City of Cocoa

65 Stone Street
Cocoa, FL 32922

Meeting Agenda

Wednesday, February 7, 2024

6:00 PM

Cocoa City Council Chambers

Planning and Zoning / Local Planning Agency

I. CALL TO ORDER

ROLL CALL

II. APPROVAL OF AGENDA AND MINUTES:

AGENDA:

24-054 Request Board Approval for the Agenda for the Planning & Zoning Meeting held on Wednesday, February 7, 2024, either as written or with amendments.

Attachments: PZ Short Agenda Feb 7, 2024.pdf

MINUTES:

24-053 Request Board Approval of the Minutes from the December 6, 2023 Planning & Zoning Meeting, either as written or with amendments.

Attachments: 12-6-23 DRAFT2.docx

III. OLD BUSINESS: None

IV. NEW BUSINESS:

A. 23-739 Annual Election of Chairperson and Vice Chairperson for the Planning & Zoning Board.

Attachments: Planning Roster.pdf

B. 24-067 Approval of a Large-Scale Site Plan and a Preliminary Subdivision consistent with Chapter 18 Subdivisions and Appendix A Zoning of the City Code for the Lakes at Cocoa Grove.

Attachments:

1.Lakes at Cocoa Location.pdf
2.Lakes at Cocoa Zoning.pdf
3.Lakes at Cocoa FLU.pdf
Exhbit A - Lakes PSP Comments.pdf
Amended and Restated Settlement Implementation Agreement (Executed & No
Stipulated Settlement Agreement 12-11-07 RECORDED.pdf
Florida Space Needle Preceding Development Agreement
412401 COCOA GROVE 2024-01-25 SS.pdf
412401 Cocoa Grove Water Report_SS.pdf
412401 Cocoa Lakes Drainage Report 2023-0721.pdf
412401 Signed Subdivision Application.pdf
412401 Turn Analysis.pdf
CLUBHOUSE - COCOA GROVE - PRELIM ELEVATION 1 & Floor Plan.pdf
Final Draft-HOA-Declaration _ Rev1_City 1-25-24.pdf
Final Draft-HOA-Declaration -Contents _City 1-25-24.pdf
Lakes at Cocoa Grove_TIA_Revised_Report_1-12-23.pdf
Lakes at Cocoa Groves_Environmental Assessment.pdf
Lakes at Cocoa Groves (Approval Letter).pdf
Lakes at Cocoa Groves Street Lighting - Electrical.pdf
Legal Desc - 412401--2021-03-17-001 Overall Desc.pdf
Opinion of Title.pdf
Recreational Equipment Details.pdf
SJRWMD PERMIT 7766110 (1) Lakes at Cocoa Groves.pdf
TheLakesAtCocoaGroves-Bookle(Lower-Res).pdf
Warranty Deed.pdf
_SHLA Lakes at Cocoa Groves_REV#4_06-30-23 irrigation.pdf
_SHLA Lakes at Cocoa Groves_REV#5_01-25-2 (1).pdf
_SHLA Lakes at Cocoa Groves_REV#5_01-25-2 (2).pdf
_SHLA Lakes at Cocoa Groves_REV#5_01-25-2 (3).pdf
_SHLA Lakes at Cocoa Groves_REV#5_01-25-24 la.pdf
SHLA - Lakes at Cocoa Groves-Conceptual Entry 02-27-23.pdf
P&Z Legal Ad Feb 7_final.pdf

C. 24-060 Consideration of a Zoning Map Amendment consistent with Appendix A, Zoning, Article XXI, to change the Zoning Map designation of eleven parcels totaling 1.39 acres, with the address 301 S. Cocoa Blvd., from C-P, Commercial Parkway, to C-N, Neighborhood Commercial.

Attachments:
- 301 S Cocoa Blvd Location.pdf
- 301 S Cocoa Blvd FLU.pdf
- 301 S Cocoa Blvd Zoning.pdf
- Exhibit D Relevant Excerpt Comp Plan Data and Analysis 2010 (1)
- Exhibit E - City of Cocoa Entry Signs.pdf
- Exhibit F - Relevant Excerpt Cocoa Redeveopment Agency Minutes 5-2002 (1).
- 24-0200001 Application ZMA 301 S Cocoa Blvd.pdf
- P&Z Legal Ad Feb 7_final.pdf

V. TREE BOARD:

VI. OTHER BUSINESS: Planning and Zoning Board Open Discussion

VII. NEXT MEETING DATE:

The next regularly scheduled meeting of the Planning & Zoning Board will be on Wednesday, March 6, 2024 at 6:00 PM at the Cocoa City Hall, 65 Stone Street, Cocoa, Florida.

VIII. ADJOURNMENT

NOTICE TO THE PUBLIC:

This is a public meeting. All interested parties may attend in person. The facility wherein this public meeting will be held is accessible to the physically handicapped. In accordance with the Americans With Disabilities Act, persons needing assistance to participate in any of these proceedings should contact the City Clerk of the City of Cocoa, listed below, at least 48 hours prior to the meeting: Carie Shealy, City Clerk, 65 Stone Street, Cocoa, by telephone at (321) 433-8484 or via email at cshealy@cocoafl.org.

Additionally, interested persons may view or listen to the meeting electronically at the following internet sites:
(1) https://tinyurl.com/s5e875r or
(2) https://cocoa.legistar.com/DepartmentDetail.aspx?ID=26365&GUID=FF9D3369-D354-4FAB-800A-57D0AEE30153&Mode=MainBody

However, the City is not responsible for technical difficulties that may occur while attempting to view or listen to the meeting on the internet.

Interested persons may submit their written comments or questions regarding the meeting prior to the meeting through Email at meetings@cocoafl.org, or via E-comments through the online agenda. Any electronic comments submitted will be made part of the meeting record. Written comments or questions not relevant to the Council meeting agenda will not be made part of the meeting record but will be maintained as public record.

Pursuant to Section 286.0105, Florida Statutes, the City hereby advises the public that: if a person decides to appeal any decision made by the City Council with respect to any matter considered at its meeting or hearing, that person will need a record of the proceedings and for such purpose, affected persons may need to assure that a verbatim record of the proceedings is made, and such record shall include the testimony and evidence upon which the appeal is to be based. This notice does not constitute consent by the City for the introduction or admission into evidence of otherwise inadmissible or irrelevant evidence, nor does it authorize challenges or appeals otherwise not allowed by law.

Although members of the public are entitled to be heard by the City Council on certain items on the meeting agenda pursuant to the City Council Rules of Procedure, members of the public are not entitled to an immediate response by either administrative staff members or Council; however, the City Council or administrative staff may provide a response at their discretion. When presenting before the City Council, all comments or questions should be directed to the Mayor or the chair of the meeting. Comments or questions should not be made directly to administrative staff without permission from the Mayor or chair.
Public debate by individual speakers from the audience on public hearing items shall be limited to three (3) minutes. Applicants or representatives of recognized groups with special interests in a matter shall be limited to ten (10) minutes; and total debate on a single issue shall be limited to thirty (30) minutes. Only one presentation per person per item shall be allowed.

A Council member may add an item to the agenda during the meeting only at the time the agenda is approved. If the item requires action by the Council, then it may be added to the agenda by an affirmative vote of the Council, and written documentation must be submitted at the time the item is added to the agenda. Matters may also be raised by the Council, City Manager or City Attorney under reports and acted upon by the City Council.

This agenda is posted on the Municipal Bulletin Board and at the Central Brevard Library and Reference Center in Cocoa for public review.

Legislation Details (With Text)

File #:	24-054	**Version:**	1	**Name:**	
Type:	Agenda			**Status:**	Agenda Ready
File created:	1/25/2024			**In control:**	Planning and Zoning / Local Planning Agency
On agenda:	2/7/2024			**Final action:**	
Title:	Request Board Approval for the Agenda for the Planning & Zoning Meeting held on Wednesday, February 7, 2024, either as written or with amendments.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result

PLANNING & ZONING BOARD/LOCAL PLANNING AGENCY AGENDA ITEM

Memo Date: January 25, 2024
Agenda Date: February 7, 2024
Prepared By: Lori Chabot, Recording Secretary
Through: Stockton Whitten, City Manager
Requested Action:
Request Board Approval for the Agenda for the Planning & Zoning Meeting held on Wednesday, February 7, 2024, either as written or with amendments.

BACKGROUND:

Board Members approve the Agenda at the beginning of the meeting.

BUDGETARY IMPACT:

None

PREVIOUS ACTION:

N/A

RECOMMENDED MOTION:

Request Board Approval for the Agenda for the Planning & Zoning Meeting held on Wednesday, February 7, 2024, either as written or with amendments.

CITY OF COCOA
Planning & Zoning Board /
Local Planning Agency
City Council Chambers

Cocoa City Hall
65 Stone Street
Cocoa, FL 32922

AGENDA
Regular Meeting
February 7, 2024
6:00 p.m.

I. OPENING MATTERS:
1. CALL TO ORDER
2. ROLL CALL
3. PLEDGE OF ALLEGIANCE

II. APPROVAL OF AGENDA AND MINUTES:
1. AGENDA: Meeting of February 7, 2024
2. MINUTES: Meeting of December 6, 2023

III. OLD BUSINESS: None

IV. **NEW BUSINESS:**

A. Annual Election of Chairperson and Vice Chairperson for the Planning and Zoning Board.

PZ-21-00100002- SITE PLAN AND PRELIMINARY PLAT APPROVAL (Lakes at Cocoa Groves)

B. Consideration of a large-scale site plan and preliminary plat, pursuant to Chapter 18 and Appendix A, Zoning, Article XIII, Sec. 1 of the Cocoa City Code, of one (1) parcel of real property, totaling 246.43 acres, more or less, and generally located on the northeast corner of SR-528 and I-95, in Cocoa, Florida, for a residential subdivision of approximately 350 lots with private recreational common space and amenities. Tax Parcel ID number: 24-35-10-00-3.

PZ-24-02100001 – ZONING MAP AMENDMENT (301 S. Cocoa Blvd)

C. Ordinance XX-2024. AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COCOA, BREVARD COUNTY, FLORIDA; amending the Official Zoning Map designation of eleven (11) parcels of real property, totaling 1.39 acres, more or less, and generally located on the southwest corner of SR-520 and US-1, more particularly depicted and

legally described on Exhibit "A" attached hereto, from Commercial Parkway District (C-P) to Neighborhood Commercial (C-N); providing for the repeal of prior inconsistent ordinances and resolutions, severability, and an effective date. Parcel ID numbers: 24-36-33-31-A-5, 24-36-33-31-C-1, 24-36-33-31-D-11, 24-36-33-31-D-12, 24-36-33-31-D-13, 24-36-33-31-C-2, 24-36-33-31-*-R.1, 24-36-33-31-*-R.2, 24-36-33-31-*-R.3, 24-36-33-31-*-R.4, and 24-36-33-31-*-R.5

V. TREE BOARD:

VI. OTHER BUSINESS:

Planning and Zoning Board Open Discussion

VII. NEXT MEETING DATE:

Wednesday, March 6th at 6:00 pm

VIII. ADJOURNMENT

General Notice Information:

This is a public meeting. Interested parties are hereby advised that they may appear at said meeting and be heard. The facility wherein this public meeting will be held is accessible to the physically handicapped. In accordance with the Americans With Disabilities Act, persons needing assistance to participate in any of these proceedings should contact the City Clerk of the City of Cocoa, listed below, at least 48 hours prior to the meeting: Monica Arsenault, Interim City Clerk, 65 Stone Street, Cocoa, by telephone at (321) 433-8488 or via email at marsenault@cocoafl.gov

Pursuant to Section 286.0105, Florida Statutes, the City hereby advises the public that if a person decides to appeal any decision made by the BOA, P&Z Board/LPA or City Council with respect to any matter considered at its meeting or hearing, that person will need a record of the proceedings and for such purpose, affected persons may need to assure that a verbatim record of the proceedings is made, and such record shall include the testimony and evidence upon which the appeal is to be based. This notice does not constitute consent by the City for the introduction or admission into evidence of otherwise inadmissible or irrelevant evidence, nor does it authorize challenges or appeals otherwise not allowed by law.

The BOA or PZ Board/LPA meeting may include the attendance of one (1) or more members of the Cocoa City Council who may or may not participate in the Board discussions held at this public hearing. The BOA, PZ Board/LPA and City Council reserve the right to continue or postpone hearings to a date certain without re-advertising.

Public Participation Information:

Members of the public may view the meeting agenda, ordinances, project applications, supporting documents, and staff reports on the City's website at the following link prior to attending or commenting:

- City of Cocoa meeting calendar at https://cocoa.legistar.com/Calendar.aspx

Documents pertaining to the above may also be inspected at the Community Services Department, between 8:00 a.m. and 5:00 p.m., Monday through Friday, or by phoning (321) 433-8535.

Interested persons may submit their written comments or questions prior to the meeting through Email at meetings@cocoafl.org, or via E-comments through the online agenda at the link above. Any electronic comments submitted will be made part of the meeting record.

Viewing In Real Time. Interested persons are encouraged to view and listen to the hearings live by accessing the meetings at the following internet address:

- City of Cocoa meeting calendar at https://cocoa.legistar.com/Calendar.aspx

However, the City is not responsible for technical difficulties that may occur while attempting to view or listen to the meeting on the internet.

Special Information for Quasi-Judicial Hearings:

Any person that (1) can demonstrate that they may suffer special damages different in kind and degree from that of the general public at large; and (2) wishes to present factual or expert witnesses and/or evidence at the quasi-judicial hearing is highly encouraged to immediately contact Planning and Zoning, at (321) 433-8535 or lribeiro@cocoafl.org, to make proper arrangements for presentation of witnesses and/or evidence. All witnesses should be identified and all evidentiary documents and exhibits that are intended to be distributed to the BOA, P&Z/LPA and City Council should be submitted via email or mail at least three (3) days prior to the hearing.

Legislation Details (With Text)

File #:	24-053	**Version:**	1	**Name:**	
Type:	Minutes			**Status:**	Agenda Ready
File created:	1/25/2024			**In control:**	Planning and Zoning / Local Planning Agency
On agenda:	2/7/2024			**Final action:**	
Title:	Request Board Approval of the Minutes from the December 6, 2023 Planning & Zoning Meeting, either as written or with amendments.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result

PLANNING & ZONING BOARD/LOCAL PLANNING AGENCY AGENDA ITEM

Memo Date: January 25, 2024
Agenda Date: February 7, 2024
Prepared By: Lori Chabot, Recording Secretary
Through: Stockton Whitten, City Manager
Requested Action:
Request Board Approval of the Minutes from the December 6, 2023 Planning & Zoning Meeting, either as written or with amendments.

BACKGROUND:

Board Members approve the Agenda at the beginning of the meeting.

BUDGETARY IMPACT:

N/A

PREVIOUS ACTION:

N/A

RECOMMENDED MOTION:

Request Board Approval of the Minutes from the December 6, 2023 Planning & Zoning Meeting, either as written or with amendments.

Legislation Details (With Text)

File #:	23-739	**Version:**	1	**Name:**	
Type:	Agenda			**Status:**	Agenda Ready
File created:	11/15/2023			**In control:**	Planning and Zoning / Local Planning Agency
On agenda:	2/7/2024			**Final action:**	
Title:	Annual Election of Chairperson and Vice Chairperson for the Planning & Zoning Board.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:	Planning Roster.pdf				

Date	Ver.	Action By	Action	Result

PLANNING & ZONING BOARD/LOCAL PLANNING AGENCY AGENDA ITEM

Memo Date: February 2, 2024
Agenda Date: February 7, 2024
Prepared By: Lori Chabot, Recording Secretary
Through: Luci Ribeiro, Planner; Stockton Whitten, City Manager
Requested Action:
Annual Election of Chairperson and Vice Chairperson for the Planning & Zoning Board.

BACKGROUND:

Board members nominate and elect a Chairperson and Vice Chairperson annually.

BUDGETARY IMPACT:

None

PREVIOUS ACTION:

None

RECOMMENDED MOTION:

Annual Election of Chairperson and Vice Chairperson for the Planning & Zoning Board.

Planning & Zoning Board	**Meets First Wednesday Every Month @ 6pm**		**Expirations in November**	
MEMBER	**ADDRESS**	**PHONE**	**APPOINTED**	**EXPIRES**
~~Chris Bankhead (2/3 non-resident)~~ ~~Fulfilling Susan Mock's term~~ **VACANCY**	~~842 Egret Rd., Cocoa, FL 32926~~ ~~(Owns property at 102 Riverside Dr., Cocoa, FL 32922)~~ ~~pdbankhead@gmail.com~~	~~321-704-3141~~	~~01/23 Appointed~~	~~2023~~
Wesley Park Fulfilling Al Washington's term	1112 Abington St., Cocoa, FL 32922 Wesley.n.park@gmail.com	321-298-4943	01/23 Appointed	2023
Veronica Lopez-Velez (Replaced Trina Gilliam)	571 Cressa Cir. Cocoa, FL 32926 Ronilope011@gmail.com	407-498-8510 (cell)	12/21 Appointed	2024
Ron Chabot Fulfilling Marilyn Green's term	2114 Clairemont Dr. Cocoa, FL 32922 Ron982@msn.com	321-403-3861	01/23 Appointed	2024
~~Michael Dobrin~~ **VACANCY**	~~100 Riverside Drive #406, 32922-7864~~ ~~MIKE-CONNIE@oleanderpointe.com~~	~~637-0884~~	~~11/20 Reappointed~~ ~~11/17 Reappointed~~ ~~10/14 Reappointed~~ ~~10/11 Reappointed~~ ~~11/08 Reappointed~~ ~~4/06 Appointed to fill unexpired term~~	~~2023~~
Aleck Greenwood	PO Box 1077 Cocoa, FL 32923 Agreenwood2@cfl.rr.com	321-917-3770	12/22 Reappointed 08/2022 Appointed as Regular member (fulfilling term of J. Blanco) 01/2019 Appointed	2025
Marcus Wheeler	709 Ixora Ave. Cocoa, FL 32922 lushorn@gmail.com	321-271-9871	01/23 Appointed	2026
Justin Simpson	2515 Stanford Dr. Cocoa, FL 32926 Justin.darrell.simpson88@gmail.com	907-347-1003	05/2021 Appointed	2024
Todd Anderson (1/3 non-resident)	6570 Pleasant Ave., Cocoa, FL 32927 toddpanderson@yahoo.com	403-7595 (cell)	01/23 Reappointed 02/2020 Appointed 11/16 Reappointed 1/28/14 appointed (to fill vacancy	2025

			left by Stephenson)	
MerryBeth Burgess- 1st Alternate	19 Parkway Street Cocoa, FL 32922 merrybethburgess@rocketmail.com	404-683-0560 home/cell	01/2022 Appointed	No expiration
Katherine Stewart- 2nd Alternate	5261 Talbot Blvd., Cocoa, FL 32926 Katherineann_s@yahoo.com	267-226-2284	01/23 Appointed	No expiration
~~Debbie Joyce (Non-Voting Member)~~ **VACANCY**	~~3231 Nottingham Ln., Cocoa, FL 32926~~ ~~Debbie32926@brighthouse.com~~ ~~Debbie3231nl@outlook.com~~	~~321-338-2047~~	~~03/2020~~ ~~Appointed~~	~~No expiration~~
LIAISON	Councilman Hearn	474-1189	Updated 1/23	
Counsel: Anthony Garganese/Kristin Eick	PO Box 2873, Orlando, FL 32802-2873	866-425-9566 407-472-0178 (Kristin Eick)		
RECORDING SECRETARY	Lori Chabot	433-8491		

Legislation Details (With Text)

File #:	24-067	**Version:**	1	**Name:**	
Type:	Informational Item			**Status:**	Agenda Ready
File created:	2/2/2024			**In control:**	Planning and Zoning / Local Planning Agency
On agenda:	2/7/2024			**Final action:**	
Title:	Approval of a Large-Scale Site Plan and a Preliminary Subdivision consistent with Chapter 18 Subdivisions and Appendix A Zoning of the City Code for the Lakes at Cocoa Grove.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result

PLANNING & ZONING BOARD/LOCAL PLANNING AGENCY AGENDA ITEM

Memo Date: January 31, 2024
Agenda Date: February 7, 2024
Prepared By: Eric Raasch, AICP - Inspire Placemaking Collective, Inc.; Contract Planner to the City of Cocoa
Through: Stockton Whitten - City Manager
Requested Action:
Approval of a Large-Scale Site Plan and a Preliminary Subdivision consistent with Chapter 18 Subdivisions and Appendix A Zoning of the City Code for the Lakes at Cocoa Grove.

BACKGROUND:

Project Information:

The proposed Lakes at Cocoa Grove project is located north of State Road 528 (Beachline) and east of Interstate 95. The Lakes at Cocoa Grove includes one parcel of land identified by the Brevard County Property Appraiser as parcel identification number 24-35-10-00-3. The proposed project will be accessed through two access points, one on the north side of the property through an extension of Bahia Street and one on the east side of the property through an extension of Osage Street/Angelica Street.

History:

This project dates back to 2004, at which time the City approved Ordinance 31-2004 to annex the subject property into the City of Cocoa. Later in 2004, Brevard County filed a Petition for Writ of Certiorari to challenge the annexation. In 2008, Brevard County and City of Cocoa entered into a

Stipulated Settlement Agreement to resolve the outstanding litigation associated with the annexation. This agreement included certain provisions related to density, buffering, and access for the project. In 2019, the City and Virgin Trains USA Florida, LLC entered into a Settlement Implementation Agreement to further outline the responsibilities of the City and the developer as it relates to the development of the property. In 2021, Brightline Trails Florida LLC (f.k.a. Virgin Trains USA Florida, LLC) conveyed the property to the current owner, Mountain Cove Homes at Lakes at Cocoa Grove LLC. On December 19, 2023, the City approved an Amended and Restated Settlement Implementation Agreement, rescinding the prior Settlement Implementation Agreement, and allowing for consideration of up to 350 dwelling units on the property with specific requirements for access, minimum unit square footages, and enhanced recreational amenities.

Project Details:

The proposed Lakes at Cocoa Grove subdivision contains 246.43 gross acres, of which 215.58 are proposed for development. The remaining 30.85 acres will be placed into a conservation easement as shown in the Preliminary Plat. This project is proposed to include 350 detached single-family dwelling units, which will be completed in four phases. The project is consistent with the prior agreements between the current and previous owners and the City.

Future Land Use Designation: Very Low Density Residential / Conservation

Zoning District: RU-1-7 (Single-Family Residential District)

Existing Land Use: Vacant Land / Borrow Pit

Council District: District 3 - Councilmember Matthew Barringer

Legal Ad Date: January 23, 2024

Overview of Surrounding Area:

	Future Land Use Des	Zoning Districts	Land Uses
North	RES 1:2.5 (Brevard Co	AU - Agricultural Residential (Brevard County)	Single-Family Residential
South	Very Low Density Res Conservation Overlay	PUD - Windward Preserve Planned Unit Development	State Road 528 / Brightline Railroad Tracks and Retention Ponds
East	RES 1:2.5 (Brevard Co	GU - General Use (Brevard County)	Single-Family Residential
West	RES 1:2.5 (Brevard Co	AU - Agricultural Residential (Brevard County)	Interstate 95 / Single-Family Residential (West of I-95)

Preliminary Subdivision / Large Scale Site Plan Analysis

The submitted application and plans have been reviewed by City staff for consistency with the City's Comprehensive Plan, Chapter 18 - Subdivisions and Appendix A - Zoning of the City of Cocoa Code, and the development agreements that were previously approved by the City of Cocoa. Staff has found the applications to be in substantial compliance, with the exception of the items found in Appendix A within this report. A full analysis documenting consistency with each of the applicable documents is summarized below.

Consistency with the Comprehensive Plan

Future Land Use Element

Policy 1.1.2.2: Very Low Density Residential (VLDR). Very low density residential areas consist of neighborhoods of single family detached housing. The following criteria shall be used for determining appropriate locations for very low density residential areas.

a. Very low density residential areas shall be buffered from the nuisance effects of agricultural uses, higher intensity uses and major traffic corridors.

b. Very low density residential developments should be located in areas where more intensive development would be unwarranted due to environmental constraints.

Staff Response: The subject property has a Future Land Use Map (FLUM) designation of Very Low Density Residential with the Conservation Overlay, which allows for consideration of residential densities of up to four (4) dwelling units per acre. The proposed development program results in a gross density of 1.42 dwelling units per acre and a net density (less conservation) of 1.62 dwelling units per acre. As such, the proposed density is below the maximum allowed by the Comprehensive Plan. Moreover, the Stipulated Settlement Agreement with Brevard County provides that the City will limit development to between 300 and 500 total residential units with a gross density permitted by the City to be approximately 2.03 residential units per acre. Accordingly, the gross density is well below the maximum allowed by the Comprehensive Plan and the Stipulated Settlement Agreement with Brevard County.

Policy 1.1.2.13: The Conservation Future Land Use Category is intended to protect environmentally sensitive natural resource systems as defined in Chapter 163 Part II F.S.

B. The boundaries of the Conservation Future Land Use category may be adjusted to be consistent with a wetland jurisdictional line determination by the SJRWMD without the need for a comprehensive plan amendment. In those areas initially presumed but later determined not to be classified as a wetland will take on the future land use category assigned to the upland portion of the development site.

Staff Response: A portion of the wetlands within the project area are being proposed to be impacted through this request. The applicant has an approved Environmental Resource Permit (ERP) through the St. Johns Water Management District (SJRWMD), which was issued on February 16, 2023, under permit number 158236-2. The technical analysis provided by SJRWMD for that permit states that the ecological value of the impacted wetlands / surface waters is low, and the proposed mitigation at the Kemcho Mitigation Tract will provide greater long-term ecological value than the impacted wetlands and surface waters. As such, these impacts are consistent with Policy FLU 1.1.2.13 and the City's Comprehensive Plan.

Recreation and Open Space Element

Policy 10.1.2.2: All new development of recreational facilities in the City shall be required to meet the Florida Accessibility Code.

Staff Response: The proposed 8' wide trails will be constructed with concrete or asphalt to ensure ADA accessibility. Maintenance of this trial system will fall under the CDD or HOA, as applicable. The appropriate entity will be required to maintain the trail in accordance with ADA standards.

Concurrency Management / Adequate Public Facilities

Wastewater

The Windward Preserve project is going to generate 83,300 gallons per day. The Sellers Plant is currently permitted to treat 3.5 mgd of wastewater. The maximum peak flow over the past three months was 3.83 mgd with typical daily average flows of 2.0 mgd. Thus, there is sufficient capacity for wastewater.

Stormwater Management

The Level of Service (LOS) for Stormwater Management is as follows:

Design Storm Event"	25-year frequency/24-hour duration event
On-site Stormwater Management:	Retention of the first one inch of rainfall for areas of more than one acre.
Stormwater Quantity:	Post development stormwater runoff flow rates, quantities, peaks, and velocities shall be equal to or less than levels that existed prior to development.
Stormwater Quality:	No significant degradation of water quality in receiving water bodies.

The applicant has an approved Environmental Resource Permit with the St. Johns River Water Management District and is not proposing any deviations from the City of Cocoa's requirements or Water Management District standards.

Potable Water

Per Comprehensive Plan Potable Water policy 7.1.1.1, the City's level of service (LOS) standard for potable water is 122 gallons per capita per day (gpcpd) per Equivalent Residential Connection (ERC), or 340 gallons per day per ERC. In reviewing the development program of 350 dwelling units, this totals an estimated 119,500 gallons per day on average, when including the recreational amenity.

The Dyal Plant provides potable for the City of Cocoa service area and it is currently permitted to operate at 48 million gallons per day (mgd). The maximum provision over the past twelve months is

34 mgd. Thus, there is sufficient capacity for potable water available to serve the project.

Solid Waste

The LOS standard for solid waste capacity within the City of Cocoa is 1.2 tons of solid waste disposal per capita per year. The residential collection LOS shall be two times per week per household with green waste and recyclables once per week. The City contracts with Waste Management for the provision of solid waste, and the projected solid waste generated will be collected consistent with the adopted level of service standards.

Roadways (Transportation)

The project is proposed to have two access points, an extension of Bahia Street to the north of the site and the extension of Osage Street to the east of the site. Both Bahia Street and Osage Street are owned and maintained by Brevard County and the applicant will be required to coordinate directly with the County to determine what improvements will be required to those facilities.

Per the Traffic Impact Study conducted by DRMP dated December of 2022, the project will generate 3,293 daily trips at buildout. As part of DRMP's analysis, segments of Grissom Parkway, Canaveral Groves Boulevard, and Industry Road were evaluated for peak-hour, two-way level of service at projected buildout. The study concluded that all study area roadway segments and intersections would operate at an acceptable capacity and level of service at buildout. However, the study recommends the following improvements for the project:

- Phase 1: Grissom Parkway at Proposed Connector Road: exclusive right-turn lane eastbound on Proposed Connector Road, exclusive right-turn lane southbound on Grissom Parkway, exclusive left-turn lane northbound on Grissom Parkway

- Phase 2: Grissom Parkway at Proposed Connector Road: install traffic signal

Recreation

Per Comprehensive Plan Recreation Policy 10.1.1.3, the LOS standard for recreation facilities is 1.25 acres per 1,000 population.

Pursuant to the City of Cocoa Comprehensive Plan Evaluation and Appraisal Report (October 2010) Data and Analysis, Cocoa has a surplus of 118.34 acres of parks, which was determined to be more than sufficient to meet the needs of the citizens through 2020. Per the U.S. Census, the City's estimated 2022 population was 19,559, which requires 24.45 acres of park and recreation facilities within the City. The EAR identified the City as having 323.58 acres (including the 165.09 acres Cocoa Conservation Area) available for residents. Per the U.S. Census, the City has an average of 2.4 persons per household, which would yield a population of 840 people at buildout. Based on the City's LOS, the project will require 1.05 acres of recreation to accommodate the proposed population. The applicant is proposing 12.88 acres of recreation space within the project. Thus, the City has sufficient

recreation and parks to support the project and maintain the adopted LOS.

Schools

The applicant will be required to provide documentation from Brevard Public Schools that shows that capacity is available to serve this development.

Consistency with the Code of the City of Cocoa

The submitted application and plans have been reviewed by City staff for consistency with Chapter 18 - Subdivisions and Appendix A - Zoning of the City of Cocoa Code. The subject property is zoned RU-1-7 (Single-Family Residential District) and the following regulations apply:

Sec. 3: RU-1-7, Single-Family District
Principal uses and structures: single-family dwelling units
Minimum lot area: 7,500 square feet
Minimum lot width: 75’
Minimum lot depth: 100 feet
Minimum living area: 1,200 square feet
Maximum height: 35’
Minimum front setback: 25’
Minimum interior lot setback: 8’
Minimum corner lot setback: 15’
Minimum rear setback: 15’

Staff Response: The applicant’s Preliminary Subdivision / Large-Scale Site Plan has been designed in accordance with these zoning requirements.

Consistency with Applicable Development Agreements
There are the following development agreements are applicable to the property:

Stipulated Settlement Agreement between Brevard County, Florida; the City of Cocoa, Florida, Florida Space Needle, LLC; and Barrera Shores, LLC recorded at Brevard County Official Records Book 5837 / Page 2226

The Stipulated Settlement Agreement was approved by the City, County, and private property owners to resolve litigation associated with the annexation of the subject property. This agreement included measures to ensure that the design of the subject property was compatible with the surrounding area within unincorporated Brevard County. The following provisions were included in the agreement:

- The perimeter lots located on the north and east perimeter of the property shall be no less than 70’ by 140’ in size, with the rear 15’ of the lot dedicated to be a natural buffer.
- The total unit count shall be between 300 and 500 dwelling units.
- The access to Grissom Parkway shall be either through Osage Street / Angelica Street or south along the 100’ wide drainage canal right-of-way, whichever alignment is preferred by Brevard County.

- The owner shall comply with all applicable drainage permitting requirements of the County and/or the St. Johns' River Water Management District.

Staff Response: In review of the proposed plans, the applicant has complied with the required minimum lots sizes on the perimeter and the required natural buffers. The application contemplates 350 single-family dwelling units, which is within the range required by the agreement. Brevard County selected the Osage Street / Angelica Street alignment for the eastern access point, and that alignment is reflected on the plans. The owner has an approved Environmental Resource Permit through the St. Johns' River Water Management District. As such, the applicant's request is consistent with the terms outlined in the Stipulated Settlement Agreement.

Amended and Restated Settlement Implementation Agreement between the City of Cocoa and Mountain Cove Homes at Lakes at Cocoa Grove, LLC recorded at Brevard County Official Records (RECORDING DATE TO BE DETERMINED)

The City of Cocoa entered in a Settlement Implementation Agreement with the applicant's predecessor, Virgin Trains USA, LLC, which was recorded on October 16, 2019. An Amended and Restated Agreement was approved by the City of Cocoa on December 19, 2023. The following provisions were included in the agreement:

- The subdivision shall include a maximum of 350 residential dwelling units.
- The minimum living area under heat and air shall be 1,500 square feet and the minimum average living area under heat and air shall be 1,800 square feet.
- The project shall have two access points; the northern access points shall be at the existing southern terminus of Bahia Street and the eastern access shall be located at the southeast corner of the project to align with Osage/Angelica Street.
- The project shall be consistent with the conceptual development plan shown in Exhibit B of the agreement.
- Project recreational amenities shall include:
    - Central amenity center (community clubhouse) which shall be fully enclosed and air-conditioned with feature pool, open space area, and community pavilion (picnic tables and grills) with state-of-the-art modern tot-lot and playground (with UV rated canopy and/or shade trees);
    - Multi-use sports field;
    - Multi-purpose courts;
    - Smaller common open space lots and areas through the community with benches (with UV rated canopy and/or shade trees);
    - Connected multipurpose trail system;
    - Streetscape design acceptable to the City;
    - Decorative and landscaped entrance features;
    - Residential driveways constructed of stone or brick pavers, or stamped and stained concrete;
    - All utilities constructed underground; and
    - Incorporation of energy efficient features.

Staff Response: The applicant has committed to installing the required amenities for the project. Additionally, recommended conditions of approval have been added to this report to ensure

compliance as the applicant works through the City's permitting process.

BUDGETARY IMPACT:

Based on a 2.4 persons per dwelling unit multiplier, the project can be expected to add 840 persons to the City's population base. An increase in population will positively affect intergovernmental revenues received where the distribution formula is population based, such as gasoline and sales taxes.

In addition to the direct fiscal impact to the City's General Fund, the development project will increase the economic attractiveness of the City by increasing its market and trade area potential, an important factor to corporate site selectors as well as retail and dining establishments.

PREVIOUS ACTION:

The City of Cocoa has taken the following previous actions related to the subject property:

- **January 1, 2008:** Stipulated Settlement Agreement between Brevard County and the City of Cocoa recorded in Brevard County Records
- **October 16, 2019:** Settlement Implementation Agreement between City of Cocoa Virgin Trains USA Florida, LLC recorded in Brevard County Records
- **February 26, 2020:** Rezone the property to RU-1-7
- **May 23, 2023:** Brevard County Board of County Commissioners selected the Osage/Angelica access route to the project
- **December 19, 2023:** Amended and Restated Settlement Implementation Agreement between City of Cocoa and Mountain Cove Homes at Lakes at Cocoa Grove, LLC approved

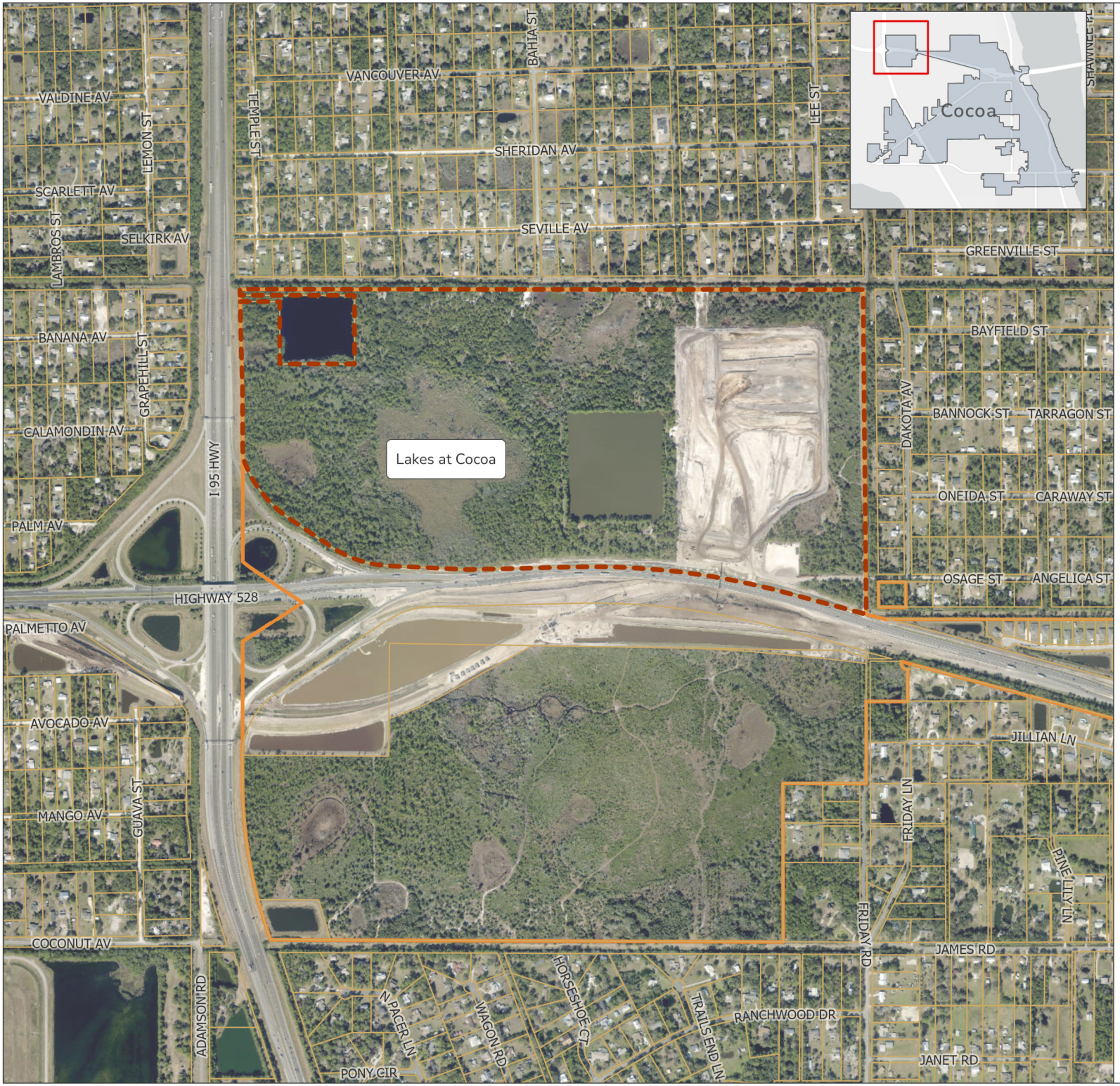
RECOMMENDED MOTION:

Staff recommends the Planning & Zoning Board recommend **approval** to City Council of the Preliminary Subdivision and **approve** the Large-Scale Site Plan for the Lakes at Cocoa Grove with the conditions set forth below:

1. The project shall comply with the Preliminary Subdivision and Large Scale Site Plan for the Lakes at Cocoa Grove Subdivision.
2. The P&Z approval of the Large Scale Site Plan shall be conditional upon the City Council's approval of the Preliminary Plat.
3. The applicant shall address all remaining comments provided under Exhibit A.
4. All amenities in a designated phase must be completed before any Certificate of Occupancy in the following phase will be issued.
5. The traffic signal at the intersection of Osage / Angelica Streets and Grissom Parkway shall be installed prior to the issuance of any Certificates of Occupancy for residential units within Phase 3.
6. The clubhouse facility shall be an enclosed structure under heat and air.
7. Residential driveways shall be constructed of stone or brick pavers, or stamped and stained concrete.
8. All utilities constructed on the property including, but not limited to, electric, water, sewer,

reclaimed water, cable, phone, fiber optics, natural gas, and other similar kinds of utilities to service the property constructed underground unless otherwise necessary to be above ground and approved by the City.

9. The project shall incorporate the use of energy efficient lighting systems, insulation, ENERGY STAR rated windows, low-flow water fixtures, modern heat pumps, energy efficient HVAC systems, and the ability for roof top solar panels.
10. Single-family living area shall be a minimum of 1,500 square feet, with an average of 1,800 square feet.
11. The same architectural elevation shall not be built on a lot that is adjacent to or directly across the street, including one home to either side, diagonal, or the house directly across the street.
12. The developer shall comply with tree protection and preservation requirements found within Sec. 22 of the City of Cocoa Code, as may be amended, and the Tree Mitigation Contribution Deferral requirements within the Amended and Restated Settlement Implementation Agreement.
13. The developer shall comply and address all comments by the City Surveyor prior to submittal of any application for final plat approval.
14. The applicant shall provide notice to the City to include ownership and maintenance obligations for the common areas and infrastructure within the community between the HOA and CDD.
15. Prior to issuance of residential building permits, the applicant shall provide documentation from Brevard Public Schools showing that capacity is available to serve the project.



Lakes at Cocoa Location

February 02, 2024

- Subject Parcel
- Parcels
- Cocoa City Boundary

N

0 500 1,000 Feet

P20240202-110001.1

Lakes at Cocoa Zoning

February 02, 2024

Subject Parcel

Cocoa Zoning

- RU-1-7 - Single-Family Residential
- Zoning Not Assigned
- Parcels
- Cocoa City Boundary

0 500 1,000 Feet

P20240202-110001.2

Lakes at Cocoa Future Land Use

February 02, 2024

Subject Parcel

Future Land Use

- Very Low Density Residential
- Conservation
- Parcels
- Cocoa City Boundary

N

0 500 1,000 Feet

P20240202-110001.3

Planning and Zoning Division
65 Stone Street • Cocoa, FL 32922
PHONE: (321) 433-8535

February 2, 2024

Mountain Cove Homes at Lakes of Cocoa Grove, LLC
Attn: Victor F. Solorzano
C/O Barry Cabaniss, PLS
4878 SW 74th Court
Miami, FL 33155

Re: PZ-21-001000002 – Preliminary Subdivision / Lakes at Cocoa Grove

Dear Mr. Solorzano,

City staff has completed its third review of your application. We have made the following comments based on the plans that were submitted with your request. Please contact me before resubmitting to discuss the number of plans needed based on changes.

Planning Division, Eric Raasch (Inspire Placemaking Collective, Inc.) (407) 683-6939

General Comments

1. *On Sheet 88, please update the parking calculations to reflect the new parking totals.*
2. Per Exhibit B of the 2024 Amended Settlement Implementation Agreement, 86.06 acres will be used for the residential lots. However, on Sheet 1, the Average Lot Area calculation states that 160.35 acres will be occupied by residential lots. *Please clarify the Average Lot Area under the Site Data table on Sheet 1.*

Comprehensive Plan

3. **Policy 12.1.6.15.E** states that where wetlands exist, upland buffers shall be provided at a minimum width of fifteen (15) feet and an average width of twenty-five (25) feet beyond the perimeter of the wetland. The applicant is proposing a minimum 20-foot upland buffer within Tract I and a 5-foot wetland preservation buffer easement along the rear of all of the lots and tracts that abut Tract I. Inspire notes that the lots abutting Tract I are proposed to have a 120' depth, which exceeds the code requirement for the RU-1-7 zoning district of 100'. *Inspire suggests reducing the lot depth adjacent to Tract I by five feet to eliminate the need for the wetland preservation buffer easements in this location. The City will not accept a 5' conservation easement over the rear of all lots abutting Tract I. The buffers must be located in Tract I or a separate buffer tract to be owned and maintained by the HOA.*

Settlement Implementation Agreement, OR Book 8564/ PAGE 2243

4. **Section 11.0(4)** requires small open space lots and areas throughout the community that include small playgrounds and benches. These areas shall be adequately covered from sun exposure by a UV rated

playground or other canopy and/or shade trees. With the latest submittal no shade structure was provided for Tract L*. Please provide a shade structure for Tract L.*

Public Works

Traffic Impact Analysis

- Continue to coordinate with Brevard County Traffic Operations to address their comments on the TIA.

Additional Analysis

1. Benches and trash cans shall be located on a concrete pad. Please provide detail.
2. What is the ground cover under the amenities at Tracts H, M, and Q. Please provide details.
3. Because of the environmental constraints, the project does not provide a traditional grid network which would disperse traffic and slow down vehicles. It should be noted that there are several long straight aways, namely Zamia Court and Pampas Drive. These are the types of streets that residents tend to complain about speeding and request traffic calming measures such as speed bumps. Fortunately, this project has crossings to amenities and the multipurpose trail that can break up these streets. Recommend raised pedestrian crossings at each leg of the north entrance (Bahia St), where the trail crosses the street to the fishing pier (between lots 23 and 24 on Zamia Court), and where the trail crosses the street about half-way on the southern entrance road (between lots 23 and 24 on Pampas Drive) to: 1. Provide a crossing (especially for children) that is at a higher elevation than the road so cars are more likely to see them. 2. It will slow down traffic through the vertical deflection.
4. Where are the signage details for amenities and multipurpose trail? I see the entry signage on Sheet L-15, but no details for signage inside the project. Will signage be provided?
5. Sheet 88, Provide a crosswalk with pavers between the sidewalk connections leading to the mail kiosk from the parking lot / Central Amenity Center.

Landscape Plans

1. Sheet L-0 – Applicant to show arbor mitigation tables 1-3. Show calculations for: Table 1 preserved, Table 2 removals/replacements, and Table 3 Mitigation. See attached example.
2. Arbor mitigation table is using 3,600 square feet per lot. The building foot print may not match the square footage of the house. Please revise the calculations related to the exemption of the building footprint perimeter +7.5 feet.
3. Applicant to provide irrigation for the four trees on every lot.
4. Sheet L-8 counts 43 Wax myrtles (top right), I counted 31, please verify correct totals.
5. Sheet L-10 counts 136 Slash pines (bottom), I counted 117, please verify correct totals.

Floodplain Review, Geosyntec Consultants (Tom Amstadt, PE, CFM)

Based on review of the Federal Emergency Management Agency's (FEMA) effective Flood Insurance Rate Map (FIRM), Map Numbers 12009C0320H and 12009C0325G revised January 29, 2021 and March 17, 2014, respectively, portions of the site are within the "Zone A – Without Base Flood Elevation".

Comments regarding the proposed development's compliance with the City's Flood Damage Prevention Code and Comprehensive Plan are provided below.

1. The Zone A floodplains mapped by FEMA are without base flood elevations (BFE). Per Sec. 6-331 and 6-356 (2) the applicant is required to include BFE data "prepared in accordance with currently accepted engineering practices." Based on review of the stormwater calculations, it appears that the applicant may use data from existing ICPR models of onsite and offsite areas to prepare BFE data.
2. Per Comprehensive Plan Policy 6.1.3.6, if fill within the 100-year floodplain is proposed, "compensatory storage shall be provided through excavation of a volume equivalent to the loss of storage within the 100-year floodplain resulting from the placement of fill in adjacent upland areas (above the 100-year floodplain) where such compensatory storage can be accomplished in an environmentally sound and economically feasible manner." (See also, Objective 12.1.9) Based on review of the construction plans, significant onsite fill is proposed. As such, the applicant is required to provide proposed floodplain fill and compensating storage quantity calculations. If adequate compensatory storage is not considered environmentally sound or economically feasible, the applicant should provide stormwater calculations for review that demonstrate no onsite or offsite floodplain impacts (i.e., no rise to the established BFE) resulting from the proposed development.
3. Per Sec. 6-315 (6) and 6-355 (1), the documents were reviewed to provide assurance that the proposed project will be reasonably safe from flooding. No issues were noted because of this review.

City Legal, Assistant City Attorney, Kristin Eick

Preliminary Plat

1. The 15' ingress / egress easement that is located on the eastern boundary remains listed on the title opinion and is depicted on the plat. The 15' ingress/egress easement conflicts with the placement of the 15' landscape buffer required by the Stipulated Settlement Agreement. The 15' ingress/egress easement will need to be vacated, or the landscape buffer will need to move 15' to the west so as to avoid conflict.

2. Please add a plat note to state that Tract I (including all wetland buffers) will be subject to a conservation easement dedicated to the City of Cocoa, as recorded in the Official Records of Brevard County, Book ___, Page __.

Utilities Department, Environmental Control Coordinator, Johnathon Combs

1. If the clubhouse is going to have any type of food prep, cooking or cleaning areas or devices inside, then an appropriately sized grease interceptor will be required.

Please contact the City of Cocoa Planning and Zoning Division at (321) 433-8535 if you have any questions.

Regards,

Eric Raasch, AICP, Inspire Placemaking Collective, Inc.

THIS INSTRUMENT WAS PREPARED BY
AND SHOULD BE RETURNED TO:

Anthony A. Garganese
City Attorney of Cocoa
Garganese, Weiss, D'Agresta & Salzman, P.A.
111 N. Orange Avenue, Suite 2000
Orlando, FL 32802

(407) 425-9566

FOR RECORDING DEPARTMENT USE ONLY

AMENDED AND RESTATED SETTLEMENT IMPLEMENTATION AGREEMENT

(Residential Subdivision Lakes at Cocoa Grove and Lake Amenity Excavation)

THIS AMENDED AND RESTATED SETTLEMENT IMPLEMENTATION AGREEMENT ("Agreement") is made and executed this 19 day of December, 2023, by and between the **CITY OF COCOA,** a Florida Municipal Corporation ("City"), whose address is 65 Stone Street, Cocoa, Florida 32922, and **MOUNTAIN COVE HOMES AT LAKES AT COCOA GROVE, LLC**, a limited liability company organized in the State of Florida and authorized to transact business in the State of Florida ("Developer"), whose address is 4878 SW 74 Court, Miami, Florida 33155.

WITNESSETH:

WHEREAS, Developer has purchased approximately 246 acres, more or less, of real property located north of State Road 528 and east of Highway I-95, Cocoa, Florida, more particularly described in Section 3 and depicted in Section 8 of this Agreement ("Property"); and

WHEREAS, the Property is subject to that certain City of Cocoa/Florida Space Needle, LLC Preceding Development Agreement, dated August 24, 2004 ("Preceding Development Agreement"); and

WHEREAS, the Property is also subject to that certain Stipulated Settlement Agreement entered into in Brevard County v. City of Cocoa, Case No. 05-2005-018141, which was recorded on January 9, 2008 in Official Record Book 5837, Page 2226 of Brevard County, Florida ("Stipulated Settlement Agreement"); and

WHEREAS, the City and Developer's predecessor, Virgin Trains USA, LLC, entered into a Settlement Implementation Agreement, dated July 10, 2019, which was recorded in the Official Record Book 8564, Page 2243 of Brevard County, Florida (the "Settlement

Implementation Agreement"), in order to further refine the conditions related to the proposed development of the Property; and

WHEREAS, the Parties herein intend to modify the conditions of the Settlement Implementation Agreement and acknowledge and agree that the previously executed Settlement Implementation Agreement is rescinded in its entirety and replaced as restated and amended herein; and

WHEREAS, this Project is related to the construction of the Brightline train system along State Road 528 as provided herein; and

WHEREAS, the location and construction of a Brightline train station within the jurisdictional limits of the City of Cocoa will result in a substantial capital investment, and will be an economic catalyst to the City of Cocoa including, but not limited to, enhancing the local government tax base; and

WHEREAS, the City Council desires to approve this Agreement waiving certain City Code provisions described herein for purposes of authorizing the Concept Plan for the Project, subject to such other conditions imposed by the City Council and applicable law; and

WHEREAS, the City Council finds and declares that this Agreement serves a public purpose and serves the public health, safety, and welfare of the citizens and visitors of Cocoa, which includes promotion of high-quality growth, economic development, and the future expansion of the City's tax base.

WHEREAS, Developer desires to permit and construct a low-density residential subdivision (approx. 350 units) on the Property consistent with the terms and conditions of the Preceding Development Agreement and the Stipulated Settlement Agreement and as more specifically required by this Amended and Restated Settlement Implementation Agreement; and

NOW THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties mutually agree as follows:

1.0 Recitals. The foregoing recitals are true and correct and are hereby incorporated herein by this reference.

2.0 Authority. This Agreement is entered into pursuant to the Florida Municipal Home Rule Powers Act and in furtherance of implementing the terms and conditions of the Preceding Development Agreement and Stipulated Settlement Agreement.

3.0 The Property. The real property subject to this Agreement has tax parcel identification numbers of 24-35-10-00-3 and is legally described in **EXHIBIT "A"**, attached hereto and fully incorporated herein by this reference ("Property").

4.0 Acquisition of Property by Developer. Developer represents and warrants to the City that it has purchased the Property as of February 19, 2021. Based on this representation

and warranty to the City, Developer further represents and warrants to the City that it is empowered to negotiate and enter into this Agreement.

5.0 Project Description and Requirements. Developer shall design, permit and construct one of the premier, upscale low-density residential subdivisions in the City of Cocoa. The subdivision shall be created and constructed in multiple phases and consist of approximately 350 residential lots and homes with a minimum living area under air of one thousand five hundred (1,500) square feet and a minimum average living area under air for the entire Project of one thousand eight hundred (1,800) square feet, private streets, ample private recreational common area green space and amenities, including a private Amenity Center and a proposed 38-acre, more or less, amenity lake (the "Project"). The Developer may construct the homes in accordance with a phasing plan approved by the City. The Project shall have a homeowner's association, which shall be responsible for maintaining the common areas in perpetuity. The Project shall be constructed in accordance with the requirements set forth in this Agreement.

6.0 Zoning Application. Developer acknowledges that the current City Comprehensive Plan, Future Land Use Map designation on the Property is very low-density residential with several areas subject to a conservation overlay designation. Developer agrees to comply with the current Future Land Use Map designation. In furtherance of compliance with the City's Comprehensive Plan, Developer applied for and on February 26, 2020, was granted a City Zoning designation of RU-1-7, Single-Family Residential District, which is consistent with the very low-density residential Future Land Use Map designation.

7.0 Location of Ingress/Egress Points – North and Southeast Corner of Project. Pursuant to the Stipulated Settlement Agreement, the Project shall have two public road access points. The northern access point shall be at the existing southern terminus of Bahia Street. Per the Stipulated Settlement Agreement, Brevard County was required to choose between two options for public road access at the southeastern corner of the Project: (1) Osage/Angelica Street or (2) south along the 100-foot wide drainage canal right-of-way connecting to Grissom Road. On May 23, 2023, the Brevard County Board of County Commissioners selected the Osage/Angelica Street route as the ingress/egress route to the Project.

8.0 Conceptual Development Plan; Subdivision and Site Plan Approval.

8.1 The Project shall be substantially developed in accordance with the conceptual development plan which is attached hereto as **EXHIBIT "B"** and incorporated herein by this reference (**"Concept Plan"**). The Concept Plan is intended to be the general blueprint which details key aspects of the future physical development of the Property. The Concept Plan shall also serve as a necessary guide for future permit applications and permitting necessary to complete the construction of the Project. Developer shall have the obligation to further submit and obtain the City's approval of a final subdivision plat, final site plan and final engineering plans (**"Final Plans"**) consistent with the Concept Plan in all material respects and in compliance with the City Code and City Comprehensive Plan and the amenities schedule required by Section 11.0 of this Agreement. Developer acknowledges and agrees that the

Concept Plan was not created with specific surveyed dimensions and that during the Final Plans process such dimensions shall be surveyed, duly engineered, and provided to the City for consideration under applicable City Codes and City Comprehensive Plan. The Concept Plan shall be subject to reasonable adjustments at the Final Plans phase in order to bring the Project into full compliance with the City Code and City Comprehensive Plan, and as a result, the exact location, layout and dimensions of the lots, common areas, buildings, landscaping, entrances, utilities, parking and other site improvements may vary slightly between Concept Plan approval and approval of the Final Plans. These changes shall be allowed as long as the changes are consistent with the development standards noted in this Agreement and preserve the general character of the development shown on the Concept Plan. The City will not unreasonably withhold approval of the Final Plans and amenities schedule.

8.2 The Parties agree that time is of the essence to complete the Project. Therefore, Developer shall have three (3) months from the date of the City Council's approval of this Agreement to submit and obtain the City's approval of "Final Plans" for the Project. The City Manager shall have the authority to grant up to two (2) ninety-day extensions for Developer to obtain the City's approval of Final Plans.

9.0 Public Utilities; Project Completion and Reimbursement Obligations. Pursuant to Section 4.8 of the Preceding Development Agreement, the Developer has elected not to design, permit and construct the extension of the water, sewer and reclaimed utilities to the Property ("Utilities"). Therefore, the City will design, permit and construct at the City's expense, subject to the Developer's conditional reimbursement obligations described herein, the extension of the Utilities up to the point of connection at the southeastern boundary of the Property as determined and deemed appropriate by the City, subject to the following terms and conditions:

(1) The City will design, permit, construct and make the Utilities available to the Property no later than the date that the Developer has: (a) completed and received a final completion certificate (e.g., evidence of final written approval) from the City for all on-site infrastructure to support the Project including, but not limited to, streets, street lights, on-site utilities, sidewalks, and stormwater facilities; (b) been issued and received building permits for at least ten (10) building permits approved by the City for residential units; and (c) commenced vertical construction of the ten residential homes on the Property ("Utility Completion Date"). Prior to commencing construction of the Utilities, the City shall provide the Developer a written estimate of the Total City Utility Expenses described in Subsection (2) below.

(2) Developer shall complete construction of the Project by obtaining all required certificates of occupancies within five (5) years from the Utility Completion Date ("Project Completion Obligation"). In furtherance of the Project Completion Obligation, within ninety (90) days from the date that the City completes the Utilities, the City will deliver written notice to the Developer documenting the expenses incurred by the City to design, permit and construct the extension of the Utilities to the Property ("Total City Utility Expenses"). Within sixty (60) days of receipt of said written notice, the Developer, at its expense, shall secure the reimbursement of the Total City Utility Expenses as prorated with the development known as the

Windward Preserve PUD in the event the Developer fails to fully satisfy the Project Completion Obligation by providing the City with an irrevocable stand-by letter of credit in the amount of such prorated expenses incurred by the City. Proration of the Total City Utility Expenses shall be determined by the proportionate share based on the projected water demands for each Project, including the residential lots, clubhouses, and other amenities requiring water service in each Project. The letter of credit shall be in favor of the City and shall be issued by a bank mutually agreed to by the Parties. The letter of credit shall be in a form acceptable to the City to effectuate the reimbursement, if required due to Developer's failure to make reimbursement pursuant to Subsection (3) below. The letter of credit shall be subject to being drawn upon by the City in the event that the Developer fails to fully satisfy the Project Completion Obligation. The letter of credit shall remain in effect until such time the City provides written notice to the Developer that they have fully satisfied the Project Completion Obligation or the City receives reimbursement pursuant to Subsection (3) below, whichever occurs sooner. However, the City agrees that Developer may proportionately reduce the value of the letter of credit by the number of certificates of occupancies granted by the City for the homes constructed in the Project. Said reduction shall occur only at twenty percent (20%) intervals of construction. The letter of credit may also be reduced on an annual basis by the amount of any home rule special assessment collected on the Property pursuant to Subsection (4) below. Any reduction of the letter of credit shall require prior written notice to the City and confirmation by the City the reduction amount is accurate.

(3) Upon failure to fully satisfy the Project Completion Obligation, the City may provide Developer written notice declaring Developer in default under this Agreement and demanding full reimbursement, within thirty (30) days, of the Total City Utility Expenses as prorated, less any credits as a result of any home rule assessments paid pursuant to Subsection (4) below, if any. If Developer fails to timely make such payment, the City shall have the right to draw upon the letter of credit required by Subsection (2) above.

(4) The City shall have the right at any time to adopt and impose a home rule special assessment on the Property, and the lots created thereon, to recover the Total City Utility Expenses. In furtherance of said right, the Developer hereby voluntarily and irrevocably consents to said assessment and that the extension of Utilities constitutes a special benefit to the Property. Developer further agrees not to directly or indirectly contest or challenge such special assessment. The assessment, if imposed by the City, will be collected and enforced in accordance with the Uniform Method of Collection and Enforcement of Non-Ad Valorem Special Assessments under Florida law. In the event that a special assessment is imposed and the City collects the full amount of the Total City Utility Expenses by assessment, the City agrees to release the letter of credit obligation in full if still in effect pursuant to Subsection (2) above.

(5) The Developer has conveyed a perpetual public utilities easement upon, over and under the Property that allows the City to connect the future public utilities constructed on the Property with the Windward Preserve PUD (approx. 212 acres) located south of State Road 528. The Developer shall fully cooperate with the City to coordinate and assist the City's plans and efforts to permit, construct and install future public utilities under State Road 528 including the

installation of one or more casings, conduits or culverts to support future water, sewer and reclaimed utilities. The Parties agree that the Developer's coordination, cooperation and assistance does not constitute permission, or the requirement to gain permission, for the City to place the casing, conduit or culverts in the said area which is not owned by the Developer. The Parties acknowledge that the property is not owned by the Developer and that the City must gain the necessary permissions and permits from the property owner (Florida Department of Transportation) and any other required regulatory entity to perform the required utility work. During the construction of the required utility work by the City, the City agrees to coordinate its utility activities in a manner that does not interfere with the excavation operation or the construction and operation of the proposed future Brightline rail line.

(6) The Developer shall be responsible for the design, permitting and construction of all on-site utility infrastructure required to serve the Property including, but not limited to water, sewer, reclaimed stormwater pipes, sewer lift stations and pumps, electric lines and equipment, cable lines and equipment, phone lines and equipment, gas lines and equipment, and other utility pipes, lines and equipment. Should City utility policy require that certain on-site water, sewer, reclaimed or stormwater utility infrastructure be conveyed to the City upon completion by the Developer, said conveyance of any such infrastructure shall be by written bill of sale along with any warranties and maintenance bonds or letters of credit. Developer will build a reclaim water line system. The source of water used in the reclaim water system will either be reclaim water provided by the City or, at the discretion of the Developer, stormwater as part of a stormwater harvesting system. Potable water will not be allowed as a source of irrigation nor will a combined system of stormwater harvesting and reclaim water. It must be either a reclaim system or a storm water harvesting system. Should the Developer choose to irrigate the Project via a stormwater harvesting system utilizing the on-site lake amenity, the Developer shall remain fully responsible for the cost of the prorated Total City Utility Expenses as conditionally provided in this Agreement. Under no circumstances shall the Total City Utility Expenses be reduced to exclude the cost of design, permitting, or construction of reclaimed water mains available to serve the Property.

(7) In the event the Developer fails to obtain approval of the Final Plans required by Section 8.0 of this Agreement within the time schedule set forth in Section 8.2, or if the City declares, in writing, that Developer failed to complete the lake amenity as required by Section 10.0 either upon completion of the excavation or abandonment, the City's commitment to design, permit and construct the Utilities to the Property shall terminate and thereafter, the Developer, at Developer's sole expense, shall be fully responsible for the design, permitting and construction of the Utilities to the Property or the prorated cost thereof in accordance with City technical specifications and standards.

10.0 Permitting and Construction of Lake Amenity. On September 30, 2019, the City approved and executed an excavation permit for purposes of constructing the proposed 38-acre, more or less, lake amenity as depicted on the Conceptual Plans. The excavation permit shall be subject to Chapter 12.5 of the City Code and shall be in the form of an Excavation Permit Agreement executed by the Parties. The Excavation Permit Agreement shall be subject to

the terms and conditions of this Agreement, and any other applicable state and federal laws. The excavation site and Property shall be maintained and secured by the Developer in a safe and sanitary condition at all times in compliance with applicable laws, administrative rules, or City Code. Notwithstanding any other terms and conditions in this Agreement and the Excavation Permit Agreement, Developer, upon completion of the excavation, shall be required to complete the lake amenity in anticipation of, or in conjunction with, the residential subdivision required by this Agreement. Should the excavation be completed before the Final Plans are approved by the City, Developer shall be required to submit, for the City's approval, plans and specifications necessary for the Developer to complete the lake amenity including, but not limited to, bank stabilization, seeding and final contouring and shaping of the lake to support the future subdivision and accommodate the future amenities required by the amenity schedule approved by the City during Final Plans approval, including landscaping, walking trails, usable open space and other pedestrian-friendly recreational and beautification features. The Excavation Permit Agreement shall be in a form approved by the City Manager and City Attorney, and the City Manager is authorized to execute the Excavation Permit Agreement on behalf of the City. By execution of this Agreement, the City Manager herein agrees to transfer the excavation permit to the Developer, Mountain Cove Homes at Lakes at Cocoa Grove, LLC. In order to reduce and mitigate against any potential negative impacts of the excavation on surrounding properties, the Developer agrees to employ an excavation strategy that requires the excavation materials to be removed from the Property via a conveyance system running above or underneath State Road 528 for use by the future proposed Brightline railroad route along the State Road 528 corridor. Developer has represented to the City that they are pursuing a permit from the Florida Department of Transportation to employ this excavation strategy subject to the City permitting the excavation. However, during the excavation, access to and from the Property by excavation workers and to receive delivery of equipment and materials for the excavation shall be allowed via the existing public road network as specified in the excavation permit agreement. Notwithstanding the foregoing, should Developer choose to forego or substantially reduce the scope and size of the excavation, Developer acknowledges that a modification to this Agreement may be required by the City to at least modify the Concept Plan to incorporate more upland buildable areas and recreational space.

11.0 <u>Other Project Recreational Amenities and Enhancements.</u> The Developer shall design, permit and construct, at its own expense, the following minimum schedule of Project amenities and enhancements in scope and scale to adequately support the number of residential lots required for the Project. The Project amenities listed below, at minimum, shall be included in the application for large scale site plan approval submitted by the Developer:

(1) Central Amenity Center (community clubhouse), which shall be fully enclosed and air-conditioned, with a feature pool, open space area with a community pavilion (picnic tables and grills) along with a state-of-the-art modern tot-lot and playground. The tot-lot and playground shall be adequately covered from sun exposure by a playground UV rated canopy and/or shade trees.

(2) Multi-use sports field.

(3) Multipurpose courts (convertible for volleyball, basketball, pickleball and/or tennis).
(4) Smaller common open space lots and areas throughout the community that include small playgrounds and areas with benches. The playground and bench areas shall be adequately covered from sun exposure by a UV rated playground or other canopy and/or shade trees .
(5) Connected multipurpose trail throughout the community that connects to all recreational common open spaces including the existing lakes and lake amenity.
(6) A streetscape design deemed acceptable by the City, which emphasizes sidewalks, connectivity within the community, tree-lined streets, and decorative street lights to add appeal and security and decorative signage.
(7) Decorative and landscaped entrance features to the Project deemed acceptable to the City which may include a restricted gated entry feature.
(8) The residential driveways shall be constructed of stone or brick pavers, or stamped and stained concrete.
(9) All utilities constructed on the Property including, but not limited to, electric, water, sewer, reclaimed water, cable, phone, fiber optics, natural gas and other similar kinds of utilities to service the Property shall be constructed underground unless otherwise necessary to be above ground and approved by the City. Each lot and all common landscaped areas shall be equipped with in-ground water irrigation systems, which may at Developer's option may have water provided by stormwater harvesting from the lake system.
(10) The Project shall incorporate the use of energy efficient lighting systems, insulation and ENERGY STAR rated windows, low-flow water fixtures, modern heat pumps, energy efficient HVAC systems, and optional roof top solar panels.

Developer may also propose additional amenities for the City's consideration and approval. All Project amenities and enhancements shall be completed and finally accepted by the City in accordance with the written amenities construction schedule approved by the City in conjunction with the approval of the Final Plans. Upon approval, the written amenities construction schedule shall automatically be deemed incorporated within and made a part of this Agreement. All Project amenities and enhancements shall be maintained in perpetuity by the homeowner's association required to be created by this Agreement.

12.0 Building Elevations and Floor Plans. The Developer shall submit to the City for approval the building elevations and related floor plans for the proposed homes and Central Amenity Center (community clubhouse) to be constructed on the Property in conjunction with its application for large scale site plan approval. Building elevations and related floor plans submitted at the time of application for large scale site plan approval shall not be construed as requiring detailed construction drawings that would ordinarily be submitted in conjunction with an application for building permit approval. Upon approval by the City, the building elevations and related floor plans shall be deemed incorporated herein by this reference and said buildings shall be constructed substantially in accordance with the approved building elevations and floor plans. Further, other aspects of the building façade and roof lines, color scheme, and

architectural features depicted on the building may have to be adjusted during the City's final review and administrative approval procedures to issue a building permit. The design of the homes and Central Amenity Center (community clubhouse) shall create one aesthetically pleasing and unified Project.

13.0 Tree Mitigation Contribution Deferral.

(a) Conditions Precedent. The Developer and City acknowledge that, at the time of this Agreement's approval and execution, the Large Scale Site Plan has not yet been approved by the City's Planning and Zoning Board. The tree mitigation contribution calculation shall be determined at the time the Planning and Zoning Board considers and approves the Large Scale Site Plan. The deferral provided herein shall be contingent upon the Planning and Zoning Board approving the Site Plan within twelve (12) months of the Effective Date of this Agreement.

(b) Tree Mitigation Deferral. Based on the proposed Site Plan being presented to the Planning & Zoning Board for consideration by the Developer, as of the Effective Date of this Agreement, the City Council hereby agrees to conditionally defer the tree mitigation contribution payments, notwithstanding any other conflicting City Code provision, provided that the Site Plan is approved by the Planning and Zoning Board. A tree mitigation contribution shall be determined in accordance with the City's Landscape and Tree Protection Ordinance, Ord. 20-2023.("Tree Mitigation Contribution"). No payments of the Tree Mitigation Contribution shall be required for five (5) years following the date of the commencement of land clearing on the Property for the Project or the date of the 250th residential certificate of occupancy, whichever is earlier. If, by the end of the fifth year following the commencement of land clearing for the Project or the date of the 250th residential certificate of occupancy, Brightline Trains has constructed a train station within the jurisdictional limits of the City of Cocoa, the Tree Mitigation Contribution shall be forgiven, and the Developer shall have no obligation to pay the Tree Mitigation Contribution. Should Brightline Trains decline to build a train station within the jurisdictional limits of the City of Cocoa by the end of the fifth year following land clearing or by the time the 250th residential certificate of occupancy is issued, the Tree Mitigation Contribution shall become immediately due and payable by the Community Development District. The City then shall have the right, but not obligation to, immediately take any and all actions necessary to collect the entire Tree Mitigation Contribution to the extent the trees have been removed.

(c) Recalculation of Tree Mitigation Contribution. The City shall recalculate and adjust the Tree Mitigation Contribution in two circumstances. First, a recalculation and adjustment of the Tree Mitigation Contribution shall occur should the Planning and Zoning Board approve an amended version of the Site Plan. Adjustments may increase or decrease the Tree Mitigation Contribution, depending upon the amendments to the Site Plan approved by the Planning and Zoning Board. Second, to the extent that the City Code, Appendix A - Zoning, Article XIII, Section 22 Landscape Requirements, is amended prior to the end of the fifth year following the commencement of land clearing such that the total amount of the Tree Mitigation Contribution would be reduced under the amendment, the Developer may request, in writing, that the City Manager or his or her designee recalculate and decrease the Tree Mitigation Contribution.

Recalculations authorized in this Paragraph may be administratively granted without further approval of the City Council.

14.0 Homeowner's Association. In conjunction with the approval of the final subdivision for the Project, the Developer shall create a mandatory homeowner's association to govern the Project in accordance with Chapter 720, Florida Statutes. The association shall also be governed by the covenants and restrictions created and recorded against the Property by the Developer as required by this Agreement. A copy of the association's articles of incorporation, by-laws and recorded covenants and restrictions shall be provided to the City prior to the approval of the final subdivision. The homeowner's association shall be responsible for the perpetual maintenance and operation of all common areas and amenities constructed for the Project, shall govern the Project in accordance with the requirements of Florida law including the recorded covenants and restrictions and by-laws of the association, have the power to levy assessments and collect HOA fees, which are used to pay for the maintenance of the community common areas and any other designated areas that are detailed in the covenants and deeds applicable to the Project.

15.0 Model Homes. The City agrees to allow the Developer or Developer's chosen homebuilder(s) (hereinafter referred to in this Section as "Builder") for the Project to construct both a sales office and up to four (4) model homes to be used for the customary temporary marketing and sales activities of the Builder. The Builder shall have the right to utilize two garages in two model home units as the temporary sales office. The City represents that such marketing and sales activities shall be permitted through buildout of the Project. The City agrees to permit early construction of the model homes prior to or after plat approval, provided that, prior to construction of the model homes, stabilized access to the model home lots and adequate means of fire protection from a City-approved source of water are completed and the following conditions, which are deemed acceptable to Builder, are adhered to:

(a) The model homes shall remain under Builder's ownership and control until such time as a final certificate of occupancy for each model home unit is issued under the conditions set forth below. In other words, the Builder shall not contract for sale, sell, or lease any of the individual model home units until such time as the City issues a final certification of occupancy for each model home unit.

(b) The model homes shall be constructed on existing or proposed lots approved by the City, and any associated parking, pedestrian activity and other activities conducted by sales staff or the general public shall be adequately segregated from construction activities to ensure safety. Parking for the model homes shall be provided in a temporary parking lot to be located in an area approved by the City, which may consist of a mulch surface. Prior to a final certificate of occupancy being issued on the last remaining model home, the mulch surface shall be removed and the area shall either be prepared for home construction, open space or recreational amenity or seeded.

(c) The model sales office shall comply with all applicable state and city regulations regarding accessibility. In addition, Builder shall provide a minimal level of access to all model

homes for potential homebuyers with disabilities by providing physical access (via ramp or lift) to the primary level each model home and making photographs of other levels within each home available to the customer.

(d) Prior to construction, the model homes shall be duly permitted by the City in accordance with the City's Code. As part of the building permit application, the Builder shall submit, along with all construction plans for the units, a duly certified boundary survey which shall depict the location and legal description of each individual model lot. The Builder acknowledges and agrees that this legal description is intended to coincide with the eventual location of the lots as depicted and legally described on the final plat. The Builder shall assume full and complete responsibility in the event that said legal descriptions do not conform to the lot lines required by the City in the final plat. The Builder fully understands the construction of model homes before final plat is approved by the City may pose a risk to the Builder if the approved plat is not consistent with the layout of model home on the subject property, and that such risk may require modification or removal of the model home based on the approved plat before a final certificate of occupancy can be issued for the model home. The Builder agrees to defend, indemnify, and hold harmless the City from and against any and all damages, losses or claims arising from the layout and construction of the model home under this Agreement prior to preliminary and final plat approval as provided further in Section 34.0 of this Agreement.

(e) At such time as the City Building Official completes and approves a final inspection of the model homes, the City will issue a temporary certificate of occupancy. Said temporary certificate of occupancy shall be issued for each model home as a whole. Occupancy of the model home units shall be limited to the sales and marketing efforts for the Project until a final certificate of occupancy is issued for such model home units. It is intended that the model homes can be shown by sales staff to prospective buyers as long as the Building Official has issued the temporary certificate of occupancy and the model is not staffed continuously.

(f) Following completion of all required plat improvements, at the request of the Builder or at such time as the Project development is completed, whichever occurs sooner, the model home units shall be converted into permanent residential units and the City shall issue final certificates of occupancy for each model home unit, provided, that the City Building Official determines that such units are suitable for permanent residential occupancy and in compliance with the City Codes.

Nothing in this Section shall cause to limit the number of inventory homes (pre-sale, spec homes) that may be constructed on the Property. Violation of this Section will also constitute a violation of the City Code of Ordinances, and the provisions of this Section may also be enforced as provided therein. Any Builder desiring to construct a model home pursuant to this Section, other than Developer, shall be provided a copy of this Section by the Developer if Builder is not the owner of the subject property on which the model home will be constructed and shall automatically be deemed to have agreed to the terms and conditions herein as a condition of the issuance of a building permit by the City even if they are not the owner or have not consented, in writing, to the term and conditions of this Section.

16.0 Representations of the Parties. The City and Developer hereby each represent and warrant to the other that it has the power and authority to execute, deliver and perform the terms and provisions of this Agreement and has taken all necessary action to authorize the execution, delivery and performance of this Agreement. This Agreement will, when duly executed and delivered by the City and Developer, constitute a legal, valid and binding obligation enforceable against the parties hereto. Upon the recording of this Agreement in the Public Records of Brevard County, Florida, the Agreement shall be a binding obligation upon the Property in accordance with the terms and conditions of this Agreement. Developer represents that it has voluntarily and willfully executed this Agreement for purposes of binding himself and the Property to the terms and conditions set forth in this Agreement.

17.0 Successors and Assigns. This Agreement shall automatically be binding upon and shall inure to the benefit of the City and Developer and their respective successors and assigns. The terms and conditions of this Agreement similarly shall be binding upon the Property and shall run with title to the same upon being duly recorded against the Property by the City.

18.0 Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.

19.0 Amendments. This Agreement shall not be modified or amended except by written agreement duly executed by both parties hereto (or their successors or assigns) and approved by the City Council.

20.0 Entire Agreement; Exhibits; Conflicts. This Agreement, the Preceding Agreement and Stipulated Settlement Agreement and all attached exhibits thereto supersede any other agreement, oral or written, regarding the development of the Property and contain the entire agreement between the City and Developer as to the subject matter hereof. The Exhibits attached hereto and referenced herein are hereby fully incorporated herein by this reference. To the extent that a conflict exists between provisions of this Agreement and the Preceding Agreement, the conflicting provisions of this Agreement shall apply. However, to the extent a conflict exists between the provisions of this Agreement and the Stipulated Settlement Agreement, the conflicting provisions of the Stipulated Settlement Agreement shall apply.

21.0 Severability. If any provision of this Agreement shall be held to be invalid or unenforceable to any extent by a court of competent jurisdiction, the same shall not affect in any respect the validity or enforceability of the remainder of this Agreement.

22.0 Effective Date. This Amended and Restated Agreement shall become effective upon approval by the City Council and execution of this Agreement by both parties hereto.

23.0 Recordation. Upon full execution by the Parties, this Agreement shall be recorded in the Public Records of Brevard County, Florida by the City.

24.0 Relationship of the Parties. The relationship of the Parties to this Agreement is contractual and Developer and any Builder described in Section 13.0 are independent contractors and not an agent of the City. Nothing herein shall be deemed to create a joint venture or principal-agent relationship between the Parties or any such Builder, and neither party nor Builder is authorized to, nor shall either party act toward third persons or the public in any manner, which would indicate any such relationship with the other.

25.0 Sovereign Immunity. Notwithstanding any other provision set forth in this Agreement, nothing contained in this Agreement shall be construed as a waiver of the City's right to sovereign immunity under section 768.28, Florida Statutes, or other limitations imposed on the City's potential liability under state or federal law. As such, the City shall not be liable under this Agreement for punitive damages or interest for the period before judgment. Further, the City shall not be liable for any claim or judgment, or portion thereof, to any one person for more than two hundred thousand dollars ($200,000.00), or any claim or judgment, or portion thereof, which, when totaled with all other claims or judgments paid by the State or its agencies and subdivisions arising out of the same incident or occurrence, exceeds the sum of three hundred thousand dollars ($300,000.00).

26.0 City's Police Power. Developer agrees and acknowledges that the City hereby reserves all police powers granted to the City by law. In no way shall this Agreement be construed as the City bargaining away or surrendering its police powers.

27.0 Interpretation. The parties hereby agree and acknowledge that they have both participated equally in the drafting of this Agreement and no party shall be favored or disfavored regarding the interpretation to this Agreement in the event of a dispute between the parties.

28.0 Third-Party Rights. This Agreement is not a third-party beneficiary contract and shall not in any way whatsoever create any rights on behalf of any third party.

29.0 Specific Performance. Strict compliance shall be required with each and every provision of this Agreement. The Parties agree that failure to perform the obligations provided by this Agreement shall result in irreparable damage and that specific performance of these obligations may be obtained by a suit in equity.

30.0 Attorney's Fees. In connection with any arbitration or litigation arising out of this Agreement, each party shall be responsible for their own attorney's fees and costs.

31.0 Development Permits. Nothing herein shall limit the City's authority to grant or deny any development permit applications or requests subsequent to the Effective Date of this Agreement. The failure of this Agreement to address any particular City, County, State and/or Federal permit, condition, term or restriction shall not relieve Developer or the City of the necessity of complying with the law governing said permitting requirement, condition, term or restriction. Without imposing any limitation on the City's police powers, the City reserves the

right to withhold, suspend or terminate any and all certificates of occupancy for any building, trailer, structure or unit if Developer is in breach of any term and condition of this Agreement.

32.0 Default. Failure by either party to perform each and every one of its obligations hereunder shall constitute a default, entitling the non-defaulting party to pursue whatever remedies are available to it under Florida law or equity including, without limitation, an action for specific performance and/or injunctive relief. Prior to any party filing any action or exercising any remedy or right expressly provided in this Agreement as a result of a default under this Agreement, the non-defaulting party shall first provide the defaulting party with written notice of said default. Upon receipt of said notice, the defaulting party shall be provided a forty-five (45) day (or such other time mutually agreed to in writing by the Parties) opportunity in which to cure the default to the reasonable satisfaction of the non-defaulting party prior to filing said action.

33.0 Termination. Except as expressly provided in this Agreement, this Agreement may only be terminated by mutual written consent of the Parties. If the Parties terminate this Agreement and the Agreement was recorded in the Official Records of Brevard County, the City shall record a notice of termination against the Property in the Official Records of Brevard County, Florida.

34.0 Indemnification and Hold Harmless. Developer shall be solely responsible for designing, permitting, constructing, operating and maintaining this Project. As such, in consideration of the rights and benefits afforded to and accepted by the Developer hereunder, Developer hereby agrees to indemnify, release, and hold harmless the City and its councilmembers, employees and attorneys from and against all claims, losses, damages, personal injuries (including, but not limited to, death), or liability (including reasonable attorney's fees and costs through all appellate proceedings), directly or indirectly arising from, out of, or caused by Developer and Developer's contractor's and subcontractor's performance of design, permit and construction activities in furtherance of constructing the Project under this Agreement and the operation and maintenance of the Project thereafter. This indemnification shall survive the termination of this Agreement.

35.0 Force Majeure. The Parties agree that in the event that the failure by either party to accomplish any action required hereunder within a specified time period ("Time Period") constitutes a default under the terms of this Agreement and, if any such failure is due to any unforeseeable or unpredictable event or condition beyond the control of such party, including, but not limited to, acts of God, acts of government authority (other than the City's own acts), acts of public enemy or war, riots, civil disturbances, power failure, shortages of labor or materials, injunction or other court proceedings beyond the control of such party, severe adverse weather conditions or a United States economic recession declared by the National Bureau of Economic Research that temporarily makes it commercially impractical for Developer to complete the construction of the Project and sell the required residential homes ("Uncontrollable Event"), then, notwithstanding any provision of this Agreement to the contrary except as expressly provided below, that failure shall not constitute a default under this Agreement and any Time Period proscribed hereunder shall be extended by the amount of time that such party was unable

to perform solely due to the Uncontrollable Event. The impacted party shall give notice to the other party, stating the period of time the occurrence is expected to continue, and he extended time period shall be agreed to in writing by the Parties and said agreement shall not be unreasonably withheld by either party. The impacted party shall use diligent efforts to end the failure or delay and ensure the effects of such force majeure event are minimized. The impacted party shall resume the performance of its obligations as soon as reasonably practicable after the removal of the cause. A force majeure event shall not excuse the Developer's requirement to provide and maintain in effect a letter of credit under Section 9.0 of this Agreement or a performance and maintenance bond required by City Code. In addition, a United States economic recession force majeure event shall not excuse Developer from completing the Final Plans in accordance with the time periods required by Section 8.0 of this Agreement. The Parties agree that the provisions of Section 252.363, Florida Statutes do not apply to this Agreement or are hereby waived to the extent that such provisions are deemed to apply. Notwithstanding the aforesaid, the Parties may extend any Time Period as expressly provided elsewhere in this Agreement or as otherwise mutually agreed to in writing.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seal on the date first above written.

CITY OF COCOA

By: _____
Michael C. Blake, Mayor

Date: 12/19/23

ATTEST:

By: _____
Monica Arsenault, Deputy City Clerk

APPROVED AS TO FORM AND LEGALITY
For the use and reliance of the City of Cocoa, Florida only.

Date: 12/19/23
By: _____
Anthony A. Garganese, City Attorney for the City of Cocoa, Florida

CITY SEAL

Signed, sealed and delivered in the presence of the following witnesses:

Signature of Witness

Anelis Leon
Printed Name of Witness

Signature of Witness

Brian Dominguez
Printed Name of Witness

MOUNTAIN COVE HOMES AT LAKES AT COCOA GROVE, LLC

Print name and title: VICTOR F SOLORZANO MANAGER

Date: 01-22-2024

STATE OF Florida
COUNTY OF Miami Dade

The foregoing instrument was acknowledged before me this 22 day of January, 2024, by Victor F. Solorzano, the Manager of Mountain Cove Homes at Lakes at Cocoa Grove, LLC a limited liability company He is personally known to me or produced _____ _____ as identification.

(NOTARY SEAL)

ALICIA E. QUINONES
Notary Public
State of Florida
Comm# HH193748
Expires 2/5/2026

(Notary Public Signature)

Alicia E. Quinones
(Print Name)

Notary Public, State of Florida
Commission No.: HH193748
My Commission Expires: 2/5/2026

DEVELOPER IS HEREBY ADVISED THAT SHOULD DEVELOPER FAIL TO FULLY EXECUTE, AND DELIVER TO THE CITY, THIS AGREEMENT WITHIN THIRTY (30) DAYS FROM THE DATE THAT THE CITY COUNCIL APPROVES THIS AGREEMENT, THIS AGREEMENT SHALL AUTOMATICALLY BE DEEMED NULL AND VOID.

Exhibits:

A – Legal Description
B –Concept Plan

EXHIBIT A
Legal Description

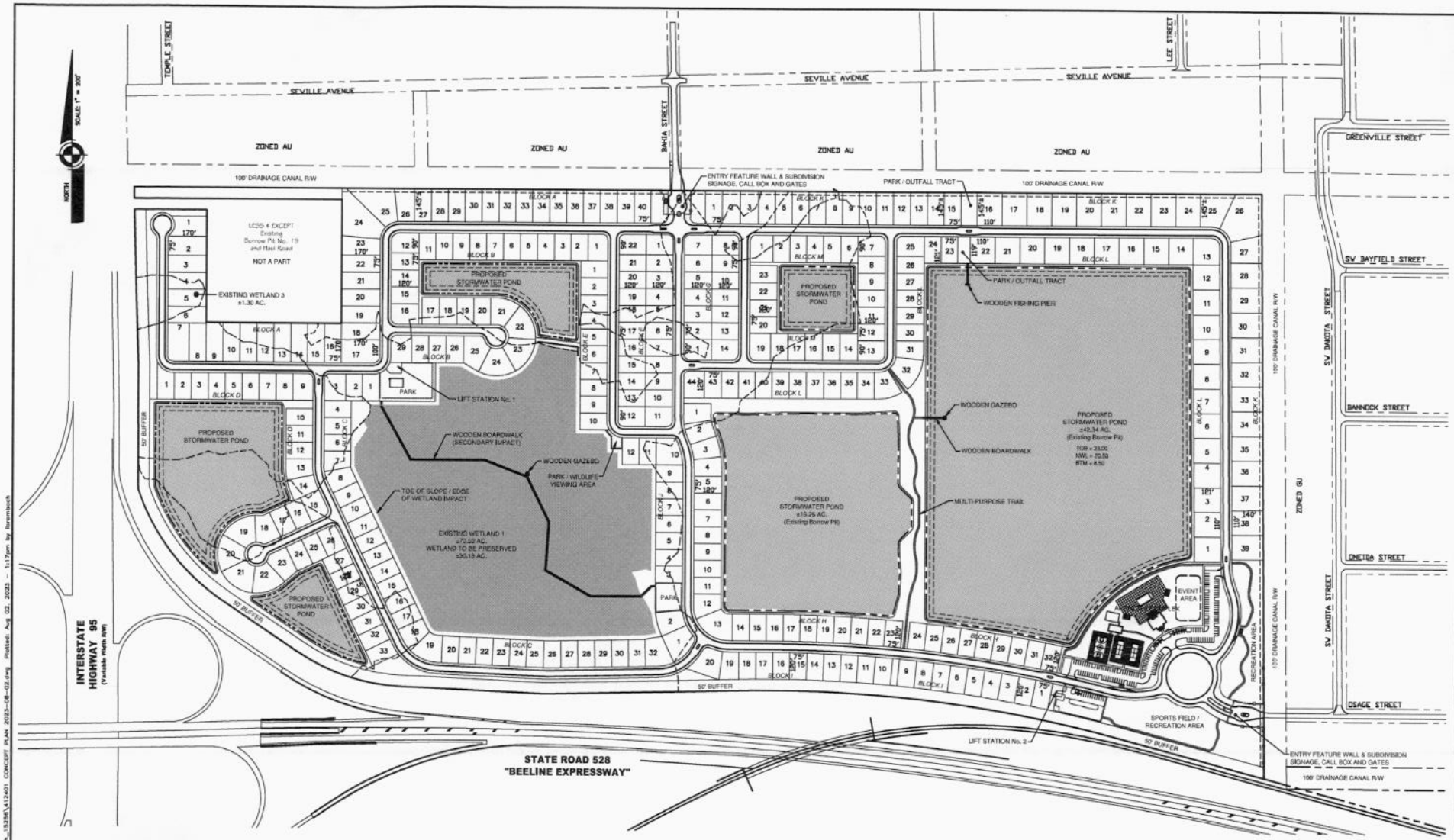
Description:

A parcel of land as described in O.R. Book 8563 Page 760 of the public Records of Brevard County, Florida and lying in Section 10, Township 24 South, Range 35 East and being more particularly described as follows;

Begin at the northeast corner of said Section 10; thence S. 00°31'49" E., along the east line of the northeast corner of said Section 10, a distance of 2602.21 feet to a point lying 44.08 feet N. 00°31'49" E. of the east quarter corner of said Section 10, said point also being on the northerly right-of-way line of State Road No. 528 as shown on Section Map 70007-2508; thence N. 74°59'21" W., along said north right-of-way line, a distance of 693.63 feet to the Point-of-Curvature of a 5879.58 foot radius circular curve concave southerly; thence easterly, along the arc of said curve, through a central angle of 16°24'08" a distance of 1683.16 ft. said curve having a chord bearing of N. 83°11'25" W. and a chord distance of 1677.42 ft.; thence S. 88°36'31" W., along said northerly right-of-way line, a distance of 858.67 feet; thence N. 87°23'29" W., along said northerly right-of-way line, a distance of 638.50 feet to the Point-of-Curvature of a 900.00 foot radius circular curve concave northeasterly, said curve also being the northeasterly right-of-way line of the State Road No. 528 and I-95 interchange; thence northwest along the arc of said curve, through a central angle of 31°18'50" a distance of 491.88 feet said curve having a chord bearing of N. 71°44'04" W. and a chord distance of 485.78 feet; thence N. 56°04'39" W., along said State Road 528/I-95 right-of-way line, a distance of 398.70 feet to a non-tangent point on a 969.79 foot radius circular curve concave northeasterly; thence northwesterly, along the arc of said curve, through a central angle of 37°46'38" a distance of 639.42 feet said curve having a chord bearing of N. 37°11'20" W. and a chord distance of 627.90 feet to a point on the easterly right-of-way line of I-95 per FDOT Map Section 70220; thence N. 00°11'53" W., along said easterly right-of-way line, a distance of 566.36 feet; thence N. 01°55'04" W., along said easterly right-of-way line, a distance of 300.93 feet; thence N. 01°21'38" W., along said easterly right-of-way line, a distance of 376.15 feet to a point on the south line of a borrow pit No. 19 Haul Road; thence N. 89°58'02 E., along said south line, a distance of 318.30 feet to a point on the west line of borrow pit No. 19 per FDOT Project No. 70220-2402; thence along the west, south, east and north lines of said borrow pit, the following four courses; S. 00°01'58" W. a distance of 500.00 feet; thence S. 89°58'02" E. a distance of 600.00 feet; thence N. 00°01'58" E. a distance of 550.00 feet; thence N. 89°58'02" W. a distance of 919.51 feet to a point on the aforesaid easterly right-of-way line of I-95; thence N. 01°20'38" W., along said easterly right-of-way line, a distance of 50.01 feet to a point on the north line of the northwest ¼ of said Section 10; thence S. 89°58'02" E., along said north line, a distance of 2337.02 feet to the north quarter corner of said Section 10; thence S. 89°58'06" E., along the north line of the northeast ¼ of said Section 10, a distance of 2665.57 feet to the Point-of-Beginning.

Containing 246.43 acres more or less and being subject to any easements and/or rights-of-ways of record.

EXHIBIT "B"



NOTE:
This plan is conceptual, and is subject to final design and permitting.

Lakes at Cocoa Grove CDD			
Residential Lot Type	Size	Units	Acres
Estate Lots	110' x 119' min.	46	15.67
North Perimeter Lots	75' x 145' min.	55	15.76
Regular Lot size	75' x 120' min.	249	54.65
Totals		350	86.08

WETLAND SUMMARY

On-Site Wetland Area = 71.816 ac.
Proposed Wetland Impact = 41.634 ac.
Wetland to be Preserved = 30.182 ac.

WETLAND TO BE PRESERVED

SITE DATA

Overall Site Area = 246.43 ac.
Zoning = RU-1-7
Min. Lot Width = 75'
Min. Lot Depth = 100'
Min. Lot Area = 7,500 s.f.
Max. Building Height = 35'

LARGE LOTS = 110' x 120' MIN. = 47 LOTS
REGULAR LOTS 75' x120' MIN. = 279 LOTS
SMALL LOTS 75' x 115' MIN. = 24 LOTS

350 LOTS

NO.	DATE	DRW BY	CHK BY	APPR BY
1	08.02.23	LB	LB	JJD

Rotate entrance to align with osage — JJD

CONCEPT PLAN FOR
Lakes at Cocoa Grove SUBDIVISION
CITY OF COCOA, FLORIDA

Concept Plan
COVER SHEET
EXHIBIT "B"

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2668
100 Parnell Street Suite A, Merritt Island, FL 32953
Phone 321.453.0030 WWW.DRMP.COM
DRMP, Inc.

PROJECT NUMBER:	21-0569.000
SCALE:	1" = 200'
DATE:	February 21, 2020
SHEET:	1

C:\Users\brentmitch\appdata\local\temp\AcPublish_15356\412401 CONCEPT PLAN 2023-08-02.dwg Plotted: Aug 02, 2023 - 1:17pm by brentmitch

CFN 2008005069, OR BK 5837 Page 2226, Recorded 01/09/2008 at 04:24 PM, Scott Ellis, Clerk of Courts, Brevard County

1/20

IN THE CIRCUIT COURT OF THE EIGHTEENTH JUDICIAL CIRCUIT IN AND FOR BREVARD COUNTY, FLORIDA

BREVARD COUNTY, Florida,
a Political Subdivision of the
State of Florida,

Case No: 05-2005-018141-XXXX-XX

Petitioner,

vs.

CITY OF COCOA, Florida,
a Municipal Corporation,

Respondent,

_____/

FILED IN VIERA-A
CLERK OF CIR. CT.
BREVARD CO. FL.
2008 JAN -9 A 10: 29
SCOTT ELLIS

Not Suitable for Imaging

STIPULATED SETTLEMENT AGREEMENT

This Stipulated Settlement Agreement ("Settlement" or "Agreement") is made and entered into this 11th day of December, 2007 by and among (i) Brevard County, Florida, a political subdivision of the State of Florida (hereinafter the "County"), (ii) the City of Cocoa, Florida, a municipal corporation, (hereinafter the "City"), (iii) Florida Space Needle, LLC (hereinafter "FSN") and Barrera Shores, LLC, formerly known as Hagen-Nicholson Properties, LLC (hereinafter "Barrera"). Collectively all parties will be referred to herein as the "Parties".

RECITALS

1. On August 24, 2004, pursuant to Ordinance No. 31-2004, the City annexed 757.29 acres of real property into the municipal boundaries of the City.

Case # 05-2005-CA-018141-XXXX-XX
Document Page # 7
011445665

Among other property, the annexation included real property owned by FSN and by Barrera.

2. On September 23, 2004, Petitioner filed a Petition for Writ of Certiorari challenging the City's annexation.

3. Since that time, the Parties have litigated numerous issues before various judicial and administrative tribunals.

4. Currently, the only active matter remaining before the Courts is this circuit court proceeding (the "Lawsuit").

5. All Parties now wish to resolve all pending matters in the above-styled case.

ACCORDINGLY, in consideration of the above-stated Recitals, the receipt and sufficiency of which are acknowledged by the Parties hereto, the Parties (and those related individuals and entities joining and consenting) agree as follows:

TERMS

SECTION 1. RECITALS. The above Recitals are true and correct and are hereby incorporated in this Agreement as a material part hereof.

SECTION 2. SUBMISSION OF ORDER. Thereafter, the Parties to this Stipulated Settlement Agreement will submit to the Court a Joint Motion and Order approving this Stipulated Settlement Agreement, a copy of which Joint Motion and agreed Order are attached to this Agreement as a material part, upon its full execution by all Parties.

SECTION 3. SPECIFIC AGREEMENTS. The Parties agree as follows:

(1) The City will limit development on the 267 ± acre parcel of property owned by Barrera, a legal description of which is provided as Exhibit "B"

attached to this Agreement ("Barrera's Property"), to 600 total residential units. The gross density permitted by the City for Barrera's property will be approximately 2.3 residential units per acre.

(2) The Parties agree that all units shall be to a minimum of 1,500 square feet under air conditioning.

(3) Barrera has submitted a new bubble plan which depicts a 600 unit development with open space and conservation area being located on the Eastern and Southern portion of the Barrera property, so as not to create an adverse affect on the adjoining neighbors (Exhibit "B"). Barrera Shores will be substantially developed in accordance with said bubble plan subject to the improvements directed by the City of Cocoa. The bubble plan is attached hereto as Exhibit "B-1."

(4) The City will require the size of FSN's perimeter lots located on the North and located on the East perimeter of the parcel of property described in Exhibit "A" to be no less than 70 feet by 140 feet, with the rear 15 feet of the lot dedicated to be a natural buffer. The City will limit development on the 246 ± acre parcel of property owned by FSN, a legal description of which is provided as Exhibit "A" attached to this Agreement ("FSN Property"), to between 300 to 500 total residential units. The gross density permitted by the City for this FSN Property will be approximately 2.03 residential units per acre.

(5) The Parties agree that ingress/egress previously proposed for Friday Road, has been eliminated and the proposed ingress/egress may now be used as a park or for other recreational facilities as may be directed by the City of Cocoa. Said area will be buffered from the adjacent properties. The Parties agree that location of the ingress/egress points for the northern parcel shall be identified on Exhibit "C" attached to and incorporated in this Agreement. With regard to whether public road access from the northern parcel east to Grissom shall be via Osage / Angelica or south along the 100-foot wide drainage canal right-of-way ("Canal R/W"), the County shall have the option of choosing which access shall be acceptable. If the County determines that public road access shall be along the Canal R/W instead of via Osage / Angelica, then the County agrees to use its power of eminent domain to condemn or otherwise acquire any lands or interests in land within the Canal R/W depicted on Exhibit "C" so as to enable FSN to connect the northern parcel to Grissom Road. FSN agrees to pay all the County's reasonable costs in acquiring said lands or interests in land and the cost of constructing a public road access to the FSN property over that land and canal right of way.

(6) FSN and Barrera shall provide secondary access for their respective properties at their expense. Barrera agrees that the intersection of James Road and Friday Road will be redesigned and reconstructed to accommodate the

increased traffic. Under the County's transportation impact fee ordinance, these improvements will be considered site-related improvements and, therefore, are not eligible for any transportation impact fee credits.

(7) James Road classification shall be modified and Barrera will pay for construction of traffic calming devices along James Road. Input from property owners along James Road will be solicited by the County regarding the location and placement of traffic calming devices. All traffic calming devices along James Road shall be constructed and completed following land clearing but prior to any further construction or site work being completed.

(8) The City agrees to enter into an interlocal agreement with the County, to be negotiated by both parties in good faith and upon mutually acceptable terms, whereby the MSTU revenues derived from the developments will be utilized in the immediate area on County owned and maintained facilities directly affected by the developments, specifically, Cox Road, James Road, Friday Road, the County owned and maintained portion of Westminster Road, and associated intersections and drainage functions.

(9) It is understood that Barrera may provide or contribute intersection improvements at Friday Road and State Road 524, together with improvements to the North and South bound exit ramps at State Road 524, as

directed by the County. These improvements are not considered site related improvements and therefore are eligible for transportation impact fee credits.

(10) The City shall determine appropriate locations for the installation of all water and sewer infrastructure. Homes adjacent to this infrastructure that already have installed a functioning septic system shall not be required to connect to the City's system until such time as the septic system may fail.

(11) Barrera and FSN shall comply with all applicable drainage permitting requirements of the County and/or the St. John's River Water Management District to the extent required by law.

SECTION 4. COOPERATION. Neither Party nor entity referenced above shall take any action or refrain from taking any action in a manner which is inconsistent with the intent and spirit of this Stipulated Settlement Agreement. The City and County agree to use best efforts to process and permit approvals reasonably necessary to implement the development plans of FSN and Barrera consistent with the terms of this Stipulated Settlement Agreement.

SECTION 5. EFFECTIVE DATE. This Stipulated Settlement Agreement shall be effective upon the entry of an Order of the Court.

SECTION 6. DISMISSAL OF PROCEEDINGS. That all legal proceedings between the Parties and entities referenced above shall, if still active,

be dismissed upon entry of the Order, each party to pay its own attorney's fees and costs. Within three (3) business days after the full execution of this Agreement and the date that the Court enters an Order approving this Agreement and Dismissing the Action with Prejudice, the Parties, through their counsel, shall cause to be filed in the Circuit Court of Brevard County, Florida, a Joint Stipulation for Dismissal, with prejudice, relative to any other litigation or any administrative proceedings that may be pending between or among the Parties.

SECTION 7. ENFORCEABLE AGREEMENT. The Parties agree that this Agreement is valid, binding, and enforceable, and each Party warrants to all other Parties that it has the requisite power and authority to be bound by this Agreement. The Parties agree that they shall not challenge in any forum the validity or enforceability of this Agreement.

SECTION 8. RELEASES. The Parties on their own behalf and on behalf of their past and present agents, assigns, and any all persons or entities claiming through them or under them, hereby each release and forever discharge the other and their respective past, present and future parent corporations, subsidiaries, affiliates, shareholders, agents, employees, directors, officers, servants, assigns, insurers, partners, attorneys, and predecessors and successors, officers, directors, and elected officials ("Released Parties"), from any and all claims and demands, actions and causes of action, at law or in equity, known and unknown, which either

now owns or holds, or has at any time heretofore owned or held against the other or any of the Released Parties, including, but not limited to, any and all claims, demands or causes of action of any kind whatsoever arising out of the above-styled causes.

SECTION 9. VENUE. The venue for all lawsuits brought by any of the Parties hereto involving any dispute, controversy, or claim arising out of or in connection with this Agreement shall be brought in the Circuit Court of Brevard County, Florida.

SECTION 10. BINDING UPON SUCCESSORS. This Stipulated Settlement Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, heirs, parent corporations, subsidiaries, affiliates, representatives, and assigns. Any party may record this document.

IN WITNESS WHEREOF, the Parties hereto have executed this Stipulated Settlement Agreement on the date first above written.

ATTEST:

Joan Clark, City Clerk

Date: December 11, 2007

"CITY"

CITY OF COCOA, FLORIDA

By: Michael C. Blake, Mayor

"COUNTY"

BREVARD COUNTY, FLORIDA

By: _____

Print Name: Scott Ellis

Name: Jackie Colon

Clerk

Title: Chairperson

As approved by the Board 11-13-07

Print Name: _____

APPROVED AS TO FORM AND
LEGALITY.

_____

STATE OF FLORIDA
COUNTY OF BREVARD

The foregoing instrument was acknowledged before me this 13 day of November, 2007 by Jackie Colon, the Chairperson of Brevard County, on behalf of Brevard County, He is personally known to me and did not take an oath.

_____
Signature of Notary Public

Jennifer Jones
Print Notary Name
My Commission Expires: _____
Commission No.: _____
☒ Personally known, or
☐ Produced Identification
Type of Identification Produced

AFFIX NOTARY STAMP

Jennifer Jones
Commission #DD329614
Expires: Jul 31, 2008
Bonded Thru
Atlantic Bonding Co., Inc.

11

"FSN"

FLORIDA SPACE NEEDLE, LLC

Donna C. Darter

Print Name: DONNA C. DARTER

Nicholas G. Levato

Print Name: Nicholas G. Levato

By: Kenneth E. Allen

Name: Kenneth E. Allen

Title: President

STATE OF FLORIDA
COUNTY OF BREVARD

The foregoing instrument was acknowledged before me this 26th day of DECEMBER, 2007 by KENNETH E. ALLEN, the PRESIDENT of Florida Space Needle, LLC on behalf of Florida Space Needle, LLC. He is personally known to me and did not take an oath.

Donna C. Darter
Signature of Notary Public

DONNA C. DARTER
Print Notary Name
My Commission Expires:_____
Commission No.:_____
☒ Personally known, or
☐ Produced Identification
Type of Identification Produced

AFFIX NOTARY STAMP

NOTARY PUBLIC-STATE OF FLORIDA
Donna C. Darter
Commission # DD406637
Expires: APR. 25, 2009
Bonded Thru Atlantic Bonding Co., Inc.

12

"BARRERA"

BARRERA PROPERTIES, LLC

By: Terry D. Hagen

Name: TERRY D. HAGEN

Title: MANAGER

Print Name: MICHAEL D. JONES

Jean Hovey

Print Name: Jean Hovey

STATE OF FLORIDA
COUNTY OF BREVARD

The foregoing instrument was acknowledged before me this 3rd day of January, 2008 by Terry D. Hagen the Manager of Barrera Properties, LLC on behalf of Barrera Properties, LLC. He is personally known to me and did not take an oath.

NOTARY PUBLIC-STATE OF FLORIDA
Jean M. Hovey
Commission # DD509536
Expires: FEB. 03, 2010
Bonded Thru Atlantic Bonding Co., Inc.

Jean M. Hovey
Signature of Notary Public

Jean M. Hovey
Print Notary Name

My Commission Expires:_____

Commission No.:_____

☒ Personally known, or

☐ Produced Identification

Type of Identification Produced

AFFIX NOTARY STAMP

13

THOMAS A. CLOUD
Florida Bar Number: 293326
HEATHER M. BLOM-RAMOS
Florida Bar Number: 588601
GRAYROBINSON, P.A.
301 East Pine St. Ste. 1400
Orlando, Florida 32801
407-843-8880
407-244-5690 Facsimile
Counsel for Florida Space Needle, LLC

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OFFICE OF THE COUNTY ATTORNEY
2725 Judge Fran Jamieson Way
Building C
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321-633-2096 Facsimile
Counsel for Petitioner
Brevard County

ANTHONY GARGANESE
Florida Bar Number: 988294
BROWN GARGANESE WEISS & D'AGRESTA
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407.425.9596 Facsimile
Counsel for Respondent
City of Cocoa

MICHAEL D. JONES
Florida Bar Number: 137608
MICHAEL D. JONES & ASSOCIATES, P.A.
P.O. Box 196130
Winter Springs, FL 32719-6130
407-695-7666
407-695-7157 (Facsimile)
Counsel for Barrera Properties, LLC

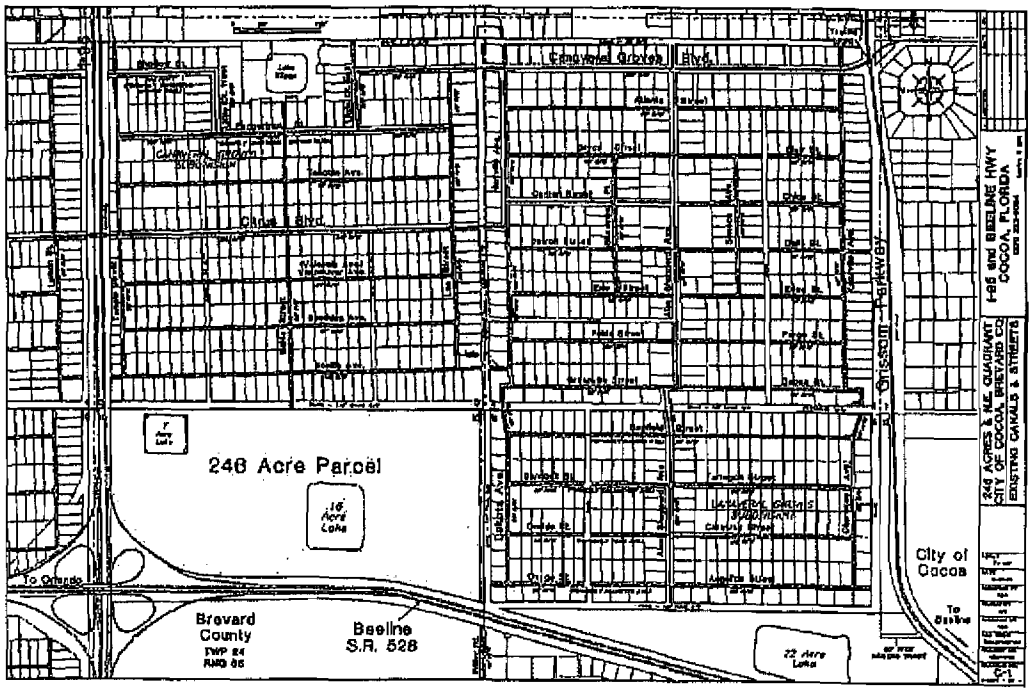
246 Acre Parcel
16 Acre Lake
Brevard County
Beeline S.R. 528
To Orlando
City of Cocoa
To Beeline
22 Acre Lake
Grissom Parkway
Clubhouse Drive
Oakland Ave
246 Acres & NE QUADRANT CITY OF COCOA, BREVARD CO. EXISTING CANALS & STREETS
I-95 and BEELINE HWY COCOA, FLORIDA

EXHIBIT
A

15

Fidelity National Title
Insurance Company

Title No. 45441-CD05-104513
Agent ID: FL-2264
Agent File No. FSN/Fairwinds
Policy Jacket No. 1482-5689

EXHIBIT A

PARCEL 1

A parcel of land lying in the North Half of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, run thence South 89 degrees 57 minutes 44 seconds East, along the North line of said Section 10, a distance of 329.44 feet to the POINT OF BEGINNING; thence continue South 89 degrees 57 minutes 44 seconds East, along said North line a distance of 2266.28 feet; thence departing said North line of Section 10, South 00 degrees 32 minutes 12 seconds East, a distance of 2235.09 feet to a point on the existing Northerly right of way line of State Road No. 528 (also known as the "Bee Line Expressway", formerly known as State Road No. 524); thence South 88 degrees 36 minutes 31 seconds West (Calculated measurement) South 88 degrees 40 minutes 54 seconds West (Deed), along said existing North right of way line a distance of 454.64 feet; thence North 87 degrees 19 minutes 06 seconds West, a distance of 638.49 feet, to a point of curvature of a curve concave to the Northeast, having a radius of 900.00 feet a central angle of 31 degrees 18 minutes 50 seconds (Calculated measurement) 31 degrees 18 minutes 48 seconds (Deed), thence Northwesterly along the arc of said curve a distance of 491.88 (calculated measurement) 491.87 (Deed) feet; thence North 56 degrees 04 minutes 39 seconds West (Calculated measurement) North 56 degrees 00 minutes 19 seconds West (Deed), a distance of 398.70 (Calculated measurement) 398.75 (Deed) feet to a point of curvature of a non-tangent curve concave to the North having a radius of 969.79 feet, a central angle of 37 degrees 46 minutes 38 seconds, thence Northwesterly along the arc of said curve a distance of 639.42 feet, to a point on the East right of way line of State Road No. 9 (Interstate 95); thence North 00 degrees 11 minutes 53 seconds West, along said East right of way line of State Road No. 9 (Interstate 95), a distance of 566.36 feet; thence North 01 degrees 55 minutes 04 seconds West, a distance of 300.93; thence North 01 degrees 20 minutes 38 seconds West, a distance of 476.50 feet to the POINT OF BEGINNING.

LESS AND EXCEPT THE AREA FOR BORROW PIT NO. 19 AND HAUL ROAD AS SET FORTH IN CIRCUIT COURT MINUTE BOOK 57, PAGE 479, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, OTHER THAN THE REVERSIONARY INTEREST, DESCRIBED AS FOLLOWS:

BORROW PIT NO. 19

A parcel of land in the Northwest Quarter of Northwest Quarter of Section 10, Township 24 South, Range 35 East, described as follows:

Commence on the North boundary of said Section 10, at a point 150 feet East from the Northwest corner thereof, run thence South 00 degrees 12 minutes 38 seconds East 50 feet; thence North 89 degrees 59 minutes 22 seconds East, 499.83 feet to the Northwest corner of Borrow Pit No. 19 and the POINT OF BEGINNING; continue thence North 89 degrees 59 minutes 22 seconds East 600 feet; thence South 00 degrees 00 minutes 38 seconds East 550 feet; thence South 89 degrees 59 minutes 22 seconds West 600 feet; thence North 00 degrees 00 minutes 38 seconds West 550 feet to the POINT OF BEGINNING.

AND

Fidelity National Title
Insurance Company

Title No. 45441-CD05-104513
Agent ID: FL-2264
Agent File No. FSN/Fairwinds
Policy Jacket No. 1482-5689

HAUL ROUTE FOR BORROW PIT NO. 19

That part of the Northwest Quarter of Northwest Quarter of Section 10, Township 24 South, Range 35 East, lying South and within 50 feet of a line described as follows:

Begin at the Northwest corner of Borrow Pit No. 19 as described above, run thence South 89 degrees 59 minutes 22 seconds West 499.83 feet to the end of said line as herein described.

PARCEL 2

A parcel of land lying in the North Half of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, run thence South 89 degrees 57 minutes 44 seconds East, along the North line of said Section 10, a distance of 2595.72 feet to the POINT OF BEGINNING; thence continue South 89 degrees 57 minutes 44 seconds East, along said North line of Section 10 a distance of 70.51 feet, to the North Quarter corner of Section 10; thence South 89 degrees 57 minutes 56 seconds East, along said North line of Section 10, a distance of 1926.93 feet; thence departing said North line South 00 degrees 32 minutes 12 seconds East, a distance of 2404.54 feet, to a point on a curve on the existing Northerly right of way line of State Road No. 528 (also known as the "Bee Line Expressway", formerly known as State Road No. 524); thence along said existing North right of way line and along said curve that is concave to the South, having a radius of 5879.58 feet, a central angle of 15 degrees 41 minutes 33 seconds; thence Westerly, along the arc of said curve, a distance of 1610.32 feet; thence South 88 degrees 36 minutes 31 seconds West (Calculated measurement) South 88 degrees 40 minutes 54 seconds West (Deed), a distance of 404.03 feet; thence departing said North right of way line North 00 degrees 32 minutes 12 seconds West, a distance of 2235.09 feet, to the POINT OF BEGINNING.

PARCEL 3

A parcel of land lying in the North Half Section 10, Township 24 South, Range 35 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, run thence South 89 degrees 57 minutes 44 seconds East, along the North line of said Section 10, a distance of 2666.23 feet to the North Quarter corner of Section 10; thence South 89 degrees 57 minutes 56 seconds East, along said North line of Section 10, a distance of 1926.93 feet, to the POINT OF BEGINNING; thence continue South 89 degrees 57 minutes 56 seconds East, along said North line of said Section 10, a distance of 738.58 feet to the Northeast corner of Section 10; thence South 00 degrees 32 minutes 12 seconds East, along the East line of said Section 10, a distance of 2602.18 feet, to a point on the existing Northerly right of way line of State Road No. 528 (also known as the "Bee Line Expressway", formerly known as State Road No. 524); thence North 74 degrees 59 minutes 21 seconds West, along said existing North right of way line, a distance of 693.63 feet, to a point of curvature of a curve concave to the South, having a radius of 5879.58 feet, a central angle of 00 degrees 42 minutes 35 seconds, thence Westerly, along the arc of said curve, a distance of 72.84 feet; thence departing said

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Fidelity National Title
Insurance Company

Title No. 45441-CD05-104513
Agent ID: FL-2264
Agent File No. FSN/Fairwinds
Policy Jacket No. 1482-5689

North right of way line North 00 degrees 32 minutes 12 seconds West, a distance of 2404.54 feet, to the POINT OF BEGINNING.

PARCEL 5

The West 318 feet of the South Half of the South Half of the South Half of the North Half, LESS the North 30 feet for road and LESS the South 100 feet and the West 100 feet for canal, Section 11, Township 24 South, Range 35 East, Brevard County, Florida. Also known as Tract 6, Block 16, CANAVERAL GROVES SUBDIVISION, according to the Map thereof, as recorded in Survey Book 2, Page 621, Brevard County, Florida.

EXHIBIT "B"

BARRERA PROPERTY

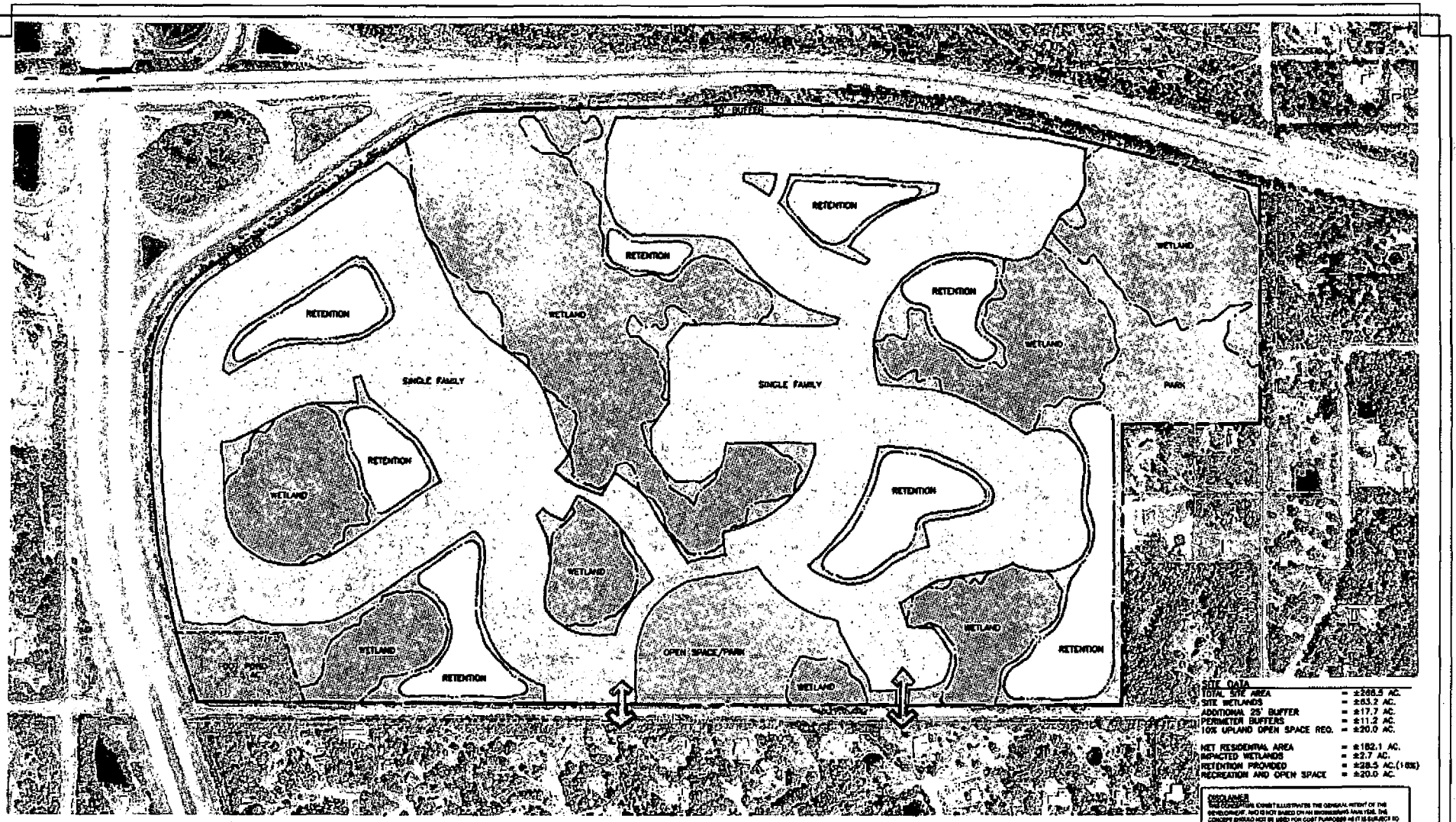
A PARCEL OF LAND LYING IN SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH 1/4 CORNER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, RUN THENCE NORTH 00 DEGREES 15 MINUTES 39 SECONDS WEST, A DISTANCE OF 50.05 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF JAMES ROAD, A 50 FOOT RIGHT OF WAY PER OFFICIAL RECORDS BOOK 783, PAGE 918 AND THE POINT OF BEGINNING; THENCE ALONG SAID RIGHT OF WAY LINE, NORTH 89 DEGREES 44 MINUTES 06 SECONDS WEST, A DISTANCE OF 1630.19 FEET TO A POINT ON THE WATER RETENTION AREA AS DESCRIBED IN F.D.O.T. MAP NO. 405506 5; THENCE LEAVING SAID RIGHT OF WAY LINE AND ALONG SAID WATER RETENTION AREA FOR THE NEXT 2 COURSES: NORTH 16 DEGREES 15 MINUTES 30 SECONDS WEST, A DISTANCE OF 333.76 FEET; THENCE NORTH 89 DEGREES 44 MINUTES 06 SECONDS WEST, A DISTANCE OF 488.64 FEET TO A POINT ON THE EAST RIGHT OF WAY LINE STATE ROUTE 9 (INTERSTATE 95) AND A POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY HAVING A RADIUS OF 3725.72 FEET, A CENTRAL ANGLE OF 14 DEGREES 38 MINUTES 34 SECONDS AND A CHORD DISTANCE OF 949.57 FEET WHICH BEARS NORTH 07 DEGREES 30 MINUTES 55 SECONDS WEST; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 952.16 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY LINE, NORTH 00 DEGREES 10 MINUTES 54 SECONDS WEST, A DISTANCE OF 205.37 FEET TO THE SOUTHEASTERLY RIGHT OF WAY LINE OF BEELINE EXPRESSWAY (S.R. 528) AND A POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY HAVING A RADIUS OF 600.49 FEET, A CENTRAL ANGLE OF 56 DEGREES 36 MINUTES 06 SECONDS AND A CHORD DISTANCE OF 569.39 FEET WHICH BEARS NORTH 28 DEGREES 05 MINUTES 29 SECONDS EAST; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 593.22 FEET; THENCE CONTINUING ALONG SAID BEELINE EXPRESSWAY RIGHT OF WAY LINE FOR THE NEXT 5 COURSES: NORTH 56 DEGREES 24 MINUTES 56 SECONDS EAST, A DISTANCE OF 1093.64 FEET TO A POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 600.49 FEET, A CENTRAL ANGLE OF 32 DEGREES 11 MINUTES 39 SECONDS AND A CHORD DISTANCE OF 332.99 FEET WHICH BEARS NORTH 72 DEGREES 30 MINUTES 43 SECONDS EAST; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 337.41 FEET; THENCE NORTH 88 DEGREES 36 MINUTES 31 SECONDS EAST, A DISTANCE OF 1179.23 FEET TO A POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 5579.58 FEET, A CENTRAL ANGLE OF 16 DEGREES 24 MINUTES 06 SECONDS AND A CHORD DISTANCE OF 1591.78 FEET WHICH BEARS SOUTH 83 DEGREES 11 MINUTES 31 SECONDS EAST; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 1597.23 FEET; THENCE SOUTH 74 DEGREES 59 MINUTES 21 SECONDS EAST, A DISTANCE OF 774.87 FEET TO THE EAST LINE OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA; THENCE ALONG SAID EAST SECTION LINE, SOUTH 00 DEGREES 04 MINUTES 39 SECONDS EAST, A DISTANCE OF 1056.66 FEET; THENCE LEAVING SAID EAST SECTION LINE, NORTH 89 DEGREES 52 MINUTES 22 SECONDS WEST, A DISTANCE OF 668.59 FEET; THENCE SOUTH 00 DEGREES 07 MINUTES 14 SECONDS EAST, A DISTANCE OF 1273.27 FEET TO THE NORTH RIGHT OF WAY LINE OF JAMES ROAD, A 50 FOOT RIGHT OF WAY PER OFFICIAL RECORDS BOOK 783, PAGE 318, THENCE ALONG SAID RIGHT OF WAY LINE, NORTH 89 DEGREES 51 MINUTES 39 SECONDS WEST, A DISTANCE OF 2003.10 FEET TO THE POINT OF BEGINNING.

CONTAINING WITHIN SAID BOUNDS, 264.10 ACRES (11,504,572 SQ. FT.), MORE OR LESS.

EXHIBIT "B-1"

CONCEPTUAL BUBBLE PLAN FOR BARRERA SHORES PUD



BUBBLE PLAN

BARRERA SHORES

CITY OF COCOA, FLORIDA

HAGEN PROPERTIES

BOWTER-SINGLETON & ASSOCIATES, INCORPORATED
ENGINEERING · PLANNING · SURVEYING · ENVIRONMENTAL

20
21

I-95 and BEELINE HWY
COCOA, FLORIDA
OSAGE/ANGELICA STREET
EASTERN ACCESS
Grissom Parkway
Canaveral Groves Blvd.
Citrus Blvd
BAHIA STREET
NORTHERN ACCESS
246 Acre Parcel
Beeline
S.R. 528
Brevard
County
TWP 24
RNG 35
22 Acre Lake
16 Acre Lake
CANAVERAL GROVES SUBDIVISION
To Beeline
To Orlando
Friday Rd.
Dakota Ave.
Tangelo Ave.
Tangerine Ave.
Bradford Ave.
Vancouver Ave.
Lake Vision
Lake Ct. Villa
Lake Ct. Vigar
Lake Ct. Elen
Lake Ct. Lee
Lake Ct. Lillie
Lake Ct. Lucy
Lake Ct. Lucille
Lake Ct. Lucia
Lake Ct. Lucas
Lake Ct. Lucas
Lake Ct. Lucas

CITY OF COCOA/
FLORIDA SPACE NEEDLE, LLC
PRECEDING DEVELOPMENT AGREEMENT

August 24, 2004

August ~~12~~, 2004

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EXHIBITS:

A PROPERTY

THIS INSTRUMENT PREPARED BY
AND SHOULD BE RETURNED TO:

Thomas A. Cloud, Esq.
GRAYROBINSON, P.A.
301 E. Pine Street, Suite 1400
Post Office Box 3068
Orlando, FL 32802-3068
(407) 843-8880

For Recording Purposes Only

CITY OF COCOA/
FLORIDA SPACE NEEDLE, LLC
PRECEDING DEVELOPMENT AGREEMENT

THIS AGREEMENT ("Agreement") is made and entered into this 24th day of August, 2004, by and between Florida Space Needle, LLC, a Florida limited liability company (the "**Developer**") and the City of Cocoa, a municipal corporation created pursuant to the laws of the State of Florida (the "**City**").

RECITALS

1. The **Developer** owns approximately _____ acres of property currently located in unincorporated Brevard County, Florida, described and depicted in Exhibit "A" attached to and incorporated in this Agreement (hereafter referred to as the "Property").

2. The Property is currently located in unincorporated Brevard County, Florida, and is currently zoned for agricultural uses.

3. The **Developer** has contemplated, considered, and developed plans for the long-range development of the Property.

4. The Property is currently designated for agricultural uses on Brevard County's Future Land Use Map.

5. The **Developer** desires to create a framework with all necessary governmental agencies, including without limitation, the **City**, to facilitate the orderly development of the entire Property in accordance with the laws of the State of Florida.

6. The **Developer** has proceeded to prepare, and will submit, appropriate applications for the project to be approved by the City of Cocoa, Florida.

7. The **Developer** and the **City** have been jointly investigating the possibility of annexing the Property into the City of Cocoa and processing land use and other approvals under the City of Cocoa Land Development Regulations and other applicable **City** requirements as set forth below.

8. The **Developer** has the full power and authority to make, deliver, enter into and perform pursuant to the terms and conditions of this Agreement and has taken all necessary action or its equivalent to authorize the execution, delivery and performance of the terms and conditions of this Agreement.

9. The **Developer** will require certain public improvements and infrastructure to facilitate the development of the Property.

10. The **City** has identified the Property as a logical candidate for annexation into the **City** and, as such, the **City** will exercise its planning authority over the Property upon annexation.

11. The **City** has encouraged **Developer** to annex into the **City** and anticipates the continuing permanent benefit which the **City** will receive by virtue of annexing **Developer's** Property and acquiring the right to provide municipal services to **Developer's** Property.

12. The **City** likewise anticipates that the annexation will be beneficial and acknowledges the continuing permanent benefit which the **City** will receive by virtue of its authority, from time to time, to levy taxes, fees, special assessments and user charges that will be paid to the **City** after annexation of the Property, as well as the opportunity that the **City** will have to assist in master planning and facilities planning of property surrounding the Property.

13. The **City** has determined it to be in its best interest to assure **Developer** of the future availability of municipal water and wastewater services for a ten-year period from the effective date of this Agreement, at such times and in such capacities as may be necessary to allow **Developer** to continue to develop the Property as set forth herein; thereafter, in such capacities that the City may have available.

14. The **Developer's** plans for development of the Property as a high-quality, planned unit development is anticipated by the **City** to be of substantial economic benefit to the **City** and its citizens.

15. The **City** has determined that it is feasible to extend into **Developer's** Property police protection, fire protection, solid waste, and water and wastewater services.

16. The **City**, other adjacent property owners, and the region will also benefit from the planning, financing, design, permitting, and construction (hereafter "Provision") of the Eleeline Interchange and related interconnected roadway systems.

17. Therefore, in reasonable reliance upon the provision of municipal services and other inducements to annex, **Developer** has filed with the **City** a Petition for Annexation pursuant to Chapter 171, Florida Statutes and the City will process an application for amendment to the **City's** Comprehensive Plan and an application for Rezoning.

18. **Developer** and **City** believe that it is in the best interest of each party to enable the Property to continue to be developed as further described herein, in accordance with Part II of Chapter 163, Florida Statutes, the Local Government Comprehensive Planning and Land Development Regulation Act (the "Act"), other applicable Florida Law and the Charter and Code of Ordinances of the City of Cocoa, Florida, and, therefore, **Developer** and **City** agree that this agreement is entered into under the **City's** municipal home rule powers.

19. **City** and **Developer** hereby acknowledge and warrant to the other that this Agreement and any future acts as required hereby are binding and enforceable on the **City** and **Developer** in accordance with their terms. **Developer** hereby further represents that it has the unrestricted right to impose all of the covenants and conditions set forth herein and as contemplated by the **City's** Land Development Regulations.

20. The agreement of the **City** to provide inducements as set forth in this Agreement and be bound by this Agreement, as well as the **City's** assurance to the **Developer** that this Agreement is enforceable against the **City** and that the **City** will not seek to thwart enforcement based on any claim of invalidity based on existing legal precedent in effect on the effective date of this Agreement, are all material inducements to the **Developer** to enter into this Agreement, and the **Developer** would not voluntarily annex into the **City** or enter into this Agreement but for such agreement and assurances by the **City**.

21. **Developer** has already made and will continue to make financial commitments in reliance upon and in contemplation of the annexation, comprehensive plan redesignation, rezoning of the Property, and approval of financial mechanisms to develop the Property.

22. **Developer** is willing to annex if the **City** supports the **Developer's** efforts. However, **Developer** recognizes and acknowledges that such support is subject to due process and statutory requirements to amend the **City's** Comprehensive Plan and Future Land Use Map to designate the Property as set forth herein and consistent

therewith zone the Property as set forth herein in accordance with applicable **City** requirements.

23. The agreement of the **Developer** to annex the Property into the **City** and to develop the Property as set forth in this Agreement are material inducements for the **City** to enter into this Agreement and the **City** would not enter into this Agreement but for such agreement and assurances by the **Developer**.

24. The parties agree that this Agreement constitutes a development agreement preceding any plan amendment or rezoning of the Property, and **Developer**'s duties hereunder constitute a preceding inducement for the proposed amendment to the comprehensive plan and the rezoning.

ACCORDINGLY, in consideration of mutual benefits and the public interest and other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1. RECITALS. The above recitations are true and correct, are hereby incorporated herein by reference, and form a material part of this Agreement. All exhibits referenced in this Agreement are hereby deemed a part hereof.

SECTION 2. AUTHORITY. This Agreement is entered into under the authority of the Florida Constitution (including Article VIII, Section 2(b) thereof), the general powers conferred upon municipalities by statute and otherwise (including Chapter 163 and 166, Florida Statutes), and the **City's** Charter. The parties specifically agree that this Agreement does not constitute a "development agreement" under the Florida Local Government Development Agreement Act, Section 163.3220-163.3243, Fla. Stat., nor do the provisions of said supplemental act apply to this Agreement.

SECTION 3. ANNEXATION. **Developer** has filed a Petition for Annexation of the Property conditioned upon the prior or concurrent adoption of this Agreement. The **City** has initiated the process to accomplish the annexation in accordance with law.

SECTION 4. INDUCEMENTS FOR ANNEXATION. The **Developer** is willing to annex the Property to the City of Cocoa in return for the **City's** agreement to cooperate, facilitate, consummate, and implement the following:

4.1 **Orderly Development of Land Uses on the Property.** The parties agree that the orderly, comprehensively planned and integrated development of the Property is in the best interests of the **Developer** and the **City**. With respect to the Property, the **City** agrees that it will process and review, in accordance with the City of Cocoa Interstate 95 – State Road 528 annexation report, dated June 28, 2004, future land use designations in its Comprehensive Plan consistent with low density residential and rezoning consistent with the RU-1-7 zoning district designations. The **City** finds these land uses and intensities to be consistent with its Comprehensive Plan and Land Development Code. The **City's** processing of these Comprehensive Plan Amendments and rezonings shall be subject to necessary public participation and hearings as required by law and submission of substantial, competent evidence in support thereof. The City acknowledges that the Developer may file a PUD application consistent with this section.

Developer, however, acknowledges that the **City** and the Florida Department of Community Affairs ("DCA") are currently entering into a Stipulated Settlement Agreement in DOAH case No. 04-0716GM. In such case, DCA is mandating that the City adopt revised wetland protection policies and that the City create a "conservation" future land use designation. The policies contained in the Stipulated Agreement will apply to the Property to the extent that the Property contains wetlands.

4.2 **Submittal of Applications and Documentation**. **Developer** has submitted to the **City** such applications and other documentation and shall comply with such other procedures as may be normally and customarily required by the **City** for comprehensive plan amendments, rezonings, plats, site plans and other development approvals or permits. With respect to the zoning application, the **City** agrees to charge, and **Developer** agrees to pay, the **City's** zoning application fee at the normal and customary amount. The **City** will not charge an application fee to process the comprehensive plan amendment to assign a future land use designation.

4.3 **Development**. The parties recognize and acknowledge that **Developer** may engage one or more developers or builders, other than **Developer**, to effect the development of the Property, including the sale or long-term lease of all or portions of the Property. The parties hereto further recognize and acknowledge that as the development process proceeds, it may be necessary to amend any attached Exhibits and the **City's** adopted Comprehensive Plan as may be mutually agreed upon by the parties. In accordance with law, the **City** shall do what is reasonably necessary and within its powers and authority to grant and allow development permits and approvals for the orderly development of the Property in accordance with this Agreement.

4.4 **Compliance with City Laws and Regulations**. Except as otherwise set forth herein, all development of the Property shall be subject to compliance with current existing **City** Land Development Regulations, and with regulations of state, local and federal agencies. Except as otherwise set forth herein, none of the provisions of this Agreement shall be deemed to amend, modify or

otherwise change the provisions of any such ordinance or regulation of the **City** or any other governmental agency. Development of the remainder of the Property shall be subject to the **City's** ordinances, codes, and resolutions as amended from time to time.

4.5 **Impact Fees**. **Developer** agrees to pay applicable impact fees which may be imposed by the **City** and Brevard County, so long as such fees comply with Florida law.

4.6 **Wetland as Open Space**. The **City** agrees that the acreage of any wetlands located on the Property may be counted towards any open space acreage requirements of the City, provided a minimum of five percent (5%) of the Property is improved as active upland recreational open space. The parties acknowledge that portions of the lake/conservation/retention areas shown in the Exhibits may be identified as wetlands. **Developer** may use or develop wetlands provided that such use and development is in compliance with all federal, state, county, city, water management district and other applicable local regulations.

4.7 **Community Development Districts**. The **City** acknowledges in concept that it may be beneficial for **Developer** to create a Community Development District ("CDD") pursuant to Chapter 190, Florida Statutes (or some other similar special taxing district or municipal service taxing unit), for the purpose of providing certain services and capital infrastructure to the Property, to the extent allowed and authorized by applicable law. In the event the **Developer** elects to proceed with a CDD or similar entity, Developer shall be responsible for creating the CDD and the **City** and the **Developer** will cooperate in the establishment of such a district or entity. Moreover, should a CDD be created, **Developer** agrees to cooperate with the **City** to determine

whether it is the possible and feasible to reimburse the **City** for any costs incurred by the **City** in running utility infrastructure to the Property.

4.8 **Water, Wastewater and Reclaimed Water Service**. The **Developer** agrees to purchase water and wastewater service (hereafter "Utilities") exclusively from the **City**. In return thereof, the **City** agrees to design, permit, and construct the extension of the Utilities in sufficient capacities to serve phased development of the Property up to the points of connection. The **City** reserves the right to determine the points of connection to the Property line. These off-site utility extensions shall be funded by the **City**, in support of development activities on the Property. The **City** shall proceed with the utility extensions in a timely fashion upon approval of the first subdivision plan for the Project. The **City** shall reserve Utilities in sufficient capacities to serve the Property for a ten (10) year period beginning at the effective date of this Agreement, and the **Developer** shall be required to pay applicable impact fees for Utilities for such portion of the development on the Property as required by **City** regulations at a time when normally due or to time prior to issuance of building permits therefore. Thereafter, upon written request of **Developer**, the **City** may reserve capacity of Utilities in such capacities that the **City** may have available at the time of the request. The parties agree that if reclaimed water service is reasonably and economically available, **Developer** shall connect to the reclaimed water system.

At the **Developer's** election in writing, however, the **Developer** may design, permit, and construct the extension of the utilities required hereunder in order to expedite the process. Said election shall be made no later than the first subdivision plan for the Project. If the election is affirmatively made, the **City** agrees to reimburse

the **Developer** for its actual and reasonable cost to design, permit, and construct the utilities. Reimbursable costs shall not include impact fees and force main capacity charges required by City Code. Prior to permitting, the **Developer** shall submit for approval by the **City** an estimate of the reimbursable costs, in a "not to exceed" value. Reimbursement of any costs in excess of this amount will be subject to review and approval by the City Council.

Subsequent to the approval by the **City** of the estimated reimbursable costs, the **Developer** shall submit monthly invoices of costs actually incurred and due for reimbursement under this Agreement. The **Developer's** reimbursable costs shall be justified by written invoices and receipts. The **City** agrees to remit payment to **Developer** in accordance with the Florida Prompt Payment Act (Section 218.70 et seq., Florida Statutes).

Should the **Developer** not complete the first subdivision or phase of the project to be serviced by the utility extension within five (5) years from date upon which a Certificate of Completion is issued for the utilities or from the date of the **City's** acceptance of the utilities, whichever occurs first ("Utilities Completion Date"). The **Developer** shall complete the remainder of the development project, at a rate of completing a minimum of twenty percent (20%) of the units each year, within five (5) years from the Utilities Completion Date. Should Developer fail to complete the first subdivision or phase or the remainder of the development project in accordance with the aforementioned time frames, the Developer shall pay to the **City** its pro-rata share of the cost to extend the utilities to the **Developer's** Property, as provided in Chapter 22, City Code, as may be amended. **Developer** may request, for good cause shown,

an extension of time to complete the first subdivision project, but in no case shall said extension be for a period in excess of two (2) years. Approval of such time extension is in the sole discretion of the City Council, but shall not be unreasonably withheld.

SECTION 5. PROPERTY OWNERSHIP; INDUCEMENT OF CITY SERVICES AND COMMITMENTS.

Based on **Developer's** acknowledgement and representation to the **City** that **Developer** is the owner of the Property and that **Developer** is empowered to enter into this Agreement, the **City** is willing to provide the City services and abide by the commitments hereunder in return for the **Developer's** agreement to cooperate, facilitate, consummate, and implement the following:

5.1 Upon execution of this Agreement by both parties, **Developer** shall diligently process all necessary development permit applications to construct a residential development project on the Property.

5.2 Unless otherwise mutually agreed by the parties in writing, the residential development project shall consist of a minimum of One Thousand (1,000) residential dwelling units with an average living area under air of One Thousand Eight Hundred (1,300) square feet. Each dwelling unit shall have an approximate minimum fair market value of One Hundred Thirty Thousand Dollars ($130,000.00) and Two Hundred Thirty Thousand Dollars ($210,000.00) (average $170,000.00) at the time of construction.

SECTION 6. AGRICULTURE, AQUACULTURE, HORTICULTURE OR SILVICULTURE OPERATIONS. Prior to the **City** rezoning the Property, the **City** agrees that the **Developer** including its lessees, licensees, affiliates, or subsidiaries, may initiate or continue, as applicable, agricultural, aquacultural, horticultural or

silvicultural operations on the Property. After any zoning has been approved for a portion of the Property, all agricultural, aquacultural, silvicultural and horticultural operations within the area of the Property subject to the zoning may continue as permitted uses if the new zoning category allows such uses or as nonconforming "grandfathered" uses under the City Code on the condition that **Developer** identify such existing uses in writing prior to the rezoning becoming effective. As to silviculture, **Developer** may continue its silviculture operation within any area of the Property provided that twenty percent (20%) of the trees in the area of the Property is retained.

SECTION 7. EXPLORATION RIGHTS. The **City** agrees that to the extent permitted by law or regulation, **Developer** including its lessees, licensees, affiliates, or subsidiaries may explore the Property for oil, gas and minerals subject to proper permitting by the appropriate regulatory agencies.

SECTION 8. AD VALOREM TAXATION. This Section is subject to the conditions contained in Section 6 of this Agreement. Substantially all of the Property is assessed as agricultural by the Brevard County Property Appraiser and qualifies for that classification. **City** will permit uses that will allow **Developer** to maintain the agricultural tax status of those portions of the Property currently assessed agricultural. The **City** agrees that it shall take no action without the written consent of **Developer** which would affect or impair **Developer**'s ability to continue to obtain the agricultural status for its lands which otherwise qualify by law for assessment as agricultural. The **City** acknowledges that **Developer**'s ability to continue to obtain the agricultural assessment on those portions of its Property once annexed to the **City** was an important factor in the decision of **Developer** to annex the Property into the **City**.

SECTION 9. DUE DILIGENCE. The **City** and **Developer** further covenant that they shall immediately commence all reasonable actions necessary to fulfill their obligations hereunder and shall diligently pursue the same throughout the existence of this Agreement. The **City** shall further provide all municipal services available and provided by the **City** to the Property as are needed by **Developer** from time to time in accordance with the **City's** applicable policies for the provision of said services.

SECTION 10. DEVELOPMENT RIGHTS. **Developer** shall have the right to use and develop the Property as described in this Agreement. Furthermore, **Developer** does not waive any right to use or develop the Property arising under the City Code, common law or the laws of the State of Florida.

SECTION 11. TERM; CONDITIONS SUBSEQUENT. Except as specified below, this Agreement and the annexation contemplated herein shall become effective upon the annexation of and expiration of an applicable appeals period of the ordinance annexing the Property. Should the annexation ordinance not become effective, then either party may terminate this Agreement by written notice and be relieved of their respective obligations under this Agreement.

SECTION 12. DEFAULT; ENFORCEMENT. A default by either party under this Agreement shall entitle the other party to all remedies available at law or in equity, which shall include, but not be limited to, the right to damages, injunctive relief and specific performance. In the event either party is required to enforce this Agreement, by court proceedings or otherwise, then the prevailing party shall be entitled to recover from the other party all costs incurred, including reasonable attorneys' fees at all pre-trial, trial, appeal and alternative dispute resolution levels.

SECTION 13. GOVERNING LAW. This Agreement shall be construed in accordance with the laws of the State of Florida.

SECTION 14. BINDING EFFECT; ASSIGNABILITY. This Agreement, once effective, shall be binding upon and enforceable by and against the parties hereto and their assigns. This Agreement shall be freely assignable by the **Developer** to various successive owners without the need for consent by the **City**. **Developer** shall, however, provide written notice to the **City** of any and all such assignees. However, at such time **Developer** no longer has a fee simple ownership interest in the Property, this Agreement shall be deemed assigned to the successive owners of the Property. The parties hereby covenant that they will enforce this Agreement and that is a legal, valid and binding agreement.

SECTION 15. RECORDATION. A copy of this Agreement shall be recorded by the **Developer** at the **Developer**'s expense, in the Public Records of Brevard County, Florida, upon taking effect. Upon receipt of the recorded Agreement, **Developer** shall promptly provide a copy of the recorded Agreement to the City Manager and City Attorney .

SECTION 16. DISCLAIMER OF THIRD PARTY BENEFICIARIES. This Agreement is for the sole benefit of the parties hereto, and no right of action shall accrue upon or by reason hereof, to or for the benefit of any third party. Nothing in this Agreement either express or implied is intended or shall be construed to confer upon or give any person, corporation or governmental entity other than the parties hereto any right, remedy or claim under or by reason of this Agreement or any provisions or conditions hereof, and all of the provisions, representations, covenants and conditions

herein contained shall inure to the sole benefit of and shall be binding upon the parties hereto and their respective representatives, successors and assigns.

SECTION 17. ARMS LENGTH NEGOTIATION. This Agreement is the result of mutual arms length negotiations between the parties. Accordingly, this Agreement shall be construed equally between the parties.

SECTION 18. WAIVER; REMEDIES. No failure or delay on the part of either party in exercising any right, power or privilege hereunder will operate as a waiver thereof; nor will any waiver on the part of either party of any right, power, or privilege hereunder operate as a waiver of any other right, power, or privilege hereunder, not will any single or partial exercise of any right, power, or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power, or privilege hereunder.

SECTION 19. EXHIBITS. All exhibits referenced herein and attached hereto are hereby incorporated in and made a part of this Agreement as if set forth in full herein.

SECTION 20. NOTICE; PROPER FORM. Any notice to be given shall be in writing and shall be sent by certified mail, return receipt requested, to the party being noticed at the following addresses:

AS TO CITY:
City Manager
City of Cocoa
P.O. Box 1750
Cocoa, Florida 32922

COPY TO:
Anthony A. Garganese
Brown, Garganese, Weiss, & D'Agresta, P.A.
City Attorney
City of Cocoa
Post Office Box 2873
Orlando, Florida 32802-2873

AS TO DEVELOPER: Florida Space Needle, LLC
c/o

COPY TO: Thomas A. Cloud, Esquire
GrayRobinson, P.A.
301 E. Pine Street, Suite 1400
Orlando, Florida 32801

Each party may amend the aforementioned persons and addresses by written notice to the other party.

SECTION 21. ENTIRE AGREEMENT. This Agreement sets forth all of the promises, covenants, agreements, conditions and understandings between the parties relevant to the subject matter hereof, and supersedes all prior and contemporaneous agreements, understandings, inducements or conditions, express or implied, oral or written with respect to said subject matter, except as herein contained.

SECTION 22. AMENDMENT. Amendments to and waivers to the provisions of this Agreement shall be made by the parties only in writing by formal amendment.

SECTION 23. TIME OF THE ESSENCE. Time is hereby declared of the essence in the performance of each and every provision of this Agreement.

SECTION 24. SOVEREIGN IMMUNITY. Nothing contained in this Agreement shall be construed as a waiver of the **CITY'S** right to sovereign immunity under Section 768.28, *Florida Statutes*, or any other limitation on the **CITY'S** potential liability under state and federal law.

SECTION 25. CITY'S POLICE POWERS. **DEVELOPER** agrees and acknowledges that the **CITY** hereby reserves all police powers granted to the **CITY** by

law. In no way shall this Agreement be construed as the **CITY** bargaining away or surrendering its police powers.

SECTION 26. ADDITIONAL PERMITS. The failure of this Agreement to address any particular **CITY**, county, state, and federal permit, condition, term, or restriction shall not relieve **DEVELOPER** or the **CITY** of the necessity of complying with the law governing said permitting requirements, conditions, term, or restriction.

SECTION 27. DEVELOPMENT PERMITS APPROVALS BY CITY. Nothing herein shall limit the **CITY'S** authority to grant or deny any development permit applications or requests subsequent to the effective date of this Agreement. In addition, nothing herein shall be construed as granting or creating a vested property right or interest in **DEVELOPER** or on the Property.

IN WITNESS WHEREOF, the parties hereto have entered into this Agreement as of the date first above written.

[This part intentionally left blank]

Signed, sealed and delivered before these witnesses:

Donna C. Darter
Print Name: DONNA C. DARTER

Nicholas G. Levato
Print Name: Nicholas G. Levato

DEVELOPER:
"Florida Space Needle"

Florida Space Needle, LLC, a Florida limited liability company

By: Kenneth E. Allen
Print Name: Kenneth E. Allen
As Its: President

CORPORATE SEAL

STATE OF FLORIDA
COUNTY OF BREVARD

SWORN to and subscribed freely and voluntarily for the purposes therein expressed before me by KENNETH E. ALLEN, as PRESIDENT of FLORIDA SPACE NEEDLE, LLC, a Florida limited liability company, known to me to be the person described in and who executed the foregoing, this 23rd day of AUGUST, ~~2004.~~ 2007 He/she is personally known to me or has produced _____ (type of identification) as identification.

WITNESS my hand and official seal in the County and State last aforesaid this 23rd day of AUGUST, ~~2004.~~ 2007

Donna C. Darter
Signature of Notary Public
DONNA C. DARTER
(Print Notary Name)
My Commission Expires: 4-25-09
Commission No.: _____

AFFIX NOTARY STAMP

NOTARY PUBLIC-STATE OF FLORIDA
Donna C. Darter
Commission # DD406637
Expires: APR. 25, 2009
Bonded Thru Atlantic Bonding Co., Inc.

ATTEST:

By: _____
Joan Clark, City Clerk

[SEAL]

CITY:
CITY OF COCOA, a Florida municipal corporation

By: _____
Print: Michael C. Blake
Title: Mayor

STATE OF FLORIDA
COUNTY OF BREVARD

The foregoing instrument was acknowledged before me, this 13 day of NOVEMBER, 2007, by MICHAEL BLAKE, MAYOR of the City of Cocoa, a municipal corporation under the laws of the State of Florida, on behalf of the City. Who is personally known to me or has produced _____, (type of identification) as identification and (did/did not) take an oath.

BRANDON C ST.AUBIN
MY COMMISSION # DD539646
EXPIRES: Apr. 11, 2010
(407) 398-0153 Florida Notary Service.com

AFFIX NOTARY STAMP

_____
Signature of Notary Public
Brandon St Aubin
(Print Notary Name)
My Commission Expires: _____
Commission No.: _____

EXHIBIT "A"

PROPERTY

EXHIBIT "A"

Legal Description

PARCEL 1

A parcel of land lying in the North Half of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, run thence South 89 degrees 57 minutes 44 seconds East, along the North line of said Section 10, a distance of 329.44 feet to the POINT OF BEGINNING; thence continue South 89 degrees 57 minutes 44 seconds East, along said North line a distance of 2266.28 feet; thence departing said North line of Section 10, South 00 degrees 32 minutes 12 seconds East, a distance of 2235.09 feet to a point on the existing Northerly right of way line of State Road No. 528 (also known as the "Bee Line Expressway", formerly known as State Road No. 524); thence South 88 degrees 36 minutes 31 seconds West (Calculated measurement) South 88 degrees 40 minutes 54 seconds West (Deed), along said existing North right of way line a distance of 454.64 feet; thence North 87 degrees 19 minutes 06 seconds West, a distance of 638.49 feet, to a point of curvature of a curve concave to the Northeast, having a radius of 900.00 feet a central angle of 31 degrees 18 minutes 50 seconds (Calculated measurement) 31 degrees 18 minutes 48 seconds (Deed), thence Northwesterly along the arc of said curve a distance of 491.88 (calculated measurement) 491.87 (Deed) feet; thence North 56 degrees 04 minutes 39 seconds West (Calculated measurement) North 56 degrees 00 minutes 19 seconds West (Deed), a distance of 398.70 (Calculated measurement) 398.75 (Deed) feet to a point of curvature of a non-tangent curve concave to the North having a radius of 969.79 feet, a central angle of 37 degrees 46 minutes 38 seconds, thence Northwesterly along the arc of said curve a distance of 639.42 feet, to a point on the East right of way line of State Road No. 9 (Interstate 95); thence North 00 degrees 11 minutes 53 seconds West, along said East right of way line of State Road No. 9 (Interstate 95), a distance of 566.36 feet; thence North 01 degrees 55 minutes 04 seconds West, a distance of 300.93; thence North 01 degrees 20 minutes 38 seconds West, a distance of 476.50 feet to the POINT OF BEGINNING.

LESS AND EXCEPT THE AREA FOR BORROW PIT NO. 19 AND HAUL ROAD AS SET FORTH IN CIRCUIT COURT MINUTE BOOK 57, PAGE 479, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, OTHER THAN THE REVERSIONARY INTEREST, DESCRIBED AS FOLLOWS:

BORROW PIT NO. 19

A parcel of land in the Northwest Quarter of Northwest Quarter of Section 10, Township 24 South, Range 35 East, described as follows:

Commence on the North boundary of said Section 10, at a point 150 feet East from the Northwest corner thereof, run thence South 00 degrees 12 minutes 38 seconds East 50 feet; thence North 89 degrees 59 minutes 22 seconds East, 499.83 feet to the Northwest corner of Borrow Pit No. 19 and the POINT OF BEGINNING; continue thence North 89 degrees 59 minutes 22 seconds East 600 feet; thence South 00 degrees 00 minutes 38 seconds East 550 feet; thence South 89 degrees 59 minutes 22 seconds West 600 feet; thence North 00 degrees 00 minutes 38 seconds West 550 feet to the POINT OF BEGINNING.

AND

HAUL ROUTE FOR BORROW PIT NO. 19

That part of the Northwest Quarter of Northwest Quarter of Section 10, Township 24 South, Range 35 East, lying South and within 50 feet of a line described as follows:

Begin at the Northwest corner of Borrow Pit No. 19 as described above, run thence South 89 degrees 59 minutes 22 seconds West 499.83 feet to the end of said line as herein described.

PARCEL 2

A parcel of land lying in the North Half of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, run thence South 89 degrees 57 minutes 44 seconds East, along the North line of said Section 10, a distance of 2595.72 feet to the POINT OF BEGINNING; thence continue South 89 degrees 57 minutes 44 seconds East, along said North line of Section 10 a distance of 70.51 feet, to the North Quarter corner of Section 10; thence South 89 degrees 57 minutes 56 seconds East, along said North line of Section 10, a distance of 1926.93 feet; thence departing said North line South 00 degrees 32 minutes 12 seconds East, a distance of 2404.54 feet, to a point on a curve on the existing Northerly right of way line of State Road No. 528 (also known as the "Bee Line Expressway", formerly known as State Road No. 524); thence along said existing North right of way line and along said curve that is concave to the South, having a radius of 5879.58 feet, a central angle of 15 degrees 41 minutes 33 seconds; thence Westerly, along the arc of said curve, a distance of 1610.32 feet; thence South 88 degrees 36 minutes 31 seconds West (Calculated measurement) South 88 degrees 40 minutes 54 seconds West (Deed), a distance of 404.03 feet; thence departing said North right of way line North 00 degrees 32 minutes 12 seconds West, a distance of 2235.09 feet, to the POINT OF BEGINNING.

PARCEL 3

A parcel of land lying in the North Half Section 10, Township 24 South, Range 35 East, Brevard County, Florida, being more particularly described as follows:

Commence at the Northwest corner of Section 10, Township 24 South, Range 35 East, Brevard County, Florida, run thence South 89 degrees 57 minutes 44 seconds East, along the North line of said Section 10, a distance of 2666.23 feet to the North Quarter corner of Section 10; thence South 89 degrees 57 minutes 56 seconds East, along said North line of Section 10, a distance of 1926.93 feet, to the POINT OF BEGINNING; thence continue South 89 degrees 57 minutes 56 seconds East, along said North line of said Section 10, a distance of 738.58 feet to the Northeast corner of Section 10; thence South 00 degrees 32 minutes 12 seconds East, along the East line of said Section 10, a distance of 2602.18 feet, to a point on the existing Northerly right of way line of State Road No. 528 (also known as the "Bee Line Expressway", formerly known as State Road No. 524); thence North 74 degrees 59 minutes 21 seconds West, along said existing North right of way line, a distance of 693.63 feet, to a point of curvature of a curve concave to the South, having a radius of 5879.58 feet, a central angle of 00 degrees 42 minutes 35 seconds, thence Westerly, along the arc of said curve, a distance of 72.84 feet; thence departing said North right of way line North 00 degrees 32 minutes 12 seconds West, a distance of 2404.54 feet, to the POINT OF BEGINNING.

PARCEL 4

A parcel of land being the North 290 feet of the Southwest One Quarter of Section 12, Township 24 South, Range 35 East, Tallahassee Base Meridian, Brevard County, Florida, lying West of the Westerly right of way of Grissom Parkway, being part of the lands described in Official Records Book 549, Page 354 and being more particularly described by meets and bounds as follows:

Commence at a concrete monument occupying the Northwest corner of the Southwest One-Quarter of aforesaid Section 12; thence South 00 degrees 15 minutes 49 seconds East, along the West line of the Southwest One Quarter, a distance of 290.01 feet; thence South 89 degrees 54 minutes 34 seconds East, parallel to and 290.00 feet South of the North line of the Southwest One-quarter, a distance of 501.02 feet to a point on the Westerly right of way line of Grissom Parkway, said point lying on a radial circular curve, concave to the Northwest, having a radius of 1705.02 feet and a central angle of 11 degrees 38 minutes 02 seconds; thence Northwesterly, along said Westerly right of way line and the arc of said curve a distance of 346.20 feet (chord bearing North 32 degrees 51 minutes 07 seconds West) to the North line of the Southwest One-Quarter; thence North 89 degrees 54 minutes 34 seconds West, along said North line, a distance of 314.89 feet to the POINT OF BEGINNING.

LESS AND EXCEPT that portion conveyed to Brevard County Board of County Commissioners recorded in Official Records Book 2923, Page 1070; and in Official Records Book 2923, Page 1073, all of the Public Records of Brevard County, Florida.

PARCEL 5

The West 318 feet of the South Half of the South Half of the South Half of the North Half, LESS the North 30 feet for road and LESS the South 100 feet and the West 100 feet for canal, Section 11, Township 24 South, Range 35 East, Brevard County, Florida. Also known as Tract 6, Block 16, CANAVERAL GROVES SUBDIVISION, according to the Map thereof, as recorded in Survey Book 2, Page 621, Brevard County, Florida.

Water System Hydraulic Calculations

Lakes at Cocoa Grove Subdivision

Prepared for:

City of Cocoa

FDEP

Prepared by:

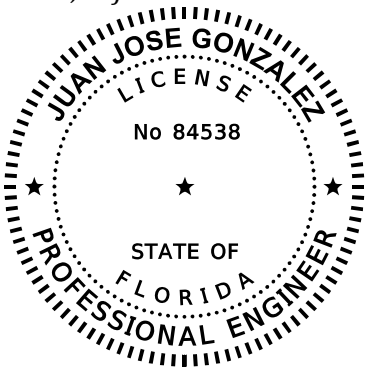
DRMP

100 Parnell Street • Merritt Island, FL 32953

(321) 453-0010

July 2022

DRMP PROJECT NUMBER: 21-0569.000
Date: July 29, 2022
Revised: January 22, 2024: Add phasing calcs, use M22, adjust ERC demand



Juan Gonzalez, P.E.
Florida Registration Number: #84538
DRMP Cert. of Authorization #2648

The subject parcel is a 246.4 acre property located on the northeast corner of I-95 and Highway 528, Cocoa, Brevard County, Florida (Section 10, Township 24 South, Range 35 East). Proposed improvements include a 350 lot subdivision and clubhouse.

The proposed water utility design has been evaluated using the WaterCAD Version 8i distribution modeling software. The analysis includes modeling for domestic peak hourly demand as well as fire flow per Florida Fire Prevention Code (FFPC).

EXISTING SYSTEM PRESSURE

Hydrant flow data was used to determine the pressure (fixed grade node) at the point of connection. The City of Cocoa Utilities Department provided hydrant flow test information for the fire hydrants located at the intersection of Bahia Street and Sheridan Avenue (X-0790) and the intersection of Bahia Street and Seville Avenue (X-0792) as well as the fire hydrants located at SW Dakota Avenue and Osage Street (X-0860) and SW Dakota Avenue and Oneida Street (X-0861). Static pressure, residual pressure, and pitot pressure were recorded. Pump definitions were created to estimate available pressure at the desired demand values. Refer to ***Appendix A*** for fire hydrant calculations.

There will be two connections into the Cocoa water system. The first connection will be a 10" tap into an 8" water main located at the south end of Bahia Street. The second connection will be a 12" tap into the 6" water main located at the west end of Osage Street. This existing Osage Street main will be upgraded to 12" as part of another project; however, the calculations were performed assuming current conditions. The water main network will provide fire flow to 39 onsite fire hydrants.

CRITERIA AND DEMANDS

Water modeling was used to determine if the required fire flow applied concurrently with the maximum daily flow (MDF) could be obtained with a minimum residual pressure of 25 psi. This allows a 5 psi safety factor above the requirements of City of Cocoa and FFPC. In a separate scenario the potable peak hourly flows (PHF) were simulated to show pressures and velocities.

Domestic Water Demands

Average daily domestic water demands for the clubhouse are based on FAC Table 64E-6.008. Per the City of Cocoa Comprehensive Plan (2010) Policy 7.1.1.1 the average flow for each equivalent residential connection (ERC) is 340 gallons per day (gpd).

Table 1 – Average Daily Flow - Clubhouse

Establishment Type	No. people/day	Flow per Unit (gpd)	Average Daily Flow (gpd)
Park-w/bathhouse, per person	50	10	500
Total Average Demand (Clubhouse) (gpd)			500

Table 2 – Total Average Daily Flow

City of Cocoa ERC (gpd)	340
No. Residences	350
Total Residential Average Daily Flow (gpd)	119,000
Total Subdivision Average Demand (gpd)	119,500
Total Subdivision ERCs	351.5

A fixture count was generated based on the plans provided by the Architect dated June 28, 2021. The PHF was derived based on AWWA M22. Refer to ***Appendix B*** for the complete M22 calculations. The Mechanical Engineer is to confirm the fixture unit count utilized and provide confirmation to the City of Cocoa that the proposed meter size is adequate.

The following conversion factors were utilized. The individual lot demands were assigned to the nearest junction node.

Table 3 – Domestic Demand Conversion Factors

	Peaking Factor (x ADF)	Demand Rate per ERC (gpm)	Total House Demand (gpm)	Clubhouse Demand (gpm)	Total Subdivision Demand (gpm)
Average Daily Flow (ADF)	--	0.24	82.64	23.20	105.8
Maximum Daily Flow (MDF)	1.5	0.35	123.96	34.80	158.8
Peak Hourly Flow (PHF)	2.5	0.59	206.60	58.00	264.6

Fire Flow Demands

The fire flow demands shall be based on construction type and building area. The proposed residential building construction is assumed to be Type VB single family dwelling. Per FFPC 18.4.5.1.1 the minimum fire flow and flow duration requirements for one- and two-family dwellings having a fire flow area that does not exceed 5,000 sf shall be 1,000 gpm for 1 hour. The required fire flow demand must be delivered at a minimum of 20 psi plus a 5 psi safety factor. The required fire flow demand for the residences is 1,000 gpm.

The proposed Clubhouse building construction is Type VB and is subject to the fire flow requirements for that type as listed in FFPC: Table 18.4.5.2.1 (Minimum Required Fire Flow and Flow Duration for Buildings). The required fire flow shall be reduced by 75% when the building is protected throughout by an approved automatic sprinkler system. The resulting fire flow shall not be less than 1,000 gpm for buildings other than one- and two-family dwellings (NFPA 1: 18.4.5.3.2). A sprinkler system will **NOT** be installed in the building. The required fire flow demand must be delivered at a minimum of 20 psi plus a 5 psi safety factor. The resulting fire

flow is **1,500 gpm** for the clubhouse building. A minimum of 2 fire hydrants is required based on the building demand. Refer to ***Appendix C*** for fire flow calculations.

ANALYSIS

The Hazen-Williams coefficient (C) for clean, newly laid PVC pipe is 150. For modeling purposes, minor losses such as fittings, bends, valves, and other associated appurtenances have been ignored. To compensate, the friction coefficient was reduced to a conservative 130 for the waterline simulation.

The fire flow analysis consists of fire flow applied concurrently with Maximum Daily Flow (MDF) potable demands. The results are shown in the table below.

Table 4 – WaterCAD Results

Phase	Scenario	Fire Flow Req'd (gpm)	Max Pipe Velocity (fps)	Critical Node	Pressure at Critical Node (psi)
Phase 1	MDF + FF	1,000	6.57	J-6	32
Phase 1	PHF	--	0.30	J-6	64
Phase 2	MDF + FF	1,000	6.84	J-6	34
Phase 2	MDF + REC FF	1,500	9.80	REC	31
Phase 2	PHF	--	0.56*	REC	61
Phase 3	MDF + FF	1,000	8.88	J-6	42
Phase 3	MDF + REC FF	1,500	9.80	REC	32
Phase 3	PHF	--	0.65*	REC	61
Phase 4	MDF + FF	1,000	8.98	J-6	42
Phase 4	MDF + REC FF	1,500	7.73	REC	41
Phase 4	PHF	--	0.80*	REC	61

*Excludes Clubhouse Service Line

Table 5 – Clubhouse Domestic Results

Location	Average Daily Demand (gpd)	Fixture Unit Count	PHF Demand (gpm)	Meter Size (in)	Service Line (in)	Service Line Velocity (fps)	Pressure (psi)
REC	500	175.7	58	1.5	2	5.92	61

The results from the model indicate that the proposed development maintains pressures greater than 25 psi under fire flow conditions. Velocities are within 2-10 fps under these scenarios. Therefore, the fire flows are met or exceeded. Results of the modeling analysis are included in ***Appendix D***.

Appendix A

Fire Hydrant Calculations

Available Pressure Calculations

Lakes at Cocoa Grove

DRMP No: 21-0569.000
1/12/2024

City of Cocoa Fire Flow Results

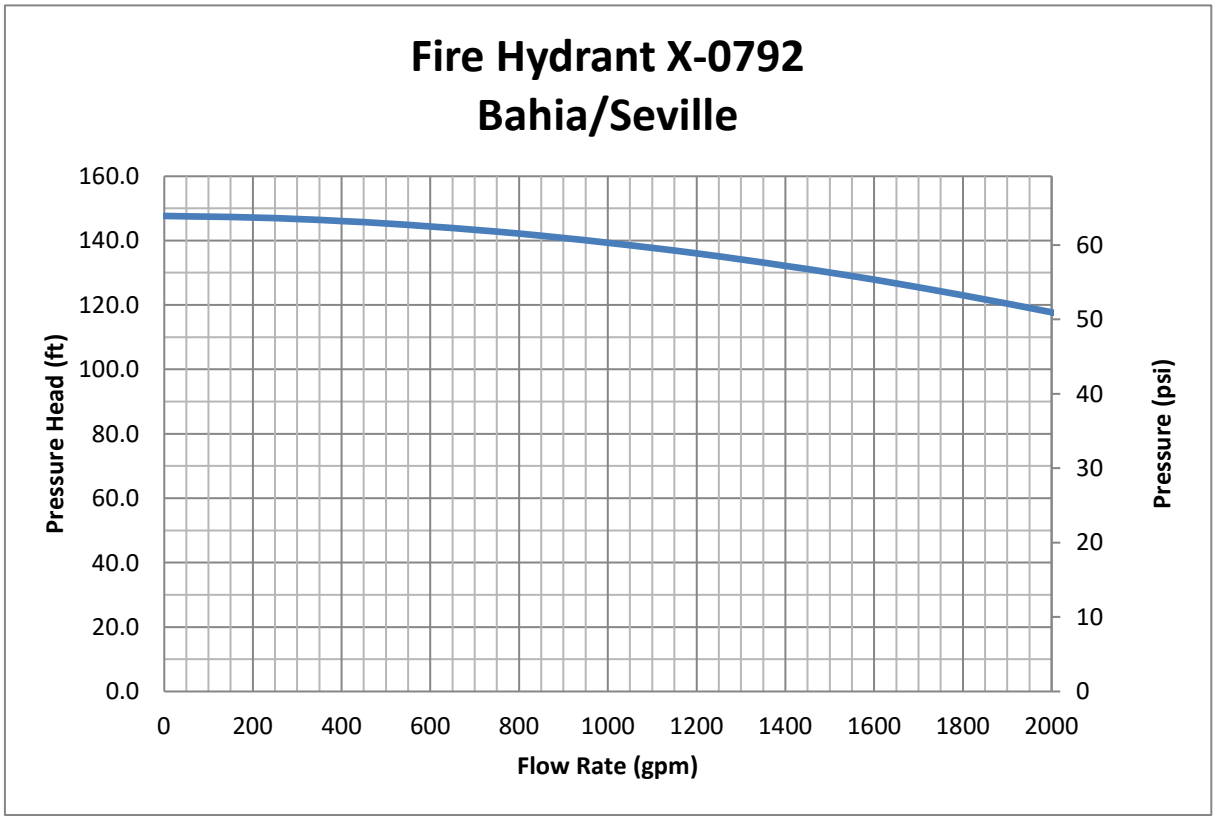
Test Date: 3/25/2021
Flow Hydrant: X-0792 Bahia/Seville
Gauge Hydrant: X-0790 Bahia/Sheridan

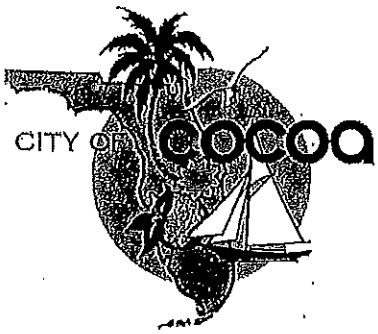
Hazen-Williams Variation:

$$R_2 = S - \left[\frac{Q_2}{Q_1}(S - R_1)^{0.54}\right]^{1/0.54}$$

Static Pressure (S):	64	psi
Residual Pressure (R1):	60	psi
Pitot Pressure:	40	psi
Tested Flow (Q1):	1,060	gpm

Req'd Flow (gpm)	Pressure (ft)
0	147.6
200	147.2
400	146.1
600	144.4
800	142.2
1000	139.4
1200	136.0
1400	132.2
1600	127.9
1800	123.0
2000	117.7
2200	112.0
2400	105.7
2600	99.0





Serving the Community

City of Cocoa, Florida

UTILITIES DEPARTMENT
600 School Street Cocoa, Florida 32922
PHONE (321) 639-7653 FAX (321) 639-7522

FIRE HYDRANT FLOW INFORMATION REQUEST

Information requested by: _____(Company)
_____(Person)
_____(Phone #)
_____(Fax #)

Project Name: _____

Project Location: _____

Hydrant from which Information is needed: _____

Is a True Residual Pressure Required? ☑ YES ☐ NO

Date: _____ Prepared By: _____

RECORDED FIRE HYDRANT FLOW INFORMATION

Hydrant Number Flowed:	X-0790	X-0792
Hydrant Location:	Bahia/Sheridan	Bahia st / Seville Ave
Recorded Static Pressure:	66 p.s.i.	64 p.s.i.
Recorded Residual Pressure:	58 p.s.i.	60 p.s.i.
Recorded Flow:	32 / 950 p.s.i./g.p.m.	40 / 1060 p.s.i./g.p.m.
Residual taken from hydrant:	X-0792	X-0790

Date of Recording: 3/25/21 Completed by: Caleb D, Jeff B

Flow Recorded from 2.5" nozzle unless otherwise specified.

IMPORTANT NOTE: The above information is supplied for use in calculation of available fire flow. The information is an instantaneous recording and does not reflect flow and pressure variations in the City of Cocoa potable water system. A minimum of a 5 p.s.i. safety factor will be required for approval by the City. A larger safety factor may be required due to the location of the proposed project. Should you have any questions, please call the City of Cocoa, Utilities Engineering Department @ (321) 639-7659.

Available Pressure Calculations

Lakes at Cocoa Grove

DRMP No: 21-0569.000
1/12/2024

City of Cocoa Fire Flow Results

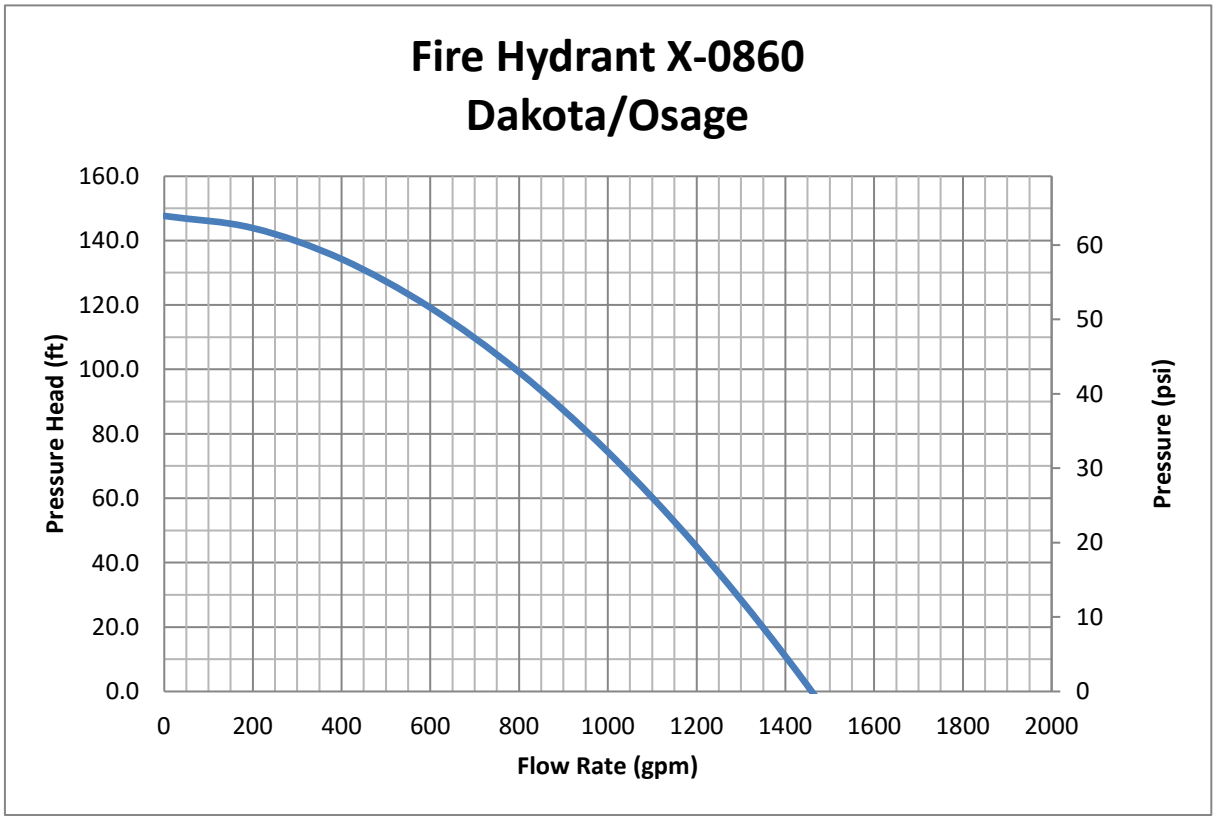
Test Date: 3/25/2021
Flow Hydrant: X-0860 Dakota/Osage
Gauge Hydrant: X-0861 Dakota/Oneida

Hazen-Williams Variation:

$$R_2 = S - \left[\frac{Q_2}{Q_1}(S - R_1)^{0.54}\right]^{1/0.54}$$

Static Pressure (S):	64	psi
Residual Pressure (R1):	42	psi
Pitot Pressure:	24	psi
Tested Flow (Q1):	820	gpm

Req'd Flow (gpm)	Pressure (ft)
0	147.6
200	143.9
400	134.2
600	119.2
800	99.2
1000	74.4
1200	44.9
1400	11.0
1600	-27.4
1800	-70.0
2000	-116.9
2200	-168.0
2400	-223.2
2600	-282.4



Serving the Community

City of Cocoa, Florida

UTILITIES DEPARTMENT
600 School Street Cocoa, Florida 32922
PHONE (321) 639-7653 FAX (321) 639-7522

FIRE HYDRANT FLOW INFORMATION REQUEST

Information requested by: _____ (Company)
_____ (Person)
_____ (Phone #)
_____ (Fax #)

Project Name: _____

Project Location: _____

Hydrant from which Information is needed: _____

Is a True Residual Pressure Required? ☑ YES ☐ NO

Date: _____ Prepared By: _____

RECORDED FIRE HYDRANT FLOW INFORMATION

Hydrant Number Flowed:	X-0860	X-0861
Hydrant Location:	Osage / Dakota	Dakota Ave / Oneida St
Recorded Static Pressure:	64 p.s.i.	66 p.s.i.
Recorded Residual Pressure:	42 p.s.i.	40 p.s.i.
Recorded Flow:	24 / 820 p.s.i./g.p.m.	30 / 920 p.s.i./g.p.m.
Residual taken from hydrant:	X-0861	X-0860

Date of Recording: 3/25/21 Completed by: Carson D, Jeff B

Flow Recorded from 2.5" nozzle unless otherwise specified.

IMPORTANT NOTE: The above information is supplied for use in calculation of available fire flow. The information is an **instantaneous** recording and **does not** reflect flow and pressure variations in the City of Cocoa potable water system. A minimum of a 5 p.s.i. safety factor will be required for approval by the City. A larger safety factor may be required due to the location of the proposed project. Should you have any questions, please call the City of Cocoa, Utilities Engineering Department @ (321) 639-7659.

Appendix B

M22 and Meter Sizing

Potable Water Demands

Lakes at Cocoa Grove

Water Meter Sizing per AWWA M22, Third Edition

DRMP No: 21-0569.000

Fixture counts per Architect plans sent 6/28/2021

1/12/2024

Clubhouse

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Bathtub	8	x		=	0
Bedpan Washers	10	x		=	0
Bidet	2	x		=	0
Dental Unit	2	x		=	0
Drinking Fountain - Public	2	x	2	=	4
Kitchen Sink	2.2	x	1	=	2.2
Lavatory Sink	1.5	x	10	=	15
Showerhead (Shower Only)	2.5	x	1	=	2.5
Service Sink	4	x		=	0
Toilet - Flush Valve	35	x	2	=	70
- Tank Type	4	x	5	=	20
Urinal - Pedestal Flush Valve	35	x		=	0
- Wall Flush Valve	16	x	2	=	32
Wash Sink (Each Set of Faucets)	4	x		=	0
Dishwasher	2	x		=	0
Washing Machine	6	x		=	0
Hose (50 ft. Wash Down) - 1/2 in.	5	x	6	=	30
- 5/8 in.	9	x		=	0
- 3/4 in.	12	x		=	0

Combined Fixture Total 175.7

Water-flow Demand per Fixture Value from Figure 4-2 or 4-3 x Pressure Adjustment Factor = 58 gpm

**For Residual Pressures at Fixture Outlet from 60-80 psi, Pressure Adjustment Factor is 1.00 per Table 4-3*

Add Irrigation - _____ Sections* x 1.16 or 0.40[†] = _____ gpm

- _____ Hose Bibbs x Fixture Value x _____ Press. Adj. Factor = _____ gpm

Added Fixed Load = _____ gpm

TOTAL FIXED DEMAND = _____ gpm

*100 sf area = 1 section

[†]Spray systems - Use 1.16; Rotary systems - Use 0.40

Meter size chosen per Table 6-1 = 1.5 in.

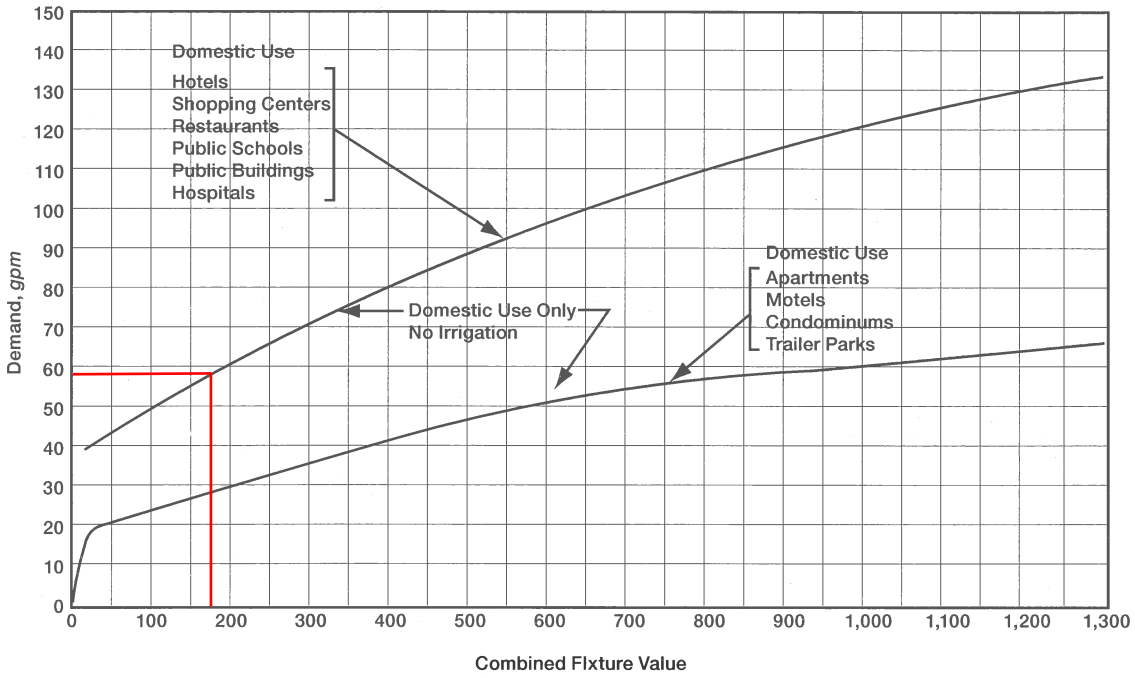


Figure 4-2 Water-flow demand per fixture value—enlarged scale from Figure 4-1

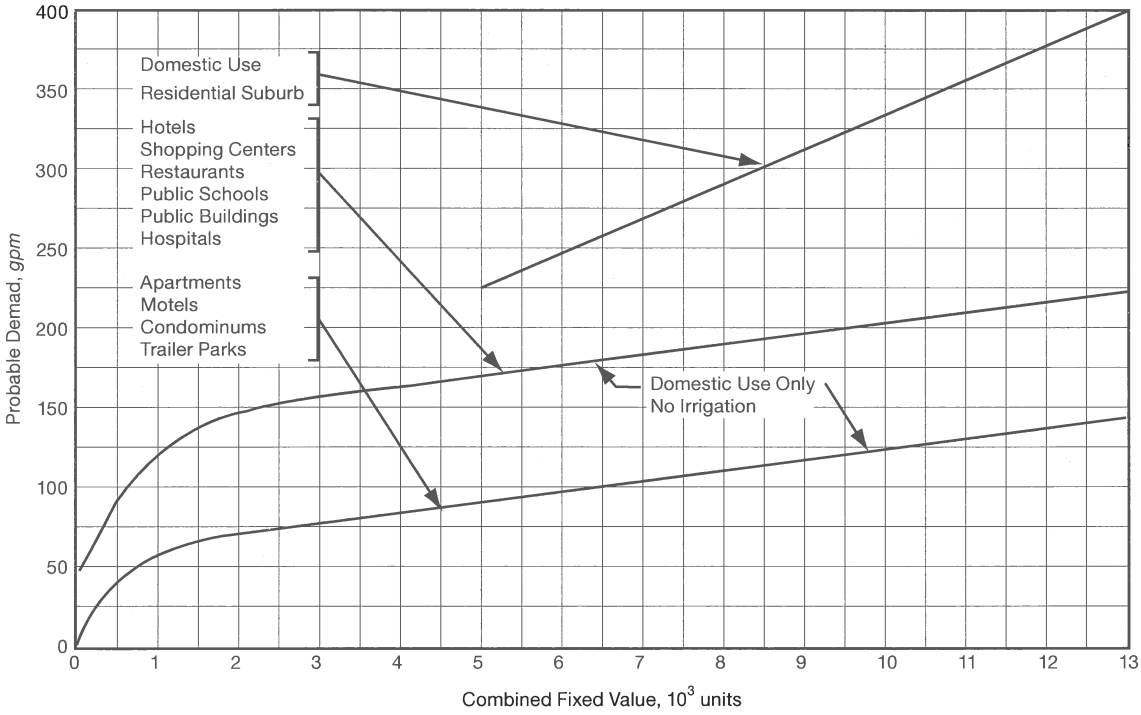


Figure 4-3 Water-flow demand per fixture value

Table 4-3 Example of fixture value adjustment for pressure (based on Figure 4-6)

Kitchen Faucet Fixture Value Adjustment			
Residual Pressure at Fixture Outlet, *psi*	Baseline Flow Rate at 60 *psi*	Actual Flow Rate at Residual Pressure (Fixture Value)	Pressure Adjustment Factor
15	1.8	1.0	0.56
20	1.8	1.1	0.61
25	1.8	1.2	0.67
30	1.8	1.3	0.72
35	1.8	1.4	0.78
40	1.8	1.5	0.83
50	1.8	1.7	0.94
60	1.8	1.8	1.00
70	1.8	1.8	1.00
80	1.8	1.8	1.00

Table 6-1 AWWA meter standards

Meter	Minimum Flow Rate, *gpm*	Low-Normal Flow Rate, *gpm*	Change-over Range (Compound Meters)	High-Normal Flow Rate, *gpm*	Maximum Flow Rate *gpm*	Head Loss at Maximum Flow, *psi*
Positive displacement						
½ in.	0.25	1	N/A	7.5	15	15
⅝ in.	0.25	1		10	20	15
¾ in.	0.50	2		15	30	15
1 in.	0.75	3		25	50	15
1½ in.	1.50	5		50	100	15
2 in.	2.00	8		80	160	15
Multijet						
⅝ in.	0.25	1	N/A	10	20	15
¾ in.	0.50	2		15	30	15
1 in.	0.75	3		25	50	15
1½ in.	1.50	5		50	100	15
2 in.	2.00	8		80	160	15
Turbine class II						
1½ in.	N/A	4	N/A	90	120	7
2 in.		4		160	190	7
3 in.		8		350	435	7
4 in.		15		650	750	7
6 in.		30		1,400	1,600	7
8 in.		50		2,400	2,800	7
10 in.		75		3,500	4,200	7
12 in.		120		4,400	5,300	7
16 in.		200		6,500	7,800	7
20 in.		300		10,000	12,000	7
Compound class II						
2 in.	0.25	1	13	80	160	15
3 in.	0.50	2	15	175	350	15
4 in.	0.75	3	18	300	600	15
6 in.	1.50	5	20	675	1,350	15
8 in.	2.00	16	35	900	1,600	15
Fire service, type II—compound						
3 in	* see note	2	30	250	350	12
4 in.		4	40	400	700	12
6 in.		5	90	900	1,600	12
8 in.		8	150	1,600	2,800	12
10 in.		8	200	2,200	4,400	12

Source: Data are drawn from AWWA Standards C700, C701, C702, C703, C704, C708, C710, C712, C713, and C714, latest revision.

N/A = not applicable.

* Minimum flow rate is per the applicable AWWA standard for the bypass meter employed.

(Table continued on next page.)

Table 6-1 AWWA meter standards (continued)

Meter	Minimum Flow Rate, *gpm*	Low-Normal Flow Rate, *gpm*	Change-over Range (Compound Meters)	High-Normal Flow Rate, *gpm*	Maximum Flow Rate *gpm*	Head Loss at Maximum Flow, *psi*
Fire service, type III—turbine						
3 in.	4	5	N/A	250	350	11
4 in.	10	15		400	700	11
6 in.	20	30		900	1,600	11
8 in.	30	35		1,600	2,800	11
10 in.	35	55		2,500	4,400	11
Propeller (main line)						
2 in.	N/A	45	N/A	100	120	5
3 in.		80		250	300	5
4 in.		85		500	600	2
6 in.		160		1,200	1,350	1
8 in.		190		1,500	1,800	0.5
10 in.		260		2,000	2,400	0.5
12 in.		275		2,800	3,375	0.5
14 in.		350		3,750	4,500	0.5
16 in.		450		4,750	5,700	0.5
18 in.		550		5,625	6,750	0.25
20 in.		650		6,875	8,250	0.25
24 in.		1,000		10,000	12,000	0.25
30 in.		1,600		15,000	18,000	0.25
36 in.		2,400		20,000	24,000	0.25
42 in.		2,800		28,000	40,000	0.1
48 in.		3,500		35,000	50,000	0.1
54 in.		5,000		45,000	55,000	0.1
60 in.		6,000		60,000	80,000	0.1
66 in.		7,500		75,000	95,000	0.1
72 in.		9,000		90,000	115,000	0.1
Fluidic oscillator						
½ in.	0.25	1	N/A	7.5	15	15
⅝ in.	0.25	1		10	20	15
¾ in.	0.50	2		15	30	15
1 in.	0.75	3		25	50	15
1½ in.	1.50	5		50	100	15
2 in.	2.00	8		80	160	15
Singlejet						
⅝ in.	0.25	1	N/A	10	20	15
¾ in.	0.50	2		15	30	15
1 in.	0.75	3		20	40	15
1½ in.	0.50	1.5	N/A	50	100	15

Source: Data are drawn from AWWA Standards C700, C701, C702, C703, C704, C708, C710, C712, C713, and C714, latest revision.

N/A = not applicable.

* Minimum flow rate is per the applicable AWWA standard for the bypass meter employed.

(Table continued on next page.)

Table 6-1 AWWA meter standards (continued)

Meter	Minimum Flow Rate, *gpm*	Low-Normal Flow Rate, *gpm*	Change-over Range (Compound Meters)	High-Normal Flow Rate, *gpm*	Maximum Flow Rate *gpm*	Head Loss at Maximum Flow, *psi*
2 in.	0.50	2.0		80	160	15
3 in.	0.50	2.5		160	320	15
4 in.	0.75	3.0		250	500	15
6 in	1.50	4.0		500	1,000	15
Residential Fire Sprinkler						
¾ in.	0.5	2	N/A	15	30	10.1
1 in.	0.75	2		25	50	10.7
1½ in.	1.5	3		50	100	7.7
2 in.	2.0	4		80	160	7.7
Residential Fire Sprinkler w/ strainer						
¾ in.	0.5	2	N/A	15	30	14.5
1 in.	0.75	2		25	50	15.3
1½ in.	1.5	3		50	100	11
2 in.	2.0	4		80	160	11

Source: Data are drawn from AWWA Standards C700, C701, C702, C703, C704, C708, C710, C712, C713, and C714, latest revision.

N/A = not applicable.

* Minimum flow rate is per the applicable AWWA standard for the bypass meter employed.

Table 6-2 Typical uses for each type of meter classification

Meter Type	Typical Use
Positive displacement, fluidic oscillator, multijet, singlejet, static, turbine, electromagnetic, or ultrasonic	Single-family residential, apartment buildings with fewer than 100 units; small businesses (e.g., filling stations, restaurants, small hotels, motels, small office buildings, retail stores, etc.); schools and other public buildings without large irrigation demands
Turbine, singlejets, static, electromagnetic or ultrasonic	Large hotels, factories, hospitals, irrigation, large office buildings, pump discharge, laundries, nursing homes
Compound, singlejets, turbine, multijet, static, electromagnetic or ultrasonic	Schools (with irrigation), apartment buildings with more than 100 units, dormitories, assisted living centers, retail shopping centers
Residential fire meters	One- and two-family dwellings and manufactured homes (NFPA 13D applications)
Fire-line meters	Fire service (for various NFPA 13 and NFPA 13R applications)
Differential pressure (venturi, flow tube), electromagnetic or ultrasonic meters	Pump discharge, wholesale water purchasers, research applications, subsystem metering

Appendix C

Fire Flow Calculations

Fire Flow Calcs

Lakes at Cocoa Grove

DRMP No: 21-0569.000
7/28/2022

BASIC REQUIREMENTS FOR DETERMINING MINIMUM FIRE FLOW (FFPC 1-18.4)

FFPC 1-Table 18.4.5.1.2 Minimum Required Fire Flow and Flow Duration for Buildings

Fire Flow Area ft^2 (X 0.0929 for m^2)					Fire Flow gpm[+] (X 3.785 for L/min)	Flow Duration (hours)
I(443), I(332), II(222)*	II(111), III(211)*	IV(2HH), V(111)*	II(000), III(200)*	V(000)		
0-22,700	0-12,700	0-8200	0-5900	0-3600	1500	
22,701-30,200	12,701-17,000	8200-10,900	5901-7900	3601-4800	1750	
30,201-38,700	17,001-21,800	10,901-12,900	7901-9800	4801-6200	2000	2
38,701-48,300	21,801-24,200	12,901-17,400	9801-12,600	6201-7700	2250	
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7701-9400	2500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9401-11,301	2750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3000	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3250	
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3500	3
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,801-20,600	3750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4000	
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4250	
164,201-188,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4500	
188,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5750	
Greater than 295,900	Greater than 166,500	106,501-115,800	77,001-83,700	47,401-51,500	6000	4
		115,801-125,500	83,701-90,600	51,501-55,700	6250	
		125,201-135,500	90,601-97,900	55,701-60,200	6500	
		135,501-145,800	97,901-106,800	60,201-64,800	6750	
		145,801-156,700	106,801-113,200	64,801-69,600	7000	
		156,701-167,900	113,201-121,300	69,600-74,600	7250	
		167,901-179,400	121,301-129,600	74,601-79,800	7500	
		179,401-191,400	129,601-188,300	79,801-85,100	7750	
		Greater than 191,400	Greater than 188,300	Greater than 85,100	8000	

* Types of construction are based on NFPA 220.

[+] Measured at 20 psi (139.9kPa).

NFPA 220 - Table A.4.1.1 Cross-Reference of Building Construction Types

NFPA 220	I(442)	I(332)	II(222)	II(111)	II(000)	III(211)	III(200)	IV(2HH)	V(111)	V(000)
IBC	-	IA	IB	IIA	IIB	IIIA	IIIB	IV	VA	VB

Construction Type	VB
Building Area (sf)	3,597
Sprinklered	No

Exposure Increase (BCFR Exposures Memo - April 10, 2018)
Exposure increases are only applied to non-sprinklered buildings

North	_____	ft	Add	0%
South	_____	ft	Add	0%
East	_____	ft	Add	0%
West	_____	ft	Add	0%

Total Exposure Increase 0% (maximum 200%)

Base Minimum Fire Flow	1,500	gpm (From Table 18.4.5.1.2)
Total Exposure Increase	0	gpm
Initial Fire Flow	1,500	gpm
Fire Sprinkler Decrease	1,500	Reduce Initial Fire Flow maximum of 75% if structure is fully sprinklered

Total Minimum Fire Flow **1,500** **gpm** (Minimum required flow is 1,000 gpm)
Duration Requirement 2 hours

Appendix D

WaterCAD Results

FH-1
FH-2
FH-3
FH-4
FH-5
FH-6
FH-7
FH-8
FH-9
FH-10
FH-11
FH-12
FH-13
FH-14
FH-15
FH-16
FH-17
FH-18
FH-19
FH-20
FH-21
FH-22
FH-23
FH-24
FH-25
FH-26
FH-27
FH-28
FH-29
FH-30
FH-31
FH-32
FH-33
FH-34
FH-35
FH-36
FH-37
FH-38
FH-39
J-4
J-6
J-7

Lakes at Cocoa Grove
Lot Demand Assignments

Junction	Phase	Lots	ADF (gpm)	MDF (gpm)	PHF (gpm)
FH-1	1		0.00	0.0	0.0
FH-2	1	12	2.83	4.3	7.1
FH-3	1	19	4.49	6.7	11.2
FH-4	1	6	1.42	2.1	3.5
FH-5	1	1	0.24	0.4	0.6
FH-6	1	6	1.42	2.1	3.5
FH-7	1	13	3.07	4.6	7.7
FH-8	1	5	1.18	1.8	3.0
FH-9	1	3	0.71	1.1	1.8
FH-10	3	10	2.36	3.5	5.9
FH-11	3	2	0.47	0.7	1.2
FH-12	3	11	2.60	3.9	6.5
FH-13	3	8	1.89	2.8	4.7
FH-14	3	5	1.18	1.8	3.0
FH-15	3	6	1.42	2.1	3.5
FH-16	3	1	0.24	0.4	0.6
FH-17	2	14	3.31	5.0	8.3
FH-18	2	12	2.83	4.3	7.1
FH-19	2	19	4.49	6.7	11.2
FH-20	2	13	3.07	4.6	7.7
FH-21	2	9	2.13	3.2	5.3
FH-22	2	11	2.60	3.9	6.5
FH-23	2	11	2.60	3.9	6.5
FH-24	2	12	2.83	4.3	7.1
FH-25	2	6	1.42	2.1	3.5
FH-26	2		0.00	0.0	0.0
FH-27	2		0.00	0.0	0.0
FH-28	2		0.00	0.0	0.0
FH-29	4	10	2.36	3.5	5.9
FH-30	4	6	1.42	2.1	3.5
FH-31	4	9	2.13	3.2	5.3
FH-32	4	9	2.13	3.2	5.3
FH-33	4	8	1.89	2.8	4.7
FH-34	4	4	0.94	1.4	2.4
FH-35	4	14	3.31	5.0	8.3
FH-36	4	10	2.36	3.5	5.9
FH-37	4	11	2.60	3.9	6.5
FH-38	4	17	4.01	6.0	10.0
FH-39	4	12	2.83	4.3	7.1
J-1	1		0.00	0.0	0.0
J-2	1		0.00	0.0	0.0
J-3	1		0.00	0.0	0.0
J-4	1	12	2.83	4.3	7.1

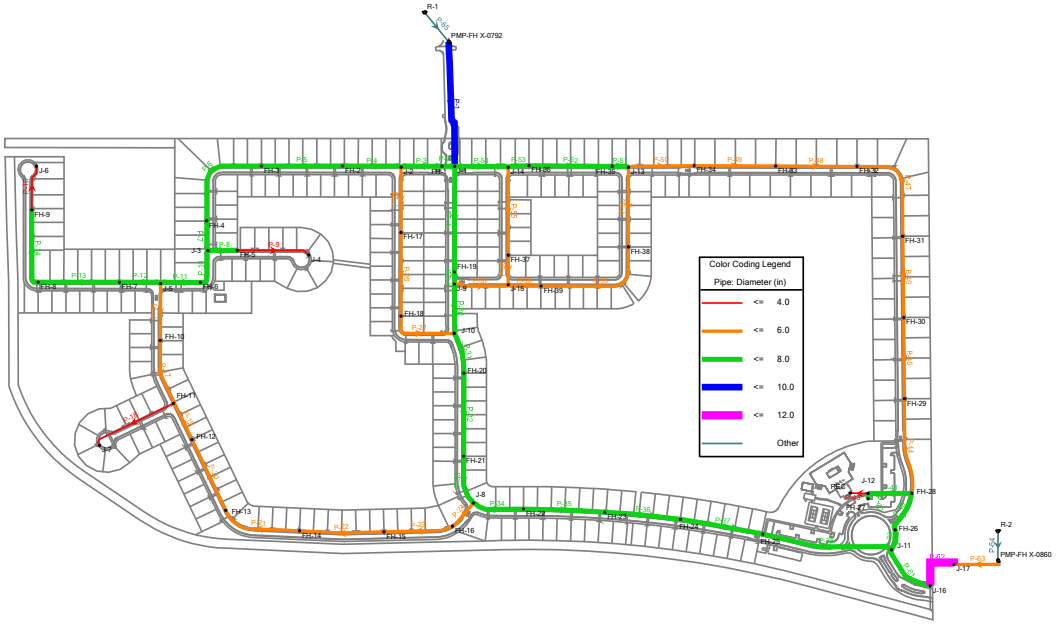
Lakes at Cocoa Grove

Lot Demand Assignments

Junction	Phase	Lots	ADF (gpm)	MDF (gpm)	PHF (gpm)
J-5	1		0.00	0.0	0.0
J-6	1	3	0.71	1.1	1.8
J-7	3	10	2.36	3.5	5.9
J-8	2		0.00	0.0	0.0
J-9	2		0.00	0.0	0.0
J-10	2		0.00	0.0	0.0
J-11	2		0.00	0.0	0.0
J-12	2		0.00	0.0	0.0
J-13	4		0.00	0.0	0.0
J-14	4		0.00	0.0	0.0
J-15	4		0.00	0.0	0.0
J-16	2		0.00	0.0	0.0
J-17	2		0.00	0.0	0.0
REC	2		23.20	34.8	58.0
Total		**350**	**105.8**	**158.8**	**264.6**

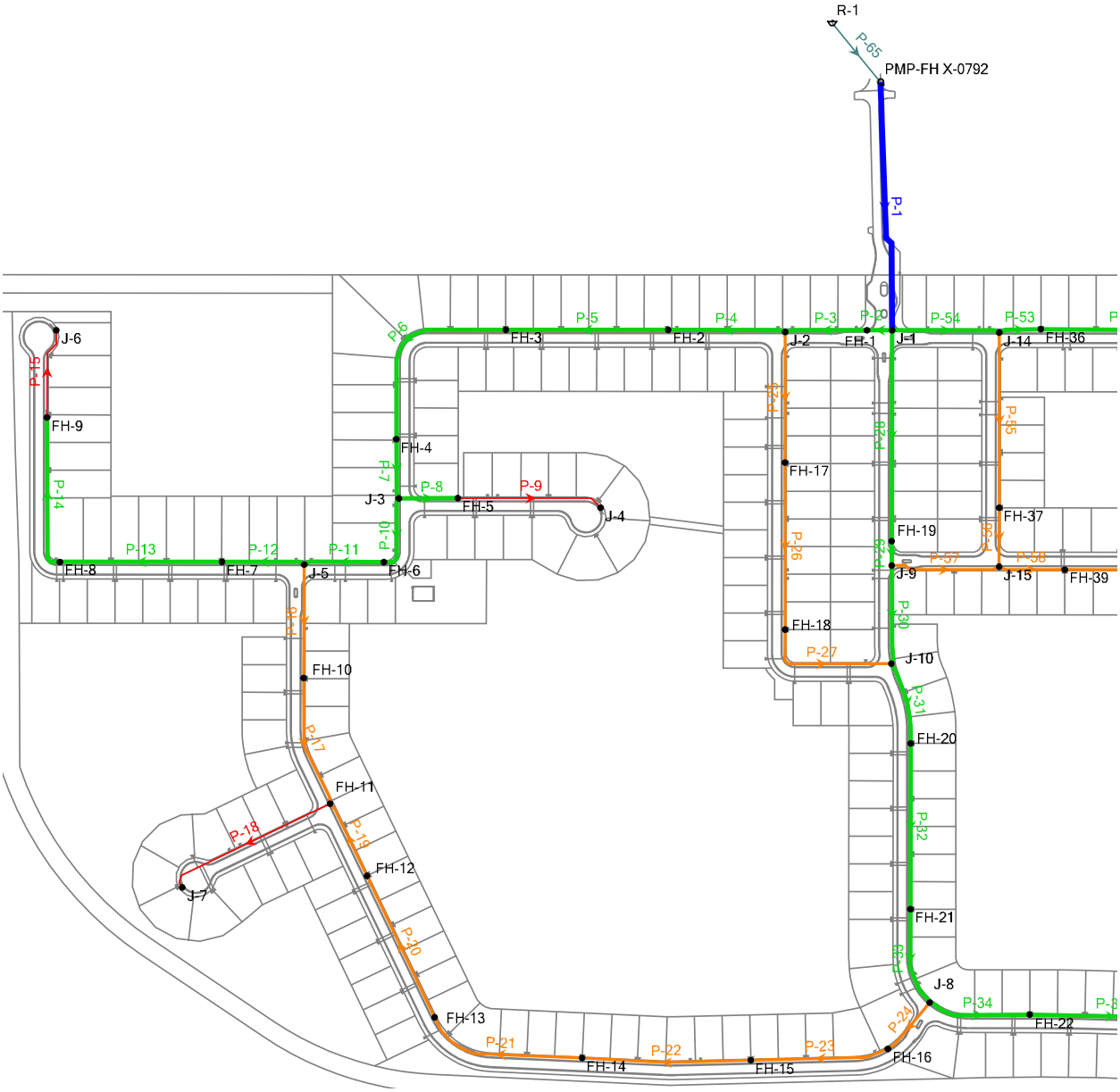
Lakes at Cocoa Grove (DRMP No. 21-0569.000)

Extents



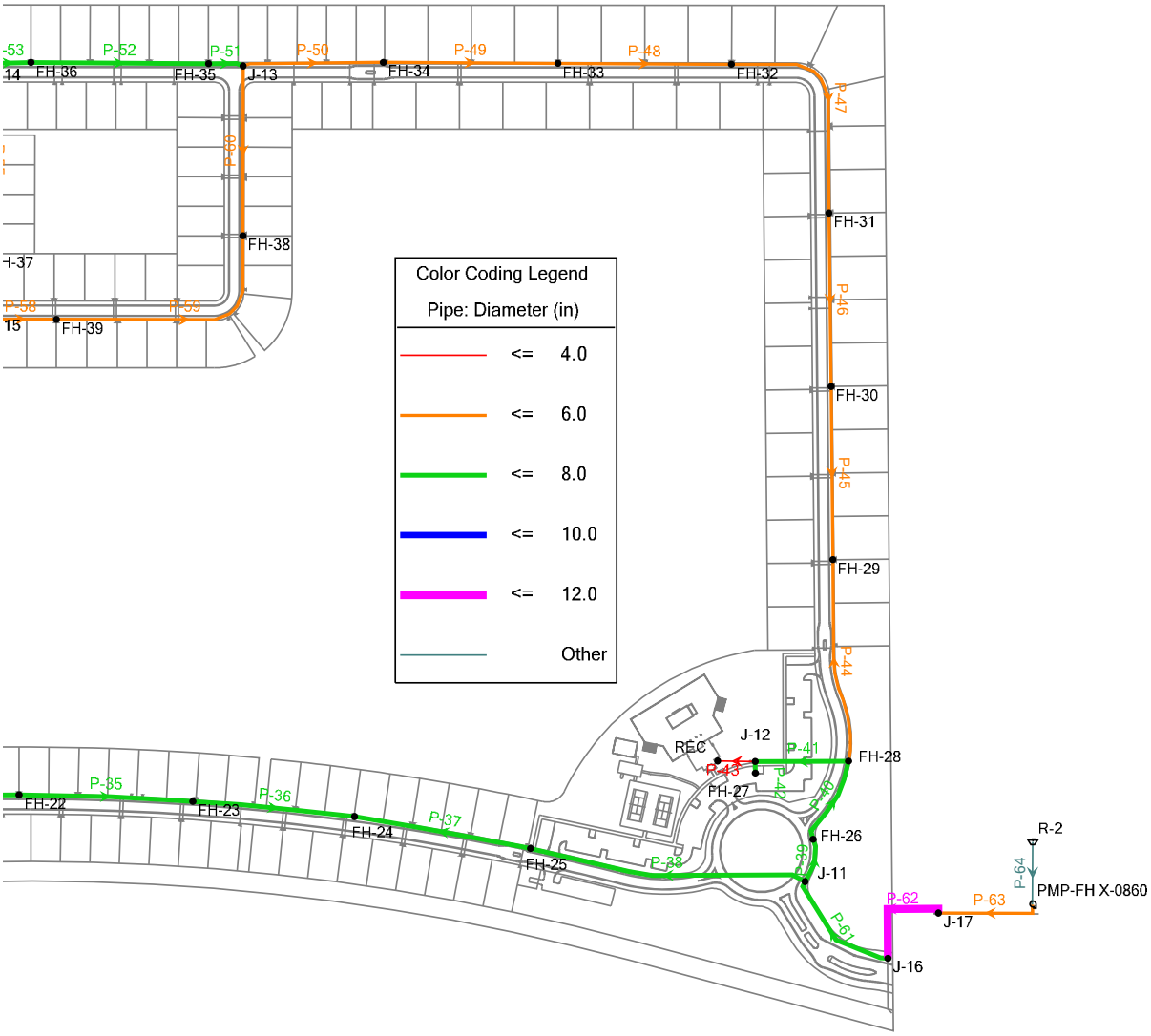
Lakes at Cocoa Grove (DRMP No. 21-0569.000)

West Half



Lakes at Cocoa Grove (DRMP No. 21-0569.000)

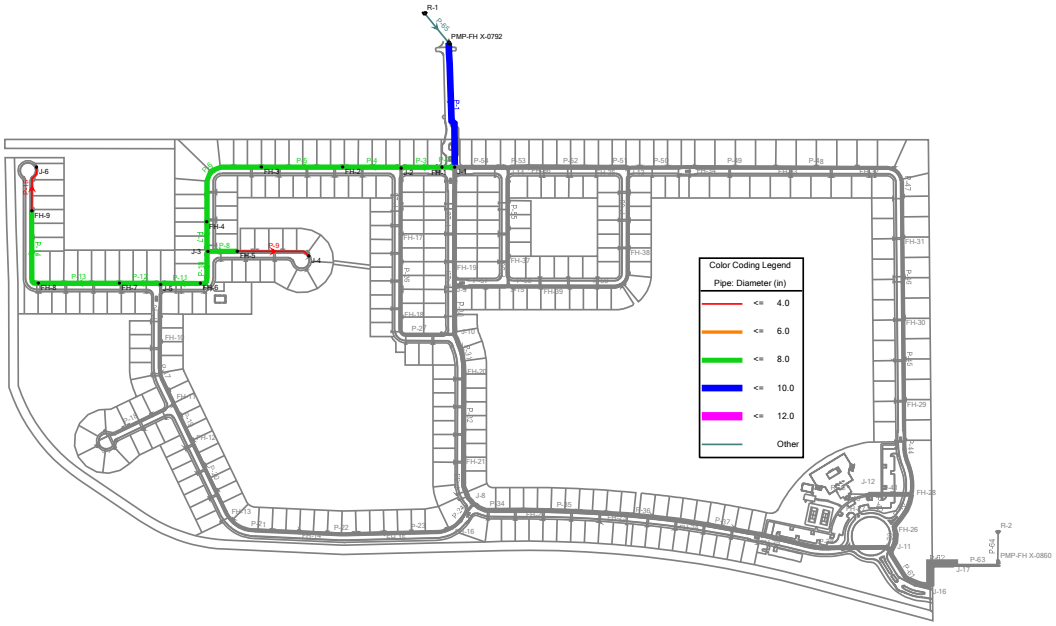
East Half



Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.1 Phase 1 MDF

Extents



Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.1 Phase 1 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.58	64	True
FH-2	0.00	<Collection: 1 item>	4	148.57	64	True
FH-3	0.00	<Collection: 1 item>	7	148.56	64	True
FH-4	0.00	<Collection: 1 item>	2	148.56	64	True
FH-5	0.00	<Collection: 1 item>	0	148.55	64	True
FH-6	0.00	<Collection: 1 item>	2	148.55	64	True
FH-7	0.00	<Collection: 1 item>	5	148.55	64	True
FH-8	0.00	<Collection: 1 item>	2	148.55	64	True
FH-9	0.00	<Collection: 1 item>	1	148.55	64	True
FH-10	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-11	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-12	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-13	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-14	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-15	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-16	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-17	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-18	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-19	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-20	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-21	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-22	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-23	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-24	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-25	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-26	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
FH-27	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
FH-28	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	148.59	64	True
J-2	0.00	<Collection: 0 items>	0	148.58	64	True
J-3	0.00	<Collection: 0 items>	0	148.55	64	True
J-4	0.00	<Collection: 1 item>	4	148.55	64	True
J-5	0.00	<Collection: 0 items>	0	148.55	64	True
J-6	0.00	<Collection: 1 item>	1	148.55	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.1 Phase 1 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-8	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-9	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-10	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-11	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-12	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-17	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
REC	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.1 Phase 1 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.01	0.12	28	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.00	0.18	28	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.01	0.18	28	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.01	0.18	28	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.01	0.15	24	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.11	17	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.10	15	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.07	11	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.05	9	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-17	FH-10	FH-11	130.0	6.0	356	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-18	FH-11	J-7	130.0	4.0	482	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-19	FH-11	FH-12	130.0	6.0	221	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-20	FH-12	FH-13	130.0	6.0	425	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-21	FH-13	FH-14	130.0	6.0	444	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-22	FH-14	FH-15	130.0	6.0	457	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-23	FH-15	FH-16	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-24	FH-16	J-8	130.0	6.0	170	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-25	FH-17	J-2	130.0	6.0	354	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-26	FH-18	FH-17	130.0	6.0	453	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-27	J-10	FH-18	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-28	J-1	FH-19	130.0	8.0	572	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-29	FH-19	J-9	130.0	8.0	66	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-30	J-9	J-10	130.0	8.0	267	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-31	FH-20	J-10	130.0	8.0	226	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-32	FH-21	FH-20	130.0	8.0	449	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-33	J-8	FH-21	130.0	8.0	269	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-34	FH-22	J-8	130.0	8.0	281	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-35	FH-23	FH-22	130.0	8.0	441	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-36	FH-24	FH-23	130.0	8.0	412	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-37	FH-25	FH-24	130.0	8.0	454	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-38	J-11	FH-25	130.0	8.0	708	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-39	FH-26	J-11	130.0	8.0	114	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.1 Phase 1 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-41	FH-28	J-12	130.0	8.0	237	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-42	J-12	FH-27	130.0	8.0	29	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-43	J-12	REC	130.0	2.0	95	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-62	J-17	J-16	130.0	12.0	265	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	(N/A)	(N/A)	(N/A)	(N/A)	False
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.01	28	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.1 Phase 1 MDF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.59	28	147.59	True
PMP-FH X-0860	0.00	FH X-0860	On	(N/A)	(N/A)	(N/A)	(N/A)	False

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	28	1.00	True
R-2	1.00	<None>	(N/A)	(N/A)	False

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.2 Phase 1 MDF+FF = 1,000

Fire Flow Results Table - Time: 0.00 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Velocity of Maximum Pipe (ft/s)	Pressure (Calculated Residual) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
FH-1	True	1,001	1,000	1,001	6.57	58	58	J-4
FH-2	True	1,001	1,004	1,005	6.57	54	54	J-4
FH-3	True	1,001	1,007	1,008	6.57	50	50	J-4
FH-4	True	1,001	1,002	1,003	6.57	45	45	J-4
FH-5	True	1,001	1,000	1,001	6.57	43	43	J-4
FH-6	True	1,001	1,002	1,003	6.57	42	42	J-6
FH-7	True	1,001	1,005	1,006	6.57	39	39	J-6
FH-8	True	1,001	1,002	1,003	6.57	35	35	J-6
FH-9	True	1,001	1,001	1,002	6.57	32	32	J-6
FH-10	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-11	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-12	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-13	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-14	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-15	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-16	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-17	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-18	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-19	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-20	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-21	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-22	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-23	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-24	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-25	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-26	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-27	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-28	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-29	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-30	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-31	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-32	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-33	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-34	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-35	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-36	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-37	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-38	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-39	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.3 Phase 1 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.55	64	True
FH-2	0.00	<Collection: 1 item>	7	148.52	64	True
FH-3	0.00	<Collection: 1 item>	11	148.50	64	True
FH-4	0.00	<Collection: 1 item>	4	148.48	64	True
FH-5	0.00	<Collection: 1 item>	1	148.48	64	True
FH-6	0.00	<Collection: 1 item>	4	148.48	64	True
FH-7	0.00	<Collection: 1 item>	8	148.48	64	True
FH-8	0.00	<Collection: 1 item>	3	148.48	64	True
FH-9	0.00	<Collection: 1 item>	2	148.48	64	True
FH-10	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-11	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-12	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-13	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-14	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-15	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-16	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-17	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-18	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-19	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-20	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-21	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-22	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-23	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-24	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-25	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-26	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
FH-27	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
FH-28	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	148.56	64	True
J-2	0.00	<Collection: 0 items>	0	148.54	64	True
J-3	0.00	<Collection: 0 items>	0	148.48	64	True
J-4	0.00	<Collection: 1 item>	7	148.46	64	True
J-5	0.00	<Collection: 0 items>	0	148.48	64	True
J-6	0.00	<Collection: 1 item>	2	148.47	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.3 Phase 1 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-8	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-9	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-10	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-11	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-12	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-17	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
REC	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.3 Phase 1 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.01	0.19	47	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.00	0.30	47	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.01	0.30	47	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.02	0.30	47	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.02	0.26	40	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.18	29	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.16	25	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.05	8	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.02	0.18	7	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.11	18	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.09	14	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.09	14	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.04	7	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.02	4	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.05	2	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-17	FH-10	FH-11	130.0	6.0	356	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-18	FH-11	J-7	130.0	4.0	482	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-19	FH-11	FH-12	130.0	6.0	221	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-20	FH-12	FH-13	130.0	6.0	425	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-21	FH-13	FH-14	130.0	6.0	444	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-22	FH-14	FH-15	130.0	6.0	457	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-23	FH-15	FH-16	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-24	FH-16	J-8	130.0	6.0	170	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-25	FH-17	J-2	130.0	6.0	354	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-26	FH-18	FH-17	130.0	6.0	453	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-27	J-10	FH-18	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-28	J-1	FH-19	130.0	8.0	572	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-29	FH-19	J-9	130.0	8.0	66	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-30	J-9	J-10	130.0	8.0	267	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-31	FH-20	J-10	130.0	8.0	226	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-32	FH-21	FH-20	130.0	8.0	449	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-33	J-8	FH-21	130.0	8.0	269	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-34	FH-22	J-8	130.0	8.0	281	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-35	FH-23	FH-22	130.0	8.0	441	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-36	FH-24	FH-23	130.0	8.0	412	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-37	FH-25	FH-24	130.0	8.0	454	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-38	J-11	FH-25	130.0	8.0	708	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-39	FH-26	J-11	130.0	8.0	114	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.3 Phase 1 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-41	FH-28	J-12	130.0	8.0	237	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-42	J-12	FH-27	130.0	8.0	29	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-43	J-12	REC	130.0	2.0	95	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-62	J-17	J-16	130.0	12.0	265	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	(N/A)	(N/A)	(N/A)	(N/A)	False
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.01	47	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

1.3 Phase 1 PHF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.57	47	147.57	True
PMP-FH X-0860	0.00	FH X-0860	On	(N/A)	(N/A)	(N/A)	(N/A)	False

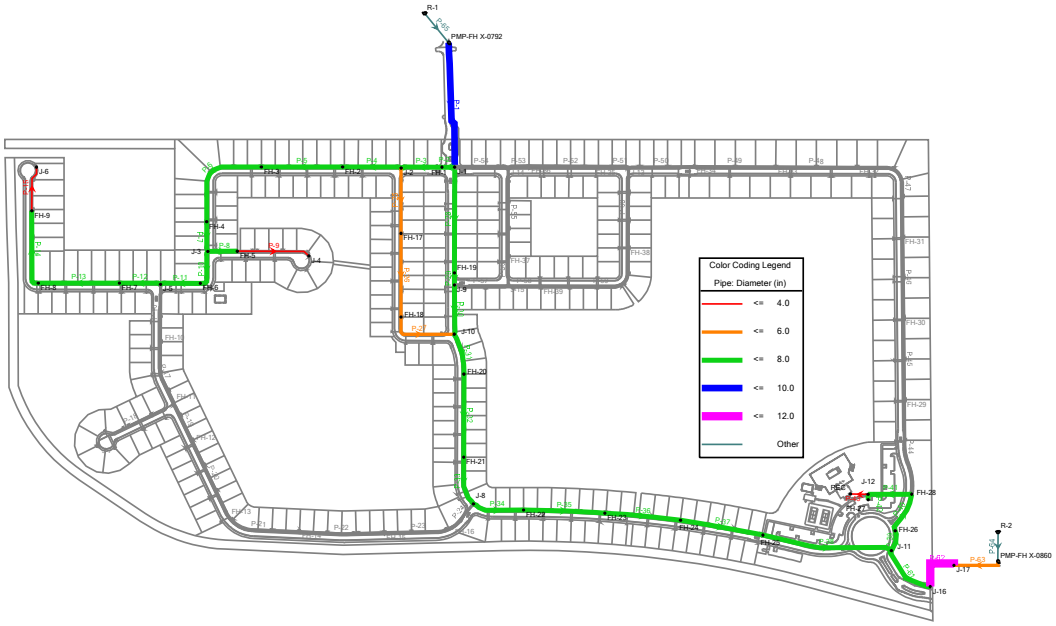
Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	47	1.00	True
R-2	1.00	<None>	(N/A)	(N/A)	False

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.1 Phase 2 MDF

Extents



Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.1 Phase 2 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.51	64	True
FH-2	0.00	<Collection: 1 item>	4	148.49	64	True
FH-3	0.00	<Collection: 1 item>	7	148.48	64	True
FH-4	0.00	<Collection: 1 item>	2	148.47	64	True
FH-5	0.00	<Collection: 1 item>	0	148.47	64	True
FH-6	0.00	<Collection: 1 item>	2	148.47	64	True
FH-7	0.00	<Collection: 1 item>	5	148.47	64	True
FH-8	0.00	<Collection: 1 item>	2	148.47	64	True
FH-9	0.00	<Collection: 1 item>	1	148.47	64	True
FH-10	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-11	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-12	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-13	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-14	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-15	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-16	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-17	0.00	<Collection: 1 item>	5	148.49	64	True
FH-18	0.00	<Collection: 1 item>	4	148.49	64	True
FH-19	0.00	<Collection: 1 item>	7	148.49	64	True
FH-20	0.00	<Collection: 1 item>	5	148.48	64	True
FH-21	0.00	<Collection: 1 item>	3	148.47	64	True
FH-22	0.00	<Collection: 1 item>	4	148.47	64	True
FH-23	0.00	<Collection: 1 item>	4	148.46	64	True
FH-24	0.00	<Collection: 1 item>	4	148.46	64	True
FH-25	0.00	<Collection: 1 item>	2	148.46	64	True
FH-26	0.00	<Collection: 0 items>	0	148.45	64	True
FH-27	0.00	<Collection: 0 items>	0	148.44	64	True
FH-28	0.00	<Collection: 0 items>	0	148.45	64	True
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	148.51	64	True
J-2	0.00	<Collection: 0 items>	0	148.50	64	True
J-3	0.00	<Collection: 0 items>	0	148.47	64	True
J-4	0.00	<Collection: 1 item>	4	148.46	64	True
J-5	0.00	<Collection: 0 items>	0	148.47	64	True
J-6	0.00	<Collection: 1 item>	1	148.47	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.1 Phase 2 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-8	0.00	<Collection: 0 items>	0	148.47	64	True
J-9	0.00	<Collection: 0 items>	0	148.49	64	True
J-10	0.00	<Collection: 0 items>	0	148.48	64	True
J-11	0.00	<Collection: 0 items>	0	148.46	64	True
J-12	0.00	<Collection: 0 items>	0	148.44	64	True
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	0	148.47	64	True
J-17	0.00	<Collection: 0 items>	0	148.47	64	True
REC	0.00	<Collection: 1 item>	35	145.47	63	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.1 Phase 2 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.03	0.29	72	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.00	0.26	40	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.01	0.26	40	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.01	0.18	28	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.01	0.15	24	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.11	17	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.10	15	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.07	11	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.05	9	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-17	FH-10	FH-11	130.0	6.0	356	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-18	FH-11	J-7	130.0	4.0	482	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-19	FH-11	FH-12	130.0	6.0	221	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-20	FH-12	FH-13	130.0	6.0	425	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-21	FH-13	FH-14	130.0	6.0	444	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-22	FH-14	FH-15	130.0	6.0	457	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-23	FH-15	FH-16	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-24	FH-16	J-8	130.0	6.0	170	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.000	0.01	0.13	-12	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.000	0.00	0.08	-7	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.000	0.00	0.03	-2	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.000	0.02	0.20	32	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.000	0.00	0.16	25	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.000	0.01	0.16	25	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.000	0.01	0.18	-27	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.000	0.01	0.15	-23	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.000	0.00	0.13	-20	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.000	0.00	0.13	-20	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.000	0.00	0.10	-16	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.000	0.00	0.08	-12	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.000	0.00	0.05	-8	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.000	0.00	0.04	-6	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.000	0.00	0.22	-35	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.1 Phase 2 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.000	0.01	0.22	-35	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.000	0.01	0.22	35	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.000	0.00	0.00	0	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.031	2.97	3.55	35	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	0.000	0.01	0.19	29	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.000	0.00	0.08	29	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.000	0.03	0.33	29	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.01	29	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.01	72	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.1 Phase 2 MDF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.54	72	147.54	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	148.49	29	147.49	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	72	1.00	True
R-2	1.00	<None>	29	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.2 Phase 2 MDF+FF = 1,000

Fire Flow Results Table - Time: 0.00 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Velocity of Maximum Pipe (ft/s)	Pressure (Calculated Residual) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
FH-1	True	1,001	1,000	1,001	5.97	60	60	J-4
FH-2	True	1,001	1,004	1,005	6.57	56	56	J-4
FH-3	True	1,001	1,007	1,008	6.57	52	52	J-4
FH-4	True	1,001	1,002	1,003	6.57	48	48	J-4
FH-5	True	1,001	1,000	1,001	6.57	45	45	J-4
FH-6	True	1,001	1,002	1,003	6.57	45	45	J-6
FH-7	True	1,001	1,005	1,006	6.57	41	41	J-6
FH-8	True	1,001	1,002	1,003	6.57	38	38	J-6
FH-9	True	1,001	1,001	1,002	6.57	34	34	J-6
FH-10	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-11	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-12	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-13	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-14	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-15	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-16	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-17	True	1,001	1,005	1,006	6.84	55	58	FH-18
FH-18	True	1,001	1,004	1,005	6.66	55	58	FH-17
FH-19	True	1,001	1,007	1,008	4.04	59	59	J-9
FH-20	True	1,001	1,005	1,006	4.79	57	58	FH-21
FH-21	True	1,001	1,003	1,004	4.55	56	56	J-8
FH-22	True	1,001	1,004	1,005	4.34	55	55	FH-23
FH-23	True	1,001	1,004	1,005	4.66	54	55	FH-24
FH-24	True	1,001	1,004	1,005	4.94	53	54	REC
FH-25	True	1,001	1,002	1,003	5.23	53	53	REC
FH-26	True	1,001	1,000	1,001	6.61	52	50	REC
FH-27	True	1,001	1,000	1,001	6.61	47	46	REC
FH-28	True	1,001	1,000	1,001	6.61	50	48	REC
FH-29	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-30	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-31	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-32	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-33	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-34	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-35	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-36	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-37	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-38	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-39	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.3 Phase 2 MDF+REC FF = 1,500

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	139.01	60	True
FH-2	0.00	<Collection: 1 item>	4	138.65	60	True
FH-3	0.00	<Collection: 1 item>	7	138.64	60	True
FH-4	0.00	<Collection: 1 item>	2	138.64	60	True
FH-5	0.00	<Collection: 1 item>	0	138.63	60	True
FH-6	0.00	<Collection: 1 item>	2	138.63	60	True
FH-7	0.00	<Collection: 1 item>	5	138.63	60	True
FH-8	0.00	<Collection: 1 item>	2	138.63	60	True
FH-9	0.00	<Collection: 1 item>	1	138.63	60	True
FH-10	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-11	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-12	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-13	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-14	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-15	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-16	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-17	0.00	<Collection: 1 item>	5	136.82	59	True
FH-18	0.00	<Collection: 1 item>	4	134.56	58	True
FH-19	0.00	<Collection: 1 item>	7	135.06	58	True
FH-20	0.00	<Collection: 1 item>	5	129.87	56	True
FH-21	0.00	<Collection: 1 item>	3	124.22	54	True
FH-22	0.00	<Collection: 1 item>	4	117.36	51	True
FH-23	0.00	<Collection: 1 item>	4	111.89	48	True
FH-24	0.00	<Collection: 1 item>	4	106.84	46	True
FH-25	0.00	<Collection: 1 item>	2	101.33	44	True
FH-26	0.00	<Collection: 0 items>	0	88.16	38	True
FH-27	0.00	<Collection: 1 item>	1,000	73.88	32	True
FH-28	0.00	<Collection: 1 item>	500	79.02	34	True
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	139.12	60	True
J-2	0.00	<Collection: 0 items>	0	138.66	60	True
J-3	0.00	<Collection: 0 items>	0	138.63	60	True
J-4	0.00	<Collection: 1 item>	4	138.63	60	True
J-5	0.00	<Collection: 0 items>	0	138.63	60	True
J-6	0.00	<Collection: 1 item>	1	138.63	60	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.3 Phase 2 MDF+REC FF = 1,500

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-8	0.00	<Collection: 0 items>	0	120.86	52	True
J-9	0.00	<Collection: 0 items>	0	134.60	58	True
J-10	0.00	<Collection: 0 items>	0	132.74	57	True
J-11	0.00	<Collection: 0 items>	0	92.77	40	True
J-12	0.00	<Collection: 0 items>	0	74.42	32	True
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	0	96.01	42	True
J-17	0.00	<Collection: 0 items>	0	96.39	42	True
REC	0.00	<Collection: 1 item>	35	71.45	31	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.3 Phase 2 MDF+REC FF = 1,500

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.005	3.21	3.54	867	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.002	0.11	1.70	266	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.002	0.35	1.70	266	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.01	0.18	28	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.01	0.15	24	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.11	17	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.10	15	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.07	11	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.05	9	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-17	FH-10	FH-11	130.0	6.0	356	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-18	FH-11	J-7	130.0	4.0	482	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-19	FH-11	FH-12	130.0	6.0	221	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-20	FH-12	FH-13	130.0	6.0	425	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-21	FH-13	FH-14	130.0	6.0	444	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-22	FH-14	FH-15	130.0	6.0	457	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-23	FH-15	FH-16	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-24	FH-16	J-8	130.0	6.0	170	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.005	1.84	2.70	-238	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.005	2.26	2.64	-233	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.005	1.82	2.60	-229	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.007	4.06	3.83	600	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.007	0.46	3.79	594	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.007	1.86	3.79	594	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.013	2.87	5.25	-822	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.013	5.65	5.22	-818	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.012	3.36	5.20	-815	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.012	3.51	5.20	-815	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.012	5.46	5.17	-811	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.012	5.05	5.15	-807	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.012	5.51	5.12	-803	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.012	8.56	5.11	-800	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.040	4.61	9.80	-1,535	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.3 Phase 2 MDF+REC FF = 1,500

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.040	9.14	9.80	-1,535	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.019	4.61	6.60	1,035	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.018	0.53	6.38	1,000	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.031	2.97	3.55	35	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	0.010	3.24	4.69	734	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.001	0.38	2.08	734	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.042	10.91	8.33	734	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.13	734	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.15	867	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.3 Phase 2 MDF+REC FF = 1,500

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	142.32	867	141.32	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	107.30	734	106.30	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	867	1.00	True
R-2	1.00	<None>	734	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.4 Phase 2 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.35	64	True
FH-2	0.00	<Collection: 1 item>	7	148.31	64	True
FH-3	0.00	<Collection: 1 item>	11	148.29	64	True
FH-4	0.00	<Collection: 1 item>	4	148.27	64	True
FH-5	0.00	<Collection: 1 item>	1	148.27	64	True
FH-6	0.00	<Collection: 1 item>	4	148.27	64	True
FH-7	0.00	<Collection: 1 item>	8	148.26	64	True
FH-8	0.00	<Collection: 1 item>	3	148.26	64	True
FH-9	0.00	<Collection: 1 item>	2	148.26	64	True
FH-10	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-11	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-12	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-13	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-14	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-15	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-16	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-17	0.00	<Collection: 1 item>	8	148.31	64	True
FH-18	0.00	<Collection: 1 item>	7	148.30	64	True
FH-19	0.00	<Collection: 1 item>	11	148.32	64	True
FH-20	0.00	<Collection: 1 item>	8	148.29	64	True
FH-21	0.00	<Collection: 1 item>	5	148.27	64	True
FH-22	0.00	<Collection: 1 item>	7	148.25	64	True
FH-23	0.00	<Collection: 1 item>	7	148.24	64	True
FH-24	0.00	<Collection: 1 item>	7	148.24	64	True
FH-25	0.00	<Collection: 1 item>	4	148.23	64	True
FH-26	0.00	<Collection: 0 items>	0	148.22	64	True
FH-27	0.00	<Collection: 0 items>	0	148.18	64	True
FH-28	0.00	<Collection: 0 items>	0	148.20	64	True
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	148.36	64	True
J-2	0.00	<Collection: 0 items>	0	148.33	64	True
J-3	0.00	<Collection: 0 items>	0	148.27	64	True
J-4	0.00	<Collection: 1 item>	7	148.25	64	True
J-5	0.00	<Collection: 0 items>	0	148.27	64	True
J-6	0.00	<Collection: 1 item>	2	148.26	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.4 Phase 2 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-8	0.00	<Collection: 0 items>	0	148.26	64	True
J-9	0.00	<Collection: 0 items>	0	148.31	64	True
J-10	0.00	<Collection: 0 items>	0	148.30	64	True
J-11	0.00	<Collection: 0 items>	0	148.23	64	True
J-12	0.00	<Collection: 0 items>	0	148.18	64	True
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	0	148.25	64	True
J-17	0.00	<Collection: 0 items>	0	148.26	64	True
REC	0.00	<Collection: 1 item>	58	140.53	61	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.4 Phase 2 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.08	0.49	120	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.01	0.43	67	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.03	0.43	67	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.02	0.30	47	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.02	0.26	40	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.18	29	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.16	25	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.05	8	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.02	0.18	7	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.11	18	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.09	14	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.09	14	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.04	7	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.02	4	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.05	2	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-17	FH-10	FH-11	130.0	6.0	356	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-18	FH-11	J-7	130.0	4.0	482	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-19	FH-11	FH-12	130.0	6.0	221	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-20	FH-12	FH-13	130.0	6.0	425	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-21	FH-13	FH-14	130.0	6.0	444	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-22	FH-14	FH-15	130.0	6.0	457	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-23	FH-15	FH-16	130.0	6.0	376	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-24	FH-16	J-8	130.0	6.0	170	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.000	0.02	0.22	-19	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.000	0.01	0.13	-11	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.000	0.00	0.05	-4	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.000	0.05	0.34	53	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.000	0.00	0.27	42	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.000	0.01	0.27	42	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.000	0.01	0.29	-46	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.000	0.02	0.24	-38	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.000	0.01	0.21	-33	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.000	0.01	0.21	-33	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.000	0.01	0.17	-26	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.000	0.01	0.13	-20	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.000	0.00	0.08	-13	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.000	0.00	0.06	-9	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.000	0.01	0.37	-58	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.4 Phase 2 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.000	0.02	0.37	-58	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.000	0.02	0.37	58	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.000	0.00	0.00	0	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.080	7.65	5.92	58	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	0.000	0.02	0.31	49	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.000	0.00	0.14	49	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.000	0.07	0.56	49	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.01	49	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.02	120	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

2.4 Phase 2 PHF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.44	120	147.44	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	148.33	49	147.33	True

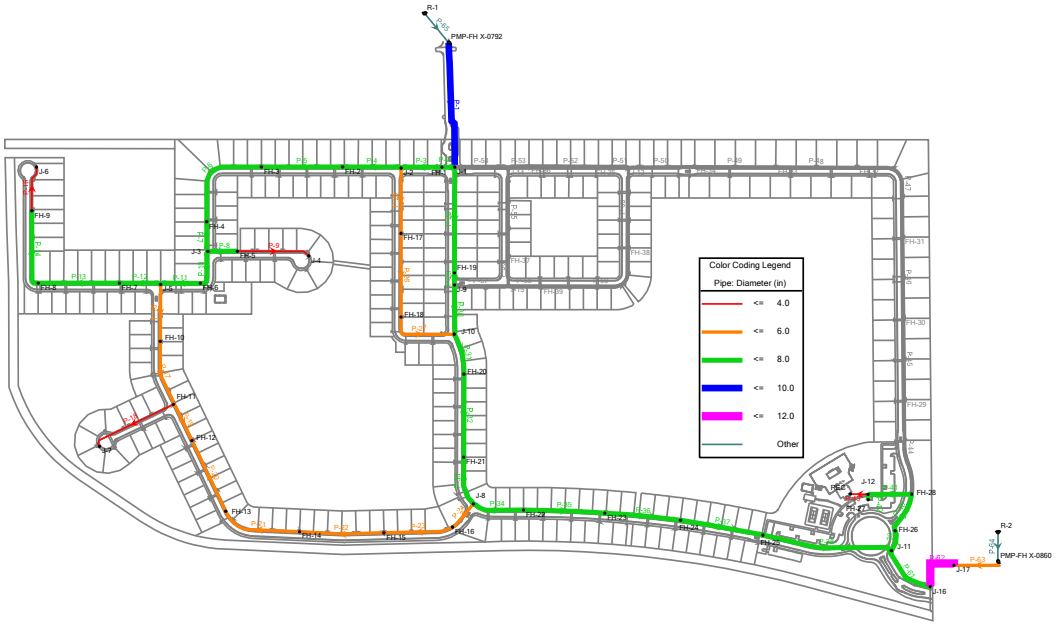
Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	120	1.00	True
R-2	1.00	<None>	49	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.1 Phase 3 MDF

Extents



Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.1 Phase 3 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.47	64	True
FH-2	0.00	<Collection: 1 item>	4	148.44	64	True
FH-3	0.00	<Collection: 1 item>	7	148.43	64	True
FH-4	0.00	<Collection: 1 item>	2	148.41	64	True
FH-5	0.00	<Collection: 1 item>	0	148.41	64	True
FH-6	0.00	<Collection: 1 item>	2	148.41	64	True
FH-7	0.00	<Collection: 1 item>	5	148.41	64	True
FH-8	0.00	<Collection: 1 item>	2	148.41	64	True
FH-9	0.00	<Collection: 1 item>	1	148.41	64	True
FH-10	0.00	<Collection: 1 item>	4	148.40	64	True
FH-11	0.00	<Collection: 1 item>	1	148.40	64	True
FH-12	0.00	<Collection: 1 item>	4	148.40	64	True
FH-13	0.00	<Collection: 1 item>	3	148.40	64	True
FH-14	0.00	<Collection: 1 item>	2	148.40	64	True
FH-15	0.00	<Collection: 1 item>	2	148.41	64	True
FH-16	0.00	<Collection: 1 item>	0	148.41	64	True
FH-17	0.00	<Collection: 1 item>	5	148.45	64	True
FH-18	0.00	<Collection: 1 item>	4	148.44	64	True
FH-19	0.00	<Collection: 1 item>	7	148.45	64	True
FH-20	0.00	<Collection: 1 item>	5	148.43	64	True
FH-21	0.00	<Collection: 1 item>	3	148.42	64	True
FH-22	0.00	<Collection: 1 item>	4	148.41	64	True
FH-23	0.00	<Collection: 1 item>	4	148.41	64	True
FH-24	0.00	<Collection: 1 item>	4	148.41	64	True
FH-25	0.00	<Collection: 1 item>	2	148.41	64	True
FH-26	0.00	<Collection: 0 items>	0	148.41	64	True
FH-27	0.00	<Collection: 0 items>	0	148.39	64	True
FH-28	0.00	<Collection: 0 items>	0	148.40	64	True
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	148.47	64	True
J-2	0.00	<Collection: 0 items>	0	148.45	64	True
J-3	0.00	<Collection: 0 items>	0	148.41	64	True
J-4	0.00	<Collection: 1 item>	4	148.40	64	True
J-5	0.00	<Collection: 0 items>	0	148.41	64	True
J-6	0.00	<Collection: 1 item>	1	148.40	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.1 Phase 3 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	4	148.39	64	True
J-8	0.00	<Collection: 0 items>	0	148.42	64	True
J-9	0.00	<Collection: 0 items>	0	148.45	64	True
J-10	0.00	<Collection: 0 items>	0	148.44	64	True
J-11	0.00	<Collection: 0 items>	0	148.41	64	True
J-12	0.00	<Collection: 0 items>	0	148.39	64	True
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	0	148.42	64	True
J-17	0.00	<Collection: 0 items>	0	148.42	64	True
REC	0.00	<Collection: 1 item>	35	145.42	63	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.1 Phase 3 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.04	0.35	86	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.00	0.31	49	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.02	0.31	49	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.01	0.24	37	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.01	0.21	33	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.17	26	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.15	24	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.12	19	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.11	17	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	0.000	0.00	0.10	9	True
P-17	FH-10	FH-11	130.0	6.0	356	False	0	0.000	0.00	0.06	5	True
P-18	FH-11	J-7	130.0	4.0	482	False	0	0.000	0.01	0.09	4	True
P-19	FH-11	FH-12	130.0	6.0	221	False	0	0.000	0.00	0.01	1	True
P-20	FH-12	FH-13	130.0	6.0	425	False	0	0.000	0.00	0.04	-3	True
P-21	FH-13	FH-14	130.0	6.0	444	False	0	0.000	0.00	0.07	-6	True
P-22	FH-14	FH-15	130.0	6.0	457	False	0	0.000	0.00	0.09	-8	True
P-23	FH-15	FH-16	130.0	6.0	376	False	0	0.000	0.01	0.11	-10	True
P-24	FH-16	J-8	130.0	6.0	170	False	0	0.000	0.00	0.12	-10	True
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.000	0.01	0.14	-12	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.000	0.00	0.08	-7	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.000	0.00	0.03	-3	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.000	0.02	0.23	37	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.000	0.00	0.19	30	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.000	0.01	0.19	30	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.000	0.01	0.21	-33	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.000	0.01	0.18	-28	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.000	0.01	0.16	-25	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.000	0.00	0.10	-15	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.000	0.00	0.07	-11	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.000	0.00	0.05	-7	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.000	0.00	0.02	-3	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.000	0.00	0.00	-1	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.000	0.00	0.22	-35	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.1 Phase 3 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.000	0.01	0.22	-35	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.000	0.01	0.22	35	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.000	0.00	0.00	0	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.031	2.97	3.55	35	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	0.000	0.01	0.22	34	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.000	0.00	0.10	34	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.000	0.04	0.39	34	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.01	34	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.02	86	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.1 Phase 3 MDF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.52	86	147.52	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	148.46	34	147.46	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	86	1.00	True
R-2	1.00	<None>	34	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.2 Phase 3 MDF+FF = 1,000

Fire Flow Results Table - Time: 0.00 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Velocity of Maximum Pipe (ft/s)	Pressure (Calculated Residual) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
FH-1	True	1,001	1,000	1,001	5.71	60	60	J-2
FH-2	True	1,001	1,004	1,005	5.64	57	57	FH-3
FH-3	True	1,001	1,007	1,008	5.32	55	55	FH-4
FH-4	True	1,001	1,002	1,003	5.02	53	53	J-4
FH-5	True	1,001	1,000	1,001	6.42	51	51	J-4
FH-6	True	1,001	1,002	1,003	4.87	51	51	J-6
FH-7	True	1,001	1,005	1,006	6.44	49	49	J-6
FH-8	True	1,001	1,002	1,003	6.44	45	45	J-6
FH-9	True	1,001	1,001	1,002	6.44	42	42	J-6
FH-10	True	1,001	1,004	1,005	7.42	48	49	J-7
FH-11	True	1,001	1,001	1,002	6.71	46	46	J-7
FH-12	True	1,001	1,004	1,005	6.30	45	47	J-7
FH-13	True	1,001	1,003	1,004	6.03	45	48	FH-12
FH-14	True	1,001	1,002	1,003	6.84	46	49	FH-13
FH-15	True	1,001	1,002	1,003	7.81	49	51	FH-14
FH-16	True	1,001	1,000	1,001	8.88	54	55	FH-15
FH-17	True	1,001	1,005	1,006	6.93	55	57	FH-18
FH-18	True	1,001	1,004	1,005	6.70	55	57	FH-17
FH-19	True	1,001	1,007	1,008	3.88	58	59	J-9
FH-20	True	1,001	1,005	1,006	4.27	58	58	FH-21
FH-21	True	1,001	1,003	1,004	3.85	57	57	J-8
FH-22	True	1,001	1,004	1,005	4.43	56	56	FH-23
FH-23	True	1,001	1,004	1,005	4.40	55	56	FH-24
FH-24	True	1,001	1,004	1,005	4.71	54	55	REC
FH-25	True	1,001	1,002	1,003	5.02	54	54	REC
FH-26	True	1,001	1,000	1,001	6.61	52	51	REC
FH-27	True	1,001	1,000	1,001	6.61	48	47	REC
FH-28	True	1,001	1,000	1,001	6.61	50	49	REC
FH-29	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-30	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-31	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-32	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-33	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-34	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-35	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-36	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-37	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-38	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
FH-39	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.3 Phase 3 MDF+REC FF = 1,500

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	137.99	60	True
FH-2	0.00	<Collection: 1 item>	4	136.83	59	True
FH-3	0.00	<Collection: 1 item>	7	136.32	59	True
FH-4	0.00	<Collection: 1 item>	2	135.72	59	True
FH-5	0.00	<Collection: 1 item>	0	135.55	59	True
FH-6	0.00	<Collection: 1 item>	2	135.34	59	True
FH-7	0.00	<Collection: 1 item>	5	135.12	58	True
FH-8	0.00	<Collection: 1 item>	2	135.12	58	True
FH-9	0.00	<Collection: 1 item>	1	135.12	58	True
FH-10	0.00	<Collection: 1 item>	4	133.95	58	True
FH-11	0.00	<Collection: 1 item>	1	132.64	57	True
FH-12	0.00	<Collection: 1 item>	4	131.86	57	True
FH-13	0.00	<Collection: 1 item>	3	130.42	56	True
FH-14	0.00	<Collection: 1 item>	2	128.95	56	True
FH-15	0.00	<Collection: 1 item>	2	127.46	55	True
FH-16	0.00	<Collection: 1 item>	0	126.27	55	True
FH-17	0.00	<Collection: 1 item>	5	136.11	59	True
FH-18	0.00	<Collection: 1 item>	4	134.77	58	True
FH-19	0.00	<Collection: 1 item>	7	135.34	59	True
FH-20	0.00	<Collection: 1 item>	5	131.78	57	True
FH-21	0.00	<Collection: 1 item>	3	127.98	55	True
FH-22	0.00	<Collection: 1 item>	4	122.03	53	True
FH-23	0.00	<Collection: 1 item>	4	116.27	50	True
FH-24	0.00	<Collection: 1 item>	4	110.93	48	True
FH-25	0.00	<Collection: 1 item>	2	105.12	45	True
FH-26	0.00	<Collection: 0 items>	0	91.47	40	True
FH-27	0.00	<Collection: 1 item>	1,000	77.19	33	True
FH-28	0.00	<Collection: 1 item>	500	82.33	36	True
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	138.23	60	True
J-2	0.00	<Collection: 0 items>	0	137.21	59	True
J-3	0.00	<Collection: 0 items>	0	135.55	59	True
J-4	0.00	<Collection: 1 item>	4	135.54	59	True
J-5	0.00	<Collection: 0 items>	0	135.12	58	True
J-6	0.00	<Collection: 1 item>	1	135.12	58	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.3 Phase 3 MDF+REC FF = 1,500

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	4	132.63	57	True
J-8	0.00	<Collection: 0 items>	0	125.73	54	True
J-9	0.00	<Collection: 0 items>	0	135.02	58	True
J-10	0.00	<Collection: 0 items>	0	133.71	58	True
J-11	0.00	<Collection: 0 items>	0	96.08	42	True
J-12	0.00	<Collection: 0 items>	0	77.73	34	True
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	0	99.13	43	True
J-17	0.00	<Collection: 0 items>	0	99.49	43	True
REC	0.00	<Collection: 1 item>	35	74.76	32	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.3 Phase 3 MDF+REC FF = 1,500

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.005	3.50	3.71	909	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.004	0.24	2.62	410	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.004	0.78	2.62	410	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.001	0.38	1.46	229	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.001	0.51	1.44	225	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.001	0.60	1.39	218	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.001	0.17	1.38	216	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.001	0.21	1.35	212	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.001	0.22	1.34	209	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	0.004	1.17	2.28	201	True
P-17	FH-10	FH-11	130.0	6.0	356	False	0	0.004	1.31	2.24	197	True
P-18	FH-11	J-7	130.0	4.0	482	False	0	0.000	0.01	0.09	4	True
P-19	FH-11	FH-12	130.0	6.0	221	False	0	0.004	0.78	2.19	193	True
P-20	FH-12	FH-13	130.0	6.0	425	False	0	0.003	1.44	2.15	189	True
P-21	FH-13	FH-14	130.0	6.0	444	False	0	0.003	1.47	2.12	186	True
P-22	FH-14	FH-15	130.0	6.0	457	False	0	0.003	1.49	2.10	185	True
P-23	FH-15	FH-16	130.0	6.0	376	False	0	0.003	1.20	2.07	183	True
P-24	FH-16	J-8	130.0	6.0	170	False	0	0.003	0.54	2.07	182	True
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.003	1.10	2.05	-181	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.003	1.34	1.99	-176	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.003	1.06	1.94	-171	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.005	2.89	3.19	499	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.005	0.33	3.14	493	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.005	1.31	3.14	493	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.009	1.93	4.24	-664	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.008	3.79	4.21	-659	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.008	2.25	4.19	-656	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.013	3.70	5.35	-838	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.013	5.76	5.33	-834	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.013	5.33	5.30	-831	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.013	5.82	5.27	-826	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.013	9.04	5.26	-824	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.040	4.61	9.80	-1,535	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.3 Phase 3 MDF+REC FF = 1,500

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.040	9.14	9.80	-1,535	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.019	4.61	6.60	1,035	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.018	0.53	6.38	1,000	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.031	2.97	3.55	35	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	0.010	3.05	4.54	711	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.001	0.36	2.02	711	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.039	10.26	8.06	711	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.13	711	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.16	909	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.3 Phase 3 MDF+REC FF = 1,500

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	141.74	909	140.74	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	109.75	711	108.75	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	909	1.00	True
R-2	1.00	<None>	711	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.4 Phase 3 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.26	64	True
FH-2	0.00	<Collection: 1 item>	7	148.18	64	True
FH-3	0.00	<Collection: 1 item>	11	148.15	64	True
FH-4	0.00	<Collection: 1 item>	4	148.12	64	True
FH-5	0.00	<Collection: 1 item>	1	148.11	64	True
FH-6	0.00	<Collection: 1 item>	4	148.10	64	True
FH-7	0.00	<Collection: 1 item>	8	148.10	64	True
FH-8	0.00	<Collection: 1 item>	3	148.10	64	True
FH-9	0.00	<Collection: 1 item>	2	148.10	64	True
FH-10	0.00	<Collection: 1 item>	6	148.09	64	True
FH-11	0.00	<Collection: 1 item>	1	148.09	64	True
FH-12	0.00	<Collection: 1 item>	7	148.09	64	True
FH-13	0.00	<Collection: 1 item>	5	148.09	64	True
FH-14	0.00	<Collection: 1 item>	3	148.09	64	True
FH-15	0.00	<Collection: 1 item>	4	148.11	64	True
FH-16	0.00	<Collection: 1 item>	1	148.12	64	True
FH-17	0.00	<Collection: 1 item>	8	148.20	64	True
FH-18	0.00	<Collection: 1 item>	7	148.19	64	True
FH-19	0.00	<Collection: 1 item>	11	148.21	64	True
FH-20	0.00	<Collection: 1 item>	8	148.17	64	True
FH-21	0.00	<Collection: 1 item>	5	148.14	64	True
FH-22	0.00	<Collection: 1 item>	7	148.12	64	True
FH-23	0.00	<Collection: 1 item>	7	148.12	64	True
FH-24	0.00	<Collection: 1 item>	7	148.11	64	True
FH-25	0.00	<Collection: 1 item>	4	148.11	64	True
FH-26	0.00	<Collection: 0 items>	0	148.10	64	True
FH-27	0.00	<Collection: 0 items>	0	148.06	64	True
FH-28	0.00	<Collection: 0 items>	0	148.08	64	True
FH-29	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-30	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-31	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-32	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-33	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-34	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-35	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-36	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-37	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-38	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
FH-39	0.00	<Collection: 1 item>	(N/A)	(N/A)	(N/A)	False
J-1	0.00	<Collection: 0 items>	0	148.27	64	True
J-2	0.00	<Collection: 0 items>	0	148.22	64	True
J-3	0.00	<Collection: 0 items>	0	148.11	64	True
J-4	0.00	<Collection: 1 item>	7	148.09	64	True
J-5	0.00	<Collection: 0 items>	0	148.10	64	True
J-6	0.00	<Collection: 1 item>	2	148.09	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.4 Phase 3 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	6	148.07	64	True
J-8	0.00	<Collection: 0 items>	0	148.13	64	True
J-9	0.00	<Collection: 0 items>	0	148.21	64	True
J-10	0.00	<Collection: 0 items>	0	148.19	64	True
J-11	0.00	<Collection: 0 items>	0	148.11	64	True
J-12	0.00	<Collection: 0 items>	0	148.06	64	True
J-13	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-14	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-15	0.00	<Collection: 0 items>	(N/A)	(N/A)	(N/A)	False
J-16	0.00	<Collection: 0 items>	0	148.14	64	True
J-17	0.00	<Collection: 0 items>	0	148.14	64	True
REC	0.00	<Collection: 1 item>	58	140.41	61	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.4 Phase 3 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.11	0.58	143	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.01	0.52	82	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.04	0.52	82	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.03	0.39	61	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.04	0.35	54	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.03	0.28	43	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.01	0.25	40	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.05	8	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.02	0.18	7	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.01	0.20	32	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.01	0.18	28	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.09	14	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.04	7	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.02	4	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.05	2	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	0.000	0.01	0.16	14	True
P-17	FH-10	FH-11	130.0	6.0	356	False	0	0.000	0.00	0.09	8	True
P-18	FH-11	J-7	130.0	4.0	482	False	0	0.000	0.02	0.15	6	True
P-19	FH-11	FH-12	130.0	6.0	221	False	0	0.000	0.00	0.01	1	True
P-20	FH-12	FH-13	130.0	6.0	425	False	0	0.000	0.00	0.06	-5	True
P-21	FH-13	FH-14	130.0	6.0	444	False	0	0.000	0.01	0.11	-10	True
P-22	FH-14	FH-15	130.0	6.0	457	False	0	0.000	0.01	0.15	-13	True
P-23	FH-15	FH-16	130.0	6.0	376	False	0	0.000	0.01	0.19	-16	True
P-24	FH-16	J-8	130.0	6.0	170	False	0	0.000	0.01	0.19	-17	True
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.000	0.02	0.23	-20	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.000	0.01	0.14	-12	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.000	0.00	0.06	-5	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.000	0.06	0.39	61	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.000	0.00	0.32	50	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.000	0.02	0.32	50	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.000	0.02	0.35	-55	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.000	0.03	0.30	-47	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.000	0.01	0.27	-42	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.000	0.01	0.16	-25	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.000	0.00	0.12	-18	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.000	0.00	0.07	-12	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.000	0.00	0.03	-5	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.000	0.00	0.01	-1	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.000	0.01	0.37	-58	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.4 Phase 3 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.000	0.02	0.37	-58	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.000	0.02	0.37	58	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.000	0.00	0.00	0	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.080	7.65	5.92	58	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-45	FH-30	FH-29	130.0	6.0	439	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-46	FH-31	FH-30	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-47	FH-32	FH-31	130.0	6.0	584	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-48	FH-33	FH-32	130.0	6.0	440	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-49	FH-34	FH-33	130.0	6.0	443	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-50	J-13	FH-34	130.0	6.0	357	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-51	FH-35	J-13	130.0	8.0	89	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-52	FH-36	FH-35	130.0	8.0	451	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-53	J-14	FH-36	130.0	8.0	115	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-54	J-1	J-14	130.0	8.0	291	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-55	J-14	FH-37	130.0	6.0	475	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-56	FH-37	J-15	130.0	6.0	160	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-57	J-15	J-9	130.0	6.0	298	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-58	FH-39	J-15	130.0	6.0	180	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-59	FH-38	FH-39	130.0	6.0	651	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-60	J-13	FH-38	130.0	6.0	431	False	0	(N/A)	(N/A)	(N/A)	(N/A)	False
P-61	J-16	J-11	130.0	8.0	315	False	0	0.000	0.03	0.36	57	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.000	0.00	0.16	57	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.000	0.10	0.65	57	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.01	57	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.03	143	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

3.4 Phase 3 PHF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.38	143	147.38	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	148.24	57	147.24	True

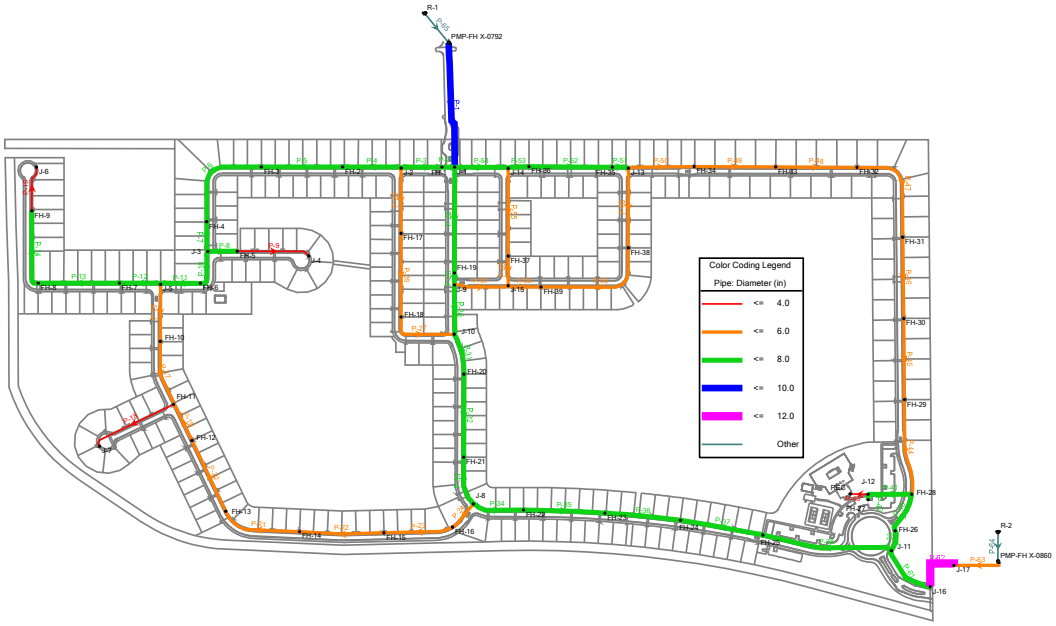
Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	143	1.00	True
R-2	1.00	<None>	57	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.1 Phase 4 MDF

Extents



Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.1 Phase 4 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	148.37	64	True
FH-2	0.00	<Collection: 1 item>	4	148.34	64	True
FH-3	0.00	<Collection: 1 item>	7	148.33	64	True
FH-4	0.00	<Collection: 1 item>	2	148.32	64	True
FH-5	0.00	<Collection: 1 item>	0	148.31	64	True
FH-6	0.00	<Collection: 1 item>	2	148.31	64	True
FH-7	0.00	<Collection: 1 item>	5	148.31	64	True
FH-8	0.00	<Collection: 1 item>	2	148.31	64	True
FH-9	0.00	<Collection: 1 item>	1	148.31	64	True
FH-10	0.00	<Collection: 1 item>	4	148.31	64	True
FH-11	0.00	<Collection: 1 item>	1	148.31	64	True
FH-12	0.00	<Collection: 1 item>	4	148.31	64	True
FH-13	0.00	<Collection: 1 item>	3	148.31	64	True
FH-14	0.00	<Collection: 1 item>	2	148.31	64	True
FH-15	0.00	<Collection: 1 item>	2	148.32	64	True
FH-16	0.00	<Collection: 1 item>	0	148.32	64	True
FH-17	0.00	<Collection: 1 item>	5	148.35	64	True
FH-18	0.00	<Collection: 1 item>	4	148.34	64	True
FH-19	0.00	<Collection: 1 item>	7	148.35	64	True
FH-20	0.00	<Collection: 1 item>	5	148.34	64	True
FH-21	0.00	<Collection: 1 item>	3	148.33	64	True
FH-22	0.00	<Collection: 1 item>	4	148.33	64	True
FH-23	0.00	<Collection: 1 item>	4	148.33	64	True
FH-24	0.00	<Collection: 1 item>	4	148.33	64	True
FH-25	0.00	<Collection: 1 item>	2	148.33	64	True
FH-26	0.00	<Collection: 0 items>	0	148.32	64	True
FH-27	0.00	<Collection: 0 items>	0	148.30	64	True
FH-28	0.00	<Collection: 0 items>	0	148.31	64	True
FH-29	0.00	<Collection: 1 item>	4	148.31	64	True
FH-30	0.00	<Collection: 1 item>	2	148.31	64	True
FH-31	0.00	<Collection: 1 item>	3	148.31	64	True
FH-32	0.00	<Collection: 1 item>	3	148.32	64	True
FH-33	0.00	<Collection: 1 item>	3	148.33	64	True
FH-34	0.00	<Collection: 1 item>	1	148.34	64	True
FH-35	0.00	<Collection: 1 item>	5	148.35	64	True
FH-36	0.00	<Collection: 1 item>	4	148.36	64	True
FH-37	0.00	<Collection: 1 item>	4	148.35	64	True
FH-38	0.00	<Collection: 1 item>	6	148.35	64	True
FH-39	0.00	<Collection: 1 item>	4	148.35	64	True
J-1	0.00	<Collection: 0 items>	0	148.37	64	True
J-2	0.00	<Collection: 0 items>	0	148.35	64	True
J-3	0.00	<Collection: 0 items>	0	148.31	64	True
J-4	0.00	<Collection: 1 item>	4	148.30	64	True
J-5	0.00	<Collection: 0 items>	0	148.31	64	True
J-6	0.00	<Collection: 1 item>	1	148.31	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.1 Phase 4 MDF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	4	148.30	64	True
J-8	0.00	<Collection: 0 items>	0	148.33	64	True
J-9	0.00	<Collection: 0 items>	0	148.35	64	True
J-10	0.00	<Collection: 0 items>	0	148.34	64	True
J-11	0.00	<Collection: 0 items>	0	148.33	64	True
J-12	0.00	<Collection: 0 items>	0	148.30	64	True
J-13	0.00	<Collection: 0 items>	0	148.35	64	True
J-14	0.00	<Collection: 0 items>	0	148.36	64	True
J-15	0.00	<Collection: 0 items>	0	148.35	64	True
J-16	0.00	<Collection: 0 items>	0	148.34	64	True
J-17	0.00	<Collection: 0 items>	0	148.34	64	True
REC	0.00	<Collection: 1 item>	35	145.33	63	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.1 Phase 4 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.08	0.48	118	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.00	0.30	47	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.01	0.30	47	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.01	0.23	36	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.01	0.20	31	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.01	0.16	25	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.00	0.14	23	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.00	0.11	18	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.10	16	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	0.000	0.00	0.08	7	True
P-17	FH-10	FH-11	130.0	6.0	356	False	0	0.000	0.00	0.04	4	True
P-18	FH-11	J-7	130.0	4.0	482	False	0	0.000	0.01	0.09	4	True
P-19	FH-11	FH-12	130.0	6.0	221	False	0	0.000	0.00	0.01	0	True
P-20	FH-12	FH-13	130.0	6.0	425	False	0	0.000	0.00	0.05	-4	True
P-21	FH-13	FH-14	130.0	6.0	444	False	0	0.000	0.00	0.08	-7	True
P-22	FH-14	FH-15	130.0	6.0	457	False	0	0.000	0.01	0.10	-9	True
P-23	FH-15	FH-16	130.0	6.0	376	False	0	0.000	0.01	0.13	-11	True
P-24	FH-16	J-8	130.0	6.0	170	False	0	0.000	0.00	0.13	-11	True
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.000	0.01	0.12	-11	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.000	0.00	0.07	-6	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.000	0.00	0.02	-2	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.000	0.02	0.21	34	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.000	0.00	0.17	27	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.000	0.01	0.17	26	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.000	0.01	0.18	-28	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.000	0.01	0.15	-24	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.000	0.00	0.13	-20	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.000	0.00	0.06	-9	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.000	0.00	0.03	-5	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.000	0.00	0.01	-1	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.000	0.00	0.02	3	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.000	0.00	0.03	5	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.000	0.00	0.23	-36	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.1 Phase 4 MDF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.000	0.01	0.23	-36	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.000	0.01	0.22	35	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.000	0.00	0.00	0	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.031	2.97	3.55	35	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	0.000	0.00	0.02	-2	True
P-45	FH-30	FH-29	130.0	6.0	439	False	0	0.000	0.00	0.02	2	True
P-46	FH-31	FH-30	130.0	6.0	440	False	0	0.000	0.00	0.05	4	True
P-47	FH-32	FH-31	130.0	6.0	584	False	0	0.000	0.00	0.08	7	True
P-48	FH-33	FH-32	130.0	6.0	440	False	0	0.000	0.01	0.12	10	True
P-49	FH-34	FH-33	130.0	6.0	443	False	0	0.000	0.01	0.15	13	True
P-50	J-13	FH-34	130.0	6.0	357	False	0	0.000	0.01	0.17	15	True
P-51	FH-35	J-13	130.0	8.0	89	False	0	0.000	0.00	0.11	18	True
P-52	FH-36	FH-35	130.0	8.0	451	False	0	0.000	0.01	0.14	23	True
P-53	J-14	FH-36	130.0	8.0	115	False	0	0.000	0.00	0.17	27	True
P-54	J-1	J-14	130.0	8.0	291	False	0	0.000	0.01	0.24	37	True
P-55	J-14	FH-37	130.0	6.0	475	False	0	0.000	0.01	0.12	11	True
P-56	FH-37	J-15	130.0	6.0	160	False	0	0.000	0.00	0.08	7	True
P-57	J-15	J-9	130.0	6.0	298	False	0	0.000	0.00	0.01	0	True
P-58	FH-39	J-15	130.0	6.0	180	False	0	0.000	0.00	0.08	-7	True
P-59	FH-38	FH-39	130.0	6.0	651	False	0	0.000	0.00	0.03	-3	True
P-60	J-13	FH-38	130.0	6.0	431	False	0	0.000	0.00	0.03	3	True
P-61	J-16	J-11	130.0	8.0	315	False	0	0.000	0.02	0.27	42	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.000	0.00	0.12	42	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.000	0.05	0.47	42	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.01	42	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.02	118	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.1 Phase 4 MDF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.45	118	147.45	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	148.40	42	147.40	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	118	1.00	True
R-2	1.00	<None>	42	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.2 Phase 4 MDF+FF = 1,000

Fire Flow Results Table - Time: 0.00 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Available) (gpm)	Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Velocity of Maximum Pipe (ft/s)	Pressure (Calculated Residual) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)
FH-1	True	1,001	1,000	1,001	5.75	60	59	REC
FH-2	True	1,001	1,004	1,005	5.64	57	57	FH-3
FH-3	True	1,001	1,007	1,008	5.32	55	55	FH-4
FH-4	True	1,001	1,002	1,003	5.03	52	52	J-4
FH-5	True	1,001	1,000	1,001	6.42	51	51	J-4
FH-6	True	1,001	1,002	1,003	4.87	51	51	J-6
FH-7	True	1,001	1,005	1,006	6.44	49	49	J-6
FH-8	True	1,001	1,002	1,003	6.44	45	45	J-6
FH-9	True	1,001	1,001	1,002	6.44	42	42	J-6
FH-10	True	1,001	1,004	1,005	7.42	47	49	J-7
FH-11	True	1,001	1,001	1,002	6.70	45	45	J-7
FH-12	True	1,001	1,004	1,005	6.30	45	47	J-7
FH-13	True	1,001	1,003	1,004	6.04	44	48	FH-12
FH-14	True	1,001	1,002	1,003	6.87	46	48	FH-13
FH-15	True	1,001	1,002	1,003	7.85	49	51	FH-14
FH-16	True	1,001	1,000	1,001	8.98	54	55	FH-15
FH-17	True	1,001	1,005	1,006	6.90	55	57	FH-18
FH-18	True	1,001	1,004	1,005	6.76	55	57	FH-17
FH-19	True	1,001	1,007	1,008	3.61	59	59	J-9
FH-20	True	1,001	1,005	1,006	4.35	58	58	FH-21
FH-21	True	1,001	1,003	1,004	3.77	57	58	J-8
FH-22	True	1,001	1,004	1,005	4.09	56	57	FH-23
FH-23	True	1,001	1,004	1,005	3.94	56	56	FH-24
FH-24	True	1,001	1,004	1,005	4.15	55	56	FH-25
FH-25	True	1,001	1,002	1,003	4.38	55	56	REC
FH-26	True	1,001	1,000	1,001	5.35	55	54	REC
FH-27	True	1,001	1,000	1,001	6.61	52	51	REC
FH-28	True	1,001	1,000	1,001	5.23	54	53	REC
FH-29	True	1,001	1,004	1,005	7.57	48	50	FH-30
FH-30	True	1,001	1,002	1,003	6.75	45	48	FH-31
FH-31	True	1,001	1,003	1,004	6.01	44	48	FH-30
FH-32	True	1,001	1,003	1,004	6.50	45	49	FH-31
FH-33	True	1,001	1,003	1,004	7.31	47	49	FH-32
FH-34	True	1,001	1,001	1,002	8.34	51	52	FH-33
FH-35	True	1,001	1,005	1,006	4.29	57	57	J-13
FH-36	True	1,001	1,004	1,005	5.09	58	58	FH-35
FH-37	True	1,001	1,004	1,005	6.45	56	58	J-15
FH-38	True	1,001	1,006	1,007	6.50	53	57	FH-39
FH-39	True	1,001	1,004	1,005	7.80	55	57	FH-38

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.3 Phase 4 MDF+REC FF = 1,500

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	134.65	58	True
FH-2	0.00	<Collection: 1 item>	4	133.94	58	True
FH-3	0.00	<Collection: 1 item>	7	133.62	58	True
FH-4	0.00	<Collection: 1 item>	2	133.25	58	True
FH-5	0.00	<Collection: 1 item>	0	133.14	58	True
FH-6	0.00	<Collection: 1 item>	2	133.02	58	True
FH-7	0.00	<Collection: 1 item>	5	132.88	57	True
FH-8	0.00	<Collection: 1 item>	2	132.88	57	True
FH-9	0.00	<Collection: 1 item>	1	132.88	57	True
FH-10	0.00	<Collection: 1 item>	4	132.20	57	True
FH-11	0.00	<Collection: 1 item>	1	131.43	57	True
FH-12	0.00	<Collection: 1 item>	4	130.99	57	True
FH-13	0.00	<Collection: 1 item>	3	130.17	56	True
FH-14	0.00	<Collection: 1 item>	2	129.34	56	True
FH-15	0.00	<Collection: 1 item>	2	128.52	56	True
FH-16	0.00	<Collection: 1 item>	0	127.85	55	True
FH-17	0.00	<Collection: 1 item>	5	133.58	58	True
FH-18	0.00	<Collection: 1 item>	4	132.85	57	True
FH-19	0.00	<Collection: 1 item>	7	133.27	58	True
FH-20	0.00	<Collection: 1 item>	5	131.14	57	True
FH-21	0.00	<Collection: 1 item>	3	128.89	56	True
FH-22	0.00	<Collection: 1 item>	4	125.40	54	True
FH-23	0.00	<Collection: 1 item>	4	122.05	53	True
FH-24	0.00	<Collection: 1 item>	4	118.96	51	True
FH-25	0.00	<Collection: 1 item>	2	115.61	50	True
FH-26	0.00	<Collection: 0 items>	0	107.43	46	True
FH-27	0.00	<Collection: 1 item>	1,000	96.40	42	True
FH-28	0.00	<Collection: 1 item>	500	101.54	44	True
FH-29	0.00	<Collection: 1 item>	4	106.30	46	True
FH-30	0.00	<Collection: 1 item>	2	110.43	48	True
FH-31	0.00	<Collection: 1 item>	3	114.62	50	True
FH-32	0.00	<Collection: 1 item>	3	120.27	52	True
FH-33	0.00	<Collection: 1 item>	3	124.60	54	True
FH-34	0.00	<Collection: 1 item>	1	129.03	56	True
FH-35	0.00	<Collection: 1 item>	5	132.78	57	True
FH-36	0.00	<Collection: 1 item>	4	133.61	58	True
FH-37	0.00	<Collection: 1 item>	4	133.31	58	True
FH-38	0.00	<Collection: 1 item>	6	132.78	57	True
FH-39	0.00	<Collection: 1 item>	4	133.05	58	True
J-1	0.00	<Collection: 0 items>	0	134.79	58	True
J-2	0.00	<Collection: 0 items>	0	134.18	58	True
J-3	0.00	<Collection: 0 items>	0	133.14	58	True
J-4	0.00	<Collection: 1 item>	4	133.14	58	True
J-5	0.00	<Collection: 0 items>	0	132.88	57	True
J-6	0.00	<Collection: 1 item>	1	132.88	57	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.3 Phase 4 MDF+REC FF = 1,500

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	4	131.43	57	True
J-8	0.00	<Collection: 0 items>	0	127.56	55	True
J-9	0.00	<Collection: 0 items>	0	133.10	58	True
J-10	0.00	<Collection: 0 items>	0	132.29	57	True
J-11	0.00	<Collection: 0 items>	0	110.40	48	True
J-12	0.00	<Collection: 0 items>	0	96.93	42	True
J-13	0.00	<Collection: 0 items>	0	132.63	57	True
J-14	0.00	<Collection: 0 items>	0	133.83	58	True
J-15	0.00	<Collection: 0 items>	0	133.14	58	True
J-16	0.00	<Collection: 0 items>	0	112.62	49	True
J-17	0.00	<Collection: 0 items>	0	112.87	49	True
REC	0.00	<Collection: 1 item>	35	93.96	41	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.3 Phase 4 MDF+REC FF = 1,500

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.007	4.66	4.33	1,061	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.002	0.14	1.98	310	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.002	0.47	1.98	310	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.001	0.24	1.14	179	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.001	0.32	1.12	175	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.001	0.37	1.07	168	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.001	0.11	1.06	166	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.03	5	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.01	0.11	4	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.001	0.13	1.03	162	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.001	0.13	1.02	159	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.05	9	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.02	4	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.01	2	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.03	1	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	0.002	0.69	1.71	151	True
P-17	FH-10	FH-11	130.0	6.0	356	False	0	0.002	0.76	1.67	147	True
P-18	FH-11	J-7	130.0	4.0	482	False	0	0.000	0.01	0.09	4	True
P-19	FH-11	FH-12	130.0	6.0	221	False	0	0.002	0.45	1.62	143	True
P-20	FH-12	FH-13	130.0	6.0	425	False	0	0.002	0.82	1.58	139	True
P-21	FH-13	FH-14	130.0	6.0	444	False	0	0.002	0.82	1.55	136	True
P-22	FH-14	FH-15	130.0	6.0	457	False	0	0.002	0.83	1.53	135	True
P-23	FH-15	FH-16	130.0	6.0	376	False	0	0.002	0.66	1.50	133	True
P-24	FH-16	J-8	130.0	6.0	170	False	0	0.002	0.30	1.50	132	True
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.002	0.61	1.49	-131	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.002	0.72	1.43	-126	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.002	0.56	1.38	-122	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.003	1.52	2.26	353	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.003	0.17	2.21	347	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.003	0.81	2.43	380	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.005	1.15	3.20	-502	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.005	2.25	3.17	-497	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.005	1.33	3.15	-494	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.008	2.16	4.00	-626	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.008	3.35	3.97	-622	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.008	3.09	3.95	-618	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.007	3.36	3.92	-614	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.007	5.21	3.91	-612	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.026	2.97	7.73	-1,211	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.3 Phase 4 MDF+REC FF = 1,500

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.026	5.89	7.73	-1,211	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.019	4.61	6.60	1,035	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.018	0.53	6.38	1,000	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.031	2.97	3.55	35	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	0.009	4.77	3.68	324	True
P-45	FH-30	FH-29	130.0	6.0	439	False	0	0.009	4.13	3.72	328	True
P-46	FH-31	FH-30	130.0	6.0	440	False	0	0.010	4.19	3.74	330	True
P-47	FH-32	FH-31	130.0	6.0	584	False	0	0.010	5.65	3.78	333	True
P-48	FH-33	FH-32	130.0	6.0	440	False	0	0.010	4.33	3.82	336	True
P-49	FH-34	FH-33	130.0	6.0	443	False	0	0.010	4.43	3.85	339	True
P-50	J-13	FH-34	130.0	6.0	357	False	0	0.010	3.60	3.86	341	True
P-51	FH-35	J-13	130.0	8.0	89	False	0	0.002	0.16	1.82	285	True
P-52	FH-36	FH-35	130.0	8.0	451	False	0	0.002	0.83	1.85	290	True
P-53	J-14	FH-36	130.0	8.0	115	False	0	0.002	0.22	1.87	294	True
P-54	J-1	J-14	130.0	8.0	291	False	0	0.003	0.96	2.53	397	True
P-55	J-14	FH-37	130.0	6.0	475	False	0	0.001	0.53	1.17	103	True
P-56	FH-37	J-15	130.0	6.0	160	False	0	0.001	0.16	1.13	99	True
P-57	J-15	J-9	130.0	6.0	298	False	0	0.000	0.04	0.38	33	True
P-58	FH-39	J-15	130.0	6.0	180	False	0	0.000	0.09	0.75	-66	True
P-59	FH-38	FH-39	130.0	6.0	651	False	0	0.000	0.28	0.70	-62	True
P-60	J-13	FH-38	130.0	6.0	431	False	0	0.000	0.15	0.63	-56	True
P-61	J-16	J-11	130.0	8.0	315	False	0	0.007	2.22	3.82	598	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.001	0.26	1.70	598	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.029	7.47	6.79	598	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.11	598	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.19	1,061	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.3 Phase 4 MDF+REC FF = 1,500

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	139.45	1,061	138.45	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	120.34	598	119.34	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	1,061	1.00	True
R-2	1.00	<None>	598	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.4 Phase 4 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
FH-1	0.00	<Collection: 0 items>	0	147.99	64	True
FH-2	0.00	<Collection: 1 item>	7	147.93	64	True
FH-3	0.00	<Collection: 1 item>	11	147.89	64	True
FH-4	0.00	<Collection: 1 item>	4	147.87	64	True
FH-5	0.00	<Collection: 1 item>	1	147.86	64	True
FH-6	0.00	<Collection: 1 item>	4	147.85	64	True
FH-7	0.00	<Collection: 1 item>	8	147.85	64	True
FH-8	0.00	<Collection: 1 item>	3	147.85	64	True
FH-9	0.00	<Collection: 1 item>	2	147.85	64	True
FH-10	0.00	<Collection: 1 item>	6	147.84	64	True
FH-11	0.00	<Collection: 1 item>	1	147.84	64	True
FH-12	0.00	<Collection: 1 item>	7	147.84	64	True
FH-13	0.00	<Collection: 1 item>	5	147.84	64	True
FH-14	0.00	<Collection: 1 item>	3	147.85	64	True
FH-15	0.00	<Collection: 1 item>	4	147.87	64	True
FH-16	0.00	<Collection: 1 item>	1	147.88	64	True
FH-17	0.00	<Collection: 1 item>	8	147.94	64	True
FH-18	0.00	<Collection: 1 item>	7	147.94	64	True
FH-19	0.00	<Collection: 1 item>	11	147.95	64	True
FH-20	0.00	<Collection: 1 item>	8	147.92	64	True
FH-21	0.00	<Collection: 1 item>	5	147.90	64	True
FH-22	0.00	<Collection: 1 item>	7	147.89	64	True
FH-23	0.00	<Collection: 1 item>	7	147.89	64	True
FH-24	0.00	<Collection: 1 item>	7	147.89	64	True
FH-25	0.00	<Collection: 1 item>	4	147.89	64	True
FH-26	0.00	<Collection: 0 items>	0	147.88	64	True
FH-27	0.00	<Collection: 0 items>	0	147.83	64	True
FH-28	0.00	<Collection: 0 items>	0	147.86	64	True
FH-29	0.00	<Collection: 1 item>	6	147.86	64	True
FH-30	0.00	<Collection: 1 item>	4	147.86	64	True
FH-31	0.00	<Collection: 1 item>	5	147.86	64	True
FH-32	0.00	<Collection: 1 item>	5	147.87	64	True
FH-33	0.00	<Collection: 1 item>	5	147.89	64	True
FH-34	0.00	<Collection: 1 item>	2	147.92	64	True
FH-35	0.00	<Collection: 1 item>	8	147.95	64	True
FH-36	0.00	<Collection: 1 item>	7	147.97	64	True
FH-37	0.00	<Collection: 1 item>	7	147.95	64	True
FH-38	0.00	<Collection: 1 item>	10	147.94	64	True
FH-39	0.00	<Collection: 1 item>	7	147.95	64	True
J-1	0.00	<Collection: 0 items>	0	148.01	64	True
J-2	0.00	<Collection: 0 items>	0	147.96	64	True
J-3	0.00	<Collection: 0 items>	0	147.86	64	True
J-4	0.00	<Collection: 1 item>	7	147.84	64	True
J-5	0.00	<Collection: 0 items>	0	147.85	64	True
J-6	0.00	<Collection: 1 item>	2	147.85	64	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.4 Phase 4 PHF

Junction Table - Time: 0.00 hours

Label	Elevation (ft)	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)	Is Active?
J-7	0.00	<Collection: 1 item>	6	147.82	64	True
J-8	0.00	<Collection: 0 items>	0	147.89	64	True
J-9	0.00	<Collection: 0 items>	0	147.95	64	True
J-10	0.00	<Collection: 0 items>	0	147.94	64	True
J-11	0.00	<Collection: 0 items>	0	147.89	64	True
J-12	0.00	<Collection: 0 items>	0	147.83	64	True
J-13	0.00	<Collection: 0 items>	0	147.95	64	True
J-14	0.00	<Collection: 0 items>	0	147.97	64	True
J-15	0.00	<Collection: 0 items>	0	147.95	64	True
J-16	0.00	<Collection: 0 items>	0	147.93	64	True
J-17	0.00	<Collection: 0 items>	0	147.94	64	True
REC	0.00	<Collection: 1 item>	58	140.19	61	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.4 Phase 4 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-1	PMP-FH X-0792	J-1	130.0	10.0	679	False	0	0.000	0.20	0.80	196	True
P-2	J-1	FH-1	130.0	8.0	68	False	0	0.000	0.01	0.49	78	True
P-3	FH-1	J-2	130.0	8.0	223	False	0	0.000	0.04	0.49	78	True
P-4	J-2	FH-2	130.0	8.0	318	False	0	0.000	0.03	0.38	59	True
P-5	FH-2	FH-3	130.0	8.0	440	False	0	0.000	0.03	0.33	52	True
P-6	FH-3	FH-4	130.0	8.0	553	False	0	0.000	0.03	0.26	41	True
P-7	FH-4	J-3	130.0	8.0	162	False	0	0.000	0.01	0.24	38	True
P-8	J-3	FH-5	130.0	8.0	160	False	0	0.000	0.00	0.05	8	True
P-9	FH-5	J-4	130.0	4.0	397	False	0	0.000	0.02	0.18	7	True
P-10	J-3	FH-6	130.0	8.0	203	False	0	0.000	0.01	0.19	30	True
P-11	FH-6	J-5	130.0	8.0	218	False	0	0.000	0.00	0.17	26	True
P-12	J-5	FH-7	130.0	8.0	225	False	0	0.000	0.00	0.09	14	True
P-13	FH-7	FH-8	130.0	8.0	439	False	0	0.000	0.00	0.04	7	True
P-14	FH-8	FH-9	130.0	8.0	420	False	0	0.000	0.00	0.02	4	True
P-15	FH-9	J-6	130.0	4.0	247	False	0	0.000	0.00	0.05	2	True
P-16	J-5	FH-10	130.0	6.0	308	False	0	0.000	0.01	0.14	12	True
P-17	FH-10	FH-11	130.0	6.0	356	False	0	0.000	0.00	0.07	6	True
P-18	FH-11	J-7	130.0	4.0	482	False	0	0.000	0.02	0.15	6	True
P-19	FH-11	FH-12	130.0	6.0	221	False	0	0.000	0.00	0.01	-1	True
P-20	FH-12	FH-13	130.0	6.0	425	False	0	0.000	0.00	0.08	-7	True
P-21	FH-13	FH-14	130.0	6.0	444	False	0	0.000	0.01	0.14	-12	True
P-22	FH-14	FH-15	130.0	6.0	457	False	0	0.000	0.01	0.17	-15	True
P-23	FH-15	FH-16	130.0	6.0	376	False	0	0.000	0.02	0.21	-19	True
P-24	FH-16	J-8	130.0	6.0	170	False	0	0.000	0.01	0.22	-19	True
P-25	FH-17	J-2	130.0	6.0	354	False	0	0.000	0.02	0.21	-18	True
P-26	FH-18	FH-17	130.0	6.0	453	False	0	0.000	0.01	0.11	-10	True
P-27	J-10	FH-18	130.0	6.0	376	False	0	0.000	0.00	0.03	-3	True
P-28	J-1	FH-19	130.0	8.0	572	False	0	0.000	0.05	0.36	56	True
P-29	FH-19	J-9	130.0	8.0	66	False	0	0.000	0.00	0.29	45	True
P-30	J-9	J-10	130.0	8.0	267	False	0	0.000	0.02	0.28	44	True
P-31	FH-20	J-10	130.0	8.0	226	False	0	0.000	0.01	0.30	-47	True
P-32	FH-21	FH-20	130.0	8.0	449	False	0	0.000	0.02	0.25	-39	True
P-33	J-8	FH-21	130.0	8.0	269	False	0	0.000	0.01	0.22	-34	True
P-34	FH-22	J-8	130.0	8.0	281	False	0	0.000	0.00	0.09	-15	True
P-35	FH-23	FH-22	130.0	8.0	441	False	0	0.000	0.00	0.05	-8	True
P-36	FH-24	FH-23	130.0	8.0	412	False	0	0.000	0.00	0.01	-2	True
P-37	FH-25	FH-24	130.0	8.0	454	False	0	0.000	0.00	0.03	5	True
P-38	J-11	FH-25	130.0	8.0	708	False	0	0.000	0.00	0.06	9	True
P-39	FH-26	J-11	130.0	8.0	114	False	0	0.000	0.01	0.39	-61	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.4 Phase 4 PHF

Pipe Table - Time: 0.00 hours

Label	Start Node	Stop Node	Hazen-Williams C	Diameter (in)	Length (Scaled) (ft)	Has User Defined Length?	Length (User Defined) (ft)	Headloss Gradient (ft/ft)	Headloss (ft)	Velocity (ft/s)	Flow (gpm)	Is Active?
P-40	FH-28	FH-26	130.0	8.0	226	False	0	0.000	0.02	0.39	-61	True
P-41	FH-28	J-12	130.0	8.0	237	False	0	0.000	0.02	0.37	58	True
P-42	J-12	FH-27	130.0	8.0	29	False	0	0.000	0.00	0.00	0	True
P-43	J-12	REC	130.0	2.0	95	False	0	0.080	7.65	5.92	58	True
P-44	FH-29	FH-28	130.0	6.0	517	False	0	0.000	0.00	0.03	-3	True
P-45	FH-30	FH-29	130.0	6.0	439	False	0	0.000	0.00	0.04	3	True
P-46	FH-31	FH-30	130.0	6.0	440	False	0	0.000	0.00	0.08	7	True
P-47	FH-32	FH-31	130.0	6.0	584	False	0	0.000	0.01	0.14	12	True
P-48	FH-33	FH-32	130.0	6.0	440	False	0	0.000	0.02	0.20	17	True
P-49	FH-34	FH-33	130.0	6.0	443	False	0	0.000	0.03	0.25	22	True
P-50	J-13	FH-34	130.0	6.0	357	False	0	0.000	0.03	0.28	25	True
P-51	FH-35	J-13	130.0	8.0	89	False	0	0.000	0.00	0.19	29	True
P-52	FH-36	FH-35	130.0	8.0	451	False	0	0.000	0.02	0.24	38	True
P-53	J-14	FH-36	130.0	8.0	115	False	0	0.000	0.01	0.28	44	True
P-54	J-1	J-14	130.0	8.0	291	False	0	0.000	0.03	0.40	62	True
P-55	J-14	FH-37	130.0	6.0	475	False	0	0.000	0.02	0.20	18	True
P-56	FH-37	J-15	130.0	6.0	160	False	0	0.000	0.00	0.13	11	True
P-57	J-15	J-9	130.0	6.0	298	False	0	0.000	0.00	0.01	-1	True
P-58	FH-39	J-15	130.0	6.0	180	False	0	0.000	0.00	0.14	-12	True
P-59	FH-38	FH-39	130.0	6.0	651	False	0	0.000	0.00	0.06	-5	True
P-60	J-13	FH-38	130.0	6.0	431	False	0	0.000	0.00	0.06	5	True
P-61	J-16	J-11	130.0	8.0	315	False	0	0.000	0.04	0.44	70	True
P-62	J-17	J-16	130.0	12.0	265	False	0	0.000	0.00	0.20	70	True
P-63	PMP-FH X-0860	J-17	130.0	6.0	260	False	0	0.001	0.14	0.79	70	True
P-64	R-2	PMP-FH X-0860	130.0	48.0	159	True	1	0.000	0.00	0.01	70	True
P-65	R-1	PMP-FH X-0792	130.0	48.0	206	True	1	0.000	0.00	0.03	196	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)

4.4 Phase 4 PHF

Pump Table - Time: 0.00 hours

Label	Elevation (ft)	Pump Definition	Status (Initial)	Hydraulic Grade (Suction) (ft)	Hydraulic Grade (Discharge) (ft)	Flow (Total) (gpm)	Pump Head (ft)	Is Active?
PMP-FH X-0792	0.00	FH X-0792	On	1.00	148.21	196	147.21	True
PMP-FH X-0860	0.00	FH X-0860	On	1.00	148.08	70	147.08	True

Reservoir Table - Time: 0.00 hours

Label	Elevation (ft)	Zone	Flow (Out net) (gpm)	Hydraulic Grade (ft)	Is Active?
R-1	1.00	<None>	196	1.00	True
R-2	1.00	<None>	70	1.00	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)
Pump Definition Detailed Report: FH X-0792

Element Details			
ID	173	Notes	
Label	FH X-0792		

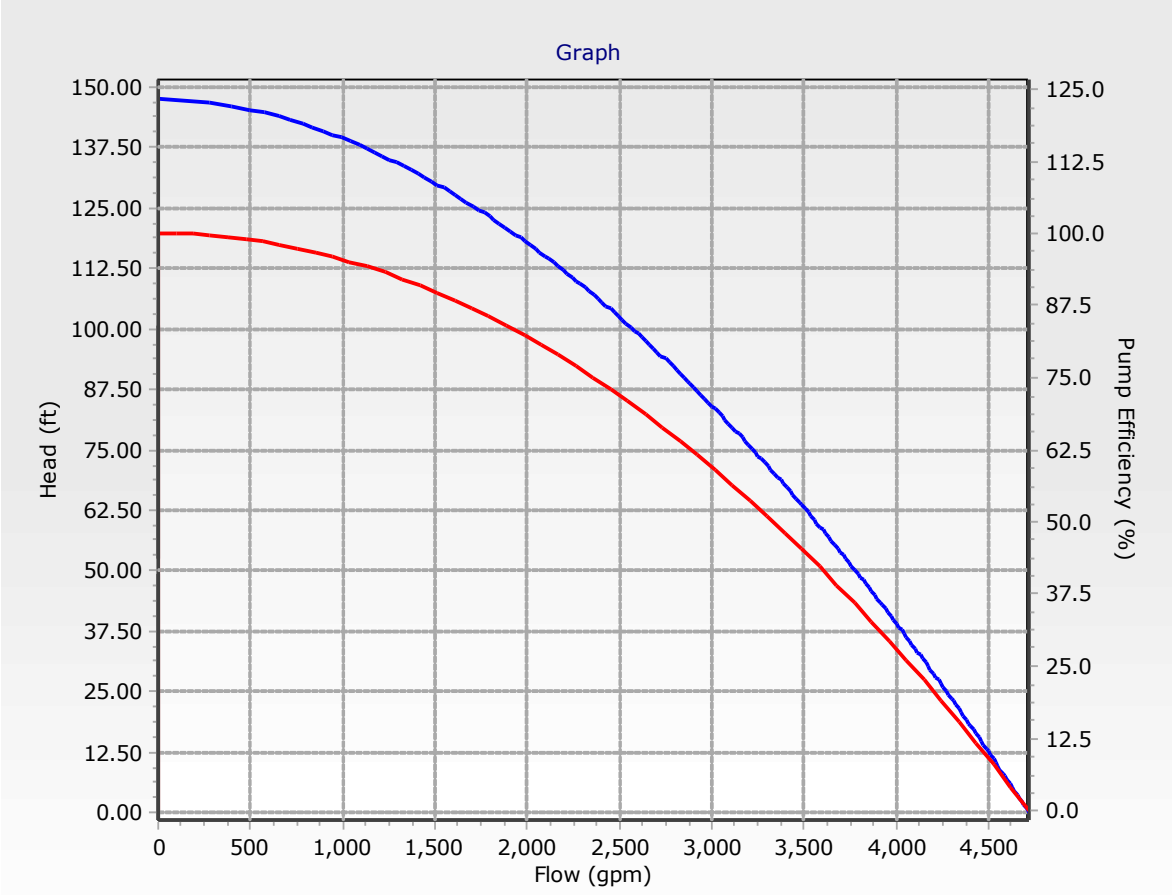
Pump Curve

Flow (gpm)	Head (ft)
0	147.60
800	142.20
1,000	139.40
2,600	99.00

Pump Efficiency Type			
Pump Efficiency Type	Best Efficiency Point	Motor Efficiency	100.0 %
BEP Efficiency	100.0 %	Is Variable Speed Drive?	False
BEP Flow	0 gpm		

Transient (Physical)			
Inertia (Pump and Motor)	0.000 lb·ft²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)
Pump Definition Detailed Report: FH X-0792



Lakes at Cocoa Grove (DRMP No. 21-0569.000)
Pump Definition Detailed Report: FH X-0860

Element Details			
ID	176	Notes	
Label	FH X-0860		

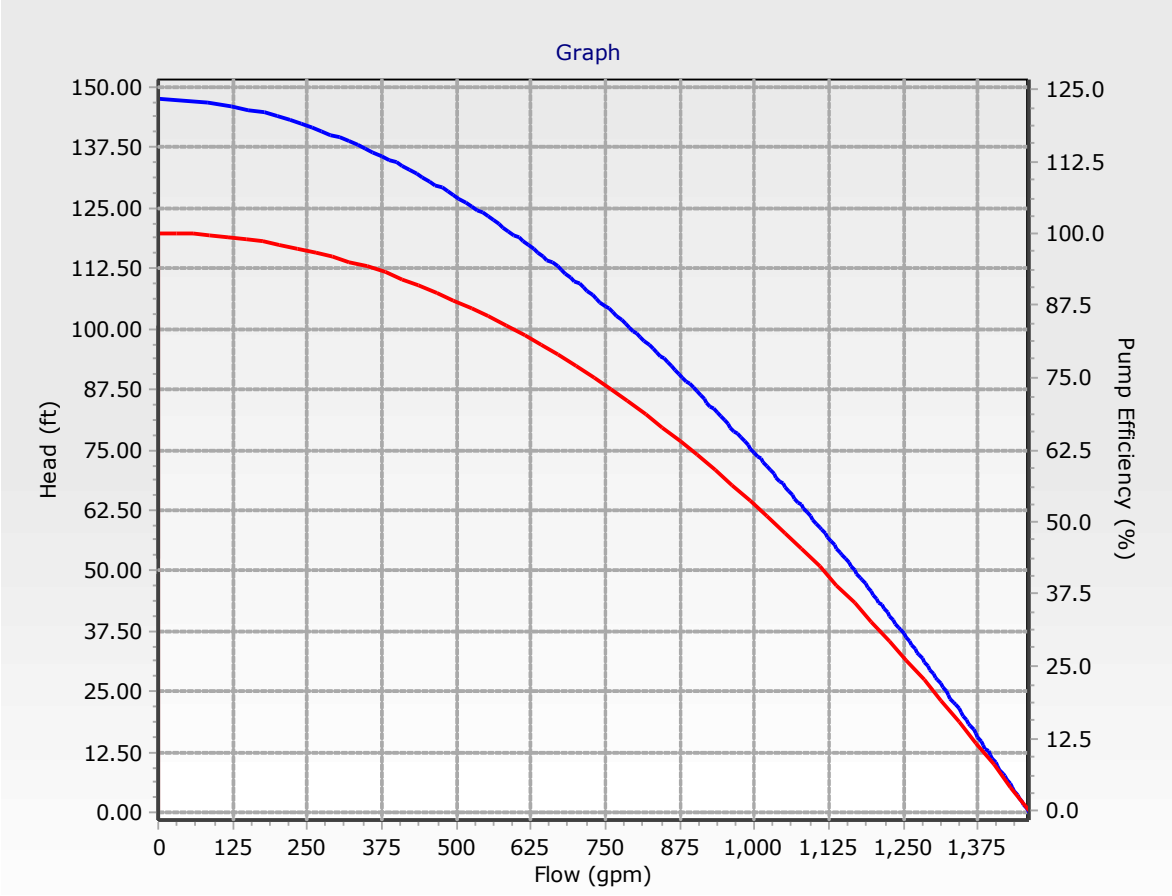
Pump Curve

Flow (gpm)	Head (ft)
0	147.60
800	99.20
1,000	74.40
1,400	11.00

Pump Efficiency Type			
Pump Efficiency Type	Best Efficiency Point	Motor Efficiency	100.0 %
BEP Efficiency	100.0 %	Is Variable Speed Drive?	False
BEP Flow	0 gpm		

Transient (Physical)			
Inertia (Pump and Motor)	0.000 lb·ft²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

Lakes at Cocoa Grove (DRMP No. 21-0569.000)
Pump Definition Detailed Report: FH X-0860



Stormwater Calculations

Lakes at Cocoa Grove Subdivision

Prepared for:

St. John's River Water Management District

City of Cocoa

Prepared by:

DRMP

100 Parnell Street• Merritt Island, FL 32953

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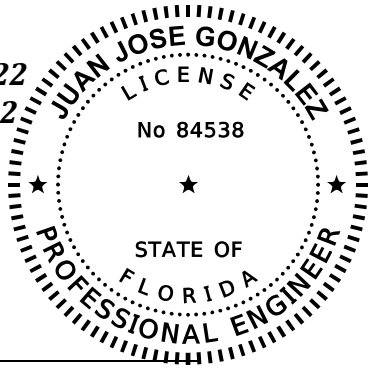
JANUARY 2021

DRMP# 21-0569.000 (legacy# 412401)

DATE: January 28, 2021
Revised July 13, 2022
Revised September 19, 2022
Revised December 19, 2022
Revised July 21, 2023



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ON THE DATE ADJACENT TO THE SEAL

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JUAN J. GONZALEZ, P.E. NO. 84538

Juan Gonzalez, P.E.
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DRMP Cert. of Authorization #2648

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THIS DOCUMENT IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

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Appendix

Appendix A – Figures
Appendix B – BMP Trains Stormwater Treatment Analysis
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Appendix E – ICPR Pre-Development 10-year Results

Report Revisions

Revision No.	Date	Requesting Agency	Updates
1	7/13/2022	SJRWMD	1) Adjust NWL 2) Add anoxic depth calcs 3) Add tailwater discussion 4) Revise treatment train 5) Fix DCIA values 6) Add 10-year storm 7) Add post-dev HSG discussion 8) Add offsite wetland flow analysis
2	9/19/2022	SJRWMD	1) Add additional figures, pre-development land use information, and curve number breakdown 2) Add 14-day recovery analysis 3) Revise irrigation application rate from 1.5"/wk to 1.0"/wk 4) Revise initial pond water elevation to rim elevation for ICPR analysis
3	12/19/2022	SJRWMD	1) Add input information for Pre-dev used in ICPR as Appendix D 2) Adjust BMP Trains Wetland for standing water vs. dry land 3) Remove reservoir area from BMP Trains Pre-dev 4) Add Pre-dev 10-yr ICPR results as Appendix E
4	7/20/2023	Cocoa/ Internal	1) Add information for canal and FDOT borrow pit. 2) Update tailwater information with boundary stages

1.0 INTRODUCTION

The subject parcel is a 246.4 acre property located on the northeast corner of I-95 and Highway 528, Cocoa, Brevard County, Florida (Section 10, Township 24 South, Range 35 East). The site location is shown in ***Appendix A***. Proposed improvements include a 350 lot subdivision.

Stormwater runoff will be directed into curb inlets that are routed to the stormwater treatment system consisting of wet detention and stormwater harvesting. Once the treatment elevation is reached, the stormwater will overflow the control structures and be conveyed to the existing drainage canal located on the north property line. This canal conveys stormwater to the west underneath I-95, thence to the St. Johns River.

2.0 PRE-DEVELOPMENT CONDITIONS

This site was previously permitted under SJRWMD Permit No. 158236-1 by ETM. This permit authorized construction and operation of a stormwater management system consisting of a borrow pit for a nearby project. The stormwater management facility is intended to serve future development of the site. The ETM report includes water quality treatment calculations for future residential lots; however, these calculations do not include a nutrient loading analysis.

This report will utilize the information and water quantity results from the ETM report for the pre-development conditions of the site. Pertinent information from the drainage report has been included.

From ETM report:

"The site is currently undeveloped and existing elevations on-site range from 13 to 26 feet (NAVD 88). Drainage on the site sheet flows into a series of depressional isolated wetlands connected to ditches around the perimeter of the property. The existing ditches all come together at the northwest corner of the site. At the point of connection, the ditch then crosses I-95 through a 10'x10' box culvert and continues west through a series of canals before feeding into the St. Johns River."

2.1 Nutrient Loading

According to the FLUCCS map prepared by Bio-Tech Consulting (***Appendix A***), the site has multiple FLUCCS classifications. Weighted nitrogen and phosphorus concentrations were developed based on land use. 31.0 acres of the existing onsite wetland will be preserved as part of this project. It will not be connected to the site drainage system. The area has been removed from the nutrient loading analysis. Refer to the ***Wetland*** section of the report for more information. The BMP Trains analysis is located in ***Appendix B***.

Table 1 – Pre-Development Nutrient Loading Summary Table

Total Area (ac)	FLUCCS Code	FLUCCS Description	BMPTrains Land Use	CN = 77	CN = 95	Nitrogen Conc. (mg/L)	Phos. Conc. (mg/L)
84.7	434	Hardwood Conifer Mixed	Mesic Flatwoods	84.2	0.4	1.09	0.043
10.6	436	Upland Pine, Scrub, and Hardwoods	Mesic Flatwoods	10.6	0.0	1.09	0.043
66.9	533	Reservoir, under construction	Mesic Flatwoods	57.5	9.4	1.09	0.043
32.0	630	Wetland Forested Mixed	Undeveloped/Rangeland (Wetland)	32.0	0.0	1.15	0.055
4.5	641	Freshwater Marshes	Undeveloped/Rangeland (Wetland)	1.5	3.0	1.15	0.055
198.6				**185.8**	**12.8**		

77 CN for Woods, Good (HSG D) and CN for Non-cultivated Brush, Fair (HSG D) per ETM report

95 CN for Wetland and water bodies

16.9 acres for the existing onsite Reservoir has been removed from loading since it is a zero-load area.

2.2 Curve Number and Time of Concentration

ETM developed basin information for each of the on-site sub-basins. A summary of the results is contained in the chart below.

Table 2 – Pre-Development ICPR Values

Basin	Peaking Factor	Area (ac)	CN	DCIA	Time of Concentration (min)
BASIN 1	256	8.07	76	0%	50
BASIN 2	256	16.24	77	0%	39
BASIN 3	256	6.75	80	0%	47
BASIN 4	256	22.63	81	0%	58
BASIN 5	256	24.22	79	0%	71
BASIN 6	256	25.60	76	0%	48
BASIN 7	256	12.00	79	0%	48
BASIN 8	256	18.64	75	0%	49
BASIN 9	256	56.93	82	0%	60

BASIN 10	256	22.98	85	0%	34
BASIN 11	256	14.81	80	0%	43
BASIN 12	256	8.63	77	0%	38
BASIN 13	256	3.22	77	0%	35
BASIN 14	256	2.50	77	0%	10
BASIN 15	256	7.14	76	0%	43
BASIN D1	256	1.98	73	0%	10
BASIN D2	256	2.02	73	0%	10
BASIN D3	256	0.44	73	0%	80
BASIN D4	256	0.44	73	0%	228
Total		**250.36**	**79**		

3.0 POST-DEVELOPMENT CONDITIONS

The post-development stormwater treatment system consists of 6 wet detention ponds connected with equalizer pipes. There is a control structure in Pond 1 and a control structure in Pond 6. Both control structures discharge into the canal located on the north property line. These control structures are set at the same normal water level and treatment volume elevation.

3.1 Curve Number

The soils are primarily dual rated type HSG A/D. A blended pervious CN was developed based on the fill characteristics of the site. Areas with minimum 3' of fill and/or minimum 4' above the water table were designated as HSG A. The remaining pervious area was designated as HSG D.

Table 3 – Post-Development Weighted Curve Number (Pervious Area Only)

TR-55 Cover Description	Curve Number	Area (ac)	Percent of Area
Open Space, Good Condition, HSG A	39	45.4	55%
Open Space, Good Condition, HSG D	80	36.6	45%
		82.1	
		Weighted Pervious CN	**57**

3.2 Nutrient Loading

The nutrient loading summaries are shown in the tables below.

Table 4 – Post-Development Nutrient Loading Summary Table

Pond	Total Area (ac)	Imp. Area (ac) (DCIA)	Imp. Area (ac) (Non-DCIA)	Pervious Area (ac)	BMP Area (Pond NWL) (ac)	Non-DCIA CN	% DCIA	Total Area - Pond NWL (ac)
POND 1	20.6	2.3	6.4	9.0	3.0	74	13%	17.7
POND 2	31.6	2.4	5.3	16.9	7.0	67	10%	24.6
POND 3	10.6	1.2	2.8	4.6	2.1	73	14%	8.5
POND 4	17.9	2.5	5.6	7.7	2.1	75	16%	15.8
POND 5	47.8	4.3	10.0	17.6	15.9	72	13%	31.9
POND 6	87.1	7.5	12.5	26.3	40.8	70	16%	46.3
Sub-Total	**215.6**	**20.1**	**42.6**	**82.1**	**70.8**	**71**	**14%**	**144.8**

4.0 NUTRIENT REMOVAL

The phosphorus and nitrogen loading within the developed project site must not exceed the loading under pre-development conditions. BMP Trains 2020 4.3.5 was utilized to determine pre- and post-development phosphorus and nitrogen loading rates. The complete BMP Trains analysis is located in ***Appendix B.***

Table 5 – BMP Trains Nutrient Summary

Nutrient	Pre-Development Load (kg/yr)	Post-Development Load (kg/yr)	Reduction Required	Reduction Provided
Nitrogen	128.36	261.36	51%	79%
Phosphorus	5.242	41.288	87%	88%

The proposed development of the site results in a net increase of nitrogen and phosphorus loading. The treatment system described earlier is proposed to provide the required treatment.

5.0 WET POND AND STORMWATER HARVESTING TREATMENT

5.1 Normal Water Level

The site's ponds are currently controlled at elevation 19.0 NAVD per the ETM report. However, the onsite wetland will be controlled at elevation 21.15 NAVD (refer to ***Wetland*** section for more information). Wet Pond 1 is located adjacent to the wetland and 3 other proposed wet ponds are in the near vicinity. The NWL for all 6 of the wet ponds will be set at 20.5 NAVD.

5.2 Stormwater Harvesting

A stormwater harvesting system will be installed consisting of the wet ponds and irrigation system. BMP Trains was used to calculate the treatment efficiency. The residences and community areas will be irrigated. In addition, the stormwater harvesting system will provide water to a portion of the wetland for wetland hydration. The control structure rims will be set at elevation 20.80 NAVD, providing a harvest volume of 21.34 ac-ft. The harvesting application rate is assumed to be 1.0 inches per week.

Table 6 – Stormwater Harvesting Irrigation Area

Area	Area Available for Irrigation (sf)	Area Available for Irrigation (ac)
Common Areas	1,200,000	27.5
Residential Lots (6,000 sf / lot x 350 lots)	2,100,000	48.2
Wetland	650,000	14.9
Total	**3,950,000**	**90.7**

5.3 Wet Pond Treatment Volume

This site does not directly discharge to Class I, Class II, OWFs, or Class III waters which are approved, conditionally approved, restricted, or conditionally restricted for shellfish harvesting. The water quality treatment volume (WQTV) will not be increased by 50%. Per the ERP Applicant's Handbook, Volume II, Part V, Chapter 8.2, the treatment volume is the greater of the following:

- 1" of runoff over the drainage area
- 2.5" times the impervious area (excluding water bodies)

The contributory basin areas have the following post-development pervious and impervious areas:

Table 7 – Wet Pond/Stormwater Harvesting Treatment Volume

Drainage Area (acres)	Impervious (excludes ponds) (acres)	Pervious (acres)	1" Volume (ac-ft)	2.5" Volume (ac-ft)	Req'd Treatment Volume (ac-ft)	Prov'd Treatment Volume (ac-ft)	Weir Elev. (NAVD)
215.6	62.7	82.1	17.97	13.06	**17.97**	**21.34**	**20.80**

5.4 Mean Depth of Pond

St. John's River Water Management District wet detention criterion requires a pond mean depth between 2 and 8 feet and a maximum depth of 12 feet. The wet ponds exceed both the maximum depth and average depth criteria. SJRWMD staff has stated that in lieu of meeting the above listed criteria, an anoxic depth calculation can be performed. The pond depths are considered acceptable if the required permanent pool volume is met above the anoxic depth.

Table 8 – Wet Pond Maximum and Average Depth

Wet Pond	Maximum Depth (ft)	Average Depth (ft)
POND 1	13.5	8.8
POND 2	13.5	11.1
POND 3	13.5	8.9
POND 4	13.5	9.5
POND 5	13.5	11.9
POND 6	13.5	12.5

5.5 Anoxic Depth

Anoxic depth calculations are based on the criteria listed in FDEP Draft 2010 Stormwater Rules, Chapter 25.

Table 9 – Anoxic Depth

Wet Pond	Annual Runoff (ac-ft/yr)[1]	TP Loading to Pond (kg TP/yr)[1]	PPV Required (ac-ft)	TP Treatment Efficiency[2]	TP Remaining in Water Column (kg TP/yr)[3]	Mean Pond Conc. (µg TP/liter)[4]	Mean Chlorophyll-a Conc. (mg/m^3)[5]	Mean Sechi Disk Depth (m)[6]	Anoxic Depth (ft)[7]
POND 1	12.75	5.14	5.70	65%	1.80	79.1	40.0	0.79	9.4
POND 2	13.03	5.25	8.05	65%	1.84	70.7	35.6	0.84	9.8
POND 3	6.29	2.53	2.95	65%	0.89	77.9	39.4	0.80	9.5
POND 4	13.18	5.31	4.98	65%	1.86	83.0	42.2	0.77	9.3
POND 5	22.07	8.90	13.89	65%	3.11	70.2	35.3	0.85	9.8
POND 6	34.95	14.09	26.55	65%	4.93	65.0	32.6	0.88	10.0

Notes:

1) Values provided by BMP Trains

2) 65% is based on 21-day residence time.

3) TP Remaining = TP Loading * (1 - Treatment Efficiency %)

4) Mean Pond Concentration = TP remaining in water column (kg TP/yr) / (Annual runoff (ac-ft/yr) + PPV (ac-ft) / 43,560 (sf/ac) * 7.48 (gal/cf) / 3.785 (liter/gal) * 10^6 (mg/kg) * 10^3 (µg/mg)

5) ln(Chyl-a) = 1.058 ln(TP) - 0.934

6) SD = (24.2386 + (0.3041 * chyl-a)) / (6.0632 + chyl-a)

7) Anoxic Depth = 3.035 * SD + 0.02164 * chyl-a - 0.004979 * TP * 3.28 (ft/m)

5.6 Permanent Pool Volume

A vegetative littoral zone is not being provided; therefore, additional permanent pool volume will be provided by utilizing a 21-day residence time per Section 8.7 and 21.5 of the Applicant's Handbook.

$$Perm.\,Pool\,Vol. = \frac{Drainage\,Area \times C \times Rainfall \times Res.Time}{Wet\,Season \times 12\,{}^{in}/_{ft}}$$

Table 10 – Wet Pond/Stormwater Harvesting Permanent Pool Volume (Applicant's Handbook method)

Wet Pond	Drainage Area (acres)	Impervious (includes ponds) (acres)	Pervious (acres)	Weighted C	Required PPV (ac-ft)
POND 1	20.63	11.63	9.01	0.71	**5.70**
POND 2	31.59	14.65	16.94	0.66	**8.05**
POND 3	10.62	6.05	4.57	0.71	**2.95**
POND 4	17.94	10.23	7.71	0.71	**4.98**
POND 5	47.75	30.20	17.55	0.75	**13.89**
POND 6	87.08	60.80	26.28	0.78	**26.55**

Notes:

21	Residence Time, non-littoral zone (days)
34	Wet season rain (inches)
153	Wet season duration (days)
0.95	C Impervious
0.4	C Pervious

The required permanent pool volume is also calculated in the BMP Trains model. The permanent pool volume requirements for both the Applicant's Handbook method and BMP Trains are met for each of the wet ponds. The results are shown in the table below.

Table 11 – Wet Pond Permanent Pool Volume Summary

Wet Pond	Req'd PPV Applicant's Handbook (ac-ft)	Req'd PPV BMP Trains (ac-ft)	Prov'd PPV (above anoxic depth) (ac-ft)
POND 1	5.70	1.08	20.05
POND 2	8.05	1.11	63.55
POND 3	2.95	0.53	17.00
POND 4	4.98	1.12	14.83
POND 5	13.89	1.88	140.42
POND 6	26.55	2.97	385.24

6.0 WETLAND

The onsite wetland serves as the historical outfall location for approximately 173 acres of offsite basin area via cross drain CD-13A of the HNTB All Aboard Florida Project Section 3E – C03E: West of I-95 to FEC Railway (SJRWMD Permit No: 136255-5). The offsite area consists of treated stormwater from a portion of SR 528 and Brightline Railway, and untreated stormwater from undeveloped areas south of SR 528. Stormwater discharges from the wetland via several natural grass weirs. Per the Existing Conditions model of the ETM report for Lakes at Canaveral Groves Lake Amenity (SJRWMD Permit No: 158236-1) the lowest of these grass weirs has a low point of 21.04 NAVD. This grass weir has a width of 14' at or below elevation 21.15 NAVD. Water that passes over this weir discharges into the canal located on the north property line.

31.0 acres of the wetland will be preserved in the post-development condition. CD-13A will be extended into the wetland to preserve the historical outfall for the offsite basin area. A control structure set at elevation 21.15 NAVD will be set at the north end of the wetland and piping will convey stormwater to the canal located at the north property line. The wetland discharge piping is combined with the discharge piping from POND 1.

The modifications to the wetland will affect CD-13A and CD-13 of the All Aboard Florida project. The relevant portion of the HNTB model was recreated and combined with the project site model to determine the revised peak stages for CD-13A and CD-13.

Table 12 – FDOT Rainfall Depths

Storm Event	Rainfall Depth (in)
25-Year / 24-Hour	8.70
50-Year / 24-Hour	9.96
100-Year / 24-Hour	10.56

Table 13 – CD-13A Peak Upstream Stage (Node: Dummy 13-3)

Storm Event	HNTB Pre Warning Elev. 27.0	HNTB Post Warning Elev. 48.27	Cocoa Grove Post
FDOT 25-Year / 24-Hour	23.31	23.23	23.45
FDOT 50-Year / 24-Hour	23.52	23.57	23.86
FDOT 100-Year / 24-Hour	23.62	23.73	24.02

Table 14 – CD-13 Peak Upstream Stage (Node: OFFSITE-7064+00)

Storm Event	HNTB Pre	HNTB Post Warning Elev. 28.03	Cocoa Grove Post
FDOT 25-Year / 24-Hour	--	24.1	24.17
FDOT 50-Year / 24-Hour	--	24.65	24.77
FDOT 100-Year / 24-Hour	--	24.91	25.04

The peak stages for CD-13A and CD-13 are increased slightly from the HNTB results; however, they remain well below the warning elevations.

7.0 STORM ANALYSIS

The post-development flood routed discharge must not exceed the pre-development peak discharge for the design storms. The following design storms were analyzed.

Table 15 – SJRWMD Rainfall Depths

Storm Event	Rainfall Depth (in)	Source
Mean Annual 24-Hour	5.00	SJRWMD Isopluvial Map
10-Year / 24-Hour	7.50	SJRWMD Isopluvial Map
25-Year / 24-Hour	9.50	SJRWMD Isopluvial Map
100-Year / 24-Hour	13.00	SJRWMD Isopluvial Map

7.1 Tailwater Conditions

The discharge location is the existing canal located on the north side of the property. The tailwater condition is represented with boundary conditions in the ICPR model with survey information recorded on 7/19/2023 at the I-95 box culvert located downstream of the outfall.

7.2 Peak Discharge

The post-development hydrographs and storm routings were simulated using the input parameters calculated above using ICPR v3.10. See ***Appendix C*** for the complete

ICPR input and results. The pre-development values are from pg. 6 of the ETM drainage report.

The ETM pre-development peak discharge rates are based on an overall basin area of 250 acres. The ETM basins include the onsite wetland, but do not include the offsite contributions from CD-13A.

The post-development ICPR model includes both the wetland and the 173 acres of offsite basin for a total contributory basin area of 423 acres to model the interactions between the two systems.

The project site is located within the St. Johns River Hydrologic basin; therefore, the 10-year / 24-hour storm event is included in the post-development analysis.

Table 16 – SJRWMD Pre-Post Development Runoff

Storm Event	Pre Dev Permit 158236-1 Node: BOUNDARY (cfs)	Post Dev (cfs)
Mean Annual 24-Hour	46.72	42.44
10-Year / 24-Hour	107.02	83.24
25-Year / 24-Hour	153.60	115.84
100-Year / 24-Hour	235.95	155.41

Note: Post-Dev flowrate is maximum Node Time Series results for combined outflow from Pond 1 and Pond 6.

The Post-Development Node Time Series reports for the outflow from Pond 1 and Pond 6 for the storm events were added together to determine actual site discharge rate. The pre-development results for the 10-year storm were not included in the original report. They are attached in ***Appendix E.***

Table 17 – SJRWMD Post-Development Peak Stage

Pond/Wetland	TOB (NAVD)	Mean Annual 24-Hour Peak Stage (NAVD)	10-Year / 24-Hour Peak Stage (NAVD)	25-Year / 24-Hour Peak Stage (NAVD)	100-Year / 24-Hour Peak Stage (NAVD)
POND 1	23.0	21.31	21.62	21.89	22.60
POND 2	23.0	21.40	21.85	22.24	23.00
POND 3	23.0	21.40	21.85	22.24	22.99
POND 4	23.0	21.35	21.80	22.20	22.95
POND 5	23.0	21.32	21.68	22.00	22.58
POND 6	23.0	21.27	21.53	21.73	22.08
WETLAND	23.0	21.75	22.00	22.17	22.77
N124 (BRW PIT 19)	22.0	20.50	20.59	20.66	20.75
TW(N607) (I-95 Box Culvert)	21.2	15.00	15.00	15.00	15.92
N114 (Canal at S123)	21.3	15.92	16.65	17.19	17.89
N112 (Canal at Osage Ent.)	24.0	16.50	16.65	17.19	17.89

7.3 Volume Recovery

SJRWMD requires the total storage capacity within the system to be recovered within 14 days following the design storm event.

The wetland recovers to its control elevation via the wetland control structure. An ICPR analysis for the 25yr/24hr storm shows that the wetland reaches its control elevation of 21.15' at Hour 350, or 326 hours (13.6 days) following the conclusion of the 24-hour storm event.

The wet ponds recover their treatment volume via irrigation and pond surface evaporation. The tables below summarize the volume the system is able to recover in 14 days.

Table 18 – Wet Pond Recovery Rates via Irrigation and Evaporation

Irrigation

Irrigable Area	90.7	ac
Application Rate	1	in/wk
Volume Recovered via Irrigation	**1.08**	**ac-ft/day**

Pond Evaporation

Evaporation Rate	48	inches/yr
Evaporation Rate	**0.011**	**ft/day**

Notes:

Applicant's Handbook Vol II, Chapter 29.1 (c) The mean annual evaporation from the pond equals the mean annual rainfall on the pond.

Applicant's Handbook Vol II, Figure 32-1 Average Annual Lake Evaporation (inches)

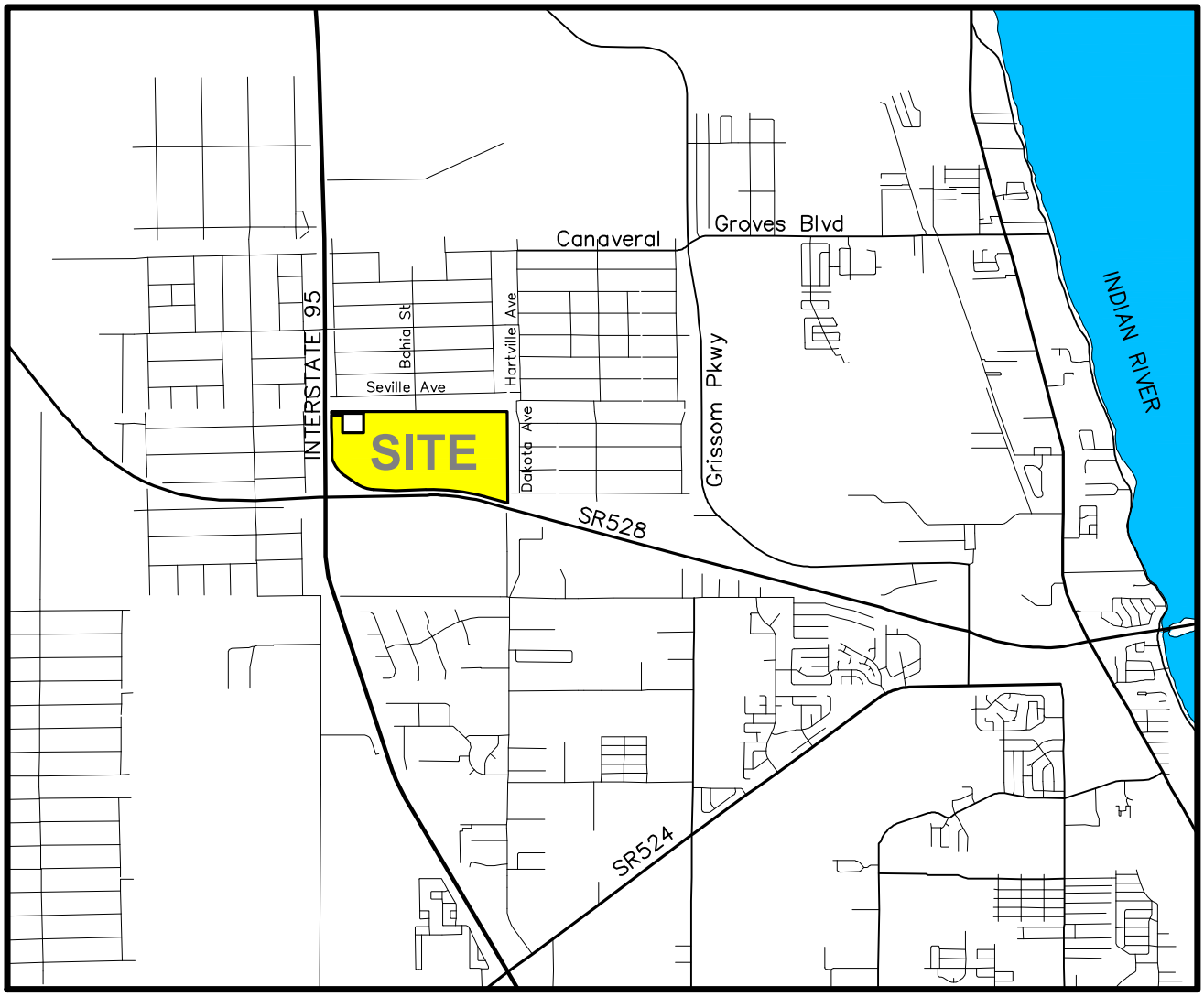
Table 19 – Wet Ponds Recovery

Day	Stormwater Harvesting Vol. Recovered (ac-ft)	Harvested Vol (cf)	Combined Ponds Surface Area (sf)	Harvest Start Elev.	Harvest Finish Elev.	Evaporation Rate (ft/day)	Evaporation Finish Elev.
1	1.08	47,024	3,109,650	20.8	20.78	0.011	20.77
2	1.08	47,024	3,107,601	20.77	20.76	0.011	20.75
3	1.08	47,024	3,105,551	20.75	20.73	0.011	20.72
4	1.08	47,024	3,103,501	20.72	20.71	0.011	20.70
5	1.08	47,024	3,101,449	20.70	20.68	0.011	20.67
6	1.08	47,024	3,099,397	20.67	20.65	0.011	20.64
7	1.08	47,024	3,097,344	20.64	20.63	0.011	20.62
8	1.08	47,024	3,095,290	20.62	20.60	0.011	20.59
9	1.08	47,024	3,093,235	20.59	20.58	0.011	20.56
10	1.08	47,024	3,091,180	20.56	20.55	0.011	20.54
11	1.08	47,024	3,089,124	20.54	20.52	0.011	20.51
12	1.08	47,024	3,087,067	20.51	20.50	0.011	20.49

The pond elevations reach the NWL of 20.50 on Day 12 based on steady recovery from the rim elevation via stormwater harvesting application and evaporation from the ponds' surfaces; therefore, the pond system volume recovery is achieved within 14 days following a storm event.

Appendix A

Figures



NORTH

SCALE: 1"=5000'

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS

DRAWN BY: GM
CHECKED BY: JR
DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
LOCATION MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE 1

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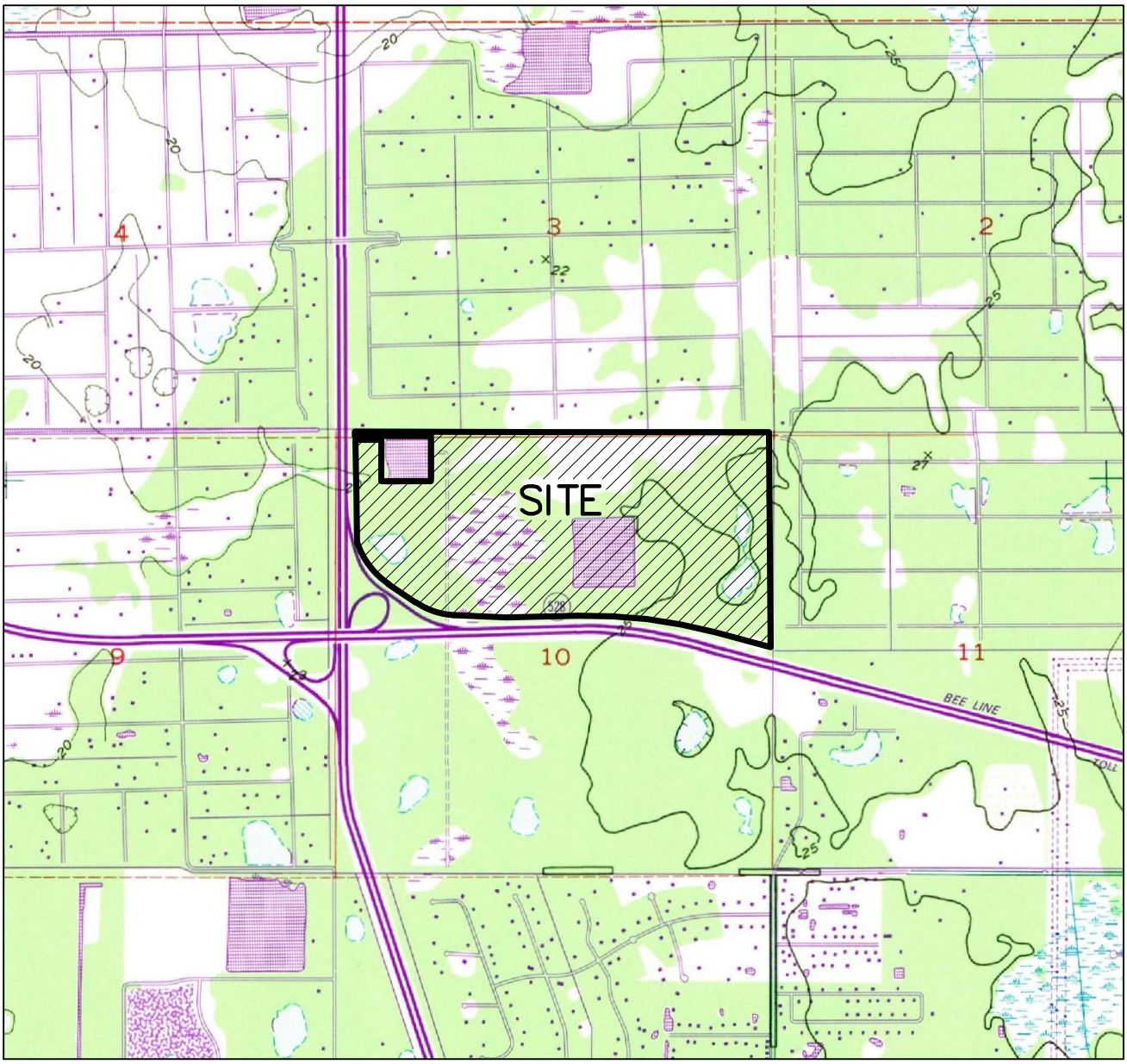

Sharpes 1988

Latitude 28°24'56"
Longitude 80°48'42"

NORTH

SCALE: 1"=2000'

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CHECKED BY: JR
DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
QUAD MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE 2

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NORTH

SCALE: 1"=1000'

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DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
AERIAL MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE
3

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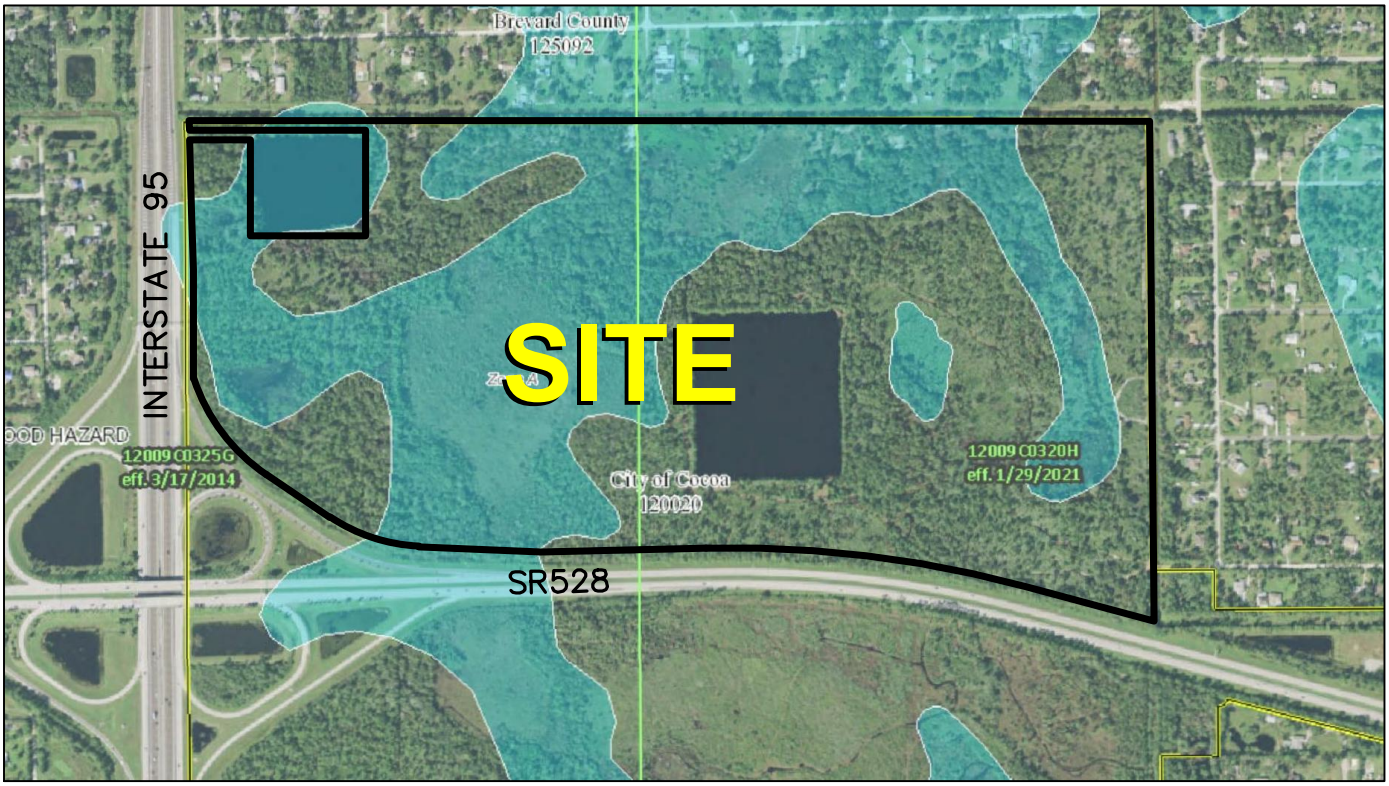

FIRM# 12009C0325G eff. 3/17/2014 | FIRM# 12009C0320H eff. 1/29/2021

Project site lies within Zone A (no base flood elevations determined), and Zone X (areas determined to be outside the 0.2% annual chance floodplain).

Map info retrieved: May 4, 2021

NORTH

SCALE: 1"=1000'

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CHECKED BY: JR
DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
FLOOD INSURANCE
RATE MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE 4

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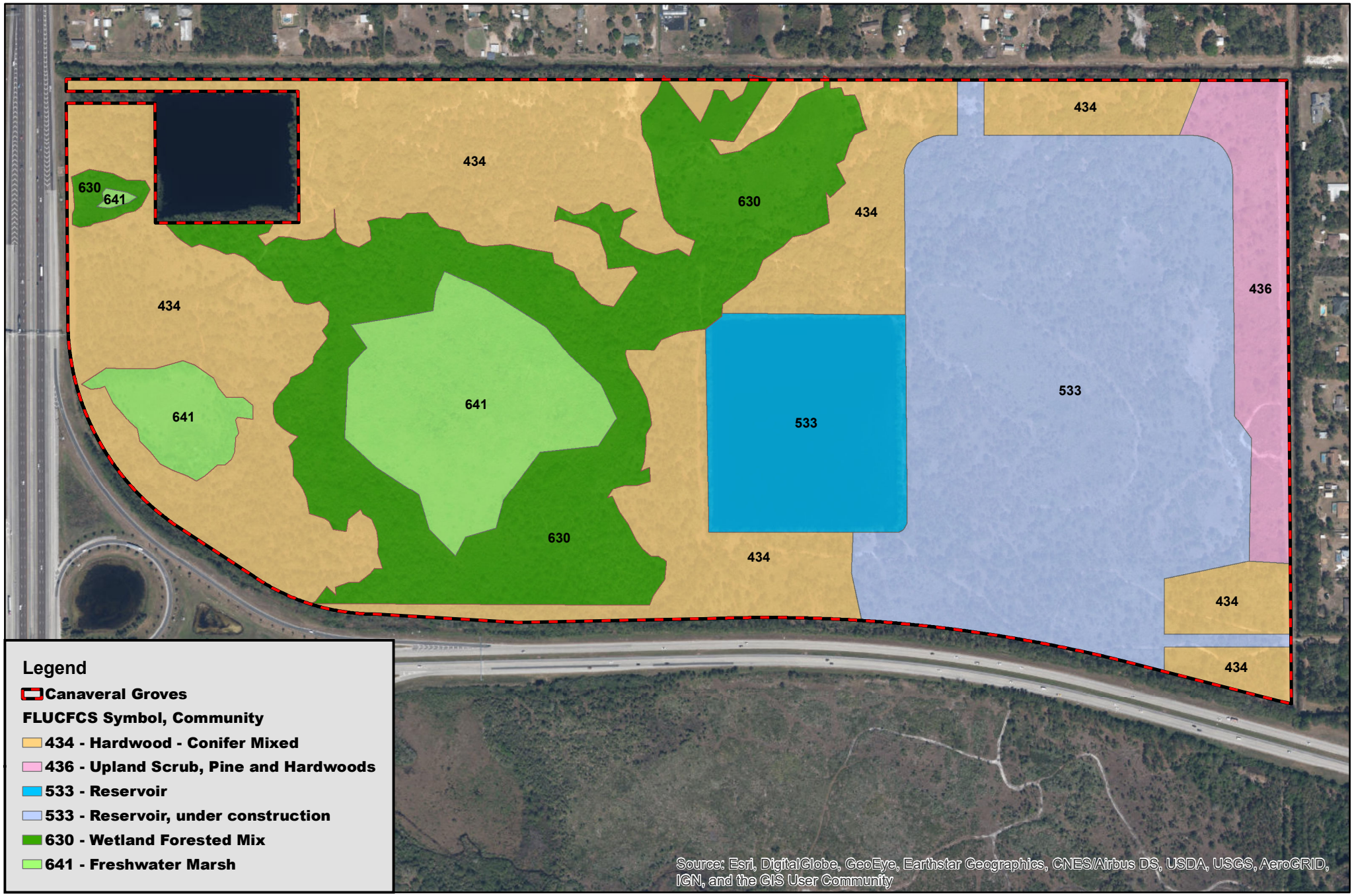


Bio-Tech Consulting Inc.
Environmental and Permitting Services
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Canaveral Groves
Brevard County, Florida

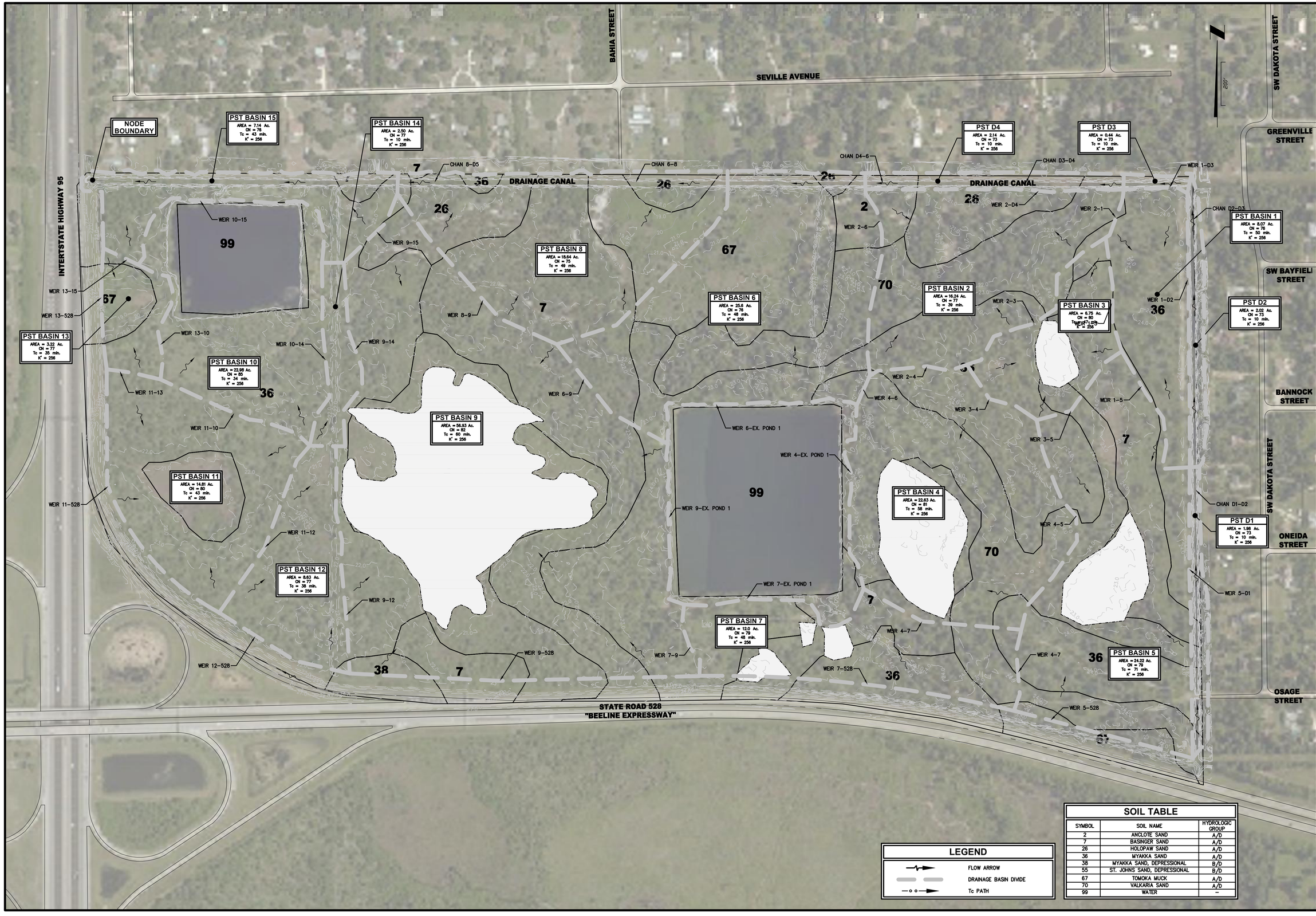
FLUCFCS Map

Figure 5

1,000 Feet

N W E S

Project #: 1231-01
Produced By: SAS
Date: 11/10/2020



SOIL TABLE		
SYMBOL	SOIL NAME	HYDROLOGIC GROUP
2	ANCLOTE SAND	A/D
7	BASINGER SAND	A/D
26	HOLOPAW SAND	A/D
36	MYAKKA SAND	A/D
38	MYAKKA SAND, DEPRESSIONAL	B/D
55	ST. JOHNS SAND, DEPRESSIONAL	B/D
67	TOMOKA MUCK	A/D
70	VALKARIA SAND	A/D
99	WATER	–

PLANS PREPARED UNDER THE DIRECTION OF:

ANDREW J. BOOTH
P.E. NUMBER: 82302

PLOTTED: June 17, 2019 – 5:27 PM, BY: AJ Booth

REVISIONS:

ETM NO.	18-256
DRAWN BY:	RAS
DESIGNED BY:	AJB
CHECKED BY:	AAH
DATE:	Issue Date

England-Thims & Miller, Inc.
14775 Old St. Augustine Road
Jacksonville, FL 32258
TEL: (904) 642-8990
FAX: (904) 646-9485
CA - 00002584 LC - 0000316

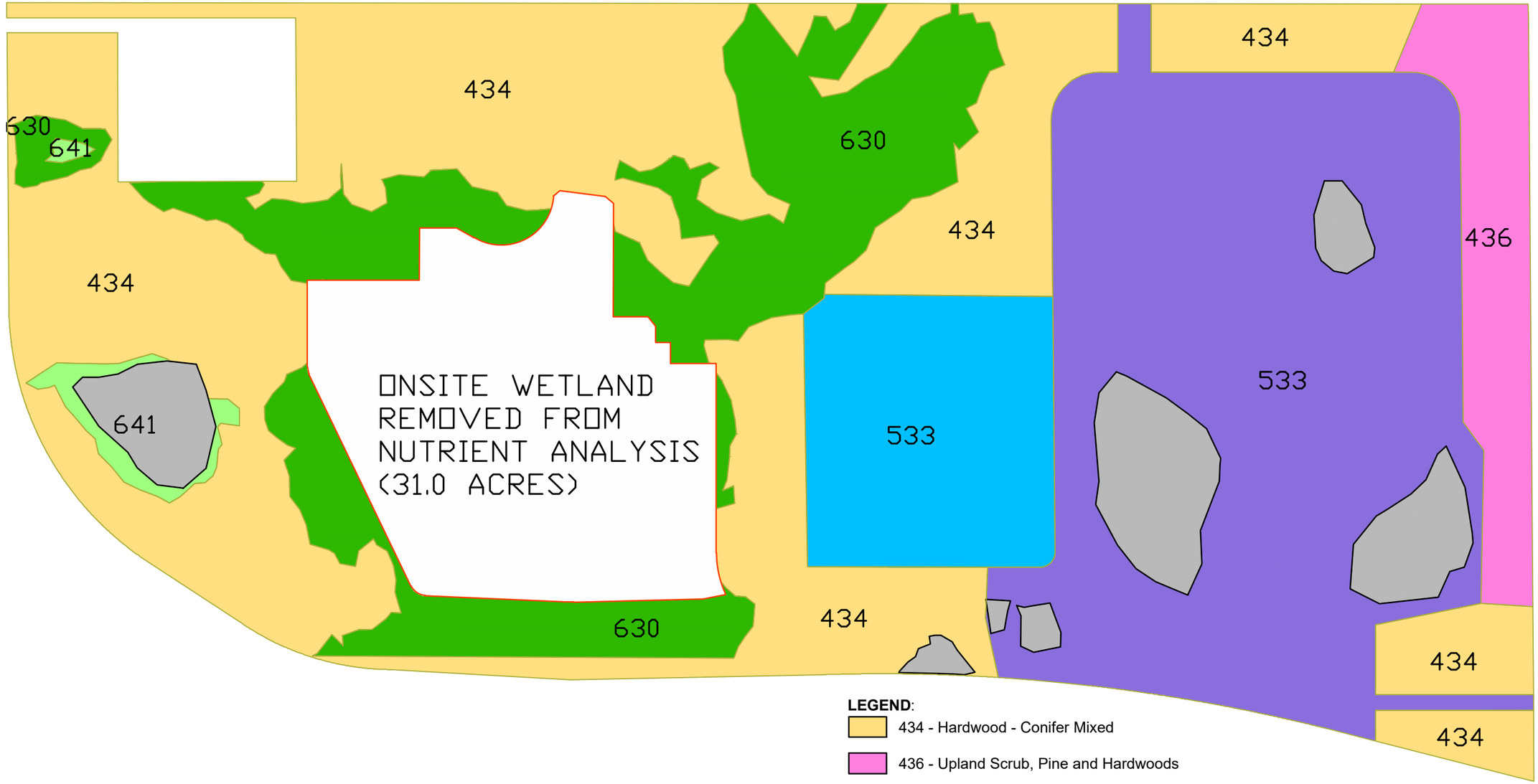
ETM
VISION * EXPERIENCE * RESULTS

PRE DEVELOPMENT DRAINAGE PLAN

LAKES AT CANAVERAL GROVES STORMWATER POND FOR VIRGIN TRAINS USA FLORIDA, LLC

Figure 6

T:\2018\18-256\LandDev\Design\Plots\18-256 PRE.dwg



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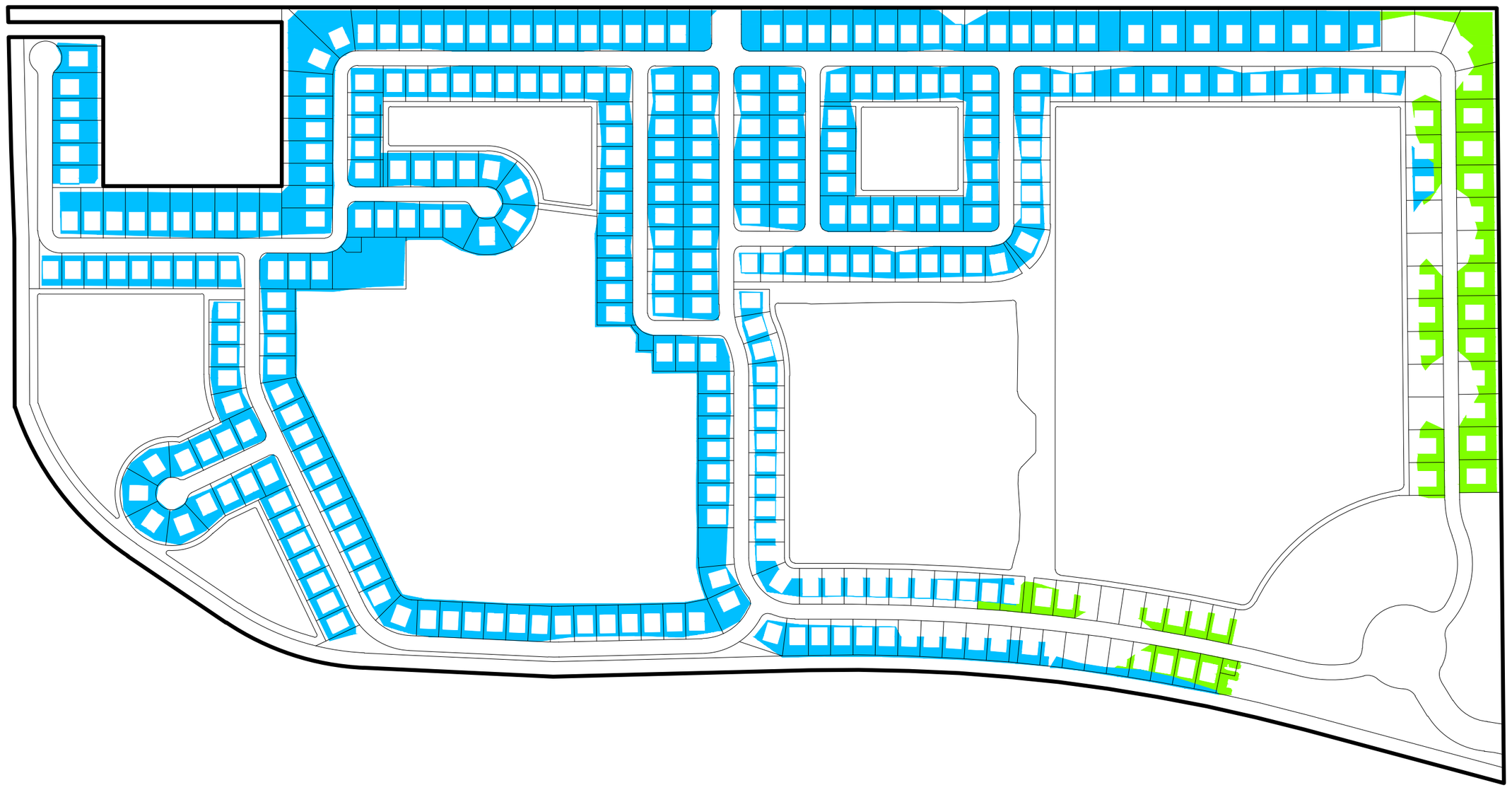
DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS

DRAWN BY: GM
CHECKED BY: JR
DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
PRE-DEVELOPMENT NUTRIENT LOADING MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE
7



AREA:

40.2 acres — Pervious areas with minimum 3 feet fill

5.2 acres — Pervious areas with minimum 4 feet above water table (not already included in 3' fill areas)

45.4 acres Total

DRMP ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS

DRAWN BY: GM
CHECKED BY: JR
DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
POST-DEVELOPMENT SOIL FILL MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE 8

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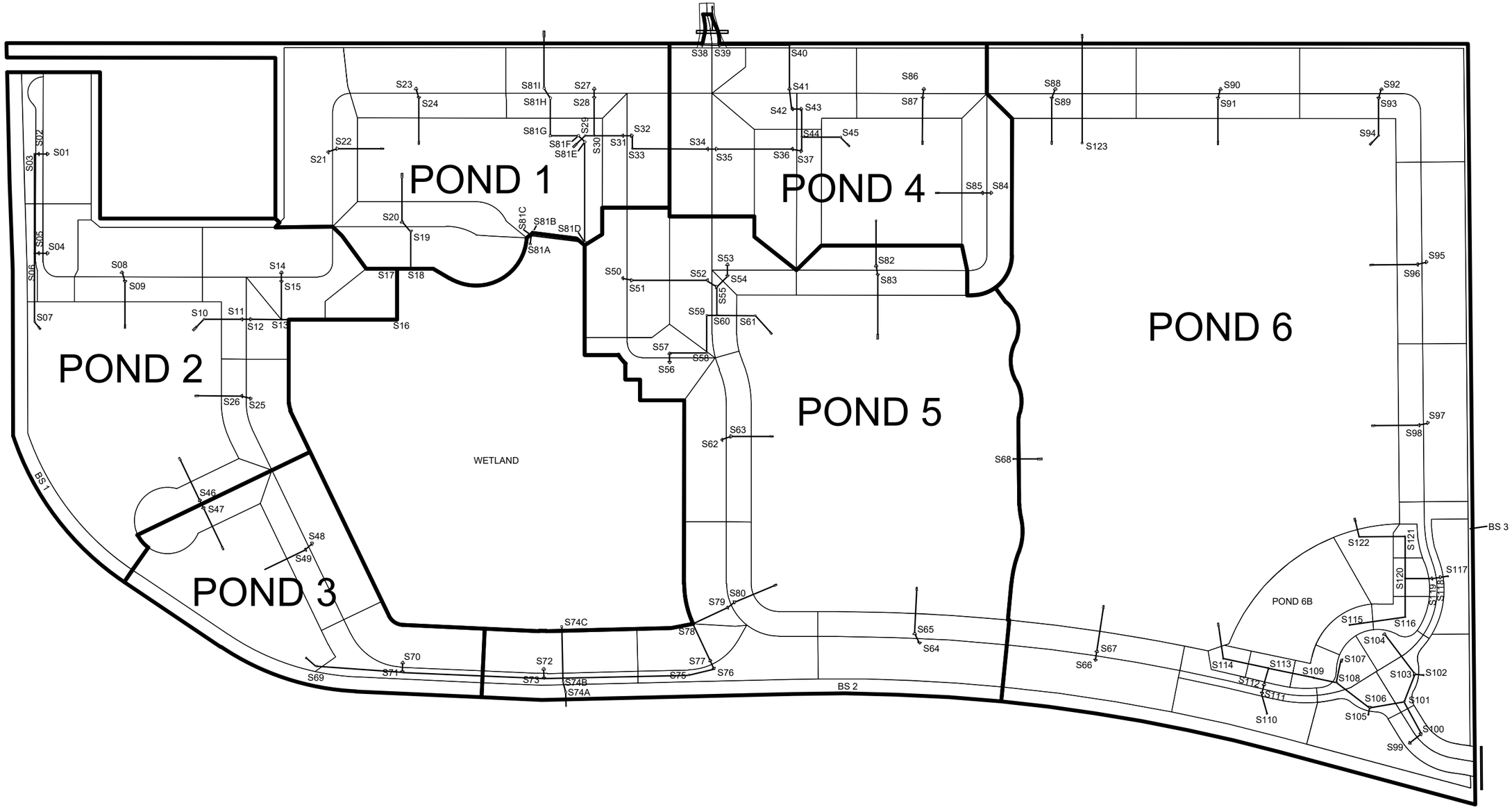

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DRMP
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DRAWN BY: GM
CHECKED BY: JR
DATE: JULY 2022
PROJECT NO. 21-0569.000

LAKES AT COCOA GROVE
POST-DEVELOPMENT BASIN MAP

SECTION 10
TOWNSHIP 24 SOUTH
RANGE 35 EAST

FIGURE 9

Appendix B

BMP Trains Stormwater Treatment Analysis

Complete Report (not including cost) Ver 4.3.5

Project: Cocoa Grove (412401)
Date: 12/18/2022 3:36:04 PM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	Site
Rainfall Zone	Florida Zone 2
Annual Mean Rainfall	51.00

Pre-Condition Landuse Information

Landuse	User Defined Values
Area (acres)	198.60
Rational Coefficient (0-1)	0.11
Non DCIA Curve Number	80.09
DCIA Percent (0-100)	0.00
Nitrogen EMC (mg/l)	1.102
Phosphorus EMC (mg/l)	0.045
Runoff Volume (ac-ft/yr)	94.434
Groundwater N (kg/yr)	0.000
Groundwater P (kg/yr)	0.000
Nitrogen Loading (kg/yr)	128.314
Phosphorus Loading (kg/yr)	5.240

Post-Condition Landuse Information

Landuse	Single-Family: TN=2.070 TP=0.327
Area (acres)	215.60
Rational Coefficient (0-1)	0.17
Non DCIA Curve Number	71.00
DCIA Percent (0-100)	14.00
Wet Pond Area (ac)	70.80
Nitrogen EMC (mg/l)	2.070
Phosphorus EMC (mg/l)	0.327
Runoff Volume (ac-ft/yr)	102.403
Groundwater N (kg/yr)	0.000
Groundwater P (kg/yr)	0.000
Nitrogen Loading (kg/yr)	261.363
Phosphorus Loading (kg/yr)	41.288

Catchment Number: 1 Name: Site

Project: Cocoa Grove (412401)
Date: 12/18/2022

Multiple BMP in Series Design Parameters

BMP in Series Number: 1
BMP Type: Wet Detention

Permanent Pool Volume (ac-ft)	8.697
Permanent Pool Volume (ac-ft) for 31 days residence	8.697
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

BMP in Series Number: 2
BMP Type: Stormwater Harvesting

Total Contributing Area to Harvesting (ac)	144.800
Total Area Available for Irrigation (ac)	90.700
Available Harvest Volume (ac-ft)	21.340
Harvest Rate (0.1-4.0 in/week)	1.000

BMP in Series Number: 3
BMP Type: None

BMP in Series Number: 4
BMP Type: None

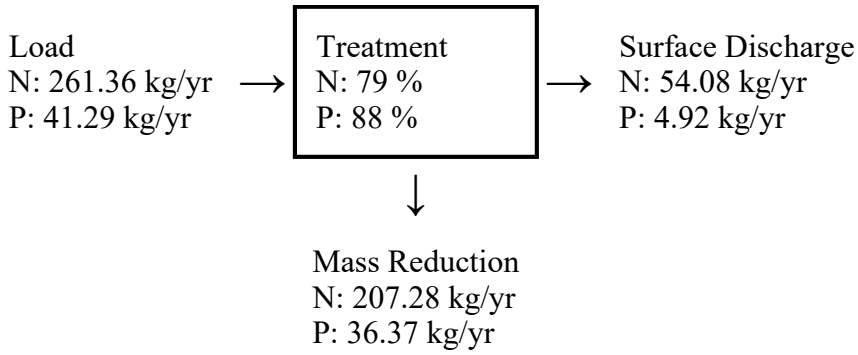
Watershed Characteristics

Catchment Area (acres)	215.60
Contributing Area (acres)	144.800
Non-DCIA Curve Number	71.00
DCIA Percent	14.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

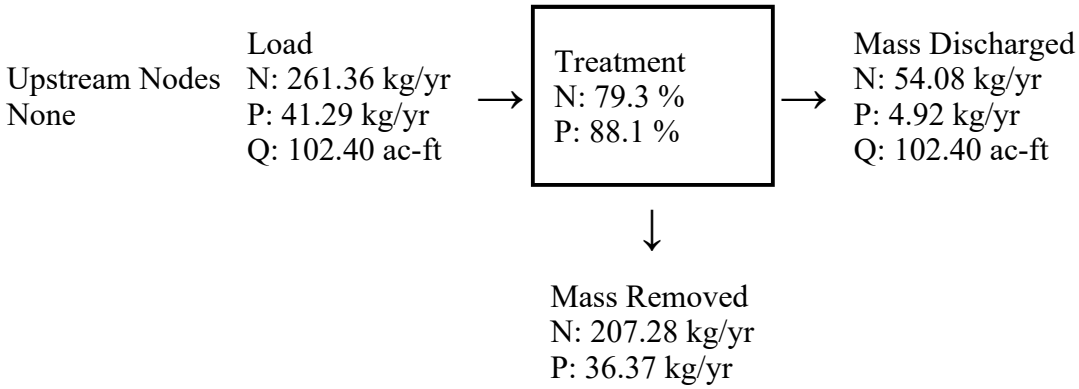
Surface Water Discharge

Required TN Treatment Efficiency (%)	51
Provided TN Treatment Efficiency (%)	79
Required TP Treatment Efficiency (%)	87
Provided TP Treatment Efficiency (%)	88

Load for Multiple BMP in Series



Load Diagram for Multiple BMP (As Used In Routing)



Summary Treatment Report Version: 4.3.5

Project: Cocoa Grove (412401)

Date:12/18/2022

Analysis Type: Net Improvement
BMP Types:
Catchment 1 - (Site) Multiple BMP
Based on % removal values to the nearest percent

Routing Summary
Catchment 1 Routed to Outlet

Total nitrogen target removal met? **Yes**
Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	128.31 kg/yr
Total N post load	261.36 kg/yr

Target N load reduction	51 %	
Target N discharge load	128.31 kg/yr	
Percent N load reduction	79 %	
Provided N discharge load	54.08 kg/yr	119.26 lb/yr
Provided N load removed	207.28 kg/yr	457.05 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	5.24 kg/yr	
Total P post load	41.288 kg/yr	
Target P load reduction	87 %	
Target P discharge load	5.24 kg/yr	
Percent P load reduction	88 %	
Provided P discharge load	4.915 kg/yr	10.84 lb/yr
Provided P load removed	36.372 kg/yr	80.201 lb/yr

BMP Trains Composite Calculators (12/18/2022)

Composite CN Calculator - Enter Area and CN (for Impervious Area CN = 95)

Area (ac)	CN	C	Weighted C
84.200	77	0.092	0.039
0.400	95	0.404	0.001
10.600	77	0.092	0.005
57.500	77	0.092	0.027
9.400	95	0.404	0.019
32.000	77	0.092	0.015
1.500	77	0.092	0.001
3.000	95	0.404	0.006

Avg Weighted C
0.112

DCIA Percent
0.0

Composite CN
80.09

Composite EMC Calculator - Enter Area, CN, and EMC Pre-Development Total Nitrogen

Area (ac)	EMC	CN	C	Weighted C
84.200	1.090	77	0.092	0.039
0.400	1.090	95	0.404	0.001
10.600	1.090	77	0.092	0.005
57.500	1.090	77	0.092	0.027
9.400	1.090	95	0.404	0.019
32.000	1.150	77	0.092	0.015
1.500	1.150	77	0.092	0.001
3.000	1.150	95	0.404	0.006

Mesic Flatwoods

Mesic Flatwoods

Undeveloped/Rangeland (Wetland)

Avg Weighted C
0.112

DCIA Percent
0.0

Composite EMC
1.102

Composite EMC Calculator - Enter Area, CN, and EMC Pre-Development Total Phosphorus

Area (ac)	EMC	CN	C	Weighted C
84.200	0.043	77	0.092	0.039
0.400	0.043	95	0.404	0.001
10.600	0.043	77	0.092	0.005
57.500	0.043	77	0.092	0.027
9.400	0.043	95	0.404	0.019
32.000	0.055	77	0.092	0.015
1.500	0.055	77	0.092	0.001
3.000	0.055	95	0.404	0.006

Mesic Flatwoods

Mesic Flatwoods

Undeveloped/Rangeland (Wetland)

Avg Weighted C
0.112

DCIA Percent
0.0

Composite EMC
0.045

Wet Pond breakdown for Anoxic and Permanent Pool Volume calcs

Complete Report (not including cost) Ver 4.3.5

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022 10:14:18 PM

Site and Catchment Information

Analysis: BMP Analysis

Catchment Name	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6
Rainfall Zone	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2	Florida Zone 2
Annual Mean Rainfall	51.00	51.00	51.00	51.00	51.00	51.00

Pre-Condition Landuse Information

Landuse						
Area (acres)	0.00	0.00	0.00	0.00	0.00	0.00
Rational Coefficient (0-1)	0.00	0.00	0.00	0.00	0.00	0.00
Non DCIA Curve Number	29.90	29.90	29.90	29.90	29.90	29.90
DCIA Percent (0-100)	0.00	0.00	0.00	0.00	0.00	0.00
Nitrogen EMC (mg/l)	0.000	0.000	0.000	0.000	0.000	0.000
Phosphorus EMC (mg/l)	0.000	0.000	0.000	0.000	0.000	0.000
Runoff Volume (ac-ft/yr)	0.000	0.000	0.000	0.000	0.000	0.000
Groundwater N (kg/yr)	0.000	0.000	0.000	0.000	0.000	0.000
Groundwater P (kg/yr)	0.000	0.000	0.000	0.000	0.000	0.000
Nitrogen Loading (kg/yr)	0.000	0.000	0.000	0.000	0.000	0.000
Phosphorus Loading (kg/yr)	0.000	0.000	0.000	0.000	0.000	0.000

Post-Condition Landuse

Information

Landuse	Single-Family: TN=2.070 TP=0.327	Single-Family: TN=2.070 TP=0.327	Single-Family: TN=2.070 TP=0.327	Single-Family: TN=2.070 TP=0.327	Single-Family: TN=2.070 TP=0.327	Single-Family: TN=2.070 TP=0.327
Area (acres)	20.60	31.60	10.60	17.90	47.80	87.10
Rational Coefficient (0-1)	0.17	0.12	0.17	0.20	0.16	0.18
Non DCIA Curve Number	74.00	67.00	73.00	75.00	72.00	70.00
DCIA Percent (0-100)	13.00	10.00	14.00	16.00	13.00	16.00
Wet Pond Area (ac)	3.00	7.00	2.10	2.10	15.90	40.80
Nitrogen EMC (mg/l)	2.070	2.070	2.070	2.070	2.070	2.070
Phosphorus EMC (mg/l)	0.327	0.327	0.327	0.327	0.327	0.327
Runoff Volume (ac-ft/yr)	12.746	13.027	6.286	13.175	22.072	34.947
Groundwater N (kg/yr)	0.000	0.000	0.000	0.000	0.000	0.000
Groundwater P (kg/yr)	0.000	0.000	0.000	0.000	0.000	0.000
Nitrogen Loading (kg/yr)	32.532	33.249	16.043	33.626	56.334	89.196
Phosphorus Loading (kg/yr)	5.139	5.252	2.534	5.312	8.899	14.090

Catchment Number: 1 Name: Pond 1

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022

Wet Detention Design

Permanent Pool Volume (ac-ft)	1.083
Permanent Pool Volume (ac-ft) for 31 days residence	1.083
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	20.60
Contributing Area (acres)	17.600
Non-DCIA Curve Number	74.00
DCIA Percent	13.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

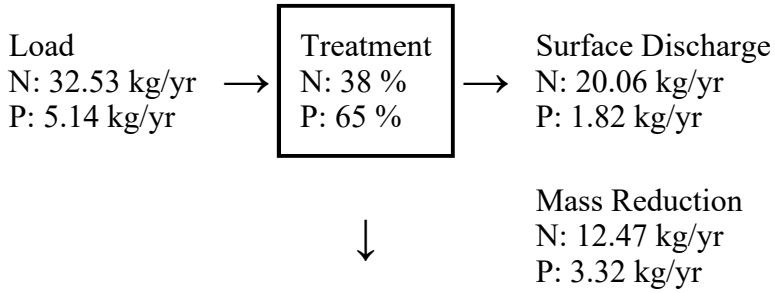
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

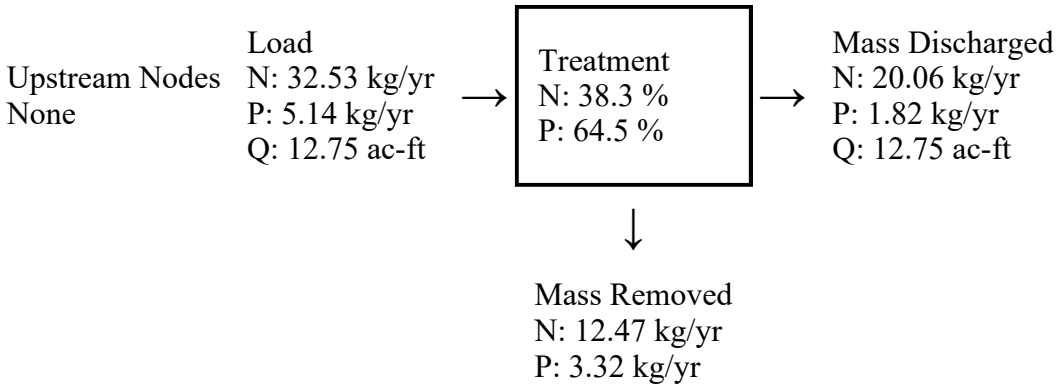
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 2 Name: Pond 2

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022

Wet Detention Design

Permanent Pool Volume (ac-ft)	1.106
Permanent Pool Volume (ac-ft) for 31 days residence	1.106
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	31.60
Contributing Area (acres)	24.600
Non-DCIA Curve Number	67.00
DCIA Percent	10.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

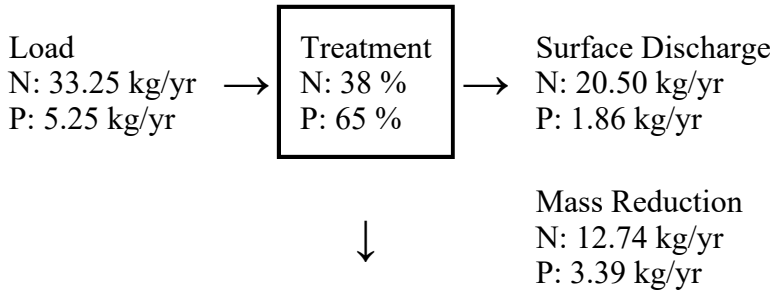
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

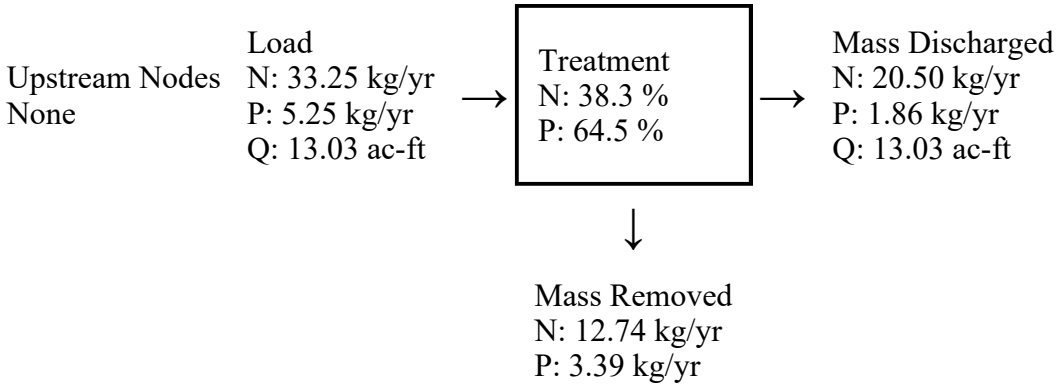
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 3 Name: Pond 3

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022

Wet Detention Design

Permanent Pool Volume (ac-ft)	0.534
Permanent Pool Volume (ac-ft) for 31 days residence	0.534
Annual Residence Time (days)	31

Littoral Zone Efficiency Credit
Wetland Efficiency Credit

Watershed Characteristics

Catchment Area (acres)	10.60
Contributing Area (acres)	8.500
Non-DCIA Curve Number	73.00
DCIA Percent	14.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

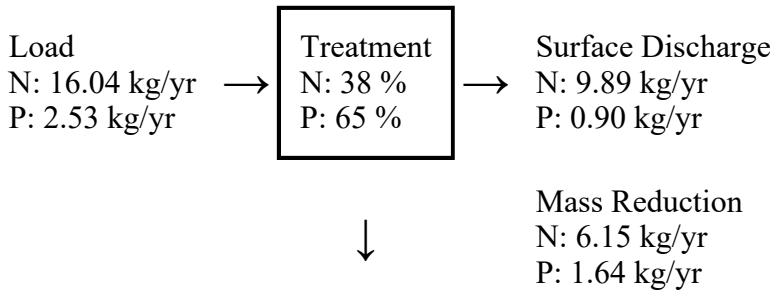
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

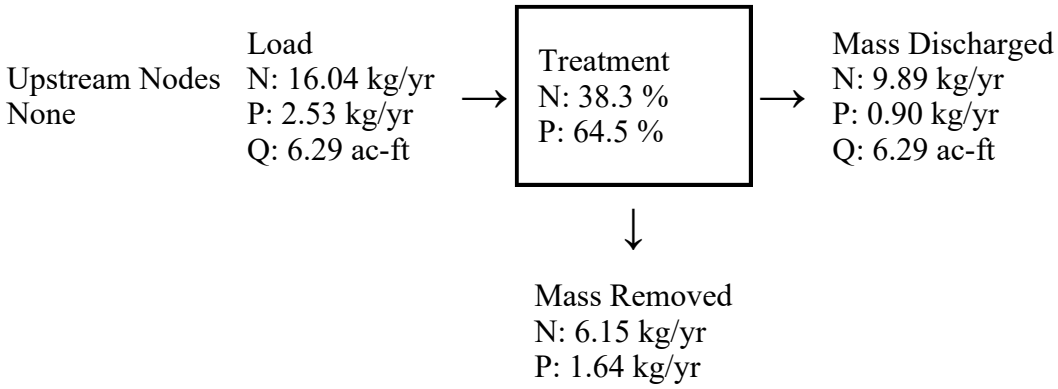
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 4 Name: Pond 4

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022

Wet Detention Design

Permanent Pool Volume (ac-ft)	1.119
Permanent Pool Volume (ac-ft) for 31 days residence	1.119
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	17.90
Contributing Area (acres)	15.800
Non-DCIA Curve Number	75.00
DCIA Percent	16.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

Media Mix Information

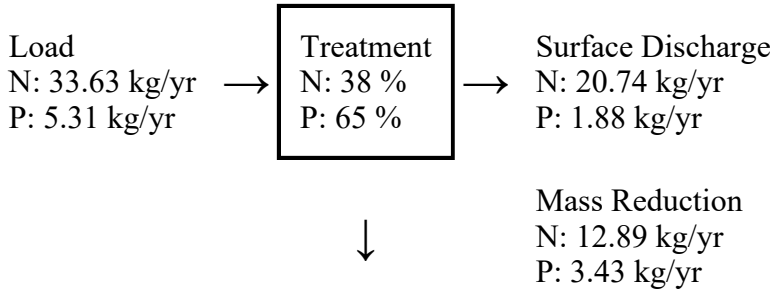
Type of Media Mix	Not Specified

Media N Reduction (%)	
Media P Reduction (%)	

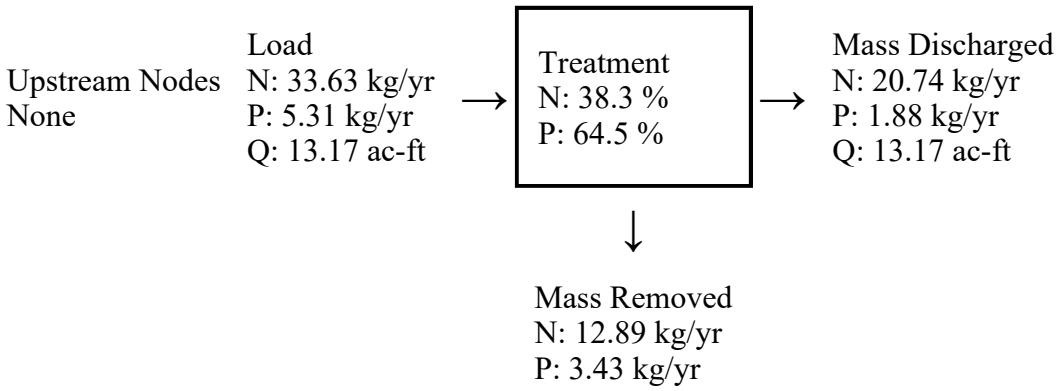
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 5 Name: Pond 5

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022

Wet Detention Design

Permanent Pool Volume (ac-ft)	1.875
Permanent Pool Volume (ac-ft) for 31 days residence	1.875
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	47.80
Contributing Area (acres)	31.900
Non-DCIA Curve Number	72.00
DCIA Percent	13.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

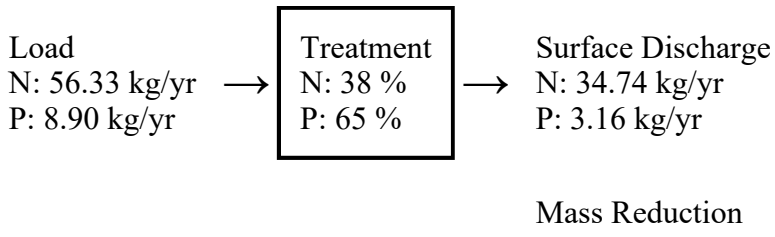
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

Groundwater Discharge (Stand-Alone)

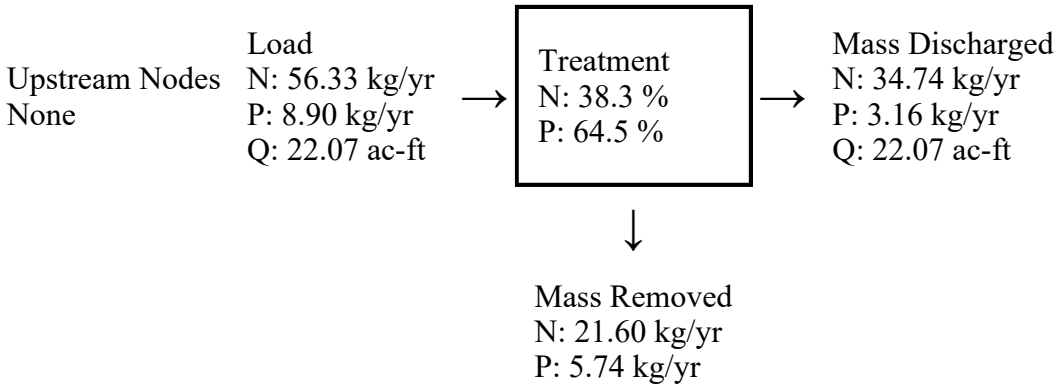
Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



↓ N: 21.60 kg/yr
P: 5.74 kg/yr

Load Diagram for Wet Detention (As Used In Routing)



Catchment Number: 6 Name: Pond 6

Project: Cocoa Lakes - Wet Ponds (412401)
Date: 7/10/2022

Wet Detention Design

Permanent Pool Volume (ac-ft)	2.968
Permanent Pool Volume (ac-ft) for 31 days residence	2.968
Annual Residence Time (days)	31
Littoral Zone Efficiency Credit	
Wetland Efficiency Credit	

Watershed Characteristics

Catchment Area (acres)	87.10
Contributing Area (acres)	46.300
Non-DCIA Curve Number	70.00
DCIA Percent	16.00
Rainfall Zone	Florida Zone 2
Rainfall (in)	51.00

Surface Water Discharge

Required TN Treatment Efficiency (%)	
Provided TN Treatment Efficiency (%)	38
Required TP Treatment Efficiency (%)	
Provided TP Treatment Efficiency (%)	65

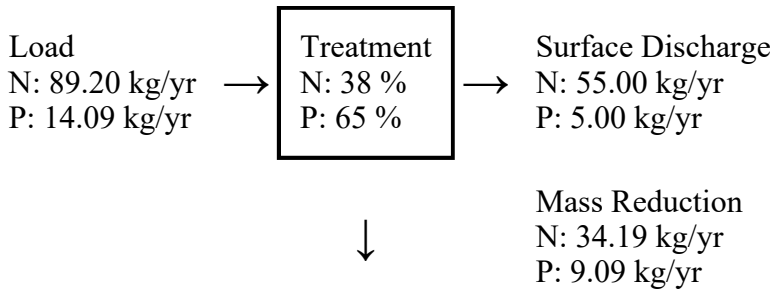
Media Mix Information

Type of Media Mix	Not Specified
Media N Reduction (%)	
Media P Reduction (%)	

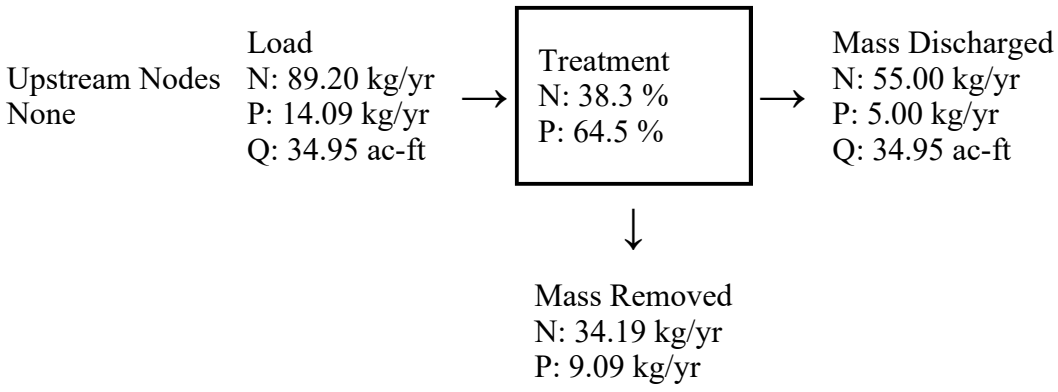
Groundwater Discharge (Stand-Alone)

Treatment Rate (MG/yr)	0.000
TN Mass Load (kg/yr)	0.000
TN Concentration (mg/L)	0.000
TP Mass Load (kg/yr)	0.000
TP Concentration (mg/L)	0.000

Load Diagram for Wet Detention (stand-alone)



Load Diagram for Wet Detention (As Used In Routing)



Summary Treatment Report Version: 4.3.5

Project: Cocoa Lakes - Wet Ponds (412401)

Analysis Type: BMP Analysis
BMP Types:
Catchment 1 - (Pond 1) Wet Detention
Catchment 2 - (Pond 2) Wet Detention
Catchment 3 - (Pond 3) Wet Detention
Catchment 4 - (Pond 4) Wet Detention
Catchment 5 - (Pond 5) Wet Detention
Catchment 6 - (Pond 6) Wet Detention
Based on % removal values to the nearest percent

Date:7/10/2022

Routing Summary
Catchment 1 Routed to Outlet
Catchment 2 Routed to Outlet
Catchment 3 Routed to Outlet
Catchment 4 Routed to Outlet
Catchment 5 Routed to Outlet
Catchment 6 Routed to Outlet

Summary Report

Nitrogen

Surface Water Discharge		
Total N post load	260.98 kg/yr	
Percent N load reduction	38 %	
Provided N discharge load	160.94 kg/yr	354.86 lb/yr
Provided N load removed	100.04 kg/yr	220.6 lb/yr

Phosphorus

Surface Water Discharge		
Total P post load	41.227 kg/yr	
Percent P load reduction	65 %	
Provided P discharge load	14.626 kg/yr	32.25 lb/yr
Provided P load removed	26.601 kg/yr	58.656 lb/yr

Appendix C

ICPR Post Development Model

POND 1

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	57,301	0	0	0.00	1.315
	16.0	87,308	650,741	650,741	14.94	2.004
	19.0	114,384	302,538	953,279	21.88	2.626
	20.0	123,802	119,093	1,072,372	24.62	2.842
NWL	20.5	128,570	63,093	1,135,465	26.07	2.952
Weir	**20.80**	**131,454**	**39,004**	**1,174,468**	**26.96**	**3.018**
	21.0	133,377	26,483	1,200,951	27.57	3.062
	22.0	143,110	138,244	1,339,195	30.74	3.285
TOB	23.0	152,999	148,055	1,487,249	34.14	3.512

Mean Depth 8.8 *Must be between 2 and 8'

Permanent Pool

Description	Elev. (FT) (NAVD)	Depth (ft)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	13.5	57,301	262,013	1,135,465	26.07
Anoxic	**11.1**	**9.4**	**70,926**	**388,727**	**873,451**	**20.05**
	16.0	4.5	87,308	302,538	484,724	11.13
	19.0	1.5	114,384	119,093	182,186	4.18
	20.0	0.5	123,802	63,093	63,093	1.45
NWL	20.5	0.0	128,570	0	0	0.00

Anoxic Depth 9.4 ft
PPV at Anoxic Depth 20.05

Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	128,570	0	0	0.00
Weir	**20.8**	**131,454**	**39,004**	**39,004**	**0.90**
	21.0	133,377	26,483	65,487	1.50
	22.0	143,110	138,244	203,730	4.68
	23.0	152,999	148,055	351,785	8.08

Prov. Treatment Vol. 0.90 ac-ft

POND 2

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	218,318	0	0	0.00	5.012
	16.0	255,150	2,130,606	2,130,606	48.91	5.857
	19.0	288,536	815,529	2,946,135	67.63	6.624
	20.0	300,200	294,368	3,240,503	74.39	6.892
NWL	20.5	306,091	151,573	3,392,076	77.87	7.027
Weir	**20.80**	**309,649**	**92,361**	**3,484,437**	**79.99**	**7.109**
	21.0	312,021	62,167	3,546,604	81.42	7.163
	22.0	324,000	318,011	3,864,614	88.72	7.438
TOB	23.0	336,135	330,068	4,194,682	96.30	7.717

Mean Depth 11.1 *Must be between 2 and 8'

Permanent Pool

Description	Elev. (FT) (NAVD)	Depth (ft)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	13.5	218,318	887,533	3,655,738	83.92
Anoxic	**10.7**	**9.8**	**255,150**	**1,427,428**	**2,768,206**	**63.55**
	16.0	4.5	288,536	883,104	1,340,778	30.78
	19.0	1.5	300,200	303,146	457,674	10.51
	20.0	0.5	306,091	154,528	154,528	3.55
NWL	20.5	0.0	312,021	0	0	0.00

Anoxic Depth 9.8 ft
PPV at Anoxic Depth 63.55

Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	306,091	0	0	0.00
Weir	**20.8**	**309,649**	**92,361**	**92,361**	**2.12**
	21.0	312,021	62,167	154,528	3.55
	22.0	324,000	318,011	472,539	10.85
	23.0	336,135	330,068	802,606	18.43

Prov. Treatment Vol. 2.12 ac-ft

POND 3

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	42,214	0	0	0.00	0.969
	16.0	61,605	467,186	467,186	10.73	1.414
	19.0	80,628	213,350	680,535	15.62	1.851
	20.0	87,557	84,093	764,628	17.55	2.010
NWL	20.5	91,067	44,656	809,284	18.58	2.091
Weir	**20.80**	**93,197**	**27,640**	**836,923**	**19.21**	**2.140**
	21.0	94,617	18,781	855,705	19.64	2.172
	22.0	101,834	98,226	953,930	21.90	2.338
TOB	23.0	109,208	105,521	1,059,451	24.32	2.507

Mean Depth 8.9 *Must be between 2 and 8'

Permanent Pool

Description	Elev. (FT) (NAVD)	Depth (ft)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	13.5	42,214	209,990	950,361	21.82
Anoxic	**11.0**	**9.5**	**61,605**	**352,360**	**740,370**	**17.00**
	16.0	4.5	80,628	252,278	388,011	8.91
	19.0	1.5	87,557	89,312	135,733	3.12
	20.0	0.5	91,067	46,421	46,421	1.07
NWL	20.5	0.0	94,617	0	0	0.00

Anoxic Depth 9.5 ft
PPV at Anoxic Depth 17.00

Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	91,067	0	0	0.00
Weir	**20.8**	**93,197**	**27,640**	**27,640**	**0.63**
	21.0	94,617	18,781	46,421	1.07
	22.0	101,834	98,226	144,647	3.32
	23.0	109,208	105,521	250,168	5.74

Prov. Treatment Vol. 0.63 ac-ft

POND 4

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	48,679	0	0	0.00	1.118
	16.0	65,945	515,808	515,808	11.84	1.514
	19.0	82,314	222,389	738,197	16.95	1.890
	20.0	88,148	85,231	823,428	18.90	2.024
NWL	20.5	91,125	44,818	868,246	19.93	2.092
Weir	**20.80**	**92,934**	**27,609**	**895,855**	**20.57**	**2.133**
	21.0	94,140	18,707	914,562	21.00	2.161
	22.0	100,289	97,215	1,011,777	23.23	2.302
TOB	23.0	106,595	103,442	1,115,219	25.60	2.447

Mean Depth 9.5 *Must be between 2 and 8'

Permanent Pool

Description	Elev. (FT) (NAVD)	Depth (ft)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	13.5	48,679	222,154	868,246	19.93
Anoxic	**11.2**	**9.3**	**56,763**	**293,654**	**646,092**	**14.83**
	16.0	4.5	65,945	222,389	352,438	8.09
	19.0	1.5	82,314	85,231	130,049	2.99
	20.0	0.5	88,148	44,818	44,818	1.03
NWL	20.5	0.0	91,125	0	0	0.00

Anoxic Depth 9.3 ft
PPV at Anoxic Depth 14.83

Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	91,125	0	0	0.00
Weir	**20.8**	**92,934**	**27,609**	**27,609**	**0.63**
	21.0	94,140	18,707	46,316	1.06
	22.0	100,289	97,215	143,531	3.30
	23.0	106,595	103,442	246,973	5.67

Prov. Treatment Vol. 0.63 ac-ft

POND 5

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	561,244	0	0	0.00	12.884
	16.0	617,718	5,305,329	5,305,329	121.79	14.181
	19.0	666,776	1,926,741	7,232,070	166.03	15.307
	20.0	683,462	675,119	7,907,189	181.52	15.690
NWL	20.5	691,865	343,832	8,251,021	189.42	15.883
Weir	**20.80**	**696,930**	**208,319**	**8,459,340**	**194.20**	**15.999**
	21.0	700,307	139,724	8,599,064	197.41	16.077
	22.0	717,308	708,808	9,307,871	213.68	16.467
TOB	23.0	734,466	725,887	10,033,758	230.34	16.861

Mean Depth 11.9 *Must be between 2 and 8'

Permanent Pool

Description	Elev. (FT) (NAVD)	Depth (ft)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	13.5	561,244	2,134,529	8,251,021	189.42
Anoxic	**10.7**	**9.8**	**584,622**	**3,170,800**	**6,116,492**	**140.42**
	16.0	4.5	617,718	1,926,741	2,945,692	67.62
	19.0	1.5	666,776	675,119	1,018,951	23.39
	20.0	0.5	683,462	343,832	343,832	7.89
NWL	20.5	0.0	691,865	0	0	0.00

Anoxic Depth 9.8 ft
PPV at Anoxic Depth 140.42

Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	691,865	0	0	0.00
Weir	**20.8**	**696,930**	**208,319**	**208,319**	**4.78**
	21.0	700,307	139,724	348,043	7.99
	22.0	717,308	708,808	1,056,851	24.26
	23.0	734,466	725,887	1,782,738	40.93

Prov. Treatment Vol. 4.78 ac-ft

POND 6

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	1,567,355	0	0	0.00	35.982
	16.0	1,659,170	14,519,363	14,519,363	333.32	38.089
	19.0	1,737,577	5,095,121	19,614,483	450.29	39.889
	20.0	1,764,061	1,750,819	21,365,302	490.48	40.497
NWL	20.5	1,777,362	885,356	22,250,658	510.80	40.803
Weir	**20.80**	**1,785,486**	**534,427**	**22,785,085**	**523.07**	**40.989**
	21.0	1,790,902	357,639	23,142,724	531.28	41.113
	22.0	1,817,500	1,804,201	24,946,925	572.70	41.724
TOB	23.0	1,844,455	1,830,978	26,777,902	614.74	42.343

Mean Depth 12.5 *Must be between 2 and 8'

Permanent Pool

Description	Elev. (FT) (NAVD)	Depth (ft)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	13.5	1,567,355	5,469,508	22,250,658	510.80
Anoxic	**10.5**	**10.0**	**1,602,560**	**9,049,855**	**16,781,150**	**385.24**
	16.0	4.5	1,659,170	5,095,121	7,731,295	177.49
	19.0	1.5	1,737,577	1,750,819	2,636,175	60.52
	20.0	0.5	1,764,061	885,356	885,356	20.32
NWL	20.5	0.0	1,777,362	0	0	0.00

Anoxic Depth 10.0 ft
PPV at Anoxic Depth 385.24

Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	1,777,362	0	0	0.00
Weir	**20.8**	**1,785,486**	**534,427**	**534,427**	**12.27**
	21.0	1,790,902	357,639	892,066	20.48
	22.0	1,817,500	1,804,201	2,696,267	61.90
	23.0	1,844,455	1,830,978	4,527,245	103.93

Prov. Treatment Vol. 12.27 ac-ft

PONDS 1-6

Description	Elev. (FT) (NAVD)	Pond 1 Area (SF)	Pond 2 Area (SF)	Pond 3 Area (SF)	Pond 4 Area (SF)	Pond 5 Area (SF)	Pond 6 Area (SF)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	7.0	57,301	218,318	42,214	48,679	561,244	1,567,355	2,495,111	0	0	0.00	57.280
	16.0	87,308	255,150	61,605	65,945	617,718	1,659,170	2,746,896	23,589,032	23,589,032	541.53	63.060
	19.0	114,384	288,536	80,628	82,314	666,776	1,737,577	2,970,215	8,575,667	32,164,698	738.40	68.187
	20.0	123,802	300,200	87,557	88,148	683,462	1,764,061	3,047,230	3,008,723	35,173,421	807.47	69.955
NWL	20.5	128,570	306,091	91,067	91,125	691,865	1,777,362	3,086,080	1,533,328	36,706,748	842.67	70.847
Weir	**20.80**	**131,454**	**309,649**	**93,197**	**92,934**	**696,930**	**1,785,486**	**3,109,650**	**929,360**	**37,636,108**	**864.01**	**71.388**
	21.0	133,377	312,021	94,617	94,140	700,307	1,790,902	3,125,364	623,501	38,259,609	878.32	71.748
	22.0	143,110	324,000	101,834	100,289	717,308	1,817,500	3,204,041	3,164,703	41,424,312	950.97	73.555
TOB	23.0	152,999	336,135	109,208	106,595	734,466	1,844,455	3,283,858	3,243,950	44,668,261	1,025.44	75.387

Mean Depth 11.9 *Must be between 2 and 8'

Description	Elev. (FT) (NAVD)	Pond 1 Area (AC)	Pond 2 Area (AC)	Pond 3 Area (AC)	Pond 4 Area (AC)	Pond 5 Area (AC)	Pond 6 Area (AC)
Bottom	7.0	1.32	5.01	0.97	1.12	12.88	35.98
	16.0	2.00	5.86	1.41	1.51	14.18	38.09
	19.0	2.63	6.62	1.85	1.89	15.31	39.89
	20.0	2.84	6.89	2.01	2.02	15.69	40.50
NWL	20.5	2.95	7.03	2.09	2.09	15.88	40.80
Weir	**20.8**	**3.02**	**7.11**	**2.14**	**2.13**	**16.00**	**40.99**
	21.0	3.06	7.16	2.17	2.16	16.08	41.11
	22.0	3.29	7.44	2.34	2.30	16.47	41.72
TOB	23.0	3.51	7.72	2.51	2.45	16.86	42.34

PONDS 1-6
Permanent Pool

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
Bottom	7.0	2,495,111	0	0	0.00
	16.0	2,746,896	23,589,032	23,589,032	541.53
	19.0	2,970,215	8,575,667	32,164,698	738.40
	20.0	3,047,230	3,008,723	35,173,421	807.47
NWL	20.5	3,086,080	1,533,328	36,706,748	842.67

PONDS 1-6
Treatment Volume

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)
NWL	20.5	3,086,080	0	0	0.00
Weir	**20.8**	**3,109,650**	**929,360**	**929,360**	**21.34**
	21.0	3,125,364	623,501	1,552,861	35.65
	22.0	3,204,041	3,164,703	4,717,564	108.30
TOB	23.0	3,283,858	3,243,950	7,961,513	182.77

Prov. Treatment Vol. 21.34 ac-ft

WETLAND Contours

Description	Elev. (FT) (NAVD)	Area (SF)	Vol. (CF)	Accum. Vol. (CF)	Accum. Vol. (ac-ft)	Area (ac)
Bottom	20.0	340,201	0	0	0.00	7.810
	21.0	983,898	662,050	662,050	15.20	22.587
TOB	25.0	1,349,209	4,666,214	5,328,264	122.32	**30.974**

Post-Development Basins

Lakes at Cocoa Grove

BMEG No: 412401
7/13/2022

				Width	Width		House Area		Area			Pervious (Open Space, Good Condition, HSG-A / HSG-D)	CN			
				28	**5**		**4,200**		**514**				**57**			
	Post-Dev Sub-Basins			Ft.	Ft.		Sq. Ft.		Sq. Ft.				Impervious	**98**		
Pond	**Post-Dev Sub-Basin**	**Basin Areas**		**Road Length (LF)**	**Road & C&G DCIA**	**Side-Walk Non-DCIA**	**# of Houses**	**House Imp. Non-DCIA**	**# of Drives**	**Conc. Drive DCIA**	**Other Imp. Non-DCIA**	**Imp. Area DCIA**	**Imp. Area Non-DCIA**	**Pervious Area**	**Wet Pond at NWL**	**Non-DCIA CN**	**%DCIA**
		(SF)	**(AC)**														
POND 2	S01	74,161	1.70	550	7,700	2,750	5.00	21,000	5.0	2,570		10,270	23,750	40,141		72	14%
POND 2	S02	12,816	0.29	550	7,700	2,750	0.00	0	0.0	0		7,700	2,750	2,366		79	60%
POND 2	S03	17,670	0.41	0	0	0	0.00	0	0.0	0		0	0	17,670		57	0%
POND 2	S04	31,864	0.73	337	4,718	1,685	2.00	8,400	2.0	1,028		5,746	10,085	16,033		73	18%
POND 2	S05	17,436	0.40	337	4,718	1,685	1.00	4,200	2.0	1,028		5,746	5,885	5,805		78	33%
POND 2	S06	11,248	0.26	0	0	0	0.00	0	0.0	0		0	0	11,248		57	0%
POND 2	S07	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 2	S08	73,970	1.70	438	6,132	2,190	6.00	25,200	6.0	3,084		9,216	27,390	37,364		75	12%
POND 2	S09	37,196	0.85	438	6,132	2,190	2.75	11,550	6.0	3,084		9,216	13,740	14,240		77	25%
POND 2	S10	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 2	S11	29,400	0.67	431	6,034	2,155	1.75	7,350	2.0	1,028		7,062	9,505	12,833		75	24%
POND 2	S12	28,376	0.65	281	3,934	1,405	2.50	10,500	2.0	1,028		4,962	11,905	11,509		78	17%
POND 2	S13	5	0.00	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 2	S14	75,439	1.73	597	8,358	2,985	4.50	18,900	5.0	2,570		10,928	21,885	42,626		71	14%
POND 2	S15	46,877	1.08	447	6,258	2,235	3.00	12,600	3.0	1,542		7,800	14,835	24,242		73	17%
POND 2	S16	34,914	0.80	0	0	0	0.00	0	0.0	0		0	0	34,914		57	0%
POND 2	S17	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 1	S18	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 1	S19	89,717	2.06	540	7,560	2,700	6.50	27,300	7.0	3,598		11,158	30,000	48,559		73	12%
POND 1	S20	51,190	1.18	540	7,560	2,700	3.50	14,700	6.0	3,084		10,644	17,400	23,146		75	21%
POND 1	S21	110,030	2.53	491	6,874	2,455	7.50	31,500	7.0	3,598		10,472	33,955	65,603		71	10%
POND 1	S22	33,309	0.76	491	6,874	2,455	2.50	10,500	5.0	2,570		9,444	12,955	10,910		79	28%
POND 1	S23	85,188	1.96	533	7,462	2,665	7.00	29,400	7.0	3,598		11,060	32,065	42,063		75	13%
POND 1	S24	44,381	1.02	533	7,462	2,665	3.50	14,700	6.0	3,084		10,546	17,365	16,470		78	24%
POND 2	S25	53,144	1.22	400	5,600	2,000	4.50	18,900	4.0	2,056		7,656	20,900	24,588		76	14%
POND 2	S26	31,927	0.73	400	5,600	2,000	2.50	10,500	4.0	2,056		7,656	12,500	11,771		78	24%
POND 1	S27	87,423	2.01	561	7,854	2,805	8.00	33,600	8.0	4,112		11,966	36,405	39,052		77	14%
POND 1	S28	31,560	0.72	416	5,824	2,080	2.50	10,500	5.0	2,570		8,394	12,580	10,586		79	27%
POND 1	S29	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 1	S30	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 1	S31	29,590	0.68	391	5,474	1,955	2.00	8,400	3.0	1,542		7,016	10,355	12,219		76	24%
POND 1	S32	56,640	1.30	536	7,504	2,680	5.00	21,000	5.0	2,570		10,074	23,680	22,886		78	18%
POND 1	S33	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 4	S34	60,972	1.40	421	5,894	2,105	5.00	21,000	5.0	2,570		8,464	23,105	29,403		75	14%
POND 4	S35	52,028	1.19	421	5,894	2,105	4.50	18,900	5.0	2,570		8,464	21,005	22,559		77	16%
POND 4	S36	61,498	1.41	482	6,748	2,410	5.50	23,100	6.0	3,084		9,832	25,510	26,156		77	16%
POND 4	S37	37,325	0.86	482	6,748	2,410	2.50	10,500	4.0	2,056		8,804	12,910	15,611		76	24%
POND 4	S38	25,109	0.58	272	3,808	1,360	0.00	0	0.0	0		3,808	1,360	19,941		60	15%
POND 4	S39	15,168	0.35	272	3,808	1,360	0.00	0	0.0	0		3,808	1,360	10,000		62	25%
POND 4	S40	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 4	S41	64,423	1.48	495	6,930	2,475	5.00	21,000	5.0	2,570		9,500	23,475	31,448		75	15%
POND 4	S42	26,834	0.62	414	5,796	2,070	1.50	6,300	1.0	514		6,310	8,370	12,154		74	24%
POND 4	S43	20,730	0.48	330	4,620	1,650	1.50	6,300	2.0	1,028		5,648	7,950	7,132		79	27%
POND 4	S44	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 4	S45	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 2	S46	41,896	0.96	441	6,174	2,205	3.00	12,600	6.0	3,084		9,258	14,805	17,833		76	22%

Post-Development Basins

Lakes at Cocoa Grove

BMEG No: 412401
7/13/2022

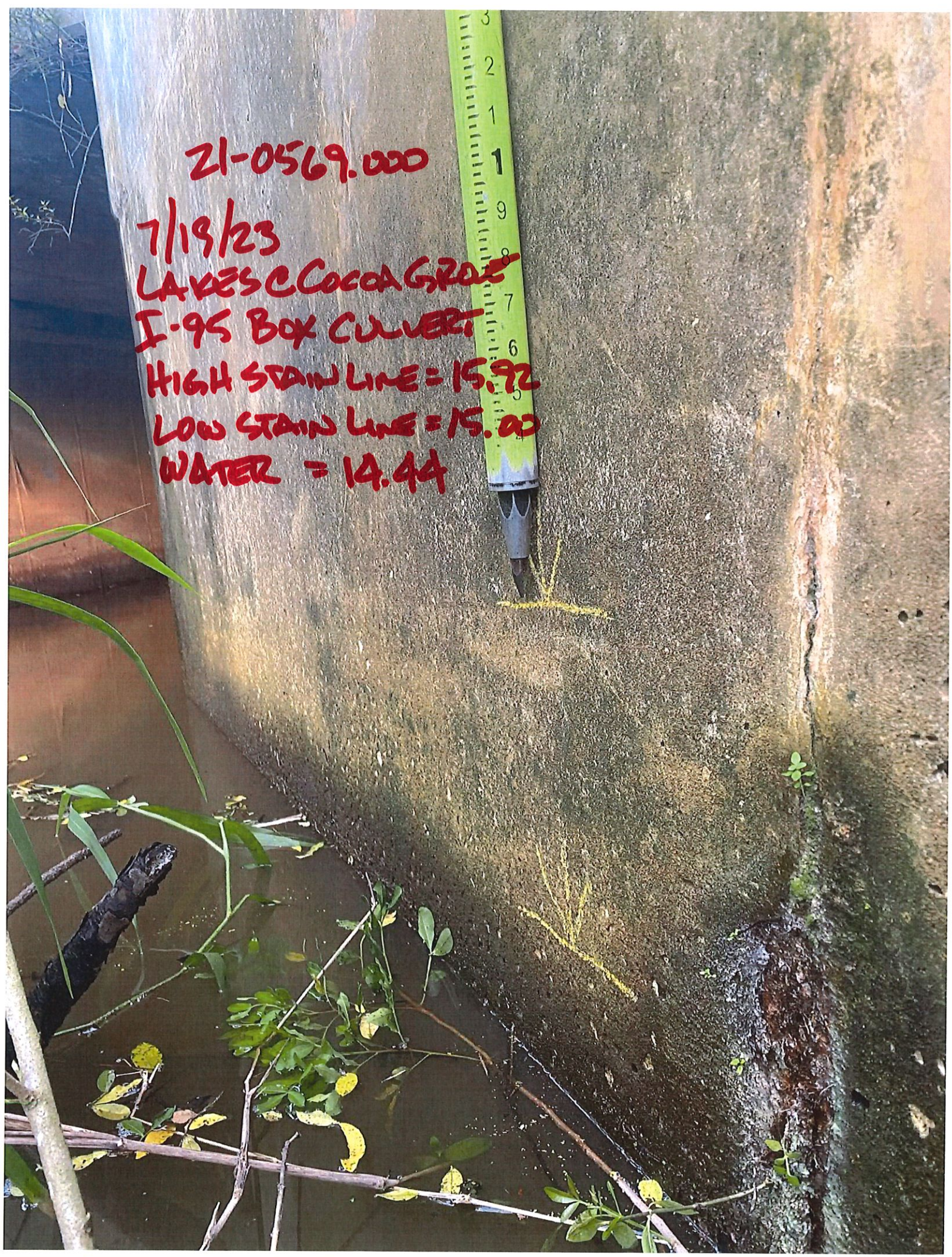
					Width	Width		House Area		Area				Pervious (Open Space, Good Condition, HSG-A / HSG-D)	CN	
					28	**5**		**4,200**		**514**					**57**	
	Post-Dev Sub-Basins				Ft.	Ft.		Sq. Ft.		Sq. Ft.				Impervious	**98**	
Pond	**Post-Dev Sub-Basin**	**Basin Areas**		**Road Length (LF)**	**Road & C&G DCIA**	**Side-Walk Non-DCIA**	**# of Houses**	**House Imp. Non-DCIA**	**# of Drives**	**Conc. Drive DCIA**	**Other Imp. Non-DCIA**	**Imp. Area DCIA**	**Imp. Area Non-DCIA**	**Pervious Area**	**Wet Pond at NWL**	**Non-DCIA CN**	**%DCIA**
		(SF)	**(AC)**														
POND 3	S47	41,896	0.96	441	6,174	2,205	3.00	12,600	6.0	3,084		9,258	14,805	17,833		76	22%
POND 3	S48	82,158	1.89	567	7,938	2,835	7.50	31,500	8.0	4,112		12,050	34,335	35,773		77	15%
POND 3	S49	44,550	1.02	567	7,938	2,835	3.50	14,700	6.0	3,084		11,022	17,535	15,993		79	25%
POND 5	S50	57,852	1.33	445	6,230	2,225	5.00	21,000	6.0	3,084		9,314	23,225	25,313		77	16%
POND 5	S51	63,128	1.45	445	6,230	2,225	5.50	23,100	6.0	3,084		9,314	25,325	28,489		76	15%
POND 5	S52	61,580	1.41	486	6,804	2,430	5.50	23,100	6.0	3,084		9,888	25,530	26,162		77	16%
POND 5	S53	35,090	0.81	475	6,650	2,375	2.50	10,500	2.0	1,028		7,678	12,875	14,537		76	22%
POND 5	S54	21,040	0.48	290	4,060	1,450	1.50	6,300	3.0	1,542		5,602	7,750	7,688		78	27%
POND 5	S55	20,995	0.48	300	4,200	1,500	1.00	4,200	1.0	514		4,714	5,700	10,581		72	22%
POND 5	S56	42,950	0.99	350	4,900	1,750	3.50	14,700	4.0	2,056		6,956	16,450	19,544		76	16%
POND 5	S57	19,882	0.46	350	4,900	1,750	1.00	4,200	0.0	0		4,900	5,950	9,032		73	25%
POND 5	S58	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 5	S59	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 5	S60	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 5	S61	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 5	S62	71,340	1.64	567	7,938	2,835	6.00	25,200	5.0	2,570		10,508	28,035	32,797		76	15%
POND 5	S63	49,144	1.13	567	7,938	2,835	4.00	16,800	8.0	4,112		12,050	19,635	17,459		79	25%
POND 5	S64	92,865	2.13	648	9,072	3,240	8.00	33,600	8.0	4,112		13,184	36,840	42,841		76	14%
POND 5	S65	55,440	1.27	648	9,072	3,240	4.25	17,850	8.0	4,112		13,184	21,090	21,166		78	24%
POND 6	S66	85,805	1.97	600	8,400	3,000	8.00	33,600	8.0	4,112		12,512	36,600	36,693		78	15%
POND 6	S67	51,265	1.18	600	8,400	3,000	4.00	16,800	8.0	4,112		12,512	19,800	18,953		78	24%
POND 3	S68	5	0.00011		0	0		0		0		0	0	5		57	0%
POND 3	S69	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 3	S70	68,627	1.58	552	7,728	2,760	5.50	23,100	5.0	2,570		10,298	25,860	32,469		75	15%
POND 3	S71	37,468	0.86	552	7,728	2,760	0.50	2,100	1.0	514		8,242	4,860	24,366		64	22%
POND 5	S72	76,315	1.75	532	7,448	2,660	7.00	29,400	7.0	3,598		11,046	32,060	33,209		77	14%
POND 5	S73	21,315	0.49	532	7,448	2,660	0.00	0	0.0	0		7,448	2,660	11,207		65	35%
POND 5	S74	5	0.00011		0	0		0		0		0	0	5		57	0%
POND 5	S75	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 5	S76	60,643	1.39	692	9,688	3,460	3.00	12,600	3.0	1,542		11,230	16,060	33,353		71	19%
POND 5	S77	47,435	1.09	440	6,160	2,200	3.00	12,600	3.0	1,542		7,702	14,800	24,933		72	16%
POND 5	S78	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 5	S79	52,736	1.21	376	5,264	1,880	3.00	12,600	3.0	1,542		6,806	14,480	31,450		70	13%
POND 5	S80	47,614	1.09	627	8,778	3,135	2.75	11,550	6.0	3,084		11,862	14,685	21,067		74	25%
POND 4	S81	5	0.00011		0	0		0		0		0	0	5		57	0%
POND 5	S82	45,235	1.04	584	8,176	2,920	3.50	14,700	6.0	3,084		11,260	17,620	16,355		78	25%
POND 5	S83	49,618	1.14	584	8,176	2,920	4.00	16,800	8.0	4,112		12,288	19,720	17,610		79	25%
POND 4	S84	57,954	1.33	651	9,114	3,255	4.50	18,900	9.0	4,626	520	13,740	22,675	21,539		78	24%
POND 4	S85	46,506	1.07	651	9,114	3,255	3.50	14,700	7.0	3,598		12,712	17,955	15,839		79	27%
POND 4	S86	69,485	1.60	446	6,244	2,230	6.00	25,200	6.0	3,084		9,328	27,430	32,727		76	13%
POND 4	S87	34,223	0.79	446	6,244	2,230	2.50	10,500	4.0	2,056		8,300	12,730	13,193		77	24%
POND 6	S88	79,785	1.83	512	7,168	2,560	5.00	21,000	5.0	2,570		9,738	23,560	46,487		71	12%
POND 6	S89	39,832	0.91	512	7,168	2,560	2.25	9,450	3.0	1,542		8,710	12,010	19,112		73	22%
POND 6	S90	87,088	2.00	559	7,826	2,795	5.00	21,000	5.0	2,570		10,396	23,795	52,897		70	12%
POND 6	S91	47,484	1.09	559	7,826	2,795	2.50	10,500	6.0	3,084		10,910	13,295	23,279		72	23%
POND 6	S92	123,440	2.83	622	8,708	3,110	7.00	29,400	7.0	3,598		12,306	32,510	78,624		69	10%

Post-Development Basins

Lakes at Cocoa Grove

BMEG No: 412401
7/13/2022

					Width	Width		House Area		Area				Pervious (Open Space, Good Condition, HSG-A / HSG-D)	CN	
					28	**5**		**4,200**		**514**					**57**	
	Post-Dev Sub-Basins				Ft.	Ft.		Sq. Ft.		Sq. Ft.					Impervious	**98**
Pond	**Post-Dev Sub-Basin**	**Basin Areas**		**Road Length (LF)**	**Road & C&G DCIA**	**Side-Walk Non-DCIA**	**# of Houses**	**House Imp. Non-DCIA**	**# of Drives**	**Conc. Drive DCIA**	**Other Imp. Non-DCIA**	**Imp. Area DCIA**	**Imp. Area Non-DCIA**	**Pervious Area**	**Wet Pond at NWL**	**Non-DCIA CN**	**%DCIA**
		(SF)	**(AC)**														
POND 6	S93	47,054	1.08	622	8,708	3,110	2.75	11,550	4.0	2,056		10,764	14,660	21,630		74	23%
POND 6	S94	5	0.00011	0	0	0	0.00	0	0.0	0		0	0	5		57	0%
POND 6	S95	93,344	2.14	622	8,708	3,110	5.50	23,100	6.0	3,084		11,792	26,210	55,342		70	13%
POND 6	S96	52,824	1.21	622	8,708	3,110	2.75	11,550	5.0	2,570		11,278	14,660	26,886		72	21%
POND 6	S97	81,200	1.86	541	7,574	2,705	5.00	21,000	5.0	2,570		10,144	23,705	47,351		71	12%
POND 6	S98	45,968	1.06	541	7,574	2,705	2.50	10,500	6.0	3,084		10,658	13,205	22,105		73	23%
POND 6	S99	17,080	0.39	372	5,208	1,860		0		0		5,208	1,860	10,012		64	30%
POND 6	S100	18,812	0.43	336	4,704	1,680		0		0		4,704	1,680	12,428		62	25%
POND 6	S101	5	0.00		0	0		0		0		0	0	5		57	0%
POND 6	S102	62,009	1.42		0	0		0		0	2,984	0	2,984	59,025		59	0%
POND 6	S103	16,252	0.37		16,252	0		0		0		16,252	0	0		57	100%
POND 6	S104	17,434	0.40		17,434	0		0		0		17,434	0	0		57	100%
POND 6	S105	61,760	1.42			0		0		0	3,120	0	3,120	58,640		59	0%
POND 6	S106	17,868	0.41		17,868	0		0		0		17,868	0	0		57	100%
POND 6	S107	18,070	0.41		0	0		0		0		0	0	18,070		57	0%
POND 6	S108	5	0.00011		0	0		0		0		0	0	5		57	0%
POND 6	S109	16,568	0.38		0	0		0		0		16,568	0	0		57	100%
POND 6	S110	49,989	1.15		0	0		0		0	14,226	0	14,226	35,763		69	0%
POND 6	S111	20,777	0.48	479	6,706	2,395	1.00	4,200	1.0	514		7,220	6,595	6,962		77	35%
POND 6	S112	17,486	0.40	479	6,706	2,395	0.50	2,100	1.0	514		7,220	4,495	5,771		75	41%
POND 6	S113	14,608	0.34		0	0		0		0		14,608	0	0		57	100%
POND 6	S114	11,512	0.26		0	0		0		0		11,512	0	0		57	100%
POND 6	S115	17,455	0.40		0	0		0		0		17,455	0	0		57	100%
POND 6	S116	20,372	0.47		0	0		0		0		20,372	0	0		57	100%
POND 6	S117	40,528	0.93		0	0		0		0		0	0	40,528		57	0%
POND 6	S118	19,464	0.45	470	6,580	2,350	0.50	2,100	1.0	514		7,094	4,450	7,920		72	36%
POND 6	S119	16,092	0.37	470	6,580	2,350	0.25	1,050	0.0	0		6,580	3,400	6,112		72	41%
POND 6	S120	15,550	0.36		0	0		0		0		15,550	0	0		57	100%
POND 6	S121	9,761	0.22		0	0		0		0		9,761	0	0		57	100%
POND 6	S122	44,113	1.01		0	0		0		0	44,113	0	44,113	0		98	0%
POND 1	POND 1	279,792	6.42	0	0	0	12.00	50,400	0.0	0		0	50,400	100,822	128,570	71	0%
POND 2	POND 2	464,614	10.67	0	0	0	9.25	38,850	0.0	0		0	38,850	119,673	306,091	67	0%
POND 3	POND 3	187,695	4.31	0	0	0	5.75	24,150	0.0	0		0	24,150	72,478	91,067	67	0%
POND 4	POND 4	209,070	4.80	0	0	0	9.50	39,900	0.0	0		0	39,900	78,045	91,125	71	0%
POND 5	POND 5	998,794	22.93	0	0	0	17.00	71,400	0.0	0	4,728	0	76,128	230,801	691,865	67	0%
POND 6	POND 6	2,153,747	49.44	0	0	0	19.50	81,900	0.0	0	4,728	0	86,628	289,757	1,777,362	67	0%
POND 6	POND 6B	116,593	2.68	0	0	0	0.00	0	0.0	0	116,593	0	116,593	0		98	0%
POND 2	BS 1	292,992	6.73	0	0	0	0.00	0	0.0	0		0	0	292,992		57	0%
POND 5	BS 2	89,039	2.04	0	0	0	0.00	0	0.0	0		0	0	89,039		57	0%
POND 6	BS 3	144,339	3.31	0	0	0	0.00	0	0.0	0		0	0	144,339		57	0%
WETLAND	WETLAND	1,349,205	30.97	0	0	0	0.00	0	0.0	0		0	0	1,349,205		95	0%
	Total	10,741,182	246.6	19,299	591,912	192,985	350.0	1,470,000	350.0	179,900	191,012	877,638	1,853,997	4,923,467	3,086,080	73	8%
	Total (ac)	246.6			13.6	4.4		33.7		4.1	4.4	20.1	42.6	113.0	70.8		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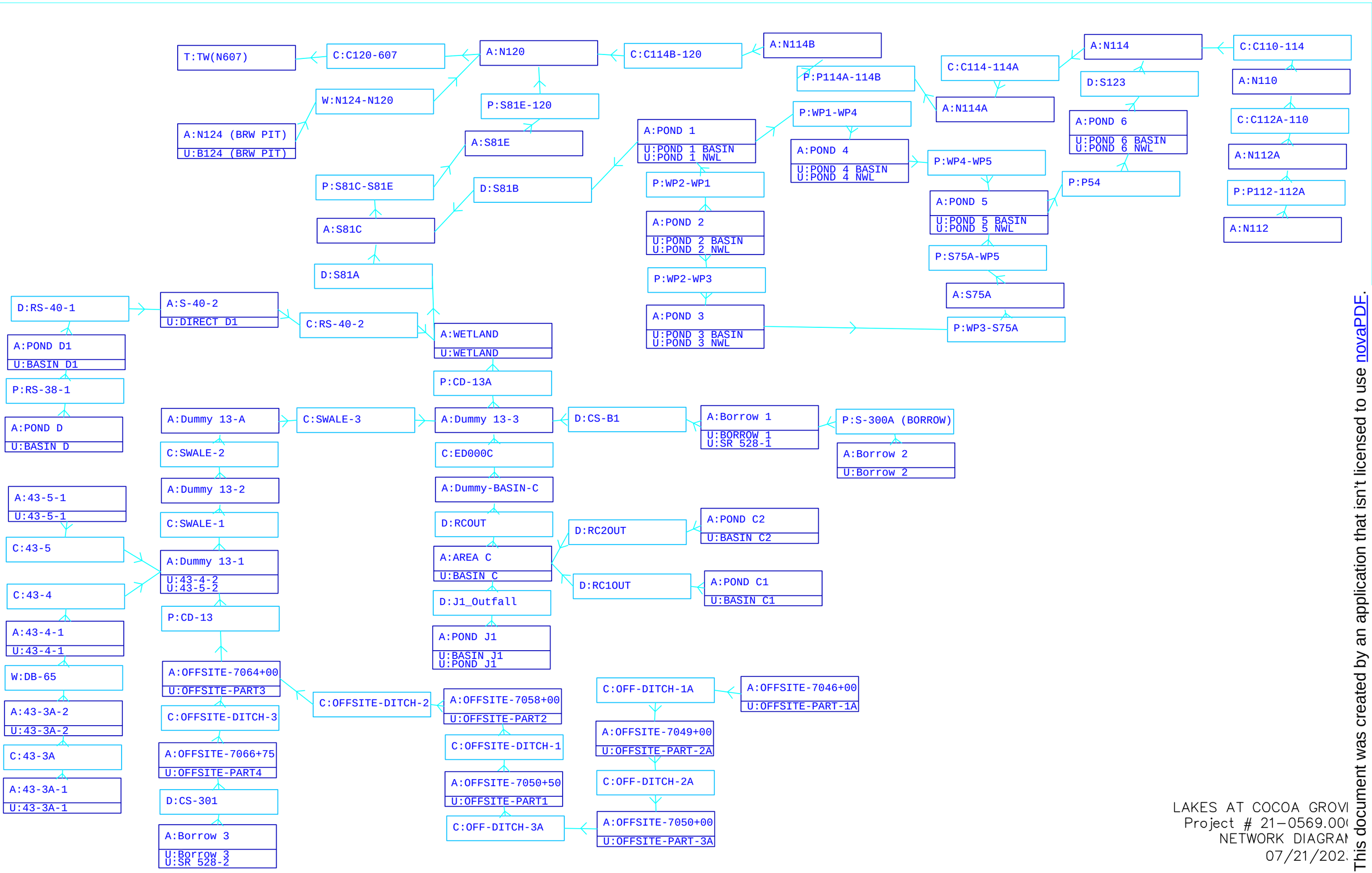
7/19/23
LAKES @ COCOA GROVE
I-95 BOX CULVERT
HIGH STAIN LINE = 15.92
LOW STAIN LINE = 15.00
WATER = 14.44



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LAKES AT COCOA GROVI
Project # 21-0569.00(
NETWORK DIAGRAI
07/21/202

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================================================================================
==== Basins ====================================================================
================================================================================

         Name: 43-3A-1                 Node: 43-3A-1               Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 10.00
              Area(ac): 0.850                  Time Shift(hrs): 0.00
          Curve Number: 64.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------
         Name: 43-3A-2                 Node: 43-3A-2               Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 29.94
              Area(ac): 0.850                  Time Shift(hrs): 0.00
          Curve Number: 64.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------
         Name: 43-4-1                  Node: 43-4-1                Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 10.00
              Area(ac): 1.450                  Time Shift(hrs): 0.00
          Curve Number: 67.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------
         Name: 43-4-2                  Node: Dummy 13-1            Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 70.70
              Area(ac): 1.450                  Time Shift(hrs): 0.00
          Curve Number: 67.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------
         Name: 43-5-1                  Node: 43-5-1                Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 10.00
              Area(ac): 0.110                  Time Shift(hrs): 0.00
          Curve Number: 70.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------
         Name: 43-5-2                  Node: Dummy 13-1            Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
```

Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 16.87
Area(ac): 0.110 Time Shift(hrs): 0.00
Curve Number: 70.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: B124 (BRW PIT) Node: N124 (BRW PIT) Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 7.940 Time Shift(hrs): 0.00
Curve Number: 98.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 100.00

Area per Cocoa Groves plans

Name: BASIN C Node: AREA C Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 3.950 Time Shift(hrs): 0.00
Curve Number: 94.49 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN C1 Node: POND C1 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 5.400 Time Shift(hrs): 0.00
Curve Number: 92.74 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN C2 Node: POND C2 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 11.78
Area(ac): 7.880 Time Shift(hrs): 0.00
Curve Number: 91.76 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: BASIN D Node: POND D Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 7.020 Time Shift(hrs): 0.00
Curve Number: 89.80 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.

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---------------------------------------------------------------------------------------------
         Name: BASIN D1                Node: POND D1                Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 4.100                 Time Shift(hrs): 0.00
          Curve Number: 76.60             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.

---------------------------------------------------------------------------------------------
         Name: BASIN J1                Node: POND J1                Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh484                  Peaking Factor: 484.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 1.750                 Time Shift(hrs): 0.00
          Curve Number: 98.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00



---------------------------------------------------------------------------------------------
         Name: BORROW 1                Node: Borrow 1               Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 78.70
              Area(ac): 17.600                Time Shift(hrs): 0.00
          Curve Number: 95.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00



---------------------------------------------------------------------------------------------
         Name: Borrow 2                Node: Borrow 2               Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 5.660                 Time Shift(hrs): 0.00
          Curve Number: 95.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00



---------------------------------------------------------------------------------------------
         Name: Borrow 3                Node: Borrow 3               Status: Onsite
        Group: WETLAND                 Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 7.870                 Time Shift(hrs): 0.00
          Curve Number: 93.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00



---------------------------------------------------------------------------------------------
         Name: DIRECT D1               Node: S-40-2                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 6.610                 Time Shift(hrs): 0.00
```

Curve Number: 69.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART-1A Node: OFFSITE-7046+00 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 1.880 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART-2A Node: OFFSITE-7049+00 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 2.660 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART-3A Node: OFFSITE-7050+00 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 1.150 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART1 Node: OFFSITE-7050+50 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 18.470 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART2 Node: OFFSITE-7058+00 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 30.730 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART3 Node: OFFSITE-7064+00 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 25.330 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART4 Node: OFFSITE-7066+75 Status: Onsite
Group: WETLAND Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 12.700 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: POND 1 BASIN Node: POND 1 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 17.700 Time Shift(hrs): 0.00
Curve Number: 74.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 13.00

Name: POND 1 NWL Node: POND 1 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 3.000 Time Shift(hrs): 0.00
Curve Number: 98.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 100.00

Name: POND 2 BASIN Node: POND 2 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Flmod Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 24.600 Time Shift(hrs): 0.00
Curve Number: 67.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 10.00

Name: POND 2 NWL Node: POND 2 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 Peaking Factor: 484.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 7.000 Time Shift(hrs): 0.00
Curve Number: 98.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 100.00

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---------------------------------------------------------------------------------------------------
        Name: POND 3 BASIN             Node: POND 3                Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh484                  Peaking Factor: 484.0
         Rainfall File: Flmod               Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
            Area(ac): 8.500                   Time Shift(hrs): 0.00
        Curve Number: 73.00               Max Allowable Q(cfs): 999999.000
             DCIA(%): 14.00



---------------------------------------------------------------------------------------------------
        Name: POND 3 NWL               Node: POND 3                Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh484                  Peaking Factor: 484.0
         Rainfall File:                    Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
            Area(ac): 2.100                   Time Shift(hrs): 0.00
        Curve Number: 98.00               Max Allowable Q(cfs): 999999.000
             DCIA(%): 100.00



---------------------------------------------------------------------------------------------------
        Name: POND 4 BASIN             Node: POND 4                Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh484                  Peaking Factor: 484.0
         Rainfall File: Flmod               Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
            Area(ac): 15.800                  Time Shift(hrs): 0.00
        Curve Number: 75.00               Max Allowable Q(cfs): 999999.000
             DCIA(%): 16.00



---------------------------------------------------------------------------------------------------
        Name: POND 4 NWL               Node: POND 4                Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh484                  Peaking Factor: 484.0
         Rainfall File:                    Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
            Area(ac): 2.100                   Time Shift(hrs): 0.00
        Curve Number: 98.00               Max Allowable Q(cfs): 999999.000
             DCIA(%): 100.00



---------------------------------------------------------------------------------------------------
        Name: POND 5 BASIN             Node: POND 5                Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh484                  Peaking Factor: 484.0
         Rainfall File: Flmod               Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
            Area(ac): 31.900                  Time Shift(hrs): 0.00
        Curve Number: 72.00               Max Allowable Q(cfs): 999999.000
             DCIA(%): 13.00



---------------------------------------------------------------------------------------------------
        Name: POND 5 NWL               Node: POND 5                Status: Onsite
       Group: BASE                     Type: SCS Unit Hydrograph CN

       Unit Hydrograph: Uh484                  Peaking Factor: 484.0
         Rainfall File:                    Storm Duration(hrs): 0.00
   Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
            Area(ac): 15.900                  Time Shift(hrs): 0.00
        Curve Number: 98.00               Max Allowable Q(cfs): 999999.000
```

DCIA(%): 100.00

Name: POND 6 BASIN | Node: POND 6 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 | Peaking Factor: 484.0
Rainfall File: Flmod | Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 10.00
Area(ac): 46.300 | Time Shift(hrs): 0.00
Curve Number: 70.00 | Max Allowable Q(cfs): 999999.000
DCIA(%): 16.00

Name: POND 6 NWL | Node: POND 6 | Status: Onsite
Group: BASE | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh484 | Peaking Factor: 484.0
Rainfall File: | Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 10.00
Area(ac): 40.800 | Time Shift(hrs): 0.00
Curve Number: 98.00 | Max Allowable Q(cfs): 999999.000
DCIA(%): 100.00

Name: POND J1 | Node: POND J1 | Status: Onsite
Group: WETLAND | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 | Peaking Factor: 323.0
Rainfall File: | Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 10.00
Area(ac): 4.210 | Time Shift(hrs): 0.00
Curve Number: 93.41 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: SR 528-1 | Node: Borrow 1 | Status: Onsite
Group: WETLAND | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 | Peaking Factor: 323.0
Rainfall File: | Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 10.00
Area(ac): 7.940 | Time Shift(hrs): 0.00
Curve Number: 98.00 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: SR 528-2 | Node: Borrow 3 | Status: Onsite
Group: WETLAND | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 | Peaking Factor: 323.0
Rainfall File: | Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 | Time of Conc(min): 10.00
Area(ac): 16.080 | Time Shift(hrs): 0.00
Curve Number: 98.00 | Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: WETLAND | Node: WETLAND | Status: Onsite
Group: WETLAND | Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 | Peaking Factor: 323.0

Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 30.00
Area(ac): 31.000 Time Shift(hrs): 0.00
Curve Number: 95.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Nodes

Name: 43-3A-1 Base Flow(cfs): 0.000 Init Stage(ft): 24.270
Group: WETLAND Warn Stage(ft): 25.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: 43-3A-2 Base Flow(cfs): 0.000 Init Stage(ft): 24.000
Group: WETLAND Warn Stage(ft): 24.800
Type: Stage/Area

Stage(ft)	Area(ac)

Name: 43-4-1 Base Flow(cfs): 0.000 Init Stage(ft): 24.500
Group: WETLAND Warn Stage(ft): 25.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: 43-5-1 Base Flow(cfs): 0.000 Init Stage(ft): 23.150
Group: WETLAND Warn Stage(ft): 24.200
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AREA C Base Flow(cfs): 0.000 Init Stage(ft): 21.800
Group: WETLAND Warn Stage(ft): 28.000
Type: Stage/Area

Stage(ft)	Area(ac)
20.450	0.0010
20.880	0.0010
21.380	0.0010
21.880	0.0900
22.380	0.4000
22.880	0.7000
23.380	1.1700
23.880	1.6800
24.380	2.1300
24.880	2.4100
25.380	2.5900
25.880	2.7200
26.380	2.8700
26.880	3.0300

27.380	3.2900
27.880	3.5200
28.380	3.5900
28.880	3.6200
29.380	3.6500
29.880	3.6700
30.380	3.6900
30.880	3.7100
31.380	3.7300
31.880	3.7400
32.380	3.7600
32.880	3.7800
33.380	3.7900
33.880	3.8100
34.380	3.8200
34.880	3.8400
35.380	3.8500
35.880	3.8600
36.380	3.8800
36.880	3.8900
37.380	3.9000
37.880	3.9200
38.380	3.9300
38.880	3.9400
39.380	3.9400
40.080	3.9500
50.080	3.9500

Name: Borrow 1 Base Flow(cfs): 0.000 Init Stage(ft): 22.900
Group: WETLAND Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)
22.900	15.4050
23.100	15.4900
24.500	16.0500
25.500	17.6000

Name: Borrow 2 Base Flow(cfs): 0.000 Init Stage(ft): 22.900
Group: WETLAND Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)
22.900	4.3680
23.100	4.4150
24.500	4.7460
25.500	5.6560

Name: Borrow 3 Base Flow(cfs): 0.000 Init Stage(ft): 22.400
Group: WETLAND Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)
22.400	5.6600
22.700	5.7700
24.500	6.4100
25.500	7.8700

Name: Dummy 13-1 Base Flow(cfs): 0.000 Init Stage(ft): 20.000
Group: WETLAND Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy 13-2 Base Flow(cfs): 0.000 Init Stage(ft): 19.940
Group: WETLAND Warn Stage(ft): 22.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy 13-3 Base Flow(cfs): 0.000 Init Stage(ft): 18.090
Group: WETLAND Warn Stage(ft): 21.090
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy 13-A Base Flow(cfs): 0.000 Init Stage(ft): 19.900
Group: WETLAND Warn Stage(ft): 22.900
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy-BASIN-C Base Flow(cfs): 0.000 Init Stage(ft): 19.550
Group: WETLAND Warn Stage(ft): 22.550
Type: Stage/Area

Stage(ft)	Area(ac)

Name: N110 Base Flow(cfs): 0.000 Init Stage(ft): 14.440
Group: OFFSITE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
13.500	0.0100
23.000	0.0100

Name: N112 Base Flow(cfs): 0.000 Init Stage(ft): 16.500
Group: OFFSITE Warn Stage(ft): 24.000
Type: Stage/Area

Stage(ft)	Area(ac)
16.000	0.0100
24.000	0.0100

Name: N112A Base Flow(cfs): 0.000 Init Stage(ft): 15.000
Group: OFFSITE Warn Stage(ft): 24.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.500	0.0100
24.000	0.0100

Name: N114 Base Flow(cfs): 0.000 Init Stage(ft): 14.440
Group: OFFSITE Warn Stage(ft): 21.300
Type: Stage/Area

Stage(ft)	Area(ac)
12.000	0.0100
21.300	0.0100

Name: N114A Base Flow(cfs): 0.000 Init Stage(ft): 14.440
Group: OFFSITE Warn Stage(ft): 19.500
Type: Stage/Area

Stage(ft)	Area(ac)
11.250	0.0100
19.500	0.0100

Name: N114B Base Flow(cfs): 0.000 Init Stage(ft): 14.440
Group: OFFSITE Warn Stage(ft): 21.800
Type: Stage/Area

Stage(ft)	Area(ac)
11.250	0.0100
21.800	0.0100

Name: N120 Base Flow(cfs): 0.000 Init Stage(ft): 14.440
Group: OFFSITE Warn Stage(ft): 20.500
Type: Stage/Area

Stage(ft)	Area(ac)
11.500	0.0100
20.500	0.0100

Name: N124 (BRW PIT) Base Flow(cfs): 0.000 Init Stage(ft): 20.200
Group: BASE Warn Stage(ft): 22.000
Type: Stage/Area

Updated NWL and contours per Cocoa Groves plans

Stage(ft)	Area(ac)
18.000	6.7000
19.000	6.8000
20.000	6.9000
21.000	7.0000
22.000	7.3100

Name: OFFSITE-7046+00 Base Flow(cfs): 0.000 Init Stage(ft): 23.060
Group: WETLAND Warn Stage(ft): 23.500

Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7049+00 Base Flow(cfs): 0.000 Init Stage(ft): 23.000
Group: WETLAND Warn Stage(ft): 23.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7050+00 Base Flow(cfs): 0.000 Init Stage(ft): 22.750
Group: WETLAND Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7050+50 Base Flow(cfs): 0.000 Init Stage(ft): 20.690
Group: WETLAND Warn Stage(ft): 23.340
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7058+00 Base Flow(cfs): 0.000 Init Stage(ft): 20.300
Group: WETLAND Warn Stage(ft): 24.230
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7064+00 Base Flow(cfs): 0.000 Init Stage(ft): 20.000
Group: WETLAND Warn Stage(ft): 23.160
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7066+75 Base Flow(cfs): 0.000 Init Stage(ft): 20.140
Group: WETLAND Warn Stage(ft): 22.420
Type: Stage/Area

Stage(ft)	Area(ac)

Name: POND 1 Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
7.000	1.3150
16.000	2.0040
19.000	2.6260
20.000	2.8420
20.500	2.9520
21.000	3.0620
22.000	3.2850
23.000	3.5120

Name: POND 2 Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
7.000	5.0120
16.000	5.8570
19.000	6.6240
20.000	6.8920
20.500	7.0270
21.000	7.1630
22.000	7.4380
23.000	7.7170

Name: POND 3 Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
7.000	0.9690
16.000	1.4140
19.000	1.8510
20.000	2.0100
20.500	2.0910
21.000	2.1720
22.000	2.3380
23.000	2.5070

Name: POND 4 Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
7.000	1.1180
16.000	1.5140
19.000	1.8900
20.000	2.0240
20.500	2.0920
21.000	2.1610
22.000	2.3020
23.000	2.4470

Name: POND 5 Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)

7.000	12.8840
16.000	14.1810
19.000	15.3070
20.000	15.6900
20.500	15.8830
21.000	16.0770
22.000	16.4670
23.000	16.8610

Name: POND 6 Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
7.000	35.9820
16.000	38.0890
19.000	39.8890
20.000	40.4970
20.500	40.8030
21.000	41.1130
22.000	41.7240
23.000	42.3430

Name: POND C1 Base Flow(cfs): 0.000 Init Stage(ft): 22.450
Group: WETLAND Warn Stage(ft): 25.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.450	0.1800
20.450	0.2900
22.450	0.3900
22.900	0.4100
23.350	0.4400
24.450	0.4900
24.940	0.5700
26.450	0.8000
26.950	1.2760
27.450	1.8490
27.950	2.3890
28.450	2.8700
28.950	3.0840
29.610	3.1530
39.610	3.1530

Name: POND C2 Base Flow(cfs): 0.000 Init Stage(ft): 22.450
Group: WETLAND Warn Stage(ft): 25.000
Type: Stage/Area

Stage(ft)	Area(ac)
14.450	0.9400
20.450	1.2200
22.450	1.5500
22.650	1.5700
22.850	1.5900
24.240	1.7300
24.450	1.7500
25.450	2.2900
26.030	2.6450
26.530	3.0110
27.030	3.1970
27.530	3.3130
28.030	3.4180

28.530	3.4920
29.030	3.5680
29.530	3.6380
30.030	3.7190
30.530	3.7950
31.030	3.8690
31.530	3.9360
32.030	4.0030
32.530	4.0650
33.030	4.1120
33.530	4.1810
34.030	4.2360
34.530	4.2870
35.030	4.3320
35.530	4.3790
36.030	4.4320
36.530	4.4770
37.030	4.5280
37.530	4.5690
38.030	4.6150
38.530	4.6640
39.030	4.7150
39.530	4.7600
40.030	4.8110
40.530	4.8650
41.030	4.9110
41.530	4.9630
42.030	5.0140
42.530	5.0670
43.030	5.1210
43.530	5.1650
44.030	5.1990
44.530	5.2360
45.030	5.2630
45.530	5.2970
46.030	5.3270
46.530	5.3470
47.030	5.3930
47.530	5.4250
48.030	5.4630
48.530	5.5000
49.030	5.5440
49.530	5.5900
50.030	5.6440
50.530	5.6930
51.030	5.7290
51.530	5.7590
51.910	5.7660
61.910	5.7660

Name: POND D Base Flow(cfs): 0.000 Init Stage(ft): 21.960
Group: BASE Warn Stage(ft): 35.000
Type: Stage/Area

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Area(ac)
21.960	2.0800
23.960	2.3100
24.960	2.9300

Name: POND D1 Base Flow(cfs): 0.000 Init Stage(ft): 21.960
Group: BASE Warn Stage(ft): 25.000
Type: Stage/Area

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Area(ac)
21.960	0.7500
23.960	0.8900
24.460	1.2900

Name: POND J1 Base Flow(cfs): 0.000 Init Stage(ft): 22.300
Group: WETLAND Warn Stage(ft): 25.000
Type: Stage/Area

Stage(ft)	Area(ac)
22.300	1.8600
22.500	1.8800
24.000	2.0500
25.000	2.6600
28.000	2.6600

Name: S-40-2 Base Flow(cfs): 0.000 Init Stage(ft): 21.460
Group: BASE Warn Stage(ft): 24.660
Type: Stage/Area

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD

Stage(ft)	Area(ac)
21.460	0.0100
24.660	0.0100

Name: S75A Base Flow(cfs): 0.000 Init Stage(ft): 20.800
Group: BASE Warn Stage(ft): 24.800
Type: Stage/Area

Stage(ft)	Area(ac)
13.000	0.0005
24.800	0.0005

Name: S81C Base Flow(cfs): 0.000 Init Stage(ft): 16.140
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
16.140	0.0005
23.000	0.0005

Name: S81E Base Flow(cfs): 0.000 Init Stage(ft): 15.410
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
12.600	0.0005
23.000	0.0005

Name: TW(N607) Base Flow(cfs): 0.000 Init Stage(ft): 14.440
Group: BASE Warn Stage(ft): 99.000

Type: Time/Stage

Recordings taken 7/19/23:
Water Elevation: 14.44
Low Stain Line: 15.00
High Stain Line: 15.92
Boundary Stages Used for various storms

Time(hrs)	Stage(ft)
101.00	14.440
102.00	14.440

Name: WETLAND Base Flow(cfs): 0.000 Init Stage(ft): 21.150
Group: WETLAND Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)
20.000	7.8100
21.000	22.5870
25.000	30.9740

Cross Sections

Name: X110-US Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	24.360	0.042000
8.800	16.460	0.042000
15.800	13.630	0.042000
24.700	15.830	0.042000
37.100	24.490	0.042000

Name: X114 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	22.410	0.042000
12.600	15.990	0.042000
23.700	12.200	0.042000
33.100	15.470	0.042000
44.100	21.500	0.042000

Name: X114A-B Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	19.440	0.042000
5.600	15.290	0.042000
18.100	11.760	0.042000
31.500	14.190	0.042000
46.100	21.680	0.042000

Name: X120 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	21.690	0.042000
10.400	15.010	0.042000
20.100	11.790	0.042000
33.800	14.600	0.042000
45.300	20.500	0.042000

Name: X607 Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	22.030	0.042000
20.400	13.700	0.042000
31.300	12.430	0.042000
41.500	14.040	0.042000
59.700	22.470	0.042000

Pipes

Name: CD-13 From Node: OFFSITE-7064+00 Length(ft): 61.00
Group: WETLAND To Node: Dummy 13-1 Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	36.00	36.00	Flow:	Both
Rise(in):	36.00	36.00	Entrance Loss Coef:	0.50
Invert(ft):	20.000	20.000	Exit Loss Coef:	1.00
Manning's N:	0.013000	0.012000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: CD-13A From Node: Dummy 13-3 Length(ft): 591.00
Group: WETLAND To Node: WETLAND Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	42.00	42.00	Flow:	Both
Rise(in):	42.00	42.00	Entrance Loss Coef:	0.50
Invert(ft):	18.090	17.700	Exit Loss Coef:	1.00
Manning's N:	0.012000	0.012000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

per HNTB report, CD-13A is 317lf 42". US = 18.09, DS = 17.89

Add 274lf (P83A-P83C) to extend into wetland for total of 591lf. New DS = 17.7

Name:	P112-112A	From Node:	N112	Length(ft):	24.00
Group:	OFFSITE	To Node:	N112A	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	60.00	60.00		Entrance Loss Coef:	0.50
Rise(in):	60.00	60.00		Exit Loss Coef:	1.00
Invert(ft):	16.560	16.600		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Existing 60" CMP used for east entrance to site

Name:	P114A-114B	From Node:	N114A	Length(ft):	108.00
Group:	BASE	To Node:	N114B	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Rectangular	Rectangular		Flow:	Both
Span(in):	120.00	120.00		Entrance Loss Coef:	0.50
Rise(in):	120.00	120.00		Exit Loss Coef:	1.00
Invert(ft):	11.500	11.500		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Box Culvert No. 1

Name:	P54	From Node:	POND 5	Length(ft):	115.00
Group:	BASE	To Node:	POND 6	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	48.00	48.00		Entrance Loss Coef:	0.50
Rise(in):	48.00	48.00		Exit Loss Coef:	1.00
Invert(ft):	15.600	15.600		Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Name:	RS-38-1	From Node:	POND D	Length(ft):	199.00

Group: BASE To Node: POND D1 Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	24.00	24.00	Flow:	Both
Rise(in):	24.00	24.00	Entrance Loss Coef:	0.50
Invert(ft):	19.350	19.290	Exit Loss Coef:	1.00
Manning's N:	0.013000	0.013000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Name: S-300A (BORROW) From Node: Borrow 2 Length(ft): 231.00
Group: WETLAND To Node: Borrow 1 Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	36.00	36.00	Flow:	Both
Rise(in):	36.00	36.00	Entrance Loss Coef:	0.50
Invert(ft):	10.000	10.000	Exit Loss Coef:	1.00
Manning's N:	0.012000	0.012000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: S75A-WP5 From Node: S75A Length(ft): 830.00
Group: BASE To Node: POND 5 Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	36.00	36.00	Flow:	Both
Rise(in):	36.00	36.00	Entrance Loss Coef:	0.50
Invert(ft):	15.000	15.000	Exit Loss Coef:	1.00
Manning's N:	0.013000	0.013000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Pipes 78B, 80, 81, 82, 84-86

Name: S81C-S81E From Node: S81C Length(ft): 41.00
Group: BASE To Node: S81E Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM	
Solution Algorithm:	Most Restrictive		

Geometry:	Circular	Circular	Flow:	Both
Span(in):	48.00	48.00	Entrance Loss Coef:	0.50
Rise(in):	48.00	48.00	Exit Loss Coef:	1.00
Invert(ft):	16.140	13.870	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

P79C - P79D

Name:	S81E-120	From Node: S81E	Length(ft):	491.00
Group:	BASE	To Node: N120	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Horz Ellipse	Horz Ellipse	Flow:	Both
Span(in):	60.00	60.00	Entrance Loss Coef:	0.50
Rise(in):	38.00	38.00	Exit Loss Coef:	1.00
Invert(ft):	12.600	12.000	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

P79E - P79I

Name:	WP1-WP4	From Node: POND 1	Length(ft):	1074.00
Group:	BASE	To Node: POND 4	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	36.00	36.00	Entrance Loss Coef:	0.50
Rise(in):	36.00	36.00	Exit Loss Coef:	1.00
Invert(ft):	17.000	17.000	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Pipes 30-39, 47, 48

Name:	WP2-WP1	From Node: POND 2	Length(ft):	1265.00
Group:	BASE	To Node: POND 1	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	36.00	36.00	Entrance Loss Coef:	0.50
Rise(in):	36.00	36.00	Exit Loss Coef:	1.00
Invert(ft):	16.500	16.500	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw

Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Pipes 10-13, 16-21

Name:	WP2-WP3	From Node: POND 2	Length(ft):	361.00
Group:	BASE	To Node: POND 3	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	36.00	36.00	Entrance Loss Coef:	0.50
Rise(in):	36.00	36.00	Exit Loss Coef:	1.00
Invert(ft):	16.500	16.500	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Pipes 49-51

Name:	WP3-S75A	From Node: POND 3	Length(ft):	1081.00
Group:	BASE	To Node: S75A	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	36.00	36.00	Entrance Loss Coef:	0.50
Rise(in):	36.00	36.00	Exit Loss Coef:	1.00
Invert(ft):	13.000	13.000	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Pipes 73, 74, 76A, 76B, 78A

Name:	WP4-WP5	From Node: POND 4	Length(ft):	417.00
Group:	BASE	To Node: POND 5	Count:	1
			Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM	Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	48.00	48.00	Entrance Loss Coef:	0.50
Rise(in):	48.00	48.00	Exit Loss Coef:	1.00
Invert(ft):	14.000	14.000	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Pipes 87-89

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==== Channels ==========
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Name:	43-3A	From Node:	43-3A-1	Length(ft):	543.00
Group:	WETLAND	To Node:	43-3A-2	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	24.270	24.000	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	10.000	10.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name:	43-4	From Node:	43-4-1	Length(ft):	1743.00
Group:	WETLAND	To Node:	Dummy 13-1	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	24.500	23.150	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	10.000	10.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name:	43-5	From Node:	43-5-1	Length(ft):	196.00
Group:	WETLAND	To Node:	Dummy 13-1	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	23.150	23.050	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None

Aux XSec2:		
Top Width(ft):		
Depth(ft):		
Bot Width(ft):	10.000	10.000
LtSdSlp(h/v):	2.00	2.00
RtSdSlp(h/v):	2.00	2.00

Name:	C110-114	From Node:	N110	Length(ft): 1345.00
Group:	OFFSITE	To Node:	N114	Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Irregular	Irregular	Friction Equation:	Automatic
Invert(ft):	13.630	12.200	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:			Contraction Coef:	0.100
Top Clip(ft):			Expansion Coef:	0.300
Bot Clip(ft):			Entrance Loss Coef:	0.000
Main XSec:	X110-US	X114	Exit Loss Coef:	0.000
AuxElev1(ft):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):	0.000	0.000	Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):				
LtSdSlp(h/v):				
RtSdSlp(h/v):				

Name:	C112A-110	From Node:	N112A	Length(ft): 2345.00
Group:	OFFSITE	To Node:	N110	Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	14.810	14.260	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.042000	0.042000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	0.000	15.000		
LtSdSlp(h/v):	2.40	0.70		
RtSdSlp(h/v):	1.90	2.40		

Name:	C114-114A	From Node:	N114	Length(ft): 1210.00
Group:	OFFSITE	To Node:	N114A	Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Irregular	Irregular	Friction Equation:	Automatic
Invert(ft):	12.200	11.760	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:			Contraction Coef:	0.100
Top Clip(ft):			Expansion Coef:	0.300
Bot Clip(ft):			Entrance Loss Coef:	0.000
Main XSec:	X114	X114A-B	Exit Loss Coef:	0.000
AuxElev1(ft):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):	0.000	0.000	Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				

```
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


-------------------------------------------------------------------------------------------------
          Name: C114B-120           From Node: N114B             Length(ft): 440.00
         Group: OFFSITE               To Node: N120                  Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                  Solution Algorithm: Automatic
    Invert(ft): 11.760         11.790                              Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                  Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                          Entrance Loss Coef: 0.000
  Bot Clip(ft):                                              Exit Loss Coef: 0.000
     Main XSec: X114A-B         X120                     Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000            0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
 AuxElev2(ft): 0.000            0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


-------------------------------------------------------------------------------------------------
          Name: C120-607            From Node: N120              Length(ft): 1990.00
         Group: OFFSITE               To Node: TW(N607)              Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Irregular      Irregular                  Solution Algorithm: Automatic
    Invert(ft): 11.790         12.430                              Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                  Contraction Coef: 0.100
   Manning's N:                                             Expansion Coef: 0.300
  Top Clip(ft):                                          Entrance Loss Coef: 0.000
  Bot Clip(ft):                                              Exit Loss Coef: 0.000
     Main XSec: X120            X607                     Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft): 0.000            0.000                     Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
 AuxElev2(ft): 0.000            0.000
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft):
  LtSdSlp(h/v):
  RtSdSlp(h/v):


-------------------------------------------------------------------------------------------------
          Name: ED000C              From Node: Dummy-BASIN-C     Length(ft): 1664.00
         Group: WETLAND               To Node: Dummy 13-3            Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
      Geometry: Trapezoidal    Trapezoidal                Solution Algorithm: Automatic
    Invert(ft): 19.550         17.880                              Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                  Contraction Coef: 0.100
   Manning's N: 0.050000       0.050000                    Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                          Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft):                                            Inlet Ctrl Spec: Use dc
     Aux XSec1:                                          Stabilizer Option: None
 AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 28.000          28.000
```

LtSdSlp(h/v):	3.00	3.00
RtSdSlp(h/v):	2.00	2.00

Name: OFF-DITCH-1A From Node: OFFSITE-7046+00 Length(ft): 349.00
Group: WETLAND To Node: OFFSITE-7049+00 Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	23.060	23.000	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.060000	0.060000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	2.000	2.000		
LtSdSlp(h/v):	3.00	3.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFF-DITCH-2A From Node: OFFSITE-7049+00 Length(ft): 160.00
Group: WETLAND To Node: OFFSITE-7050+00 Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	23.000	22.750	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.060000	0.060000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	2.000	0.000		
LtSdSlp(h/v):	3.00	3.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFF-DITCH-3A From Node: OFFSITE-7050+00 Length(ft): 186.00
Group: WETLAND To Node: OFFSITE-7050+50 Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	22.750	20.690	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.060000	0.060000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	0.000	5.000		
LtSdSlp(h/v):	3.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFFSITE-DITCH-1 From Node: OFFSITE-7050+50 Length(ft): 780.00
Group: WETLAND To Node: OFFSITE-7058+00 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	20.690	20.300	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.060000	0.060000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	5.000	5.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFFSITE-DITCH-2 From Node: OFFSITE-7058+00 Length(ft): 600.00
Group: WETLAND To Node: OFFSITE-7064+00 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	20.300	20.000	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.060000	0.060000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	5.000	5.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFFSITE-DITCH-3 From Node: OFFSITE-7066+75 Length(ft): 275.00
Group: WETLAND To Node: OFFSITE-7064+00 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	20.140	20.000	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.060000	0.060000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	7.000	7.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

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          Name: RS-40-2             From Node: S-40-2            Length(ft): 1280.00
         Group: BASE                  To Node: WETLAND               Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Trapezoidal     Trapezoidal               Solution Algorithm: Automatic
   Invert(ft): 18.740          17.840                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.040000       0.040000                     Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.100
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                          Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                           Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 35.000         35.000
  LtSdSlp(h/v): 4.00           4.00
  RtSdSlp(h/v): 6.00           6.00



---------------------------------------------------------------------------------------------------
          Name: SWALE-1             From Node: Dummy 13-1        Length(ft): 121.50
         Group: WETLAND               To Node: Dummy 13-2             Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Trapezoidal     Trapezoidal               Solution Algorithm: Automatic
   Invert(ft): 20.000          19.940                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.042000       0.042000                     Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                          Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                           Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 15.000         15.000
  LtSdSlp(h/v): 2.00           2.00
  RtSdSlp(h/v): 2.00           2.00



---------------------------------------------------------------------------------------------------
          Name: SWALE-2             From Node: Dummy 13-2        Length(ft): 75.00
         Group: WETLAND               To Node: Dummy 13-A             Count: 1

                UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Trapezoidal     Trapezoidal               Solution Algorithm: Automatic
   Invert(ft): 19.940          19.900                                Flow: Both
 TClpInitZ(ft): 9999.000       9999.000                   Contraction Coef: 0.100
   Manning's N: 0.042000       0.042000                     Expansion Coef: 0.300
  Top Clip(ft): 0.000          0.000                     Entrance Loss Coef: 0.000
  Bot Clip(ft): 0.000          0.000                         Exit Loss Coef: 0.000
     Main XSec:                                          Outlet Ctrl Spec: Use dc or tw
  AuxElev1(ft):                                           Inlet Ctrl Spec: Use dc
     Aux XSec1:                                         Stabilizer Option: None
  AuxElev2(ft):
     Aux XSec2:
 Top Width(ft):
     Depth(ft):
 Bot Width(ft): 15.000         15.000
  LtSdSlp(h/v): 2.00           2.00
  RtSdSlp(h/v): 2.00           2.00



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```
         Name: SWALE-3             From Node: Dummy 13-A         Length(ft): 305.00
        Group: WETLAND               To Node: Dummy 13-3              Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Trapezoidal    Trapezoidal              Solution Algorithm: Automatic
   Invert(ft): 19.900         18.090                              Flow: Both
TClpInitZ(ft): 9999.000       9999.000                 Contraction Coef: 0.100
  Manning's N: 0.042000       0.042000                   Expansion Coef: 0.300
 Top Clip(ft): 0.000          0.000                   Entrance Loss Coef: 0.000
 Bot Clip(ft): 0.000          0.000                       Exit Loss Coef: 0.000
    Main XSec:                                         Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft):                                          Inlet Ctrl Spec: Use dc
    Aux XSec1:                                        Stabilizer Option: None
 AuxElev2(ft):
    Aux XSec2:
Top Width(ft):
    Depth(ft):
Bot Width(ft): 15.000         15.000
 LtSdSlp(h/v): 2.00           2.00
 RtSdSlp(h/v): 2.00           2.00



================================================================================================
==== Drop Structures ===========================================================================
================================================================================================

         Name: CS-301              From Node: Borrow 3           Length(ft): 39.00
        Group: WETLAND               To Node: OFFSITE-7066+75         Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 24.00          24.00                               Flow: Both
     Rise(in): 24.00          24.00                   Entrance Loss Coef: 0.500
   Invert(ft): 21.000         20.500                      Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                  Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope



*** Weir 1 of 2 for Drop Structure CS-301 ***
                                                                                  TABLE
                  Count: 5                        Bottom Clip(in): 0.000
                   Type: Vertical: Mavis             Top Clip(in): 0.000
                   Flow: Both                     Weir Disc Coef: 3.200
               Geometry: Rectangular            Orifice Disc Coef: 0.600

               Span(in): 29.00                         Invert(ft): 22.800
               Rise(in): 12.00                  Control Elev(ft): 22.800

*** Weir 2 of 2 for Drop Structure CS-301 ***
                                                                                  TABLE
                  Count: 1                        Bottom Clip(in): 0.000
                   Type: Horizontal                  Top Clip(in): 0.000
                   Flow: Both                     Weir Disc Coef: 3.200
               Geometry: Rectangular            Orifice Disc Coef: 0.600

               Span(in): 105.00                        Invert(ft): 24.000
               Rise(in): 36.00                  Control Elev(ft): 24.000


------------------------------------------------------------------------------------------------
         Name: CS-B1               From Node: Borrow 1           Length(ft): 38.00
        Group: WETLAND               To Node: Dummy 13-3              Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
```

Span(in):	24.00	24.00	Flow: Both
Rise(in):	24.00	24.00	Entrance Loss Coef: 0.500
Invert(ft):	19.000	18.740	Exit Loss Coef: 1.000
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

*** Weir 1 of 2 for Drop Structure CS-B1 ***

TABLE

Count:	2	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	30.00	Invert(ft):	23.500
Rise(in):	12.00	Control Elev(ft):	23.500

*** Weir 2 of 2 for Drop Structure CS-B1 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	37.00	Invert(ft):	24.500
Rise(in):	49.00	Control Elev(ft):	24.500

Name:	J1_Outfall	From Node:	POND J1	Length(ft):	49.00
Group:	WETLAND	To Node:	AREA C	Count:	1

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Friction Equation:	Automatic
Span(in):	24.00	24.00	Solution Algorithm:	Most Restrictive
Rise(in):	24.00	24.00	Flow:	Both
Invert(ft):	21.200	21.000	Entrance Loss Coef:	0.500
Manning's N:	0.013000	0.013000	Exit Loss Coef:	1.000
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

*** Weir 1 of 3 for Drop Structure J1_Outfall ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Circular	Orifice Disc Coef:	0.600
Span(in):	2.10	Invert(ft):	21.800
Rise(in):	2.10	Control Elev(ft):	22.300

*** Weir 2 of 3 for Drop Structure J1_Outfall ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600

```
              Span(in): 3.00                      Invert(ft): 22.500
              Rise(in): 18.00                  Control Elev(ft): 22.500

*** Weir 3 of 3 for Drop Structure J1_Outfall ***
                                                                        TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 24.00                     Invert(ft): 24.000
              Rise(in): 37.00                  Control Elev(ft): 24.000


-------------------------------------------------------------------------------------------------
         Name: RC1OUT              From Node: POND C1           Length(ft): 108.00
        Group: WETLAND               To Node: AREA C                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                                Flow: Both
     Rise(in): 36.00          36.00                   Entrance Loss Coef: 0.500
   Invert(ft): 19.670         19.530                      Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                  Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                      Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall


*** Weir 1 of 3 for Drop Structure RC1OUT ***
                                                                        TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.130
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 33.60                     Invert(ft): 23.350
              Rise(in): 13.08                  Control Elev(ft): 23.350

*** Weir 2 of 3 for Drop Structure RC1OUT ***
                                                                        TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Vertical: Mavis           Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 2.600
              Geometry: Circular              Orifice Disc Coef: 0.600

              Span(in): 2.00                      Invert(ft): 22.450
              Rise(in): 2.00                   Control Elev(ft): 22.450

*** Weir 3 of 3 for Drop Structure RC1OUT ***
                                                                        TABLE
                 Count: 1                      Bottom Clip(in): 0.000
                  Type: Horizontal                Top Clip(in): 0.000
                  Flow: Both                    Weir Disc Coef: 3.200
              Geometry: Rectangular           Orifice Disc Coef: 0.600

              Span(in): 49.00                     Invert(ft): 24.440
              Rise(in): 37.00                  Control Elev(ft): 24.440


-------------------------------------------------------------------------------------------------
         Name: RC2OUT              From Node: POND C2           Length(ft): 135.00
        Group: WETLAND               To Node: AREA C                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                                Flow: Both
     Rise(in): 36.00          36.00                   Entrance Loss Coef: 0.500
```

Invert(ft):	19.780	19.780	Exit Loss Coef: 1.000
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000	Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

*** Weir 1 of 3 for Drop Structure RC2OUT ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.130
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	54.00	Invert(ft):	22.850
Rise(in):	9.72	Control Elev(ft):	22.850

*** Weir 2 of 3 for Drop Structure RC2OUT ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	14.50	Invert(ft):	22.450
Rise(in):	5.00	Control Elev(ft):	22.450

*** Weir 3 of 3 for Drop Structure RC2OUT ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	49.00	Invert(ft):	23.660
Rise(in):	37.00	Control Elev(ft):	23.660

Name:	RCOUT	From Node: AREA C	Length(ft): 203.00
Group:	WETLAND	To Node: Dummy-BASIN-C	Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Circular	Circular	Solution Algorithm:	Most Restrictive
Span(in):	24.00	24.00	Flow:	Both
Rise(in):	24.00	24.00	Entrance Loss Coef:	0.500
Invert(ft):	19.850	19.550	Exit Loss Coef:	1.000
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

*** Weir 1 of 2 for Drop Structure RCOUT ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	37.00	Invert(ft):	22.350
Rise(in):	24.00	Control Elev(ft):	22.350

*** Weir 2 of 2 for Drop Structure RCOUT ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	24.00	Invert(ft):	21.800
Rise(in):	7.00	Control Elev(ft):	21.800

Name:	RS-40-1	From Node:	POND D1
Group:	BASE	To Node:	S-40-2
Length(ft):	117.00		
Count:	1		

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Friction Equation:	Automatic
Span(in):	48.00	48.00	Solution Algorithm:	Most Restrictive
Rise(in):	48.00	48.00	Flow:	Both
Invert(ft):	18.940	18.740	Entrance Loss Coef:	0.500
Manning's N:	0.013000	0.013000	Exit Loss Coef:	1.000
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

AAF Note:
From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

*** Weir 1 of 1 for Drop Structure RS-40-1 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Vertical: Mavis	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200
Geometry:	Rectangular	Orifice Disc Coef:	0.600
Span(in):	48.00	Invert(ft):	22.360
Rise(in):	9999.00	Control Elev(ft):	22.360

Name:	S123	From Node:	POND 6
Group:	BASE	To Node:	N114
Length(ft):	369.00		
Count:	1		

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Friction Equation:	Automatic
Span(in):	48.00	48.00	Solution Algorithm:	Most Restrictive
Rise(in):	48.00	48.00	Flow:	Both
Invert(ft):	13.500	13.000	Entrance Loss Coef:	0.500
Manning's N:	0.013000	0.013000	Exit Loss Coef:	1.000
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
			Solution Incs:	10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

P130
Type H, 4 grate
Control Elevation = 20.8

*** Weir 1 of 1 for Drop Structure S123 ***

TABLE

Count:	1	Bottom Clip(in):	0.000
Type:	Horizontal	Top Clip(in):	0.000
Flow:	Both	Weir Disc Coef:	3.200

```
               Geometry: Rectangular          Orifice Disc Coef: 0.600

               Span(in): 36.00                      Invert(ft): 20.800
               Rise(in): 105.00                Control Elev(ft): 20.800


-------------------------------------------------------------------------------------------------
         Name: S81A               From Node: WETLAND           Length(ft): 28.00
        Group: WETLAND              To Node: S81C                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 48.00          48.00                               Flow: Both
     Rise(in): 48.00          48.00                   Entrance Loss Coef: 0.500
   Invert(ft): 16.150         16.140                      Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                     Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                       Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Wetland Control Structure
P79A

*** Weir 1 of 1 for Drop Structure S81A ***
                                                                                    TABLE
                  Count: 1                     Bottom Clip(in): 0.000
                   Type: Horizontal               Top Clip(in): 0.000
                   Flow: Both                  Weir Disc Coef: 3.200
               Geometry: Rectangular          Orifice Disc Coef: 0.600

               Span(in): 79.00                      Invert(ft): 21.150
               Rise(in): 36.00                 Control Elev(ft): 21.150


-------------------------------------------------------------------------------------------------
         Name: S81B               From Node: POND 1            Length(ft): 13.00
        Group: BASE                 To Node: S81C                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 48.00          48.00                               Flow: Both
     Rise(in): 48.00          48.00                   Entrance Loss Coef: 0.500
   Invert(ft): 16.150         16.140                      Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                     Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                       Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

P79B
Rim = 20.8

*** Weir 1 of 1 for Drop Structure S81B ***
                                                                                    TABLE
                  Count: 1                     Bottom Clip(in): 0.000
                   Type: Horizontal               Top Clip(in): 0.000
                   Flow: Both                  Weir Disc Coef: 3.200
               Geometry: Rectangular          Orifice Disc Coef: 0.600

               Span(in): 36.00                      Invert(ft): 20.800
               Rise(in): 105.00                Control Elev(ft): 20.800


=================================================================================================
==== Weirs =======================================================================================
```

```
================================================================================

         Name: DB-65               From Node: 43-3A-2
        Group: WETLAND               To Node: 43-4-1
         Flow: Both                    Count: 1
         Type: Horizontal           Geometry: Rectangular

                   Span(in): 120.00
                   Rise(in): 60.00
                 Invert(ft): 24.800
       Control Elevation(ft): 24.800
                                         TABLE
              Bottom Clip(in): 0.000
                 Top Clip(in): 0.000
         Weir Discharge Coef: 3.200
      Orifice Discharge Coef: 0.600



--------------------------------------------------------------------------------------------------------
         Name: N124-N120           From Node: N124 (BRW PIT)
        Group: BASE                  To Node: N120
         Flow: Both                    Count: 1
         Type: Vertical: Fread      Geometry: Trapezoidal

            Bottom Width(ft): 44.00
       Left Side Slope(h/v): 20.00
      Right Side Slope(h/v): 20.00
                 Invert(ft): 20.380
       Control Elevation(ft): 20.380
      Struct Opening Dim(ft): 9999.00
                                         TABLE
              Bottom Clip(ft): 0.000
                 Top Clip(ft): 0.000
         Weir Discharge Coef: 3.200
      Orifice Discharge Coef: 0.600

Per AAF report

================================================================================
==== Hydrology Simulations =====================================================
================================================================================

         Name: 100YR-24HR
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 13.00

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

--------------------------------------------------------------------------------------------------------
         Name: 100YR-24HR FDOT
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 10.56

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

--------------------------------------------------------------------------------------------------------
         Name: 10YR-24HR
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
```

```
          Rainfall File: Flmod
    Rainfall Amount(in): 7.50

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

------------------------------------------------------------------------------------------------------
         Name: 25YR-24HR
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 9.50

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

------------------------------------------------------------------------------------------------------
         Name: 25YR-24HR FDOT
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 8.70

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

------------------------------------------------------------------------------------------------------
         Name: 50YR-24HR FDOT
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 9.96

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

------------------------------------------------------------------------------------------------------
         Name: MEAN ANN
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 5.00

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

==============================================================================
==== Routing Simulations ======================================================
==============================================================================

         Name: 100YR-24HR          Hydrology Sim: 100YR-24HR
     Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

      Execute: No          Restart: No            Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 30.00
     Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
        Boundary Stages: 100-yr                  Boundary Flows:
```

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: 100YR-24HR FDOT Hydrology Sim: 100YR-24HR FDOT
Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: 100-yr Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: 10YR-24HR Hydrology Sim: 10YR-24HR
Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Mean,10,25 Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: 25YR-24HR Hydrology Sim: 25YR-24HR

Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Mean,10,25 Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: 25YR-24HR EXTEN Hydrology Sim: 25YR-24HR
Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 360.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Mean,10,25 Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000
120.000	300.000
360.000	600.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: 25YR-24HR FDOT Hydrology Sim: 25YR-24HR FDOT
Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Mean,10,25 Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000

16.000 15.000
30.000 60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: 50YR-24HR FDOT Hydrology Sim: 50YR-24HR FDOT
Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Mean,10,25 Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

Name: MEAN ANN Hydrology Sim: MEAN ANN
Filename: O:\Merritt_Island\My Documents\Project Documents and Permits\412401 (21-0569.000) Lakes at Cocoa

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Mean,10,25 Boundary Flows:

Time(hrs)	Print Inc(min)
11.000	30.000
16.000	15.000
30.000	60.000

Group	Run
BASE	Yes
OFFSITE	Yes
WETLAND	Yes

==========
==== Boundary Conditions ====
==========

Name: Mean,10,25 Node: TW(N607) Type: Stage

Time(hrs)	Stage(ft)

0.000	14.440
12.000	14.440
12.500	15.000
60.000	15.000
120.000	14.440
360.000	14.440

Name: 100-yr Node: TW(N607) Type: Stage

Time(hrs)	Stage(ft)
0.000	14.440
12.000	14.440
12.500	15.920
60.000	15.920

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.04	12.24	12.04	12.75	12.04
Flow Max(cfs):	5.34	3.36	9.59	3.68	0.76
Runoff Volume(in):	8.061	8.056	8.525	8.514	8.979
Runoff Volume(ft3):	24874	24856	44872	44812	3585

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000
Time Max(hrs):	12.11	12.00	12.02	12.02	12.04
Flow Max(cfs):	0.63	75.56	33.47	45.50	63.09
Runoff Volume(in):	8.978	12.883	12.331	12.111	11.984
Runoff Volume(ft3):	3585	371310	176804	237395	342782

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33
Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660
Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.00	12.75	12.02
Flow Max(cfs):	58.43	30.79	16.64	55.97	48.02
Runoff Volume(in):	11.735	9.943	12.741	12.379	12.394
Runoff Volume(ft3):	299031	147977	80939	790874	254652

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.04	12.04	12.04
Flow Max(cfs):	66.38	45.07	12.47	17.64	7.63
Runoff Volume(in):	12.144	8.829	8.553	8.553	8.553
Runoff Volume(ft3):	346920	211841	58367	82583	35703

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000
DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.08	13.08	13.08	13.08	12.02
Flow Max(cfs):	36.59	60.88	50.18	25.16	148.77
Runoff Volume(in):	8.549	8.549	8.549	8.549	9.985
Runoff Volume(ft3):	573167	953623	786048	394110	641534

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	12.00	12.02	12.00	12.02	12.00
Flow Max(cfs):	28.55	189.72	66.61	70.86	19.98
Runoff Volume(in):	12.883	8.947	12.883	9.893	12.883
Runoff Volume(ft3):	140294	798991	327352	305247	98205

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.02	12.00	12.02	12.00	12.02
Flow Max(cfs):	134.62	19.98	262.76	151.31	375.45
Runoff Volume(in):	10.206	12.883	9.731	12.883	9.590
Runoff Volume(ft3):	585360	98205	1126780	743556	1611832

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR	100YR-24HR
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	13.000	13.000	13.000	13.000	13.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000
Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.02	12.02	12.02	12.20
Flow Max(cfs):	388.26	35.56	67.71	137.13	171.13
Runoff Volume(in):	12.883	12.195	12.764	12.764	12.394
Runoff Volume(ft3):	1907992	186372	367878	745023	1394735

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.11	12.00	12.50	12.00
Flow Max(cfs):	0.62	0.58	1.12	0.90	0.09
Runoff Volume(in):	5.913	5.909	6.325	6.317	6.733

Runoff Volume(ft3):	18246	18233	33293	33248	2688

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000
Time Max(hrs):	12.03	11.51	12.00	12.00	11.99
Flow Max(cfs):	0.09	8.44	4.16	5.65	8.21
Runoff Volume(in):	6.732	10.446	9.895	9.680	9.556
Runoff Volume(ft3):	2688	301078	141884	189738	273337

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33
Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660
Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.00	12.00	12.50	12.00
Flow Max(cfs):	7.24	3.72	1.86	15.60	5.98
Runoff Volume(in):	9.313	7.615	10.305	9.946	9.958
Runoff Volume(ft3):	237330	113335	65464	635406	204593

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.00	12.00	12.00	12.00
Flow Max(cfs):	8.25	5.31	1.46	2.06	0.89

Runoff Volume(in):	9.712	6.598	6.350	6.350	6.350
Runoff Volume(ft3):	277444	158304	43334	61313	26507

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000
DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.08	13.08	13.08	13.08	12.00
Flow Max(cfs):	10.48	17.43	14.37	7.20	15.93
Runoff Volume(in):	6.347	6.347	6.347	6.347	7.672
Runoff Volume(ft3):	425539	708003	583590	292601	492925

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	11.51	12.00	11.51	12.00	11.51
Flow Max(cfs):	3.19	19.82	7.44	7.57	2.23
Runoff Volume(in):	10.446	6.727	10.446	7.589	10.446
Runoff Volume(ft3):	113757	600735	265434	234162	79630

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.00	11.51	12.00	11.51	12.00

Flow Max(cfs):	14.47	2.23	27.97	16.89	39.81
Runoff Volume(in):	7.879	10.446	7.439	10.446	7.317
Runoff Volume(ft3):	451898	79630	861468	602914	1229786

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT	100YR-24HR FDOT
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	10.560	10.560	10.560	10.560	10.560
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000
Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	11.51	12.00	12.00	12.00	12.07
Flow Max(cfs):	43.35	4.42	8.44	17.09	31.53
Runoff Volume(in):	10.446	9.762	10.323	10.323	9.958
Runoff Volume(ft3):	1547100	149191	297543	602580	1120561

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.04	12.24	12.04	12.75	12.04
Flow Max(cfs):	2.24	1.38	4.21	1.57	0.35
Runoff Volume(in):	3.388	3.385	3.712	3.707	4.040
Runoff Volume(ft3):	10454	10445	19536	19510	1613

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000

Time Max(hrs):	12.11	12.00	12.02	12.02	12.04
Flow Max(cfs):	0.29	43.59	19.06	25.69	35.41
Runoff Volume(in):	4.039	7.390	6.846	6.639	6.522
Runoff Volume(ft3):	1613	213000	98159	130135	186550

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33
Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660
Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.00	12.75	12.02
Flow Max(cfs):	32.41	15.23	9.58	31.82	27.40
Runoff Volume(in):	6.293	4.775	7.251	6.898	6.906
Runoff Volume(ft3):	160364	71062	46061	440688	141896

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.04	12.04	12.04
Flow Max(cfs):	37.53	20.34	5.49	7.76	3.36
Runoff Volume(in):	6.670	3.930	3.731	3.731	3.731
Runoff Volume(ft3):	190536	94292	25463	36028	15576

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000

DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.17	13.17	13.17	13.17	12.02
Flow Max(cfs):	15.58	25.92	21.37	10.71	74.15
Runoff Volume(in):	3.730	3.730	3.730	3.730	4.854
Runoff Volume(ft3):	250049	416026	342920	171934	311875

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	12.00	12.02	12.00	12.02	12.00
Flow Max(cfs):	16.47	87.43	38.43	35.07	11.53
Runoff Volume(in):	7.390	4.074	7.390	4.787	7.390
Runoff Volume(ft3):	80478	363764	187783	147717	56335

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.02	12.00	12.02	12.00	12.02
Flow Max(cfs):	68.09	11.53	128.58	87.29	181.68
Runoff Volume(in):	5.035	7.390	4.661	7.390	4.570
Runoff Volume(ft3):	288794	56335	539698	426536	768016

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR	10YR-24HR
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	7.500	7.500	7.500	7.500	7.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000

Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.02	12.02	12.02	12.20
Flow Max(cfs):	224.00	20.15	38.99	78.96	97.48
Runoff Volume(in):	7.390	6.718	7.264	7.264	6.906
Runoff Volume(ft3):	1094507	102666	209354	423981	777170

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.04	12.24	12.04	12.75	12.04
Flow Max(cfs):	3.34	2.07	6.12	2.32	0.50
Runoff Volume(in):	5.012	5.008	5.397	5.390	5.780
Runoff Volume(ft3):	15465	15453	28406	28368	2308

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000
Time Max(hrs):	12.11	12.00	12.02	12.02	12.04
Flow Max(cfs):	0.41	55.22	24.31	32.93	45.52
Runoff Volume(in):	5.780	9.387	8.838	8.625	8.503
Runoff Volume(ft3):	2308	270567	126725	169063	243222

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33
Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660

Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.00	12.75	12.02
Flow Max(cfs):	41.93	20.88	12.15	40.63	34.92
Runoff Volume(in):	8.264	6.618	9.247	8.889	8.900
Runoff Volume(ft3):	210599	98501	58742	567911	182860

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.04	12.04	12.04
Flow Max(cfs):	48.06	29.19	7.97	11.28	4.88
Runoff Volume(in):	8.657	5.653	5.420	5.420	5.420
Runoff Volume(ft3):	247301	135630	36987	52333	22625

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000
DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.08	13.08	13.08	13.08	12.02
Flow Max(cfs):	22.98	38.23	31.51	15.80	101.21
Runoff Volume(in):	5.417	5.417	5.417	5.417	6.682
Runoff Volume(ft3):	363215	604310	498118	249747	429348

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00

Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	12.00	12.02	12.00	12.02	12.00
Flow Max(cfs):	20.86	124.03	48.68	48.03	14.60
Runoff Volume(in):	9.387	5.787	9.387	6.604	9.387
Runoff Volume(ft3):	102229	516796	238535	203780	71561

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.02	12.00	12.02	12.00	12.02
Flow Max(cfs):	92.25	14.60	177.09	110.57	251.50
Runoff Volume(in):	6.882	9.387	6.462	9.387	6.349
Runoff Volume(ft3):	394705	71561	748242	541816	1067049

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR	25YR-24HR
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	9.500	9.500	9.500	9.500	9.500
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000
Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.02	12.02	12.02	12.20
Flow Max(cfs):	283.73	25.77	49.44	100.13	124.34
Runoff Volume(in):	9.387	8.707	9.263	9.263	8.900
Runoff Volume(ft3):	1390319	133056	266990	540706	1001532

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00

Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.11	12.00	12.58	12.00
Flow Max(cfs):	0.46	0.42	0.84	0.66	0.07
Runoff Volume(in):	4.349	4.345	4.711	4.704	5.074
Runoff Volume(ft3):	13418	13408	24795	24762	2026

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000
Time Max(hrs):	12.03	11.60	12.00	12.00	11.99
Flow Max(cfs):	0.07	6.95	3.42	4.63	6.70
Runoff Volume(in):	5.073	8.589	8.041	7.830	7.709
Runoff Volume(ft3):	2026	247540	115292	153477	220525

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33
Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660
Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.00	12.00	12.50	12.00
Flow Max(cfs):	5.89	2.90	1.53	12.79	4.91
Runoff Volume(in):	7.474	5.874	8.449	8.092	8.102
Runoff Volume(ft3):	190468	87424	53669	516998	166467

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite

TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.00	12.00	12.00	12.00
Flow Max(cfs):	6.75	4.02	1.09	1.55	0.67
Runoff Volume(in):	7.861	4.953	4.732	4.732	4.732
Runoff Volume(ft3):	224575	118834	32296	45696	19756

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000
DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.33	13.33	13.33	13.33	12.00
Flow Max(cfs):	7.74	12.88	10.62	5.32	12.45
Runoff Volume(in):	4.730	4.730	4.730	4.730	5.944
Runoff Volume(ft3):	317152	527671	434947	218074	381906

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	11.60	12.00	11.82	12.00	11.60
Flow Max(cfs):	2.63	15.06	6.13	5.90	1.84
Runoff Volume(in):	8.589	5.091	8.589	5.870	8.589
Runoff Volume(ft3):	93529	454622	218234	181126	65470

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00

Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.00	11.60	12.00	11.60	12.00
Flow Max(cfs):	11.37	1.84	21.72	13.92	30.79
Runoff Volume(in):	6.137	8.589	5.733	8.589	5.629
Runoff Volume(ft3):	351976	65470	663900	495704	945985

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT	25YR-24HR FDOT
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	8.700	8.700	8.700	8.700	8.700
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000
Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	11.82	12.00	12.00	12.00	12.07
Flow Max(cfs):	35.72	3.62	6.95	14.07	25.88
Runoff Volume(in):	8.589	7.911	8.463	8.463	8.102
Runoff Volume(ft3):	1271994	120891	243934	494013	911745

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.11	12.00	12.50	12.00
Flow Max(cfs):	0.56	0.53	1.03	0.82	0.08
Runoff Volume(in):	5.400	5.396	5.797	5.789	6.192
Runoff Volume(ft3):	16663	16651	30514	30473	2472

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960

Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000
Time Max(hrs):	12.03	11.60	12.00	12.00	11.99
Flow Max(cfs):	0.08	7.96	3.92	5.32	7.72
Runoff Volume(in):	6.191	9.847	9.297	9.082	8.960
Runoff Volume(ft3):	2472	283808	133302	178032	256285

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33
Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660
Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.00	12.00	12.50	12.00
Flow Max(cfs):	6.80	3.45	1.75	14.69	5.63
Runoff Volume(in):	8.719	7.050	9.706	9.348	9.359
Runoff Volume(ft3):	222193	104918	61659	597197	192290

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.00	12.00	12.00	12.00
Flow Max(cfs):	7.77	4.89	1.34	1.90	0.82
Runoff Volume(in):	9.114	6.060	5.821	5.821	5.821
Runoff Volume(ft3):	260378	145416	39725	56206	24300

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24

Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000
DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.17	13.17	13.17	13.17	12.00
Flow Max(cfs):	9.58	15.95	13.14	6.59	14.80
Runoff Volume(in):	5.818	5.818	5.818	5.818	7.110
Runoff Volume(ft3):	390097	649036	534985	268231	456847

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	11.60	12.00	11.60	12.00	11.60
Flow Max(cfs):	3.01	18.28	7.02	7.03	2.10
Runoff Volume(in):	9.847	6.193	9.847	7.030	9.847
Runoff Volume(ft3):	107232	553024	250208	216919	75062

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.00	11.60	12.00	11.60	12.00
Flow Max(cfs):	13.47	2.10	25.95	15.93	36.89
Runoff Volume(in):	7.313	9.847	6.884	9.847	6.767
Runoff Volume(ft3):	419452	75062	797191	568330	1137375

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT	50YR-24HR FDOT
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00

Rain File:	Fdot-24	Fdot-24	Fdot-24	Fdot-24	Fdot-24
Rain Amount(in):	9.960	9.960	9.960	9.960	9.960
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000
Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	11.60	12.00	12.00	12.00	12.07
Flow Max(cfs):	40.89	4.16	7.96	16.12	29.71
Runoff Volume(in):	9.847	9.165	9.723	9.723	9.359
Runoff Volume(ft3):	1458356	140056	280249	567556	1053179

Name:	43-3A-1	43-3A-2	43-4-1	43-4-2	43-5-1
Group:	WETLAND	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	43-3A-1	43-3A-2	43-4-1	Dummy 13-1	43-5-1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	3.99	1.33	9.43	1.33
Comp Time Inc(min):	1.33	3.99	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	29.94	10.00	70.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.850	0.850	1.450	1.450	0.110
Vol of Unit Hyd(in):	1.001	1.000	1.000	1.000	1.000
Curve Num:	64.000	64.000	67.000	67.000	70.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.04	12.31	12.04	12.83	12.04
Flow Max(cfs):	1.00	0.60	1.99	0.72	0.17
Runoff Volume(in):	1.581	1.580	1.804	1.801	2.037
Runoff Volume(ft3):	4879	4874	9494	9482	813

Name:	43-5-2	B124 (BRW PIT)	BASIN C	BASIN C1	BASIN C2
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	Dummy 13-1	N124 (BRW PIT)	AREA C	POND C1	POND C2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh484	Uh323	Uh323	Uh323
Peaking Factor:	323.0	484.0	323.0	323.0	323.0
Spec Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Comp Time Inc(min):	2.25	1.33	1.33	1.33	1.57
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	16.87	10.00	10.00	10.00	11.78
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	0.110	7.940	3.950	5.400	7.880
Vol of Unit Hyd(in):	1.000	1.001	1.001	1.000	1.000
Curve Num:	70.000	98.000	94.490	92.740	91.760
DCIA(%):	0.000	100.000	0.000	0.000	0.000
Time Max(hrs):	12.11	12.00	12.02	12.02	12.04
Flow Max(cfs):	0.14	29.06	12.44	16.56	22.64
Runoff Volume(in):	2.037	4.893	4.364	4.171	4.064
Runoff Volume(ft3):	813	141040	62578	81766	116252

Name:	BASIN D	BASIN D1	BASIN J1	BORROW 1	Borrow 2
Group:	BASE	BASE	WETLAND	WETLAND	WETLAND
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	POND D	POND D1	POND J1	Borrow 1	Borrow 2
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh484	Uh323	Uh323
Peaking Factor:	323.0	323.0	484.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	10.49	1.33

Comp Time Inc(min):	1.33	1.33	1.33	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	78.70	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.020	4.100	1.750	17.600	5.660
Vol of Unit Hyd(in):	1.000	1.000	1.001	1.001	1.000
Curve Num:	89.800	76.600	98.000	95.000	95.000
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.04	12.04	12.00	12.75	12.02
Flow Max(cfs):	20.40	8.31	6.37	20.73	17.95
Runoff Volume(in):	3.857	2.589	4.757	4.416	4.421
Runoff Volume(ft3):	98285	38531	30218	282127	90841

Name:	Borrow 3	DIRECT D1	OFFSITE-PART-1A	OFFSITE-PART-2A	OFFSITE-PART-3A
Group:	WETLAND	BASE	WETLAND	WETLAND	WETLAND
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	Borrow 3	S-40-2	OFFSITE-7046+00	OFFSITE-7049+00	OFFSITE-7050+00
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	323.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	7.870	6.610	1.880	2.660	1.150
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	93.000	69.000	67.180	67.180	67.180
DCIA(%):	0.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.02	12.04	12.04	12.04	12.04
Flow Max(cfs):	24.24	9.94	2.60	3.67	1.59
Runoff Volume(in):	4.200	1.958	1.817	1.817	1.817
Runoff Volume(ft3):	119977	46985	12403	17549	7587

Name:	OFFSITE-PART1	OFFSITE-PART2	OFFSITE-PART3	OFFSITE-PART4	POND 1 BASIN
Group:	WETLAND	WETLAND	WETLAND	WETLAND	BASE
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	OFFSITE-7050+50	OFFSITE-7058+00	OFFSITE-7064+00	OFFSITE-7066+75	POND 1
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh323	Uh323	Uh323	Uh323	Uh484
Peaking Factor:	323.0	323.0	323.0	323.0	484.0
Spec Time Inc(min):	13.63	13.63	13.63	13.63	1.33
Comp Time Inc(min):	5.00	5.00	5.00	5.00	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	102.20	102.20	102.20	102.20	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	18.470	30.730	25.330	12.700	17.700
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.001
Curve Num:	67.180	67.180	67.180	67.180	74.000
DCIA(%):	0.000	0.000	0.000	0.000	13.000
Time Max(hrs):	13.17	13.17	13.17	13.17	12.02
Flow Max(cfs):	7.18	11.94	9.84	4.93	41.19
Runoff Volume(in):	1.817	1.817	1.817	1.817	2.690
Runoff Volume(ft3):	121801	202649	167039	83750	172854

Name:	POND 1 NWL	POND 2 BASIN	POND 2 NWL	POND 3 BASIN	POND 3 NWL
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	POND 1	POND 2	POND 2	POND 3	POND 3
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0

Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	3.000	24.600	7.000	8.500	2.100
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	98.000	67.000	98.000	73.000	98.000
DCIA(%):	100.000	10.000	100.000	14.000	100.000
Time Max(hrs):	12.00	12.02	12.00	12.02	12.00
Flow Max(cfs):	10.98	44.41	25.62	19.35	7.69
Runoff Volume(in):	4.893	2.110	4.893	2.644	4.893
Runoff Volume(ft3):	53290	188410	124343	81570	37303

Name:	POND 4 BASIN	POND 4 NWL	POND 5 BASIN	POND 5 NWL	POND 6 BASIN
Group:	BASE	BASE	BASE	BASE	BASE
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	POND 4	POND 4	POND 5	POND 5	POND 6
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh484	Uh484	Uh484	Uh484
Peaking Factor:	484.0	484.0	484.0	484.0	484.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Comp Time Inc(min):	1.33	1.33	1.33	1.33	1.33
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	10.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	15.800	2.100	31.900	15.900	46.300
Vol of Unit Hyd(in):	1.000	1.000	1.000	1.000	1.000
Curve Num:	75.000	98.000	72.000	98.000	70.000
DCIA(%):	16.000	100.000	13.000	100.000	16.000
Time Max(hrs):	12.02	12.00	12.02	12.00	12.02
Flow Max(cfs):	38.51	7.69	70.00	58.20	98.03
Runoff Volume(in):	2.838	4.893	2.546	4.893	2.491
Runoff Volume(ft3):	162747	37303	294789	282436	418689

Name:	POND 6 NWL	POND J1	SR 528-1	SR 528-2	WETLAND
Group:	BASE	WETLAND	WETLAND	WETLAND	WETLAND
Simulation:	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN	MEAN ANN
Node:	POND 6	POND J1	Borrow 1	Borrow 3	WETLAND
Type:	SCS	SCS	SCS	SCS	SCS
Unit Hydrograph:	Uh484	Uh323	Uh323	Uh323	Uh323
Peaking Factor:	484.0	323.0	323.0	323.0	323.0
Spec Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Comp Time Inc(min):	1.33	1.33	1.33	1.33	4.00
Rain File:	Flmod	Flmod	Flmod	Flmod	Flmod
Rain Amount(in):	5.000	5.000	5.000	5.000	5.000
Duration(hrs):	24.00	24.00	24.00	24.00	24.00
Status:	Onsite	Onsite	Onsite	Onsite	Onsite
TC(min):	10.00	10.00	10.00	10.00	30.00
Time Shift(hrs):	0.00	0.00	0.00	0.00	0.00
Area(ac):	40.800	4.210	7.940	16.080	31.000
Vol of Unit Hyd(in):	1.000	1.001	1.000	1.000	1.000
Curve Num:	98.000	93.410	98.000	98.000	95.000
DCIA(%):	100.000	0.000	0.000	0.000	0.000
Time Max(hrs):	12.00	12.02	12.02	12.02	12.20
Flow Max(cfs):	149.33	13.05	25.91	52.46	63.66
Runoff Volume(in):	4.893	4.245	4.765	4.765	4.421
Runoff Volume(ft3):	724741	64868	137344	278147	497540

Lakes at Cocoa Grove (21-0569.000)
Post-Dev Combined w/Ditch
Node Max

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
43-3A-1	WETLAND	100YR-24HR	12.33	25.65	25.50	0.0011	4399	12.00	5.18	12.09	3.41
43-3A-2	WETLAND	100YR-24HR	12.34	25.64	24.80	0.0012	4541	12.24	6.57	12.35	6.31
43-4-1	WETLAND	100YR-24HR	12.34	25.63	25.50	0.0012	12082	12.08	13.62	12.34	11.70
43-5-1	WETLAND	100YR-24HR	15.57	25.23	24.20	0.0009	1920	12.00	0.74	14.99	2.50
AREA C	WETLAND	100YR-24HR	17.67	25.23	28.00	0.0021	110533	12.04	72.01	12.22	15.25
Borrow 1	WETLAND	100YR-24HR	23.26	24.73	24.50	0.0004	714655	12.08	98.41	30.00	11.45
Borrow 2	WETLAND	100YR-24HR	23.35	24.73	24.50	0.0005	215880	12.00	47.38	12.17	9.32
Borrow 3	WETLAND	100YR-24HR	17.75	26.76	24.50	0.0020	422967	12.00	200.82	27.64	18.35
Dummy 13-1	WETLAND	100YR-24HR	15.57	25.23	24.50	0.0014	18944	13.61	90.74	14.85	108.93
Dummy 13-2	WETLAND	100YR-24HR	15.57	25.23	22.50	-0.0063	3664	14.85	108.93	15.57	153.36
Dummy 13-3	WETLAND	100YR-24HR	15.55	25.22	21.09	0.0031	58599	13.85	71.25	15.07	59.46
Dummy 13-A	WETLAND	100YR-24HR	15.57	25.22	22.90	0.0032	7282	15.57	153.36	14.24	90.07
Dummy-BASIN-C	WETLAND	100YR-24HR	15.55	25.22	22.55	0.0026	48715	12.22	15.25	19.32	12.69
N110	OFFSITE	100YR-24HR	14.01	17.89	23.00	0.0021	42528	18.05	0.47	18.04	1.48
N112	OFFSITE	100YR-24HR	14.00	17.89	24.00	0.0043	488	0.00	0.00	13.52	0.39
N112A	OFFSITE	100YR-24HR	14.03	17.89	24.00	0.0024	19828	13.52	0.39	18.05	0.47
N114	OFFSITE	100YR-24HR	14.01	17.89	21.30	0.0021	36762	14.12	100.96	14.40	100.93
N114A	OFFSITE	100YR-24HR	13.92	17.71	19.50	0.0031	21648	14.40	100.93	14.43	101.09
N114B	OFFSITE	100YR-24HR	13.87	17.64	21.80	-0.0046	8709	14.43	101.09	14.44	101.15
N120	OFFSITE	100YR-24HR	13.82	17.59	20.50	0.0020	40367	13.70	198.45	13.82	198.37
N124 (BRW PIT)	BASE	100YR-24HR	12.24	20.75	22.00	0.0003	303828	12.00	75.55	12.24	35.82
OFFSITE-7046+00	WETLAND	100YR-24HR	14.21	29.43	23.50	0.0038	6037	12.00	12.14	14.65	13.78
OFFSITE-7049+00	WETLAND	100YR-24HR	14.21	29.44	23.50	0.0037	8783	12.06	27.98	14.35	31.04
OFFSITE-7050+00	WETLAND	100YR-24HR	14.23	29.43	23.00	0.0031	6062	12.08	34.26	14.65	34.76
OFFSITE-7050+50	WETLAND	100YR-24HR	14.21	29.43	23.34	0.0028	19420	14.65	55.66	12.14	36.19
OFFSITE-7058+00	WETLAND	100YR-24HR	14.22	29.43	24.23	0.0031	28699	13.26	77.33	14.35	70.43
OFFSITE-7064+00	WETLAND	100YR-24HR	14.20	29.42	23.16	0.0032	18958	13.52	150.64	13.91	86.59
OFFSITE-7066+75	WETLAND	100YR-24HR	14.22	29.42	22.42	0.0046	6198	21.72	19.61	13.52	42.27
POND 1	BASE	100YR-24HR	12.41	22.60	23.00	0.0018	149218	12.00	180.05	12.00	63.23
POND 2	BASE	100YR-24HR	13.68	23.00	23.00	0.0019	336217	12.00	254.77	15.19	18.71
POND 3	BASE	100YR-24HR	13.67	22.99	23.00	0.0018	109206	12.00	87.16	16.09	9.47
POND 4	BASE	100YR-24HR	12.37	22.95	23.00	0.0023	106413	12.00	143.69	12.16	42.75
POND 5	BASE	100YR-24HR	13.27	22.58	23.00	0.0014	727326	12.00	456.96	13.16	49.63
POND 6	BASE	100YR-24HR	13.66	22.08	23.00	0.0009	1819764	12.00	794.99	12.64	103.09
POND C1	WETLAND	100YR-24HR	17.63	25.24	25.00	0.0019	26808	12.00	44.89	12.10	32.39
POND C2	WETLAND	100YR-24HR	17.71	25.24	25.00	0.0020	94815	12.00	61.38	12.36	9.61
POND D	BASE	100YR-24HR	12.87	23.95	35.00	0.0015	100571	12.00	57.61	13.49	8.98
POND D1	BASE	100YR-24HR	12.43	23.64	25.00	0.0013	37789	12.00	31.12	12.43	18.44
POND J1	WETLAND	100YR-24HR	17.92	25.25	25.00	0.0015	115870	12.00	51.71	30.00	3.11
S-40-2	BASE	100YR-24HR	20.24	22.77	24.66	-0.0024	50050	12.08	56.12	0.00	146.67
S75A	BASE	100YR-24HR	13.56	22.76	24.80	-0.0051	256	16.09	9.47	16.10	9.48
S81C	BASE	100YR-24HR	13.63	21.83	23.00	0.0050	117	12.09	94.57	12.09	94.49
S81E	BASE	100YR-24HR	13.71	20.53	23.00	-0.0215	178	12.09	94.49	12.10	94.37
TW(N607)	BASE	100YR-24HR	12.50	15.92	99.00	0.0025	30678	13.82	198.37	0.00	0.00
WETLAND	WETLAND	100YR-24HR	20.25	22.77	23.00	0.0006	1197843	12.17	243.27	28.74	71.28
43-3A-1	WETLAND	100YR-24HR FDOT	12.17	24.94	25.50	0.0007	3632	12.00	0.62	12.01	0.55
43-3A-2	WETLAND	100YR-24HR FDOT	12.17	24.94	24.80	0.0007	3777	12.03	1.13	12.17	1.10
43-4-1	WETLAND	100YR-24HR FDOT	12.17	24.94	25.50	0.0004	10061	12.00	2.18	12.17	2.05
43-5-1	WETLAND	100YR-24HR FDOT	20.97	24.04	24.20	0.0002	1450	12.00	0.09	20.57	0.45
AREA C	WETLAND	100YR-24HR FDOT	21.27	24.25	28.00	0.0005	87788	11.67	13.53	10.80	8.98

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
Borrow 1	WETLAND100YR-24HR	FDOT	23.41	24.11	24.50	0.0002	692367	12.00	22.68	26.66	6.60
Borrow 2	WETLAND100YR-24HR	FDOT	23.47	24.11	24.50	0.0002	202744	12.00	5.98	27.04	1.41
Borrow 3	WETLAND100YR-24HR	FDOT	20.57	25.16	24.50	0.0004	321409	12.00	25.34	27.66	15.45
Dummy 13-1	WETLAND100YR-24HR	FDOT	20.98	24.04	24.50	0.0029	14598	17.04	45.04	20.90	65.38
Dummy 13-2	WETLAND100YR-24HR	FDOT	21.03	24.04	22.50	-0.0076	3194	20.90	65.38	19.33	91.10
Dummy 13-3	WETLAND100YR-24HR	FDOT	21.10	24.02	21.09	0.0031	52912	20.90	55.26	20.11	48.10
Dummy 13-A	WETLAND100YR-24HR	FDOT	20.98	24.03	22.90	-0.0028	6375	19.33	91.10	16.20	49.12
Dummy-BASIN-C	WETLAND100YR-24HR	FDOT	21.12	24.02	22.55	0.0027	43756	10.80	8.98	27.80	10.36
N110	OFFSITE100YR-24HR	FDOT	19.08	17.27	23.00	0.0008	38868	26.60	0.51	26.61	1.71
N112	OFFSITE100YR-24HR	FDOT	19.16	17.27	24.00	0.0013	477	0.00	0.00	17.20	0.08
N112A	OFFSITE100YR-24HR	FDOT	19.07	17.27	24.00	0.0012	16911	17.20	0.08	26.60	0.51
N114	OFFSITE100YR-24HR	FDOT	19.10	17.27	21.30	0.0008	33980	16.31	58.50	17.18	58.36
N114A	OFFSITE100YR-24HR	FDOT	19.12	17.17	19.50	0.0009	20487	17.18	58.36	17.22	58.35
N114B	OFFSITE100YR-24HR	FDOT	19.13	17.14	21.80	0.0017	8347	17.22	58.35	17.23	58.35
N120	OFFSITE100YR-24HR	FDOT	19.13	17.12	20.50	0.0009	38763	19.07	147.99	19.13	147.99
N124 (BRW PIT)	BASE100YR-24HR	FDOT	12.11	20.51	22.00	0.0001	302806	11.50	8.44	12.11	7.30
OFFSITE-7046+00	WETLAND100YR-24HR	FDOT	19.07	25.07	23.50	0.0007	2231	12.00	1.46	12.01	1.39
OFFSITE-7049+00	WETLAND100YR-24HR	FDOT	19.08	25.07	23.50	0.0007	3231	12.00	3.46	12.01	3.35
OFFSITE-7050+00	WETLAND100YR-24HR	FDOT	19.09	25.07	23.00	0.0006	2388	12.00	4.24	12.01	4.12
OFFSITE-7050+50	WETLAND100YR-24HR	FDOT	19.12	25.07	23.34	0.0016	10879	13.03	13.23	13.12	12.33
OFFSITE-7058+00	WETLAND100YR-24HR	FDOT	19.14	25.06	24.23	0.0016	16632	13.12	29.76	13.38	28.60
OFFSITE-7064+00	WETLAND100YR-24HR	FDOT	19.16	25.04	23.16	0.0016	11292	14.80	50.82	17.11	42.91
OFFSITE-7066+75	WETLAND100YR-24HR	FDOT	19.16	25.04	22.42	-0.0021	3789	26.93	15.78	26.77	15.98
POND 1	BASE100YR-24HR	FDOT	19.10	21.49	23.00	0.0002	138299	12.00	28.04	12.10	25.48
POND 2	BASE100YR-24HR	FDOT	16.17	21.91	23.00	0.0003	323032	12.00	27.25	16.37	12.69
POND 3	BASE100YR-24HR	FDOT	16.16	21.91	23.00	0.0003	101286	12.00	9.96	16.16	5.39
POND 4	BASE100YR-24HR	FDOT	16.12	21.75	23.00	0.0003	98888	11.33	9.68	11.48	4.93
POND 5	BASE100YR-24HR	FDOT	16.16	21.76	23.00	0.0003	713274	12.00	53.72	16.08	23.32
POND 6	BASE100YR-24HR	FDOT	16.29	21.65	23.00	0.0002	1808082	12.00	104.31	16.29	58.50
POND C1	WETLAND100YR-24HR	FDOT	21.11	24.29	25.00	0.0003	21023	12.00	5.65	12.04	5.28
POND C2	WETLAND100YR-24HR	FDOT	21.24	24.26	25.00	0.0003	75439	11.92	8.20	10.84	4.18
POND D	BASE100YR-24HR	FDOT	15.16	23.09	35.00	0.0004	96266	12.00	7.24	15.55	4.09
POND D1	BASE100YR-24HR	FDOT	15.10	22.99	25.00	0.0004	35806	12.00	6.51	15.10	6.33
POND J1	WETLAND100YR-24HR	FDOT	21.38	24.27	25.00	0.0004	96495	12.00	6.28	24.13	1.80
S-40-2	BASE100YR-24HR	FDOT	21.62	22.30	24.66	-0.0024	47051	12.00	10.56	0.00	146.67
S75A	BASE100YR-24HR	FDOT	16.16	21.82	24.80	0.0052	256	16.16	5.39	16.22	5.39
S81C	BASE100YR-24HR	FDOT	19.21	21.20	23.00	0.0014	117	21.08	86.66	21.08	86.66
S81E	BASE100YR-24HR	FDOT	19.20	19.95	23.00	-0.0215	178	21.08	86.66	21.09	86.66
TW(N607)	BASE100YR-24HR	FDOT	12.50	15.92	99.00	0.0031	30114	19.13	147.99	0.00	0.00
WETLAND	WETLAND100YR-24HR	FDOT	21.62	22.30	23.00	0.0003	1152040	0.00	122.66	25.54	63.92
43-3A-1	WETLAND	10YR-24HR	12.52	25.10	25.50	0.0013	3805	12.08	2.15	12.29	0.96
43-3A-2	WETLAND	10YR-24HR	12.52	25.10	24.80	0.0020	3950	12.25	2.33	12.50	2.03
43-4-1	WETLAND	10YR-24HR	12.52	25.09	25.50	0.0008	10514	12.14	4.71	12.52	3.56
43-5-1	WETLAND	10YR-24HR	15.50	23.56	24.20	0.0005	1264	12.00	0.34	12.11	0.31
AREA C	WETLAND	10YR-24HR	13.07	23.78	28.00	0.0017	68897	12.10	40.17	12.30	15.86
Borrow 1	WETLAND	10YR-24HR	24.26	23.74	24.50	0.0003	685954	12.08	57.30	24.26	1.91
Borrow 2	WETLAND	10YR-24HR	24.25	23.74	24.50	0.0003	198950	12.00	27.03	12.15	6.30
Borrow 3	WETLAND	10YR-24HR	15.82	24.54	24.50	0.0012	281843	12.00	114.92	12.05	14.99
Dummy 13-1	WETLAND	10YR-24HR	15.50	23.56	24.50	0.0029	13004	13.23	57.34	13.63	59.16
Dummy 13-2	WETLAND	10YR-24HR	15.44	23.56	22.50	0.0064	3007	13.63	59.16	14.69	72.71

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
Dummy 13-3	WETLAND	10YR-24HR	15.54	23.54	21.09	0.0031	50617	13.63	55.70	14.69	47.16
Dummy 13-A	WETLAND	10YR-24HR	15.66	23.55	22.90	-0.0028	6011	14.69	72.71	13.63	53.08
Dummy-BASIN-C	WETLAND	10YR-24HR	15.55	23.54	22.55	0.0027	41754	12.30	15.86	20.86	8.31
N110	OFFSITE	10YR-24HR	15.66	16.65	23.00	0.0022	35210	25.28	0.30	25.21	1.19
N112	OFFSITE	10YR-24HR	16.04	16.65	24.00	0.0001	450	0.00	0.00	17.05	0.00
N112A	OFFSITE	10YR-24HR	15.66	16.65	24.00	0.0025	13977	17.05	0.00	25.28	0.30
N114	OFFSITE	10YR-24HR	15.67	16.65	21.30	0.0020	31150	14.65	46.27	14.88	45.94
N114A	OFFSITE	10YR-24HR	15.86	16.53	19.50	0.0023	19180	14.88	45.94	14.95	45.77
N114B	OFFSITE	10YR-24HR	15.90	16.51	21.80	0.0046	7883	14.95	45.77	14.97	45.70
N120	OFFSITE	10YR-24HR	15.97	16.49	20.50	0.0019	35582	15.83	115.56	15.97	115.55
N124 (BRW PIT)	BASE	10YR-24HR	12.35	20.59	22.00	0.0004	303156	12.00	43.58	12.35	15.12
OFFSITE-7046+00	WETLAND	10YR-24HR	13.76	24.92	23.50	0.0032	2101	12.00	5.26	12.11	4.86
OFFSITE-7049+00	WETLAND	10YR-24HR	13.76	24.92	23.50	0.0031	3040	12.08	12.20	12.11	11.72
OFFSITE-7050+00	WETLAND	10YR-24HR	13.75	24.92	23.00	0.0023	2263	12.09	14.80	12.11	14.50
OFFSITE-7050+50	WETLAND	10YR-24HR	13.75	24.92	23.34	0.0031	10582	12.14	18.85	13.60	14.81
OFFSITE-7058+00	WETLAND	10YR-24HR	13.75	24.90	24.23	0.0030	16169	13.25	40.03	13.56	37.40
OFFSITE-7064+00	WETLAND	10YR-24HR	13.78	24.82	23.16	0.0030	10922	13.63	65.87	13.27	53.71
OFFSITE-7066+75	WETLAND	10YR-24HR	13.77	24.82	22.42	0.0044	3667	12.06	17.50	12.07	15.26
POND 1	BASE	10YR-24HR	12.27	21.62	23.00	0.0013	139584	12.00	87.58	12.25	48.22
POND 2	BASE	10YR-24HR	13.09	21.85	23.00	0.0012	322319	12.00	124.54	13.85	13.23
POND 3	BASE	10YR-24HR	13.08	21.85	23.00	0.0012	100852	12.00	44.24	13.59	5.72
POND 4	BASE	10YR-24HR	12.33	21.80	23.00	0.0016	99148	12.00	73.39	12.13	26.96
POND 5	BASE	10YR-24HR	12.88	21.68	23.00	0.0010	712043	12.00	242.87	12.65	30.53
POND 6	BASE	10YR-24HR	14.16	21.53	23.00	0.0007	1805064	12.00	425.26	14.16	47.14
POND C1	WETLAND	10YR-24HR	12.18	24.69	25.00	0.0023	23033	12.00	25.32	12.18	18.82
POND C2	WETLAND	10YR-24HR	12.87	23.84	25.00	0.0012	73602	12.00	34.39	12.42	6.42
POND D	BASE	10YR-24HR	13.04	23.07	35.00	0.0011	96151	12.00	31.91	13.49	3.97
POND D1	BASE	10YR-24HR	12.71	22.99	25.00	0.0011	35811	12.00	13.84	12.71	6.35
POND J1	WETLAND	10YR-24HR	18.65	23.85	25.00	0.0011	88563	12.00	29.44	25.24	1.14
S-40-2	BASE	10YR-24HR	19.19	22.00	24.66	-0.0024	45157	12.08	22.17	0.00	146.67
S75A	BASE	10YR-24HR	12.98	21.76	24.80	-0.0050	256	13.59	5.72	13.60	5.72
S81C	BASE	10YR-24HR	17.60	19.94	23.00	0.0050	159	17.60	69.69	17.57	69.69
S81E	BASE	10YR-24HR	17.41	18.30	23.00	-0.0215	240	17.57	69.69	17.60	69.70
TW(N607)	BASE	10YR-24HR	12.50	15.00	99.00	0.0014	26495	15.97	115.55	0.00	0.00
WETLAND	WETLAND	10YR-24HR	19.19	22.00	23.00	0.0004	1123117	12.25	130.21	19.19	48.29
43-3A-1	WETLAND	25YR-24HR	12.41	25.33	25.50	0.0013	4048	12.00	3.21	12.10	1.79
43-3A-2	WETLAND	25YR-24HR	12.41	25.32	24.80	0.0014	4192	12.25	3.80	12.42	3.51
43-4-1	WETLAND	25YR-24HR	12.41	25.31	25.50	0.0008	11153	12.08	7.85	12.41	6.34
43-5-1	WETLAND	25YR-24HR	14.93	24.22	24.20	0.0009	1521	12.00	0.48	15.04	0.67
AREA C	WETLAND	25YR-24HR	16.22	24.29	28.00	0.0018	89375	12.08	53.63	12.26	15.97
Borrow 1	WETLAND	25YR-24HR	20.90	24.03	24.50	0.0003	690909	12.08	72.37	24.31	5.72
Borrow 2	WETLAND	25YR-24HR	20.98	24.03	24.50	0.0003	201884	12.00	34.45	12.16	7.49
Borrow 3	WETLAND	25YR-24HR	16.58	25.42	24.50	0.0011	337525	12.00	146.22	21.95	15.04
Dummy 13-1	WETLAND	25YR-24HR	14.95	24.22	24.50	0.0026	15217	13.47	70.12	14.37	77.57
Dummy 13-2	WETLAND	25YR-24HR	15.04	24.22	22.50	-0.0080	3265	14.37	77.57	14.46	102.16
Dummy 13-3	WETLAND	25YR-24HR	14.96	24.20	21.09	0.0031	53741	13.81	66.73	14.71	53.48
Dummy 13-A	WETLAND	25YR-24HR	14.97	24.21	22.90	-0.0026	6509	14.46	102.16	13.87	67.46
Dummy-BASIN-C	WETLAND	25YR-24HR	14.97	24.20	22.55	0.0027	44477	12.26	15.97	26.33	9.85
N110	OFFSITE	25YR-24HR	14.54	17.19	23.00	0.0023	38387	25.11	0.43	25.09	1.58
N112	OFFSITE	25YR-24HR	14.53	17.19	24.00	0.0023	475	0.00	0.00	14.46	0.05

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
N112A	OFFSITE	25YR-24HR	14.54	17.19	24.00	0.0031	16527	14.46	0.05	25.11	0.43
N114	OFFSITE	25YR-24HR	14.54	17.19	21.30	0.0017	33585	14.29	67.53	14.58	67.18
N114A	OFFSITE	25YR-24HR	14.53	17.04	19.50	0.0026	20247	14.58	67.18	14.65	67.21
N114B	OFFSITE	25YR-24HR	14.52	17.00	21.80	0.0048	8241	14.65	67.21	14.68	67.22
N120	OFFSITE	25YR-24HR	14.50	16.96	20.50	0.0017	37197	14.39	157.24	14.50	157.20
N124 (BRW PIT)	BASE	25YR-24HR	12.30	20.66	22.00	0.0004	303433	12.00	55.21	12.30	22.80
OFFSITE-7046+00	WETLAND	25YR-24HR	13.95	26.49	23.50	0.0031	3466	12.00	7.71	12.10	7.16
OFFSITE-7049+00	WETLAND	25YR-24HR	13.95	26.49	23.50	0.0030	5032	12.08	17.85	12.10	17.26
OFFSITE-7050+00	WETLAND	25YR-24HR	13.95	26.49	23.00	0.0024	3582	12.08	21.82	12.10	21.28
OFFSITE-7050+50	WETLAND	25YR-24HR	13.95	26.49	23.34	0.0029	13655	12.13	28.12	12.16	21.40
OFFSITE-7058+00	WETLAND	25YR-24HR	13.94	26.48	24.23	0.0025	20541	13.31	53.31	13.73	49.43
OFFSITE-7064+00	WETLAND	25YR-24HR	13.95	26.44	23.16	0.0025	13750	13.45	96.74	13.54	65.28
OFFSITE-7066+75	WETLAND	25YR-24HR	13.94	26.44	22.42	0.0048	4559	21.30	16.76	13.45	19.11
POND 1	BASE	25YR-24HR	12.30	21.89	23.00	0.0013	142242	12.00	122.66	12.15	61.75
POND 2	BASE	25YR-24HR	13.16	22.24	23.00	0.0013	327012	12.00	171.28	13.96	16.42
POND 3	BASE	25YR-24HR	13.16	22.24	23.00	0.0013	103687	12.00	59.66	14.13	7.00
POND 4	BASE	25YR-24HR	12.34	22.20	23.00	0.0016	101638	12.00	98.55	12.15	33.21
POND 5	BASE	25YR-24HR	12.97	22.00	23.00	0.0010	717374	12.00	321.03	12.79	37.66
POND 6	BASE	25YR-24HR	13.87	21.73	23.00	0.0007	1810405	12.00	559.42	13.87	67.78
POND C1	WETLAND	25YR-24HR	12.16	24.86	25.00	0.0022	24285	12.00	32.47	12.13	25.36
POND C2	WETLAND	25YR-24HR	16.26	24.30	25.00	0.0012	75603	12.00	44.25	12.18	7.54
POND D	BASE	25YR-24HR	12.91	23.40	35.00	0.0010	97805	12.00	41.31	13.47	5.98
POND D1	BASE	25YR-24HR	12.57	23.24	25.00	0.0010	36585	12.08	20.24	12.57	10.58
POND J1	WETLAND	25YR-24HR	16.63	24.31	25.00	0.0010	97505	12.00	37.56	20.97	1.98
S-40-2	BASE	25YR-24HR	18.80	22.17	24.66	-0.0024	46202	12.08	34.01	0.00	146.67
S75A	BASE	25YR-24HR	13.07	22.10	24.80	-0.0052	256	14.13	7.00	14.15	7.01
S81C	BASE	25YR-24HR	16.17	20.94	23.00	0.0050	117	12.48	87.89	12.48	87.89
S81E	BASE	25YR-24HR	15.77	19.71	23.00	-0.0215	178	12.48	87.89	12.50	87.82
TW(N607)	BASE	25YR-24HR	12.50	15.00	99.00	0.0012	26946	14.50	157.20	0.00	0.00
WETLAND	WETLAND	25YR-24HR	18.80	22.17	23.00	0.0005	1139074	12.25	171.43	20.91	60.86
43-3A-1	WETLAND	25YR-24HR FDOT	12.22	24.87	25.50	0.0007	3553	12.00	0.46	11.49	0.41
43-3A-2	WETLAND	25YR-24HR FDOT	12.23	24.87	24.80	0.0007	3699	12.02	0.82	12.20	0.79
43-4-1	WETLAND	25YR-24HR FDOT	12.23	24.86	25.50	0.0004	9848	12.00	1.60	12.23	1.48
43-5-1	WETLAND	25YR-24HR FDOT	19.86	23.47	24.20	0.0001	1228	12.00	0.07	19.09	0.08
AREA C	WETLAND	25YR-24HR FDOT	20.41	23.66	28.00	0.0006	63191	12.00	12.38	11.73	9.14
Borrow 1	WETLAND	25YR-24HR FDOT	23.97	23.86	24.50	0.0002	687971	12.00	18.62	23.97	3.43
Borrow 2	WETLAND	25YR-24HR FDOT	24.00	23.86	24.50	0.0002	200145	12.00	4.91	27.43	0.64
Borrow 3	WETLAND	25YR-24HR FDOT	19.52	24.30	24.50	0.0004	276095	12.00	20.83	26.66	12.98
Dummy 13-1	WETLAND	25YR-24HR FDOT	19.82	23.47	24.50	0.0029	12722	15.53	38.39	18.87	51.88
Dummy 13-2	WETLAND	25YR-24HR FDOT	19.84	23.46	22.50	-0.0068	2970	18.87	51.88	16.21	65.47
Dummy 13-3	WETLAND	25YR-24HR FDOT	19.89	23.45	21.09	0.0031	50198	18.87	48.35	19.64	42.83
Dummy 13-A	WETLAND	25YR-24HR FDOT	19.82	23.46	22.90	-0.0027	5944	16.21	65.47	16.06	41.67
Dummy-BASIN-C	WETLAND	25YR-24HR FDOT	19.90	23.45	22.55	0.0027	41389	11.73	9.14	25.74	8.62
N110	OFFSITE	25YR-24HR FDOT	19.31	16.76	23.00	0.0008	35877	25.10	0.42	25.09	1.57
N112	OFFSITE	25YR-24HR FDOT	19.31	16.76	24.00	0.0002	459	0.00	0.00	22.57	0.01
N112A	OFFSITE	25YR-24HR FDOT	19.31	16.76	24.00	0.0012	14517	22.57	0.01	25.10	0.42
N114	OFFSITE	25YR-24HR FDOT	19.32	16.76	21.30	0.0008	31675	18.27	44.40	19.41	44.15
N114A	OFFSITE	25YR-24HR FDOT	19.30	16.66	19.50	0.0008	19444	19.41	44.15	19.48	44.20
N114B	OFFSITE	25YR-24HR FDOT	19.29	16.65	21.80	0.0012	7983	19.48	44.20	19.51	44.22
N120	OFFSITE	25YR-24HR FDOT	19.27	16.62	20.50	0.0008	36049	19.15	127.23	19.27	127.17

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
N124 (BRW PIT)	BASE	25YR-24HR FDOT	12.13	20.50	22.00	0.0001	302724	11.50	6.95	12.13	5.79
OFFSITE-7046+00	WETLAND	25YR-24HR FDOT	17.25	24.27	23.50	0.0007	1527	12.00	1.09	12.03	1.06
OFFSITE-7049+00	WETLAND	25YR-24HR FDOT	17.24	24.26	23.50	0.0007	2198	12.00	2.60	12.02	2.54
OFFSITE-7050+00	WETLAND	25YR-24HR FDOT	17.20	24.24	23.00	0.0007	1692	12.00	3.21	12.02	3.15
OFFSITE-7050+50	WETLAND	25YR-24HR FDOT	17.15	24.22	23.34	0.0014	9229	13.08	10.09	13.12	9.65
OFFSITE-7058+00	WETLAND	25YR-24HR FDOT	17.20	24.21	24.23	0.0014	14282	13.17	22.52	13.26	21.87
OFFSITE-7064+00	WETLAND	25YR-24HR FDOT	17.44	24.17	23.16	0.0016	9777	15.82	36.94	16.11	36.65
OFFSITE-7066+75	WETLAND	25YR-24HR FDOT	17.46	24.17	22.42	0.0014	3311	26.06	13.44	25.99	13.61
POND 1	BASE	25YR-24HR FDOT	15.10	21.32	23.00	0.0002	136622	12.00	22.09	12.11	19.68
POND 2	BASE	25YR-24HR FDOT	16.13	21.65	23.00	0.0003	319933	12.00	21.19	16.39	10.56
POND 3	BASE	25YR-24HR FDOT	16.13	21.65	23.00	0.0003	99422	11.99	7.84	15.22	4.11
POND 4	BASE	25YR-24HR FDOT	16.11	21.56	23.00	0.0003	97695	11.33	7.77	11.46	4.04
POND 5	BASE	25YR-24HR FDOT	16.17	21.56	23.00	0.0003	709992	12.00	42.80	15.13	17.65
POND 6	BASE	25YR-24HR FDOT	17.95	21.50	23.00	0.0002	1804303	12.00	83.33	17.95	44.40
POND C1	WETLAND	25YR-24HR FDOT	12.09	23.97	25.00	0.0003	20387	12.00	4.63	12.09	4.34
POND C2	WETLAND	25YR-24HR FDOT	20.78	23.69	25.00	0.0002	72942	12.00	6.70	11.83	4.22
POND D	BASE	25YR-24HR FDOT	15.33	22.94	35.00	0.0004	95533	12.00	5.89	15.72	3.14
POND D1	BASE	25YR-24HR FDOT	15.17	22.88	25.00	0.0004	35490	15.00	4.95	15.17	4.82
POND J1	WETLAND	25YR-24HR FDOT	22.08	23.96	25.00	0.0004	89078	12.00	5.15	28.12	1.18
S-40-2	BASE	25YR-24HR FDOT	21.12	22.08	24.66	-0.0024	45677	15.00	7.55	0.00	146.67
S75A	BASE	25YR-24HR FDOT	16.15	21.60	24.80	0.0050	256	15.22	4.11	15.23	4.11
S81C	BASE	25YR-24HR FDOT	19.11	20.36	23.00	0.0014	135	19.11	80.39	19.10	80.39
S81E	BASE	25YR-24HR FDOT	19.14	19.07	23.00	-0.0215	233	19.10	80.39	19.12	80.39
TW(N607)	BASE	25YR-24HR FDOT	12.50	15.00	99.00	0.0014	26476	19.27	127.17	0.00	0.00
WETLAND	WETLAND	25YR-24HR FDOT	21.12	22.08	23.00	0.0003	1131055	0.00	122.66	21.12	55.35
43-3A-1	WETLAND	50YR-24HR FDOT	12.18	24.92	25.50	0.0006	3607	12.00	0.56	12.01	0.50
43-3A-2	WETLAND	50YR-24HR FDOT	12.19	24.92	24.80	0.0006	3753	12.05	1.02	12.18	1.00
43-4-1	WETLAND	50YR-24HR FDOT	12.19	24.91	25.50	0.0005	9995	12.00	1.99	12.19	1.87
43-5-1	WETLAND	50YR-24HR FDOT	20.36	23.88	24.20	0.0002	1388	12.00	0.08	20.96	0.31
AREA C	WETLAND	50YR-24HR FDOT	21.22	24.10	28.00	0.0006	81688	11.82	13.27	11.38	9.00
Borrow 1	WETLAND	50YR-24HR FDOT	23.33	24.00	24.50	0.0002	690493	12.00	21.37	25.54	5.34
Borrow 2	WETLAND	50YR-24HR FDOT	23.38	24.00	24.50	0.0002	201636	12.00	5.63	26.84	1.05
Borrow 3	WETLAND	50YR-24HR FDOT	20.34	24.90	24.50	0.0004	304540	12.00	23.88	27.94	14.92
Dummy 13-1	WETLAND	50YR-24HR FDOT	20.36	23.88	24.50	0.0029	14070	16.13	42.75	17.66	59.09
Dummy 13-2	WETLAND	50YR-24HR FDOT	20.36	23.88	22.50	-0.0077	3132	17.66	59.09	20.36	85.10
Dummy 13-3	WETLAND	50YR-24HR FDOT	20.40	23.86	21.09	0.0031	52154	17.66	53.16	19.96	47.16
Dummy 13-A	WETLAND	50YR-24HR FDOT	20.24	23.87	22.90	-0.0029	6255	20.36	85.10	15.60	46.71
Dummy-BASIN-C	WETLAND	50YR-24HR FDOT	20.40	23.86	22.55	0.0027	43095	11.38	9.00	26.67	10.04
N110	OFFSITE	50YR-24HR FDOT	19.10	16.98	23.00	0.0008	37162	25.01	0.54	25.05	1.92
N112	OFFSITE	50YR-24HR FDOT	19.08	16.98	24.00	0.0004	469	0.00	0.00	24.62	0.02
N112A	OFFSITE	50YR-24HR FDOT	19.09	16.98	24.00	0.0011	15548	24.62	0.02	25.01	0.54
N114	OFFSITE	50YR-24HR FDOT	19.11	16.98	21.30	0.0008	32658	16.57	53.82	17.47	53.66
N114A	OFFSITE	50YR-24HR FDOT	19.14	16.86	19.50	0.0008	19869	17.47	53.66	17.51	53.64
N114B	OFFSITE	50YR-24HR FDOT	19.14	16.84	21.80	0.0012	8125	17.51	53.64	17.53	53.63
N120	OFFSITE	50YR-24HR FDOT	19.14	16.81	20.50	0.0008	36688	19.07	143.67	19.14	143.66
N124 (BRW PIT)	BASE	50YR-24HR FDOT	12.12	20.51	22.00	0.0001	302781	11.50	7.96	12.12	6.83
OFFSITE-7046+00	WETLAND	50YR-24HR FDOT	19.03	24.82	23.50	0.0007	2008	12.00	1.34	12.02	1.29
OFFSITE-7049+00	WETLAND	50YR-24HR FDOT	19.03	24.82	23.50	0.0006	2904	12.00	3.18	12.02	3.10
OFFSITE-7050+00	WETLAND	50YR-24HR FDOT	19.07	24.81	23.00	0.0006	2171	12.00	3.92	12.02	3.82
OFFSITE-7050+50	WETLAND	50YR-24HR FDOT	19.11	24.81	23.34	0.0016	10370	13.03	12.25	13.12	11.50

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
OFFSITE-7058+00	WETLAND	50YR-24HR FDOT	19.13	24.80	24.23	0.0016	15910	13.12	27.44	13.45	26.44
OFFSITE-7064+00	WETLAND	50YR-24HR FDOT	19.15	24.77	23.16	0.0016	10831	13.80	47.43	16.78	40.71
OFFSITE-7066+75	WETLAND	50YR-24HR FDOT	19.16	24.77	22.42	0.0016	3644	26.90	15.22	26.80	15.41
POND 1	BASE	50YR-24HR FDOT	19.06	21.38	23.00	0.0002	137272	12.00	26.13	12.10	23.61
POND 2	BASE	50YR-24HR FDOT	16.14	21.82	23.00	0.0003	321960	12.00	25.29	16.35	12.32
POND 3	BASE	50YR-24HR FDOT	16.14	21.82	23.00	0.0003	100643	12.00	9.27	16.06	4.95
POND 4	BASE	50YR-24HR FDOT	16.11	21.69	23.00	0.0003	98481	11.33	9.05	11.47	4.64
POND 5	BASE	50YR-24HR FDOT	16.15	21.69	23.00	0.0003	712168	12.00	50.19	15.16	21.39
POND 6	BASE	50YR-24HR FDOT	16.36	21.60	23.00	0.0002	1806869	12.00	97.54	16.36	53.83
POND C1	WETLAND	50YR-24HR FDOT	21.10	24.14	25.00	0.0003	20722	12.00	5.32	12.08	5.02
POND C2	WETLAND	50YR-24HR FDOT	21.21	24.10	25.00	0.0002	74761	11.92	7.72	11.39	4.18
POND D	BASE	50YR-24HR FDOT	15.19	23.04	35.00	0.0003	96032	12.00	6.80	15.59	3.79
POND D1	BASE	50YR-24HR FDOT	15.12	22.95	25.00	0.0003	35709	15.00	5.95	15.12	5.85
POND J1	WETLAND	50YR-24HR FDOT	21.15	24.14	25.00	0.0004	93002	12.00	5.91	19.00	1.65
S-40-2	BASE	50YR-24HR FDOT	21.33	22.21	24.66	-0.0024	46455	12.00	9.56	0.00	146.67
S75A	BASE	50YR-24HR FDOT	16.14	21.75	24.80	-0.0052	256	16.06	4.95	16.07	4.95
S81C	BASE	50YR-24HR FDOT	19.15	20.94	23.00	0.0013	117	21.03	87.00	21.03	87.00
S81E	BASE	50YR-24HR FDOT	19.15	19.68	23.00	-0.0215	178	21.03	87.00	21.04	87.00
TW(N607)	BASE	50YR-24HR FDOT	12.50	15.00	99.00	0.0012	26719	19.14	143.66	0.00	0.00
WETLAND	WETLAND	50YR-24HR FDOT	21.33	22.21	23.00	0.0003	1142932	0.00	122.66	23.31	62.61
43-3A-1	WETLAND	MEAN ANN	13.15	24.83	25.50	0.0007	3507	12.08	0.97	12.13	0.73
43-3A-2	WETLAND	MEAN ANN	13.15	24.83	24.80	0.0015	3653	12.15	1.25	13.15	0.44
43-4-1	WETLAND	MEAN ANN	12.43	24.78	25.50	0.0006	9628	12.08	1.92	12.43	0.97
43-5-1	WETLAND	MEAN ANN	12.15	23.24	24.20	0.0002	1122	12.08	0.17	12.15	0.14
AREA C	WETLAND	MEAN ANN	12.75	23.05	28.00	0.0012	37621	12.09	20.70	12.43	14.70
Borrow 1	WETLAND	MEAN ANN	30.00	23.49	24.50	0.0003	681502	12.08	38.15	0.00	0.00
Borrow 2	WETLAND	MEAN ANN	29.95	23.49	24.50	0.0003	196318	12.00	17.68	12.13	4.57
Borrow 3	WETLAND	MEAN ANN	14.16	23.44	24.50	0.0010	262819	12.00	75.61	12.44	13.01
Dummy 13-1	WETLAND	MEAN ANN	15.03	22.59	24.50	0.0029	11648	13.49	36.24	13.75	38.80
Dummy 13-2	WETLAND	MEAN ANN	15.03	22.58	22.50	0.0051	2622	13.75	38.80	16.72	37.68
Dummy 13-3	WETLAND	MEAN ANN	15.07	22.56	21.09	0.0031	45924	13.75	40.26	14.60	35.68
Dummy 13-A	WETLAND	MEAN ANN	15.03	22.57	22.90	0.0033	5267	16.72	37.68	13.75	35.30
Dummy-BASIN-C	WETLAND	MEAN ANN	15.07	22.56	22.55	0.0027	37662	12.43	14.70	12.23	8.31
N110	OFFSITE	MEAN ANN	16.82	15.92	23.00	0.0015	30502	21.85	0.14	25.12	0.72
N112	OFFSITE	MEAN ANN	0.00	16.50	24.00	0.0000	439	0.00	0.00	0.00	0.00
N112A	OFFSITE	MEAN ANN	16.82	15.92	24.00	0.0025	10534	0.00	0.00	21.85	0.14
N114	OFFSITE	MEAN ANN	16.84	15.92	21.30	0.0013	27644	15.05	23.59	15.32	23.23
N114A	OFFSITE	MEAN ANN	17.21	15.84	19.50	0.0019	17711	15.32	23.23	12.89	23.18
N114B	OFFSITE	MEAN ANN	17.25	15.83	21.80	0.0047	7383	12.89	23.18	15.47	22.93
N120	OFFSITE	MEAN ANN	17.32	15.82	20.50	0.0013	33324	17.19	64.95	17.32	64.94
N124 (BRW PIT)	BASE	MEAN ANN	12.53	20.50	22.00	0.0003	302723	12.00	29.05	12.53	5.77
OFFSITE-7046+00	WETLAND	MEAN ANN	12.15	24.38	23.50	0.0025	1607	12.08	2.51	12.15	2.18
OFFSITE-7049+00	WETLAND	MEAN ANN	12.15	24.30	23.50	0.0024	2216	12.08	5.59	12.15	5.26
OFFSITE-7050+00	WETLAND	MEAN ANN	12.18	23.85	23.00	0.0018	1240	12.12	6.64	12.15	6.55
OFFSITE-7050+50	WETLAND	MEAN ANN	13.45	23.54	23.34	0.0028	7896	13.00	8.48	13.41	7.97
OFFSITE-7058+00	WETLAND	MEAN ANN	13.45	23.51	24.23	0.0029	12329	13.32	19.74	13.41	19.48
OFFSITE-7064+00	WETLAND	MEAN ANN	13.48	23.40	23.16	0.0029	8472	13.42	34.98	13.52	34.98
OFFSITE-7066+75	WETLAND	MEAN ANN	13.49	23.40	22.42	0.0028	2889	12.44	15.46	12.45	14.04
POND 1	BASE	MEAN ANN	12.34	21.31	23.00	0.0008	136570	12.00	48.62	12.34	23.83
POND 2	BASE	MEAN ANN	12.96	21.40	23.00	0.0008	316907	12.00	68.99	13.68	8.39

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
POND 3	BASE	MEAN ANN	12.96	21.40	23.00	0.0008	97588	12.00	25.30	13.09	3.94
POND 4	BASE	MEAN ANN	12.34	21.35	23.00	0.0009	96387	12.00	42.87	12.12	17.98
POND 5	BASE	MEAN ANN	12.88	21.32	23.00	0.0007	705797	12.00	145.98	12.50	20.72
POND 6	BASE	MEAN ANN	14.54	21.27	23.00	0.0005	1798124	12.00	260.55	14.54	24.36
POND C1	WETLAND	MEAN ANN	12.36	24.31	25.00	0.0021	21072	12.00	16.30	12.36	8.39
POND C2	WETLAND	MEAN ANN	12.73	23.32	25.00	0.0010	71340	12.08	21.97	12.71	5.09
POND D	BASE	MEAN ANN	14.16	22.67	35.00	0.0008	94160	12.00	20.02	14.41	1.39
POND D1	BASE	MEAN ANN	14.13	22.66	25.00	0.0008	34801	12.00	7.59	14.13	2.06
POND J1	WETLAND	MEAN ANN	17.71	23.21	25.00	0.0008	85406	12.00	19.21	19.55	0.58
S-40-2	BASE	MEAN ANN	18.92	21.75	24.66	-0.0024	43553	12.08	9.62	0.00	146.67
S75A	BASE	MEAN ANN	12.91	21.35	24.80	-0.0051	256	13.09	3.94	13.09	3.94
S81C	BASE	MEAN ANN	18.44	18.83	23.00	0.0031	188	18.42	41.97	18.36	41.97
S81E	BASE	MEAN ANN	17.72	16.48	23.00	-0.0215	246	18.36	41.97	0.00	46.56
TW(N607)	BASE	MEAN ANN	12.50	15.00	99.00	0.0012	25859	17.32	64.94	0.00	0.00
WETLAND	WETLAND	MEAN ANN	18.92	21.75	23.00	0.0004	1098629	0.00	122.66	18.92	28.65

Lakes at Cocoa Grove (21-0569.000)
Post-Dev Combined w/Ditch
Node Time Series, Ponds 1 and 6

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100YR-24HR	POND 1	BASE	0.00	20.80	23.00	131640	0.00	0.00	0.0	0.0
100YR-24HR	POND 1	BASE	0.50	20.80	23.00	131640	0.00	0.00	0.0	0.0
100YR-24HR	POND 1	BASE	1.00	20.80	23.00	131678	0.88	0.25	0.0	0.0
100YR-24HR	POND 1	BASE	1.50	20.81	23.00	131762	1.04	0.40	0.1	0.0
100YR-24HR	POND 1	BASE	2.00	20.82	23.00	131845	1.10	0.47	0.1	0.0
100YR-24HR	POND 1	BASE	2.50	20.83	23.00	131931	1.21	0.55	0.1	0.1
100YR-24HR	POND 1	BASE	3.00	20.84	23.00	132016	1.25	0.59	0.2	0.1
100YR-24HR	POND 1	BASE	3.50	20.85	23.00	132105	1.39	0.70	0.3	0.1
100YR-24HR	POND 1	BASE	4.00	20.86	23.00	132193	1.46	0.80	0.3	0.1
100YR-24HR	POND 1	BASE	4.50	20.87	23.00	132290	1.78	1.02	0.4	0.2
100YR-24HR	POND 1	BASE	5.00	20.88	23.00	132389	2.03	1.27	0.5	0.2
100YR-24HR	POND 1	BASE	5.50	20.89	23.00	132496	2.37	1.53	0.6	0.3
100YR-24HR	POND 1	BASE	6.00	20.90	23.00	132607	2.69	1.83	0.7	0.4
100YR-24HR	POND 1	BASE	6.50	20.92	23.00	132742	3.38	2.30	0.8	0.4
100YR-24HR	POND 1	BASE	7.00	20.93	23.00	132881	3.76	2.70	0.9	0.5
100YR-24HR	POND 1	BASE	7.50	20.95	23.00	133044	4.52	3.25	1.1	0.7
100YR-24HR	POND 1	BASE	8.00	20.96	23.00	133206	5.00	3.76	1.3	0.8
100YR-24HR	POND 1	BASE	8.50	20.98	23.00	133404	6.08	4.54	1.5	1.0
100YR-24HR	POND 1	BASE	9.00	21.01	23.00	133639	7.32	5.53	1.8	1.2
100YR-24HR	POND 1	BASE	9.50	21.03	23.00	133887	8.38	6.54	2.1	1.4
100YR-24HR	POND 1	BASE	10.00	21.07	23.00	134189	10.21	7.94	2.5	1.7
100YR-24HR	POND 1	BASE	10.50	21.11	23.00	134592	13.04	10.02	3.0	2.1
100YR-24HR	POND 1	BASE	11.00	21.16	23.00	135134	17.06	13.07	3.6	2.6
100YR-24HR	POND 1	BASE	11.50	21.25	23.00	136016	32.30	18.65	4.6	3.2
100YR-24HR	POND 1	BASE	11.75	21.52	23.00	138655	100.64	40.02	6.0	3.8
100YR-24HR	POND 1	BASE	12.00	22.09	23.00	144123	180.03	63.22	8.9	4.9
100YR-24HR	POND 1	BASE	12.25	22.54	23.00	148563	90.29	58.42	11.7	6.2
100YR-24HR	POND 1	BASE	12.50	22.59	23.00	149130	47.17	54.16	13.1	7.3
100YR-24HR	POND 1	BASE	12.75	22.52	23.00	148387	33.45	49.22	14.0	8.4
100YR-24HR	POND 1	BASE	13.00	22.43	23.00	147474	30.35	44.39	14.6	9.4
100YR-24HR	POND 1	BASE	13.25	22.35	23.00	146697	28.37	39.82	15.2	10.2
100YR-24HR	POND 1	BASE	13.50	22.29	23.00	146139	28.88	36.02	15.8	11.0
100YR-24HR	POND 1	BASE	13.75	22.25	23.00	145713	26.54	33.29	16.4	11.7
100YR-24HR	POND 1	BASE	14.00	22.21	23.00	145370	26.64	31.16	16.9	12.4
100YR-24HR	POND 1	BASE	14.25	22.19	23.00	145104	25.41	29.54	17.5	13.0
100YR-24HR	POND 1	BASE	14.50	22.16	23.00	144890	25.41	28.28	18.0	13.6
100YR-24HR	POND 1	BASE	14.75	22.14	23.00	144701	24.04	27.21	18.5	14.2
100YR-24HR	POND 1	BASE	15.00	22.13	23.00	144533	23.94	26.26	19.0	14.8
100YR-24HR	POND 1	BASE	15.25	22.11	23.00	144397	23.42	25.50	19.5	15.3
100YR-24HR	POND 1	BASE	15.50	22.10	23.00	144284	23.31	24.89	20.0	15.8
100YR-24HR	POND 1	BASE	15.75	22.09	23.00	144169	22.26	24.33	20.4	16.3
100YR-24HR	POND 1	BASE	16.00	22.08	23.00	144052	22.08	23.81	20.9	16.8
100YR-24HR	POND 1	BASE	16.25	22.07	23.00	143939	21.48	23.37	21.3	17.3
100YR-24HR	POND 1	BASE	17.25	22.02	23.00	143494	20.35	22.05	23.1	19.2
100YR-24HR	POND 1	BASE	18.25	21.97	23.00	142984	19.20	21.03	24.7	21.0
100YR-24HR	POND 1	BASE	19.25	21.91	23.00	142433	18.08	20.10	26.3	22.7
100YR-24HR	POND 1	BASE	20.25	21.86	23.00	141869	16.51	19.22	27.7	24.3
100YR-24HR	POND 1	BASE	21.25	21.79	23.00	141247	15.87	18.23	29.0	25.8
100YR-24HR	POND 1	BASE	22.25	21.73	23.00	140685	15.26	17.44	30.3	27.3
100YR-24HR	POND 1	BASE	23.25	21.67	23.00	140101	14.17	16.51	31.5	28.7

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
100YR-24HR	POND 1	BASE	24.25	21.60	23.00	139410	10.69	15.25	32.5	30.0
100YR-24HR	POND 1	BASE	25.25	21.50	23.00	138426	9.90	13.33	33.4	31.2
100YR-24HR	POND 1	BASE	26.25	21.42	23.00	137613	9.15	12.18	34.2	32.3
100YR-24HR	POND 1	BASE	27.25	21.34	23.00	136882	8.42	11.14	34.9	33.2
100YR-24HR	POND 1	BASE	28.25	21.27	23.00	136227	7.73	10.12	35.6	34.1
100YR-24HR	POND 1	BASE	29.25	21.21	23.00	135641	7.13	9.36	36.2	34.9
100YR-24HR	POND 1	BASE	30.00	21.17	23.00	135212	6.83	8.95	36.6	35.5
100YR-24HR	POND 6	BASE	0.00	20.80	23.00	1785492	0.00	0.00	0.0	0.0
100YR-24HR	POND 6	BASE	0.50	20.80	23.00	1785492	0.00	0.00	0.0	0.0
100YR-24HR	POND 6	BASE	1.00	20.80	23.00	1785592	8.00	0.02	0.2	0.0
100YR-24HR	POND 6	BASE	1.50	20.81	23.00	1785826	8.86	0.10	0.5	0.0
100YR-24HR	POND 6	BASE	2.00	20.82	23.00	1786062	8.86	0.23	0.9	0.0
100YR-24HR	POND 6	BASE	2.50	20.83	23.00	1786307	9.44	0.39	1.3	0.0
100YR-24HR	POND 6	BASE	3.00	20.84	23.00	1786550	9.40	0.58	1.6	0.0
100YR-24HR	POND 6	BASE	3.50	20.85	23.00	1786803	10.20	0.80	2.1	0.1
100YR-24HR	POND 6	BASE	4.00	20.86	23.00	1787055	10.19	1.05	2.5	0.1
100YR-24HR	POND 6	BASE	4.50	20.87	23.00	1787327	11.60	1.33	2.9	0.2
100YR-24HR	POND 6	BASE	5.00	20.88	23.00	1787607	12.09	1.65	3.4	0.2
100YR-24HR	POND 6	BASE	5.50	20.89	23.00	1787910	13.49	2.01	3.9	0.3
100YR-24HR	POND 6	BASE	6.00	20.90	23.00	1788226	14.18	2.42	4.5	0.4
100YR-24HR	POND 6	BASE	6.50	20.91	23.00	1788594	17.33	2.93	5.2	0.5
100YR-24HR	POND 6	BASE	7.00	20.93	23.00	1788991	18.30	3.51	5.9	0.6
100YR-24HR	POND 6	BASE	7.50	20.95	23.00	1789446	21.80	4.21	6.7	0.8
100YR-24HR	POND 6	BASE	8.00	20.96	23.00	1789926	22.77	5.00	7.6	1.0
100YR-24HR	POND 6	BASE	8.50	20.98	23.00	1790477	27.32	5.96	8.7	1.2
100YR-24HR	POND 6	BASE	9.00	21.01	23.00	1791125	32.29	7.17	9.9	1.5
100YR-24HR	POND 6	BASE	9.50	21.04	23.00	1791835	35.67	8.59	11.3	1.8
100YR-24HR	POND 6	BASE	10.00	21.07	23.00	1792664	42.93	10.35	12.9	2.2
100YR-24HR	POND 6	BASE	10.50	21.11	23.00	1793716	54.81	12.73	15.0	2.7
100YR-24HR	POND 6	BASE	11.00	21.16	23.00	1795099	71.56	16.11	17.6	3.3
100YR-24HR	POND 6	BASE	11.50	21.23	23.00	1797058	139.09	21.32	21.9	4.0
100YR-24HR	POND 6	BASE	11.75	21.37	23.00	1800723	448.50	32.30	28.0	4.6
100YR-24HR	POND 6	BASE	12.00	21.66	23.00	1808544	794.96	60.31	40.8	5.6
100YR-24HR	POND 6	BASE	12.25	21.92	23.00	1815391	405.15	89.18	53.2	7.1
100YR-24HR	POND 6	BASE	12.50	22.02	23.00	1818030	210.69	101.25	59.6	9.1
100YR-24HR	POND 6	BASE	12.75	22.05	23.00	1818965	143.96	102.66	63.3	11.2
100YR-24HR	POND 6	BASE	13.00	22.07	23.00	1819375	124.55	101.63	66.0	13.3
100YR-24HR	POND 6	BASE	13.25	22.08	23.00	1819589	111.44	101.05	68.5	15.4
100YR-24HR	POND 6	BASE	13.50	22.08	23.00	1819719	110.16	100.82	70.8	17.5
100YR-24HR	POND 6	BASE	13.75	22.08	23.00	1819755	97.58	100.69	72.9	19.5
100YR-24HR	POND 6	BASE	14.00	22.08	23.00	1819702	96.02	100.56	74.9	21.6
100YR-24HR	POND 6	BASE	14.25	22.08	23.00	1819595	89.29	100.43	76.8	23.7
100YR-24HR	POND 6	BASE	14.50	22.07	23.00	1819438	88.13	100.23	78.7	25.8
100YR-24HR	POND 6	BASE	14.75	22.06	23.00	1819232	81.42	99.96	80.4	27.8
100YR-24HR	POND 6	BASE	15.00	22.05	23.00	1818977	80.26	99.62	82.1	29.9
100YR-24HR	POND 6	BASE	15.25	22.04	23.00	1818702	77.57	99.26	83.7	32.0
100YR-24HR	POND 6	BASE	15.50	22.03	23.00	1818410	76.76	98.85	85.3	34.0
100YR-24HR	POND 6	BASE	15.75	22.02	23.00	1818086	72.07	98.31	86.8	36.0
100YR-24HR	POND 6	BASE	16.00	22.01	23.00	1817732	71.13	97.71	88.3	38.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
100YR-24HR	POND 6	BASE	16.25	21.99	23.00	1817365	68.50	96.99	89.8	40.1
100YR-24HR	POND 6	BASE	17.25	21.94	23.00	1815853	63.80	91.27	95.2	47.9
100YR-24HR	POND 6	BASE	18.25	21.88	23.00	1814385	59.03	84.71	100.3	55.1
100YR-24HR	POND 6	BASE	19.25	21.83	23.00	1813002	54.41	78.68	105.0	61.9
100YR-24HR	POND 6	BASE	20.25	21.78	23.00	1811722	47.96	73.24	109.2	68.2
100YR-24HR	POND 6	BASE	21.25	21.73	23.00	1810454	45.38	67.98	113.1	74.0
100YR-24HR	POND 6	BASE	22.25	21.69	23.00	1809322	43.16	63.39	116.7	79.4
100YR-24HR	POND 6	BASE	23.25	21.65	23.00	1808234	38.74	59.09	120.1	84.5
100YR-24HR	POND 6	BASE	24.25	21.61	23.00	1807064	23.81	54.57	122.7	89.2
100YR-24HR	POND 6	BASE	25.25	21.55	23.00	1805455	19.29	48.56	124.5	93.4
100YR-24HR	POND 6	BASE	26.25	21.49	23.00	1803955	15.87	43.17	125.9	97.2
100YR-24HR	POND 6	BASE	27.25	21.44	23.00	1802552	12.79	38.32	127.1	100.6
100YR-24HR	POND 6	BASE	28.25	21.39	23.00	1801237	10.01	33.96	128.1	103.6
100YR-24HR	POND 6	BASE	29.25	21.34	23.00	1800000	7.45	30.02	128.8	106.2
100YR-24HR	POND 6	BASE	30.00	21.31	23.00	1799117	5.57	27.31	129.2	108.0
10YR-24HR	POND 1	BASE	0.00	20.80	23.00	131640	0.00	0.00	0.0	0.0
10YR-24HR	POND 1	BASE	0.50	20.80	23.00	131640	0.00	0.00	0.0	0.0
10YR-24HR	POND 1	BASE	1.00	20.80	23.00	131640	0.00	0.00	0.0	0.0
10YR-24HR	POND 1	BASE	1.50	20.80	23.00	131667	0.57	0.19	0.0	0.0
10YR-24HR	POND 1	BASE	2.00	20.81	23.00	131716	0.61	0.24	0.0	0.0
10YR-24HR	POND 1	BASE	2.50	20.81	23.00	131767	0.67	0.28	0.1	0.0
10YR-24HR	POND 1	BASE	3.00	20.82	23.00	131818	0.69	0.31	0.1	0.0
10YR-24HR	POND 1	BASE	3.50	20.82	23.00	131871	0.77	0.36	0.1	0.0
10YR-24HR	POND 1	BASE	4.00	20.83	23.00	131925	0.79	0.39	0.2	0.1
10YR-24HR	POND 1	BASE	4.50	20.84	23.00	131983	0.91	0.45	0.2	0.1
10YR-24HR	POND 1	BASE	5.00	20.84	23.00	132041	0.95	0.51	0.2	0.1
10YR-24HR	POND 1	BASE	5.50	20.85	23.00	132099	1.03	0.58	0.3	0.1
10YR-24HR	POND 1	BASE	6.00	20.85	23.00	132157	1.08	0.65	0.3	0.2
10YR-24HR	POND 1	BASE	6.50	20.86	23.00	132222	1.28	0.77	0.4	0.2
10YR-24HR	POND 1	BASE	7.00	20.87	23.00	132288	1.42	0.91	0.4	0.2
10YR-24HR	POND 1	BASE	7.50	20.88	23.00	132364	1.73	1.12	0.5	0.3
10YR-24HR	POND 1	BASE	8.00	20.88	23.00	132443	1.90	1.30	0.6	0.3
10YR-24HR	POND 1	BASE	8.50	20.89	23.00	132538	2.34	1.58	0.6	0.4
10YR-24HR	POND 1	BASE	9.00	20.91	23.00	132653	2.90	1.98	0.8	0.4
10YR-24HR	POND 1	BASE	9.50	20.92	23.00	132781	3.39	2.40	0.9	0.5
10YR-24HR	POND 1	BASE	10.00	20.94	23.00	132938	4.15	2.92	1.0	0.6
10YR-24HR	POND 1	BASE	10.50	20.96	23.00	133148	5.41	3.75	1.2	0.8
10YR-24HR	POND 1	BASE	11.00	20.99	23.00	133439	7.30	5.01	1.5	1.0
10YR-24HR	POND 1	BASE	11.50	21.04	23.00	133925	14.33	7.33	1.9	1.2
10YR-24HR	POND 1	BASE	11.75	21.17	23.00	135247	45.03	14.42	2.6	1.4
10YR-24HR	POND 1	BASE	12.00	21.46	23.00	138059	87.58	35.03	3.9	1.9
10YR-24HR	POND 1	BASE	12.25	21.62	23.00	139581	49.57	48.22	5.3	2.8
10YR-24HR	POND 1	BASE	12.50	21.57	23.00	139067	28.91	42.35	6.2	3.7
10YR-24HR	POND 1	BASE	12.75	21.48	23.00	138251	22.30	33.90	6.7	4.5
10YR-24HR	POND 1	BASE	13.00	21.42	23.00	137673	20.74	27.58	7.1	5.2
10YR-24HR	POND 1	BASE	13.25	21.39	23.00	137323	19.55	23.90	7.5	5.7
10YR-24HR	POND 1	BASE	13.50	21.37	23.00	137120	19.65	21.90	8.0	6.2
10YR-24HR	POND 1	BASE	13.75	21.35	23.00	136972	18.22	20.54	8.3	6.6
10YR-24HR	POND 1	BASE	14.00	21.34	23.00	136855	18.11	19.52	8.7	7.0

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
10YR-24HR	POND 1	BASE	14.25	21.33	23.00	136761	17.30	18.77	9.1	7.4
10YR-24HR	POND 1	BASE	14.50	21.32	23.00	136683	17.15	18.17	9.4	7.8
10YR-24HR	POND 1	BASE	14.75	21.31	23.00	136606	16.28	17.60	9.8	8.2
10YR-24HR	POND 1	BASE	15.00	21.31	23.00	136533	16.10	17.07	10.1	8.5
10YR-24HR	POND 1	BASE	15.25	21.30	23.00	136471	15.69	16.65	10.4	8.9
10YR-24HR	POND 1	BASE	15.50	21.29	23.00	136415	15.51	16.29	10.8	9.2
10YR-24HR	POND 1	BASE	15.75	21.29	23.00	136355	14.84	15.89	11.1	9.6
10YR-24HR	POND 1	BASE	16.00	21.28	23.00	136293	14.63	15.49	11.4	9.9
10YR-24HR	POND 1	BASE	16.25	21.28	23.00	136236	14.20	15.12	11.7	10.2
10YR-24HR	POND 1	BASE	17.25	21.25	23.00	136027	13.16	13.85	12.8	11.4
10YR-24HR	POND 1	BASE	18.25	21.23	23.00	135826	12.13	12.68	13.9	12.5
10YR-24HR	POND 1	BASE	19.25	21.21	23.00	135643	11.17	11.68	14.8	13.5
10YR-24HR	POND 1	BASE	20.25	21.20	23.00	135477	10.03	10.83	15.7	14.4
10YR-24HR	POND 1	BASE	21.25	21.18	23.00	135310	9.44	10.00	16.5	15.3
10YR-24HR	POND 1	BASE	22.25	21.17	23.00	135178	8.96	9.44	17.3	16.1
10YR-24HR	POND 1	BASE	23.25	21.15	23.00	135037	8.31	8.82	18.0	16.8
10YR-24HR	POND 1	BASE	24.25	21.13	23.00	134852	6.36	7.91	18.6	17.5
10YR-24HR	POND 1	BASE	25.25	21.11	23.00	134581	5.76	6.53	19.1	18.1
10YR-24HR	POND 1	BASE	26.25	21.09	23.00	134398	5.20	5.86	19.5	18.6
10YR-24HR	POND 1	BASE	27.25	21.07	23.00	134232	4.70	5.31	19.9	19.1
10YR-24HR	POND 1	BASE	28.25	21.05	23.00	134078	4.26	4.83	20.3	19.5
10YR-24HR	POND 1	BASE	29.25	21.04	23.00	133934	3.86	4.40	20.7	19.9
10YR-24HR	POND 1	BASE	30.00	21.03	23.00	133833	3.60	4.10	20.9	20.2
10YR-24HR	POND 6	BASE	0.00	20.80	23.00	1785492	0.00	0.00	0.0	0.0
10YR-24HR	POND 6	BASE	0.50	20.80	23.00	1785492	0.00	0.00	0.0	0.0
10YR-24HR	POND 6	BASE	1.00	20.80	23.00	1785492	0.00	0.00	0.0	0.0
10YR-24HR	POND 6	BASE	1.50	20.80	23.00	1785566	5.06	0.01	0.1	0.0
10YR-24HR	POND 6	BASE	2.00	20.81	23.00	1785704	5.12	0.05	0.3	0.0
10YR-24HR	POND 6	BASE	2.50	20.81	23.00	1785848	5.46	0.11	0.5	0.0
10YR-24HR	POND 6	BASE	3.00	20.82	23.00	1785992	5.45	0.19	0.8	0.0
10YR-24HR	POND 6	BASE	3.50	20.82	23.00	1786143	5.92	0.28	1.0	0.0
10YR-24HR	POND 6	BASE	4.00	20.83	23.00	1786295	5.90	0.39	1.2	0.0
10YR-24HR	POND 6	BASE	4.50	20.84	23.00	1786458	6.62	0.51	1.5	0.1
10YR-24HR	POND 6	BASE	5.00	20.84	23.00	1786623	6.61	0.64	1.8	0.1
10YR-24HR	POND 6	BASE	5.50	20.85	23.00	1786790	6.98	0.79	2.1	0.1
10YR-24HR	POND 6	BASE	6.00	20.85	23.00	1786957	6.97	0.95	2.3	0.1
10YR-24HR	POND 6	BASE	6.50	20.86	23.00	1787141	8.16	1.13	2.7	0.2
10YR-24HR	POND 6	BASE	7.00	20.87	23.00	1787331	8.28	1.34	3.0	0.2
10YR-24HR	POND 6	BASE	7.50	20.88	23.00	1787544	9.82	1.57	3.4	0.3
10YR-24HR	POND 6	BASE	8.00	20.88	23.00	1787771	10.25	1.84	3.8	0.4
10YR-24HR	POND 6	BASE	8.50	20.89	23.00	1788035	12.47	2.17	4.2	0.5
10YR-24HR	POND 6	BASE	9.00	20.91	23.00	1788353	14.93	2.59	4.8	0.5
10YR-24HR	POND 6	BASE	9.50	20.92	23.00	1788710	16.63	3.09	5.5	0.7
10YR-24HR	POND 6	BASE	10.00	20.93	23.00	1789138	20.48	3.73	6.2	0.8
10YR-24HR	POND 6	BASE	10.50	20.96	23.00	1789692	26.66	4.61	7.2	1.0
10YR-24HR	POND 6	BASE	11.00	20.98	23.00	1790433	35.45	5.88	8.5	1.2
10YR-24HR	POND 6	BASE	11.50	21.02	23.00	1791489	70.61	7.89	10.7	1.5
10YR-24HR	POND 6	BASE	11.75	21.10	23.00	1793431	233.15	12.07	13.8	1.7
10YR-24HR	POND 6	BASE	12.00	21.25	23.00	1797669	425.26	23.05	20.6	2.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
10YR-24HR	POND 6	BASE	12.25	21.40	23.00	1801562	223.42	35.02	27.3	2.6
10YR-24HR	POND 6	BASE	12.50	21.46	23.00	1803251	119.19	40.71	30.9	3.4
10YR-24HR	POND 6	BASE	12.75	21.49	23.00	1803996	82.26	43.31	32.9	4.3
10YR-24HR	POND 6	BASE	13.00	21.51	23.00	1804412	70.20	44.79	34.5	5.2
10YR-24HR	POND 6	BASE	13.25	21.52	23.00	1804682	61.69	45.76	35.9	6.1
10YR-24HR	POND 6	BASE	13.50	21.53	23.00	1804875	59.89	46.45	37.1	7.1
10YR-24HR	POND 6	BASE	13.75	21.53	23.00	1804995	52.07	46.89	38.3	8.1
10YR-24HR	POND 6	BASE	14.00	21.53	23.00	1805050	50.33	47.08	39.3	9.0
10YR-24HR	POND 6	BASE	14.25	21.53	23.00	1805061	45.85	47.12	40.3	10.0
10YR-24HR	POND 6	BASE	14.50	21.53	23.00	1805035	44.51	47.03	41.3	11.0
10YR-24HR	POND 6	BASE	14.75	21.53	23.00	1804973	40.19	46.81	42.2	11.9
10YR-24HR	POND 6	BASE	15.00	21.53	23.00	1804878	38.96	46.46	43.0	12.9
10YR-24HR	POND 6	BASE	15.25	21.52	23.00	1804767	36.97	46.06	43.8	13.9
10YR-24HR	POND 6	BASE	15.50	21.52	23.00	1804643	36.07	45.62	44.5	14.8
10YR-24HR	POND 6	BASE	15.75	21.51	23.00	1804499	33.09	45.10	45.2	15.8
10YR-24HR	POND 6	BASE	16.00	21.51	23.00	1804337	32.19	44.52	45.9	16.7
10YR-24HR	POND 6	BASE	16.25	21.50	23.00	1804165	30.41	43.91	46.5	17.6
10YR-24HR	POND 6	BASE	17.25	21.47	23.00	1803410	26.85	41.27	48.9	21.1
10YR-24HR	POND 6	BASE	18.25	21.44	23.00	1802596	23.68	38.47	51.0	24.4
10YR-24HR	POND 6	BASE	19.25	21.41	23.00	1801772	20.86	35.71	52.8	27.5
10YR-24HR	POND 6	BASE	20.25	21.38	23.00	1800972	17.21	33.10	54.4	30.3
10YR-24HR	POND 6	BASE	21.25	21.35	23.00	1800153	15.74	30.50	55.8	32.9
10YR-24HR	POND 6	BASE	22.25	21.32	23.00	1799403	14.75	28.17	57.0	35.4
10YR-24HR	POND 6	BASE	23.25	21.29	23.00	1798679	12.46	25.99	58.2	37.6
10YR-24HR	POND 6	BASE	24.25	21.26	23.00	1797911	4.30	23.74	58.9	39.7
10YR-24HR	POND 6	BASE	25.25	21.22	23.00	1796856	1.58	20.76	59.1	41.5
10YR-24HR	POND 6	BASE	26.25	21.19	23.00	1795885	0.90	18.14	59.2	43.1
10YR-24HR	POND 6	BASE	27.25	21.15	23.00	1795014	0.47	15.89	59.3	44.5
10YR-24HR	POND 6	BASE	28.25	21.13	23.00	1794234	0.00	13.97	59.3	45.7
10YR-24HR	POND 6	BASE	29.25	21.10	23.00	1793536	0.00	12.31	59.3	46.8
10YR-24HR	POND 6	BASE	30.00	21.08	23.00	1793061	-0.22	11.23	59.3	47.6
25YR-24HR	POND 1	BASE	0.00	20.80	23.00	131640	0.00	0.00	0.0	0.0
25YR-24HR	POND 1	BASE	0.50	20.80	23.00	131640	0.00	0.00	0.0	0.0
25YR-24HR	POND 1	BASE	1.00	20.80	23.00	131643	0.32	0.08	0.0	0.0
25YR-24HR	POND 1	BASE	1.50	20.81	23.00	131702	0.75	0.27	0.0	0.0
25YR-24HR	POND 1	BASE	2.00	20.81	23.00	131763	0.79	0.32	0.1	0.0
25YR-24HR	POND 1	BASE	2.50	20.82	23.00	131827	0.86	0.37	0.1	0.0
25YR-24HR	POND 1	BASE	3.00	20.83	23.00	131891	0.90	0.42	0.1	0.1
25YR-24HR	POND 1	BASE	3.50	20.83	23.00	131957	0.99	0.45	0.2	0.1
25YR-24HR	POND 1	BASE	4.00	20.84	23.00	132024	1.03	0.53	0.2	0.1
25YR-24HR	POND 1	BASE	4.50	20.85	23.00	132095	1.18	0.63	0.3	0.1
25YR-24HR	POND 1	BASE	5.00	20.85	23.00	132166	1.24	0.71	0.3	0.1
25YR-24HR	POND 1	BASE	5.50	20.86	23.00	132239	1.39	0.83	0.4	0.2
25YR-24HR	POND 1	BASE	6.00	20.87	23.00	132312	1.55	0.99	0.4	0.2
25YR-24HR	POND 1	BASE	6.50	20.88	23.00	132398	1.92	1.23	0.5	0.3
25YR-24HR	POND 1	BASE	7.00	20.89	23.00	132487	2.13	1.44	0.6	0.3
25YR-24HR	POND 1	BASE	7.50	20.90	23.00	132593	2.62	1.77	0.7	0.4
25YR-24HR	POND 1	BASE	8.00	20.91	23.00	132704	2.95	2.10	0.8	0.5
25YR-24HR	POND 1	BASE	8.50	20.92	23.00	132837	3.63	2.57	0.9	0.6

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
25YR-24HR	POND 1	BASE	9.00	20.94	23.00	132997	4.34	3.10	1.1	0.7
25YR-24HR	POND 1	BASE	9.50	20.96	23.00	133169	5.01	3.68	1.3	0.8
25YR-24HR	POND 1	BASE	10.00	20.98	23.00	133380	6.18	4.53	1.5	1.0
25YR-24HR	POND 1	BASE	10.50	21.01	23.00	133667	8.02	5.80	1.8	1.2
25YR-24HR	POND 1	BASE	11.00	21.05	23.00	134061	10.69	7.69	2.2	1.5
25YR-24HR	POND 1	BASE	11.50	21.12	23.00	134705	20.65	11.12	2.8	1.9
25YR-24HR	POND 1	BASE	11.75	21.31	23.00	136539	64.24	23.14	3.7	2.2
25YR-24HR	POND 1	BASE	12.00	21.68	23.00	140169	122.62	54.47	5.6	3.0
25YR-24HR	POND 1	BASE	12.25	21.89	23.00	142215	65.68	60.88	7.6	4.2
25YR-24HR	POND 1	BASE	12.50	21.84	23.00	141674	37.08	55.08	8.7	5.4
25YR-24HR	POND 1	BASE	12.75	21.72	23.00	140505	28.08	46.66	9.3	6.5
25YR-24HR	POND 1	BASE	13.00	21.61	23.00	139508	26.12	39.22	9.9	7.3
25YR-24HR	POND 1	BASE	13.25	21.54	23.00	138834	24.72	33.28	10.4	8.1
25YR-24HR	POND 1	BASE	13.50	21.50	23.00	138437	24.97	29.27	10.9	8.7
25YR-24HR	POND 1	BASE	13.75	21.48	23.00	138197	23.15	26.44	11.4	9.3
25YR-24HR	POND 1	BASE	14.00	21.46	23.00	138052	23.02	24.39	11.9	9.8
25YR-24HR	POND 1	BASE	14.25	21.45	23.00	137972	21.95	23.15	12.4	10.3
25YR-24HR	POND 1	BASE	14.50	21.45	23.00	137918	21.76	22.30	12.8	10.8
25YR-24HR	POND 1	BASE	14.75	21.44	23.00	137867	20.62	21.64	13.3	11.3
25YR-24HR	POND 1	BASE	15.00	21.44	23.00	137813	20.39	21.05	13.7	11.7
25YR-24HR	POND 1	BASE	15.25	21.43	23.00	137768	19.88	20.61	14.1	12.1
25YR-24HR	POND 1	BASE	15.50	21.43	23.00	137727	19.67	20.25	14.5	12.5
25YR-24HR	POND 1	BASE	15.75	21.42	23.00	137673	18.82	19.88	14.9	13.0
25YR-24HR	POND 1	BASE	16.00	21.42	23.00	137610	18.59	19.51	15.3	13.4
25YR-24HR	POND 1	BASE	16.25	21.41	23.00	137544	18.06	19.18	15.7	13.8
25YR-24HR	POND 1	BASE	17.25	21.38	23.00	137255	16.93	18.03	17.1	15.3
25YR-24HR	POND 1	BASE	18.25	21.35	23.00	136913	15.83	16.97	18.5	16.8
25YR-24HR	POND 1	BASE	19.25	21.31	23.00	136557	14.79	15.96	19.7	18.1
25YR-24HR	POND 1	BASE	20.25	21.28	23.00	136229	13.44	14.78	20.9	19.4
25YR-24HR	POND 1	BASE	21.25	21.25	23.00	135991	12.63	13.35	22.0	20.5
25YR-24HR	POND 1	BASE	22.25	21.23	23.00	135820	11.87	12.49	23.0	21.6
25YR-24HR	POND 1	BASE	23.25	21.21	23.00	135634	10.83	11.51	23.9	22.6
25YR-24HR	POND 1	BASE	24.25	21.19	23.00	135392	8.13	10.15	24.7	23.5
25YR-24HR	POND 1	BASE	25.25	21.15	23.00	135045	7.25	8.22	25.3	24.3
25YR-24HR	POND 1	BASE	26.25	21.13	23.00	134824	6.54	7.32	25.9	24.9
25YR-24HR	POND 1	BASE	27.25	21.11	23.00	134630	5.91	6.62	26.4	25.5
25YR-24HR	POND 1	BASE	28.25	21.09	23.00	134452	5.35	6.01	26.9	26.0
25YR-24HR	POND 1	BASE	29.25	21.07	23.00	134284	4.84	5.46	27.3	26.5
25YR-24HR	POND 1	BASE	30.00	21.06	23.00	134166	4.50	5.09	27.6	26.8
25YR-24HR	POND 6	BASE	0.00	20.80	23.00	1785492	0.00	0.00	0.0	0.0
25YR-24HR	POND 6	BASE	0.50	20.80	23.00	1785492	0.00	0.00	0.0	0.0
25YR-24HR	POND 6	BASE	1.00	20.80	23.00	1785501	3.13	0.00	0.1	0.0
25YR-24HR	POND 6	BASE	1.50	20.81	23.00	1785660	6.48	0.04	0.3	0.0
25YR-24HR	POND 6	BASE	2.00	20.81	23.00	1785835	6.49	0.11	0.5	0.0
25YR-24HR	POND 6	BASE	2.50	20.82	23.00	1786016	6.91	0.20	0.8	0.0
25YR-24HR	POND 6	BASE	3.00	20.83	23.00	1786197	6.90	0.32	1.1	0.0
25YR-24HR	POND 6	BASE	3.50	20.83	23.00	1786385	7.48	0.45	1.4	0.0
25YR-24HR	POND 6	BASE	4.00	20.84	23.00	1786574	7.46	0.60	1.7	0.1
25YR-24HR	POND 6	BASE	4.50	20.85	23.00	1786777	8.37	0.78	2.0	0.1

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
25YR-24HR	POND 6	BASE	5.00	20.86	23.00	1786980	8.36	0.97	2.4	0.1
25YR-24HR	POND 6	BASE	5.50	20.86	23.00	1787189	8.90	1.18	2.7	0.2
25YR-24HR	POND 6	BASE	6.00	20.87	23.00	1787397	9.06	1.41	3.1	0.2
25YR-24HR	POND 6	BASE	6.50	20.88	23.00	1787637	11.02	1.68	3.5	0.3
25YR-24HR	POND 6	BASE	7.00	20.89	23.00	1787893	11.54	1.99	4.0	0.4
25YR-24HR	POND 6	BASE	7.50	20.90	23.00	1788189	13.82	2.37	4.5	0.5
25YR-24HR	POND 6	BASE	8.00	20.91	23.00	1788503	14.48	2.80	5.1	0.6
25YR-24HR	POND 6	BASE	8.50	20.93	23.00	1788869	17.57	3.32	5.8	0.7
25YR-24HR	POND 6	BASE	9.00	20.94	23.00	1789309	21.08	3.99	6.5	0.8
25YR-24HR	POND 6	BASE	9.50	20.96	23.00	1789800	23.36	4.79	7.5	1.0
25YR-24HR	POND 6	BASE	10.00	20.98	23.00	1790380	28.35	5.79	8.5	1.2
25YR-24HR	POND 6	BASE	10.50	21.01	23.00	1791121	36.61	7.16	9.9	1.5
25YR-24HR	POND 6	BASE	11.00	21.04	23.00	1792091	48.30	9.12	11.6	1.8
25YR-24HR	POND 6	BASE	11.50	21.10	23.00	1793477	94.91	12.17	14.6	2.3
25YR-24HR	POND 6	BASE	11.75	21.19	23.00	1796058	311.22	18.60	18.8	2.6
25YR-24HR	POND 6	BASE	12.00	21.40	23.00	1801603	559.20	35.16	27.8	3.2
25YR-24HR	POND 6	BASE	12.25	21.59	23.00	1806600	289.58	52.82	36.5	4.1
25YR-24HR	POND 6	BASE	12.50	21.67	23.00	1808658	153.05	60.76	41.1	5.2
25YR-24HR	POND 6	BASE	12.75	21.70	23.00	1809497	105.33	64.10	43.8	6.5
25YR-24HR	POND 6	BASE	13.00	21.71	23.00	1809921	90.58	65.81	45.8	7.9
25YR-24HR	POND 6	BASE	13.25	21.72	23.00	1810166	80.18	66.81	47.6	9.2
25YR-24HR	POND 6	BASE	13.50	21.73	23.00	1810326	78.48	67.46	49.2	10.6
25YR-24HR	POND 6	BASE	13.75	21.73	23.00	1810402	68.86	67.77	50.7	12.0
25YR-24HR	POND 6	BASE	14.00	21.73	23.00	1810403	67.12	67.77	52.1	13.4
25YR-24HR	POND 6	BASE	14.25	21.73	23.00	1810358	61.75	67.59	53.5	14.8
25YR-24HR	POND 6	BASE	14.50	21.73	23.00	1810273	60.39	67.24	54.7	16.2
25YR-24HR	POND 6	BASE	14.75	21.72	23.00	1810148	55.11	66.73	55.9	17.6
25YR-24HR	POND 6	BASE	15.00	21.72	23.00	1809989	53.82	66.09	57.0	19.0
25YR-24HR	POND 6	BASE	15.25	21.71	23.00	1809815	51.46	65.38	58.1	20.3
25YR-24HR	POND 6	BASE	15.50	21.70	23.00	1809629	50.48	64.63	59.2	21.7
25YR-24HR	POND 6	BASE	15.75	21.70	23.00	1809421	46.76	63.79	60.2	23.0
25YR-24HR	POND 6	BASE	16.00	21.69	23.00	1809194	45.72	62.88	61.1	24.3
25YR-24HR	POND 6	BASE	16.25	21.68	23.00	1808958	43.50	61.94	62.1	25.6
25YR-24HR	POND 6	BASE	17.25	21.64	23.00	1807951	38.98	57.98	65.5	30.5
25YR-24HR	POND 6	BASE	18.25	21.60	23.00	1806891	34.80	53.92	68.5	35.2
25YR-24HR	POND 6	BASE	19.25	21.56	23.00	1805834	30.97	49.96	71.2	39.5
25YR-24HR	POND 6	BASE	20.25	21.52	23.00	1804815	26.01	46.24	73.6	43.4
25YR-24HR	POND 6	BASE	21.25	21.48	23.00	1803780	23.90	42.56	75.7	47.1
25YR-24HR	POND 6	BASE	22.25	21.45	23.00	1802833	22.31	39.28	77.6	50.5
25YR-24HR	POND 6	BASE	23.25	21.41	23.00	1801922	19.20	36.21	79.3	53.6
25YR-24HR	POND 6	BASE	24.25	21.38	23.00	1800951	8.39	33.04	80.4	56.5
25YR-24HR	POND 6	BASE	25.25	21.33	23.00	1799625	4.30	28.86	81.0	59.0
25YR-24HR	POND 6	BASE	26.25	21.28	23.00	1798363	2.46	25.06	81.2	61.3
25YR-24HR	POND 6	BASE	27.25	21.24	23.00	1797223	1.59	21.79	81.4	63.2
25YR-24HR	POND 6	BASE	28.25	21.20	23.00	1796206	0.99	19.00	81.5	64.9
25YR-24HR	POND 6	BASE	29.25	21.17	23.00	1795299	0.56	16.62	81.6	66.3
25YR-24HR	POND 6	BASE	30.00	21.14	23.00	1794683	0.31	15.06	81.6	67.3
MEAN ANN	POND 1	BASE	0.00	20.80	23.00	131640	0.00	0.00	0.0	0.0
MEAN ANN	POND 1	BASE	0.50	20.80	23.00	131640	0.00	0.00	0.0	0.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
MEAN ANN	POND 1	BASE	1.00	20.80	23.00	131640	0.00	0.00	0.0	0.0
MEAN ANN	POND 1	BASE	1.50	20.80	23.00	131640	0.00	0.00	0.0	0.0
MEAN ANN	POND 1	BASE	2.00	20.80	23.00	131657	0.40	0.14	0.0	0.0
MEAN ANN	POND 1	BASE	2.50	20.81	23.00	131691	0.44	0.17	0.0	0.0
MEAN ANN	POND 1	BASE	3.00	20.81	23.00	131726	0.45	0.18	0.0	0.0
MEAN ANN	POND 1	BASE	3.50	20.81	23.00	131762	0.50	0.21	0.1	0.0
MEAN ANN	POND 1	BASE	4.00	20.82	23.00	131799	0.51	0.23	0.1	0.0
MEAN ANN	POND 1	BASE	4.50	20.82	23.00	131839	0.58	0.29	0.1	0.0
MEAN ANN	POND 1	BASE	5.00	20.82	23.00	131879	0.60	0.30	0.1	0.1
MEAN ANN	POND 1	BASE	5.50	20.83	23.00	131920	0.65	0.38	0.2	0.1
MEAN ANN	POND 1	BASE	6.00	20.83	23.00	131961	0.67	0.37	0.2	0.1
MEAN ANN	POND 1	BASE	6.50	20.84	23.00	132006	0.79	0.43	0.2	0.1
MEAN ANN	POND 1	BASE	7.00	20.84	23.00	132052	0.82	0.48	0.2	0.1
MEAN ANN	POND 1	BASE	7.50	20.85	23.00	132102	0.95	0.55	0.3	0.1
MEAN ANN	POND 1	BASE	8.00	20.85	23.00	132152	0.99	0.62	0.3	0.2
MEAN ANN	POND 1	BASE	8.50	20.86	23.00	132209	1.16	0.71	0.4	0.2
MEAN ANN	POND 1	BASE	9.00	20.87	23.00	132275	1.42	0.89	0.4	0.2
MEAN ANN	POND 1	BASE	9.50	20.87	23.00	132348	1.64	1.08	0.5	0.3
MEAN ANN	POND 1	BASE	10.00	20.88	23.00	132435	2.02	1.32	0.6	0.3
MEAN ANN	POND 1	BASE	10.50	20.90	23.00	132552	2.67	1.72	0.7	0.4
MEAN ANN	POND 1	BASE	11.00	20.91	23.00	132717	3.69	2.35	0.8	0.5
MEAN ANN	POND 1	BASE	11.50	20.94	23.00	132987	7.13	3.43	1.0	0.6
MEAN ANN	POND 1	BASE	11.75	21.02	23.00	133704	23.68	6.26	1.3	0.7
MEAN ANN	POND 1	BASE	12.00	21.19	23.00	135420	48.61	15.66	2.1	0.9
MEAN ANN	POND 1	BASE	12.25	21.30	23.00	136507	28.30	23.28	2.9	1.3
MEAN ANN	POND 1	BASE	12.50	21.29	23.00	136420	17.17	22.51	3.3	1.8
MEAN ANN	POND 1	BASE	12.75	21.26	23.00	136061	13.58	18.78	3.7	2.2
MEAN ANN	POND 1	BASE	13.00	21.23	23.00	135799	12.76	15.85	3.9	2.6
MEAN ANN	POND 1	BASE	13.25	21.21	23.00	135633	12.08	14.17	4.2	2.9
MEAN ANN	POND 1	BASE	13.50	21.20	23.00	135533	12.12	13.24	4.4	3.2
MEAN ANN	POND 1	BASE	13.75	21.20	23.00	135452	11.24	12.54	4.7	3.4
MEAN ANN	POND 1	BASE	14.00	21.19	23.00	135384	11.14	11.97	4.9	3.7
MEAN ANN	POND 1	BASE	14.25	21.18	23.00	135327	10.61	11.52	5.1	3.9
MEAN ANN	POND 1	BASE	14.50	21.18	23.00	135277	10.48	11.13	5.4	4.2
MEAN ANN	POND 1	BASE	14.75	21.17	23.00	135227	9.91	10.76	5.6	4.4
MEAN ANN	POND 1	BASE	15.00	21.17	23.00	135178	9.75	10.40	5.8	4.6
MEAN ANN	POND 1	BASE	15.25	21.16	23.00	135136	9.47	10.11	6.0	4.8
MEAN ANN	POND 1	BASE	15.50	21.16	23.00	135099	9.33	9.85	6.2	5.0
MEAN ANN	POND 1	BASE	15.75	21.15	23.00	135058	8.89	9.58	6.4	5.2
MEAN ANN	POND 1	BASE	16.00	21.15	23.00	135017	8.74	9.31	6.5	5.4
MEAN ANN	POND 1	BASE	16.25	21.15	23.00	134978	8.46	9.07	6.7	5.6
MEAN ANN	POND 1	BASE	17.25	21.13	23.00	134840	7.83	8.28	7.4	6.3
MEAN ANN	POND 1	BASE	18.25	21.12	23.00	134713	7.33	7.66	8.0	7.0
MEAN ANN	POND 1	BASE	19.25	21.11	23.00	134601	6.87	7.18	8.6	7.6
MEAN ANN	POND 1	BASE	20.25	21.10	23.00	134499	6.28	6.78	9.1	8.2
MEAN ANN	POND 1	BASE	21.25	21.09	23.00	134393	6.02	6.37	9.6	8.7
MEAN ANN	POND 1	BASE	22.25	21.08	23.00	134306	5.78	6.09	10.1	9.2
MEAN ANN	POND 1	BASE	23.25	21.07	23.00	134210	5.38	5.74	10.6	9.7
MEAN ANN	POND 1	BASE	24.25	21.05	23.00	134084	4.19	5.20	11.0	10.2
MEAN ANN	POND 1	BASE	25.25	21.04	23.00	133899	3.80	4.36	11.3	10.6

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af
MEAN ANN	POND 1	BASE	26.25	21.02	23.00	133761	3.43	3.93	11.6	10.9
MEAN ANN	POND 1	BASE	27.25	21.01	23.00	133636	3.11	3.57	11.9	11.2
MEAN ANN	POND 1	BASE	28.25	21.00	23.00	133520	2.83	3.26	12.1	11.5
MEAN ANN	POND 1	BASE	29.25	20.98	23.00	133412	2.58	2.98	12.4	11.8
MEAN ANN	POND 1	BASE	30.00	20.98	23.00	133336	2.41	2.79	12.5	11.9
MEAN ANN	POND 6	BASE	0.00	20.80	23.00	1785492	0.00	0.00	0.0	0.0
MEAN ANN	POND 6	BASE	0.50	20.80	23.00	1785492	0.00	0.00	0.0	0.0
MEAN ANN	POND 6	BASE	1.00	20.80	23.00	1785492	0.00	0.00	0.0	0.0
MEAN ANN	POND 6	BASE	1.50	20.80	23.00	1785492	0.00	0.00	0.0	0.0
MEAN ANN	POND 6	BASE	2.00	20.80	23.00	1785539	3.37	0.01	0.1	0.0
MEAN ANN	POND 6	BASE	2.50	20.81	23.00	1785636	3.64	0.03	0.2	0.0
MEAN ANN	POND 6	BASE	3.00	20.81	23.00	1785734	3.64	0.06	0.4	0.0
MEAN ANN	POND 6	BASE	3.50	20.81	23.00	1785837	3.95	0.11	0.5	0.0
MEAN ANN	POND 6	BASE	4.00	20.82	23.00	1785941	3.95	0.16	0.7	0.0
MEAN ANN	POND 6	BASE	4.50	20.82	23.00	1786053	4.43	0.22	0.9	0.0
MEAN ANN	POND 6	BASE	5.00	20.82	23.00	1786166	4.42	0.30	1.0	0.0
MEAN ANN	POND 6	BASE	5.50	20.83	23.00	1786283	4.67	0.38	1.2	0.0
MEAN ANN	POND 6	BASE	6.00	20.83	23.00	1786398	4.66	0.46	1.4	0.1
MEAN ANN	POND 6	BASE	6.50	20.84	23.00	1786527	5.43	0.56	1.6	0.1
MEAN ANN	POND 6	BASE	7.00	20.84	23.00	1786657	5.42	0.67	1.9	0.1
MEAN ANN	POND 6	BASE	7.50	20.85	23.00	1786800	6.19	0.80	2.1	0.1
MEAN ANN	POND 6	BASE	8.00	20.85	23.00	1786945	6.19	0.94	2.3	0.2
MEAN ANN	POND 6	BASE	8.50	20.86	23.00	1787107	7.25	1.10	2.6	0.2
MEAN ANN	POND 6	BASE	9.00	20.87	23.00	1787293	8.41	1.29	3.0	0.3
MEAN ANN	POND 6	BASE	9.50	20.87	23.00	1787497	9.23	1.52	3.3	0.3
MEAN ANN	POND 6	BASE	10.00	20.88	23.00	1787742	11.36	1.81	3.7	0.4
MEAN ANN	POND 6	BASE	10.50	20.90	23.00	1788061	14.94	2.21	4.3	0.5
MEAN ANN	POND 6	BASE	11.00	20.91	23.00	1788494	20.18	2.79	5.0	0.6
MEAN ANN	POND 6	BASE	11.50	20.93	23.00	1789129	41.39	3.72	6.3	0.7
MEAN ANN	POND 6	BASE	11.75	20.98	23.00	1790318	139.77	5.68	8.2	0.8
MEAN ANN	POND 6	BASE	12.00	21.08	23.00	1792943	260.48	10.96	12.3	1.0
MEAN ANN	POND 6	BASE	12.25	21.17	23.00	1795415	139.90	16.92	16.4	1.3
MEAN ANN	POND 6	BASE	12.50	21.21	23.00	1796554	75.94	19.93	18.7	1.7
MEAN ANN	POND 6	BASE	12.75	21.23	23.00	1797113	52.22	21.48	20.0	2.1
MEAN ANN	POND 6	BASE	13.00	21.25	23.00	1797453	43.88	22.43	21.0	2.5
MEAN ANN	POND 6	BASE	13.25	21.26	23.00	1797692	37.80	23.11	21.8	3.0
MEAN ANN	POND 6	BASE	13.50	21.26	23.00	1797871	36.03	23.63	22.6	3.5
MEAN ANN	POND 6	BASE	13.75	21.27	23.00	1797996	30.56	23.99	23.3	4.0
MEAN ANN	POND 6	BASE	14.00	21.27	23.00	1798070	29.01	24.20	23.9	4.5
MEAN ANN	POND 6	BASE	14.25	21.27	23.00	1798111	25.87	24.32	24.5	5.0
MEAN ANN	POND 6	BASE	14.50	21.27	23.00	1798124	24.77	24.36	25.0	5.5
MEAN ANN	POND 6	BASE	14.75	21.27	23.00	1798109	21.90	24.32	25.5	6.0
MEAN ANN	POND 6	BASE	15.00	21.27	23.00	1798071	21.03	24.21	25.9	6.5
MEAN ANN	POND 6	BASE	15.25	21.27	23.00	1798021	19.75	24.06	26.3	7.0
MEAN ANN	POND 6	BASE	15.50	21.27	23.00	1797961	19.20	23.89	26.7	7.5
MEAN ANN	POND 6	BASE	15.75	21.26	23.00	1797887	17.35	23.67	27.1	8.0
MEAN ANN	POND 6	BASE	16.00	21.26	23.00	1797800	16.80	23.42	27.5	8.5
MEAN ANN	POND 6	BASE	16.25	21.26	23.00	1797706	15.71	23.15	27.8	8.9
MEAN ANN	POND 6	BASE	17.25	21.24	23.00	1797276	13.56	21.93	29.0	10.8

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
MEAN ANN	POND 6	BASE	18.25	21.22	23.00	1796786	11.53	20.57	30.0	12.6
MEAN ANN	POND 6	BASE	19.25	21.20	23.00	1796282	10.17	19.20	30.9	14.2
MEAN ANN	POND 6	BASE	20.25	21.18	23.00	1795798	8.31	17.91	31.7	15.7
MEAN ANN	POND 6	BASE	21.25	21.17	23.00	1795303	7.82	16.63	32.4	17.2
MEAN ANN	POND 6	BASE	22.25	21.15	23.00	1794857	7.67	15.50	33.0	18.5
MEAN ANN	POND 6	BASE	23.25	21.13	23.00	1794432	6.57	14.45	33.6	19.7
MEAN ANN	POND 6	BASE	24.25	21.12	23.00	1793972	1.18	13.34	33.9	20.9
MEAN ANN	POND 6	BASE	25.25	21.09	23.00	1793318	0.22	11.81	34.0	21.9
MEAN ANN	POND 6	BASE	26.25	21.07	23.00	1792720	-0.22	10.47	34.0	22.8
MEAN ANN	POND 6	BASE	27.25	21.05	23.00	1792178	-0.31	9.30	34.0	23.7
MEAN ANN	POND 6	BASE	28.25	21.03	23.00	1791690	-0.38	8.29	33.9	24.4
MEAN ANN	POND 6	BASE	29.25	21.01	23.00	1791249	-0.42	7.41	33.9	25.0
MEAN ANN	POND 6	BASE	30.00	21.00	23.00	1790946	-0.44	6.83	33.9	25.5

Lakes at Cocoa Grove (21-0569.000)
Post-Dev Combined w/Ditch
Node Time Series 25-yr, Wetland

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
25YR-24HR EXTEN	WETLAND	WETLAND	0.00	21.15	23.00	1040667	122.66	0.00	0.0	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	0.50	21.12	23.00	1037424	-24.13	0.00	2.0	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	1.00	21.08	23.00	1033314	-23.30	0.00	1.1	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	1.50	21.04	23.00	1029993	-14.48	0.00	0.3	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	2.00	21.03	23.00	1028423	-3.12	0.00	-0.1	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	2.50	21.03	23.00	1028341	1.10	0.00	-0.1	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	3.00	21.03	23.00	1028597	1.92	0.00	-0.1	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	3.50	21.03	23.00	1028941	2.47	0.00	0.0	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	4.00	21.04	23.00	1029365	2.90	0.00	0.1	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	4.50	21.04	23.00	1029862	3.39	0.00	0.3	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	5.00	21.05	23.00	1030441	3.79	0.00	0.4	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	5.50	21.06	23.00	1031084	4.20	0.00	0.6	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	6.00	21.06	23.00	1031788	4.51	0.00	0.8	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	6.50	21.07	23.00	1032558	5.12	0.00	1.0	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	7.00	21.08	23.00	1033425	5.53	0.00	1.2	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	7.50	21.09	23.00	1034384	5.41	0.00	1.4	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	8.00	21.10	23.00	1035474	6.92	0.00	1.7	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	8.50	21.11	23.00	1036716	8.12	0.00	2.0	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	9.00	21.13	23.00	1038209	9.71	0.00	2.3	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	9.50	21.15	23.00	1039998	11.70	0.00	2.8	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	10.00	21.17	23.00	1042161	15.93	0.20	3.3	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	10.50	21.20	23.00	1044882	19.20	0.70	4.1	0.0
25YR-24HR EXTEN	WETLAND	WETLAND	11.00	21.24	23.00	1048530	24.53	1.61	5.0	0.1
25YR-24HR EXTEN	WETLAND	WETLAND	11.50	21.29	23.00	1053259	38.04	3.11	6.3	0.2
25YR-24HR EXTEN	WETLAND	WETLAND	11.75	21.33	23.00	1057318	73.22	4.64	7.4	0.2
25YR-24HR EXTEN	WETLAND	WETLAND	12.00	21.41	23.00	1065551	143.27	8.29	9.7	0.4
25YR-24HR EXTEN	WETLAND	WETLAND	12.25	21.54	23.00	1078032	171.39	15.01	12.9	0.6
25YR-24HR EXTEN	WETLAND	WETLAND	12.50	21.66	23.00	1089564	147.98	22.29	16.2	1.0
25YR-24HR EXTEN	WETLAND	WETLAND	12.75	21.75	23.00	1098338	122.77	28.44	19.0	1.5
25YR-24HR EXTEN	WETLAND	WETLAND	13.00	21.82	23.00	1104981	106.55	33.41	21.4	2.2
25YR-24HR EXTEN	WETLAND	WETLAND	13.25	21.87	23.00	1110200	96.49	37.51	23.5	2.9
25YR-24HR EXTEN	WETLAND	WETLAND	13.50	21.91	23.00	1114453	90.10	40.96	25.4	3.7
25YR-24HR EXTEN	WETLAND	WETLAND	13.75	21.95	23.00	1118004	85.02	43.91	27.2	4.6
25YR-24HR EXTEN	WETLAND	WETLAND	14.00	21.98	23.00	1120956	80.74	46.42	28.9	5.5
25YR-24HR EXTEN	WETLAND	WETLAND	14.25	22.01	23.00	1123439	77.31	48.11	30.5	6.5
25YR-24HR EXTEN	WETLAND	WETLAND	14.50	22.03	23.00	1125580	75.27	49.44	32.1	7.5
25YR-24HR EXTEN	WETLAND	WETLAND	14.75	22.05	23.00	1127492	73.64	50.52	33.7	8.5
25YR-24HR EXTEN	WETLAND	WETLAND	15.00	22.06	23.00	1129194	72.16	51.53	35.2	9.6
25YR-24HR EXTEN	WETLAND	WETLAND	15.25	22.08	23.00	1130716	70.88	52.36	36.6	10.7
25YR-24HR EXTEN	WETLAND	WETLAND	15.50	22.09	23.00	1132080	69.73	53.11	38.1	11.8
25YR-24HR EXTEN	WETLAND	WETLAND	15.75	22.11	23.00	1133295	68.42	53.82	39.5	12.9
25YR-24HR EXTEN	WETLAND	WETLAND	16.00	22.12	23.00	1134350	67.14	54.48	40.9	14.0
25YR-24HR EXTEN	WETLAND	WETLAND	16.25	22.13	23.00	1135263	66.02	55.09	42.3	15.1
25YR-24HR EXTEN	WETLAND	WETLAND	17.25	22.15	23.00	1137783	62.80	57.07	47.6	19.7
25YR-24HR EXTEN	WETLAND	WETLAND	18.25	22.16	23.00	1138904	60.24	58.56	52.7	24.5
25YR-24HR EXTEN	WETLAND	WETLAND	19.25	22.16	23.00	1138954	58.18	59.67	57.6	29.4
25YR-24HR EXTEN	WETLAND	WETLAND	20.25	22.16	23.00	1138112	56.18	60.52	62.3	34.4
25YR-24HR EXTEN	WETLAND	WETLAND	21.25	22.14	23.00	1136362	54.08	60.25	66.9	39.4
25YR-24HR EXTEN	WETLAND	WETLAND	22.25	22.12	23.00	1134482	52.56	58.50	71.3	44.3
25YR-24HR EXTEN	WETLAND	WETLAND	23.25	22.10	23.00	1132634	50.73	56.79	75.6	49.0

Simulation	Node	Group	Time hrs	Stage ft	Warning Stage ft	Surface Area ft2	Total Inflow cfs	Total Outflow cfs	Total Vol In af	Total Vol Out af
25YR-24HR EXTEN	WETLAND	WETLAND	24.25	22.08	23.00	1130691	47.80	55.02	79.6	53.7
25YR-24HR EXTEN	WETLAND	WETLAND	25.25	22.05	23.00	1128019	43.45	52.61	83.4	58.1
25YR-24HR EXTEN	WETLAND	WETLAND	26.25	22.02	23.00	1125090	40.45	50.01	86.9	62.3
25YR-24HR EXTEN	WETLAND	WETLAND	27.25	21.99	23.00	1122057	37.59	47.37	90.1	66.4
25YR-24HR EXTEN	WETLAND	WETLAND	28.25	21.96	23.00	1118971	35.86	44.73	93.1	70.2
25YR-24HR EXTEN	WETLAND	WETLAND	29.25	21.93	23.00	1115845	31.10	42.11	95.9	73.8
25YR-24HR EXTEN	WETLAND	WETLAND	30.25	21.90	23.00	1112657	28.30	39.49	98.4	77.1
25YR-24HR EXTEN	WETLAND	WETLAND	35.25	21.68	23.00	1092004	10.87	23.95	106.4	90.2
25YR-24HR EXTEN	WETLAND	WETLAND	40.25	21.51	23.00	1074914	5.06	13.19	109.7	97.9
25YR-24HR EXTEN	WETLAND	WETLAND	45.25	21.41	23.00	1065282	4.42	8.12	111.7	102.3
25YR-24HR EXTEN	WETLAND	WETLAND	50.25	21.35	23.00	1059463	2.56	5.49	113.1	105.1
25YR-24HR EXTEN	WETLAND	WETLAND	55.25	21.31	23.00	1055665	1.99	3.97	114.1	107.1
25YR-24HR EXTEN	WETLAND	WETLAND	60.25	21.28	23.00	1053019	2.41	3.01	115.0	108.5
25YR-24HR EXTEN	WETLAND	WETLAND	65.25	21.26	23.00	1051078	1.31	2.37	115.8	109.6
25YR-24HR EXTEN	WETLAND	WETLAND	70.25	21.25	23.00	1049596	1.09	1.91	116.3	110.5
25YR-24HR EXTEN	WETLAND	WETLAND	75.25	21.24	23.00	1048425	0.93	1.57	116.7	111.2
25YR-24HR EXTEN	WETLAND	WETLAND	80.25	21.23	23.00	1047478	0.79	1.32	117.0	111.8
25YR-24HR EXTEN	WETLAND	WETLAND	85.25	21.22	23.00	1046694	0.68	1.12	117.3	112.3
25YR-24HR EXTEN	WETLAND	WETLAND	90.25	21.21	23.00	1046031	0.59	0.96	117.6	112.8
25YR-24HR EXTEN	WETLAND	WETLAND	95.25	21.21	23.00	1045461	0.52	0.82	117.8	113.1
25YR-24HR EXTEN	WETLAND	WETLAND	100.25	21.20	23.00	1044973	0.46	0.72	118.0	113.5
25YR-24HR EXTEN	WETLAND	WETLAND	105.25	21.20	23.00	1044524	0.41	0.63	118.2	113.7
25YR-24HR EXTEN	WETLAND	WETLAND	110.25	21.19	23.00	1044171	0.37	0.56	118.4	114.0
25YR-24HR EXTEN	WETLAND	WETLAND	115.25	21.19	23.00	1043861	0.34	0.49	118.5	114.2
25YR-24HR EXTEN	WETLAND	WETLAND	120.25	21.19	23.00	1043588	0.31	0.44	118.6	114.4
25YR-24HR EXTEN	WETLAND	WETLAND	130.25	21.18	23.00	1043128	0.27	0.35	118.9	114.7
25YR-24HR EXTEN	WETLAND	WETLAND	140.25	21.18	23.00	1042762	0.24	0.29	119.1	115.0
25YR-24HR EXTEN	WETLAND	WETLAND	150.25	21.18	23.00	1042469	0.25	0.24	119.3	115.2
25YR-24HR EXTEN	WETLAND	WETLAND	160.25	21.17	23.00	1042232	0.23	0.21	119.5	115.4
25YR-24HR EXTEN	WETLAND	WETLAND	170.25	21.17	23.00	1042035	0.23	0.18	119.7	115.6
25YR-24HR EXTEN	WETLAND	WETLAND	180.25	21.17	23.00	1041868	0.22	0.16	119.9	115.7
25YR-24HR EXTEN	WETLAND	WETLAND	190.25	21.17	23.00	1041725	0.18	0.14	120.0	115.8
25YR-24HR EXTEN	WETLAND	WETLAND	200.25	21.17	23.00	1041600	0.18	0.12	120.2	115.9
25YR-24HR EXTEN	WETLAND	WETLAND	210.25	21.16	23.00	1041489	0.17	0.11	120.3	116.0
25YR-24HR EXTEN	WETLAND	WETLAND	220.25	21.16	23.00	1041388	0.18	0.10	120.5	116.1
25YR-24HR EXTEN	WETLAND	WETLAND	230.25	21.16	23.00	1041296	0.17	0.09	120.6	116.2
25YR-24HR EXTEN	WETLAND	WETLAND	240.25	21.16	23.00	1041212	0.18	0.08	120.8	116.2
25YR-24HR EXTEN	WETLAND	WETLAND	250.25	21.16	23.00	1041134	0.17	0.07	120.9	116.3
25YR-24HR EXTEN	WETLAND	WETLAND	260.25	21.16	23.00	1041062	0.17	0.06	121.1	116.4
25YR-24HR EXTEN	WETLAND	WETLAND	270.25	21.16	23.00	1040993	0.16	0.06	121.2	116.4
25YR-24HR EXTEN	WETLAND	WETLAND	280.25	21.16	23.00	1040928	0.16	0.05	121.3	116.5
25YR-24HR EXTEN	WETLAND	WETLAND	290.25	21.16	23.00	1040866	0.16	0.05	121.5	116.5
25YR-24HR EXTEN	WETLAND	WETLAND	300.25	21.16	23.00	1040806	0.15	0.04	121.6	116.5
25YR-24HR EXTEN	WETLAND	WETLAND	310.25	21.16	23.00	1040748	0.16	0.04	121.7	116.6
25YR-24HR EXTEN	WETLAND	WETLAND	320.25	21.16	23.00	1040692	0.15	0.03	121.8	116.6
25YR-24HR EXTEN	WETLAND	WETLAND	330.25	21.16	23.00	1040642	0.15	0.03	122.0	116.6
25YR-24HR EXTEN	WETLAND	WETLAND	340.25	21.16	23.00	1040599	0.15	0.02	122.1	116.6
25YR-24HR EXTEN	WETLAND	WETLAND	350.25	21.15	23.00	1040562	0.15	0.02	122.2	116.7
25YR-24HR EXTEN	WETLAND	WETLAND	360.00	21.15	23.00	1040531	0.15	0.02	122.3	116.7

Simulation	Node	Group	Time	Stage	Warning Stage	Surface Area	Total Inflow	Total Outflow	Total Vol In	Total Vol Out
			hrs	ft	ft	ft2	cfs	cfs	af	af

Appendix D

ICPR Pre Development Input Information from

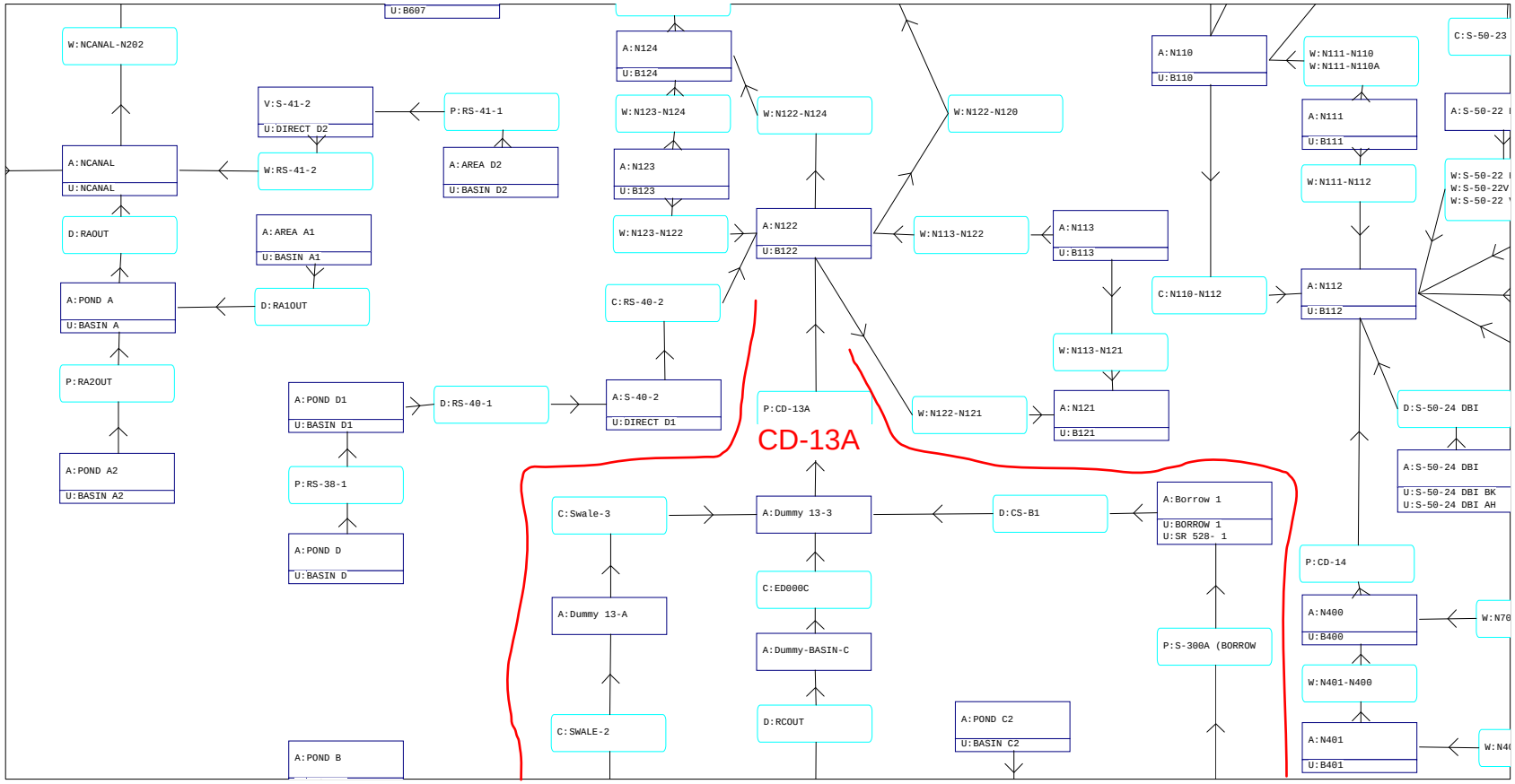
SJRWMD Permit No. 136255-5

AFF C03E - INTERIM CONDITION - East of I-95
Nodal Diagram
CD- 13A
042216   8.05am

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



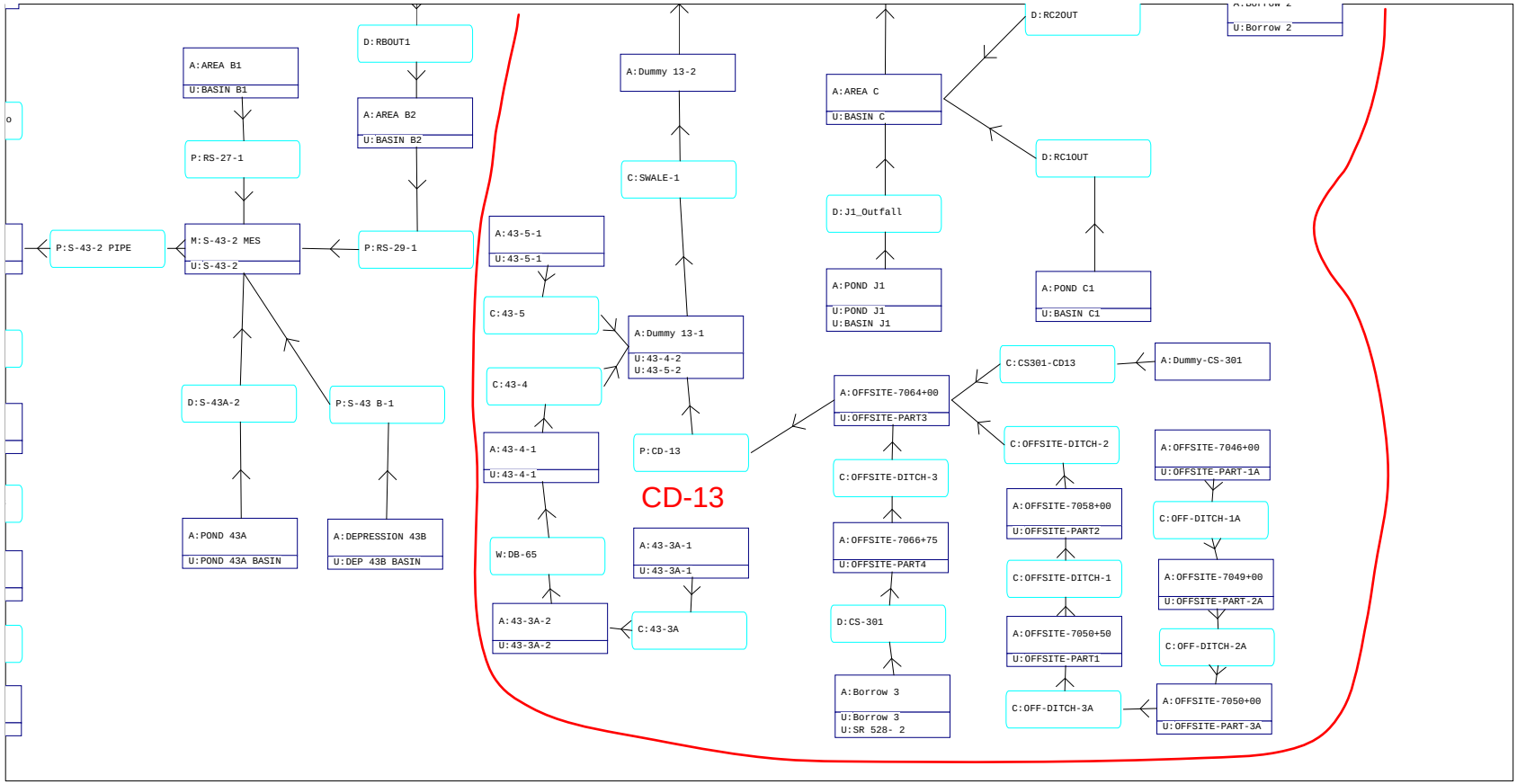
Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

AFF C03E - INTERIM CONDITION - East of I-95
Nodal Diagram
CD- 13
042216   8.05am

Nodes
A Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

Basins
O Overland Flow
U SCS Unit CN
S SBUH CN
Y SCS Unit GA
Z SBUH GA

Links
P Pipe
W Weir
C Channel
D Drop Structure
B Bridge
R Rating Curve
H Breach
E Percolation
F Filter
X Exfil Trench



Interconnected Channel and Pond Routing Model (ICPR) ©2002 Streamline Technologies, Inc.

Name: 43-3A-1 Node: 43-3A-1 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 0.850 Time Shift(hrs): 0.00
Curve Number: 64.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: 43-3A-2 Node: 43-3A-2 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 29.94
Area(ac): 0.850 Time Shift(hrs): 0.00
Curve Number: 64.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: 43-4-1 Node: 43-4-1 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 1.450 Time Shift(hrs): 0.00
Curve Number: 67.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: 43-4-2 Node: Dummy 13-1 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 70.70
Area(ac): 1.450 Time Shift(hrs): 0.00
Curve Number: 67.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: 43-5-1 Node: 43-5-1 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00

```
    Rainfall Amount(in): 0.000               Time of Conc(min): 10.00
              Area(ac): 0.110                  Time Shift(hrs): 0.00
          Curve Number: 70.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------
         Name: 43-5-2                  Node: Dummy 13-1            Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 16.87
              Area(ac): 0.110                  Time Shift(hrs): 0.00
          Curve Number: 70.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------
         Name: B100                    Node: N100                  Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 190.10
              Area(ac): 115.270                Time Shift(hrs): 0.00
          Curve Number: 61.58              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

O:\JOBS\58875-AAF-FEC\1-Active\ContractMgt\ContractMgt_(design)\3-PE03-PE E.520\4-Deliverables_Rec\2014.11.21-Final Submittal-Revised\Reports\BHR & Cross Dr

--------------------------------------------------------------------------------------------
         Name: B101                    Node: N101                  Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 361.70
              Area(ac): 172.200                Time Shift(hrs): 0.00
          Curve Number: 63.47              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00


--------------------------------------------------------------------------------------------
         Name: B102                    Node: N102                  Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 91.50
              Area(ac): 98.620                 Time Shift(hrs): 0.00
          Curve Number: 82.23              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

From SAI Consultants (AAF PE03 Team).

```
---------------------------------------------------------------------------------------------
         Name: BASIN B                 Node: POND B                Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750                 Time of Conc(min): 22.96
              Area(ac): 7.810                    Time Shift(hrs): 0.00
          Curve Number: 90.30                Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

From SAI Consultants (AAF PE03 Team).

```
---------------------------------------------------------------------------------------------
         Name: BASIN B1                Node: AREA B1               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750                 Time of Conc(min): 10.00
              Area(ac): 2.690                    Time Shift(hrs): 0.00
          Curve Number: 84.11                Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

From SAI Consultants (AAF PE03 Team).

```
---------------------------------------------------------------------------------------------
         Name: BASIN B2                Node: AREA B2               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750                 Time of Conc(min): 10.00
              Area(ac): 2.430                    Time Shift(hrs): 0.00
          Curve Number: 82.33                Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

From SAI Consultants (AAF PE03 Team).

```
---------------------------------------------------------------------------------------------
         Name: BASIN C                 Node: AREA C                Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750                 Time of Conc(min): 10.00
              Area(ac): 3.950                    Time Shift(hrs): 0.00
          Curve Number: 94.49                Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

From SAI Consultants (AAF PE03 Team).

```
---------------------------------------------------------------------------------------------
         Name: BASIN C1                Node: POND C1               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN
```

```
        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750                  Time of Conc(min): 10.00
                Area(ac): 5.400                   Time Shift(hrs): 0.00
           Curve Number: 92.74                Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From SAI Consultants (AAF PE03 Team).

-------------------------------------------------------------------------------------------------
         Name: BASIN C2                 Node: POND C2                 Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod                Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750                  Time of Conc(min): 11.78
                Area(ac): 7.880                   Time Shift(hrs): 0.00
           Curve Number: 91.76                Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From SAI Consultants (AAF PE03 Team).

-------------------------------------------------------------------------------------------------
         Name: BASIN D                  Node: POND D                  Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                      Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                  Time of Conc(min): 10.00
                Area(ac): 7.020                   Time Shift(hrs): 0.00
           Curve Number: 89.80                Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From HNTB Calculations - SJRWMD ERP No. 16690.

-------------------------------------------------------------------------------------------------
         Name: BASIN D1                 Node: POND D1                 Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                      Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                  Time of Conc(min): 10.00
                Area(ac): 4.100                   Time Shift(hrs): 0.00
           Curve Number: 76.60                Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From HNTB Calculations - SJRWMD ERP No. 16690.

-------------------------------------------------------------------------------------------------
         Name: BASIN D2                 Node: AREA D2                 Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                      Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                  Time of Conc(min): 10.00
                Area(ac): 2.220                   Time Shift(hrs): 0.00
```

```
           Curve Number: 61.00              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From HNTB Calculations - SJRWMD ERP No. 16690.

-------------------------------------------------------------------------------------------------
         Name: BASIN J1                 Node: POND J1                Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh484                   Peaking Factor: 484.0
          Rainfall File: Flmod               Storm Duration(hrs): 24.00
    Rainfall Amount(in): 7.750               Time of Conc(min): 10.00
                Area(ac): 1.750                 Time Shift(hrs): 0.00
           Curve Number: 98.00              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From SAI Consultants (AAF PE03 Team).


-------------------------------------------------------------------------------------------------
         Name: BORROW 1                 Node: BORROW 1               Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 0.00
    Rainfall Amount(in): 7.750               Time of Conc(min): 78.70
                Area(ac): 17.600                Time Shift(hrs): 0.00
           Curve Number: 95.00              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00

From SAI Consultants (AAF PE03 Team).

-------------------------------------------------------------------------------------------------
         Name: Borrow 2                 Node: Borrow 2               Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 0.00
    Rainfall Amount(in): 7.750               Time of Conc(min): 10.00
                Area(ac): 5.660                 Time Shift(hrs): 0.00
           Curve Number: 95.00              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00



-------------------------------------------------------------------------------------------------
         Name: Borrow 3                 Node: Borrow 3               Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 0.00
    Rainfall Amount(in): 7.750               Time of Conc(min): 10.00
                Area(ac): 7.870                 Time Shift(hrs): 0.00
           Curve Number: 93.00              Max Allowable Q(cfs): 999999.000
                DCIA(%): 0.00
```

```
--------------------------------------------------------------------------------------------
         Name: CD-13A-RD               Node: S-304                  Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File: Flmod               Storm Duration(hrs): 0.00
    Rainfall Amount(in): 7.750                 Time of Conc(min): 10.00
             Area(ac): 1.430                     Time Shift(hrs): 0.00
         Curve Number: 98.00                Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00



--------------------------------------------------------------------------------------------
         Name: DEP 43B BASIN           Node: DEPRESSION 43B         Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 25.00
             Area(ac): 1.263                     Time Shift(hrs): 0.00
         Curve Number: 81.00                Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00



--------------------------------------------------------------------------------------------
         Name: DIRECT D1               Node: S-40-2                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
             Area(ac): 6.610                     Time Shift(hrs): 0.00
         Curve Number: 69.00                Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00

From HNTB Calculations - SJRWMD ERP No. 16690.

--------------------------------------------------------------------------------------------
         Name: DIRECT D2               Node: S-41-2                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                    Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
             Area(ac): 7.080                     Time Shift(hrs): 0.00
         Curve Number: 78.50                Max Allowable Q(cfs): 999999.000
              DCIA(%): 0.00

From HNTB Calculations - SJRWMD ERP No. 16690.

--------------------------------------------------------------------------------------------
         Name: NCANAL                  Node: NCANAL                 Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN
```

```
        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 30.60
                Area(ac): 12.370                 Time Shift(hrs): 0.00
            Curve Number: 66.16              Max Allowable Q(cfs): 999999.000
                 DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: OFFSITE-PART-1A          Node: OFFSITE-7046+00        Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
                Area(ac): 1.880                  Time Shift(hrs): 0.00
            Curve Number: 67.18              Max Allowable Q(cfs): 999999.000
                 DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: OFFSITE-PART-2A          Node: OFFSITE-7049+00        Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
                Area(ac): 2.660                  Time Shift(hrs): 0.00
            Curve Number: 67.18              Max Allowable Q(cfs): 999999.000
                 DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: OFFSITE-PART-3A          Node: OFFSITE-7050+00        Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 10.00
                Area(ac): 1.150                  Time Shift(hrs): 0.00
            Curve Number: 67.18              Max Allowable Q(cfs): 999999.000
                 DCIA(%): 0.00


--------------------------------------------------------------------------------------------------
         Name: OFFSITE-PART1            Node: OFFSITE-7050+50        Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                  Peaking Factor: 323.0
          Rainfall File:                     Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000                 Time of Conc(min): 102.20
                Area(ac): 18.470                 Time Shift(hrs): 0.00
            Curve Number: 67.18              Max Allowable Q(cfs): 999999.000
```

DCIA(%): 0.00

Name: OFFSITE-PART2 Node: OFFSITE-7058+00 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 30.730 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART3 Node: OFFSITE-7064+00 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 25.330 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: OFFSITE-PART4 Node: OFFSITE-7066+75 Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 102.20
Area(ac): 12.700 Time Shift(hrs): 0.00
Curve Number: 67.18 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Name: Pine St AH Node: Pine St Ditch Status: Onsite
Group: BASE Type: SCS Unit Hydrograph CN

Unit Hydrograph: Uh323 Peaking Factor: 323.0
Rainfall File: Storm Duration(hrs): 0.00
Rainfall Amount(in): 0.000 Time of Conc(min): 10.00
Area(ac): 0.480 Time Shift(hrs): 0.00
Curve Number: 68.02 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Half area on the ditch

```
         Name: Pine St BK              Node: Offs DT PINE          Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 10.00
              Area(ac): 0.480                  Time Shift(hrs): 0.00
          Curve Number: 68.02              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Half area on the ditch

-------------------------------------------------------------------------------------------------
         Name: POND 43A BASIN          Node: POND 43A              Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 25.00
              Area(ac): 4.570                  Time Shift(hrs): 0.00
          Curve Number: 81.00              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00



-------------------------------------------------------------------------------------------------
         Name: POND J1                 Node: POND J1               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File: Flmod             Storm Duration(hrs): 0.00
    Rainfall Amount(in): 7.750               Time of Conc(min): 10.00
              Area(ac): 4.210                  Time Shift(hrs): 0.00
          Curve Number: 93.41              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From SAI Consultants (AAF PE03 Team).

-------------------------------------------------------------------------------------------------
         Name: POND-43-AREA            Node: POND 43               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000               Time of Conc(min): 25.00
              Area(ac): 8.090                  Time Shift(hrs): 0.00
          Curve Number: 76.10              Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00



-------------------------------------------------------------------------------------------------
         Name: S-12-1                  Node: S-43-1B               Status: Onsite
        Group: BASE                    Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                 Peaking Factor: 323.0
          Rainfall File:                   Storm Duration(hrs): 0.00
```

```
--------------------------------------------------------------------------------------------------
         Name: SBPOND3                  Node: SBPOND3                Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 76.00
              Area(ac): 13.040                Time Shift(hrs): 0.00
          Curve Number: 81.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

From SJRWMD Application No. 40-009-70259-1.

--------------------------------------------------------------------------------------------------
         Name: SR 528- 1                Node: Borrow 1               Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 7.940                 Time Shift(hrs): 0.00
          Curve Number: 98.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Ultimate Condition 6-lane with 12-ft inside shoulder and 10-ft outside shoulder, plus 2ft barrier wall

--------------------------------------------------------------------------------------------------
         Name: SR 528- 2                Node: Borrow 3               Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 10.00
              Area(ac): 16.080                Time Shift(hrs): 0.00
          Curve Number: 98.00             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00

Ultimate Condition 6-lane with 12-ft inside shoulder and 10-ft outside shoulder, plus 2ft barrier wall

--------------------------------------------------------------------------------------------------
         Name: WEST                     Node: CD-12outlet            Status: Onsite
        Group: BASE                     Type: SCS Unit Hydrograph CN

        Unit Hydrograph: Uh323                   Peaking Factor: 323.0
          Rainfall File:                  Storm Duration(hrs): 0.00
    Rainfall Amount(in): 0.000              Time of Conc(min): 21.80
              Area(ac): 8.700                 Time Shift(hrs): 0.00
          Curve Number: 58.82             Max Allowable Q(cfs): 999999.000
               DCIA(%): 0.00
```

Name: 43-3A From Node: 43-3A-1 Length(ft): 543.00
Group: BASE To Node: 43-3A-2 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	24.270	24.000	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	10.000	10.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: 43-4 From Node: 43-4-1 Length(ft): 1743.00
Group: BASE To Node: Dummy 13-1 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	24.500	23.150	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	10.000	10.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: 43-5 From Node: 43-5-1 Length(ft): 196.00
Group: BASE To Node: Dummy 13-1 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	23.150	23.050	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
			Entrance Loss Coef:	0.000

Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	10.000	10.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name:	ED000C	From Node:	Dummy-BASIN-C	Length(ft):	1664.00
Group:	BASE	To Node:	Dummy 13-3	Count:	1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	19.550	17.880	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.050000	0.050000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	28.000	28.000		
LtSdSlp(h/v):	3.00	3.00		
RtSdSlp(h/v):	2.00	2.00		

Name:	N100-N101	From Node:	N100	Length(ft):	1420.00
Group:	BASE	To Node:	N101	Count:	1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Average Conveyance
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	17.780	16.380	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.100000	0.100000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	50.000	50.000		

Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	3.000	3.000		
LtSdSlp(h/v):	1.00	1.00		
RtSdSlp(h/v):	1.00	1.00		

Name: OFF-DITCH-1A From Node: OFFSITE-7046+00 Length(ft): 348.00
Group: BASE To Node: OFFSITE-7049+00 Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	23.060	23.000	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.060000	0.060000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	2.000	2.000		
LtSdSlp(h/v):	3.00	3.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFF-DITCH-2A From Node: OFFSITE-7049+00 Length(ft): 160.00
Group: BASE To Node: OFFSITE-7050+00 Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	23.000	22.750	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.060000	0.060000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	2.000	0.000		

```
  LtSdSlp(h/v): 3.00           3.00
  RtSdSlp(h/v): 2.00           2.00



-------------------------------------------------------------------------------------------------
         Name: OFF-DITCH-3A       From Node: OFFSITE-7050+00    Length(ft): 186.00
        Group: BASE                 To Node: OFFSITE-7050+50         Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Trapezoidal    Trapezoidal              Solution Algorithm: Automatic
   Invert(ft): 22.750         20.690                                Flow: Both
TClpInitZ(ft): 9999.000       9999.000                Contraction Coef: 0.100
  Manning's N: 0.060000       0.060000                  Expansion Coef: 0.300
 Top Clip(ft): 0.000          0.000                   Entrance Loss Coef: 0.000
 Bot Clip(ft): 0.000          0.000                       Exit Loss Coef: 0.000
    Main XSec:                                        Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft):                                         Inlet Ctrl Spec: Use dc
    Aux XSec1:                                       Stabilizer Option: None
 AuxElev2(ft):
    Aux XSec2:
Top Width(ft):
    Depth(ft):
Bot Width(ft): 0.000          5.000
 LtSdSlp(h/v): 3.00           2.00
 RtSdSlp(h/v): 2.00           2.00



-------------------------------------------------------------------------------------------------
         Name: OFFSITE-DITCH-1    From Node: OFFSITE-7050+50    Length(ft): 780.00
        Group: BASE                 To Node: OFFSITE-7058+00         Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Trapezoidal    Trapezoidal              Solution Algorithm: Automatic
   Invert(ft): 20.690         20.300                                Flow: Both
TClpInitZ(ft): 9999.000       9999.000                Contraction Coef: 0.100
  Manning's N: 0.060000       0.060000                  Expansion Coef: 0.300
 Top Clip(ft): 0.000          0.000                   Entrance Loss Coef: 0.000
 Bot Clip(ft): 0.000          0.000                       Exit Loss Coef: 0.000
    Main XSec:                                        Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft):                                         Inlet Ctrl Spec: Use dc
    Aux XSec1:                                       Stabilizer Option: None
 AuxElev2(ft):
    Aux XSec2:
Top Width(ft):
    Depth(ft):
Bot Width(ft): 5.000          5.000
 LtSdSlp(h/v): 2.00           2.00
 RtSdSlp(h/v): 2.00           2.00



-------------------------------------------------------------------------------------------------
         Name: OFFSITE-DITCH-2    From Node: OFFSITE-7058+00    Length(ft): 600.00
        Group: BASE                 To Node: OFFSITE-7064+00         Count: 1
```

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	20.300	20.000	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.060000	0.060000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	5.000	5.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: OFFSITE-DITCH-3 From Node: OFFSITE-7066+75 Length(ft): 275.00
Group: BASE To Node: OFFSITE-7064+00 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Automatic
Invert(ft):	20.140	20.000	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.060000	0.060000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
Aux XSec1:			Inlet Ctrl Spec:	Use dc
AuxElev2(ft):			Stabilizer Option:	None
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	7.000	7.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: RS-40-2 From Node: S-40-2 Length(ft): 1280.00
Group: BASE To Node: N122 Count: 1

	UPSTREAM	DOWNSTREAM		
Geometry:	Trapezoidal	Trapezoidal	Friction Equation:	Average Conveyance
Invert(ft):	18.740	17.840	Solution Algorithm:	Automatic
TClpInitZ(ft):	9999.000	9999.000	Flow:	Both
Manning's N:	0.040000	0.040000	Contraction Coef:	0.100
Top Clip(ft):	0.000	0.000	Expansion Coef:	0.300
Bot Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.100
Main XSec:			Exit Loss Coef:	0.000
AuxElev1(ft):			Outlet Ctrl Spec:	Use dc or tw
			Inlet Ctrl Spec:	Use dc

Aux XSec2:		
Top Width(ft):		
Depth(ft):		
Bot Width(ft):	15.000	10.000
LtSdSlp(h/v):	6.00	6.00
RtSdSlp(h/v):	2.00	2.00

Name: SWALE-1 From Node: Dummy 13-1 Length(ft): 121.50
Group: BASE To Node: Dummy 13-2 Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	20.000	19.940	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.042000	0.042000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	15.000	15.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: SWALE-2 From Node: Dummy 13-2 Length(ft): 75.00
Group: BASE To Node: Dummy 13-A Count: 1

	UPSTREAM	DOWNSTREAM		
			Friction Equation:	Automatic
Geometry:	Trapezoidal	Trapezoidal	Solution Algorithm:	Automatic
Invert(ft):	19.940	19.900	Flow:	Both
TClpInitZ(ft):	9999.000	9999.000	Contraction Coef:	0.100
Manning's N:	0.042000	0.042000	Expansion Coef:	0.300
Top Clip(ft):	0.000	0.000	Entrance Loss Coef:	0.000
Bot Clip(ft):	0.000	0.000	Exit Loss Coef:	0.000
Main XSec:			Outlet Ctrl Spec:	Use dc or tw
AuxElev1(ft):			Inlet Ctrl Spec:	Use dc
Aux XSec1:			Stabilizer Option:	None
AuxElev2(ft):				
Aux XSec2:				
Top Width(ft):				
Depth(ft):				
Bot Width(ft):	15.000	15.000		
LtSdSlp(h/v):	2.00	2.00		
RtSdSlp(h/v):	2.00	2.00		

Name: Swale-3 From Node: Dummy 13-A Length(ft): 305.00
Group: BASE To Node: Dummy 13-3 Count: 1

	UPSTREAM	DOWNSTREAM
Geometry:	Trapezoidal	Trapezoidal
Invert(ft):	19.900	18.090
TClpInitZ(ft):	9999.000	9999.000
Manning's N:	0.042000	0.042000
Top Clip(ft):	0.000	0.000
Bot Clip(ft):	0.000	0.000
Main XSec:		
AuxElev1(ft):		
Aux XSec1:		
AuxElev2(ft):		
Aux XSec2:		
Top Width(ft):		
Depth(ft):		
Bot Width(ft):	15.000	15.000
LtSdSlp(h/v):	2.00	2.00
RtSdSlp(h/v):	2.00	2.00

Friction Equation: Automatic
Solution Algorithm: Automatic
Flow: Both
Contraction Coef: 0.100
Expansion Coef: 0.300
Entrance Loss Coef: 0.000
Exit Loss Coef: 0.000
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dc
Stabilizer Option: None

Name: 43-3A-1 Base Flow(cfs): 0.000 Init Stage(ft): 24.270
Group: BASE Warn Stage(ft): 25.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: 43-3A-2 Base Flow(cfs): 0.000 Init Stage(ft): 24.000
Group: BASE Warn Stage(ft): 24.800
Type: Stage/Area

Stage(ft)	Area(ac)

Name: 43-4-1 Base Flow(cfs): 0.000 Init Stage(ft): 24.500
Group: BASE Warn Stage(ft): 25.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: 43-5-1 Base Flow(cfs): 0.000 Init Stage(ft): 23.150
Group: BASE Warn Stage(ft): 24.200
Type: Stage/Area

Stage(ft)	Area(ac)

Name: AREA A1 Base Flow(cfs): 0.000 Init Stage(ft): 21.500
Group: BASE Warn Stage(ft): 25.050
Type: Stage/Area

From SAI Consultants (AAF PE03 Team).

Stage(ft)	Area(ac)
18.330	0.0010
21.680	0.0010
22.180	0.0200
22.680	0.0600
23.180	0.1900
23.680	0.4600
24.180	0.9100
24.680	1.8200
25.180	2.1500

33.600	2.4200
34.100	2.4240
34.600	2.4280
35.030	2.4290
45.030	2.4290

Name: AREA C Base Flow(cfs): 0.000 Init Stage(ft): 21.800
Group: BASE Warn Stage(ft): 28.000
Type: Stage/Area

From SAI Consultants (AAF PE03 Team).

Stage(ft)	Area(ac)
20.450	0.0010
20.880	0.0010
21.380	0.0010
21.880	0.0900
22.380	0.4000
22.880	0.7000
23.380	1.1700
23.880	1.6800
24.380	2.1300
24.880	2.4100
25.380	2.5900
25.880	2.7200
26.380	2.8700
26.880	3.0300
27.380	3.2900
27.880	3.5200
28.380	3.5900
28.880	3.6200
29.380	3.6500
29.880	3.6700
30.380	3.6900
30.880	3.7100
31.380	3.7300
31.880	3.7400
32.380	3.7600
32.880	3.7800
33.380	3.7900
33.880	3.8100
34.380	3.8200
34.880	3.8400
35.380	3.8500
35.880	3.8600
36.380	3.8800
36.880	3.8900
37.380	3.9000
37.880	3.9200
38.380	3.9300
38.880	3.9400
39.380	3.9400
40.080	3.9500
50.080	3.9500

Name: AREA D2 Base Flow(cfs): 0.000 Init Stage(ft): 21.260
Group: BASE Warn Stage(ft): 26.000
Type: Stage/Area

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Area(ac)
20.260	0.0100
20.660	0.1100
21.660	0.7900
22.660	1.3700
23.660	1.9400

Name: Borrow 1 Base Flow(cfs): 0.000 Init Stage(ft): 22.900
Group: BASE Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)
22.900	15.4050
23.100	15.4900
24.500	16.0500
25.500	17.6000

Name: Borrow 2 Base Flow(cfs): 0.000 Init Stage(ft): 22.900
Group: BASE Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)
22.900	4.3680
23.100	4.4150
24.500	4.7460
25.500	5.6560

Name: Borrow 3 Base Flow(cfs): 0.000 Init Stage(ft): 22.400
Group: BASE Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)
22.400	5.6600
22.700	5.7700
24.500	6.4100
25.500	7.8700

Name: CD-12outlet Base Flow(cfs): 0.000 Init Stage(ft): 16.640
Group: BASE Warn Stage(ft): 21.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: DEPRESSION 43B Base Flow(cfs): 0.000 Init Stage(ft): 21.600
Group: BASE Warn Stage(ft): 22.300
Type: Stage/Area

Stage(ft)	Area(ac)
21.600	0.1600
22.000	0.4200
22.300	0.4800

Name: Dummy 13-1 Base Flow(cfs): 0.000 Init Stage(ft): 20.000
Group: BASE Warn Stage(ft): 24.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy 13-2 Base Flow(cfs): 0.000 Init Stage(ft): 19.940
Group: BASE Warn Stage(ft): 22.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy 13-3 Base Flow(cfs): 0.000 Init Stage(ft): 18.090
Group: BASE Warn Stage(ft): 21.090
Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy 13-A Base Flow(cfs): 0.000 Init Stage(ft): 19.900
Group: BASE Warn Stage(ft): 22.900

Type: Stage/Area

Stage(ft)	Area(ac)

Name: Dummy-BASIN-C Base Flow(cfs): 0.000 Init Stage(ft): 19.550
Group: BASE Warn Stage(ft): 22.550
Type: Stage/Area

Stage(ft)	Area(ac)

Name: N100 Base Flow(cfs): 0.000 Init Stage(ft): 17.780
Group: BASE Warn Stage(ft): 25.500
Type: Stage/Area

From CatchmentSIM.

Stage(ft)	Area(ac)
17.780	0.0100
25.500	0.0100

Name: N101 Base Flow(cfs): 0.000 Init Stage(ft): 17.640
Group: BASE Warn Stage(ft): 24.500
Type: Stage/Area

From CatchmentSIM.

Stage(ft)	Area(ac)
16.380	0.0100
24.500	0.0100

Name: N102 Base Flow(cfs): 0.000 Init Stage(ft): 20.340
Group: BASE Warn Stage(ft): 25.440
Type: Stage/Area

From CatchmentSIM.

Stage(ft)	Area(ac)
20.340	0.0100
20.840	0.0100
21.340	0.0500
21.840	0.1000
22.340	0.1900
22.840	0.5800
23.340	1.9900

25.090	0.0100
25.590	0.0300

Name: N709 Base Flow(cfs): 0.000 Init Stage(ft): 25.090
Group: CD15 Warn Stage(ft): 25.100
Type: Stage/Area

Stage(ft)	Area(ac)
25.090	0.0100
25.100	0.0200

Name: NCANAL Base Flow(cfs): 0.000 Init Stage(ft): 16.640
Group: BASE Warn Stage(ft): 19.760
Type: Stage/Area

From CatchmentSIM.

Stage(ft)	Area(ac)
15.750	0.0100
17.080	0.0100
17.580	0.2100
18.080	0.3600
18.580	0.5500
19.080	0.8400
19.580	1.1900
19.760	1.3400
20.260	1.9300
20.760	2.9000
21.260	5.0800
21.760	7.5000

Name: Offs DT PINE Base Flow(cfs): 0.000 Init Stage(ft): 19.910
Group: BASE Warn Stage(ft): 21.530
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7046+00 Base Flow(cfs): 0.000 Init Stage(ft): 23.060
Group: BASE Warn Stage(ft): 23.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7049+00 Base Flow(cfs): 0.000 Init Stage(ft): 23.000
Group: BASE Warn Stage(ft): 23.500
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7050+00 Base Flow(cfs): 0.000 Init Stage(ft): 22.750
Group: BASE Warn Stage(ft): 23.000
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7050+50 Base Flow(cfs): 0.000 Init Stage(ft): 20.690
Group: BASE Warn Stage(ft): 23.340
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7058+00 Base Flow(cfs): 0.000 Init Stage(ft): 20.300
Group: BASE Warn Stage(ft): 24.230
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7064+00 Base Flow(cfs): 0.000 Init Stage(ft): 20.000
Group: BASE Warn Stage(ft): 23.160
Type: Stage/Area

Stage(ft)	Area(ac)

Name: OFFSITE-7066+75 Base Flow(cfs): 0.000 Init Stage(ft): 20.140
Group: BASE Warn Stage(ft): 22.420
Type: Stage/Area

32.830	6.2510
33.330	6.3140
33.830	6.3580
34.330	6.4020
34.830	6.4460
35.330	6.4920
35.830	6.5290
36.330	6.5650
36.830	6.5930
37.330	6.6250
37.830	6.6650
38.330	6.6960
38.830	6.7170
39.330	6.7420
39.830	6.7670
40.330	6.8030
40.830	6.8380
41.330	6.8590
41.830	6.8780
42.330	6.9000
42.830	6.9290
43.330	6.9590
43.830	6.9830
44.330	7.0030
44.830	7.0230
45.330	7.0600
45.830	7.0830
46.330	7.1040
46.830	7.1310
47.330	7.1640
47.830	7.2020
48.330	7.2370
48.830	7.2870
49.330	7.3550
49.830	7.4120
50.330	7.4760
50.830	7.5420
51.330	7.6180
51.830	7.6990
52.330	7.7920
52.600	7.8090
62.600	7.8090

Name: POND C1 Base Flow(cfs): 0.000 Init Stage(ft): 22.450
Group: BASE Warn Stage(ft): 25.000
Type: Stage/Area

From SAI Consultants (AAF PE03 Team).

Stage(ft)	Area(ac)
14.450	0.1800
20.450	0.2900
22.450	0.3900
22.900	0.4100
23.350	0.4400

24.450	0.4900
24.940	0.5700
26.450	0.8000
26.950	1.2760
27.450	1.8490
27.950	2.3890
28.450	2.8700
28.950	3.0840
29.610	3.1530
39.610	3.1530

Name: POND C2 Base Flow(cfs): 0.000 Init Stage(ft): 22.450
Group: BASE Warn Stage(ft): 25.000
Type: Stage/Area

From SAI Consultants (AAF PE03 Team).

Stage(ft)	Area(ac)
14.450	0.9400
20.450	1.2200
22.450	1.5500
22.650	1.5700
22.850	1.5900
24.240	1.7300
24.450	1.7500
25.450	2.2900
26.030	2.6450
26.530	3.0110
27.030	3.1970
27.530	3.3130
28.030	3.4180
28.530	3.4920
29.030	3.5680
29.530	3.6380
30.030	3.7190
30.530	3.7950
31.030	3.8690
31.530	3.9360
32.030	4.0030
32.530	4.0650
33.030	4.1220
33.530	4.1810
34.030	4.2360
34.530	4.2870
35.030	4.3320
35.530	4.3790
36.030	4.4320
36.530	4.4770
37.030	4.5280
37.530	4.5690
38.030	4.6150
38.530	4.6640
39.030	4.7150
39.530	4.7600
40.030	4.8110

40.530	4.8650
41.030	4.9110
41.530	4.9630
42.030	5.0140
42.530	5.0670
43.030	5.1210
43.530	5.1650
44.030	5.1990
44.530	5.2360
45.030	5.2630
45.530	5.2970
46.030	5.3270
46.530	5.3570
47.030	5.3930
47.530	5.4250
48.030	5.4630
48.530	5.5000
49.030	5.5440
49.530	5.5900
50.030	5.6440
50.530	5.6930
51.030	5.7290
51.530	5.7590
51.910	5.7660
61.910	5.7660

Name: POND D Base Flow(cfs): 0.000 Init Stage(ft): 21.960
Group: BASE Warn Stage(ft): 35.000
Type: Stage/Area

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Area(ac)
21.960	2.0800
23.960	2.3100
24.960	2.9300

Name: POND D1 Base Flow(cfs): 0.000 Init Stage(ft): 21.960
Group: BASE Warn Stage(ft): 25.000
Type: Stage/Area

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Area(ac)
21.960	0.7500
23.960	0.8900
24.460	1.2900

Name: POND J1 Base Flow(cfs): 0.000 Init Stage(ft): 22.300
Group: BASE Warn Stage(ft): 25.000

Type: Stage/Area

From SAI Consultants (AAF PE03 Team).

Stage(ft)	Area(ac)
22.300	1.8600
22.500	1.8800
24.000	2.0500
25.000	2.6600
28.000	2.6600

Name: S-40-2 Base Flow(cfs): 0.000 Init Stage(ft): 21.460
Group: BASE Warn Stage(ft): 24.660
Type: Stage/Area

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Area(ac)
21.460	0.0100
24.660	0.0100

Name: S-41-2 Base Flow(cfs): 0.000 Init Stage(ft): 21.260
Group: BASE Warn Stage(ft): 22.260
Type: Stage/Volume

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Stage(ft)	Volume(af)
21.260	0.0100
21.860	0.5640
22.260	1.0080
23.260	2.3520

Name: S-43-1 Base Flow(cfs): 0.000 Init Stage(ft): 16.000
Group: BASE Plunge Factor: 1.30 Warn Stage(ft): 33.700
Type: Manhole, Flat Floor

Stage(ft)	Area(ac)

Name: S-43-1B Base Flow(cfs): 0.000 Init Stage(ft): 17.700
Group: BASE Plunge Factor: 1.00 Warn Stage(ft): 22.800
Type: Manhole, Flat Floor

Name:	CD-11	From Node:	N218	Length(ft):	220.00
Group:	BASE	To Node:	TW CD-11	Count:	1
				Friction Equation:	Average Conveyance
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Automatic
Geometry:	Rectangular	Rectangular		Flow:	Both
Span(in):	132.00	132.00		Entrance Loss Coef:	0.50
Rise(in):	120.00	120.00		Exit Loss Coef:	1.00
Invert(ft):	5.820	5.470		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Name:	CD-12-Exist	From Node:	S-43-1	Length(ft):	232.00
Group:	BASE	To Node:	CD-12outlet	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	48.00	48.00		Entrance Loss Coef:	0.50
Rise(in):	48.00	48.00		Exit Loss Coef:	1.00
Invert(ft):	16.600	16.640		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

pipe length = 232 (exist) +18 = 250-ft

Name:	CD-13	From Node:	OFFSITE-7064+00	Length(ft):	61.00
Group:	BASE	To Node:	Dummy 13-1	Count:	1
				Friction Equation:	Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular		Flow:	Both
Span(in):	36.00	36.00		Entrance Loss Coef:	0.50
Rise(in):	36.00	36.00		Exit Loss Coef:	1.00
Invert(ft):	20.000	20.000		Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	CD-13A	From Node:	Dummy 13-3	Length(ft): 317.00
Group:	BASE	To Node:	N122	Count: 1
				Friction Equation: Automatic
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Automatic
Geometry:	Circular	Circular		Flow: Both
Span(in):	42.00	42.00		Entrance Loss Coef: 0.50
Rise(in):	42.00	42.00		Exit Loss Coef: 0.00
Invert(ft):	18.090	17.890		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name:	CD-14	From Node:	N400	Length(ft): 257.00
Group:	BASE	To Node:	N112	Count: 1
				Friction Equation: Average Conveyance
	UPSTREAM	DOWNSTREAM		Solution Algorithm: Automatic
Geometry:	Circular	Circular		Flow: Both
Span(in):	60.00	60.00		Entrance Loss Coef: 0.50
Rise(in):	60.00	60.00		Exit Loss Coef: 1.00
Invert(ft):	16.100	16.000		Bend Loss Coef: 0.00
Manning's N:	0.012000	0.012000		Outlet Ctrl Spec: Use dc or tw
Top Clip(in):	0.000	0.000		Inlet Ctrl Spec: Use dc
Bot Clip(in):	0.000	0.000		Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

From SAI Consultants (AAF PE03 Team).

Name:	RS-38-1	From Node:	POND D
Group:	BASE	To Node:	POND D1
	UPSTREAM	DOWNSTREAM	
Geometry:	Circular	Circular	
Span(in):	24.00	24.00	
Rise(in):	24.00	24.00	
Invert(ft):	19.350	19.290	
Manning's N:	0.013000	0.013000	
Top Clip(in):	0.000	0.000	
Bot Clip(in):	0.000	0.000	

Length(ft):	199.00
Count:	1
Friction Equation:	Average Conveyance
Solution Algorithm:	Automatic
Flow:	Both
Entrance Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Name:	RS-41-1	From Node:	AREA D2
Group:	BASE	To Node:	S-41-2
	UPSTREAM	DOWNSTREAM	
Geometry:	Circular	Circular	
Span(in):	18.00	18.00	
Rise(in):	18.00	18.00	
Invert(ft):	21.330	20.250	
Manning's N:	0.013000	0.013000	
Top Clip(in):	0.000	0.000	
Bot Clip(in):	0.000	0.000	

Length(ft):	82.00
Count:	1
Friction Equation:	Average Conveyance
Solution Algorithm:	Automatic
Flow:	Both
Entrance Loss Coef:	0.50
Exit Loss Coef:	1.00
Bend Loss Coef:	0.00
Outlet Ctrl Spec:	Use dc or tw
Inlet Ctrl Spec:	Use dc
Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

Name:	S-300A (BORROW	From Node:	Borrow 2
Group:	BASE	To Node:	Borrow 1

Length(ft):	231.00
Count:	1
Friction Equation:	Automatic

	UPSTREAM	DOWNSTREAM		
			Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	36.00	36.00	Entrance Loss Coef:	0.50
Rise(in):	36.00	36.00	Exit Loss Coef:	1.00
Invert(ft):	10.000	10.000	Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: S-43 B-1 From Node: DEPRESSION 43B Length(ft): 42.00
Group: BASE To Node: S-43-2 MES Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
			Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	18.00	18.00	Entrance Loss Coef:	0.00
Rise(in):	18.00	18.00	Exit Loss Coef:	1.00
Invert(ft):	21.700	20.300	Bend Loss Coef:	0.00
Manning's N:	0.013000	0.013000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
Circular: Smooth tapered inlet throat

Name: S-43-2 PIPE From Node: S-43-2 MES Length(ft): 182.00
Group: BASE To Node: S-43-1 Count: 1
Friction Equation: Automatic

	UPSTREAM	DOWNSTREAM		
			Solution Algorithm:	Most Restrictive
Geometry:	Circular	Circular	Flow:	Both
Span(in):	30.00	30.00	Entrance Loss Coef:	0.50
Rise(in):	30.00	30.00	Exit Loss Coef:	1.00
Invert(ft):	18.200	16.700	Bend Loss Coef:	0.00
Manning's N:	0.012000	0.012000	Outlet Ctrl Spec:	Use dc or tw
Top Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dc
Bot Clip(in):	0.000	0.000	Stabilizer Option:	None

```
        Name: DB-65              From Node: 43-3A-2
       Group: BASE                 To Node: 43-4-1
        Flow: Both                   Count: 1
        Type: Horizontal          Geometry: Rectangular

                  Span(in): 120.00
                  Rise(in): 60.00
                Invert(ft): 24.800
     Control Elevation(ft): 24.800
                                          TABLE
           Bottom Clip(in): 0.000
              Top Clip(in): 0.000
      Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600



--------------------------------------------------------------------------------------------------
        Name: N102-N101          From Node: N102
       Group: BASE                 To Node: N101
        Flow: Both                   Count: 1
        Type: Vertical: Fread     Geometry: Trapezoidal

           Bottom Width(ft): 10.00
      Left Side Slope(h/v): 4.00
     Right Side Slope(h/v): 4.00
                Invert(ft): 25.000
     Control Elevation(ft): 25.000
    Struct Opening Dim(ft): 9999.00
                                          TABLE
           Bottom Clip(ft): 0.000
              Top Clip(ft): 0.000
      Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600



--------------------------------------------------------------------------------------------------
        Name: N102-N104          From Node: N102
       Group: BASE                 To Node: N104
        Flow: Both                   Count: 1
        Type: Vertical: Fread     Geometry: Trapezoidal

           Bottom Width(ft): 20.00
      Left Side Slope(h/v): 20.00
     Right Side Slope(h/v): 20.00
                Invert(ft): 25.440
     Control Elevation(ft): 25.440
    Struct Opening Dim(ft): 9999.00
                                          TABLE
           Bottom Clip(ft): 0.000
              Top Clip(ft): 0.000
      Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600

From CatchmentSIM.

--------------------------------------------------------------------------------------------------
```

```
   Invert(ft): 8.050          8.190                        Exit Loss Coef: 0.000
  Manning's N: 0.012000       0.012000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Downstream FHWA Inlet Edge Description:
Rectangular Box: 30° to 75° wingwall flares

Upstream weir added to prevent flow until water level raises above tailwater of CD-11

*** Weir 1 of 1 for Drop Structure CD-11A ***
                                                                                TABLE
                  Count: 1                      Bottom Clip(ft): 0.000
                   Type: Vertical: Fread           Top Clip(ft): 0.000
                   Flow: Both                   Weir Disc Coef: 3.200
               Geometry: Trapezoidal          Orifice Disc Coef: 0.600

       Bottom Width(ft): 10.00                       Invert(ft): 14.010
        Left Sd Slp(h/v): 4.00                   Control Elev(ft): 14.530
       Right Sd Slp(h/v): 4.00             Struct Opening Dim(ft): 9999.00


-------------------------------------------------------------------------------------------------
         Name: J1_Outfall          From Node: POND J1            Length(ft): 49.00
        Group: BASE                  To Node: AREA C                 Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 24.00          24.00                                Flow: Both
     Rise(in): 24.00          24.00                    Entrance Loss Coef: 0.500
   Invert(ft): 21.200         21.000                       Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

From SAI Consultants (AAF PE03 Team).

*** Weir 1 of 3 for Drop Structure J1_Outfall ***
                                                                                TABLE
                  Count: 1                      Bottom Clip(in): 0.000
                   Type: Horizontal                Top Clip(in): 0.000
                   Flow: Both                   Weir Disc Coef: 3.200
               Geometry: Circular             Orifice Disc Coef: 0.600
```

```
              Span(in): 2.10                      Invert(ft): 21.800
              Rise(in): 2.10                 Control Elev(ft): 22.300

*** Weir 2 of 3 for Drop Structure J1_Outfall ***
                                                                      TABLE
                 Count: 1                     Bottom Clip(in): 0.000
                  Type: Vertical: Mavis          Top Clip(in): 0.000
                  Flow: Both                  Weir Disc Coef: 3.200
              Geometry: Rectangular          Orifice Disc Coef: 0.600

              Span(in): 3.00                      Invert(ft): 22.500
              Rise(in): 18.00                Control Elev(ft): 22.500

*** Weir 3 of 3 for Drop Structure J1_Outfall ***
                                                                      TABLE
                 Count: 1                     Bottom Clip(in): 0.000
                  Type: Horizontal              Top Clip(in): 0.000
                  Flow: Both                  Weir Disc Coef: 3.200
              Geometry: Rectangular          Orifice Disc Coef: 0.600

              Span(in): 24.00                     Invert(ft): 24.000
              Rise(in): 37.00                Control Elev(ft): 24.000


-------------------------------------------------------------------------------------------------
         Name: RA1OUT              From Node: AREA A1           Length(ft): 163.00
        Group: BASE                  To Node: POND A                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 24.00          24.00                               Flow: Both
     Rise(in): 24.00          24.00                    Entrance Loss Coef: 0.500
   Invert(ft): 18.250         17.750                       Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

From SAI Consultants (AAF PE03 Team).

*** Weir 1 of 1 for Drop Structure RA1OUT ***
                                                                      TABLE
                 Count: 1                     Bottom Clip(in): 0.000
                  Type: Horizontal              Top Clip(in): 0.000
                  Flow: Both                  Weir Disc Coef: 3.200
              Geometry: Rectangular          Orifice Disc Coef: 0.600

              Span(in): 49.00                     Invert(ft): 21.500
```

```
-----------------------------------------------------------------------------------------------
         Name: RC1OUT              From Node: POND C1           Length(ft): 108.00
        Group: BASE                  To Node: AREA C                Count: 1

               UPSTREAM       DOWNSTREAM                 Friction Equation: Automatic
     Geometry: Circular       Circular                  Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                                Flow: Both
     Rise(in): 36.00          36.00                  Entrance Loss Coef: 0.500
   Invert(ft): 19.670         19.530                     Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                     Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                       Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

From SAI Consultants (AAF PE03 Team).

*** Weir 1 of 3 for Drop Structure RC1OUT ***
                                                                                TABLE
                  Count: 1                      Bottom Clip(in): 0.000
                   Type: Vertical: Mavis           Top Clip(in): 0.000
                   Flow: Both                   Weir Disc Coef: 3.130
               Geometry: Rectangular           Orifice Disc Coef: 0.600

               Span(in): 33.60                       Invert(ft): 23.350
               Rise(in): 13.08                  Control Elev(ft): 23.350

*** Weir 2 of 3 for Drop Structure RC1OUT ***
                                                                                TABLE
                  Count: 1                      Bottom Clip(in): 0.000
                   Type: Vertical: Mavis           Top Clip(in): 0.000
                   Flow: Both                   Weir Disc Coef: 2.600
               Geometry: Circular              Orifice Disc Coef: 0.600

               Span(in): 2.00                        Invert(ft): 22.450
               Rise(in): 2.00                   Control Elev(ft): 22.450

*** Weir 3 of 3 for Drop Structure RC1OUT ***
                                                                                TABLE
                  Count: 1                      Bottom Clip(in): 0.000
                   Type: Horizontal                Top Clip(in): 0.000
                   Flow: Both                   Weir Disc Coef: 3.200
               Geometry: Rectangular           Orifice Disc Coef: 0.600

               Span(in): 49.00                       Invert(ft): 24.440
               Rise(in): 37.00                  Control Elev(ft): 24.440
```

```
-----------------------------------------------------------------------------------------------
         Name: RC2OUT              From Node: POND C2           Length(ft): 135.00
        Group: BASE                  To Node: AREA C                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 36.00          36.00                                  Flow: Both
     Rise(in): 36.00          36.00                  Entrance Loss Coef: 0.500
   Invert(ft): 19.780         19.780                     Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                 Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                     Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                        Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular CMP: Mitered to slope

From SAI Consultants (AAF PE03 Team).

*** Weir 1 of 3 for Drop Structure RC2OUT ***
                                                                                TABLE
                  Count: 1                        Bottom Clip(in): 0.000
                   Type: Vertical: Mavis             Top Clip(in): 0.000
                   Flow: Both                     Weir Disc Coef: 3.130
               Geometry: Rectangular            Orifice Disc Coef: 0.600

               Span(in): 54.00                        Invert(ft): 22.850
               Rise(in): 9.72                   Control Elev(ft): 22.850

*** Weir 2 of 3 for Drop Structure RC2OUT ***
                                                                                TABLE
                  Count: 1                        Bottom Clip(ft): 0.000
                   Type: Vertical: Mavis             Top Clip(ft): 0.000
                   Flow: Both                     Weir Disc Coef: 3.200
               Geometry: Irregular              Orifice Disc Coef: 0.600

          Cross Section: RC2OUT                 Control Elev(ft): 22.450
             Invert(ft): 22.450            Struct Opening Dim(ft): 1.21

*** Weir 3 of 3 for Drop Structure RC2OUT ***
                                                                                TABLE
                  Count: 1                        Bottom Clip(in): 0.000
                   Type: Horizontal                  Top Clip(in): 0.000
                   Flow: Both                     Weir Disc Coef: 3.200
               Geometry: Rectangular            Orifice Disc Coef: 0.600

               Span(in): 49.00                        Invert(ft): 23.660
               Rise(in): 37.00                  Control Elev(ft): 23.660
```

```
-------------------------------------------------------------------------------------------
         Name: RCOUT              From Node: AREA C            Length(ft): 203.00
        Group: BASE                 To Node: ED000                 Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Automatic
     Geometry: Circular       Circular                 Solution Algorithm: Most Restrictive
     Span(in): 24.00          24.00                               Flow: Both
     Rise(in): 24.00          24.00                    Entrance Loss Coef: 0.500
   Invert(ft): 19.850         19.550                       Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
 Bot Clip(in): 0.000          0.000                         Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

From SAI Consultants (AAF PE03 Team).

*** Weir 1 of 2 for Drop Structure RCOUT ***
                                                                              TABLE
                  Count: 1                      Bottom Clip(in): 0.000
                   Type: Horizontal                Top Clip(in): 0.000
                   Flow: Both                   Weir Disc Coef: 3.200
               Geometry: Rectangular          Orifice Disc Coef: 0.600

               Span(in): 37.00                      Invert(ft): 22.350
               Rise(in): 24.00                Control Elev(ft): 22.350

*** Weir 2 of 2 for Drop Structure RCOUT ***
                                                                              TABLE
                  Count: 2                      Bottom Clip(in): 0.000
                   Type: Vertical: Mavis           Top Clip(in): 0.000
                   Flow: Both                   Weir Disc Coef: 3.200
               Geometry: Rectangular          Orifice Disc Coef: 0.600

               Span(in): 24.00                      Invert(ft): 21.800
               Rise(in): 7.00                 Control Elev(ft): 21.800


-------------------------------------------------------------------------------------------
         Name: RS-40-1            From Node: POND D1           Length(ft): 117.00
        Group: BASE                 To Node: S-40-2                Count: 1

               UPSTREAM       DOWNSTREAM                Friction Equation: Average Conveyance
     Geometry: Circular       Circular                 Solution Algorithm: Automatic
     Span(in): 48.00          48.00                               Flow: Both
     Rise(in): 48.00          48.00                    Entrance Loss Coef: 0.500
   Invert(ft): 18.940         18.740                       Exit Loss Coef: 1.000
  Manning's N: 0.013000       0.013000                   Outlet Ctrl Spec: Use dc or tw
 Top Clip(in): 0.000          0.000                       Inlet Ctrl Spec: Use dc
```

```
                                          TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
          Weir Discharge Coef: 3.200
       Orifice Discharge Coef: 0.600

From SAI Consultants (AAF PE03 Team).

-------------------------------------------------------------------------------------------------
         Name: RS-41-2            From Node: S-41-2
        Group: BASE                 To Node: NCANAL
         Flow: Both                   Count: 1
         Type: Vertical: Fread     Geometry: Rectangular

                    Span(in): 360.00
                    Rise(in): 9999.00
                  Invert(ft): 21.860
       Control Elevation(ft): 21.860
                                          TABLE
            Bottom Clip(in): 0.000
               Top Clip(in): 0.000
          Weir Discharge Coef: 3.200
       Orifice Discharge Coef: 0.600

From HNTB Calculations - SJRWMD ERP No. 16690.
Stages converted from NGVD to NAVD.

-------------------------------------------------------------------------------------------------
         Name: SBPOND3-N104       From Node: SBPOND3
        Group: BASE                 To Node: N104
         Flow: Both                   Count: 1
         Type: Vertical: Fread     Geometry: Trapezoidal

             Bottom Width(ft): 600.00
        Left Side Slope(h/v): 4.00
       Right Side Slope(h/v): 4.00
                  Invert(ft): 25.210
       Control Elevation(ft): 25.210
      Struct Opening Dim(ft): 9999.00
                                          TABLE
            Bottom Clip(ft): 0.000
               Top Clip(ft): 0.000
          Weir Discharge Coef: 3.200
       Orifice Discharge Coef: 0.600



===============================================================================
==== Hydrology Simulations ====================================================
===============================================================================

         Name: 100yr-24hr
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\100yr-24hr.R32
```

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Flmod
    Rainfall Amount(in): 13.00

Time(hrs)       Print Inc(min)
--------------- ---------------
48.000          5.00

-------------------------------------------------------------------------------------------------
         Name: 100yr-24hr_FDOT
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\100yr-24hr_FDOT.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 10.56

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

-------------------------------------------------------------------------------------------------
         Name: 25yr-24hr-fdot
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\25yr-24hr-fdot.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 8.70

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

-------------------------------------------------------------------------------------------------
         Name: 500yr_FDOT
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\500yr_FDOT.R32

      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 12.07

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

-------------------------------------------------------------------------------------------------
         Name: 50yr-24hr_FDOT
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\50yr-24hr_FDOT.R32
```

```
      Override Defaults: Yes
    Storm Duration(hrs): 24.00
          Rainfall File: Fdot-24
    Rainfall Amount(in): 9.96

Time(hrs)       Print Inc(min)
--------------- ---------------
30.000          5.00

================================================================================
==== Routing Simulations ======================================================
================================================================================

         Name: 100yr-24hr          Hydrology Sim: 100yr-24hr_SAI
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\100yr-24hr.I32

      Execute: No          Restart: No           Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 30.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:

100yr-24hr Storm from SAI ICPR Model for comparison.

Time(hrs)       Print Inc(min)
--------------- ---------------
999.000         5.000

Group           Run
--------------- -----
BASE            Yes
CD15            Yes


-------------------------------------------------------------------------------------------------
         Name: 100yr-24hr_FDOT     Hydrology Sim: 100yr-24hr_FDOT
     Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\100yr-24hr_FDOT.I32

      Execute: Yes         Restart: No           Patch: No
  Alternative: No

        Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
    Time Step Optimizer: 10.000
        Start Time(hrs): 0.000                    End Time(hrs): 30.00
     Min Calc Time(sec): 0.5000              Max Calc Time(sec): 60.0000
        Boundary Stages:                         Boundary Flows:

Updated for WaterRIDE: Convert back to (999,15) for ICPR Analysis.

Time(hrs)       Print Inc(min)
```

15.000	60.000
16.000	15.000
19.000	60.000
20.000	15.000
21.000	60.000
23.000	15.000
30.000	60.000

Group	Run
BASE	Yes
CD15	Yes

Name: 25yr-24hr-fdot Hydrology Sim: 25yr-24hr-fdot
Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\25yr-24hr-fdot.I32

Execute: Yes Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
30.000	5.000

Group	Run
BASE	Yes
CD15	Yes

Name: 500-yr_FDOT Hydrology Sim: 500yr_FDOT
Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\500-yr_FDOT.I32

Execute: No Restart: No Patch: No
Alternative: No

Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Time(hrs)	Print Inc(min)
999.000	15.000

Group	Run
BASE	Yes
CD15	Yes

Name: 50yr-24hr_FDOT Hydrology Sim: 50yr-24hr_FDOT
Filename: U:\Jobs\58875-AAF EastWest\Techprod\Drainage\C03 Calcs\C03E\ICPR\50yr-24hr_FDOT.I32

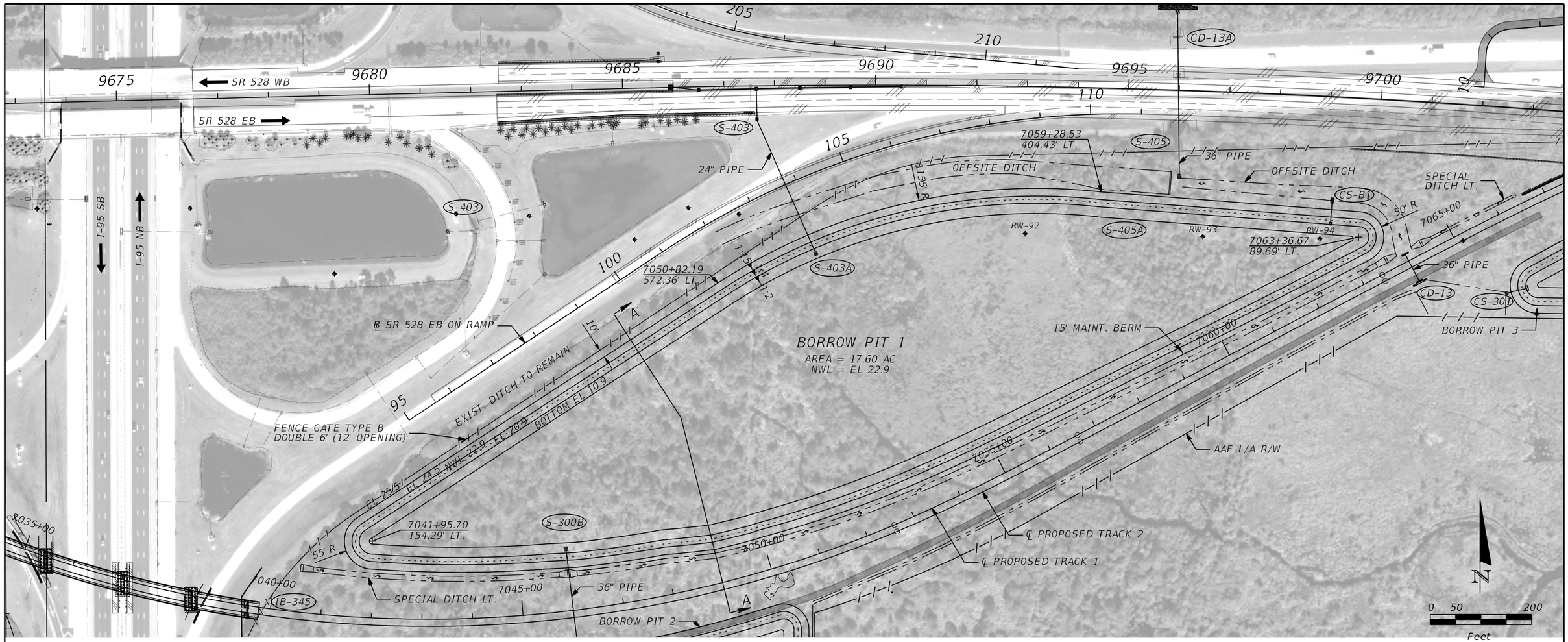
Execute: Yes Restart: No Patch: No
Alternative: No

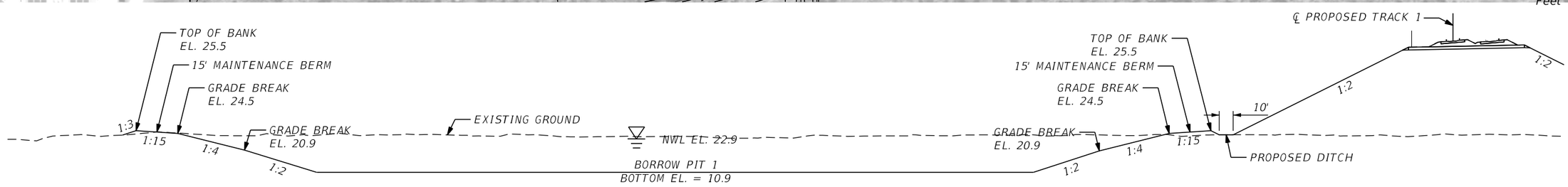
Max Delta Z(ft): 1.00 Delta Z Factor: 0.00500
Time Step Optimizer: 10.000
Start Time(hrs): 0.000 End Time(hrs): 30.00
Min Calc Time(sec): 0.5000 Max Calc Time(sec): 60.0000
Boundary Stages: Boundary Flows:

Updated for WaterRIDE: Convert back to (999,15) for ICPR Analysis.

Time(hrs)	Print Inc(min)
12.000	60.000
13.000	30.000
15.000	60.000
16.000	15.000
19.000	60.000
20.000	15.000
21.000	60.000
23.000	15.000
30.000	60.000

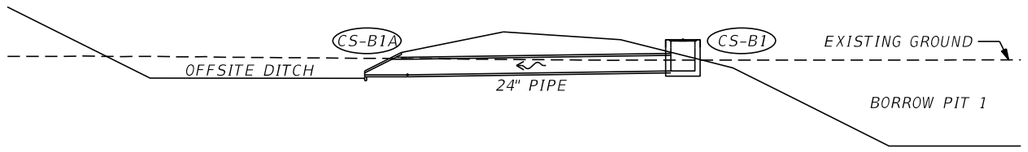
Group	Run
BASE	Yes
CD15	Yes





SECTION A-A

N.T.S.



CS-B1

STA. 7063+00.00 (140.92' LT)
CONST. DBI TYPE D MOD
INDEX 232
FL 19.00 (LT.)
REFER TO MISC. DRAINAGE DETAILS

CS-B1A

STA. 7063+20.17 (173.11' LT)
CONST. MITERED END SECTION (1:2)
INDEX 272
FL 18.74 (RT.)

25YR 24HR STAGE = 23.94

NOTE: SOD ALL DISTRIBUTED AREAS

NOTE: ALL STATION OFFSET INFORMATION RELATIVE TO ℄ PROPOSED TRACK 1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
	Appendix 2-Volume 1 CO3 East-page 15		

HNTB
HNTB CORPORATION
610 CRESCENT EXECUTIVE COURT
SUITE 400, LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD / FL. REGISTRATION NO.

CIVIL DESIGN	DRAINAGE DESIGN	RAIL DESIGN
G. JOHN HORNBECK	BARRY J. SWITZER	JOSHUA A. BAIR
P.E. NO.: 56791	P.E. NO.: 43422	P.E. NO.: 76774

ALL ABOARD FLORIDA

ROAD NO.	COUNTY	PROJECT
	BREVARD	ALL ABOARD FLORIDA CONTRACT C03

BORROW PIT 1

SHEET NO. D-312

MODEL: Default
PRINT DRIVER: FDOTPDF.pltcfg
PEN TABLE: FDOT.tbl

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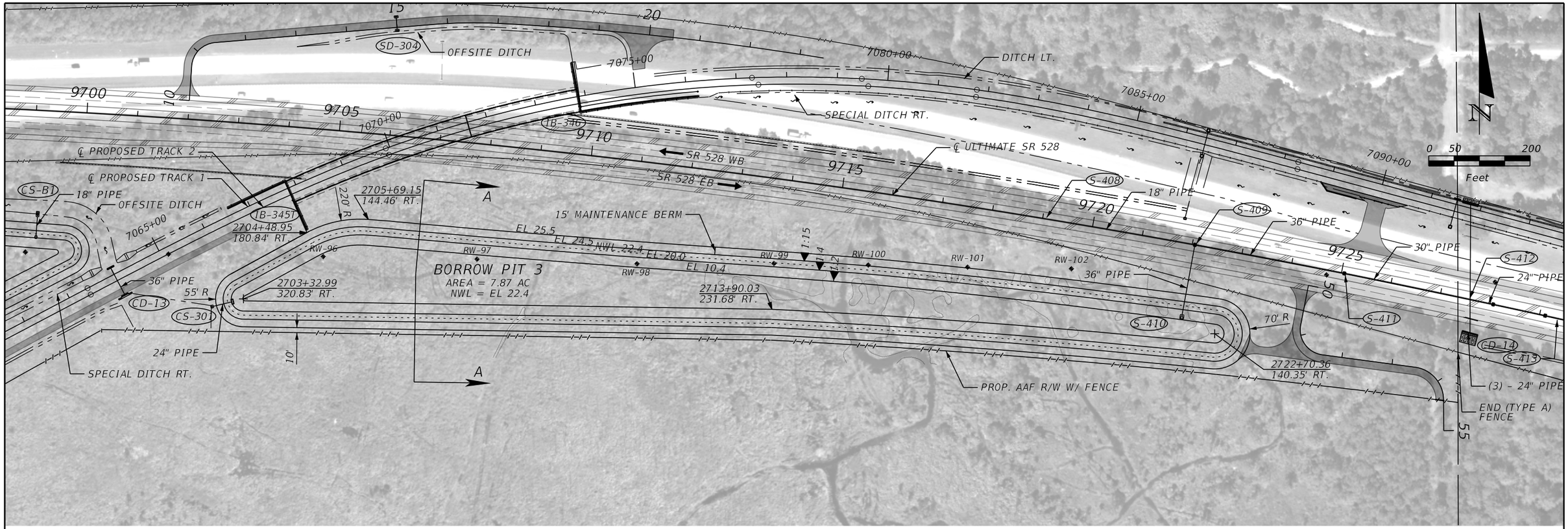
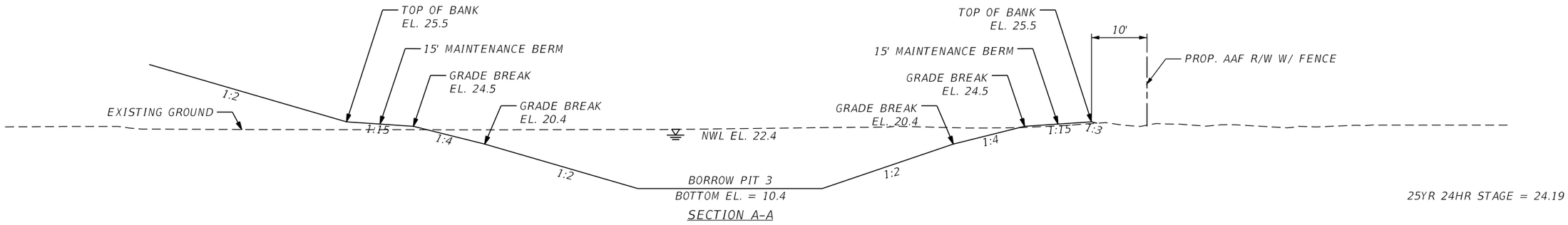




SECTION A-A
N.T.S.

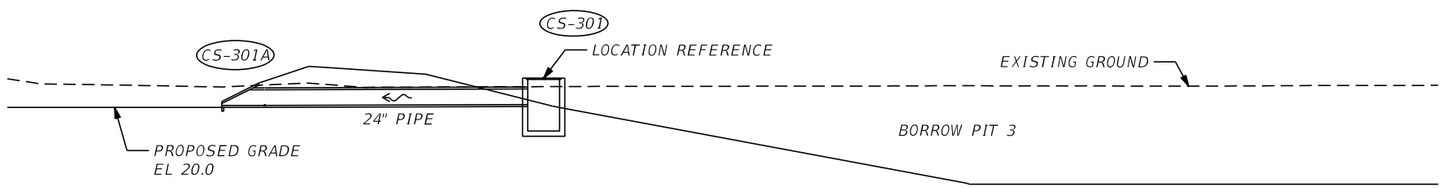
25YR 24HR STAGE = 24.19

CS-301

STA. 7065+85.00 (155.00' RT)
℄ AAF TRACK 1
CONST. DBI TYPE H (4-GRATE MOD. INLET)
INDEX 232
FL 21.00 (LT.)
REFER TO MISCELLANEOUS DRAINAGE DETAILS

CS-301A

STA. 7065+46.60 (146.20' RT)
℄ AAF TRACK 1
CONST. MITERED END SECTION (1:2)
INDEX 272
FL 20.50 (RT.)



CS-301

NOTE: SOD ALL DISTRIBUTED AREAS.
NOTE: ALL STATION OFFSET INFORMATION RELATIVE TO ℄ SR 528 EB UNLESS OTHERWISE NOTED.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
	Appendix 2-Volume 1 CO3 East-page 17		

HNTB CORPORATION
610 CRESCENT EXECUTIVE COURT
SUITE 400, LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD / FL. REGISTRATION NO.

CIVIL DESIGN	DRAINAGE DESIGN	RAIL DESIGN
G. JOHN HORNBECK	BARRY J. SWITZER	JOSHUA A. BAIR
P.E. NO.: 56791	P.E. NO.: 43422	P.E. NO.: 76774

ALL ABOARD FLORIDA

ROAD NO.	COUNTY	PROJECT
	BREVARD	ALL ABOARD FLORIDA CONTRACT C03

BORROW PIT 3 DETAIL SHEET

SHEET NO. D-314

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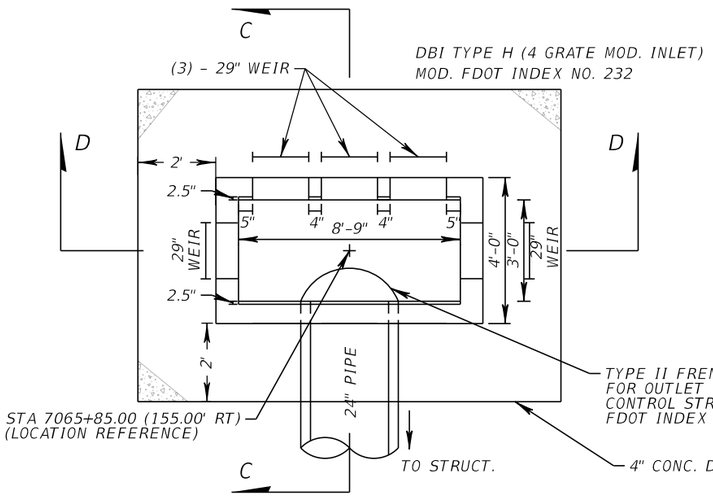

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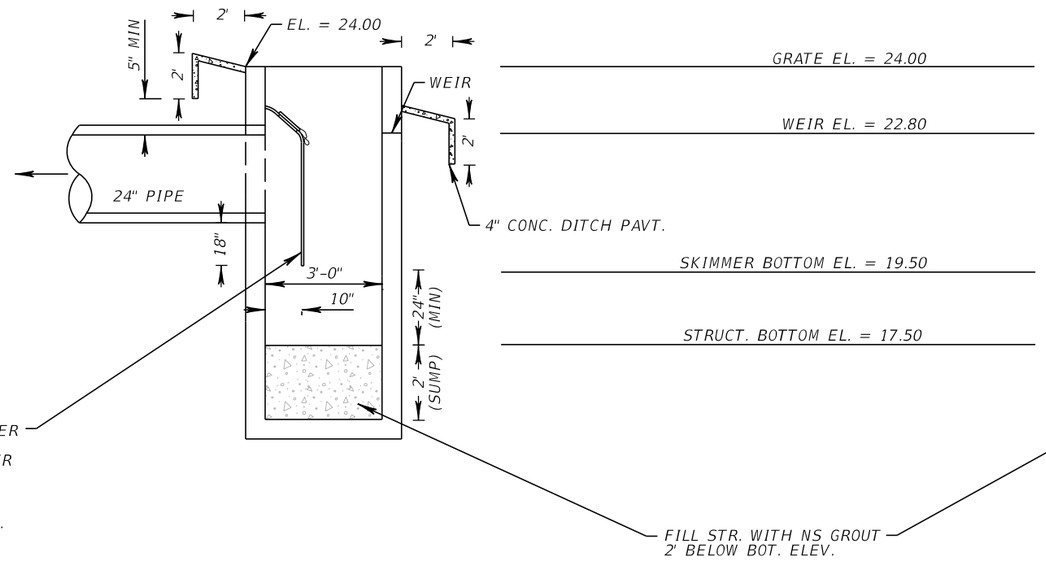

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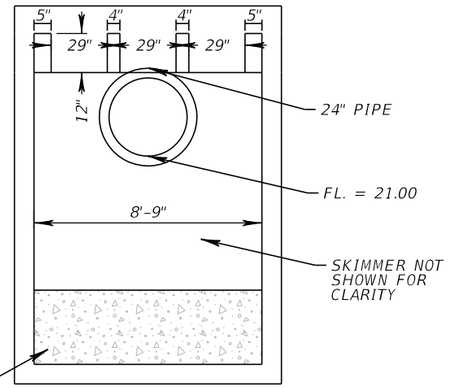

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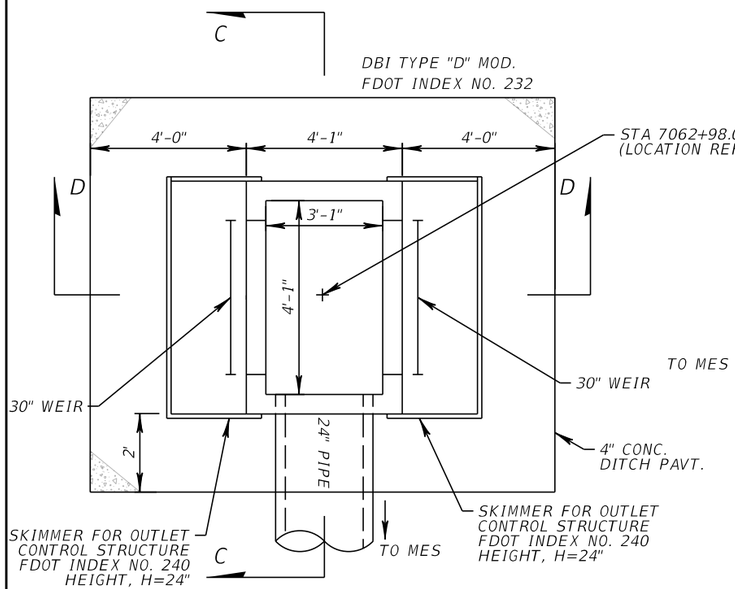

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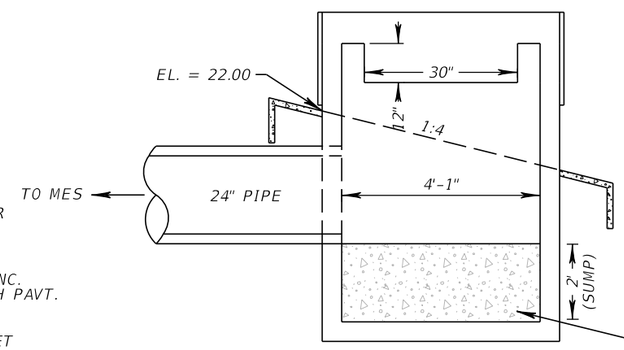

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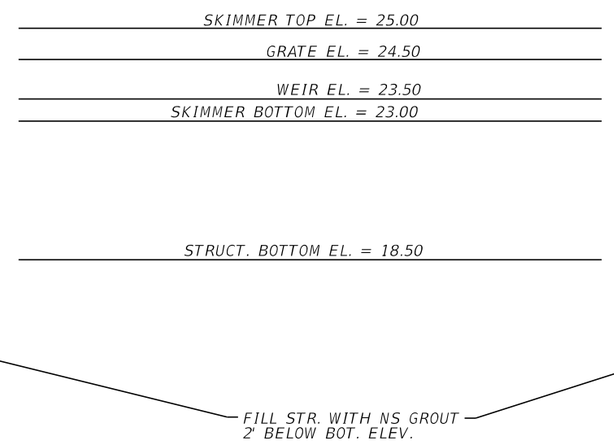

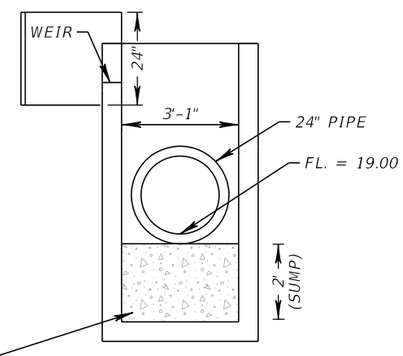

POND CONT. STRUCT. SECTION D-D
N.T.S

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
	Appendix 2-Volume 1 CO3 East-page 29		

HNTB CORPORATION
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P.E. NO.: 56791	P.E. NO.: 43422	P.E. NO.: 76774

ALL ABOARD FLORIDA

ROAD NO.	COUNTY	PROJECT
	BREVARD	ALL ABOARD FLORIDA CONTRACT C03

MISCELLANEOUS DRAINAGE DETAILS

SHEET NO. D-326

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Appendix E

ICPR Pre Development 10-year Results

LAKES AT CANAVERAL GROVES
PRE DEVELOPMENT
PRE DEV. NODE MAX

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
BNDY	BASE	10YR-24HR	0.00	13.82	0.00	0.0000	0	13.45	107.02	0.00	0.00
BNDY-528 DITCH	BASE	10YR-24HR	0.00	0.00	0.00	0.0000	0	13.72	47.63	0.00	0.00
EX. POND 1	BASE	10YR-24HR	30.00	21.81	0.00	0.0008	694303	12.63	40.71	0.00	0.00
NODE 1	BASE	10YR-24HR	0.00	23.50	0.00	-0.0141	4356	12.50	11.72	0.00	123.76
NODE 10	BASE	10YR-24HR	30.00	20.53	0.00	0.0031	358625	12.33	50.59	5.50	-0.00
NODE 11	BASE	10YR-24HR	14.29	21.64	0.00	0.0029	182084	12.42	25.90	14.29	9.32
NODE 12	BASE	10YR-24HR	13.52	21.45	0.00	0.0020	2382	12.08	0.17	13.52	0.12
NODE 13	BASE	10YR-24HR	14.00	19.98	0.00	0.0015	39306	12.33	5.92	14.00	2.04
NODE 14	BASE	10YR-24HR	13.60	20.75	0.00	-0.0122	2397	27.85	0.27	13.59	0.10
NODE 15	BASE	10YR-24HR	13.45	17.06	0.00	0.0036	16221	13.39	107.13	13.45	107.02
NODE 2	BASE	10YR-24HR	12.80	21.22	0.00	0.0013	115686	12.42	28.09	12.63	23.40
NODE 3	BASE	10YR-24HR	13.14	23.03	0.00	0.0026	54743	12.33	9.57	0.00	0.00
NODE 4	BASE	10YR-24HR	12.68	22.86	0.00	0.0013	10678	12.58	33.49	12.61	33.42
NODE 5	BASE	10YR-24HR	13.11	23.65	0.00	0.0019	208017	12.75	29.10	13.11	26.16
NODE 6	BASE	10YR-24HR	13.37	18.44	0.00	0.0050	27777	13.17	85.19	13.32	83.98
NODE 7	BASE	10YR-24HR	12.52	23.03	0.00	0.0012	16395	12.50	19.22	12.52	19.18
NODE 8	BASE	10YR-24HR	13.40	18.01	0.00	0.0050	34858	13.18	102.56	13.35	100.93
NODE 9	BASE	10YR-24HR	13.63	21.44	0.00	0.0008	1121653	12.67	84.14	13.71	54.42
NODE D1	BASE	10YR-24HR	13.38	19.01	0.00	0.0050	12255	13.09	24.42	13.29	23.35
NODE D2	BASE	10YR-24HR	13.41	18.79	0.00	0.0102	20543	0.00	123.76	13.41	31.46
NODE D3	BASE	10YR-24HR	13.41	18.70	0.00	0.0047	16833	13.41	31.63	13.58	32.07
NODE D4	BASE	10YR-24HR	13.38	18.62	0.00	0.0047	22838	13.28	57.16	13.44	56.97
NODE D5	BASE	10YR-24HR	13.45	17.49	0.00	0.0041	23633	13.35	101.03	13.45	100.72

Application # **PZ** - _____ - _____

CITY OF COCOA
Serving the Community

SUBDIVISION
- PRELIMINARY APPLICATION -

Community Services Department
Planning and Zoning Division
65 Stone Street
Cocoa, Florida 32922

Phone: (321) 433-8535
Fax: (321) 433-8543
Web: http://www.cocoafl.org

This form is divided into steps, which will help you prepare your application, provide supplemental items, and prepare for the Planning & Zoning Board and City Council hearings. A pre-application meeting with Staff is **required**.

Please TYPE or PRINT this application neatly.

For Office Use Only - Date Received

Stamp Only When Application is Fully Complete

1. **Preliminary Project Name:** The Lakes at Cocoa Grove

2. **Applicant Information:** ** NOTE: Applicant is the main contact, who must attend the meeting!*

Company (if applicable): Mountain Cove Homes at Lakes at Cocoa Grove, LLC

Name: Victor F. Solorzano, Manager

Mailing Address: 4878 SW 74th Court

City: Miami State: FL Zip Code: 33155

Phone #: 786-537-3037 Fax #: _____

Mobile #: 786-412-3543 E-mail: sales@mountaincovehomes.com

3. **Property Owner Information:** ** Check here if same as Applicant* → ☒
** If more than one owner, attach additional sheet with names and addresses.*

Company (if applicable): _____

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone #: _____ Fax #: _____

Mobile #: _____ E-mail: _____

4. **Surveyor:**

Company (if applicable): Bussen-Mayer Engineering Group, Inc.

Name: Barry Cabaniss, PLS

Mailing Address: 100 Parnell Street

City: Merritt Island State: FL Zip Code: 32953

Phone #: 321-453-0010 Fax #:

Mobile #: E-mail: Barry@bmeg.net

5. **Engineer:**

Company (if applicable): Bussen-Mayer Engineering Group, Inc.

Name: Joseph W. Mayer, P.E.

Mailing Address: 100 Parnell Street

City: Merritt Island State: FL Zip Code: 32953

Phone #: 321-453-0010 Fax #:

Mobile #: E-mail: Joe@bmeg.net

6. **Property Information:**

Street Address and Location: South of Bahia St.; West of Osage St. (no address assigned)

Parcel ID: ** If more than two Parcel IDs, attach additional sheet with Parcel IDs.*

2 4 - 3 5 - 1 0 - 0 0 - □ □ □ □ 3 . □ - □ □ □ □ . □ □

□ □ - □ □ - □ □ - □ □ - □ □ □ □ □ . □ - □ □ □ □ . □ □

Tax Account Numbers: ** If more than two Tax Account #s, attach additional sheet with Tax Account #s.*

2 4 5 7 8 5 4 □ □ □ □ □ □ □

Land Area: square feet or 246.43 acres

Existing Use(s) on Property: East half - borrow pit; West half - vacant

Proposed Use(s) on Property: Single family residential subdivision

Existing Zoning Category: RU-1-7

Existing Future Land Use Category: Low Density Residential

Proposed Density: 1.42 units per acre

7. **Economic Development Information:** *for use economic development purposes only.

Estimated Total Value of Project: $ 44M Estimated Number of Construction Jobs: 495

Estimated Number of Employees: 150 Estimated Completion Date: 2024

8. Please submit the following items in order complete the application:

a. ☑ **Notarized application.**

b. ☑ **List of owners within 500 feet.** A "radius map package" from Brevard County containing a certified mailing list with mailing labels and a map of all property owners of record who reside within a 500-foot radius of the subject property is required for public notice. It is the applicant's responsibility to obtain these materials from the following for a nominal fee:

Brevard County Planning and Zoning, Attn: Graphics.
Brevard County Government Center, Building A
2725 Judge Fran Jamieson Way
Viera, FL 32940
Phone: (321) 633-2060 Fax: (321) 633-2152

c. ☑ **Application fee.** Please make checks payable to the 'City of Cocoa' and submit payment **ONLY** to the Community Services Department. Public mail notice and legal advertising fees must also be paid a few weeks after application submittal. See Schedule of Fees, Charges and Expenses for applicable fees.

d. ☑ **Proof of ownership.** A copy of the most recent recorded warranty deed is required.

e. ☑ **Letter of authorization.** If the applicant is not the property owner, a notarized letter of authorization or agent affidavit is required, unless the applicant is the Attorney of the owner. Each property owner must complete a separate authorization form or other suitable documentation to allow the agent to act upon his/her behalf. A sample "Letter of Authorization" form is available from the City.

f. ☑ **Corporate documents.** If the applicant/owner is representing a company, articles of incorporation which show the applicant/owner is authorized to represent the company is required. A data record printout from the Florida Department of State, Division of Corporations website may also be provided (http://www.sunbiz.org/corpweb/inquiry/search.html).

g. ☑ **Legal description.** Submit a typed copy of the legal description. It may be submitted on a computer disk or by e-mail.

h. ☑ **Preliminary subdivision plan.** Submit 10 copies (folded to about 8-1/2 x 11") of a preliminary subdivision plan drawn to scale. The preliminary subdivision plan shall not be smaller than 11" x 17", and shall, at a minimum, include the items below (combine elements on several sheets where applicable):

(A) ☑ A preliminary plan drawn at a scale no smaller than one hundred (100) feet to one inch by a registered surveyor or professional engineer showing graphically or by notes:

(1) ☑ Name of the proposed development.

(2) ☑ Name or names of the developers.

(3) ☑ Boundaries of tract shown with bearings, distances, closures and bulkhead lines.

(4) ☑ Site data:

(a) ☑ Name of owner, surveyor and engineer or land planner.

(b) ☑ Acreage in total tract; acreage in public or other land usage; average lot size; total number of lots.

(c) ☑ Names of adjoining subdivisions.

(d) ☑ The existing zoning classification, both on the land to be subdivided and on adjoining lands.

(e) ☑ Proposed streets, street names, rights-of-way, pavement widths and approximate grades.

(f) ☑ Proposed lot lines, lot and block numbers and approximate dimensions.

(g) ☑ Proposed parks, school sites or other public open spaces.

(h) ☑ Location, and classification of canals and waterways.

(i) ☑ Existing ground surfaces and proposed elevation of subdivision.

(j) ☑ Typical cross-sections of proposed grading, roadways and sidewalks.

(k) ☑ Type of pavement.

(l) ☑ Engineering drawings of the following utility systems and improvements:

1. ☑ Water
2. ☑ Sanitary sewer
3. ☑ Storm sewer
4. ☐ Bulkheads
5. ☑ Sidewalks
6. ☑ Streets

(5) ☑ Proposed land uses other than public or single family.

(6) ☑ A topographic data map drawn at a scale no smaller than one hundred (100) feet to one inch by a registered surveyor showing:

(a) ☑ The location of existing and platted property lines, streets, buildings, watercourses, transmission lines, sewers, bridges, culverts and drain pipes, water mains, city limit lines and any public utility easements.

(b) ☑ Wooded areas, streams, lakes, marshes and any other physical conditions affecting the site.

(c) ☑ Contours based on U.S. coast and geodetic datum with a contour interval of one foot.

(7) ☐ Proposed number and location of street lighting fixtures.

(B) ☑ Vicinity map showing relationship between subdivision and surrounding area.

i. ☐ **Additional information (optional).** Submit any information that may be helpful in understanding the request. This may include photos, sketches, elevations, or letters from adjoining property owners.

j. ☐ **Resubmittals.** Resubmittals should be accompanied by a list of changes and a certified statement by the preparer that no other changes have been made to the drawings. Otherwise, delays may be experienced due to extra staff review time. Each resubmittal shall follow the same requirements. However, an additional 15 copies and 1 reduced 11"x17" version shall be submitted at least 10 days prior to each public hearing.

9. **Application filing procedure.** This application, together with all required exhibits and attachments, shall be completed and filed with the Planning and Zoning Division.

Public hearings process information – please read this!

10. **Dates and locations of public hearings.** All Preliminary Subdivisions require one hearing in front of the Planning & Zoning Board and one hearing in front of the City of Cocoa Council. All regularly scheduled Planning & Zoning Board hearings are held on the second Wednesday of each month at 6:00 pm in the Cocoa City Council Chambers located at 65 Stone Street, Cocoa, Florida unless otherwise notified. All regularly scheduled City of Cocoa Council meetings are held on the second and fourth Tuesday of each month at 7:00 pm in the Cocoa City Council Chambers located at 65 Stone Street, Cocoa, Florida unless otherwise notified.

11. **Board types.** The Planning & Zoning Board is an advisory board to the City Council and therefore is only authorized to make recommendations. City Council is an authoritative body and is able to make binding decisions.

12. **Presence required at the public hearings.** The applicant or his/her representative must be present to answer any questions concerning the application. If there are extenuating circumstances why the applicant or his/her representative cannot attend, he or she must notify the City in writing prior to the public hearing.

13. **Preparing for the public hearings.** It is the applicant's responsibility to research and know all laws that may be applicable and may affect the outcome of any decision on the application request. The City assumes no responsibility or liability relating to the applicant's failure to research and know all applicable laws including, but not limited to state, federal, and city laws, codes, land development regulations, and the comprehensive plan.

14. **Exhibits at public hearings.** If photographs, documents, maps or other materials are provided to the Board/Council as evidence at the public hearing, the applicant must leave those instruments with the Recording Secretary. By law those instruments automatically become part of the public records and cannot be returned to the applicant.

15. **Witnesses at public hearings.** For the purposes of making a decision on the application, the Board/Council shall only consider testimony of qualified witnesses. A witness is determined by the Board/Council and is generally based on:
    a. The witness has personal knowledge of the fact in which the witness will testify; and/or
    b. In the case of testimony consisting of opinions or inferences, the testimony is qualified as the following:
        1. *Layman witness*: Testimony of a witness other than an expert witness is qualified only if:
            - The witness can readily, and with equal accuracy and adequacy, communicate what he or she perceived to the Board without testifying in the form of opinions or inferences.
            - The opinions and inferences do not require any special knowledge, skill experience or training.
        2. *Expert witness*. Testimony of an expert witness is qualified only if:
            - The subject matter is proper for expert testimony because scientific, technical, or other specialized skill will help the Board understand the evidence being presented, or helps establish a fact in issue.
            - The witness is adequately qualified to express an opinion on the matter.

16. **Planning & Zoning Board vs. City Council actions.** If the Planning & Zoning Board finds that the facts presented in the matter justify approval, it may recommend to approve the request, or a portion thereof, and it may specify any conditions deemed necessary to preserve the intent of the City of Cocoa Code. If the Board finds that the facts presented do not justify approval, it may recommend to deny the request and will specify the reasons for denial. A decision is usually made at the same meeting that the hearing is held. Regardless of the outcome, the application will be forwarded to the City Council for consideration where a final decision can be made.

17. Signatures and Notarization.

STATE OF Florida COUNTY OF Miami Dade. I, Victor F Solorzano being first duly sworn, depose and say that:

☒ I am the applicant, or if corporation, I am the officer of the corporation authorized to act on this request.

☐ I am the legal representative of the applicant of this application and a notarized Letter of Authorization form or agent affidavit accompanies this application giving written, unless the applicant is the Attorney representing the owner.

I hereby certify that I have read, completed and understand this application and applicable petition, and understand that if my application and all associated attachments are not complete and accurate in all respects, the application will not be scheduled for a public hearing. I further understand that this application must be complete and accurate prior to the advertising of a public hearing.

(APPLICANT SIGNATURE)

Alicia E. Quinones
(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally Known ☒ OR Produced Identification ☐

Type of I.D. Produced _____

(NOTARY PUBLIC SIGNATURE)

Alicia E. Quinones
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG169747
Expires 2/5/2022

STATE OF FLORIDA, COUNTY OF ~~BREVARD~~ Miami Dade

Sworn and subscribed to before me this 25 day of March, 20 21

FOR OFFICE USE ONLY

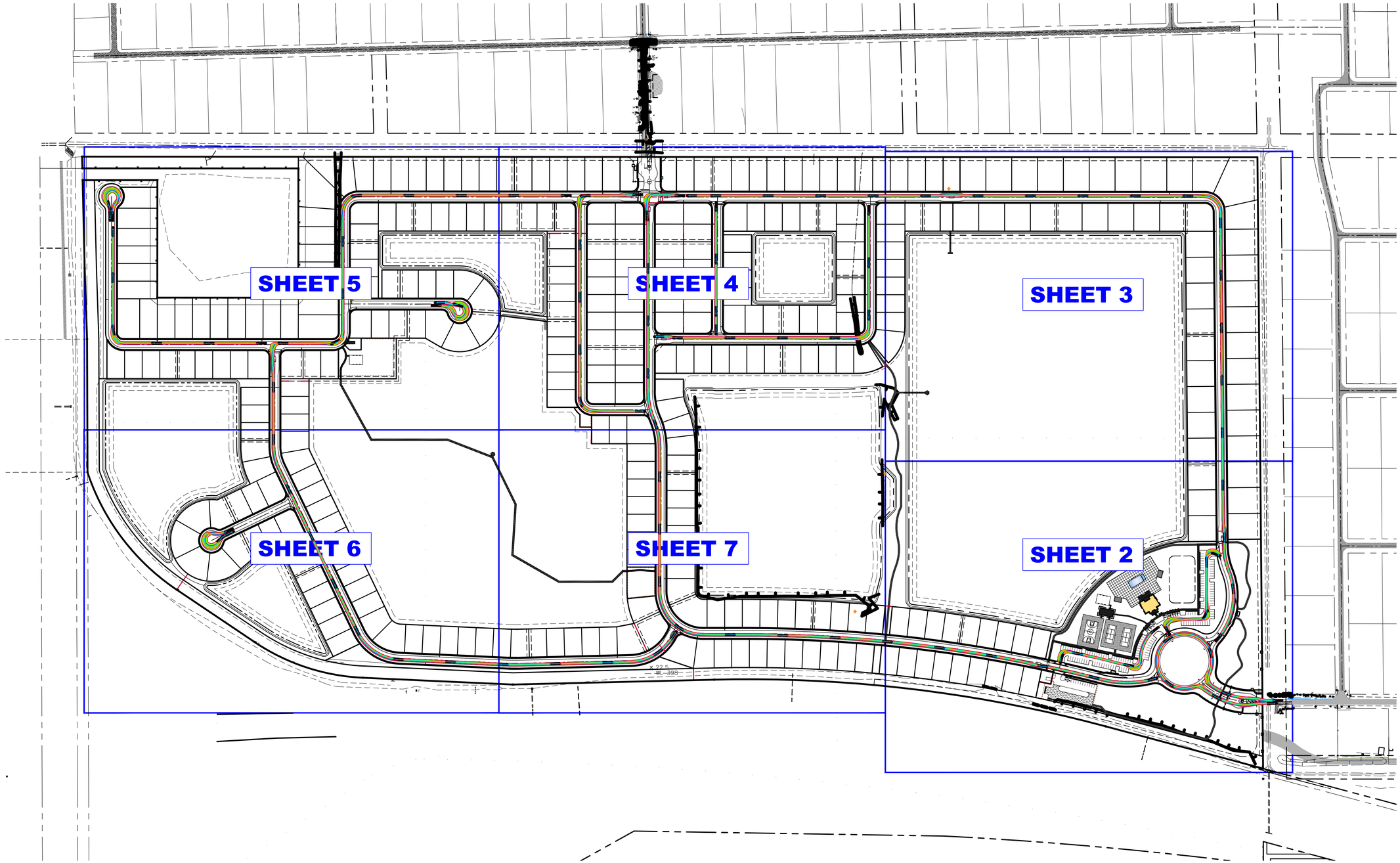
Fee of $ _____ in cash ☐ or check ☐ (No. _____) payable to the "City of Cocoa".

Receipt Number: _____

Date: _____

Signature from Planning & Zoning Division:

_____



NO.	DATE	REVISION DESCRIPTION	BY
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2	09/18/22	REV. PER SJRWMD COMMENTS	LB

DSN BY: LB
DRN BY: LB
CHK BY: MEP
APPR BY: MEP

CONSTRUCTION PLANS FOR

Lakes at Cocoa Grove
SUBDIVISION

CITY OF COCOA, FLORIDA

Pumper Fire Truck Turn Analysis Key Plan

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2648
100 Parnell Street Suite A, Merritt Island, FL 32953
Phone:321.453.0010 WWW.DRMP.COM
DRMP, Inc.

JUAN JOSE GONZALEZ LICENSE No. 84538 STATE OF FLORIDA PROFESSIONAL ENGINEER

Juan Jose Gonzalez, P.E.
State of Florida # 84538

PROJECT NUMBER: 21-0569.000
SCALE: 1" = 200'
DATE: February 21, 2020
SHEET: **1.0**

SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

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MATCH LINE SEE SHEET 3

MATCH LINE SEE SHEET 7

NORTH

45.00

11.16 20.42

E-One Cyclone II 95 HP

	feet
Width	: 9.50
Track	: 9.35
Lock to Lock Time	: 6.0
Steering Angle	: 43.4

VEHICLE CENTERLINE PATH
VEHICLE ENVELOPE
FRONT TIRE PATH
REAR TIRE PATH
VEHICLE POSITION ALONG PATH

TRUCK TURN LEGEND
(E-ONE CYCLONE II)

NO.	DATE	REVISION DESCRIPTION	BY
2	09/18/22	REV. PER SJRWMD COMMENTS	LB
1	07/12/22	REV. PER CITY OF COCOA COMMENTS	LB

DSN BY LB
DRN BY LB
CHK BY MEP
APPR BY MEP

CONSTRUCTION PLANS FOR

Lakes at Cocoa Grove SUBDIVISION

CITY OF COCOA, FLORIDA

Pumper Fire Truck Turn Analysis

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2648
100 Parnell Street Suite A, Merritt Island, FL 32953
Phone:321.453.0010 WWW.DRMP.COM

DRMP, Inc.

JUAN JOSE GONZALEZ LICENSE No. 84538 STATE OF FLORIDA PROFESSIONAL ENGINEER

Juan Jose Gonzalez, P.E.
State of Florida # 84538

PROJECT NUMBER: 21-0569.000
SCALE: 1" = 60'
DATE: February 21, 2020
SHEET: **2.0**

SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

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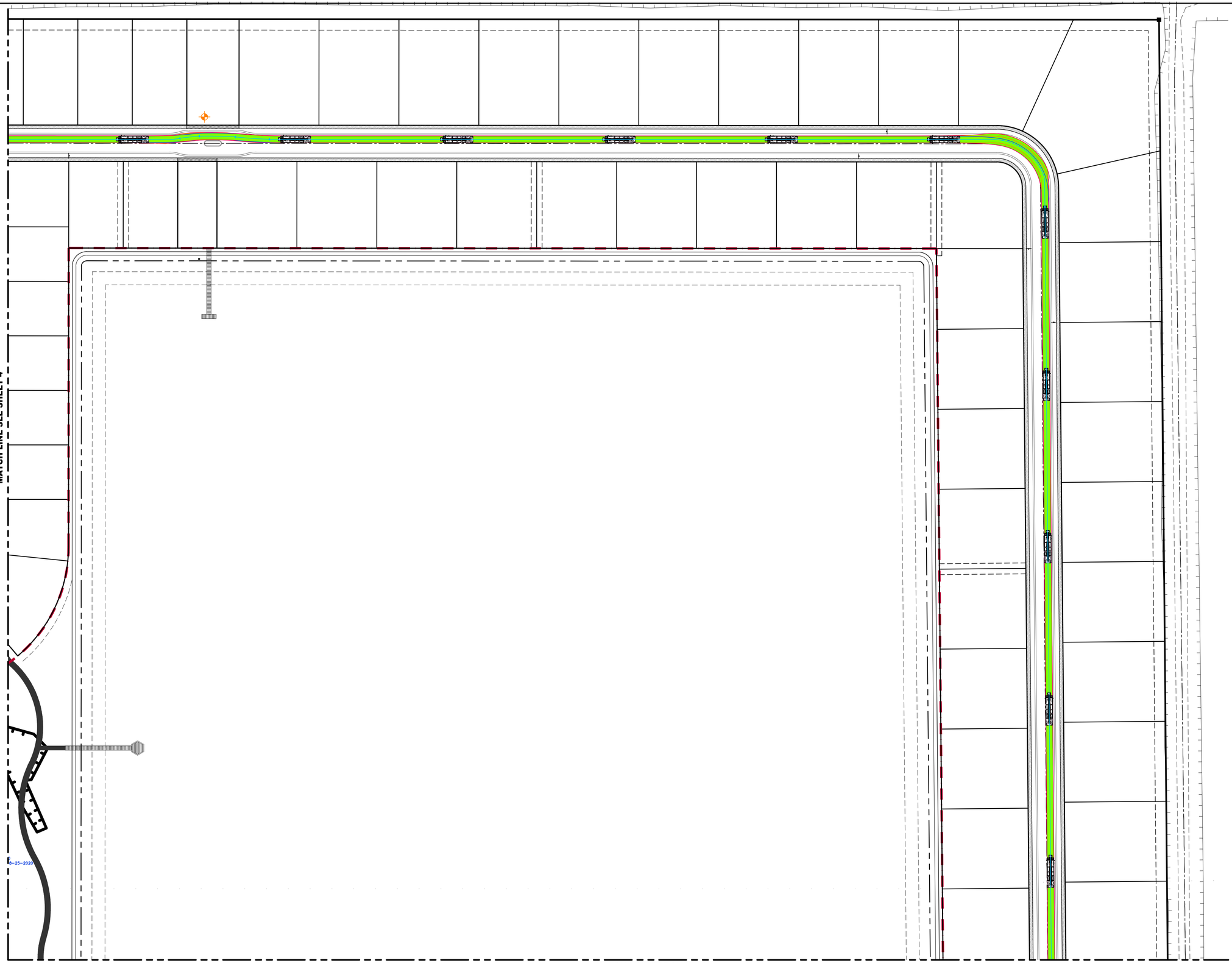
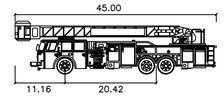
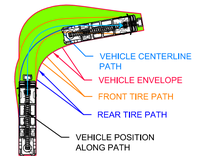
O:\Merritt_Island\Dwg\Eng 4000-4999\412401 Lakes at Cocoa Grove - 21-0569.000 DRMP\412401 CIVIL\412401 Turn Analysis.dwg Plotted: Jun 26, 2023 - 12:21pm by mduchaine





E-One Cyclone II 95 HP

	feet
Width	: 9.50
Track	: 9.35
Lock to Lock Time	: 6.0
Steering Angle	: 43.4



TRUCK TURN LEGEND
(E-ONE CYCLONE II)

NO.	DATE	REVISION DESCRIPTION	BY
2	09/18/22	REV. PER SJRWMD COMMENTS	LB
1	07/12/22	REV. PER CITY OF COCOA COMMENTS	LB

DSN BY LB
DRN BY LB
CHK BY MEP
APPR BY MEP

CONSTRUCTION PLANS FOR
Lakes at Cocoa Grove SUBDIVISION
CITY OF COCOA, FLORIDA

Pumper Fire Truck Turn Analysis

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

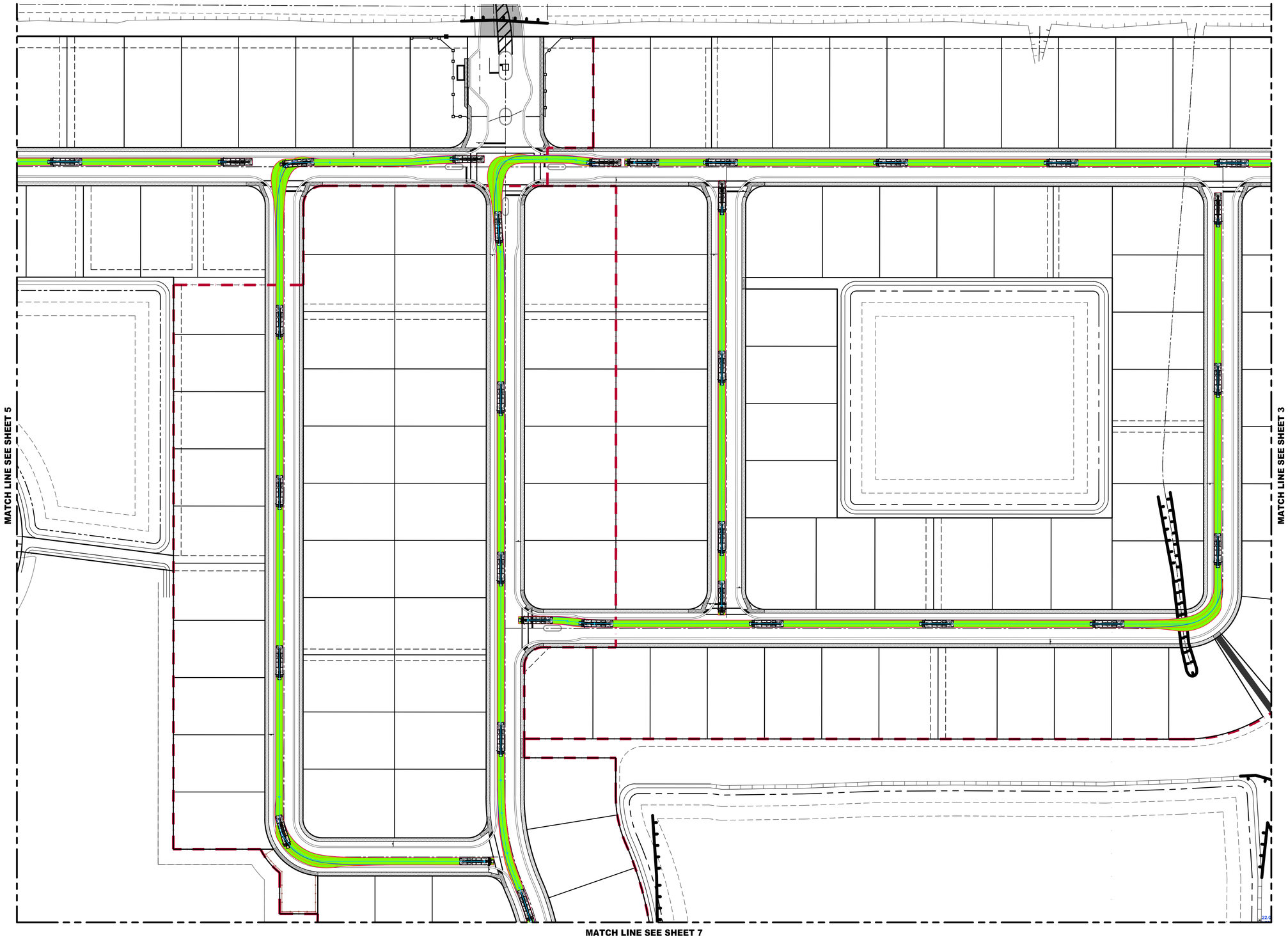
DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2648
100 Parnell Street Suite A, Merritt Island, FL 32953
Phone:321.453.0010 WWW.DRMP.COM
DRMP, Inc.

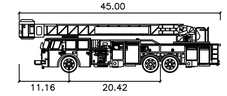
JUAN JOSE GONZALEZ LICENSE No. 84538 STATE OF FLORIDA PROFESSIONAL ENGINEER

Juan Jose Gonzalez, P.E.
State of Florida # 84538

PROJECT NUMBER: 21-0569.000
SCALE: 1" = 60'
DATE: February 21, 2020
SHEET: 3.0

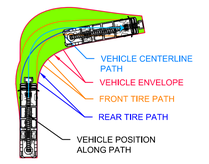
SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION





E-One Cyclone II 95 HP

	feet
Width	: 9.50
Track	: 9.35
Lock to Lock Time	: 6.0
Steering Angle	: 43.4



TRUCK TURN LEGEND
(E-ONE CYCLONE II)

NORTH

NO.	DATE	REVISION DESCRIPTION	BY
2	09/18/22	REV. PER SJRWMD COMMENTS	LB
1	07/12/22	REV. PER CITY OF COCOA COMMENTS	LB

DSN BY LB
DRN BY LB
CHK BY MEP
APPR BY MEP

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SUBDIVISION
CITY OF COCOA, FLORIDA

Pumper Fire Truck
Turn Analysis

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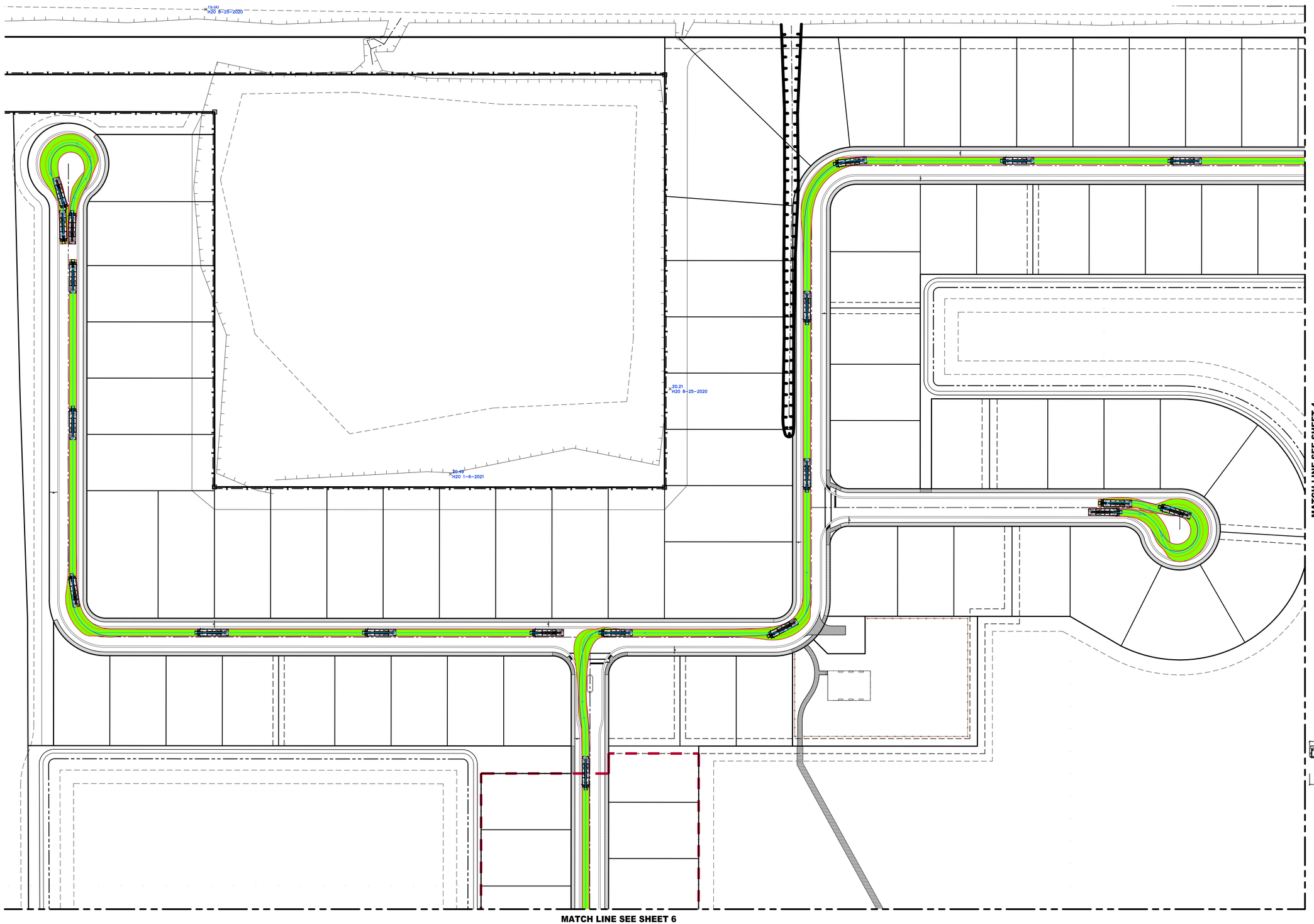
Juan Jose Gonzalez, P.E.
State of Florida # 84538

PROJECT NUMBER: 21-0569.000
SCALE: 1" = 60'
DATE: February 21, 2020
SHEET: **4.0**

SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

O:\Merritt_Island\Dwg\Eng 4000-4999\412401 Lakes at Cocoa Grove – 21-0569.000 DRMP\412401 CIVIL\412401 Turn Analysis.dwg Plotted: Jun 26, 2023 – 12:21pm by mduchaine

O:\Merritt_Island\Dwg\Eng 4000-4999\412401 Lakes at Cocoa Grove - 21-0569.000 DRMP\412401 CIVIL\412401 Turn Analysis.dwg Plotted: Jun 26, 2023 - 12:22pm by mduchaine



NORTH

NO.	DATE	REVISION DESCRIPTION	BY
1	07/12/22	REV. PER CITY OF COCOA COMMENTS	LB
2	09/18/22	REV. PER SJRWMD COMMENTS	LB

DSN BY: LB
DRN BY: LB
CHK BY: MEP
APPR BY: MEP

CONSTRUCTION PLANS FOR

Lakes at Cocoa Grove SUBDIVISION

CITY OF COCOA, FLORIDA

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Pumper Fire Truck Turn Analysis

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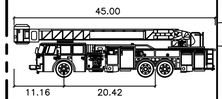
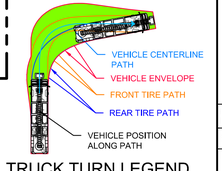
JUAN JOSE GONZALEZ LICENSE No. 84538 STATE OF FLORIDA PROFESSIONAL ENGINEER



E-One Cyclone II 95 HP

	feet
Width	: 9.50
Track	: 9.35
Lock to Lock Time	: 6.0
Steering Angle	: 43.4



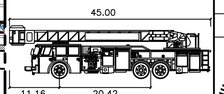
TRUCK TURN LEGEND
(E-ONE CYCLONE II)

Juan Jose Gonzalez, P.E.
State of Florida # 84538

PROJECT NUMBER: 21-0569.000
SCALE: 1" = 60'
DATE: February 21, 2020
SHEET: **5.0**

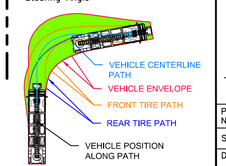
SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

O:\Merritt_Island\Dwg\Eng 4000-4999\412401 Lakes at Cocoa Grove - 21-0569.000 DRMP\412401 CIVIL\412401 Turn Analysis.dwg Plotted: Jun 26, 2023 - 12:22pm by mduchaine



E-One Cyclone II 95 HP

	feet
Width	: 9.50
Track	: 9.35
Lock to Lock Time	: 6.0
Steering Angle	: 43.4



TRUCK TURN LEGEND
(E-ONE CYCLONE II)

NO.	DATE	REVISION DESCRIPTION	BY
1	07/12/22	REV. PER CITY OF COCOA COMMENTS	LB
2	09/18/22	REV. PER SJRWMD COMMENTS	LB

DSN BY	LB	
DRN BY	LB	
CHK BY	MEP	
APPR BY	MEP	

CONSTRUCTION PLANS FOR

Lakes at Cocoa Grove SUBDIVISION

CITY OF COCOA, FLORIDA

Pumper Fire Truck Turn Analysis

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State of Florida # 84538

PROJECT NUMBER: 21-0569.000

SCALE: 1" = 60'

DATE: February 21, 2020

SHEET: **6.0**

SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

O:\Merritt_Island\Dwg\Eng 4000-4999\412401 Lakes at Cocoa Grove - 21-0569.000 DRMP\412401 CIVIL\412401 Turn Analysis.dwg Plotted: Jun 26, 2023 - 12:23pm by mduchaine

MATCH LINE SEE SHEET 4

MATCH LINE SEE SHEET 6

MATCH LINE SEE SHEET 2

21.35
H20 28DEC2020

H20 8-25-2020

× 22.5
M 398

NORTH

45.00

11.16 20.42

E-One Cyclone II 95 HP

	feet
Width	: 9.50
Track	: 9.35
Lock to Lock Time	: 6.0
Steering Angle	: 43.4

VEHICLE CENTERLINE PATH
VEHICLE ENVELOPE
FRONT TIRE PATH
REAR TIRE PATH
VEHICLE POSITION ALONG PATH

TRUCK TURN LEGEND
(E-ONE CYCLONE II)

NO.	DATE	REVISION DESCRIPTION	BY
1	07/12/22	REV. PER CITY OF COCOA COMMENTS	LB
2	09/18/22	REV. PER SJRWMD COMMENTS	LB

CHK BY MEP | DRN BY LB | DSN BY LB | APPR BY MEP

CONSTRUCTION PLANS FOR

Lakes at Cocoa Grove SUBDIVISION

CITY OF COCOA, FLORIDA

Pumper Fire Truck Turn Analysis

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Juan Jose Gonzalez, P.E.
State of Florida # 84538

PROJECT NUMBER: 21-0569.000

SCALE: 1" = 60'

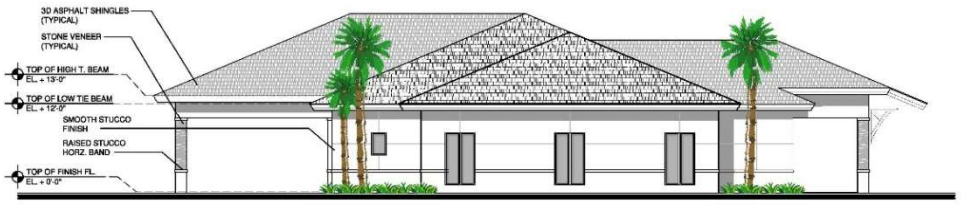
DATE: February 21, 2020

SHEET: **7.0**

SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

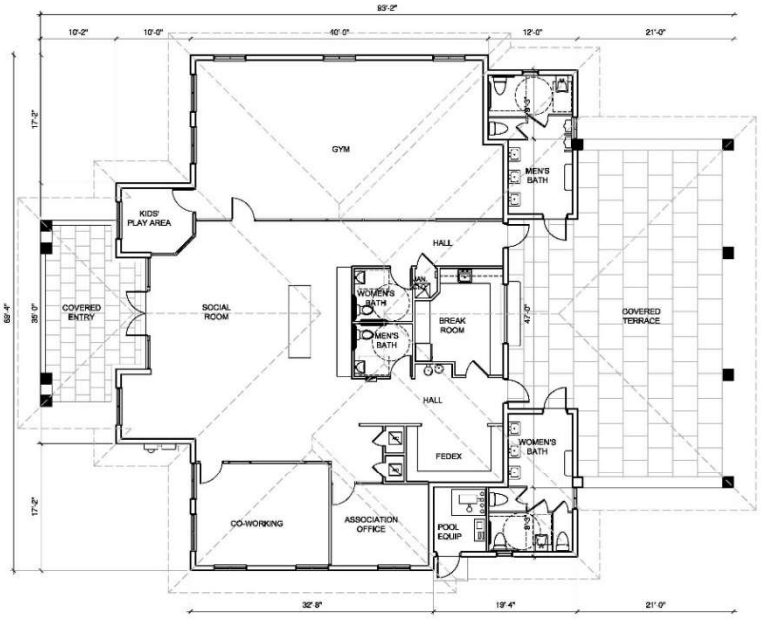
CLUB HOUSE - REAR ELEVATION

SCALE: 1/8" = 1'-0"



CLUB HOUSE - LEFT SIDE ELEVATION

SCALE: 1/8" = 1'-0"

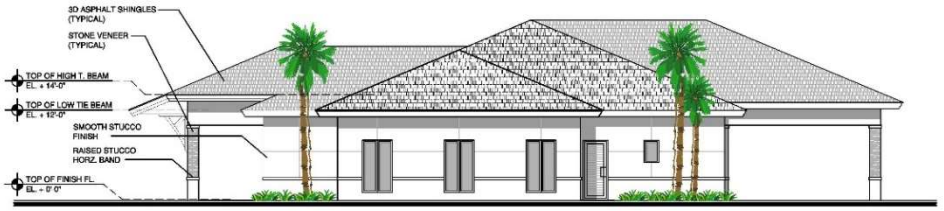


CLUB HOUSE - FLOOR PLAN

SCALE: 1/8" = 1'-0"

CLUB HOUSE - FRONT ELEVATION

SCALE: 1/8" = 1'-0"



CLUB HOUSE - RIGHT SIDE ELEVATION

SCALE: 1/8" = 1'-0"

PLANS, ARCHITECTURAL DRAWINGS AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET" OR "TOTAL AREA SQUARE FEET" OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

BELLÓN
architecture
12930 S.W. 128 STREET
SUITE 203
MIAMI, FLORIDA 33186
T. (305) 278-7776
F. (305) 278-7473
WWW.BELLONMILANES.COM
AA-26002616
ARCHITECTURE
LAND PLANNING
INTERIORS
CONSTRUCTION MANAGEMENT
CONSULTANTS

CLUBHOUSE - LAKES AT COCOA GROVE -

MOUNTAIN COVE HOMES
CITY OF COCOA, FL

MARK	DATE	DESCRIPTION

PROJECT No. LB629
DRAWN BY: FM
CHECKED BY: LB
DATE: 08.12.21

LEOPOLDO BELLON, AIA (AR-5737)

SHEET TITLE
CLUBHOUSE

A-1

SHEET OF

DRAFT

DECLARATION FOR LAKES AT COCOA GROVE POA

THIS DECLARATION FOR LAKES AT COCOA GROVE (this "Declaration") is made by **MOUNTAIN COVE HOMES AT LAKES OF COCOA GROVE LLC.,** a Florida limited liability company ("MCH") and joined in by LAKES AT COCOA GROVE **POA, Inc**., a Florida not-for-profit corporation ("Association").

RECITALS

A. Mountain Cove Homes at Lakes of Cocoa Grove, LLC., is the owner of that certain real property located in Brevard County, Florida ("County"), more particularly described in Exhibit 1 attached hereto and made a part hereof (" LAKES AT COCOA GROVE").

B. Mountain Cove Homes at Lakes of Cocoa Grove, LLC as the Developer (as defined below) desires to subject LAKES AT COCOA GROVE to the covenants, conditions and restrictions contained in this Declaration.

C. This Declaration is a covenant running with all of the land comprising LAKES AT COCOA GROVE, and each present and future owner of interests therein and their heirs, successors and assigns are hereby subject to this Declaration.

NOW THEREFORE, in consideration of the premises and mutual covenants contained in this Declaration, Developer hereby declares that every portion of LAKES AT COCOA GROVE is to be held, transferred, sold, conveyed, used and occupied subject to the covenants, conditions, restrictions, easements, reservations, regulations, charges and liens hereinafter set forth.

1. **Recitals. The foregoing Recitals are true and correct and are incorporated into and form a part of this Declaration.**

2. **Definitions. In addition to the terms defined elsewhere in this Declaration, all initially capitalized terms herein shall have the following meanings:**

"ACC" shall mean the Architectural Control Committee for LAKES AT COCOA GROVE established pursuant to Section 23.1.

"Access Control System" shall mean any system intended to control vehicular access to and/or from .

"Articles" shall mean the Articles of Incorporation of Association filed with the Florida Secretary of State in the form attached hereto as Exhibit 2 and made a part hereof, as amended from time to time.

"Assessments" shall mean any assessments made in accordance with this Declaration and as further defined in Section 21 hereof.

"Association" shall mean LAKES AT COCOA GROVE at Cocoa Grove POA, Inc., its successors and Assigns.

"Association Documents" shall mean this Declaration, the Articles, the By-Laws, the Rules and Regulations, and the Community Standards, as amended from time to time.

"Board" shall mean the Board of Directors of Association.

"Builder" shall mean any Owner who is designated in writing as a Builder by Developer. All Owners that are designated as Builders shall be entitled to the rights of Builders contained in this Declaration.

"By-Laws" shall mean the By-Laws of Association in the form attached hereto as Exhibit 3 and made a part hereof, as amended from time to time.

"Cable Services" shall mean "basic service tier" as described in Section 623(b)(7)(A) of the Cable Television Consumer Protection Act of 1992, video programming services offered on a per-channel or per-program basis, video programming services offered in addition to basic service tier, any method of delivering video programming to Homes including, without limitation, interactive video programming, and any channel recognized in the industry as premium including, without limitation, HBO; Showtime, Disney, Cinemax and the Movie Channel.. By way or 'example, and not of limitation, the term Cable Services may include cable television, satellite master antenna television, individual satellite dishes, multipoint distribution systems, video dial tone, open video system or any combination thereof. (Note: Channels TBD)

"Cellular Tower" shall mean any cellular tower or other structure and its components which are installed within the Private Parcel"

"Cellular Tower Site" shall mean the real property within the Private Parcel upon which a Cellular Tower and its components are or may be installed.

"Club" shall mean LAKES AT COCOA GROVE Club, including the land and club facilities provided for the Owners pursuant to the provisions of the Club Plan.

"Club Dues" shall mean the charges related to the Club to be paid by the Owners pursuant to the provisions of the Club Plan including, without limitation, the Club Membership Fee. (TBD)

"Club Expenses" shall have the meaning set forth in the Club Plan. (TBD)

"Club Membership Fee" shall mean the fee to be paid to the Club Owner by each Owner pursuant to the provisions of this Declaration and the Club Plan. (TBD)

"Club Manager" shall mean the entity operating and managing the Club at any given time. (TBD)

"Club Owner" shall mean the owner of the Club, its successors and assigns. Presently the Club Owner is **Mountain Cove Homes at the Lakes of Cocoa Grove, LLC**

"Club Plan" shall mean LAKES AT COCOA GROVE Club, Club Plan together with all amendments and modifications thereof. A copy of the Club Plan is attached hereto as **Exhibit 4** and made a part hereof. This Declaration is subordinate in all respects to the Club Plan. (TBD)

"Common Areas" shall mean all real property interests and personality within LAKES AT COCOA GROVE designated as Common Areas from time to time by Plat or recorded amendment to this Declaration and provided for, owned, leased by, or dedicated to, the common use and enjoyment of the Owners within LAKES AT COCOA GROVE. The Common Areas may include, without limitation, open space areas, internal buffers, entrance features, entry fountains, electronic gates, perimeter buffers, perimeter walls and fences, landscaping areas, improvements, easement areas owned by others, public rights of way, additions, lakes, irrigation pumps, irrigation lines, sidewalks, private roads, landscape lighting, walls, commonly used utility facilities, mailbox kiosks, and project signage. The Common Areas do not include any portion of a Home or Lot. NOTWITHSTANDING ANYTHING HEREIN CONTAINED TO THE CONTRARY, THE DEFINITION OF "COMMON AREAS" AS SET FORTH IN THIS DECLARATION IS FOR DESCRIPTIVE PURPOSES ONLY AND SHALL IN NO WAY BIND, OBLIGATE OR LIMIT DEVELOPER TO CONSTRUCT OR SUPPLY ANY SUCH ITEM AS SET FORTH IN SUCH DESCRIPTION, THE CONSTRUCTION OR SUPPLYING OF ANY SUCH ITEM BEING IN DEVELOPER'S SOLE DISCRETION. FURTHER, NO PARTY SHALL BE ENTITLED TO RELY UPON SUCH DESCRIPTION AS A REPRESENTATION OR WARRANTY AS TO THE EXTENT OF THE COMMON AREAS TO BE OWNED, LEASED BY OR DEDICATED TO ASSOCIATION, EXCEPT AFTER CONSTRUCTION AND DEDICATION OR CONVEYANCE OF ANY SUCH ITEM. Further, and without limiting the foregoing, it is possible that certain areas that would otherwise be Common Areas shall be conveyed to the District and comprise part of the Facilities. The final determination as to whether any areas within LAKES AT COCOA GROVE shall be Common Areas or comprise part of the Facilities shall be made by the Developer in its sole and absolute discretion.

"Community Completion Date" shall mean the date upon which all Homes in LAKES AT COCOA GROVE, as ultimately planned and as fully developed, have been conveyed by Developer and/or Builder to Owners.

"Community Standards" shall mean such standards of conduct, maintenance or other activity, if any, established by the ACC pursuant to Section 23.5 hereof.

"Contractors" shall have the meaning set forth in Section 23.12 hereof.

"County" shall have the meaning set forth in the Recitals hereof.

"Data Transmission Services" shall mean (i) internet access services and (ii) enhanced services as defined in Section 64.702 of Title 47 of the Code of Federal Regulations, as amended from time to time, and without regard to whether the transmission facilities are used in interstate commerce.

"Declaration" shall mean this Declaration together with all amendments and modifications thereof.

"Developer" shall mean Mountain Cove Homes and any of its designees (including its affiliated or related entities which conduct land development, homebuilding and sales activities), successors and assigns who receive a written assignment of all or some of the rights of Developer hereunder. Developer shall have the right to assign all or a portion of any rights granted to the Developer in this Declaration. Developer shall also have the right to assign all or a portion of any obligations of the Developer in this Declaration. Such assignment need not be recorded in the Public Records in order to be effective. In the event of a partial assignment of some, but not all, Developer rights and/or obligations, the assignee shall not be deemed Developer, but may exercise those rights or shall be responsible for those obligations of Developer assigned to it. Additionally, any partial assignee that does not assume all of the obligations of Developer shall not be deemed the Developer. Any such assignment may be made on a non-exclusive basis. All assignments of Developer rights and/or obligations (whether full and/or partial) must be in writing.

"District" shall have the meaning set forth in Section 10 hereof.

"Estate Home" shall mean each single family Home within THE LAKES AT COCOAGROVE.

"Facilities" shall have the meaning set forth in Section 10 hereof.

"Front Yard" shall mean the yard of every Home between the front of the Home and the road providing access to such Home. In the event that there is any question about what portion of a Home is part of the Front Yard, Association's determination shall be final.

"Home" shall mean a residential home and appurtenances thereto constructed on a Lot or Parcel within LAKES AT COCOA GROVE. A Home shall include, without limitation, a coach home, villa, townhome, estate home, single family home and zero lot line home. The term Home may not reflect the same division of property as reflected on a Plat. A Home shall be deemed created and have perpetual existence upon the issuance of a final or temporary Certificate of Occupancy for such residence; provided, however, the subsequent loss of such Certificate of Occupancy {e.g., by casualty or remodeling) shall not affect the status of a Home, or the obligation of Owner to pay Assessments with respect to the Lot upon which the Home is constructed. The term "Home" includes any interest in land, improvements, or other property appurtenant to the Home.

"Individual Assessments" shall have the meaning set forth in Section 21.2 hereof. "Initial Contribution"

shall have the meaning set forth in Section 21.11 herein. "Installment Assessments" shall have the meaning set forth in Section 21.2 hereof.

"Lender" shall mean (i) the institutional and licensed holder of a first mortgage encumbering a Lot or Home or (ii) Developer and its affiliates, to the extent Developer or its affiliates finances the purchase of a Home or Lot initially or by assignment of an existing mortgage.

"Lessee" shall mean the lessee named in any written lease respecting a Home who is legally entitled to possession of any rental Home within LAKES AT COCOA GROVE.

"Lot" shall mean any platted residential lot shown on a Plat. Once a Home has been constructed on a Lot, the term "Lot" shall be deemed to include all improvements thereon including, without limitation, a Home.

"Master Plan" shall mean collectively any full or partial concept plan for the development of LAKES AT COCOA GROVE, as it exists as of the date of recording this Declaration, regardless of whether such plan is currently on file with one or more governmental agencies. The Master Plan is subject to change as set forth herein. The Master Plan is not a representation by Developer as to the development of LAKES AT COCOA GROVE or its amenities, as Developer reserves the right to amend all or part of the Master Plan from time to time.

"Operating Costs" shall mean all costs and expenses of Association and the Common Areas. Operating Costs may include, without limitation, all of the costs of ownership; operation; administration; all amounts payable by Association; all amounts required to remove canvas canopies located within the Common Areas as required herein; all amounts required to maintain the Surface Water Management System which are not maintained by the District or Association; all community lighting (including certain lights adjacent to, but outside of LAKES AT COCOA GROVE) including, without limitation, lighting provided pursuant to agreements between Association and private utility providers up-lighting and entrance lighting {if not the obligation of the District or Association); all amounts payable in connection with any private street lighting agreement between Association and an electric utility provider; amounts payable to a Telecommunications Provider for Telecommunications Services ft1mished to all Owners; utilities; taxes; insurance; bonds; salaries; management fees; professional fees; service costs; supplies; maintenance; repairs; replacements; refurbishments; common area landscape maintenance and any and all of the costs relating to the discharge of the obligations hereunder, or as determined to be part of the Operating Costs by Association. By way of example, and not of limitation, Operating Costs shall include all of Association's legal expenses and costs relating to or arising from the enforcement and/or interpretation of this Declaration. If any of the foregoing items identified as possible Operating Costs are included as District Maintenance Special Assessments, the same shall not be included in Operating Costs.

"Owner" shall mean the record owner {whether one or more persons or entities) of fee simple title to any Lot. The term "Owner" shall not include Developer or Builder (once so designated in writing by Developer) until the Turnover Date, or a Lender.

"Parcel" shall mean any portion of LAKES AT COCOA GROVE upon which one or more Homes may be constructed.

"Party Roof' shall mean any roof built as part of the construction of two or more Homes, which Homes are connected by one or more Party Walls.

"Party Wall" shall mean any fence or wall built as part of the original construction of two or more Homes which is placed on the dividing line or platted lot line between such Homes.

"Permit" shall mean the permit issued by SJRWMD, a copy of which is attached hereto as Exhibit 5.

"Plat" shall mean the plat respecting LAKES AT COCOA GROVE to be filed in the Public Records, as the same may be amended by Developer, from time to time.

"Private Parcel" shall mean the real property within or adjacent to LAKES AT COCOA GROVE which may be owned by a private individual or entity and utilized by the Private Parcel Owner for, among other purposes, the construction, installation, operation, maintenance, repair and replacement of Cellular Towers.

"Private Parcel Owner" shall mean the record owner of fee simple title to the Private Parcel and who has been designated as the Private Parcel Owner in writing by the Developer. The Private Parcel Owner shall not be a member of the Association or an Owner under this Declaration, shall have no liability or obligation to pay Assessments of any kind, shall not be subject to the ACC, and shall be exempt from all use restrictions and/or rules or regulations of the Association. No amendment to this Declaration may affect the interests of the Private Parcel Owner without the prior written consent of the Private Parcel Owner.

"Public Infrastructure" shall have the meaning set forth in Section 10 hereof.

"Public Records" shall mean the Public Records of Brevard County, Florida.

"Reserves" shall have the meaning set forth in Section 21.2 hereof.

"Rules and Regulations" shall mean collectively the Rules and Regulations governing LAKES AT COCOA GROVE as adopted by the Board from time to time.

"SJRWMD" shall mean the St John's River Water Management District.

"Special Assessments" shall mean those Assessments more particularly described as Special Assessments in Section 21.2 hereof.

"Surface Water Management System" shall mean the collection of devices, improvements, or natural systems whereby surface waters are controlled, impounded or obstructed. This term includes exfiltration trenches, mitigation areas, retention areas, lift station, water management areas, ditches, culverts, structures, dams,

impoundments, reservoirs, drainage maintenance easements, retention lakes and those works defined in· Section 373.403(1)-(5) of the Florida Statutes. The Surface Water Management System includes those works authorized by SJRWMD pursuant to the Permit.

"Telecommunications Provider" shall mean any party contracting with Association and/or Owners directly to provide Owners with one or more Telecommunications Services. With respect to any particular Telecommunications Services, there may be one or more Telecommunications Providers. By way of example, with respect to Data Transmission Services, one Telecommunications Provider may provide Association or Owners such service while another may own, maintain and service the Telecommunications Systems which allow delivery of such Data Transmission Services.

"Telecommunications Services" shall mean delivered entertainment services; all services that are typically and in the future identified as telecommunication services; Telephony Services; Cable Services; and Data Transmission Services. Without limiting the foregoing Telecommunication services included the development, promotion, marketing (which may be provided by Telecommunications Providers pursuant to agreements with the Association), advertisement, provision, distribution, maintenance, transmission, and servicing of any of the foregoing services. The term Telecommunications Services is to be construed as broadly as possible.

"Telecommunications Systems" shall mean all facilities, items and methods required and/or used in order to provide Telecommunications Services to LAKES AT COCOA GROVE. Without limiting the foregoing, Telecommunications Systems may include wires (fiber optic or other material), conduits, passive and active electronic equipment, pipes, pedestals, wireless cell sites, computers, modems, satellite antenna sites, transmission facilities, amplifiers, junction boxes, trunk distribution, feeder cables, lock boxes, taps, drop cables, related apparatus, converters, connections, head-end antennae, earth stations, appurtenant devices, network facilities necessary and appropriate to support provision of local exchange services and/or any other item appropriate or necessary to support provision of Telecommunications Services. Ownership and/or control of all or a portion of any part of the Telecommunications Services may be bifurcated among network distribution architecture, system head-end equipment, and appurtenant devices *(e.g.,* individual adjustable digital units).

"Telephony Services" shall mean local exchange services provided by a certified local exchange carrier or alternative local exchange company, _____and _____ voice telephony and data transmission. (TBD)

"Title Documents" shall have the meaning set forth in Section 30.2 hereof.

"Toll Calls" shall have the meaning given to such term by the Florida Public Service Commission and\or the Federal Communications Commission.

~~"Townhome" shall mean each Home within LAKES AT COCOA GROVE that is part of a Townhome Building. (~~N /A)

~~"Townhome Building" shall mean a single structure containing multiple Homes in which the Homes are separated by Party Walls and in which the Homes have private garages (~~N.A)

"Turnover Date" shall mean the date on which transition of control of Association from Developer to Owners occurs. Without limiting the foregoing, Developer shall never be obligated to tum over Association prior to the date currently required by law.

"Use Fees" shall have the meaning set forth in Section 21.2.3 hereof.

"Wetland Conservation Areas" shall have the meaning set forth in Section 13.12.3 herein. The Wetland Conservation Areas will either be part of the Common Areas and will be maintained by Association or part of the Facilities and subject to the jurisdiction of the District.

3. Plan of Development.

3.1 General. The planning process for LAKES AT COCOA GROVE is an ever-evolving one and must remain flexible in order to be responsible to and accommodate the needs of Developer's buyers. Subject to the Title Documents, and approval by the local government authority, Developer may wish and has the right to develop LAKES AT COCOA GROVE and adjacent property owned by Developer into residences, comprised of homes, villas, coach homes, townhomes, zero lot line homes, patio homes, multi-family homes, condominiums, rental apartments, and other forms of residential dwellings, as well as commercial development, which may include shopping centers, stores, office buildings, showrooms, industrial facilities, Technological facilities, and professional offices. The existence at any point in time of walls, landscape screens, or berms is not a guarantee or promise that such items will remain or form part of LAKES AT COCOA GROVE as finally developed.

3.2 Association's Obligation to Cooperate. Association shall at all times cooperate with every entity comprising Developer. Without limiting the foregoing, Association shall provide Developer with such consents and approvals which Developer may reasonably require in connection with (i) the sale of Parcels and/or Lots to Builders, (ii) the development and conveyance of the Common Areas, (iii) any transfer and/or modification of the Permit, (iv) the opening, modification, and/or closure of any permit, and (v) master land development .requirements and/or changes. Additionally, Association shall cooperate with Developer in connection with the turnover of Association control including, but not limited to, signing a turnover receipt in the form to be provided by Developer to Association on the Turnover Date.

4. Amendment.

4.1 General Restrictions on Amendments. Notwithstanding any other provisions herein to the contrary, no amendment to this Declaration shall affect the rights of Developer or Club Owner unless such

amendment receives the prior written consent of Developer or Club Owner, as applicable, which consent may be withheld for any reason whatsoever. If the prior written approval of any governmental entity or agency having jurisdiction is required by applicable law or governmental regulation for any amendment to this Declaration, then the prior written consent of such entity or agency must also be obtained. All amendments must comply with Section 13.12 hereof which benefits the SJRWMD. No amendment shall be effective until it is recorded in the Public Records.

4.2 No Vested Rights. Each Owner by acceptance of a deed to a Home irrevocably waives any claim that such Owner has any vested rights pursuant to case law or statute with respect to this Declaration or any of the other Association Documents. It is expressly intended that Developer and Association have the unfettered right to amend this Declaration and the other Association Documents except as expressly set forth herein.

4.3 Amendments Prior to and Including the Turnover Date. Prior to and including the Turnover Date, Developer shall have the right to amend this Declaration as it deems appropriate, without the joinder or consent of any person or entity whatsoever. Such amendments may include, without limitation, the creation of easements for Telecommunications Systems, utility, drainage, ingress and egress and roof overhangs over any portion of LAKES AT COCOA GROVE; additions or deletions from the properties comprising the Common Areas; changes in the Rules and Regulations, and modifications of restrictions on the Homes, and maintenance standards for landscaping. Developer's right to amend under this provision is to be construed as broadly as possible. By way of example, and not as a limitation, Developer may create easements over Homes conveyed to Owners provided that such easements do not prohibit the use of such Homes as residential homes. In the event that Association shall desire to amend this Declaration prior to and including the Turnover Date, Association must first obtain Developer's prior written consent to any proposed amendment. Thereafter, an amendment identical to that approved by Developer may be adopted by Association pursuant to the requirements for amendments from and after the Turnover Date. Thereafter, Developer shall join in such identical amendment so that its consent to the same will be reflected in the Public Records. Notwithstanding the foregoing, at all times after the Turnover Date, Developer shall have the right to amend Association Documents unilaterally to correct scrivener's errors.

4.4 Amendments after the Turnover Date. After the Turnover Date, but subject to the general restrictions on amendments set forth above, this Declaration may be amended with the approval of (i) sixty six and two-thirds percent (66 2/3%) of the Board; and (ii) seventy-five percent (75%) of all of the votes present (in person or by proxy) at a duly noticed meeting of the members of Association at which there is a quorum.

5. Annexation and Withdrawal.

5.1 Annexation by Developer. Prior to and including the Turnover Date, additional lands may be made part of LAKES AT COCOA GROVE by Developer, at Developer's sole discretion. Such additional lands to be annexed may or may not be adjacent to LAKES AT COCOA GROVE. Except for applicable governmental approvals (if any), no consent to such annexation shall be required from any other party (including, but not limited to, Association, Owners or any Lenders of any portion of LAKES AT COCOA GROVE, including a Home). Such annexed lands shall be brought within the provisions and applicability of this Declaration by recording an amendment to this Declaration in the Public Records. The amendment shall subject the annexed lands to the covenants, conditions, and restrictions contained in this Declaration as fully as though the annexed lands were described herein as a portion of LAKES AT COCOA GROVE. Such amendment may contain additions to, modifications of or omissions from the covenants, conditions, and restrictions contained in this Declaration as deemed appropriate by Developer and as may be necessary to reflect the different character, if any, of the annexed lands. Prior to and including the Turnover Date, only Developer may add additional lands to LAKES AT COCOA GROVE.

5.2 Annexation by Association. After the Turnover Date, and subject to applicable governmental approvals (if any), additional lands may be annexed with the approval of (i) sixty-six and two-thirds percent (66 2/3%) of the Board; and (ii) seventy-five percent (75%) of all of the votes present (in person or by proxy) at a duly noticed meeting of the members of Association at which there is a quorum.

5.3 Withdrawal. Prior to and including the Turnover Date, any portions of LAKES AT COCOA GROVE (or any additions thereto) may be withdrawn by Developer from the provisions and applicability of this Declaration by the recording of an amendment to this Declaration in the Public Records. The right of Developer to withdraw portions of LAKES AT COCOA GROVE shall not apply to any Home which has been conveyed to an Owner unless that right is specifically reserved in the instrument of conveyance or the prior written consent of the Owner is obtained.The withdrawal of any portion of LAKES AT COCOA GROVE shall not require the consent or joinder of any other party (including, but not limited to, Association, Owners, or any Lenders of any portion of LAKES AT COCOA GROVE). Association shall have no right to withdraw land from LAKES AT COCOA GROVE.

6. Dissolution.

6.1 Generally. In the event of the dissolution of Association without reinstatement within thirty (30) days, other than incident to a merger or consolidation, any Owner may petition the Circuit Court of the appropriate Judicial Circuit of the State of Florida for the appointment of a receiver to manage the affairs of the dissolved Association and to manage the Common Areas in the place and stead of Association, and to make of such provisions as may be necessary for the continued management of the affairs of the dissolved Association. In the event Association is dissolved, and any portion of the Surface Water Management System is part of the Common Areas, the Surface Water Management System shall be conveyed to the District or an appropriate agency of local government, and that if not accepted, then the Surface Water Management System shall be dedicated to a similar non-profit corporation.

6.2 Applicability of Declaration after Dissolution. In the event of dissolution of Association, LAKES AT COCOA GROVE and each Lot therein shall continue to be subject to the provisions of this Declaration, including, without limitation, the provisions respecting Assessments and Club Dues specified in this Declaration and/or Club Plan. Each Owner shall continue to be personally obligated to the successors or assigns of Association and/or Club Owner for Assessments and Club Dues to the extent that Assessments are required to enable the successors or assigns of Association to properly maintain, operate and preserve the Common Areas and/or Club.

Without limiting the foregoing, the obligation of each Owner to pay the Club Membership Fee shall survive the dissolution of Association. The provisions of this Section shall only apply with regard to the maintenance, operation, and preservation ·of those portions of LAKES AT COCOA GROVE which had been Common Areas and/or comprised part of the Club and continue to be so used for the common use and enjoyment of the Owners.

7. Binding Effect and Membership.

7.1 Term. This Declaration and all covenants, conditions and restnct10ns contained in this Declaration are equitable servitudes, perpetual and run with the land. Each Owner, by acceptance of a deed to a Home or Lot, and any person claiming by, through or under such Owner agrees to be subject to the provisions of this Declaration and irrevocably waives any right to deny, and any claim, that this Declaration and all covenants, conditions and restrictions contained in this Declaration are not enforceable under the Marketable Record Titles to Real Property Act, Chapter 712 of the Florida Statutes. It is expressly intended that the Marketable Record Titles to Real Property Act will not operate to extinguish any encumbrance placed on LAKES AT COCOA GROVE by this Declaration. It is further expressly intended that no re-filing or notice of preservation ·is necessary to continue the applicability of this Declaration and the applicability of all covenants, conditions, and restrictions contained in this Declaration. This provision is not subject to amendment, except by Developer.

7.2 Transfer. The transfer of the fee simple title to a Lot, whether voluntary or by operation of law, terminating the Owner's title to that Lot shall terminate the Owner's rights to the use of and enjoyment of the Common Areas as it pertains to that Lot and shall terminate such Owner's membership in Association. An Owner's rights and privileges under this Declaration are not assignable separately from a Lot. The Owner of each Lot is entitled to the benefits of, and is burdened with the duties and responsibilities set forth in, the provisions of this Declaration. All parties acquiring any right, title and interest in and to any Lot shall be fully bound by the provisions of this Declaration. In no event shall any Owner acquire any rights that are greater than the rights granted to, and limitations placed upon its predecessor in title pursuant to the provisions of this Declaration. In the event that any Owner desires to sell or otherwise transfer title of his or her Lot, such Owner shall give the Board at least fourteen (14) days prior written notice of the name and address of the purchaser or transferee, the date on which such transfer of title is to take place, and such other information as the Board may reasonably require. The transferor shall remain jointly and severally liable with the transferee for all obligations of the Owner and the Lot pursuant to this Declaration including, without limitation, payment of all Assessments accruing prior to the date of transfer. Until written notice is received as provided in this Section, the transferor and transferee shall be jointly and severally liable for Assessments accruing subsequent to the date of transfer. In the event that upon the conveyance of a Lot an Owner fails in the deed of conveyance to reference the imposition of this Declaration on the Lot, the transferring Owner shall remain liable for Assessments accruing on the Lot from and after the date of conveyance.

7.3 Membership. Upon acceptance of title to a Lot, and as more fully provided in the Articles and By-Laws, each Owner (or his or her Lessee, if applicable) shall be a member of Association. Membership rights are governed by the provisions of this Declaration, the deed to a Lot, the Articles and By-Laws. Membership shall be an appurtenance to and may not be separated from, the ownership of a Lot. Developer rights with respect to Association are set forth in this Declaration, the Articles and the By-Laws. Club Owner shall be a member of Association as set forth in the By-Laws.

7.4 Ownership by Entity. In the event that an Owner is other than a natural person, that Owner shall, immediately upon taking title, designate one or more persons who are to be the occupants of the Home or Lot and register such persons with Association. All provisions of this Declaration and the other Association Documents shall apply to both such Owner and the designated occupants.

7.5 Voting Interests. Voting interest in Association are Governed by the provisions in the Articles and By-Laws.

7.6 Document Recordation by Owners Prohibited. Neither Association nor any Owner, nor group of Owners, may record any documents which, in any way, affect or restrict the rights of Developer or Club Owner, or conflict with the provisions of this Declaration or the other Association Documents.

7.7 Composition of Board. Developer reserves the right to change, from time to time prior to and including Turnover Date, the composition of the Board. Without limiting the foregoing, Developer may change the number of Board members, the effect of a vote by a Board member, or how a Board member is elected or appointed prior to and including Turnover Date.

7.8 Conflicts. In the event of any conflict among this Declaration, the Articles, the By-Laws or any of the other Association Documents, this Declaration shall control.

8. Paramount Right of Developer. Notwithstanding anything to the contrary herein, prior to the Community Completion Date Developer shall have the paramount right to dedicate, transfer, and/or convey (by absolute conveyance, easement, or otherwise) portions of LAKES AT COCOA GROVE for various public purposes or for the provision of Telecommunications Systems, or to make any portions of LAKES AT COCOA GROVE part of the Common Areas, or to create and implement a special taxing district which may include all or any portion of LAKES AT COCOA GROVE. In addition, the Common Areas of LAKES AT COCOA GROVE may include decorative improvements, berms and waterbodies. Notwithstanding anything to the contrary herein, the waterbodies may be dry during certain weather conditions or during certain times of the year. Developer may remove, modify, eliminate or replace these items from time to time in its sole discretion. SALES BROCHURES, SITE PLANS, AND MARKETING MATERIALS ARE CURRENT CONCEPTUAL REPRESENTATIONS AS TO WHAT FACILITIES, IF ANY, WILL BE INCLUDED WITHIN THE COMMON AREAS. DEVELOPER SPECIFICALLY RESERVES THE RIGHT TO CHANGE THE LAYOUT, COMPOSITION, AND DESIGN OF ANY AND ALL COMMON AREAS AT ANY TIME WITHOUT NOTICE AT ITS DISCRETION.

9. Operation of Common Areas.

9.1 Prior to Conveyance. Prior to the conveyance, identification and/or dedication of the Common Areas to Association as set forth in Section 9.4 herein, any portion of the Common Areas owned by Developer shall be operated, maintained, and administered at the sole cost of Association for all purposes and· uses reasonably

intended, as Developer in its sole discretion deems appropriate. During such period, Developer shall own, operate, and administer the Common Areas without interference from any Owner or Lender of a Parcel, Lot or any portion of LAKES AT COCOA GROVE or Home or any other person or entity whatsoever. Owners shall have no right in or to any Common Areas referred to in this Declaration unless and until same are actually constructed, completed, and conveyed to, leased by, dedicated to, and/or maintained by Association. The current conceptual plans and/or representations, if any, regarding the composition of the Common Areas are not a guarantee of the final composition of the Common Areas. No party should rely upon any statement contained herein as a representation or warranty as to the extent of the Common Areas to be owned, leased by, operated or dedicated to Association. Developer, so long as it controls Association, further specifically retains the right to add to, delete from, or modify any of the Common Areas referred to herein in its sole discretion and without notice.

9.2 Construction of Common Areas Facilities. Developer has constructed or will construct, at its sole cost and expense, certain facilities and improvements as part of the Common Areas, together with equipment and personalty contained therein, and such other improvements and personalty as Developer determines in its sole discretion. Developer shall be the sole judge of the composition of such facilities and improvements. Prior to the Community Completion Date Developer reserves the absolute right to construct additional Common Areas facilities and improvements within LAKES AT COCOA GROVE, from time to time, in its sole discretion, and to remove, add to modify and change the boundaries, facilities and improvements now or then part of the Common Areas. Developer is not obligated to, nor has it represented that it will, modify or add to the facilities, improvements, or Common Areas as they are contemplated as of the date hereof. Developer is the sole judge of the foregoing, including the plans, specifications, design, location, completion schedule, materials, size, and contents of the facilities, improvements, appurtenances, personalty *(e.g.*, furniture), color, textures, finishes, or Common Areas, or changes or modifications to any of them.

9.3 Use of Common Areas by Developer. Until the Community Completion Date Developer shall have the right to use any portion of the Common Areas and the Club, without charge, for any purpose deemed appropriate by Developer.

9.4 Conveyance.

9.4.1 Generally. Simultaneously with the Plat being recorded, or earlier or later as determined by Developer in its sole discretion, or as may be required by law, all or portions of the Common Areas shall be dedicated by Plats, created in the form of easements, and conveyed by written instrument or by Quitclaim Deed recorded in the Public Records from Developer to Association. Association shall pay all of the costs of the conveyance. The dedication, creation by easement, or conveyance shall be subject to easements, restrictions, reservations, conditions, limitations, and declarations of record, real estate taxes for the year of conveyance, zoning, land use regulations and survey matters. Association shall be deemed to have assumed and agreed to pay all continuing obligations and service and similar contracts relating to the ownership operation, maintenance, and administration of the conveyed portions of Common Areas and other obligations relating to the Common Areas imposed herein. Association shall, and does hereby, indemnify and hold Developer harmless on account thereof. Association, by its joinder in this Declaration, hereby accepts such dedication(s) or conveyance(s) without setoff, condition, or qualification of any nature. The Common Areas, personal property and equipment thereon and appurtenances thereto shall be dedicated or conveyed in "as is, where is" condition WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IN FACT OR BY LAW, AS TO THE CONDITION, FITNESS OR MERCHANTABILITY OF THE COMMON AREAS BEING CONVEYED.

9.4.2 Form of Deed. Each deed of the Common Areas shall be subject to the following provisions:

9.4.2.1 Intentionally left blank.

9.4.2.2 matters reflected in the Plat;

9.4.2.3 perpetual non-exclusive easements in favor of the Developer, its successors, and assigns in, to , upon and over all of the Common Areas for the purposes of vehicular and pedestrian ingress and egress, installation of utilities, landscaping and/or drainage, without charge, including, without limitation, the right to use such roadways for construction vehicles and equipment. The easements reserved in the deed shall run in favor of Developer, and its employees, representatives, agents, licensees, guests, invitees, successors and/or assigns;

9.4.2.4 all restrictions, easements, covenants and other matters of record;

9.4.2.5 in the event that Association believes that Developer shall have failed in any respect to meet Developer's obligations under this Declaration or has failed to comply with any of Developer's obligations under law or the Common Areas conveyed herein are defective in any respect, Association shall give written notice to Developer detailing the alleged failure or defect. Once Association has given written notice to Developer pursuant to this Section, Association shall be obligated to permit Developer and its agents to perform inspections of the Common Areas and *to* perform all tests and make all repairs/replacements deemed necessary by Developer to respond to such notice at all reasonable times. Association agrees that any inspection, test and/or repair/replacement scheduled on a business day between *9* a.m. and *5* p.m. shall be deemed scheduled at a reasonable time. The rights reserved in this Section include the right of Developer to repair or address, in Developer's sole option and expense, any aspect of the Common Areas deemed defective by Developer during its inspections of the Common Areas. Association's failure to give the notice and/or otherwise comply with the provisions of this Section will damage Developer. At this time, it is impossible to determine the actual damages Developer might suffer. Accordingly, if Association fails to comply with its obligations under this Section in any respect, Association shall pay to Developer liquidated damages in the amount of $250,000.00 which Association and Developer agree is a fair and reasonable remedy; and

9.4.2.6 a reservation of right in favor of Developer (so long as Developer owns any portion of LAKES AT COCOA GROVE) to require that Association re-convey all or a portion of the Common Areas conveyed by quitclaim deed in favor of Developer in the event that such property is required to be owned by Developer for any purpose, including, without limitation, the reconfiguration of any adjacent property by replatting or otherwise.

9.5 Operation after Conveyance. After the conveyance or dedication of any portion of the Common Areas to Association, the portion of the Common Areas so dedicated shall be owned, operated and administered by Association for the use and benefit of the owners of all property interests in LAKES AT COCOA GROVE including, but not limited to, Association, Developer, Club Owner, Owners and any Lenders. Subject to Association's right to grant easements and other interests as provided herein, Association may not convey, abandon, alienate, encumber, or transfer all or a portion of the Common Areas to a third party without (i) if prior to and including the Turnover Date, the approval of (a) a majority of the Board; and (b) the consent of Developer and Club Owner, or (ii) from and after the Turnover Date, approval of (a) sixty-six and two-thirds percent (66⅔%) of the Board; and (b) seventy-five percent (75%) of all of the votes in Association; and (c) consent of the Club Owner being first had and obtained.

9.6 Paved Common Areas. Certain paved areas may be part of the Facilities under the jurisdiction of the District. The Common Areas may also contain certain paved areas. Without limiting any other provision of this Declaration, Association is responsible for the maintenance and/or resurfacing of all paved surfaces including, but not limited to, roads, pathways, bicycle paths, and sidewalks forming a part of the Common Areas, if any. Although pavement appears to be a durable material, it requires maintenance. Any patching, grading, or other maintenance work should be performed by a company licensed to perform the work. From and after the Community Completion Date, Association should monitor the roads and sidewalks forming the Common Areas monthly to ensure that vegetation does not grow into the asphalt and that there are no eroded or damaged areas that need immediate maintenance.

9.7 Delegation and Managers. Once conveyed or dedicated to Association, the Common Areas and facilities and improvements located thereon shall, subject to the provisions of this Declaration and the document of conveyance or dedication, at all times be under the complete supervision, operation, control, and management of Association. Notwithstanding the foregoing Association may delegate all or a portion of its obligations hereunder to a licensed manager or professional management company. Association specifically shall have the right to pay for management services on any basis approved by the Board (including bonuses or special fee arrangements for meeting financial or other goals). Developer, its affiliates and/or subsidiaries shall have the right to manage Association. Owners and Association acknowledge that it is fair and reasonable to have Developer, its affiliates and/or subsidiaries manage Association. Further, in the event that a Common Area is created by easement, Association's obligations and rights with respect to such Common Area may be limited by the terms of the document creating such easement.

9.8 Use.

9.8.1 General Public Use. The Common Areas shall be used and enjoyed by the Owners on a non-exclusive basis in common with other persons, entities and corporations (who may, but are not required to be, members of Association) entitled to use those portions of the Common Areas. Prior to the Community Completion Date, Developer, and thereafter, Association has the right, at any and all times, and from time to time, to further additionally provide and make the Common Areas available to other individuals, persons, firms, or corporations, as it deems appropriate. The granting of such rights shall not invalidate this Declaration, reduce or abate any Owner's obligations pursuant to this Declaration, or give any Owner the right to avoid any of the covenants, agreements or obligations to be performed hereunder. Without limiting the foregoing, Club Owner and all persons having a right to use the Club (whether or not they are Owners or members of the general public) shall have the right to use the Common Areas for pedestrian and vehicular ingress and egress to the Club for all purposes, and for maintenance, repair and replacement of the Club.

9.8.2 Right to Allow Use. Developer and/or Association may enter into easement agreements or other use or possession agreements whereby the Owners, Telecommunications Providers and/or Association and/or others may obtain the use, possession of, or other rights regarding certain property, on an exclusive or non-exclusive basis, for certain specified purposes. Association may agree to maintain and pay the taxes, insurance, administration, upkeep, repair, and replacement of such property, the expenses of which shall be Operating Costs. Any such agreement by Association prior to the Community Completion Date shall require the consent of Developer and Club Owner. Thereafter, any such agreement shall require the approval of the majority of the Board and the consent of the Club Owner, which consent shall not be unreasonably withheld or delayed.

9.8.3 Waterbodies. BY ACCEPTANCE OF A DEED TO A HOME OR LOT, EACH OWNER ACKNOWLEDGES THAT THE WATER LEVELS OF ALL WATERBODIES MAY VARY, THERE IS NO GUARANTEE BY DEVELOPER, THE DISTRICT OR ASSOCIATION THAT WATER LEVELS WILL BE CONSTANT OR AESTHETICALLY PLEASING AT ANY PARTICULAR TIME; AT TIMES, WATER LEVELS MAY BE NONEXISTENT. Developer, the District, and Association shall not be obligated to erect fences, gates, or walls around or adjacent to any waterbody within LAKES AT COCOA GROVE, if any. Notwithstanding the foregoing, an Owner may erect a fence adjacent to the boundary of a waterbody but within the boundary of a Home with the prior approval of the ACC. All or a portion of the waterbodies within LAKES AT COCOA GROVE may be part of the Facilities, as hereinafter defined, and owned by the District.

9.8.4 Obstruction of Common Areas. No portion of the Common Areas may be obstructed, encumbered, or used by Owners for any purpose other than as permitted by Association.

9.8.5 Assumption of Risk. Without limiting any other provision herein, each person within any portion of LAKES AT COCOA GROVE accepts and assumes all risk and responsibility for noise, liability, injury, or damage connected with use or occupancy of any portion of LAKES AT COCOA GROVE *(e.g.*, the Common Areas) including, without limitation, (a) actions or inactions taken, or nuisances caused, by neighboring Owners (b) noise from maintenance equipment, (c) use of pesticides, herbicides and fertilizers, (d) view restrictions caused by maturation of trees and shrubbery, (e) reduction in privacy caused by the removal or pruning of shrubbery or trees within LAKES AT COCOA GROVE and (f) design of any portion of LAKES AT COCOA GROVE. Each such person entering onto any portion of LAKES AT COCOA GROVE also expressly indemnifies and agrees to hold harmless Developer, the District, Club Owner, Club Manager, Association, and their employees, directors, representatives, officers, agents, affiliates, attorneys and partners (collectively, "Indemnified Parties") from any and all damages, whether direct or consequential, arising from or related to the person's use of the Common Areas and/or Facilities, including attorneys' fees, paraprofessional fees and costs, pre-trial and at all levels of proceedings, including appeals. Without limiting the foregoing, all persons using the Common Areas and/or Facilities, including without limitation, all waterbodies or pools do so at their own risk. BY ACCEPTANCE OF A DEED, EACH OWNER ACKNOWLEDGES THAT THE COMMON AREAS MAY CONTAIN WILDLIFE SUCH AS ALLIGATORS, DOGS, RACCOONS, SNAKES, DUCKS, DEER, SWINE, TURKEYS AND FOXES.

DEVELOPER, THE DISTRICT, BUILDERS, CLUB OWNER, CLUB MANAGER, AND ASSOCIATION SHALL HAVE NO RESPONSIBILITY FOR MONITORING SUCH WILDLIFE OR NOTIFYING OWNERS OR OTHER PERSONS OF THE PRESENCE OF SUCH WILDLIFE. EACH OWNER AND HIS OR HER GUESTS AND INVITEES ARE RESPONSIBLE FOR THEIR OWN SAFETY.

9.8.6 Owner's Obligation to Indemnify. Each Owner agrees to indemnify and hold harmless Indemnified Parties against all actions, injury, claims, loss, liability, damages, costs and expenses of any kind or nature whatsoever ("Losses") incurred by or asserted against any of the Indemnified Parties from and after the date hereof, whether direct, indirect, or consequential, as a result of or in any way related to the Common Areas including, without limitation, use of waterbodies within LAKES AT COCOA GROVE, if any, by Owners, and their guests, family members, invitees, or agents, or the interpretation of this Declaration and/or exhibits attached hereto and/or from any act or omission of Developer, the District, Club Owner, Club Manager, Association, or of any of the Indemnified Parties. Should any Owner bring suit against Developer, the District, Club Owner, Club Manager, Association, or any of the Indemnified Parties for any claim or matter and fail to obtain judgment therein against such Indemnified Parties, such Owner shall be liable to such parties for all Losses, costs and expenses incurred by the Indemnified Parties in the defense of such suit, including attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals.

9.9 Rules and Regulations.

9.9.1 Generally. Prior to and including the Turnover Date, Developer, and thereafter Association, shall have the right to adopt Rules and Regulations governing the use of the Common Areas and LAKES AT COCOA GROVE. The Rules and Regulations need not be recorded in the Public Records. The Common Areas shall be used in accordance with this Declaration and Rules and Regulations promulgated hereunder.

9.9.2 Developer Not Subject to Rules and Regulations. The Rules and Regulations shall not apply to Developer or to any property owned by Developer and shall not be applied in a manner which would prohibit or restrict the development or operation of the Club or adversely affect the interests of Developer. Without limiting the foregoing, Developer and/or its assigns, shall have the right to: (i) develop and construct commercial and industrial uses, club uses, Homes, Common Areas and the Club, and related improvements within LAKES AT COCOA GROVE, and make any additions, alterations, improvements, or changes thereto; (ii) maintain sales offices (for the sale and re-sale of (a) Homes and (b) residences and properties located outside of LAKES AT COCOA GROVE), general offices and construction operations within LAKES AT COCOA GROVE; (iii) place, erect or construct portable, temporary or accessory buildings or structure within LAKES AT COCOA GROVE for sales, construction storage or other purposes; (iv) temporarily deposit, dump or accumulate materials, trash, refuse and rubbish in connection with the development or construction of any portion of LAKES AT COCOA GROVE; (v) post, display, inscribe or affix to the exterior of any portion of the Common Areas or portions of LAKES AT COCOA GROVE owned by Developer, signs and other materials used in developing, constructing, selling or promoting the sale of any portion LAKES AT COCOA GROVE including, without limitation, Homes; (vi) excavate fill from any waterways within and/or contiguous to LAKES AT COCOA GROVE by dredge or dragline, store fill within LAKES AT COCOA GROVE and remove and/or sell excess fill; and grow or store plants and trees within, or contiguous to, LAKES AT COCOA GROVE and use and/or sell excess plants and trees; and (vii) undertake all activities Which, in the sole opinion of Developer, are necessary for the development and sale of any lands and improvements comprising LAKES AT COCOA GROVE.

9.10 Public Facilities. LAKES AT COCOA GROVE may include one or more facilities which may be open and available for the use of the general public. By way of example, there may be a public park, fire station, police station, lift station or other facility within the boundaries of LAKES AT COCOA GROVE.

9.11 Default by Another Owner. No default by any Owner in the performance of the covenants and promises contained in this Declaration or by any person using the Common Areas or any other act of omission by any of them shall be construed or considered (a) a breach by Developer or Association or a non-defaulting Owner or other person or entity of any of their promises or covenants in this Declaration; or (b) an actual, implied or constructive dispossession of another Owner from the Common Areas; or (c) an excuse, justification, waiver or indulgence of the covenants and promises contained in this Declaration.

9.12 Special Taxing Districts. For as long as Developer controls Association, Developer shall have the right, but not the obligation, to dedicate or transfer or cause the dedication or transfer of all or portions of the Common Areas of Association to the District, a special taxing district or a public agency or authority under such terms as Developer deems appropriate in order to create or contract with special taxing districts and community development districts (or others) for lighting, perimeter walls, entrance features, roads, landscaping, irrigation areas, waterways, ponds, surface water management systems, wetlands mitigation areas, parks, recreational or other services, security or communications, or other similar purposes deemed appropriate by Developer, including without limitation, the maintenance and/or operation of any of the foregoing; provided, however, that any such dedication or transfer shall not result in expense to the general taxpayers of the City (other than Owners) or the assumption by the City of any responsibility for maintenance of any portion of the Common Areas. As hereinafter provided, Developer may sign any taxing district petition as attorney-in-fact for each Owner. Each Owner's obligation to pay taxes associated with such district shall be in addition to such Owner's obligation to pay Assessments. Any special taxing district shall positively provide for the proper and continuous payment of taxes for Common Areas and maintenance thereof without expense to the general taxpayers of the City and shall be created pursuant to all applicable ordinances of City and all other applicable governing entities having jurisdiction with respect to the same. Developer has applied to City for the creation of a multi-purpose special taxing district. Developer may, but shall not be required, to apply for a street lighting special taxing district, which would operate upon creation.

9.13 Water Transmission and Distribution Facilities Easement and Repair. Developer hereby grants and conveys to City, its successors and assigns, the non-exclusive right, privilege and easement to construct, re-construct, lay, install, operate, maintain, relocate, repair, replace, improve and inspect water transmission and distribution facilities and sewer collection facilities and all appurtenances thereto, and all appurtenant equipment, with the full right of ingress thereto and egress therefrom, within LAKES AT COCOA GROVE (excluding such facilities located inside a Home) in accordance with plans approved by Developer or Association. Certain water transmission and distribution facilities and sewer collection facilities may be covered with decorative brick pavers that do not conform to City regulations **("Non-Conforming Pavers")** in the course of construction of Homes and Common Areas, as and to the extent permitted under the terms of this Declaration. In the event City or any of its subdivisions,

agencies and/or divisions shall damage any Non-Conforming Pavers as a result of construction, repair or maintenance operations of the water and/or sewer facilities or the City's use of its easement rights granted in this Section 9.13, then Association shall replace or repair such damage at the expense of the Owner of the affected Home and such cost shall be billed to such Owner as an Individual Assessment, unless, and only to the extent that, such cost is not paid by City or such other subdivisions, agencies and/or divisions. Association shall indemnify and hold harmless City and its officers, employees, agents and instrumentalities from any and all liability, losses or damages, including attorney's fees and costs of defense, which City or its officers, employees, agents or instrumentalities may incur as a result of claims, demands, suits, causes of actions or proceedings of any kind or nature arising out of, relating to or resulting from the performance by Association of Association's obligations under this Section 9.13.

9.14 Association's Obligation to Indemnify. Association and Owners each covenant and agree jointly and severally to indemnify, defend and hold harmless Developer, Club Owner, the District, and their officers, directors, shareholders, representatives, agents, partners, affiliates, and any related persons or corporations and their employees from and against any and all claims, suits, actions, causes of action or damages arising from any personal injury, loss of life, or damage to property, sustained on or about the Common Areas and/or the Facilities, or other property serving Association, and improvements thereon, or resulting from or arising out of activities or operations of Association or Owners, and from and against all costs, expenses, court costs, attorneys' fees and paraprofessional fees (including, but not limited to, attorneys' and paraprofessional fees at all levels of proceedings including appeals), expenses and liabilities incurred or arising from such claim, the investigation thereof, or the defense of any action or proceedings brought thereon, and from and against any orders judgments or decrees which may be entered relating thereto. The costs and expense of fulfilling this covenant of indemnification shall be Operating Costs to the extent such matters are not covered by insurance maintained by Association.

9.15 Site Plans and Plats. LAKES AT COCOA GROVE is subject to the Plat. The Plat may identify some of the Common Areas within LAKES AT COCOA GROVE. The description of the Common Areas on the Plat is subject to change (contingent upon receipt of the appropriate plat approval(s)) and the notes on a Plat are not a guarantee of what facilities will be constructed on such Common Areas. Site plans used by Developer in its marketing efforts illustrate the types of facilities which may be constructed on the Common Areas, but such site plans are not a guarantee of what facilities will actually be constructed. Each Owner should not rely on a· Plat or any site plans used for illustration purposes as the Declaration governs the rights and obligations of Developer and Owners with respect to the Common Areas.

10. Cocoa Grove Community Development District. (CDD)

10.1 Generally. LAKES AT COCOA GROVE is within the Lakes of Cocoa Grove Community Development District (the "District"). Portions of LAKES AT COCOA GROVE may be owned and maintained by the District, including, but not limited to, roads, drainage system, Surface Water Management System, landscaping and/or utilities. In the event that any portions of LAKES AT COCOA GROVE are owned by the District, such facilities shall not be part of the Common Areas but will be part of the infrastructure facilities owned by the District ("Facilities"). AT THIS TIME IT IS NOT KNOWN WHAT PORTIONS OF LAKES AT COCOA GROVE WILL BE DESIGNATED COMMON AREAS OF THE ASSOCIATION OR FACILITIES OF THE DISTRICT. FINAL DETERMINATION OF WHICH PROPERTIES WILL BE COMMON AREAS OF THE ASSOCIATION MAY NOT OCCUR UNTIL THE COMPLETION OF ALL DEVELOPMENT AND RECORDED BY SEPARATE INSTRUMENT. (Refer to **Exhibit 6** for the proposed CDD Facilities and Services)

10.2 Creation of the District. It is anticipated that the District, which is a unit of special purpose government pursuant to Chapter 190, Florida Statutes, will be established within the LAKES AY COCOA GROVE will be subject to District Jurisdiction. The District may issue special assessment bonds (the "Bonds") to finance a portion of the cost of the Facilities.. The creation of the District puts residential units and non-residential development of LAKES AT COCOA GROVE within the jurisdiction of the District. The District may be authorized to acquire, finance, fund, install, equip, extend, construct or reconstruct, without limitation, the following: water and sewer facilities, environmental mitigation, roadways, Surface Water Management System, utility plants and lines, and land acquisition, miscellaneous utilities for the community and other infrastructure projects and services necessitated by the development of, and serving lands, within LAKES AT COCOA GROVE ("Public Infrastructure"). The estimated design, development, construction and acquisition costs for the Facilities may be funded by the District in one or more series of governmental bond financings utilizing Bonds or other revenue backed bonds. The District may issue both long- term debt and short-term debt to finance the Public Infrastructure. The principal and interest on the Bonds may be repaid through non ad valorem special assessments ("District Debt Service Assessments") levied on all benefiting properties in the District, which properties have been found to be specially benefited by the Public Infrastructure. The principal and interest on the other revenue backed bonds ("District Special Assessment Bonds") may be repaid through user fees, franchise fees or other use related revenues. In addition to the Bonds issued to fund the Public Infrastructure costs, the District may also impose an annual non ad valorem special assessment to fund the operations of the District, and the maintenance and repair of its Public Infrastructure and its services ("District Administrative and Maintenance Special Assessments").

10.3 District Assessments. The District Debt Service Assessments and District Administrative and Maintenance Special Assessments will not be taxes but, under Florida law, will constitute a lien co-equal with the lien of state, county, municipal, and school board taxes and may be collected on the ad valorem tax bill sent each year by the Tax Collector of County and disbursed to the District, or may be billed directly by the District. The homestead exemption is not applicable to the District Assessments. Because a tax bill cannot be paid in part, failure to pay the District Debt Service Assessments, District Administrative and Maintenance Special Assessments, or any other portion of the tax bill will result in the sale of tax certificates and could ultimately result in the loss of title to the property of the delinquent taxpayer through the issuance of a tax deed. District Special Assessment Bonds are not taxes or liens on property. If the fees and user charges underlying the District Special Assessment Bonds are not paid, then such fees and user charges could become liens on the property which could ultimately result in the loss of title to the property through the issuance of a tax deed. The initial amounts of the District Debt Service Assessments and District Administrative and Maintenance Special Assessments which will be due in connection with each Home were unknown at the time of recording of this Declaration. Such amounts may vary from year to year and from time to time, and may depend upon the type of Home (i.e., District Debt Service Assessments and District Administrative and Maintenance Special Assessments may be different for Townhomes and Estate Homes). The actual amount of District Debt Service Assessments will be set forth in the District Assessment Methodology Report. District Administrative and Maintenance Special Assessments relating to Facilities will be determined by the District. Any future District Assessments and/or other charges due with respect to the Facilities are direct obligations of each

Owner and are secured by a lien against the Home as set forth in this Section. Failure to pay such sums may result in loss of property as set forth in this Section. The District may construct, in part or in whole, by the issuance of Bonds (as explained in Section 10.2 above), certain facilities including, but not limited to, roads, utilities, landscaping and/or drainage system, as the District determines in its sole discretion.

10.4 Common Areas and Facilities Part of District. Portions of LAKES AT COCOA GROVE may be conveyed by Developer to the District. Such Facilities will be part of the District and the District shall govern the use and maintenance of the Facilities. In the event Developer conveys certain Facilities to the District, some of the provisions of this Declaration' will not apply to such Facilities, as the Facilities will no longer be Common Areas. By way of example and not of limitation, the procedures set forth in this Declaration respecting Developer's obligation to convey the Common Areas will not apply to the Facilities. ANY CONVEYANCE OF COMMON AREAS TO THE DISTRICT SHALL IN NO WAY INVALIDATE THIS DECLARATION. Developer may decide, in its sole discretion, to convey additional portions of the Common Areas to either the District or Association, thereby making such Common Areas part of the District's Facilities. The District or Association may promulgate membership rules, regulations, and/or covenants which may outline use restrictions for the Facilities, or Association's responsibility to maintain the Facilities, if any.

The establishment of the District and the inclusion of Facilities in the District will obligate each Owner to become responsible for the payment of District Debt Service Assessments and the District Administrative and Maintenance Special Assessments for the acquisition, construction, reconstruction, and equipping of the Facilities as set forth in this Section.

10.5 Facilities Owned by District. The Facilities may be owned and operated by the District or owned by the District and maintained by Association. The Facilities may be owned by a governmental entity other than the District. The Facilities shall be used and enjoyed by the Owners, on a non-exclusive basis, in common with such other persons, entities, and corporations that may be entitled to use the Facilities. To keep HOA/POA properties free from assessments that any tract dedicated to the HOA/POA is intended to be used as common elements for the exclusive benefit of lot owners.

11. Party Walls. (Not applicable)

11.1 General Rules of Law: Intentionally deleted

11.2 Sharing of Repair, Replacement and Maintenance for Party Walls.

11.2.1 Generally: Intentionally deleted.

11.2.2 Failure to contribute: Intentionally deleted.

11.2.3 Alterations: Intentionally deleted.

11.2.4 Weatherproofing: Intentionally deleted.

11.2.5 Easements: Intentionally deleted.

12. Party Roofs. (Not applicable)

12.1 General Rules of Law: Intentionally deleted.

12.2 Sharing of Repair, Replacement and Maintenance for Party Roofs.

12.2.1 Generally: Intentionally Deleted.

12.2.2 Failure to contribute: Intentionally deleted.

12.2.3 Alterations: Intentionally deleted.

12.2.4 Easements. Intentionally deleted.

13. Maintenance by Association.

13.1 Common Areas. Except as otherwise specifically provided in this Declaration to the contrary, Association shall at all times maintain, repair, replace and insure the Common Areas, and all improvements placed thereon, including without limitation, all Common Area landscaping and irrigation.

13.2 District Facilities. The District may contract with Association for maintenance, repair and replacement of District Facilities in the District's sole and absolute discretion.

13.3 Drainage. To the extent it is not the responsibility of the District, Association shall at all times maintain the drainage systems and drainage facilities within the Common Areas.

13.4 Canvas Canopies. Association shall be responsible for the removal of all canvas canopies including, but not limited to, mailbox and entrance canopies, if any, located within the Common Areas of the Community in the event of extreme wind conditions, as determined by the Association in its sole discretion. The expense of such removal shall be part of the Operating Costs of Association. Additionally, in the event winds are forecasted to exceed fifty (50) miles per hour, each Owner shall be responsible, at its sole cost and expense, for the removal of all canvas canopies located within its respective Home and yard.

13.5 Lawn Maintenance. If so provided in the Association's budget, Association shall maintain the entire yard of each Home. The Association's landscape maintenance obligations shall include the cutting and edging, and fertilization of grass, and maintenance of trees and hedges. Notwithstanding the foregoing, Association shall have no obligation to maintain any plant beds or other landscaping that has been modified by an Owner, and shall have no obligation to maintain landscaping and/or improvements within any portion of a Lot that is inaccessible *(e.g.,* due to locked gates, blocked passage or otherwise). Association shall have an easement over, under, across and through all of LAKES AT COCOA GROVE for the purpose of landscape maintenance, and each Owner shall be responsible for making certain that the Association has access to all portions of his, her or its yard at all times. To the extent any landscaping within a yard or 'Lot dies for any reason, the Owner of the applicable Lot shall be responsible for the removal and replacement of such landscaping in accordance with the ACC's approval and consent. EACH OWNER ACKNOWLEDGES THAT SOME HOMES MAY NOT HAVE FRONT YARDS AND OTHER HOMES MAY HAVE FRONT YARDS THAT ARE LARGER OR SMALLER THAN THE FRONT YARDS OF OTHER HOMES. NOTWITHSTANDING THE FOREGOING ALL LAWN MAINTENANCE EXPENSES SHALL BE DEEMED PART OF THE OPERATING COSTS OF ASSOCIATION AND EACH OWNER SHALL PAY AN EQUAL SHARE OF SUCH COSTS.

13.6 Irrigation and Sprinkler Systems. As there is a single irrigation system serving LAKES AT COCOA GROVE, Association shall be responsible to maintain the irrigation and sprinkler system within the Common Areas and the yards of Lots. Association shall have an easement over, under, across and through all of LAKES AT COCOA GROVE for the purpose of maintaining the irrigation and sprinkler system, and each Owner shall be responsible for making certain that the Association has access to all portions of the irrigation and sprinkler including fenced portions of a Home. Association shall be required to irrigate the grass and landscaping located on the Common Areas and Lot(s) in a routine and ordinary manner, and shall ensure that sufficient irrigation occurs during all periods when the Owner is absent from the Lot. Notwithstanding the foregoing, in the event the irrigation system is temporarily unavailable (whether due to maintenance, breaks in the line or otherwise), upon request by the Association, Owners shall be responsible for irrigating their respective Lots (by hose or sprinklers connected to a hose or hoses) until otherwise notified by the Association. To the extent that Owners are instructed by the Board to irrigate their respective Lots, each Owner shall comply with all water use restrictions imposed by applicable governmental entities. To the extent an Owner fails to comply with any such water use restrictions and Association is subsequently fined due.to such water use, Association may impose an Individual Assessment upon such Owner for the payment of any fine(s) imposed on Association. Association, but not Owners, may use lakes within LAKES AT COCOA GROVE for irrigation purposes.

13.7 Duty to Paint Exterior of Townhomes. Intentionally Deleted.

13.8 Perimeter Walls and Fencing. Association shall be responsible for the maintenance, repair and replacement of those portions of the perimeter walls or fences located within Common Areas, Lots and/or Homes in LAKES AT COCOA GROVE, at such time as the Board deems such maintenance, repair and/or replacement necessary or desirable in its sole discretion, and if located within a Lot, the costs of the same shall be charged as an Individual Assessment to the Owner of the Home or Lot upon which any such portion of the perimeter wall is located.·

13.9 Public Roads. It is possible that either the District or Association may maintain the medians and swales of all public roads pursuant to agreement with the appropriate governmental entities. The costs of such maintenance by Association shall be Operating Costs. The costs of such maintenance by the District shall be part of District Maintenance Special Assessments.

13.10 Private Roads. All roads within LAKES AT COCOA GROVE which are privately owned shall be maintained by Association. Association may enter into an agreement with the District whereby the District would be obligated to maintain such private roads within LAKES AT COCOA GROVE.

13.11 Lakes and Lake Slopes. To the extent that any lakes or lake slopes comprise part of the Facilities, they will be regulated by the District. Otherwise, lakes and lake slopes located within the Common Areas and the rear portion of any Lot shall be the maintenance· obligation of the Association, the costs of which shall be Operating Costs. Association may establish from time to time maintenance standards for the lake and canal (the **"Lake Slope Maintenance Standards").** Such standards may include requirements respecting compaction and strengthening of lake banks. Each Owner hereby grants Association and the District an easement of ingress and egress across his or her Home/Lot to all adjacent lake and canal areas for the purpose of lake maintenance.

13.12 Surface Water Management System.

13.12.1 Duty to Maintain. Unless owned by the District as part of the Facilities, the Surface Water Management System within LAKES AT COCOA GROVE will be owned, maintained and operated by Association as permitted by the SJRWMD. If owned by Association as Common Areas, the costs of the operation and maintenance of the Surface Water Management System shall be part of the Operating Costs of Association. Notwithstanding the foregoing, the SJRWMD has the right to take enforcement action, including a civil action for an injunction and penalties against Association to compel it to correct any outstanding problems with the Surface Water Management System facilities or in mitigation or conservation areas under the responsibility or control of Association.

13.12.2 Amendments to Association Documents. Any proposed amendment to Association Documents which will affect the Surface Water Management System, including any water management portions of the Common Areas must have the prior written approval of the SJWWMD (and the District in the event that the Surface Water Management System is owned by the District). Association's registered agent shall maintain copies of all Surface Water Management System permits and correspondence respecting such permits, and any future SJRWMD permit actions shall be maintained by Association's registered agent for Association's benefit.

13.12.3 Wetland Conservation Areas. Parcels or Lots may contain or be adjacent to wetlands, wetland mitigation or preservation areas, upland conservation areas and drainage easements, which may be dedicated by Plat and/or protected by a conservation easement **("Wetland Conservation Areas").** Owners of Homes abutting Wetland Conservation Areas shall not remove native vegetation (including cattails) that becomes established within the Wetland Conservation Areas abutting their Home. Removal includes dredging, the

application of herbicide, cutting, and the introduction of grass carp. Owners shall address any questions regarding authorized activities within the Wetland Conservation Areas to the SJRWMD Service Office, Surface Water Regulation Manager.

13.12.4 Use Restrictions for Wetland Conservation Areas. The Wetland Conservation Areas may in no way be altered from their natural or permitted state. These use restrictions may be defined on the Permit and the Plats associated with LAKES AT COCOA GROVE. Activities prohibited within the conservation areas include, but are not limited to, the following:

13.12.4.1 Construction or placing of landscaping, buildings, roads, signs, billboards or other advertising, utilities, or other structures on or above the ground;

13.12.4.2 Dumping or placing of soil or other substances or material as landfill, or dumping or placing of trash, waste, or unsightly or offensive materials;

13.12.4.3 Removal or destruction of trees, shrubs or other vegetation; with exception of nuisance and exotic plant species as may be required by Developer;

13.12.4.4 Excavation, dredging, or removal of loam, peat, gravel, soil, rock or other material substance in such manner as to affect the surface;

13.12.4.4 Surface use except for purposes that permit the land or water area to remain predominately in its natural condition;

13.12.4.6 Activities detrimental to drainage, flood control, water conservation, erosion control, or fish and wildlife habitat preservation or conservation;

13.12.4.7 Acts or uses detrimental to such aforementioned retention and maintenance of land or water;

13.12.4.8 Acts or uses detrimental to the preservation of any features or aspects of the property having historical, architectural or cultural significance;

13.12.4.9 No Builder or Owner within LAKES AT COCOA GROVE Community may construct or maintain any building , residence, or structure, or undertake or perform any activity in the Wetland Conservation Area described in the Permit and recorded Plat(s) of LAKES AT COCOA GROVE, unless prior approval is received from the SJRWMD Environmental Resource Regulation Department.

13.12.4.10 Each Builder and Owner within LAKES AT COCOA GROVE at the time of construction of a building, residence, or structure shall comply with the construction plans for the Surface Water Management System approved and on file the SJRWMD.

13.13 Adjoining Areas. Except as otherwise provided herein, Association shall also maintain those drainage areas, swales, lake maintenance easements, driveways, lake slopes and banks, and landscape areas that are within the Common Areas, provided that such areas are readily accessible to Association. Association shall have no responsibility for the Facilities except and to the extent provided in any agreement between Association and the District. Under no circumstances shall Association be responsible for maintaining any areas within fences or walls that form a part of a Home,

13.14 Negligence. The expense of any maintenance, repair or construction of any portion of the Common Areas necessitated by the negligent or willful acts of an Owner or persons utilizing the Common Areas, through or under an Owner shall be borne solely by such Owner and the Home and/or Lot owned by that Owner shall be subject to an Individual Assessment for that expense. By way of example, and not of limitation, an Owner shall be responsible for the removal of all landscaping and structures placed within easements or Common Areas without the prior written approval of Association.

13.15 Right of Entry. Developer, the District and Association are granted a perpetual and irrevocable easement over, under and across LAKES AT COCOA GROVE for the purposes herein expressed, including, without limitation, for inspections to ascertain compliance with the provisions of this Declaration, and for the performance of any maintenance, alteration or repair which it is entitled to perform. Without limiting the foregoing, Developer specifically reserves easements for all purposes necessary to comply with any governmental requirement or to satisfy any condition that is a prerequisite for a governmental approval. By way of example, and not of limitation, Developer may construct, maintain, repair, alter, replace and/or remove improvements; install landscaping; install utilities; and/or remove structures on any portion of LAKES AT COCOA GROVE if Developer is required to do so in order to obtain the release of any bond posted with any governmental agency.

13.16 Maintenance of Property Owned by Others. Association shall, if designated by Developer, or by Association after the Community Completion Date by amendment to this Declaration or any document of record, maintain vegetation, landscaping, sprinkler system, community identification/features and/or other areas or elements designated by Developer (or by Association after the Community Completion Date) upon areas which are within or which lie outside of LAKES AT COCOA GROVE. Such areas may abut, or be proximate to, LAKES AT COCOA GROVE, and may be owned by, or be dedicated to, others including, but not limited to, a utility, governmental or quasi-governmental entity, or the District. These areas may include, without limitation, swale areas, landscape buffer areas, berm areas or median areas within the right-of-way of public streets, roads, brick pavers, irrigation, drainage areas, community identification or entrance features, community signage or other identification and/or areas within canal rights-of- ways or other abutting waterways. By way of example and not of limitation, Association may be obligated to maintain and irrigate certain landscaped medians outside of LAKES AT COCOA GROVE. To the extent there is any agreement between Developer and Association for the maintenance of any waterways or ponds outside LAKES AT COCOA GROVE, Association shall maintain the same as part of the Common Areas.

14.00 Multi-Purpose Taxing District. It is possible that the District may maintain the roads,

off-site improvements, Surface Water Management System, landscape buffers, and/or entrance features within LAKES AT COCOA GROVE and, possibly, an adjacent community. In the event the **District** does not maintain such roads, off-site improvements, Surface Water Management Systems, landscape buffers and/or entrance features, then a special taxing district or Association may be responsible for such maintenance. Each Home shall be subject to assessments for the operation of District or for Operating Costs.

15. Maintenance by Owners. Although anticipated that the Association will be responsible for landscape maintenance within yards of Lots, all lawns, landscaping and sprinkler systems and any property, structures, improvements and appurtenances not maintained by Association shall be well maintained and kept in first class, good, safe, clean, neat and attractive condition consistent with the general appearance of LAKES AT COCOA GROVE by the Owner of each Home. To the extent not maintained by the Association, each Owner is specifically responsible for maintaining all grass, landscaping and improvements within any portion of their Home in accordance with the standards set forth below.

15.1 Lawn Maintenance Standards. The following maintenance standards (the **"Lawn Maintenance Standards"))** apply to landscaping maintained by Owners.

15.1.1 Trees. Trees are to be pruned as needed.

15.1.2 Shrubs. All shrubs are to be trimmed as needed.

15.1.3 Grass. All grass shall be mowed as needed.

15.1.3.1 Cutting Schedule. Grass shall be maintained in a neat and appropriate manner. In no event shall an Owner's lawn get in excess of five inches (5") in height.

15.1.3.2 Edging. Edging of all streets, curbs, beds and borders shall be performed as needed. Chemical edging shall not be permitted.

15.1.3.3 Dead Grass. Owner shall be responsible to replace dead grass. Neither Developer nor Association shall be responsible to replace dead grass.

5.1.4 Mulch. Mulch shall be replenished as needed on a yearly basis but no less (1) one time per year

15.1.5 Insect Control and Disease. Disease and insect control shall be performed on an as needed basis.

15.1.6 Fertilization. Fertilization of all turf, trees and palms shall be performed two times per year.

15.1.7 Irrigation. Owners shall be responsible to irrigate grass. Pump stations, if applicable, and valves shall be checked as needed by an independent contractor to assure proper automatic operation.

15.1.8 Post Lights. Each Owner shall maintain all post lights (whether gas or electric) which are located within the boundaries of his or her Home.

15.1.9 Weeding. All beds are to be weeded upon every cut. Weeds growing in joints in curbs, driveways, and expansion joints shall be removed as needed. Chemical treatment is permitted.

15.1.10 Trash Removal. Dirt, trash, plant and tree cuttings and debris resulting from all operations shall be removed and all areas left in clean condition before the end of the day.

15.1.11 Right of Association to Enforce. Each Owner grants Association an easement over his or her Home for the purpose of insuring compliance with the requirements of this provision and the Lawn Maintenance Standards. In the event an Owner does not comply with this Section, Association may perform the necessary maintenance to the lawn and charge the costs thereof to the non-complying Owner as an Individual Assessment. Association shall have the right to enforce the foregoing Lawn Maintenance Standards by all necessary legal action. In the event that Association is the prevailing party with respect to any litigation respecting the Lawn Maintenance Standards, it shall be entitled to recover all of its attorneys' fees and paraprofessional fees, and costs, pre-trial and at all levels of proceedings, including appeals.

15.2 Landscaping and Irrigation of Lots; Removal of Sod and Shrubbery· Additional Planting.

15.2.1 To the extent an Owner is able to control his or her own irrigation system, such Owner shall be responsible for the irrigation of his, her or its Lot. To the extent any Owner fails to comply with any water use restrictions and Association is subsequently fined due to such water use, Association may impose an Individual Assessment upon such Owner for the payment of any fines(s) imposed on Association.

15.2.2 No gardens, jacuzzis, fountains, playground equipment, pools, screened rooms, or other permitted improvements shall be constructed within the rear yard of a Lot without the prior written approval of the ACC. Each Owner understands that Lots within this Community may not be large enough to accommodate any of the foregoing items in any event.

15.2.3 Without the prior consent of the ACC, no sod, topsoil, tree or shrubbery shall be removed from LAKES AT COCOA GROVE, and there shall be no change in the plant landscaping or elevation of such areas shall be made, and no change in the condition of the soil or the level of the land of such areas shall be made which results in any change in the flow and drainage of surface water which the ACC, in its sole discretion, considers detrimental or potentially detrimental to person or property. Notwithstanding the foregoing, Owners who install improvements to the Home (including, without limitation, concrete or brick pavers) which result in any change in the flow and/or drainage of surface water shall be responsible for all costs of drainage problems resulting from such improvement. Further, in the event that such Owner fails to pay for such required repairs, each Owner agrees to reimburse Association for all expenses incurred in fixing such drainage problems including, without limitation, removing excess water and/or repairing the Surface Water Management System. Owners of the lots along the northern

and eastern fifteen foot (15') landscaped perimeter buffer and easement, shall not disturb, remove or cut any vegetation and landscaping in this area.

15.2.4 No landscape lighting shall be installed by an Owner without the prior written approval of the ACC.

15.2.5 Weeds and Refuse. No weeds, underbrush, or other unsightly growth shall be permitted to be grown or remain upon any Home. No refuse or unsightly objects shall be allowed to be placed or suffered to remain upon any Home.

15.2.6 Driveway and Sidewalk Repair. Each Owner shall be responsible to timely repair, maintain and/or replace the driveway which comprises part of a Home and the sidewalk abutting the front Lot or side of the Home including, but not limited to, any damage caused by Developer, Association or by the holder of any easement over which such driveway or sidewalk is constructed. Each Owner, by acceptance of a deed to a Home, shall be deemed to have agreed to indemnify, defend and hold harmless Association and the holder of any such easement including, without limitation, all applicable utility companies and governmental agencies, their agents, servants, employees and elected officials, from and against any and all actions or claims whatsoever arising out of the use of the Common Areas and any easement or the construction and/or maintenance of any driveway or sidewalk in that portion of the Common Areas, easement area, or in a public right-of-way between the boundary of such Owner's Home and the edge of the adjacent paved roadway. Further, each Owner agrees to reimburse Association any expense incurred in repairing any damage to such driveway or sidewalk in the event that such Owner fails to make the required repairs, together with interest at the highest rate allowed by law.

15.3 Paint. Estate Homes shall be repainted by each Owner, at such Owner's sole cost and expense, within forty-five (45) days of notice by the Association. In the event an Owner fails to repaint their Estate Home within the above referenced time frame, Association may, but shall not be obligated to, repaint such Owner's Estate Home and the costs of same shall be charged as an Individual Assessment to the Owner whose Home is repainted.

16. Use Restrictions. Each Owner must comply with the following:

16.1 Alterations and Additions. No material alteration, addition or modification to a Lot or Home, or material change in the appearance thereof, shall be made without the prior written approval thereof being first had and obtained from the ACC as required by this Declaration.

16.2 Animals. No animals of any kind shall be raised or kept within LAKES AT COCOA GROVE for commercial purposes. No roosters or pigeons shall be raised or kept within LAKES AT COCOA GROVE. The breeding of animals is strictly prohibited within LAKES AT COCOA GROVE. Association may prohibit breeds of dogs that the Board considers dangerous in its sole discretion. Otherwise, Owners may keep domestic pets as permitted by County ordinances and otherwise in accordance with the Rules and Regulations established by the Board from time to time. Notwithstanding the foregoing, pets may be kept or harbored in a Home only so long as such pets or animals do not constitute a nuisance. A determination by the Board that an animal or pet kept or harbored in a Home is a nuisance shall be conclusive and binding on all parties. All pets shall be walked on a leash. No pet shall be permitted outside a Home unless such pet is kept on a leash or within an enclosed portion of the yard of a Home, as approved by the ACC. No pet or animal shall be "tied out" on the exterior of the Home or in the Common Areas, or left unattended in a yard or on a balcony, porch, or patio. No dog runs or enclosures shall be permitted on any Home. When notice of removal of any pet is given by the Board, the pet shall be removed within forty-eight (48) hours of the giving of the notice. All pets shall defecate and urinate only in the "pet walking" areas within LAKES AT COCOA GROVE designated for such purpose, if any, or on that Owner's Home. The person walking the pet or the Owner shall clean up all matter created by the pet. Each Owner shall be responsible for the activities of its pet. Notwithstanding anything to the contrary, seeing eye dogs shall not be governed by the restrictions contained in this Section.

16.3 Artificial Vegetation. No artificial grass, plants or other artificial vegetation, or rocks or other landscape devices, shall be placed or maintained upon the exterior portion of any Home or Lot, unless approved by the ACC.

16.4 Cars and Trucks.

16.4.1 Parking. Owners' automobiles shall be parked in the garage or driveway, if provided, and shall not block the sidewalk. No vehicles of any nature shall be parked on any portion of LAKES AT COCOA GROVE or a Lot except on the surfaced parking area thereof *(i.e.*, parking shall be prohibited in swales or other grass areas). All lawn maintenance vehicles shall park on the driveway of the Home and not in the roadway or swale. No vehicles used in business for the purpose of transporting goods, equipment and the like, shall be parked in LAKES AT COCOA GROVE except during the period of a delivery. Personal street vans, personal trucks, and personal vehicles that can be appropriately parked within standard size parking stalls may be parked in LAKES AT COCOA GROVE. Overnight parking within the streets in LAKES AT COCOA GROVE shall be prohibited. In the event that individuals park in the streets during the day, such street parking shall be limited to one side of the street. It is not anticipated that guest parking spaces will be located within LAKES AT COCOA GROVE.

16.4.2 Repairs and Maintenance of Vehicles. No vehicle which cannot operate on its own power shall remain within LAKES AT COCOA GROVE for more than twenty-four (24) hours unless the same is stored in the garage of a Home. No repair or maintenance, except emergency repair, of vehicles shall be made within LAKES AT COCOA GROVE. No vehicles shall be stored on blocks. Tarpaulin covers on vehicles shall not.be permitted without ACC approval.

16.4.3 Prohibited Vehicles. No recreational vehicle, commercial vehicle, limousines, house trailers, and trailers of every other type, kind or description, or camper, may be kept within LAKES AT COCOA GROVE except in the garage of a Home. Boats and/or boat trailers shall not be permitted to be kept within the yard of any Home. The term commercial vehicle shall not be deemed to include law enforcement vehicles or sport utility vehicles *(i.e.*, Broncos™, Blazers™, Explorers™, Navigators™, *etc.)* or clean "non- working" vehicles such as pick-up trucks, vans, or cars if they are used by the Owner on a daily basis for normal transportation. Notwithstanding any other provision in this Declaration to the contrary, the foregoing provisions shall not apply to construction vehicles in connection with the construction, improvement, installation, or repair by Developer or Builder

of Homes, Club Owner, Common Areas, or any other LAKES AT COCOA GROVE facility. No vehicles displaying commercial advertising shall be parked within the public view. No vehicles bearing a "for sale" sign shall be parked within the public view anywhere on LAKES AT COCOA GROVE. For any Owner who drives an automobile issued by the County or other governmental entity *(i.e.,* police cars), such automobile shall not be deemed to be a commercial vehicle and may be parked in the garage or driveway of the Home. No vehicle shall be used as a domicile or residence either temporarily .or permanently. No vehicle with expired registration or license plates may be kept within public view anywhere on LAKES AT COCOA GROVE. Subject to applicable laws and ordinances, any vehicle parked in violation of these or other restrictions contained in this Declaration or in the Rules and Regulations now or subsequently adopted may (without obligation) be towed by Association at the sole expense of the owner of such vehicle. Association shall not be liable to the owner of such vehicle for trespass, conversion, or otherwise, nor guilty of any criminal act, by reason of such towing. Notwithstanding the foregoing, each Owner acknowledges that such Owner and its family, guests, tenants, and invitees shall abide by all parking regulations issued by the local governing authority having jurisdiction.

16.5 Casualty Destruction to Improvements. In the event that a Home or other improvement is damaged or destroyed by casualty loss or other loss, then within a reasonable period of time after such incident, the Owner thereof shall either commence to rebuild or repair the damaged Home or improvement and diligently continue such rebuilding or repairing until completion, or properly clear the damaged Home or improvement and restore or repair the Home as set forth in Section 18.2.2 herein and as approved by the ACC. As to any such reconstruction of a destroyed Home or improvements, the same shall only be replaced as approved by the ACC.

16.6 Commercial Activity. Except for the Private Parcel, the Club, the EMS Station that may be within or adjacent to LAKES AT COCOA GROVE, and normal construction activity, sale, and re-sale of a Home, sale or re-sale of other property owned by Developer, administrative offices of Developer, no commercial or business activity shall be conducted in any Home within LAKES AT COCOA GROVE. Notwithstanding the foregoing, and subject to applicable statutes and ordinances, an Owner may maintain a home business office within a Home for such Owner's personal use; provided, however, business invitees or customers, and clients shall not be permitted to meet with Owners in Homes unless the Board provides otherwise in the Rules and Regulations. No Owner may actively engage in any solicitations for commercial purposes within LAKES AT COCOA GROVE. No solicitors of a commercial nature shall be allowed within LAKES AT COCOA GROVE, without the prior written consent of Association. No day care center or facility may be operated out of a Home. No garage sales are permitted, except as permitted by Association. Prior to the Community Completion Date, Association shall not permit any garage sales without the prior written consent of Developer.

16.7 Completion and Sale of Homes. No person or entity shall interfere with the completion and sale of Homes within LAKES AT COCOA GROVE. WITHOUT LIMITING THE FOREGOING, EACH OWNER, BY ACCEPTANCE OF A DEED, AGREES THAT ACTIONS OF OWNERS MAY IMPACT THE VALUE OF HOMES; THEREFORE EACH OWNER IS BENEFITED BY THE FOLLOWING RESTRICTION: PICKETING AND POSTING OF NEGATIVE SIGNS OR POSTING OF NEGATIVE WEBSITES ON THE INTERNET, NEGATIVE ADVERTISING, NEGATIVE INFORMATION PROVIDED OR POSTED AT PUBLIC GATHERINGS ARE STRICTLY PROHIBITED IN ORDER TO PRESERVE THE VALUE OF THE HOMES IN LAKES AT COCOA GROVE AND THE RESIDENTIAL ATMOSPHERE THEREOF.

16.8 Control of Contractors. Except for direct services which may be offered to Owners (and then only according to the Rules and Regulations relating thereto as adopted from time to time), no person other than an Association officer or representative of the management company retained by Association shall direct, supervise, or in any manner attempt to assert any control over any contractor of Association.

16.9 Cooking. No cooking shall be permitted nor shall any goods or beverages be consumed in the Front Yard of any Home or on the Common Areas except in areas designated for those purposes by Association. The ACC shall have the right to prohibit or restrict the use of grills or barbeque facilities throughout LAKES AT COCOA GROVE.

16.10 Decorations. No decorative objects including, but not limited to, birdbaths, wind chimes, figurines, wind chimes, light fixtures, sculptures, statutes, weather vanes, or flagpoles shall be installed or placed within or upon any portion of LAKES AT COCOA GROVE without the prior written approval of the ACC. Notwithstanding the foregoing, no statues, sculptures or birdbaths of any kind can be installed or placed within the Front Yard or visible from the street. Notwithstanding the foregoing, holiday lighting and decorations shall be permitted to be placed upon the exterior portions of the Home and upon the Lot in the manner permitted hereunder commencing on October and shall be removed no later than January 15th of the following year. The ACC may establish standards for holiday lights. The ACC may require the removal of any lighting that creates a nuisance *(e.g.,* unacceptable spillover to adjacent Home).

16.11 Disputes as to Use. If there is any dispute as to whether the use of any portion of LAKES AT COCOA GROVE complies with this Declaration, such dispute shall, prior to the Community Completion Date, be decided by Developer, and thereafter by Association. A determination rendered by such party with respect to such dispute shall be final and binding on all persons concerned.

16.12 Drainage System. Drainage systems and drainage facilities may be part of the Facilities, Common Areas and/or Homes. The maintenance of such system and/or facilities within the Common Areas shall be the responsibility of the Association. Once drainage systems or drainage facilities are installed by Developer, the maintenance of such systems and/or facilities thereafter within the boundary of a Home shall be the responsibility of the Owner of the Home which includes such system and/or facilities. In the event that such system or facilities (whether comprised of swales, pipes, pumps, waterbody slopes, or other improvements) is adversely affected by landscaping, fences, structures (including, without limitation, pavers) or additions, the cost to correct, repair, or maintain such drainage system and/or facilities shall be the responsibility of the Owner of each Home containing all or a part of such drainage system and/or facilities. By way of example, and not of limitation, if the Owner of one Home plants a tree (pursuant to the ACC approval) and the roots of such tree subsequently affect pipes or other drainage facilities within another Home, the Owner that plants the tree shall be solely responsible for the removal of the roots which adversely affects the adjacent Home. Likewise, if the roots of a tree located within the Common Areas adversely affect an adjacent Home, Association shall be responsible for the removal of the roots and the costs thereof shall be Operating Costs. Notwithstanding the foregoing, Association, District, Club Owner and Developer shall have no responsibility or liability for drainage problems of any type whatsoever.

16.13 Easement for Unintentional and Non-Negligent Encroachments. If any other building or improvement on a Home shall encroach upon another Home by reason of original construction by Developer, then an easement for such encroachment shall exist so long as the encroachment exists. It is contemplated that each Home shall contain an improvement with exterior walls, footings, and other protrusions which may pass over or underneath an adjacent Home. A perpetual nonexclusive easement is herein granted to allow the footers for such walls and other protrusions and to permit any natural water run off from roof overhangs, eaves and other protrusions onto an adjacent Home.

16.14 Extended Vacation and Absences. In the event a Home will be unoccupied for an extended period, the Home must be prepared prior to departure by: (i) notifying Association in writing; (ii) removing all removable furniture, plants and other objects from outside the Home; and (iii) designating a responsible firm or individual to care for the Home, should the Home suffer damage or require attention, and providing a key to that firm or individual. The name of the designee shall be furnished to Association. Neither Association nor Developer shall have responsibility of any nature relating to any unoccupied Home.

16.15 Fences. Walls and Screens. No walls or fences shall be erected or installed without prior written consent of the ACC. All enclosures of balconies or patios including, without limitation, addition of vinyl windows and decks shall require the prior written approval of the ACC. Fences on the sides and rear of a lakefront Home shall be four (4) feet, aluminum rail, and bronze in color. Fences on the sides and rear of a non-lakefront Home shall be either: (i) four (4) feet, aluminum rail, and bronze in color, or (ii) six (6) feet in height and made of white PVC stockade. No chain link fencing shall be permitted within LAKES AT COCOA GROVE.

16.16 Fuel Storage. No fuel storage shall be permitted within LAKES AT COCOA GROVE, except as may be necessary or reasonably used for swimming pools, spas, barbecues, fireplaces, emergency generators, or similar devices and as otherwise permitted by this Declaration.

16.17 Garages. Each Home may have its own garage. The conversion of any garage within LAKES AT COCOA GROVE shall be prohibited. Garage doors shall remain closed at all times except when vehicular or pedestrian access is required.

16.18 Garbage Cans. Trash .collection and disposal procedures established by Association shall be observed. It is possible Association may provide for or contract with a private entity for garbage pick-up, the cost of which shall be Operating Costs. No outside burning of trash or garbage is permitted. No garbage cans, supplies or other similar articles shall be maintained on any Home so as to be visible from outside the Home, Lot or Parcel. Each Owner shall be responsible for properly depositing his or her garbage and trash in garbage cans and trash containers sufficient for pick-up by the appropriate collection agencies in accordance with the requirements of any such agency. All such trash receptacles shall be maintained in a sanitary condition and shall be shielded from the view of adjacent properties and streets. Garbage cans and trash containers shall not be placed outside the Home for pick-up earlier than 6:00p.m. on the day preceding the pick-up, and must be returned to the Home so that they are not visible from outside the Home on the day of pick-up. To the extent any Owner must utilize any swale in connection with bulk pickup items, such Owner shall be obligated to request the bulk pickup the same day that the debris or other bulk items are placed in the swale, and must further notify the Association in writing as to the placement of the items and the request for pickup of the same. Any bulk items that are left in any portion of the Common Areas without notice to the Association shall be considered dumping and shall subject the applicable Owner to fines and/or legal action. In the event of legal action by the Association, the applicable Owner (and his or her guests, tenants and/or invitees) shall be fully liable for the Association's legal fees and costs.

16.19 General Use Restrictions. Each Home, the Common Areas and any portion of LAKES AT COCOA GROVE shall not be used in any manner contrary to the Association Documents.

16.20 Hurricane Shutters. Any hurricane shutters or other protective devices visible from outside a Home shall be of a type as approved in writing by the ACC. Panel, accordion and roll-up style hurricane shutters may not be left closed during hurricane season (nor at any other time). Any such approved hurricane shutters may be installed or closed up to forty-eight (48) hours prior to the expected arrival of a hurricane and must be removed or opened within seventy-two (72) hours after the end of a hurricane watch or warning or as the Board may determine otherwise. Except as the Board may otherwise decide, shutters may not be closed at any time other than a storm event. Any approval by the ACC shall not be deemed an endorsement of the effectiveness of hurricane shutters.

16.21 Irrigation. The water used in the irrigation system is not suitable for drinking or water sports. People and pets should not play in such water. Such water shall not be used by Owners to irrigate lawns. Due to water quality, irrigation systems may cause staining on Homes, other structures, paved areas, or vehicles. It is each Owner's responsibility to treat and remove any such staining. Association may require from time to time, that Owners adopt systems to prevent stains (e.g., automatic deionization systems). The yard of each Home may be equipped with irrigation lines, depending on the model of the Home. Developer is not providing any irrigation to the Homes. No Owner whose Home adjoins a waterway, if any, may utilize the waterway to irrigate unless so provided by Developer as part of original construction, subject to applicable permitting. Use of waterbody water by Owners is prohibited and is at the Owner's sole risk. Association and Club Owner may use waterways to irrigate Common Areas, subject to applicable permitting and Developer shall not be liable for same. BY ACCEPTANCE OF A DEED TO A HOME OR LOT, EACH OWNER ACKNOWLEDGES THAT THE WATER LEVELS OF ALL WATERBODIES MAY VARY. THERE IS NO GUARANTEE BY DEVELOPER OR ASSOCIATION THAT WATER LEVELS WILL BE CONSTANT OR AESTHETICALLY PLEASING AT ANY PARTICULAR TIME. Developer, the District, Association, and/or Club Owner, shall have the right to use one or more pumps to remove water from waterbodies for irrigation purposes at all times, subject to applicable permitting. Developer may utilize a computerized loop system to irrigate the Common Areas and/or Homes. Any computerized loop irrigation system that is not specifically the maintenance obligation of an Owner, shall be the maintenance obligation of Association and shall be deemed part of the Common Areas.

16.22 Laundry. Subject to the provisions of Section 163.04 of the Florida Statutes, to the extent applicable, no rugs, mops, or laundry of any kind, or any other similar type article, shall be shaken, hung or exposed so as to be visible outside the Home or Lot.

16.23 Lawful Use. No immoral, improper, offensive, unlawful or obnoxious use shall be made in any

portion of LAKES AT COCOA GROVE. All laws, zoning ordinances and regulations of all governmental entities having jurisdiction thereof shall be observed. The responsibility of meeting the requirements of governmental entities for maintenance, modification or repair of a portion of LAKES AT COCOA GROVE shall be the same as the responsibility for maintenance and repair of the property concerned.

16.24 Leases. Homes may be leased, licensed or occupied only in their entirety and no fraction or portion may be rented. No bed and breakfast facility may be operated out of a Home. Individual rooms of a Home may not be leased on any basis. No transient tenants may be accommodated in a Home. To the extent that an Owner does not reside in his or her Home, but desires to permit family or friends to occupy such Home without a lease, all prospective occupants of the Home, prior to moving into the Home and irrespective of their relation to the Owner, must be registered with the Association and shall be subject to the Association's screening and approval process which is used for prospective tenants seeking to lease a Home within LAKES AT COCOA GROVE. All leases shall be subject to Association approval, and all tenants (and other occupants, as noted herein) shall be subject to Association screening. The Association shall not be permitted to deny a prospective tenant solely based upon credit score. Any credit score guideline used for tenant applications shall be no higher than the credit requirement to obtain an FHA loan (with the low down payment advantage) in effect at the time of tenancy application. All leases or occupancy agreements shall be in writing and a copy of all leases of Homes shall be provided to Association. All leases shall be on forms approved by Association and shall provide (or if not provided, shall be automatically deemed to provide) that Association shall have the unilateral right to terminate the lease upon default by the tenant in observing any of the provisions of the Association Documents or other applicable provisions of any agreement, document or instrument governing LAKES AT COCOA GROVE or administered by Association. Each Owner hereby acknowledges and agrees that any and all leases entered into by such Owner in connection with his or her Home shall be deemed to incorporate by this reference a collateral assignment of rents and leases in favor of Association, which collateral assignment of rents and leases shall provide that in the event such Owner leasing his or her Home is past due in the payment of his or her Assessments, Association shall have the power and authority to take actions including, but not limited to: (i) collecting rents now due or that become due directly from such Owner's tenant(s) (or other party in possession of the Home); and/or (ii) pursuing any and all legal remedies available against such Owner and/or such Owner's tenant(s) including, but not limited to, actions for eviction of such Owner's tenant(s). Owners are responsible for providing their tenants with copies of all such Association Documents or instruments at such Owner's sole cost and expense. Leasing of Homes shall also be subject to the prior written approval of Association, as more particularly explained in Section 29 hereof. No Home may be subject to more than two (2) leases in any twelve (12) month period, regardless of the lease term. No lease term shall be less than six (6) months. No subleasing or assignment of lease rights by the tenant is permitted. No time-share or other similar arrangement is permitted. In no event shall occupancy of a leased Home (except for temporary occupancy by visiting guests) exceed two (2) persons per bedroom. Each Owner shall be jointly and severally liable with the tenant to Association for all costs incurred by Association for the repair of any damage to Common Areas or to pay any claim for injury or damage to property caused by tenants. Association shall repair any such damage and the cost of such repair shall be invoiced as an Individual Assessment to the Owner. Additionally, as a condition to the approval by Association of a proposed lease of a Home, Association has the authority to require that a security deposit in an amount not to exceed the equivalent of one (1) month's rent be deposited into an account maintained by Association. The security deposit shall protect against damages to the Common Areas or Association Property. A security deposit held by Association under this Section shall be governed by Chapter 83 of the Florida Statutes, as it may be renumbered from time to time. Association may also charge a reasonable fee of no more than One Hundred ($100.00) dollars to offset the costs of a background check on tenant. Association and its directors or officers, or any person acting on behalf of any of them, shall not be liable for any cost or damages incurred by any party whatsoever, due to any mistakes in judgment, negligence, or any action or inaction of Association, its officers, or directors, in connection with the approval or disapproval of tenants. Each Owner agrees, individually and on behalf of its prospective tenants, current tenants, heirs, successors and assigns by acquiring title to a Lot, that he or she (or any other of the aforementioned parties) shall not bring any action or suit against Association or its directors or officers, or any of the Association's agents or other parties acting on Association's behalf, in order to recover any damages alleged or caused by the actions of Association, or its officers or directors in connection with the provisions of this Section. All leases shall also comply with and be subject to the provisions of Section 29 hereof. Notwithstanding the foregoing, this Section shall not apply to a situation where an Owner or resident of a Home receives in-home care by a professional caregiver residing within the Home.

16.25 Maintenance by Owners.

16.25.1 Standard of Maintenance. All lawns, landscaping and sprinkler systems and any property, structures, improvements, shadow box fences, and appurtenances not maintained by Association shall be well maintained and kept in first class, good, safe, clean, neat and attractive condition consistent with the general appearance of LAKES AT COCOA GROVE by the Owner of each Home. Each Owner is specifically responsible for maintaining all grass, landscaping and improvements within any portion of a Home that is fenced or located outside the Front Yard. In addition, if an Owner has installed a fence or wall around a Home, or any portion thereof, then such Owner must maintain any portion of the Common Areas that is no longer readily accessible to Association. Each Owner shall be responsible for root pruning trees within any portion of his or her Home.

16.25.2 Enclosed Common Area. If an Owner has enclosed the yard of a Home, or any portion thereof, with the ACC approval, then such Owner must maintain any portion of the Common Areas that is no longer readily accessible to Association.

16.26 Minor's Use of Facilities. Each Owner shall be responsible for all actions of minor children dwelling in and/or visiting his or her Home. Developer, Association and Club Owner shall not be responsible for any use of the facilities and Common Areas by anyone, including minors. Children under the age of twelve (12) shall be accompanied by an adult at all times.

16.27 Nuisances. No nuisance or any use or practice that is the source of unreasonable annoyance to others or which interferes with the peaceful possession and proper use of LAKES AT COCOA GROVE is permitted. The final determination of what constitutes a nuisance shall be made by the Board in its sole discretion. No firearms shall be discharged within LAKES AT COCOA GROVE. Nuisances shall include, without limitation, the playing of loud music or the gathering in front of homes or Common Areas by any Owner or permitted occupant thereof, its immediate family, guests, tenants and invitees. Nothing shall be done or kept within the Common Areas, or any other portion of LAKES AT COCOA GROVE, including a Home or Lot which will increase the rate of insurance to be paid by Association.

16.28 Oil and Mining Operations. No oil, drilling development operations, oil refming, quarrying or mining operations of any kind shall be permitted upon or on any Lot, nor shall oil wells, tanks, tunnels, mineral excavations or shafts be permitted upon or on any Lot. No derrick or other structure designed for use in boring for oil or natural gas shall be erected, maintained or permitted on any Lot.

16.29 Personal Property. All personal property of Owners or other occupants of Homes shall be stored within the Homes. No personal property, except usual patio furniture, may be stored on, nor any use made of, the Common Areas, any Lot or Home, or any other portion of LAKES AT COCOA GROVE, which is unsightly or which interferes with the comfort and convenience of others. No personal property may be stored in the Front Yard of a Home.

16.30 Townhomes- Pools. Intentionally Deleted.

16.31 Estate Homes - Pools No above-ground pools shall be permitted. All in-ground pools, hot tubs, spas and appurtenances installed shall require the prior written approval of the ACC. The design must incorporate, at a minimum, the following: (i) the composition of the material must be thoroughly tested and accepted by the industry for such construction; (ii) any swimming pool constructed on any Lot shall have an elevation at the top of the pool of not over two (2) feet above the natural grade unless approved by the ACC; and (iii) pool cages and screens must be of a design, color and material approved by the ACC and shall be no higher than fourteen (14) feet unless otherwise approved by the ACC. Pool screening shall not extend beyond the sides of the Home without the express approval of the ACC. All pools shall be adequately maintained and chlorinated (or cleaned with similar treatment). Unless installed by Developer, no diving boards, slides, or platforms shall be permitted without the approval of the ACC. No pool shall be permitted in any yard that does not also have an ACC approved fence or screened enclosure.

16.32 Removal of Soil and Additional Landscaping. Without the prior consent of the ACC, no Owner shall remove soil from any portion of LAKES AT COCOA GROVE or change the level of the land within LAKES AT COCOA GROVE, or plant landscaping which results in any permanent change in the flow and drainage of surface water within LAKES AT COCOA GROVE. Owners may not place additional plants, shrubs, or trees within any portion of LAKES AT COCOA GROVE without the prior approval of the ACC.

16.33 Roofs, Driveways and Pressure Treatment. Roofs and/or exterior surfaces and/or pavement, including, but not limited to, walks and drives, shall be pressure treated within thirty (30) days of notice by the ACC. No surface applications to driveways shall be permitted without the prior written approval of the ACC as to material, color and pattern. Such applications shall not extend beyond the front Lot line or include the sidewalk. No oil stains, stains or weeds are permitted on driveways or Lots. Each Owner shall be responsible to pressure clean between paintings. The Board may decide to have annual window washing or roof repair and may collect the costs thereof as part of Operating Costs or Reserves. Notwithstanding the foregoing, the Association shall be responsible for pressure treatments and cleaning of Townhome exterior surfaces and the costs of the same shall be charged to each applicable Owner as an Individual Assessment.

16.34 Satellite Dishes and Antennas. No exterior visible antennas, radio masts, towers, poles, aerials, satellite dishes, or other similar equipment shall be placed on any Home or Lot without the prior written approval thereof being first had and obtained from the ACC as required by this Declaration. The ACC may require, among other things, that all such improvements be screened so that they are not visible from adjacent Homes, or from the Common Areas. Each Owner agrees that the location of satellite dishes, antennas, and other equipment under this Section must be first approved by the ACC in order to address the welfare of the residents of LAKES AT COCOA GROVE and satellite dishes must be on the fascia board when possible with no exposed wires. No Owner shall operate any equipment or device which will interfere with the radio or television reception of others. Notwithstanding the foregoing, Club Owner may install without ACC approval Telecommunications Services equipment, a satellite dish or similar equipment within the property comprising the Club so long as such equipment is not visible from the street giving access to the Club. All antennas not permitted by the Federal Communications Commission ("FCC") rules are prohibited. Installation, maintenance, and use of all antennas shall comply with restrictions adopted by the Board and shall be governed by the then current rules of the FCC.

16.35 Screened Enclosures. No screened enclosures, for pools or otherwise, shall be permitted without the prior written approval of the ACC.

16.36 Solar Equipment and Components. No solar equipment shall be installed on a Lot or affixed to any Home within LAKES AT COCOA GROVE without the prior written approval thereof being first had and obtained from the ACC. With respect to ground-mounted solar panels, the same may only be installed in the rear yards of Homes that have an ACC approved fence, and all solar equipment and panels must be screened by such ACC approved fence (i.e., no solar equipment may exceed the height of the ACC approved fence). No ground-mounted solar equipment may be affixed to an Owner's fence. Roof-mounted solar panels and equipment shall be installed so that the panels are flush mounted and shall located on a portion of the rear roof area, as reasonably determined by the ACC. Roof-mounted solar panels shall be an integrated part of the roof design and mounted directly to the roof deck or if mounted on or over the existing roof tile, should be flush with the slope of the roof. Solar units must not break the roof ridgeline. Solar panels should be positioned as low as possible on the roof extending wider rather than higher on the roof plane. The solar panels, piping or any exposed part of the installation may not be higher than the roof peak. Visibility of devices and their components must be minimized from public view, and may be required to be screened from neighboring property in a manner approved by the ACC.

16.37 Signs and Flags. No sign (including brokerage or for sale/lease signs) flag, banner, sculpture, fountain, outdoor play equipment, solar equipment, artificial vegetation, sports equipment, advertisement, notice or other lettering shall be exhibited, displayed, inscribed, painted or affixed in, or upon any part of LAKES AT COCOA GROVE that is visible from the outside without the prior written approval thereof being first had and obtained from the ACC as required by this Declaration; provided however, signs required by governmental agencies and approved by the ACC may be displayed (e.g. permit boards). "For Sale" and "For Rent" signs must be approved by the ACC and shall be no larger than 12" x 12". Notwithstanding the foregoing, no broker, "For Sale" or "For Rent" signs shall be exhibited, displayed, inscribed, painted or affixed in, or upon any part of LAKES AT COCOA GROVE while the Developer holds any Homes for sale in the ordinary course of business. No sign may be placed in the window of a Home. Developer and Builders are exempt from this Section. No in-ground flag poles (except as Developer may use) shall be permitted within LAKES AT COCOA GROVE unless written approval of

the ACC is obtained. Notwithstanding the foregoing, no ACC approval is necessary for flags permitted by Florida Statute.

16.38 Sports Equipment. No recreational, playground or sports equipment shall be installed or placed within or about any portion of LAKES AT COCOA GROVE without prior written consent of the ACC. No basketball backboards, skateboard ramps, or play structures will be permitted without written approval by the ACC. Such approved equipment shall be located at the rear of the Home or on the inside portion of comer Homes within the setback lines. Tree houses or platforms of a similar nature shall not be constructed on any part of a Home. No basketball hoops shall be attached to a Home and any portable basketball hoops must be stored inside the Home. No tennis courts are permitted within Lots.

16.39 Storage. No temporary or permanent utility or storage shed, storage building, tent, or other structure or improvement shall be permitted and no other structure or improvement shall be constructed, erected, altered, modified or maintained without the prior approval of the ACC, which approval shall conform to the requirements of this Declaration and the Community Standards. Water softeners, trash containers, propane tanks, and other similar devices shall be properly screened from the street in a manner approved by the ACC.

16.40 Subdivision and Regulation of Land. No portion of any Home, Lot or Parcel shall be divided or subdivided or its boundaries changed without the prior written approval of Association. No Owner shall inaugurate or implement any variation from, modification to, or amendment of governmental regulations, land use plans, land development regulations, zoning, or any other development orders or development permits applicable to LAKES AT COCOA GROVE, without the prior written approval of Developer, which may be granted or denied in its sole discretion.

16.41 Substances. No flammable, combustible or explosive fuel, fluid, chemical, hazardous waste, or substance shall be kept on any portion of LAKES AT COCOA GROVE or within any Home, Lot or Parcel, except those which are required for normal household use. All propane tanks and bottled gas for household and/or pool purposes (excluding barbecue grill tanks) must be installed underground or in a manner to be screened from view by landscaping or other materials approved by the ACC.

16.42 Swimming Fishing Boating, Docks and Wildlife. Swimming, fishing and feeding wildlife are prohibited within any waterbodies within or adjacent to LAKES AT COCOA GROVE. Boating and personal watercraft *(e.g., jet*/water skis) are prohibited. No private docks may be erected within any waterbody.

16.43 Use of Homes. Each Home is restricted to residential use as a residence by the Owner or permitted occupant thereof, its immediate family, guests, tenants and invitees. To the extent that an Owner does not reside in his or her Home, but desires to permit family or friends to occupy such Home without a lease, all prospective occupants of the Home, prior to moving into the Home and irrespective of their relation to the Owner, must be registered with the Association and shall be subject to the Association's screening and approval process which is used for prospective tenants seeking to lease a Home within LAKES AT COCOA GROVE.

16.44 Visibility on Corners. Notwithstanding anything to the contrary in these restrictions, no obstruction to visibility at street intersections shall be permitted and such visibility clearances shall be maintained as required by the ACC and governmental agencies. No vehicles, objects, fences, walls, hedges, shrubs or other planting shall be placed or permitted on a comer Lot where such obstruction would create a traffic problem.

16.45 Water Intrusion. Florida experiences heavy rainfall and humidity on a regular basis. Each Owner is responsible for making sure his or her Home remains watertight including, without limitation, checking caulking around windows and seals on doors. Each Owner acknowledges that running air conditioning machinery with windows and/or doors open in humid conditions can result in condensation, mold and/or water intrusion. Neither Developer nor Association shall have liability under such circumstances for any damage or loss that an Owner may incur.

16.46 Wells. Wells are not permitted within LAKES AT COCOA GROVE.

16.47 Wetlands and Mitigation Areas. It is anticipated that the Common Areas may include one or more preserves, wetlands, and/or mitigation areas. No Owner or other person shall take any action or enter onto such areas so as to adversely affect the same. Such areas are to be maintained by Association in their natural state.

16.48 Windows or Wall Units. No window or wall air conditioning unit may be installed in any window or wall of a Home.

16.49 Window Treatments. Window treatments shall consist of drapery, blinds, decorative panels, or other window covering, and no newspaper, aluminum foil, sheets or other temporary window treatments are permitted, except for periods not exceeding one (1) weeks after an Owner or tenant first moves into a Home or when permanent window treatments are being cleaned or repaired. No security bars shall be placed on the windows of any Home without prior written approval of the ACC. No awnings, canopies or shutters shall be affixed to the exterior of a Home without the prior written approval of the ACC. No reflective tinting or mirror finishes on windows shall be permitted unless approved by the ACC. Window treatments facing the street shall be of a neutral color, such as white, off-white or wood tones.

16.50 Workers. Workers hired by any Owner for any purpose including, without limitation, maintenance, landscaping, and/or housekeeping may not congregate in or about the Common Areas or make any personal use of such Common Areas.

17. Easement for Unintentional and Non-Negligent Encroachments. If any other building or improvement on a Home shall encroach upon another Home by reason of original construction by Developer, then an easement for such encroachment shall exist so long as the encroachment exists. It is contemplated that each Home shall contain an improvement with exterior walls, footings, and other protrusions which may pass over or underneath an adjacent Home. A perpetual nonexclusive easement is herein granted to allow the footers for such walls and such other protrusions and to permit any natural water runoff from roof overhangs, eaves and other protrusions onto an adjacent Home.

18. Requirement to Maintain Insurance.

18.1 Association. Association shall maintain the following insurance coverage:

18.1.1 Flood Insurance. If the Common Areas are located within an area which has special flood hazards and for which flood insurance has been made available under the National Flood Insurance Program (NFIP), coverage in appropriate amounts, available under NFIP for all buildings and other insurable property within any portion of the Common Areas located within a designated flood hazard area.

18.1.2 Liability. Property Damage Hazard Insurance. Commercial general liability insurance, property damage insurance and hazard insurance coverage providing coverage and limits deemed appropriate. Such policies must provide that they may not be canceled or substantially modified by any party, without at least thirty (30) days' prior written notice to Developer (until the Community Completion Date) and Association.

18.1.3 Directors and Officers Liability Insurance. Each member of the Board shall be covered by directors and officers liability insurance in such amounts and with such provisions as approved by the Board.

18.1.4 Other Insurance. Such other insurance coverage as appropriate from time to time. All coverage obtained by Association shall cover all activities of Association and all properties maintained by Association, whether or not Association owns title thereto.

18.1.5 Developer. Prior to and including the Turnover Date, Developer shall have the right, at Association's expense, to provide any such insurance coverage it deems appropriate under its master insurance policy in lieu of any of the foregoing.

18.2 Homes.

18.2.1 Requirement to Maintain Insurance. Each Owner shall be required to obtain and maintain adequate insurance of his or her Home. Such insurance shall be sufficient for necessary repair or reconstruction work, and/or shall cover the costs to demolish a damaged Home as applicable, remove the debris, and to re-sod and landscape land comprising the Home. Upon the request of Association, each Owner shall be required to supply the Board with evidence of insurance coverage on his Home which complies with the provisions of this Section. Without limiting any other provision of this Declaration or the powers of Association, Association shall specifically have the right to bring an action to require an Owner to comply with his or her obligations hereunder.

18.2.2 Requirement to Reconstruct or Demolish. In the event that any Home is destroyed by fire or other casualty, the Owner of such Home shall do one of the following: the Owner shall commence reconstruction and/or repair of the Home **("Required Repair"),** or Owner shall tear the Home down, remove all the debris, and resod and landscape the property comprising the Home as required by the ACC **("Required Demolition")** to the extent permitted under law. If an Owner elects to perform the Required Repair, such work must be commenced within thirty (30) days of the Owner's receipt of the insurance proceeds respecting such Home. If an Owner elects to perform the Required Demolition, the Required Demolition must be completed within six (6) months from the date of the casualty or such longer period of time established by the Board in its sole and absolute discretion subject to extension if required by law. If an Owner elects to perform the Required Repair, such reconstruction and/or repair must be completed in a continuous, diligent, and timely manner. Association shall have the right to inspect the progress of all reconstruction and/or repair work. Without limiting any other provision of this Declaration or the powers of Association, Association shall have a right to bring an action against an Owner who fails to comply with the foregoing requirements. By way of example, Association may bring an action against an Owner who fails to either perform the Required Repair or Required Demolition on his or her Home within the time periods and in the manner provided herein. Each Owner acknowledges that the issuance of a building permit or a demolition permit in no way shall be deemed to satisfy the requirements set forth herein, which are independent of, and in addition to, any requirements for completion of work or progress requirements set forth in applicable statutes, zoning codes, and/or building codes.

18.2.3 Townhome Buildings. Intentionally deleted.

18.2.4 Standard of Work. The standard for all demolition, reconstruction, and other work performed as required by this Section 18.2.4 shall be in accordance with the Community Standards and any other standards established by Association with respect to any casualty that affects all or a portion of LAKES AT COCOA GROVE.

18.2.5 Additional Rights of Association. If an Owner refuses or fails, for any reason, to perform the Required Repair or Required Demolition as herein provided, then Association, in its sole and absolute discretion, by and through its Board is hereby irrevocably authorized by such Owner to perform the Required Repair or Required Demolition. All Required Repair performed by Association pursuant to this Section shall be in conformance with the original plans and specifications for the Home. Association shall have the absolute right to perform the Required Demolition to a Home pursuant to this Section if any contractor certifies in writing to Association that such Home cannot be rebuilt or repaired. The Board may levy an Individual Assessment against the Owner in whatever amount sufficient to adequately pay for Required Repair or Required Demolition performed by Association.

18.2.6 Rights of City. In the event that any Home is destroyed by fire or other casualty, City or other authorized governmental agency shall have the right, but not the obligation, to enter such Owner's Lot and/or Home for the purpose of inspecting and assessing the damage to such Home. City shall further have the right to enforce any local laws and/or ordinances with regard to the Required Repair or the Required Demolition of the Home.

18.2.7 Association Has No Liability. Notwithstanding anything to the contrary in this Section, Association, its directors and officers, shall not be liable to any Owner should an Owner fail for any reason whatsoever to obtain insurance coverage on a Home. Moreover, Association, its directors and officers, shall not be liable to any person if Association does not enforce the rights given to Association in this Section.

18.3 Fidelity Bonds. If available, Association may obtain a blanket fidelity bond for all officers, directors, trustees and employees of Association, and all other persons handling or responsible for funds of, or administered by, Association. In the event Association delegates some or all of the responsibility for the handling of

the funds to a professional management company or licensed manager, such bonds shall be required for its officers, employees and agents, handling or responsible for funds of, or administered on behalf of Association. The amount of the fidelity bond shall be based upon reasonable business judgment. The fidelity bonds required herein must meet the following requirements (to the extent available at a reasonable premium):

18.3.1 The bonds shall name Association as an obligee.

18.3.2 The bonds shall contain waivers, by the issuers of the bonds, of all defenses based upon the exclusion of persons serving without compensation from the definition of "employee" or similar terms or expressions.

18.3.3 The premiums on the bonds (except for premiums on fidelity bonds maintained by a professional management company, or its officers, employees and agents), shall be paid by Association.

18.3.4 The bonds shall provide that they may not be canceled or substantially modified (including cancellation for non-payment of premium) without at least thirty (30) days' prior written notice to Developer (until the Community Completion Date), Club Owner and Association.

18.4 Association as Agent. Association is irrevocably appointed agent for each Owner of any interest relating to the Common Areas to adjust all claims arising under insurance policies purchased by Association and to execute and deliver releases upon the payment of claims.

18.5 Casualty to Common Areas. In the event of damage to the Common Areas, or any portion thereof, Association shall be responsible for reconstruction after casualty. In the event of damage to a Home, or any portion thereof, the Owner shall be responsible for reconstruction after casualty. In the event of damage to the Club, the responsibility shall be as provided in the Club Plan.

18.6 Nature of Reconstruction. Any reconstruction of improvements hereunder shall be substantially in accordance with the plans and specifications of the original improvement, or as the improvement was last constructed, subject to modification to conform with the then current governmental regulation(s).

18.7 Additional Insured. Developer, Club Owner and their Lender(s) shall be named as additional insured on all policies obtained by Association, as their interests may appear.

18.8 Cost of Insurance. The costs of all insurance maintained by Association hereunder, and any other fees or expenses incurred which may be necessary or incidental to carry out the provisions hereof are Operating Costs. Notwithstanding the foregoing or any other provisions in this Declaration, expenses incurred during the guarantee period which result from a natural disaster or an act of God occurring during such guarantee period, which are not covered by proceeds from insurance maintained by Association *(i.e.*, the costs of any deductible, the costs incurred which are in excess of the Association's coverage, etc.), shall not be Operating Costs (and as such, are not part of the Developer's deficit funding obligation under its guarantee, if any) and may be charged as a Special Assessment against all Owners of record as of the date that the Special Assessment is assessed.

19. Property Rights.

19.1 Owners' Easement of Enjoyment. Every Owner, and its immediate family, tenants, guests and invitees, and every owner of an interest in LAKES AT COCOA GROVE shall have a non-exclusive right and easement of enjoyment in and to those portions of the Common Areas which it is entitled to use for their intended purpose, subject to the following provisions:

19.1.1 Easements, restrictions, reservations, conditions, limitations and declarations of record, now or hereafter existing, and the provisions of this Declaration, as amended.

19.1.2 Rules and Regulations adopted governing use and enjoyment of the Common Areas.

19.1.3 The right of Association to suspend an Owner's rights hereunder or to impose fines in accordance with Section 720.305 of the Florida Statutes, as amended from time to time.

19.1.4 The right to suspend the right to use all (except vehicular and pedestrian ingress and egress and necessary utilities) or a portion of the Common Areas by an Owner, its immediate family, etc. for any period during which any Assessment against that Owner remains unpaid.

19.1.5 The right of Developer and/or Association to dedicate or transfer all or any part of the Common Areas. No such dedication or transfer shall be effective prior to the Community Completion Date without prior written consent of Developer and, at any time, without prior consent of the Club Owner.

19.1.6 The right of Developer and/or Association to modify the Common Areas as set forth in this Declaration.

19.1.7 The perpetual right of Developer to access and enter the Common Areas at any time, even after the Community Completion Date, for the purposes of inspection and testing of the Common Areas. Association and each Owner shall give Developer unfettered access, ingress and egress to the Common Areas so that Developer and/or its agents can perform all tests and inspections deemed necessary by Developer. Developer shall have the right to make all repairs and replacements deemed necessary by Developer. At no time shall Association and/or an Owner prevent, prohibit and/or interfere with any testing, repair or replacement deemed necessary by Developer relative to any portion of the Common Areas.

19.1.8 The right of Developer and/or Association to modify the Common Areas as set forth in this Declaration.

19.1.9 The rights of Developer, Club Owner and/or Association regarding LAKES AT COCOA GROVE as reserved in this Declaration, including, without limitation, the right to utilize the same and to

grant use rights, etc. to others.

19.1.10 Rules and Regulations adopted governing use and enjoyment of the Common Areas.

19.1.11 An Owner relinquishes use of the Common Areas at any time that a Home is leased to a tenant.

19.1.12 The right of Association to evict occupants, tenants, guests and invitees as provided in this Declaration.

19.2 Ingress and Egress. An easement for ingress and egress is hereby created for pedestrian traffic over, and through and across sidewalks paths, walks, driveways, passageways, and lanes as the same, from time to time, may exist upon, or be designed as part of, the Common Areas, and for vehicular traffic over, through and across such portions of the Common Areas as, from time to time, may be paved and intended for such purposes.

19.3 Development Easement. In addition to the rights reserved elsewhere herein, Developer reserves an easement for itself and its nominees and creates an easement in favor of the Club Owner over, upon, across, and under LAKES AT COCOA GROVE as may be required in connection with the development of LAKES AT COCOA GROVE and the Club, and other lands designated by Developer and to promote or otherwise facilitate the development, construction and sale and/or leasing of Homes, any portion of LAKES AT COCOA GROVE, the Club, and other lands designated by Developer. Without limiting the foregoing, Developer specifically reserves the right to use all paved roads and rights of way within LAKES AT COCOA GROVE for vehicular and pedestrian ingress and egress to and from construction sites and for the construction and maintenance of any Telecommunications Systems provided by Developer and/or for the use of the Club. Specifically, each Owner acknowledges that construction vehicles and trucks may use portions of the Common Areas. Developer shall have no liability or obligation to repave, restore, or repair any portion of the Common Areas as a result of the use of the same by construction traffic, and all maintenance and repair of such Common Areas shall be deemed ordinary maintenance of Association payable by all Owners as part of Operating Costs. Without limiting the foregoing, at no time shall Developer be obligated to pay any amount to Association on account of Developer use of the Common Areas for construction purposes. Developer intends to use the Common Areas for sales of new and used Homes. Further, Developer may market other residences and commercial properties located outside of LAKES AT COCOA GROVE from Developer's sales facilities located within LAKES AT COCOA GROVE. Developer has the right to use all portions of the Common Areas in connection with its marketing activities including, without limitation, allowing members of the general public to inspect model Homes, installing signs and displays, holding promotional parties and picnics, and using the Common Areas for every other type of promotional or sales activity that may be employed in the marketing of new and used residential Homes or the leasing of residential apartments. The easements created by this Section, and the rights reserved herein in favor of Developer, shall be construed as broadly as possible and supplement the rights of Developer. At no time shall Developer incur any expense whatsoever in connection with its use and enjoyment of such rights and easements. Without limiting any other provision of this Declaration, Developer may non- exclusively assign their rights hereunder to each Builder. The Developer reserves the right to erect Commercial signage along the West and Southern exterior easements of the LAKES OF COCOA GROVE SUBDIVISION, in accordance with the local City and County codes, requirements and regulations. Partial revenues from these signs could be dispersed the LAKES OF COCOA GROVE POA, as determined by the Developer.

19.4 Public Easements. The City of Cocoa, fire, police, school transportation, health, sanitation and other public service and utility company personnel and vehicles shall have a permanent and perpetual easement for ingress and egress over and across the Common Areas. The City of Cocoa shall also have a permanent and perpetual easement for ingress and egress over and across the Common Areas. The city or other local government shall have an easement over the lake. In addition, Telecommunications Providers shall also have the right to use all paved roadways for ingress and egress to and from Telecommunications Systems within LAKES AT COCOA GROVE.

19.5 Delegation of Use. Every Owner shall be deemed to have delegated its right of enjoyment to the Common Areas to occupants or lessees of that Owner's Home subject to the provisions of this Declaration and the Rules and Regulations, as may be promulgated, from time to time. Any such delegation or lease shall not relieve any Owner from its responsibilities and obligations provided herein.

19.6 Easement in Favor of Private Parcel Owner. The Private Parcel Owner and its tenants and subtenants, invitees and their respective employees and agents, successors, and assigns shall have an easement of ingress and/or egress over, through and across all paved areas, sidewalks, paths, roads, driveways, passageways and lanes as the same may exist upon, or be designated as part of, the Common Areas and/or Facilities (if applicable) and for vehicular traffic over, through and across such portions of the Common Areas as, from time to time, may be paved and intended for such purposes. In connection with the foregoing easement, the Private Parcel Owner and its tenants, invitees, successors, and assigns shall be entitled to unfettered access through any Association gates or other access control devices, if any. In addition to the foregoing, the Private Parcel Owner and its tenants, invitees, successors, and assigns shall have an easement over, through and across the Common Areas as may be deemed reasonably necessary by the Private Parcel Owner in connection with its construction, development, operation, maintenance, and/or replacement/removal activities on the Private Parcel.

19.7 Easement for Encroachments. In the event that any improvement upon Common Areas, as originally constructed, shall encroach upon any other property or improvements thereon, or for any reason, then an easement appurtenant to the encroachment shall exist for so long as the encroachment shall naturally exist.

19.8 Permits Licenses and Easements. Prior to the Community Completion Date, Developer, and thereafter Association shall, in addition to the specific rights reserved to Developer herein, have the right to grant, modify, amend and terminate permits, licenses and easements over, upon, across, under and through LAKES AT COCOA GROVE (including Lots, Parcels and/or Homes, but excluding the Club after the Turnover Date) for Telecommunications Systems, utilities, roads and other purposes reasonably necessary or useful as it determines, in its sole discretion. To the extent legally required, each Owner shall be deemed to have granted to Developer and, thereafter,

Association an irrevocable power of attorney, coupled with an interest, for the purposes herein expressed.

19.9 Blanket Easement in Favor of District. The District shall also have blanket easements necessary for District operations above, across and under LAKES AT COCOA GROVE. The easement shall permit, without limitation, all construction, maintenance and replacement activities of the District as well as provide the District with an easement over all roads for water and sewer drainage.

19.10 Support Easement and Maintenance Easement. An easement is hereby created for the existence and maintenance of supporting structures (and the replacement thereof) in favor of the entity required to maintain the same. An easement is hereby created for maintenance purposes (including access to perform such maintenance) over and across LAKES AT COCOA GROVE (including Lots, Parcels, Homes and the Club) for the reasonable and necessary maintenance of Common Areas, the Club, utilities, cables, wires and other similar facilities.

19.11 Drainage. A non-exclusive easement shall exist in favor of Developer, the District, Association, Club Owner and their designees, and any applicable water management district, state agency, county agency and/or federal agency having jurisdiction over, across and upon LAKES AT COCOA GROVE for drainage, irrigation and water management purposes, and for purposes of installing, repairing, modifying or improving drainage facilities or components. A non-exclusive easement for ingress, egress and access exists as shown on the Plat for such parties to enter upon and over any portion of LAKES AT COCOA GROVE (including Homes) in order to construct, maintain, inspect, record data on, monitor, test, or repair, as necessary, any water management areas, conservation areas, mitigation areas, irrigation systems and facilities thereon and appurtenances thereto. No structure, landscaping, or other material shall be placed or be permitted to remain which may damage or interfere with the drainage or irrigation of LAKES AT COCOA GROVE and/or installation or maintenance of utilities or which may obstruct or retard the flow of water through LAKES AT COCOA GROVE and/or water management areas and facilities or otherwise interfere with any drainage, irrigation and/or easement provided for in this Section or the use rights set forth elsewhere in this Declaration.

19.12 Club Easements. A non-exclusive easement shall exist in favor of the Club Owner and its respective designees, invitees, guests, agents, employees, and members over and upon the Common Areas and portions of LAKES AT COCOA GROVE necessary for ingress, egress, access to, construction, maintenance and/or repair of the Club. Club Owner, Club employees, agents, invitees, guests, any manager of the Club, and all members of the Club shall be given access to the Club on the same basis as Owners, but without any charge therefore (in the term of Assessments or otherwise) (TBD).

19.13 Easement in favor of Association. Association is hereby granted an easement over all of LAKES AT COCOA GROVE, including all Homes and Lots, for the purpose of (a) constructing, maintaining, replacing and operating all Common Areas, including, but not limited to, lakes, perimeter walls and fences, and (b) performing any obligation of an Owner for which Association intends to impose an Individual Assessment.

19.14 Duration. All easements created herein or pursuant to the provisions hereof shall be perpetual unless stated to the contrary.

20. Club Plan. Association and each Home Owner, where applicable, shall be bound by and comply with the Club Plan which is incorporated herein by reference. Although the Club Plan is an exhibit to the Declaration, the Association Documents are subordinate and inferior to the Club Plan. In the event of any conflict between the Club Plan and Association Documents, the Club Plan shall control. (TBD)

21. Assessments.

21.1 Types of Assessments. Each Owner and Builder, by acceptance of a deed or instrument of conveyance for the acquisition of title in any manner (whether or not so expressed in the deed), including any purchaser at a judicial sale, shall hereafter be deemed to have covenanted and agreed to pay to Association at the time and in the manner required by the Board, assessments or charges and any special assessments as are fixed, established and collected from time to time by Association (collectively, the "Assessments"). All Owners and Builders shall pay Assessments. Notwithstanding the foregoing, so long as Developer deficit funds Association, neither Developer nor any Builder shall pay Assessments. Rather, during any period in which Developer is deficit funding the Association, each Builder shall pay pursuant to a Builder budget to be prepared by Developer in its discretion such portion of Operating Costs which benefits any Lot or Parcel owned by such Builder, as determined by Developer, in Developer's sole discretion. By way of example, and not of limitation, Developer may require that each Builder pay some portion of Assessments on a Lot or Parcel owned by a Builder which does not contain a Home. As vacant Lots or Parcels owned by Builders may not receive certain services *(e.g.*, Telecommunications Services), Builders shall not be required to pay for the same. To the extent Developer is not deficit funding Association, each Builder shall be required to pay Assessments in connection with its Lots. The statutory rights afforded to Association including, without limitation, the right of Association to file liens, bring actions for foreclosure and/or the right of Association to accelerate the amount of Assessments due upon non-payment of Assessments, shall also apply to Assessments (or portions of Operating Costs) owed by Builders with respect to Homes and/or Lots owned by such Builders. Additionally, all legal fees, late fees, interest and attorneys' fees and costs relating to the collection of Assessments from Builders shall be fully recoverable by Association against Builders.

21.2 Purpose of Assessments. The Assessments levied by Association shall be used for, among other things, the improvement and maintenance of the Common Areas and any easement in favor of Association, including but not limited to the following categories of Assessments as and when levied and deemed payable by the Board:

21.2.1 Any monthly or quarterly assessment (as determined by the Board) or charge for the purpose of operating Association and accomplishing any and all of its purposes, as determined in accordance herewith, including, without limitation, payment of Operating Costs and collection of amounts necessary to pay any deficits from prior years' operation (hereinafter "Installment Assessments");

21.2.2 Any special assessments for capital improvements, major repairs, emergencies, the repair or replacement of the Common Areas, or nonrecurring expenses (hereinafter "Special Assessments");

21.2.3 Any specific fees, dues or charges to be paid by Owners for any special services provided

to or for the benefit of an Owner *or* Home, for any special or personal use of the Common Areas, or to reimburse Association for the expenses incurred in connection with that service or use (hereinafter "Use Fees");

21.2.4 Assessments of any kind for the creation of reasonable reserves for any of the aforesaid purposes. At such time as there are improvements in any Common Areas for which Association has a responsibility to maintain, repair, and replace, the Board may, but shall have no obligation to, include a "Reserve for Replacement" in the Installment Assessments in order to establish and maintain an adequate reserve fund for the periodic maintenance, repair, and replacement of improvements comprising a portion of the Common Areas (hereinafter "Reserves"). Assessments pursuant to this Section shall be payable in such manner and at such times as determined by Association, and may be payable in installments extending beyond the fiscal year in which the Reserves are approved. Until the Community Completion Date, Reserves shall be subject to the prior written approval of Developer, which may be withheld for any reason; and

21.2.5 Assessments for which one or more Owners (but less than all Owners) or Builders within LAKES AT COCOA GROVE is subject ("Individual Assessments") such as costs of special services provided to a Builder, Home or Owner or cost relating to enforcement of the provisions of this Declaration or the architectural provisions hereof as it relates to a particular Builder, Owner or Home. By way of example, and not of limitation, in the event an Owner fails to maintain the exterior of his Home (other than those portions of a Home maintained by Association) in a manner satisfactory to Association, Association shall have the right, through its agents and employees, to enter upon the Home and to repair, restore, and maintain the Home as required by this Declaration. ~~By way of further example, and not limitation, Townhome Owners may be charged their pro rata share of Townhome Building Painting costs as Individual Assessments. The cost thereof, plus the reasonable administrative expenses of Association, shall be an Individual Assessment~~. The lien for an Individual Assessment may be foreclosed in the same manner as any other Assessment. As a further example, if one or more Owners receive optional Telecommunications Services such as Toll Calls, Cable Services and/or Data Transmission Services, and Association pays a Telecommunications Provider for such services, then the cost of such services shall be an Individual Assessment as to each Owner receiving such services. Further, in the event that Association decides it is in the best interest of LAKES AT COCOA GROVE that Association perform any other obligation of an Owner or Builder under this Declaration, the cost of performing such obligation shall be an Individual Assessment. The lien for an Individual Assessment may be foreclosed in the same manner as any other Assessment. In no event shall the Club Owner be subject to Individual Assessments.

21.3 Designation. The designation of Assessment type shall be made by Association. Prior to the Community Completion Date, any such designation must be approved by Developer. Such designation may be made on the budget prepared by Association. The designation shall be binding upon all Owners.

21.4 Allocation of Operating Costs.

21.4.1 For the period until the adoption of the first annual budget, the allocation of Operating Costs shall be as set forth in the initial budget prepared by Developer.

21.4.2 Commencing on the first day of the period covered by the annual budget, and until the adoption of the next annual budget, the Installment Assessments shall be allocated so that each Owner shall pay his pro rata portion of Installment Assessments, Special Assessments, and Reserves based upon a fraction, the numerator of which is one (1) and the denominator of which is the total number of Homes in LAKES AT COCOA GROVE conveyed to Owners or any greater number determined by Developer from time to time. Developer, in its sole and absolute discretion may change such denominator from time to time. Under no circumstances will the denominator be less than the number of Homes owned by Owners other than Developer. Notwithstanding the foregoing, it is anticipated, but not guaranteed, that Owners of Townhomes may be required to pay additional Operating Costs for services exclusive to Townhomes and Townhome Buildings, respectively.

21.4.3 In the event the Operating Costs as estimated in the budget for a particular fiscal year are, after the actual Operating Costs for that period is known, less than the actual costs, then the difference shall, at the election of Association: (i) be added to the calculation of Installment Assessments, as applicable, for the next ensuing fiscal year; or (ii) be immediately collected from the Owners as a Special Assessment. Association shall have the unequivocal right to specially assess Owners retroactively on January 1st of any year for any shortfall in Installment Assessments, which Special Assessment shall relate back to the date that the Installment Assessments could have been made. No vote of the Owners shall be required for such Special Assessment (or for any other Assessment except to the extent specifically provided herein).

21.4.4 Each Owner agrees that so long as it does not pay more than the required amount it shall have no grounds upon which to object to either the method of payment or non-payment by other Owners of any sums due.

21.5 General Assessments Allocation. Except as hereinafter specified to the contrary, Installment Assessments, Special Assessments and Reserves shall be allocated equally to each Owner. Notwithstanding the foregoing, it is anticipated, but not guaranteed, that Owners of Townhomes may be required to pay additional Operating Costs for services exclusive to Townhomes and Townhome Buildings, respectively.

21.6 Use Fees and Individual Assessment. Except as hereinafter specified to the contrary, Use Fees and Individual Assessments shall be made against the Owners benefiting from, or subject to the special service or cost as specified by Association.

21.7 Commencement of First Assessment. Assessments shall commence as to each Owner on the day of the conveyance of title of a Lot to an Owner. The applicable portion of Assessments shall commence as to each Builder on the day of the conveyance of title of a Lot or Parcel to such Builder.

21.8 Deficit Funding, Shortfalls and Surpluses. Each Owner acknowledges that because Installment Assessments, Special Assessments, and Reserves are allocated based on the formula provided herein, the total number of Homes to be included in LAKES AT COCOA GROVE, or upon the number of Homes conveyed to Owners on or prior to September 30 of the prior fiscal year (as determined in Developer's discretion), it is possible that Association may collect more or less than the amount budgeted for Operating Costs. At any time (and from time to time) prior to and including the Turnover Date, Developer shall have the option **("Developer's Option")** to either

(i) fund all or any portion of the shortfall in Installment Assessments not raised by virtue of all Installment Assessments due from Owners and other income produced by Association or (ii) to pay Installment Assessments on Homes or Lots owned by Developer. In the event that Developer elects to fund all or a portion of the shortfall in Installment Assessments, as stated above, Developer shall have no obligation to fund bad debt expenses relating to the payment of Assessments including, without limitation, estimates for bad debt allowance and actual write-offs of Owner balances. If Developer has cumulatively overfunded Operating Costs and/or prepaid expenses of Association including, but not limited to, loaning Association uncollected Assessments due from Owners which are not timely paid, Association shall refund such amounts to Developer immediately upon such prepaid or loaned amounts being received by Association (through legal collection efforts or otherwise), but in no event later than the Turnover Date or as soon as possible thereafter *(e.g.* once the amount is finally determined), or, in Developer's sole and absolute discretion, pursuant to terms and conditions (e.g., payment plan) approved by Developer. Developer shall never be required to (i) pay Installment Assessments if Developer has elected to fund the deficit instead of paying Installment Assessments on Homes or Lots owned by Developer, (ii) pay Special Assessments, management fees or Reserves, or (iii) pay amounts due from, but not paid by, Owners, as referenced above. Any surplus Assessments collected by Association may be (i) allocated towards the next year's Operating Costs, (ii) used to fund Reserves, whether or not budgeted, (iii) retained by Association, and/or (iv) used for any other purpose, in Association's sole and absolute discretion, to the creation of Reserves, whether or not budgeted. Under no circumstances shall Association be required to pay surplus Assessments to Owners.

21.8.1 If an audit of the Association's financial records reveals that Developer has funded a greater amount *(e.g.* including, without limitation, pre-paid amounts, deposits for utilities, Developer's funding of delinquent Installment Assessments, or portion thereof, not paid by Owners, etc.) than required under this Section, then any such excess shall be promptly refunded to the Developer by Association .

21.8.2 If Developer elects to loan funds to Association for any purpose including, but not limited to, covering uncollected Assessments due from Owners which are not timely paid, Developer may, but shall have no obligation to, require the Association to sign a promissory note. Notwithstanding the foregoing, irrespective of whether a promissory note exists with respect to any loan to Association by Developer, Association shall be liable to Developer for all amounts loaned.

21.9 Budget. The initial budget prepared by Developer is adopted as the budget for the period of operation until adoption of the first annual Association budget. Thereafter, annual budgets shall be prepared and adopted by Association. To the extent Association has commenced or will commence operations prior to the date this Declaration is recorded or the first Home is closed, the Operating Costs may vary in one or more respects from that set forth in the initial budget. A Builder shall pay Assessments or other amounts as per the Builder budget prepared by the Developer for each Lot or Parcel owned by such Builder commencing from the date the Builder obtained title to such Lot or Parcel. During the deficit funding period, if any, Developer shall fund entirely all Operating Costs not covered by Builders' Assessments until the month prior to the closing of the first Home. Thereafter, Assessments shall be payable by each Owner and Builder as provided in this Declaration. THE INITIAL BUDGET OF ASSOCIATION IS PROJECTED (NOT BASED ON HISTORICAL OPERATING FIGURES). THEREFORE, IT IS POSSIBLE THAT ACTUAL ASSESSMENTS MAY BE LESSER OR GREATER THAN PROJECTED.

21.10 Establishment of Assessments. Assessments shall be established in accordance with the following procedures:

21.10.1 Installment Assessments shall be established by the adoption of a twelve (12) month operating budget by the Board. The budget shall be in the form required by Section 720.303(6) of the Florida Statutes, as amended from time to time. Written notice of the amount and date of commencement thereof shall be given *to* each Owner and Owner not less than ten (10) days in advance of the due date of the first installment thereof. Notwithstanding the foregoing, the budget may cover a period of less than twelve (12) months if the first budget is adopted mid-year or in order to change the fiscal year of Association. The Board may, from time to time, determine how the Assessments will be collected by Association (i.e., monthly, quarterly or annually).

21.10.2 Special Assessments and Individual Assessments against the Owners may be established by Association, from time to time, and shall be payable at such time or time(s) as determined. Until the Community Completion Date, no Special Assessment shall be imposed without the consent of Developer.

21.10.3 Association may establish, from time to time, by resolution, rule or regulation, or by delegation to an officer or agent, including, a professional management company, Use Fees. The sums established shall be payable by the Owner utilizing the service or facility as determined by Association.

21.11 Initial Contribution. The first purchaser of each Lot, Home or Parcel, at the time of closing of the conveyance from Developer to the purchaser, shall pay to Developer an initial contribution in an amount Two Hundred Fifty Dollars ($250.00) (the **"Initial Contribution")** as determined and amended by Developer in its sole and absolute discretion from time to time. The funds derived from the Initial Contributions shall be used at the discretion of Developer for any purpose, including but not limited to, future and existing capital improvements, operating expenses, support costs and start-up costs. Developer may waive this requirement for some Lots and Homes, if the first purchaser is a Builder, and the Builder becomes unconditionally obligated to collect and pay the Initial Contribution upon the subsequent sale of each Lot and Home to an end purchaser.

21.12 Resale Contribution. Association may establish a resale contribution **("Resale Contribution").** There shall be collected upon every conveyance of ownership interest in a Home by an Owner other than Developer or Builders an amount payable to Association. The Resale Contribution shall not be applicable to conveyances from Developer or Builder. After the Home has been conveyed by Developer or a Builder there shall be a recurring assessment payable to Association upon all succeeding conveyances of a

Home. The amount of Resale Contribution and the manner of payment shall be determined by resolution of the Board from time to time; provided, however, all Homes shall be assessed a uniform amount.

21.13 Assessment Estoppel Certificates. No Owner or Builder shall sell or convey its interest in a Lot unless all sums due Association have been paid in full and an estoppel certificate in recordable form shall have been received by such Owner or Builder. Association shall prepare and maintain a ledger noting Assessments due from each Owner or Builder. The ledger shall be kept in the office of Association, or its designees, and shall be open to inspection by any Owner. Within ten (10) days of a written request therefor, there shall be furnished to an Owner or Builder an estoppel certificate in writing setting forth whether the Assessments have been paid and/or the amount which is due as of any date. As to parties other than Owners or Builders who, without knowledge of error, rely on the certificate, the certificate shall be conclusive evidence of the amount of any Assessment therein stated. The Owner or Builder requesting the estoppel certificate shall be required *to* pay Association a reasonable sum to cover the costs of examining records and preparing such estoppel certificate. Each Owner and Builder waives its rights (if any) *to* an accounting related to Operating Costs or Assessments.

21.14 Payment of Home Real Estate Taxes. Each Owner and Builder shall pay all taxes and obligations relating to its Home which, if not paid, could become a lien against the Home which is superior to the lien for Assessments created by this Declaration.

21.15 Creation of the Lien and Personal Obligation. Each Owner and Builder, by acceptance of a deed or instrument of conveyance for the acquisition of title to a Lot, shall be deemed to have covenanted and agreed that the Assessments, and/or other charges and fees set forth herein, together with interest, late fees, costs and reasonable attorneys' fees and paraprofessional fees at all levels of proceedings including appeals, collections and bankruptcy, shall be a charge and continuing lien in favor of Association encumbering the Lot and all personal property located thereon owned by the Owner or Builder against whom each such Assessment is made. The lien is effective from and after recording a Claim of Lien in the Public Records stating the legal description of the Lot, name of the Owner or Builder, and the amounts due as of that date, but shall relate back to the date that this Declaration is recorded. The Claim of Lien shall also cover any additional amounts which accrue thereafter until satisfied. Each Assessment, together with interest, late fees, costs and reasonable attorneys' fees and paraprofessional fees at all levels including appeals, collections and bankruptcy, and other costs and expenses provided for herein, shall be the personal obligation of the person who was the Owner or Builder of the Lot at the time when the Assessment became due, as well as the Owner's heirs, devisees, personal representatives, successors or assigns.

21.16 Subordination of Lien to Mortgages. The lien for Assessments shall be a lien superior to all other liens save and except tax liens, liens for Club Dues and, except as set forth in this Section, mortgage liens, provided such mortgage liens are first liens against the property encumbered thereby, subject only to tax liens, and secure indebtedness which is amortized in monthly or quarter-annual payments over a period of not less than ten (10) years. An acquirer of title to a Lot, whether by foreclosure, deed in lieu of foreclosure, or otherwise, shall be liable for all unpaid Assessments, interest, late fees and reasonable attorney's fees and costs incurred by Association in the collection of unpaid amounts that became due prior to such acquirer's acquisition. Notwithstanding the foregoing, with respect to a Lender or its successor or assignees who acquire title to a Lot by foreclosure or by deed in lieu of foreclosure, such Lender's liability respecting the unpaid Assessments (but not late fees, interest or reasonable attorney's fees or costs incurred by Association in the collection of unpaid amounts) that became due prior to the Lender's acquisition of title shall be limited to the lesser of: (i) the Lot's unpaid Assessments which accrued or came due during the twelve (12) months immediately preceding the acquisition of title and for which payment in full has not yet been received by Association; or (ii) one percent (1%) of the original mortgage debt. The limitations on Lender liability provided in this Section apply only if the Lender filed suit against the Owner and initially (and not through amendment or re-foreclosure) joined Association as a defendant in the Lender's foreclosure action when such action was first filed with a court. Joinder of Association is not required if, on the date the complaint is filed, Association was dissolved or did not maintain an office or agent for service of process at a location that was known to or reasonably discoverable by the Lender. In addition to the foregoing, and to the maximum extent permissible under Florida law as amended from time to time, any acquirer of title to a Lot including, without limitation, a Lender or other third party, shall be liable for all late fees and interest charged against the former Owner of the Lot and all reasonable attorney's fees and costs incurred by Association in collection efforts against the former Owner of the Lot. Unless specifically provided otherwise by Association in writing from time to time and in its sole and absolute discretion, late fees, interest and reasonable attorney's fees and costs shall not be considered Assessments as that term is used in this Section. The Lender or its successor or assignees acquiring title to a Lot shall pay all of the foregoing amounts owed including, but not limited to, Assessments (as the same may be limited above), late fees, interest, attorney's fees and costs owed to Association within thirty (30) days after transfer of title. Failure to pay the full amount due when due shall entitle Association to record a claim of lien against the Lot and proceed in the same manner as provided in this Declaration for the collection of unpaid Assessments and other amounts. The provisions of this Section shall not be available to shield a Lender from liability for Assessments and other amounts in any case where the unpaid Assessments and other amounts sought to be recovered by Association are secured by a lien recorded prior to the recording of the mortgage. Additionally, in order to be afforded the limitations of liability for Lenders included in this Section, a Lender must give written notice to Association if the mortgage held by such Lender is in default. Association shall have the right, but not the obligation, to cure such default within the time periods applicable to Owner. In the event Association makes such payment on behalf of an Owner, Association shall, in addition to all other rights reserved herein, be subrogated to all of the rights of Lender. All amounts advanced on behalf of an Owner pursuant to this Section shall be added to the Assessments payable by such Owner with appropriate interest. Any unpaid Assessments for which an acquirer of title is not liable *(i.e.,* where a Lender takes title to a Lot, any past due Assessment amounts which exceed the lesser of 12 months of Assessments or one percent (1%) of the original mortgage debt) may be reallocated and assessed to all Owners (including such acquirer of title) as part of Operating Costs included within Assessments. Any sale or transfer pursuant to a foreclosure (or by deed in lieu of foreclosure or otherwise) shall not relieve the acquiring party from liability for, nor the Lot from the lien of any Assessments made thereafter. Nothing herein contained shall be construed as releasing the party liable for any delinquent Assessments from the payment thereof, or the enforcement of collection by means other than a foreclosure.

21.17 Survival of the Association's Lien. To the extent that the Association forecloses upon its lien, as permitted by Florida law and the Association Documents, and becomes the owner of record title to a Home or Lot, the Association's lien shall survive foreclosure, and all amounts due in connection with the Association's

foreclosure including, but not limited to, past due Assessments, late fees, interest, attorney's fees and costs shall be the joint and several liability of the Owner that was foreclosed by the Association and the Owner that takes title to the Home or Lot after the Association, and the Association shall have no liability for the same.

21.18 Acceleration. In the event of a default in the payment of any Assessment, Association may accelerate the Assessments then due for up to the next ensuing twelve (12) month period.

21.19 Non-Payment of Assessments. If any Assessment is not paid within fifteen (15) days (or such other period of time established by the Board) after the due date, a late fee of $25.00 per month (or such greater amount established by the Board), together with interest in an amount equal to the maximum rate allowable by law (or such lesser rate established by the Board), per annum, beginning from the due date until paid in full, may be levied. The late fee shall compensate Association for administrative costs, loss of use of money, and accounting expenses. Association may, at any time thereafter, bring an action at law against the Owner or Builder personally obligated to pay the same, and/or foreclose the lien against the Lot/Home, or both. Association shall not be required to bring such an action if it believes that the best interests of Association would not be served by doing so. To the extent permitted by Florida law, the lien granted to Association may be established and foreclosed in the Circuit Court in and for the County, and in any suit for the foreclosure of such lien, Association shall be entitled to seek an order of court that it is entitled to (i) collect a reasonable rent from the Owner or Builder, if the Owner or Builder remains in possession of a Lot after a judgment of foreclosure is entered and (ii) obtain the appointment of a receiver for such Lot to collect the rent if the Lot is leased or rented during the pendency of the foreclosure action. There shall be added to the Assessment all costs expended in preserving the priority of the lien and all costs and expenses of collection, including attorneys' fees, pre-trial and at all levels of proceedings, including appeals, collection and bankruptcy. No Owner or Builder may waive or otherwise escape liability for Assessments provided for herein by non-use of, or the waiver of the right to use the Common Areas by abandonment of a Lot.

21.20 Exemption. Notwithstanding anything to the contrary herein, neither Developer, Club Owner, nor the District nor any Home or property owned by Developer shall (unless specified to the contrary by Developer in a separate written instrument) be responsible for any Assessments of any nature or any portion of the Operating Costs. Developer, at Developer's sole option, may pay Assessments on Homes owned by it, or fund the deficit, if any, as set forth in Section 21.8 herein. In addition, the Board shall have the right to exempt any portion of LAKES AT COCOA GROVE subject to this Declaration from the Assessments, provided that such portion of LAKES AT COCOA GROVE exempted is used (and as long as it is used) for any of the following purposes:

21.20.1 Any easement or other interest therein dedicated and accepted by the local public authority and devoted to public use;

21.20.2 Any real property interest held by a Telecommunications Provider;

21.20.3 Any of LAKES AT COCOA GROVE exempted from ad valorem taxation by the laws of the State of Florida or exempted from Assessments by other provisions of this Declaration;

21.20.4 Any Common Areas; and

21.20.5 Any Facilities.

21.21 Collection by Developer. If for any reason Association shall fail or be unable to levy or collect Assessments, then in that event, Developer shall at all times have the right, but not the obligation: (i) to advance such sums as a loan to Association to bear interest and to be repaid as hereinafter set forth; and/or (ii) to levy and collect such Assessments by using the remedies available as set forth above, which remedies; including, but not limited to, recovery of attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals shall be deemed assigned to Developer for such purposes. If Developer advances sums, it shall be entitled to immediate reimbursement, on demand, from Association for such amounts so paid, plus interest thereon at the Wall Street Journal Prime Rate plus two percent (2%), plus any costs of collection including, but not limited to, reasonable attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals.

21.22 Rights to Pay Assessments and Receive Reimbursement. Association, Developer, and any Lender of a Home shall have the right, but not the obligation, jointly and severally, and at their sole option, to pay any Assessments or other charges which are in default and which may or have become a lien or charge against any Home. If so paid, the party paying the same shall be subrogated to the enforcement rights of Association with regard to the amounts due.

21.23 Mortgagee Right. Each Lender may request in writing that Association notify such Lender of any default of the Owner of the Home subject to the Lender's mortgage under the Association Documents which default is not cured within thirty (30) days after Association learns of such default. A failure by Association to furnish notice to any Lender shall not result in liability of Association because such notice is given as a courtesy to a Lender and the furnishing of such notice is not an obligation of Association to Lender.

21.24 Collection of Club Dues. Upon written notice to Association, Club Owner may, in its sole and absolute discretion, require Association to collect Club Dues and any other amounts due to Club Owner (in lieu of Club Owner collecting such amounts directly), and in such event, all such Club Dues and/or other amounts shall be paid by each Owner directly to Association. Upon such notice to Association by Club Owner, Association shall be responsible for immediately notifying each Owner to pay his or her Club Dues to Association directly. Association shall thereafter be required to remit a lump sum payment to Club Owner in the full amount of all Club Dues and other amounts due to Club Owner on a monthly basis (whether the same are received or collected from Owners by Association or not) together with a record of those Owners who did and did not pay, and Association shall then diligently collect any unpaid and/or delinquent Club Dues not paid by Owners to the Association, and shall have all of the rights respecting such collection efforts which are afforded to the Club Owner pursuant to the terms of the Club Plan, as the same may be amended from time to time, as well as any and all rights afforded to Association under its governing documents and/or Florida law. In the event that Association fails to pay Club Owner the full

amount of Club Dues and other amounts which are due in any given month, interest at the highest rate permitted by Florida law shall accrue until payment is made in full, and Club Owner may charge Association a late fee of twenty-five dollars ($25.00) for each Home that Association fails to remit Club Dues for in a given month. In addition to the foregoing, to the extent Association fails to pay Club Owner in full in any given month, Club Owner shall be entitled to pursue all available remedies at law or in equity against Association and/or Owners in order to recover any unpaid amounts, and shall be entitled to recover all costs respecting any such legal action including, without limitation, all attorneys' fees and paraprofessional fees, at all levels of proceedings, including appeals. Nothing herein shall affect or limit the rights of Club Owner to exercise any of the rights afforded to the Club Owner under the Club Plan including, but not limited to, the Club Owner's right to lien and foreclose upon Owners who fail to pay Club Dues. In the event of any ambiguity or dispute in connection with the interpretation of this Section, Club Owner's interpretation shall control. (TBD)

22. Information to Lenders and Owners.

22.1 Availability. There shall be available for inspections upon request, during normal business hours or under other reasonable circumstances, to Owners and Lenders current copies of the Association Documents.

22.2 Copying. Any Owner and/or Lender shall be entitled, upon written request, and at its cost, to a copy of the documents referred to above.

22.3 Notice. Upon written request by a Lender (identifying the name and address of the Lender and the name and address of the applicable Owner), the Lender will be entitled to timely written notice of:

22.3.1 Any condemnation loss or casualty loss which affects a material portion of a Home to the extent Association is notified of the same;

22.3.2 Any delinquency in the payment of Assessments owed by an Owner of a Home subject to a first mortgage held by the Lender, which remains uncured for a period of sixty (60) days;

22.3.3 Any lapse, cancellation, or material modification of any insurance policy or fidelity bond maintained hereunder, and

2.3.4 Any proposed action (if any) which would require the consent of a specific mortgage Holder.

23. Architectural Control. The following provisions govern LAKES AT COCOA GROVE.

23.1 Architectural Control Committee. The ACC shall be a permanent committee of Association and shall administer and perform the architectural and landscape review and control functions relating to LAKES AT COCOA GROVE. The ACC shall consist of a minimum of three (3) members who shall initially be named by Developer and who shall hold office at the pleasure of Developer. The ACC shall have the right to form subcommittees to review ACC applications. The ACC shall oversee such subcommittees and shall take precedence over any decision made by such subcommittees. Until the Community Completion Date, Developer shall have the right to change the number of members on the ACC, and to appoint, remove, and replace all members of the ACC. Developer shall determine which members of the ACC shall serve as its chairman and co-chairman. In the event of the failure, refusal, or inability to act of any of the members appointed by Developer, Developer shall have the right to replace any member within thirty (30) days of such occurrence. If Developer fails to replace that member, the remaining members of the ACC shall fill the vacancy by appointment. From and after the Community Completion Date, the Board shall have the same rights as Developer with respect to the ACC. The ACC shall enforce LAKES AT COCOA GROVE Standards.

23.2 Membership. There is no requirement that any member of the ACC be an Owner or a member Of Association.

23.3 General Plan. It is the intent of this Declaration to create a general plan and scheme of development of LAKES AT COCOA GROVE. Accordingly, the ACC shall have the right to approve or disapprove all architectural, landscaping, and improvements within LAKES AT COCOA GROVE by Owners other than Developer. The ACC shall have the right to evaluate all plans and specifications as to harmony of exterior design, landscaping, location of any proposed improvements, relationship to surrounding structures, topography and conformity with such other reasonable requirements as shall be adopted by ACC. The ACC may impose standards for construction and development which may be greater or more stringent than standards prescribed in applicable building, zoning, or other local governmental codes. Prior to the Community Completion Date, any additional standards or modification of existing standards shall require the consent of Developer, which may be granted or denied in its sole discretion.

23.4 Master Plan. Developer has established an overall Master Plan. However, notwithstanding the above, or any other document, brochures or plans, Developer reserves the right to modify the Master Plan or any site plan at any time as it deems desirable in its sole discretion and in accordance with applicable laws and ordinances. WITHOUT LIMITING THE FOREGOING, DEVELOPER MAY PRESENT TO THE PUBLIC OR TO OWNERS RENDERINGS, PLANS, MODELS, GRAPHICS, TOPOGRAPHICAL TABLES, SALES BROCHURES, OR OTHER PAPERS RESPECTING LAKES AT COCOA GROVE. SUCH RENDERINGS, PLANS, MODELS, GRAPHICS, TOPOGRAPHICAL TABLES, SALES BROCHURES, OR OTHER PAPERS ARE NOT A GUARANTEE OF HOW LAKES AT COCOA GROVE

WILL APPEAR UPON COMPLETION AND DEVELOPER RESERVES THE RIGHT TO CHANGE ANY AND ALL OF THE FOREGOING AT ANY TIME AS DEVELOPER DEEMS NECESSARY IN ITS SOLE AND ABSOLUTE DISCRETION.

23.5 Community Standards. Each Owner and its contractors and employees shall observe, and comply with, the Community Standards which now or may hereafter be promulgated by the ACC and approved by the Board of Association from time to time. The Community Standards shall be effective from the date of adoption; shall be specifically enforceable by injunction or otherwise; and shall have the effect of covenants as set forth herein verbatim. The Community Standards shall not require any Owner to alter the improvements previously constructed. Until the Community Completion Date, Developer shall have the right to approve the Community Standards, which approval, may be granted in its sole discretion.

23.6 Quorum. A majority of the ACC shall constitute a quorum to transact business at any meeting. The action of a majority present at a meeting at which a quorum is present shall constitute the action of the ACC. In lieu of a meeting, the ACC may act in writing.

23.7 Power and Duties of the ACC. No improvements shall be constructed on any portion of LAKES AT COCOA GROVE, no exterior of a Home shall be repainted, no landscaping, sign, or improvements erected, removed, planted, or maintained on any portion of LAKES AT COCOA GROVE, nor shall any material addition to or any change, replacement, or alteration of the improvements as originally constructed by Developer (visible from the exterior of the Home) be made until the plans and specifications showing the nature, kind, shape, height, materials, floor plans, color scheme, and the location of same shall have been submitted to and approved in writing by the ACC.

23.8 Procedure. In order to obtain the approval of the ACC, each Owner shall observe the following:

23.8.1 Each Owner shall submit an application to the ACC with respect to any proposed improvement or material change in an improvement, together with the required application(s) and other fee(s) as established by the ACC. The applications shall include such information as may be required by the application form adopted by the ACC. The ACC may also require submission of samples of building materials and colors proposed to be used. At the time of such submissions, the Owner shall, if requested, submit to the ACC, such site plans, plans and specifications for the proposed improvement, prepared and stamped by a registered Florida architect or residential designer, and landscaping and irrigation plans, prepared by a registered landscape architect or designer showing all existing trees and major vegetation stands and surface water drainage plan showing existing and proposed design grades, contours relating to the predetermined ground floor finish elevation, pool plans and specifications and the times scheduled for completion, all as reasonably specified by the ACC.

23.8.2 In the event the information submitted to the ACC is, in the ACC's opinion, incomplete or insufficient in any manner, the ACC may request and require the submission of additional or supplemental information. The Owner shall, within fifteen (15) days thereafter, comply with the request.

23.8.3 No later than forty-five (45) days after receipt of all information required by the ACC for final review, the ACC shall approve or deny the application in writing. The ACC shall have the right to refuse to approve any plans and specifications which are not suitable or desirable, in the ACC's sole discretion, for aesthetic or any other reasons or to impose qualifications and conditions thereon. In approving or disapproving such plans and specifications, the ACC shall consider the suitability of the proposed improvements, the materials of which the improvements are to be built, the site upon which the improvements are proposed to be erected, the harmony thereof with the surrounding area and the effect thereof on adjacent or neighboring property. In the event the ACC fails to respond within such forty-five (45) day period, the plans and specifications shall be deemed disapproved by the ACC.

23.8.4 Construction of all improvements shall be completed within the time period set forth in the application and approved by the ACC.

23.8.5 In the event that the ACC disapproves any plans and specifications, the Owner may request a rehearing by the ACC for additional review of the disapproved plans and specifications. The meeting shall take place no later than forty-five (45) days after written request for such meeting is received by the ACC, unless applicant waives this time requirement in writing. The ACC shall make a final written decision no later than forty-five (45) days after such meeting. In the event the ACC fails to provide such written decision within such forty-five (45) days, the plans and specifications shall be deemed disapproved.

23.8.6 Upon disapproval, the applicant may appeal the decision of the ACC to the Board within forty-five (45) days of the ACC's written review and disapproval. Review by the Board shall take place no later than forty-five (45) days subsequent to the receipt by the Board of the Owner's request therefor. If the Board fails to hold such a meeting within forty-five (45) days after receipt of request for such meeting, then the plans and specifications shall be deemed approved. The Board shall make a final decision no later than sixty (60) days after such meeting. In the event the Board fails to provide such written decision within such sixty (60) days after such meeting, such plans and specifications shall be deemed approved. The decision of the ACC, or if appealed, the Board of Association, shall be final and binding upon the Owner, his/her heirs, legal representatives, successors and assigns.

23.9 Alterations. Any and all alterations, deletions, additions and changes of any type or nature whatsoever to then existing improvements or the plans or specifications previously approved by the ACC shall be subject to the approval of the ACC in the same manner as required for approval of original plans and specifications.

23.10 Variances. Association or ACC shall have the power to grant variances from any requirements set forth in this Declaration or from the Community Standards, on a case by case basis, provided that the variance sought is reasonable and results from a hardship upon the applicant. The granting of a variance shall not nullify or otherwise affect the right to require strict compliance with the requirements set forth herein or in the Community Standards on any other occasion.

23.11 Permits. The Owner is solely responsible to obtain all required building and other permits from all governmental authorities having jurisdiction.

23.12 Construction by Owners. The following provisions govern construction activities by Owners after consent of the ACC has been obtained:

23.12.1 Each Owner shall deliver to the ACC, if requested, copies of all construction and building permits as and when received by the Owner. Each construction site in LAKES AT COCOA GROVE shall be maintained in a neat and orderly condition throughout construction. Construction activities shall be performed on a diligent, workmanlike and continuous basis. Roadways, easements, swales, Common Areas and other such areas in LAKES AT COCOA GROVE shall be kept clear of construction vehicles, construction materials and debris at all times. No construction office or trailer shall be kept in LAKES AT COCOA GROVE and no construction materials shall be stored in LAKES AT COCOA GROVE subject, however, to such conditions and requirements as may be promulgated by the ACC. All refuse and debris shall be removed or deposited in a dumpster on a daily basis. No materials shall be deposited or permitted to be deposited in any canal or waterway or Common Areas or other Homes in LAKES AT COCOA GROVE or be placed anywhere outside of the Home upon which the construction is taking place. No hazardous waste or toxic materials shall be stored, handled and used, including, without limitation, gasoline and petroleum products, except in compliance with all applicable federal, state and local statutes, regulations and ordinances, and shall not be deposited in any manner on, in or within the construction or adjacent property or waterways. All construction activities shall comply with the Community Standards. If a contractor or Owner shall fail to comply in any regard with the requirements of this Section, the ACC may require that such Owner or contractor post security with Association in such form and such amount deemed appropriate by the ACC in its sole discretion.

23.12.2 There shall be provided to the ACC, if requested, a list (name, address, telephone number and identity of contact person), of all contractors, subcontractors, materialmen and suppliers (collectively, **"Contractors")** and changes to the list as they occur relating to construction. Each Builder and all of its employees and Contractors and their employees shall utilize those roadways and entrances into LAKES AT COCOA GROVE as are designated by the ACC for construction activities. The ACC shall have the right to require that each Builder's and Contractor's employees check in at the designated construction entrances and to refuse entrance to persons and parties whose names are not registered with the ACC.

23.12.3 Each Owner is responsible for insuring compliance with all terms and conditions of these provisions and of the Community Standards by all of its employees and Contractors. In the event of any violation of any such terms or conditions by any employee or Contractor, or, in the opinion of the ACC, the continued refusal of any employee or Contractor to comply with such terms and conditions, after five (5) days' notice and right to cure, the ACC shall have, in addition to the other rights hereunder, the right to prohibit the violating employee or Contractor from performing any further services in LAKES AT COCOA GROVE.

23.12.4 The ACC may, from time to time, adopt standards governing the performance or conduct of Owners, Contractors and their respective employees within LAKES AT COCOA GROVE. Each Owner and Contractor shall comply with such standards and cause its respective employees to also comply with same. The ACC may also promulgate requirements to be inserted in all contracts relating to construction within LAKES AT COCOA GROVE and each Owner shall include the same therein.

23.13 Inspection. There is specifically reserved to Association and ACC and to any agent or member of either of them, the right of entry and inspection upon any portion of LAKES AT COCOA GROVE at any time within reasonable daytime hours, for the purpose of determination whether there exists any violation of the terms of any approval or the terms of this Declaration or the Community Standards.

23.14 Violation. Without limiting any other provision herein, if any improvement shall be constructed or altered without prior written approval, or in a manner which fails to conform with the approval granted, the Owner shall, upon demand of Association or the ACC, cause such improvement to be removed, or restored until approval is obtained or in order to comply with the plans and specifications originally approved. The Owner shall be liable for the payment of all costs of removal or restoration, including all costs and attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals, collections and bankruptcy, incurred by Association or ACC. The costs shall be deemed an Individual Assessment and enforceable pursuant to the provisions of this Declaration. The ACC and/or Association is specifically empowered to enforce the architectural and landscaping provisions of this Declaration and the Community Standards, by any legal or equitable remedy.

23.15 Court Costs. In the event that it becomes necessary to resort to litigation to determine the propriety of any constructed improvement or to cause the removal of any unapproved improvement, Association and/or ACC shall be entitled to recover court costs, expenses and attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals, collections and bankruptcy, in connection therewith.

23.16 Certificate. In the event that any Owner fails to comply with the provisions contained herein, the Community Standards, or other rules and regulations promulgated by the ACC, Association and/or ACC may, in addition to all other remedies contained herein, record a Certificate of Non-Compliance against the Home stating that the improvements on the Home fail to meet the requirements of this Declaration and that the Home is subject to further enforcement remedies.

23.17 Certificate of Compliance. If requested by an Owner, prior to the occupancy of any improvement constructed or erected on any Home by other than Developer, or its designees, the Owner thereof shall obtain a Certificate of Compliance from the ACC, certifying that the Owner has complied with the requirements set forth herein. The ACC may, from time to time, delegate to a member or members of the ACC, the responsibility for issuing the Certificate of Compliance. The issuance of a Certificate of Compliance does not abrogate the ACC's rights set forth in Section 23.13 herein.

23.18 Exemption. Notwithstanding anything to the contrary contained herein, or in the Community Standards, any improvements of any nature made or to be made by Developer, Builder or their nominees, including, without limitation, improvements made or to be made to the Common Areas or any Home, shall not be subject to the review of the ACC, Association, or the provisions of the Community Standards.

23.19 Exculpation. Developer, Association, the directors or officers of Association, the ACC, the members of the ACC, or any person acting on behalf of any of them, shall not be liable for any cost or damages incurred by any Owner or any other party whatsoever, due to any mistakes in judgment, negligence, or any action of Developer, Association, ACC or their members, officers, or directors, in connection with the approval or disapproval of plans and specifications. Each Owner agrees, individually and on behalf of his/her heirs, devisees, successors and assigns, and legal and personal representatives by acquiring title to a Lot, that it shall not bring any action or suit against Developer, Association or their respective directors or officers, the ACC or the members of the ACC, or their respective agents, in order to recover any damages caused by the actions of Developer, Association, or ACC or their respective members, officers, or directors in connection with the provisions of this Section. Association does hereby indemnify, defend and hold Developer and the ACC, and each of their members, officers, and directors harmless from all costs, expenses, and liabilities, including attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals, of all nature resulting by virtue of the acts of the Owners, Association, ACC or their members, officers and directors. Developer, Association, its directors or officers, the ACC or its members, or any person acting on behalf of any of them, shall not be responsible for any defects in any plans or specifications or the failure of same to comply with applicable laws or code nor for any defects in any improvements constructed pursuant thereto. Each party submitting plans and specifications for approval shall be solely responsible for the sufficiency thereof and for the quality of construction performed pursuant thereto.

23.20 Government Approval. Each Owner acknowledges and agrees that ACC approval, as discussed herein, shall not be deemed to constitute an approval by any governmental authority, nor shall it relieve any Owner of the obligation to obtain necessary governmental approvals at such Owner's sole cost and expense. Additionally, in the event any governmental authority denies an Owner's application for a permit or otherwise in connection with planned alterations or improvements, such denial shall prohibit construction of such improvements (regardless of whether the ACC has previously approved the Owner's planned alterations or improvements by certificate or otherwise). Decisions of the ACC with respect to architectural control shall be based upon proposed improvements being consistent with the overall aesthetics and master plan of LAKES AT COCOA GROVE and such decisions shall not be deemed a waiver of an Owner's obligation to comply with state and local codes and/or ordinances. In the event that any Owner, with or without ACC approval, constructs any improvements or makes any changes to his or her Home without the required governmental permits or approvals, such Owner shall be solely liable for all fines and/or citations imposed by any governmental authority and shall further bear all costs in connection with the removal, repair or reconstruction of improvements required by such governmental authority. In addition, to the extent an Owner fails to obtain governmental permits and/or approvals prior to constructing improvements which require the same, or if any governmental entity requires the repair, removal or reconstruction of any improvements, Association shall be permitted to cause such Owner to repair, remove or reconstruct any unapproved improvement at the Owner's sole and absolute cost, and in the event such Owner fails to remove the same within a reasonable time, Association may, but shall not be obligated to remove the improvement and charge all costs in connection with the same to the Owner as an Individual Assessment. Each Owner further agrees to remise, release, acquit, satisfy, and forever discharge Developer and Association of and from all, and all manner of, action and actions, cause and causes of action, suits, debts, sums of money, accounts, bills, covenants, controversies, agreements, promises, damages (including consequential, incidental, punitive, special or other), judgments, executions, claims, liabilities and demands, whatsoever, at law and in equity (including, but not limited to, claims founded on tort, contract, contribution, indemnity or any other theory whatsoever) in any way related to any construction of any requested improvements due to any defects to the marketability, ability to obtain a loan, and/or insurability of a Home caused therefrom; any encroachment caused by requested improvements; and/or the repair, reconstruction or removal of the improvements as required by any governmental or court action.

23.21 Security Deposit. Any Owner seeking Association approval for the alteration or modification of a Lot or Home (or change in the appearance thereof) may, in the Association's discretion, be required to pay to Association a security deposit in an amount to be determined by the Board from time to time (the "**Security Deposit**"). To the extent the Association determines, in its sole discretion, that damage to the Common Areas has occurred as a result of an Owner's work (whether performed by such Owner or his or her contractor or agent) relating to the modification or alteration of his or her Home or Lot, the Association may, without notice to the Owner, draw upon the Security Deposit to restore the Common Areas to their condition and appearance existing prior to such Owner's modification or alteration of his or her Home or Lot. To the extent the cost of restoring any Common Areas exceeds the total amount of the Security Deposit, the Association shall be entitled to draw upon and utilize the entire Security Deposit and charge any additional costs to such Owner as an Individual Assessment. To the extent there is no damage caused to the Common Areas as a result of an Owner's alteration or modification of his or her Home or Lot, as determined by the Association in its sole discretion, the entire Security Deposit shall be returned to such Owner.

24. Owners Liability.

24.1 Loop System Irrigation. Some or all Homes and Common Areas may receive irrigation pursuant to a loop system. If an Owner desires to make any alterations or improvements to a Home that in any way affect the loop irrigation system, then the Owner shall be responsible for taking measures to "cap off" the main line of the loop irrigation system that leads to the Home. In addition, the Owner shall be obligated to obtain the prior written approval of Association before taking any action that may adversely affect the loop irrigation system. Once the main line is "capped off," the Owner shall then be responsible for maintaining the irrigation system for his or her Home. Any damages to the Home resulting from an Owner's failure to comply with the terms set forth herein shall be the sole responsibility of such Owner and Developer shall not be liable for the same. Furthermore, each Owner understands that as provided in this Declaration, an Owner may be permitted to install, without limitation, a patio, and/or screened enclosure (**"Improvement"**) on the Home upon the prior written approval of the ACC as set forth in this Declaration and/or the Community Standards. If an Improvement is approved to be installed, then a five (5) foot gate must also installed. Before the ACC approves the installation of an Improvement, the irrigation system that will be within the Improvement portion of that Home must be re-routed, if necessary, by a professional irrigation company. In order for the ACC to approve the Improvement installation, a letter or other evidence by a professional irrigation company must be given to the ACC at least ten (10) days before the Improvement installation stating that the effectiveness of LAKES AT COCOA GROVE drainage system will not be affected by the re-routing of the irrigation system. Should an Owner install the Improvement without providing the necessary letter or other evidence from a professional irrigation company in advance as required herein, then Association may conduct the necessary inspection, repair any necessary drainage facilities and charge the work as an Individual Assessment to such Owner, all as further provided in this Declaration and/or Community Standards.

24.2 Violations. Should any Owner do any of the following:

24.2.1 Fail to abide by the Association Documents;

24.2.2 Fail to perform its responsibilities as set forth herein or otherwise breach the provisions of the Declaration including, without limitation, any provision herein benefiting SFWMD; or

24.2.3 Cause any damage to any improvement or Common Areas or Club; or

24.2.4 Impede Developer, Club Owner or Association from exercising its rights or performing its responsibilities hereunder; or under the Club Plan, or

24.2.5 Undertake unauthorized improvements or modifications to a Home or the Common Areas; or

24.2.6 Impede Developer or Club Owner from proceeding with or completing the development of LAKES AT COCOA GROVE and/or the Club, as the case may be;

then, Developer, Club Owner and/or Association, where applicable, after reasonable prior written notice, shall have the right, through its agents and employees, to cure the breach, including, but not limited to, the entering upon the Home and causing the default to be remedied and/or the required repairs or maintenance to be performed, or as the case may be, remove unauthorized improvements or modifications. The cost thereof, plus reasonable overhead costs and attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals, collections and bankruptcy, incurred shall be assessed against the Owner as an Individual Assessment.

24.3 Non-Monetary Defaults. In the event of a violation by any Owner, other than the nonpayment of any Assessment or other monies, of any of the provisions of this Declaration, Developer or Association shall notify the Owner of the violation, by written notice. If such violation is not cured as soon as practicable and in any event within seven (7) days after such written notice, the party entitled to enforce same may, at its option:

24.3.1 Commence an action to enforce the performance on the part of the Owner or to enjoin the violation or breach or for equitable relief as may be necessary under the circumstances, including injunctive relief; and/or

24.3.2 Commence an action to recover damages; and/or

24.3.3 Take any and all action reasonably necessary to correct the violation or breach.

24.4 Expenses. All expenses incurred in connection with the violation or breach, or the commencement of any action against any Owner, including reasonable attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals, collections and bankruptcy, shall be assessed against the Owner, as an Individual Assessment, and shall be immediately due and payable without further notice.

24.5 No Waiver. The failure to enforce any right, provision, covenant or condition in this Declaration, shall not constitute a waiver of the right to enforce such right, provision, covenant or condition in the future.

24.6 Rights Cumulative. All rights, remedies, and privileges granted to SFWMD, Developer, Association and/or the ACC pursuant to any terms, provisions, covenants or conditions of this Declaration, or Community Standards, shall be deemed to be cumulative, and the exercise of any one or more shall neither be deemed to constitute an election of remedies, nor shall it preclude any of them from pursuing such additional remedies, rights or privileges as may be granted or as it might have by law.

24.7 Enforcement By or Against Other Persons. In addition to the foregoing, this Declaration or Community Standards may be enforced by Developer and/or, where applicable, Association, Club Owner and/or Owners, by any procedure at law or in equity against any person violating or attempting to violate any provision herein, to restrain such violation, to require compliance with the provisions contained herein, to recover damages, or to enforce any lien created herein. The expense of any litigation to enforce this Declaration or Community Standards shall be borne by the person against whom enforcement is sought, provided such proceeding results in a finding that such person was in violation of this Declaration or the Community Standards.

24.8 Fines. Association may suspend, for reasonable periods of time, the rights of an Owner or an Owner's tenants, guests and invitees, or both, to use the Common Areas and/or common services including, but not limited to, cable services and/or other services which are paid through Common Expenses, and may levy reasonable fines, not to exceed the maximum amounts permitted by Section 720.305(2) of the Florida Statutes, against an Owner, tenant, guest or invitee, for failure to comply with any provision of this Declaration including, without limitation, those provisions benefiting the SJRWMD.

24.8.1 A fine may be levied on the basis of each day of a continuing violation, with a single notice and opportunity for hearing. Fines in the aggregate are not capped to any amount.

24.8.2 Unless otherwise permitted by Florida law, fines or suspensions may not be imposed by the Board without notice of at least fourteen (14) days to the person sought to be fined or suspended and an opportunity for a hearing before a committee of at least three (3) persons (the "**Violations Committee**") **appointed** by the Board who are not officers, directors or employees of Association, or the spouse, parent, child, brother, sister of an officer, director or employee. The role of the committee is limited to determining whether to confirm or reject the fine or suspension levied by the Board. If the Violations Committee does not by a majority vote confirm a fine or suspension the same may not be imposed. The written notice of violation shall be in writing to the Owner, tenant, guest or invitee and detail the infraction or infractions. Included in the notice shall be the date and time of the hearing of the Violations Committee.

24.8.3 The non-compliance shall be presented to the Violations Committee acting as a tribunal, after which the Violations Committee shall hear reasons why a fine should not be imposed. The hearing shall be conducted in accordance with the procedures adopted by the Violations Committee from time to time. A written

decision of the Violations Committee shall be submitted to the Owner, tenant, guest or invitee, as applicable, by not later than twenty-one (21) days after the meeting of the Violations Committee. The Owner, tenant, guest or invitee shall have a right to be represented by counsel and to cross-examine witnesses.

24.8.4 To the extent the Violations Committee confirms the fine to be levied by the Board, the Board may impose Individual Assessments against the Owner in the amount of $100 (or any greater amount permitted by law from time to time) for each violation. Each day of non-compliance shall be treated as a separate violation and there is no cap on the aggregate amount the Board may fine an Owner, tenant, guest or invitee. Individual Assessment fines shall be paid not later than five (5) days after notice of the imposition of the Individual Assessment. All monies received from fines shall be allocated as directed by the Board.

24.9 Right of Association to Evict Tenants. Occupants, Guests and Invitees. With respect to any tenant or any person present in any Home or any portion of LAKES AT COCOA GROVE, other than an Owner and the members of his/her immediate family permanently residing with him/her in the Home, if such person shall violate any provision of the Association Documents or shall create a nuisance or an unreasonable and continuous source of annoyance to a resident of LAKES AT COCOA GROVE in Association's sole discretion, or shall willfully damage or destroy any of the Common Areas or personal property of Association, then upon written notice by Association, such person shall be required to immediately leave LAKES AT COCOA GROVE and if such person does not do so, Association shall be authorized to commence an action to evict such tenant or compel such person to leave LAKES AT COCOA GROVE and, where necessary, to enjoin such person from returning. Any expense incurred by Association in connection with any such action, including, without limitation, attorneys' fees, shall be charged by Association to the applicable Owner of such Home as an Individual Assessment.

25. Additional Rights of Developer.

25.1 Sales Office and Administrative Offices. For so long as Developer and/or its assigns owns any property in LAKES AT COCOA GROVE, is affected by this Declaration, or maintains a sales office or administrative office within LAKES AT COCOA GROVE, Developer shall have the perpetual right to take such action reasonably necessary to transact any business necessary to consummate the development of LAKES AT COCOA GROVE and sales and re-sales of Homes and/or other properties owned by Developer or others outside of LAKES AT COCOA GROVE. This right shall include, but not be limited to, the right to maintain models, sales offices and parking associated therewith, have signs on any portion of LAKES AT COCOA GROVE, including Common Areas and the Club, employees in the models and offices, without the payment of rent or any other fee, maintain offices in models, and use of the Common Areas and the Club to show Homes. The sales office, models, signs and all items pertaining to development and sales remain the property of Developer. Developer shall have all of the foregoing rights without charge or expense. Without limiting any other provision of this Declaration, Developer may assign its rights hereunder to each Builder. The rights reserved hereunder shall extend beyond the Community Completion Date.

25.2 Modification. The development and marketing of LAKES AT COCOA GROVE will continue as deemed appropriate in Developer's sole discretion, and nothing in this Declaration or Community Standards, or otherwise, shall be construed to limit or restrict such development and marketing. It may be necessary or convenient for the development of LAKES AT COCOA GROVE to, as an example and not a limitation, amend a Plat and/or the Master Plan, modify the boundary lines of the Common Areas, grant easements, dedications, agreements, licenses, restrictions, reservations, covenants, rights-of-way, and to take such other actions which Developer, or its agents, affiliates, or assignees may deem necessary or appropriate. Association and Owners shall, at the request of Developer, execute and deliver any and all documents and instruments which Developer deems necessary or convenient, in its sole and absolute discretion, to accomplish the same. Without limiting anything to the contrary in this Declaration, prior to and including the Turnover Date, all agreements and/or contracts which are entered into by Association shall require the prior written approval of Developer or may otherwise be voided by Developer in its sole and absolute discretion.

25.3 Promotional Events. Prior to the Community Completion Date, Developer, Builders, and their assigns shall have the right, at any time, to hold marketing, special and/or promotional events within LAKES AT COCOA GROVE and/or on the Common Areas, without any charge for use. Developer, its agents, affiliates, or assignees shall have the right to market LAKES AT COCOA GROVE and Homes in advertisements and other media by making reference to LAKES AT COCOA GROVE, including, but not limited to, pictures or drawings of LAKES AT COCOA GROVE, Common Areas, and Homes constructed in LAKES AT COCOA GROVE. All logos, trademarks, and designs used in connection with LAKES AT COCOA GROVE are the property of Developer, and Association shall have no right to use the same after the Community Completion Date except with the express written permission of Developer. Without limiting any other provision of this Declaration, Developer may assign its rights hereunder to each Builder.

25.4 Use by Prospective Purchasers. Prior to the Community Completion Date, Developer and each Builder shall have the right, without charge, to use the Common Areas for the purpose of entertaining prospective purchasers of Homes, or other properties owned by Developer outside of LAKES AT COCOA GROVE.

25.5 Franchises. Developer may grant franchises or concessions to commercial concerns on all or part of the Common Areas and shall be entitled to all income derived therefrom.

25.6 Management. Developer may manage the Common Areas by contract with Association. Developer may contract with a third party **("Manager")** for management of Association and the Common Areas.

25.7 Easements. Until the Community Completion Date, Developer reserves the exclusive right to grant, in its sole discretion, easements, permits and/or licenses for ingress and egress, drainage, utilities service, maintenance, Telecommunications Services; and other purposes over, under, upon and across LAKES AT COCOA GROVE so long as any such easements do not materially and adversely interfere with the intended use of Homes previously conveyed to Owners. By way of example, and not of limitation, Developer may be required to take certain action, or make additions or modifications to the Common Areas in connection with an environmental program. All easements necessary for such purposes are reserved in favor of Developer,

in perpetuity, for such purposes. Without limiting the foregoing, Developer may relocate any easement affecting a Home, or grant new easements over a Home, after conveyance to an Owner, without the joinder or consent of such Owner, so long as the grant of easement or relocation of easement does not materially and adversely affect the Owner's use of the Home as a residence. As an illustration, Developer may grant an easement for Telecommunications Systems, irrigation, drainage lines or electrical lines over any portion of LAKES AT COCOA GROVE so long as such easement is outside the footprint of the foundation of any residential improvement constructed on such portion of LAKES AT COCOA GROVE. Developer shall have the sole right to any fees of any nature associated therewith, including, but not limited to, license or similar fees on account thereof. Association and Owners will, without charge, if requested by Developer: (a) join in the creation of such easements, etc. and cooperate in the operation thereof; and (b) collect and remit fees associated therewith, if any, to the appropriate party. Association will not grant any easements, permits or licenses to any other entity providing the same services as those granted by Developer, nor will it grant any such easement, permit or license prior to the Community Completion Date without the prior written consent of Developer which may be granted or denied in its sole discretion.

25.8 Right to Enforce. Developer has the right, but not the obligation, to enforce the provisions of this Declaration and the Community Standards and to recover all costs relating thereto, including attorneys' fees and paraprofessional fees, pre-trial and at all levels of proceedings, including appeals, collections and bankruptcy. Such right shall include the right to perform the obligations of Association and to recover all costs incurred in doing so the Club Owner shall also have such rights relating to the Club and/or Club Dues.

25.9 Additional Development. If Developer withdraws portions of LAKES AT COCOA GROVE from the operation of this Declaration, Developer may, but is not required to, subject to governmental approvals, create other forms of residential property ownership or other improvements of any nature on the property not subjected to or withdrawn from the operation of this Declaration. Developer shall not be liable or responsible to any person or entity on account of its decision to do so or to provide, or fail to provide, the amenities and/or facilities which were originally planned to be included in such areas. If so designated by Developer, owners or tenants of such other forms of housing or improvements upon their creation, may share in the use of all or some of the Common Areas and/or the Club and other facilities and/or roadways which remain subject to this Declaration. The expense of the operation of such facilities shall be allocated to the various users thereof, if at all, as determined by Developer.

25.10 Representations. Developer makes no representations concerning development both within and outside the boundaries of LAKES AT COCOA GROVE including, but not limited to, the number, design, boundaries, configuration and arrangements, prices of all Homes or Lots and buildings in all other proposed forms of ownership and/or other improvements on LAKES AT COCOA GROVE or in LAKES AT COCOA GROVE or adjacent to or near LAKES AT COCOA GROVE, including, but not limited to, the size, location, configuration, elevations, design, building materials, height, view, airspace, number of homes, number of buildings, location of easements, parking and landscaped areas, services and amenities offered.

25.11 Non-Liability. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THE ASSOCIATION DOCUMENTS, NEITHER ASSOCIATION, DEVELOPER, CLUB OWNER NOR ANY BUILDERS SHALL BE LIABLE OR RESPONSIBLE FOR, OR IN ANY MANNER A GUARANTOR OR INSURER OF, THE HEALTH OR WELFARE OF ANY OWNER, OCCUPANT OR USER OF ANY PORTION OF LAKES AT COCOA GROVE INCLUDING, WITHOUT LIMITATION, RESIDENTS AND THEIR FAMILIES, GUESTS, LESSEES, LICENSEES, INVITEES, AGENTS, SERVANTS, CONTRACTORS, AND/OR SUBCONTRACTORS OR FOR ANY PROPERTY OF ANY SUCH PERSONS. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING:

25.11.1 IT IS THE EXPRESS INTENT OF THE ASSOCIATION DOCUMENTS THAT THE VARIOUS PROVISIONS THEREOF WHICH ARE ENFORCEABLE BY ASSOCIATION AND WHICH GOVERN OR REGULATE THE USES OF LAKES AT COCOA GROVE HAVE BEEN WRITTEN, AND ARE TO BE INTERPRETED AND ENFORCED, FOR THE SOLE PURPOSE OF ENHANCING AND MAINTAINING THE ENJOYMENT OF LAKES AT COCOA GROVE AND THE VALUE THEREOF; AND

25.11.2 DEVELOPER, CLUB OWNER AND/OR ASSOCIATION ARE NOT EMPOWERED, AND HAVE NOT BEEN CREATED, TO ACT AS AGENCIES WHICH ENFORCE OR ENSURE THE COMPLIANCE WITH THE LAWS OF THE STATE OF FLORIDA AND/OR BREVARD COUNTY OR PREVENT TORTIOUS ACTIVITIES. NEITHER DEVELOPER, CLUB OWNER, ANY BUILDER, NOR ASSOCIATION SHALL BE LIABLE FOR THE UNLAWFUL OR UNDESIRABLE ACTIONS OR INACTIONS OF OWNERS OR THEIR RESPECTIVE FAMILIES, TENANTS, GUESTS, INVITEES OR ANY OTHER OCCUPANTS OF HOMES WITHIN LAKES AT COCOA GROVE AND SHALL FURTHER HAVE NO OBLIGATION TO TAKE ANY AFFIRMATIVE ACTION NOT SPECIFICALLY SET FORTH IN THIS DECLARATION IN ORDER TO STOP, ENJOIN OR PREVENT ANY SUCH ACTIONS BY ANY OWNER OR THEIR FAMILIES, TENANTS, GUESTS, INVITEES OR ANY OTHER OCCUPANTS OF HOMES WITHIN LAKES AT COCOA GROVE; AND

25.11.3 THE PROVISIONS OF THE ASSOCIATION DOCUMENTS SETTING FORTH THE USES OF ASSESSMENTS WHICH RELATE TO HEALTH AND WELFARE SHALL BE INTERPRETED AND APPLIED ONLY AS LIMITATIONS ON THE USES OF ASSESSMENT FUNDS AND NOT AS CREATING A DUTY OF ASSOCIATION TO PROTECT OR FURTHER THE HEALTH OR WELFARE OF ANY PERSON(S), EVEN IF ASSESSMENT FUNDS ARE CHOSEN TO BE USED FOR ANY SUCH REASON. EACH OWNER (BY VIRTUE OF HIS ACCEPTANCE OF TITLE TO A LOT) AND EACH OTHER PERSON HAVING AN INTEREST IN OR LIEN UPON, OR MAKING A USE OF, ANY PORTION OF LAKES AT COCOA GROVE (BY VIRTUE OF ACCEPTING SUCH INTEREST OR LIEN OR MAKING SUCH USE) SHALL BE BOUND BY THIS SECTION AND SHALL BE DEEMED TO HAVE AUTOMATICALLY WAIVED ANY AND ALL RIGHTS, CLAIMS, DEMANDS AND CAUSES OF ACTION AGAINST ASSOCIATION ARISING FROM OR CONNECTED WITH ANY MATTER FOR WHICH THE LIABILITY OF ASSOCIATION HAS BEEN DISCLAIMED IN THIS SECTION OR OTHERWISE. AS USED IN THIS SECTION, "ASSOCIATION" SHALL INCLUDE

WITHIN ITS MEANING ALL OF ASSOCIATION'S DIRECTORS, OFFICERS, COMMITTEE AND BOARD MEMBERS, EMPLOYEES, AGENTS, CONTRACTORS (INCLUDING MANAGEMENT COMPANIES, SUBCONTRACTORS, SUCCESSORS AND ASSIGNS).

25.12 Resolution of Disputes. BY ACCEPTANCE OF A DEED, EACH OWNER AGREES THAT THE ASSOCIATION DOCUMENTS ARE VERY COMPLEX; THEREFORE, ANY CLAIM, DEMAND, ACTION, OR CAUSE OF ACTION, WITH RESPECT TO ANY ACTION, PROCEEDING, CLAIM, COUNTERCLAIM, OR CROSS CLAIM, WHETHER IN CONTRACT AND/OR IN TORT (REGARDLESS IF THE TORT ACTION IS PRESENTLY RECOGNIZED OR NOT), BASED ON, ARISING OUT OF, IN CONNECTION WITH OR IN ANY WAY RELATED TO THE ASSOCIATION DOCUMENTS, INCLUDING ANY COURSE OF CONDUCT, COURSE OF DEALING, VERBAL OR WRITTEN STATEMENT, VALIDATION, PROTECTION, ENFORCEMENT ACTION OR OMISSION OF ANY PARTY SHOULD BE HEARD IN A COURT PROCEEDING BY A JUDGE AND NOT A JURY IN ORDER TO BEST SERVE JUSTICE. DEVELOPER HEREBY SUGGESTS THAT EACH OWNER UNDERSTAND THE LEGAL CONSEQUENCES OF ACCEPTING A DEED TO A HOME.

25.13 Venue. EACH OWNER ACKNOWLEDGES REGARDLESS OF WHERE SUCH OWNER (i) EXECUTED A PURCHASE AND SALE AGREEMENT, (ii) RESIDES, (iii) OBTAINS FINANCING OR (iv) CLOSED ON A HOME, THIS DECLARATION LEGALLY AND FACTUALLY WAS EXECUTED IN BREVARD COUNTY, FLORIDA. DEVELOPER HAS AN OFFICE IN BREVARD COUNTY, FLORIDA AND EACH HOME IS LOCATED IN BREVARD COUNTY, FLORIDA. ACCORDINGLY, AN IRREBUTTABLE PRESUMPTION EXISTS THAT THE ONLY APPROPRIATE VENUE FOR THE RESOLUTION OF ANY DISPUTE LIES IN BREVARD COUNTY, FLORIDA. IN ADDITION TO THE FOREGOING, EACH OWNER AND DEVELOPER AGREE THAT THE VENUE FOR RESOLUTION OF ANY DISPUTE LIES IN BREVARD COUNTY, FLORIDA.

25.14 Reliance. BEFORE ACCEPTING A DEED TO A HOME, EACH OWNER HAS AN OBLIGATION TO RETAIN AN ATTORNEY IN ORDER TO CONFIRM THE VALIDITY OF THIS DECLARATION. BY ACCEPTANCE OF A DEED TO A HOME, EACH OWNER ACKNOWLEDGES THAT HE HAS SOUGHT AND RECEIVED SUCH AN OPINION OR HAS MADE AN AFFIRMATIVE DECISION NOT TO SEEK SUCH AN OPINION. DEVELOPER IS RELYING ON EACH OWNER CONFIRMING IN ADVANCE OF ACQUIRING A HOME THAT THIS DECLARATION IS VALID, FAIR AND ENFORCEABLE. SUCH RELIANCE IS DETRIMENTAL TO DEVELOPER. ACCORDINGLY, AN ESTOPPEL AND WAIVER EXISTS PROHIBITING EACH OWNER FROM TAKING THE POSITION THAT ANY PROVISION OF THIS DECLARATION IS INVALID IN ANY RESPECT. AS A FURTHER MATERIAL INDUCEMENT FOR DEVELOPER TO SUBJECT LAKES AT COCOA GROVE TO THIS DECLARATION, EACH OWNER DOES HEREBY RELEASE, WAIVE, DISCHARGE, COVENANT NOT TO SUE, ACQUIT, SATISFY AND FOREVER DISCHARGE DEVELOPER, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS AND ITS AFFILIATES AND ASSIGNS FROM ANY AND ALL LIABILITY, CLAIMS, COUNTERCLAIMS, DEFENSES, ACTIONS, CAUSES OF ACTION, SUITS, CONTROVERSIES, AGREEMENTS, PROMISES AND DEMANDS WHATSOEVER IN LAW OR IN EQUITY WHICH AN OWNER MAY HAVE IN THE FUTURE, OR WHICH ANY PERSONAL REPRESENTATIVE, SUCCESSOR, HEIR OR ASSIGN OF OWNER HEREAFTER CAN, SHALL OR MAY HAVE AGAINST DEVELOPER, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS, AND ITS AFFILIATES AND ASSIGNS, FOR, UPON OR BY REASON OF ANY MATTER, CAUSE OR THING WHATSOEVER RESPECTING THIS DECLARATION, OR THE EXHIBITS HERETO. THIS RELEASE AND WAIVER IS INTENDED TO BE AS BROAD AND INCLUSIVE AS PERMITTED BY THE LAWS OF THE STATE OF FLORIDA.

25.15 Access Control System. Developer may, but shall not be obligated to, install a tele-entry system at the entrance to LAKES AT COCOA GROVE. Association shall have the right, but not the obligation, to contract for the installation of additional Access Control System facilities for LAKES AT COCOA GROVE. Prior to the Community Completion Date, all contracts for Access Control Systems shall be subject to the prior written approval of Developer. ASSOCIATION AND DEVELOPER SHALL NOT BE HELD LIABLE FOR ANY LOSS OR DAMAGE BY REASON OR FAILURE TO PROVIDE ADEQUATE ACCESS CONTROL OR INEFFECTIVENESS OF ACCESS CONTROL MEASURES UNDERTAKEN. Each and every owner and the occupant of each Home acknowledges that Developer, Association, and their employees, agents, managers, directors, and officers, are not insurers of Owners or Homes, or the personal property located within Homes. Developer and Association will not be responsible or liable for losses, injuries, or deaths resulting from any casualty or intrusion into a Home.

25.16 Developer's Right to Control Access. Notwithstanding anything to the contrary in this Declaration, prior to the Community Completion Date, Developer shall have the unilateral right to control the operation of the community gates, if any, and the same shall remain open during normal business hours or as otherwise determined in the sole and absolute discretion of Developer.

26. Telecommunications Services.

26.1 Right to Contract for Telecommunications Services. Association shall have the right, but not the obligation, to enter into one or more contracts for the provision of one or more Telecommunications Services for all or any portion of LAKES AT COCOA GROVE. Prior to the Community Completion Date, all contracts between a Telecommunications Provider and Association shall be subject to the prior written approval of Developer. Owners may enter into one or more contracts for the provision of one or more Telecommunication Services for his/her Home. Developer and/or its nominees, successors, assigns, affiliates, and licensees may contract with Association and act as a Telecommunications Provider for one or more Telecommunications Services, subject only to the requirements of all applicable laws, statutes, and regulations. If Developer is not the Telecommunications Provider for any particular Telecommunications Service, Developer shall have the right to receive, on a perpetual basis, all or a portion of access fees and/or the revenues derived from such Telecommunications Service within LAKES AT COCOA GROVE as agreed, from time to time, between the Telecommunications Provider and Developer. It is anticipated that the Developer will not install alarms in Homes within LAKES AT COCOA GROVE.

26.2 Easements. Developer (i) reserves unto itself and its nominees, successors, assigns, affiliates, and licensees, and (ii) grants to each Telecommunications Provider providing Telecommunications Services to all or a portion of LAKES AT COCOA GROVE pursuant to an agreement between Association or Owner and such Telecommunications Provider, a perpetual right, privilege, easement and right-of-way across, over, under and upon LAKES AT COCOA GROVE for the installation, construction and maintenance of Telecommunications Systems together with a perpetual right, privilege and easement of ingress and egress, access, over and upon LAKES AT COCOA GROVE for installing, constructing, inspecting, maintaining, altering, moving, improving and replacing facilities and equipment constituting such systems. If, and to the extent, Telecommunications Services provided by such Telecommunications Systems are to serve all of LAKES AT COCOA GROVE, then the cost of the Telecommunications Services may be Operating Costs of Association and shall be assessed as a part of the Assessments.

26.3 Restoration. Upon the completion of any installation, upgrade, maintenance, repair, or removal of the Telecommunications Systems or any part thereof, each Telecommunications Provider shall restore the relevant portion of the Common Areas and/or any Home to as good a condition as that which existed prior to such installation, maintenance, repair or removal. Failure by Telecommunications Provider to complete such restoration within ten (10) days after receiving written notice from Association of such failure shall vest in Association, the right (but not the obligation) to restore or cause to be restored such portion of the Common Areas and/or Home disturbed by such work, all at such Telecommunications Provider's sole cost and expense, except for in emergency situations whereby Association may restore or cause to be restored such disturbed portion of the Common Areas and/or Home immediately. In the event that Association exercises the right of self-help, each Telecommunications Provider agrees in advance that Association shall have the sole right, to (i) select the Contractors to perform such work and (ii) determine the extent of required restoration. This remedy of self-help is in addition to all other remedies of Association hereunder. All reasonable expenses incurred by Association in connection with such restoration shall be paid by Telecommunications Provider within ten (10) days of delivery to Telecommunications Provider of Association's invoice therefor. Any expenses not so paid when due shall bear interest from the due date at the lesser of (i) the publicly announced prime rate (or similar successor reference rate) of Wachovia National Bank or its successor on the date of such invoice, or (ii) the maximum rate of interest allowed by the law of the State of Florida for such obligations, or as may be provided in a contract between Association and a Telecommunications Provider.

26.4 Operating Costs. Each Owner understands that the expense of any Telecommunications Service may not be charged on a bulk basis, but may be charged at the rate equal to any rate paid by individual home owners that are not subject to a homeowners association. Each Owner acknowledges that Developer may receive lump sum or monthly compensation from any Telecommunications Provider in connection with the supply of Telecommunications Services. Such compensation may be paid on a per Home or other basis. All such compensation shall be the sole property of Developer, who shall have no duty to account for or disclose the amount of such compensation.

27. Refund of Taxes and Other Charges. Unless otherwise provided herein, Association agrees that any taxes, fees or other charges paid by Developer to any governmental authority, utility company or any other entity which at a later date are refunded in whole or in part, shall be returned to Developer in the event such refund is received by Association.

28. Assignment of Powers. All or any part of the rights, exemptions and powers and reservations of Developer herein contained may be conveyed or assigned in whole or part to other persons or entities by an instrument in writing duly executed, acknowledged, and at Developer's option, recorded in the Public Records.

29. Selling Leasing and Mortgaging of Homes. In order to maintain complementary uses, congenial neighbors and to protect the value of Homes, the transfer of title to or possession of Homes by any Owner shall be subject to the following provisions so long as Association exists, which provisions each Owner covenants to observe:

29.1 Transfers Subject to Approval.

29.1.1 Sale. No Owner may dispose of a Home or any interest therein by sale without Approval of Association.

29.1.2 Lease. No Owner may transfer possession of a Home or any interest therein by lease for any period without approval of Association. The renewal of any lease, including any lease previously approved by Association under this Section 29, shall be re-submitted for approval by Association. No Owner may transfer possession of a Home or any interest therein by lease for any period until such Owner is current in payment of all assessments due to Association under the terms of this Declaration, and Association shall have the right to withhold approval of any lease until such time as the Owner is current in payment of such Assessments.

29.1.3 Gift. If any Owner proposes to transfer a Home by gift, the proposed transfer shall be subject to the approval of Association.

29.2 Approval by Association. To obtain approval of Association which is required for the transfer of Homes, each Owner shall comply with the following requirements:

29.2.1 Notice to Association.

29.2.1.1 Sale. An Owner intending to make a bona fide sale of his or her Home, or any interest therein, shall give to Association a transfer fee (in an amount determined by the Board and permitted by Florida Statutes) and notice pursuant to a form approved by Association of such intentions, together with the name and address of the intended purchaser and such other information concerning the intended purchaser as Association may reasonably require. Such notice, at the Owner's option, may include a demand by the Owner that Association furnish a new purchaser if the proposed purchaser is not approved;

and if such demand is made, the notice shall be accompanied by an executed copy of the proposed contract for sale.

29.2.1.2 Lease. An Owner intending to make a bona fide lease of his or her Home or any interest therein shall give to Association a transfer fee (in an amount determined by the Board and permitted by Florida Statutes) and notice pursuant to a form approved by Association of such intention, together with the name and address of the intended lessee, such other information concerning the intended lessee as Association may reasonably require, and an executed copy of the proposed lease, which lease shall provide that it is subject to approval by Association. Each Owner is solely responsible to obtain all required permits relating to leasing property from all applicable governmental authorities having jurisdiction. To the extent that an Owner fails to obtain all required permits and or consents from local and/or governmental authorities, any and all Association approvals shall be deemed withdrawn.

29.2.1.3 Gift. An Owner who proposes to transfer his or her title by gift shall give to Association a transfer fee (in an amount determined by the Board and permitted by Florida Statutes) and notice pursuant to a form approved by Association of the proposed transfer of his or her title, together with such information concerning the transferee as Association may reasonably require, and a copy of all instruments to be used in transferring title.

29.2.1.4 Failure to Give Notice. If the notice to Association herein required is not given, then at any time after receiving knowledge of a transaction or event transferring ownership or possession of a Home, Association at its discretion and without notice may approve or disapprove the lease, sale or transfer. If Association disapproves the transaction or ownership, Association shall proceed as if it had received the required notice on the date of such disapproval.

29.2.1.5 Effect and Manner of Notice. The giving of notice shall constitute a representation and warranty by the offeror to Association and any purchaser produced by the Board that the offering is a bona fide offer in all respects. The notice shall be given by certified mail, return receipt requested, or delivered by professional courier or by hand delivery to Association which shall give a receipt therefor.

29.2.2 Certificate of Approval.

29.2.2.1 Sale. If the proposed transaction is a sale, then, within thirty (30) days after receipt of such notice and information, Association must either approve or disapprove the proposed transaction. If approved, the approval shall be stated in a certificate executed by the proper officers of Association in recordable form and shall be delivered to the purchaser and may be recorded in the Public Records of County (the **"Public Records").**

29.2.2.2 Lease. If the proposed transaction is a lease then, within thirty (30) days after receipt of such notice and information, Association must either approve or disapprove the proposed transaction. If approved, the approval shall be stated in a certificate executed by the proper officers of Association and shall be delivered to the lessee.

29.2.2.3 Devise or Inheritance. Any person who has obtained a Home by devise or inheritance (except for the spouse, parents or children of the immediately previous Owner of such Home) shall give to Association notice thereof together with such information concerning the person(s) obtaining such Home as may be reasonably required by the Board and a certified copy of the instrument by which such Home was obtained. If such notice is not given to Association, then at any time after receiving knowledge thereof, the Board shall proceed in accordance with Section 29.2.2.4 as if it had been given such notice on the date of receipt of such knowledge. Within thirty (30) days after receipt of such notice and information, Association must either approve or disapprove the proposed transfer. If approved, the approval shall be stated in a certificate executed by the proper officers of Association in recordable form and shall be delivered to the person receiving title by devise or inheritance.

29.2.2.4 Gift. If the Owner giving notice proposes to transfer his or her title by gift, then, within thirty (30) days after receipt of such notice and information, Association must either approve or disapprove the proposed transfer of title to the Home. If approved, the approval shall be upon such terms and conditions as Association may reasonably require, and the approval shall be stated in a certificate executed by the proper officers of Association in recordable form and shall be delivered to the Owner and shall be recorded in the Public Records.

29.2.3 Approval of Owner Other Than an Individual. Inasmuch as the Home may be used only for residential purposes, and a corporation, trust or other entity cannot occupy a Home for such use, if the Owner or purchaser of a Home is a corporation, trust or other entity, the approval of ownership by the corporation, trust or other entity shall be conditioned upon the primary occupant or the beneficial owners of the entity being approved by Association. Any change in such primary occupant or beneficial owners of the Home shall be deemed a change of ownership subject to Association approval pursuant to this Section.

29.3 Disapproval by Association. Although an Owner complies with the foregoing requirements, Association may disapprove of the transfer. If Association disapproves a transfer or ownership of a Home, the matter shall be disposed of in the following manner:

29.3.1 Sale. If the proposed transaction is a sale and if the notice of sale given by the Owner shall so demand, then, within thirty (30) days after receipt of such notice and information by Association, Association shall deliver by professional courier or hand-delivery, or mail by certified mail, to the Owner an agreement to purchase by Association, or a purchaser approved by Association who will purchase and to whom the Owner must sell the Home, upon the following terms:

29.3.1.1 The price to be paid by the purchaser, to be identified in the agreement, shall be

that stated in the disapproved contract to sell.

29.3.1.2 The purchase price shall be paid by official check or federal wire.

29.3.1.3 The sale shall be closed within ninety (90) days after the delivery or mailing of the agreement to purchase to the Owner and shall be upon terms no less favorable than the terms of the disapproved contract.

29.3.1.4 If Association fails to provide a purchaser upon the demand of the Owner in the manner provided, or if a purchaser furnished by Association shall default in his or her agreement to purchase, the proposed transaction shall be deemed to have been approved and Association shall furnish a certificate of approval as provided in this Section 29.

29.3.2 Lease. In the event the Board disapproves of a transfer of possession of a Home by lease, then the Owner may not lease the Home to the intended lessee for whom the Owner sought approval.

29.3.3 Transfer by Gift, Devise or Inheritance. In the event the Board disapproves of such transfer of title by gift, devise or inheritance, the Board shall advise in writing within such thirty (30) day period, the person who has obtained such title of a purchaser approved by the Board to purchase the respective Home at its fair market value. The fair market value of the Home will be determined by any one of the following methods determined by the Board: (i) by three (3) M.A.I appraisers, one of whom shall be selected by the Association's proposed purchaser, one by the person holding title, and one by the two (2) appraisers so selected; or (ii) by mutual agreement by the Association's proposed purchaser and the person holding title. All costs for such appraisal shall be paid by the Association's proposed purchaser. The purchase price shall be paid by federal wire or official check and the sale closed within thirty (30) days after the determination of the purchase price. Simultaneously upon notification to the person holding title that the Board has a purchaser for the respective Home, the person holding title and such purchaser shall execute a contract providing for the acquisition of such Home in accordance with the terms of this Declaration. In the event the purchaser furnished by Association shall default in his or her obligation to purchase such Home, then the Board shall be required to approve the passage of title to the person then holding title thereof and shall issue and deliver a certificate of approval therefor.

29.4 Exceptions. The foregoing provisions of this Section shall not apply to a transfer or purchase by an Institutional First Mortgagee or other approved mortgagee which acquires its title as the result of owning a mortgage upon the Home concerned, and this shall be so whether the title is acquired by deed from the mortgagor or its successor in title or through foreclosure proceedings; nor shall such provisions apply to a transfer, sale or lease by an Institutional First Mortgagee or other approved mortgagee which so acquires its title. Neither shall such provisions require the approval of a purchaser who acquires the title to a Lot at a duly advertised public sale with open bidding which is provided by law including, but not limited to, an execution sale, foreclosure sale, judicial sale or tax sale. The provisions of this Section shall not apply to Developer.

29.5 Unauthorized Transactions. Any sale, transfer mortgage or lease which is not authorized pursuant to the terms of this Declaration shall be void unless subsequently approved by Association.

29.6 Notice of Lien or Suit.

29.6.1 Notice of Lien. An Owner shall give notice to Association of every lien upon his or her Home other than for permitted mortgages, taxes and special assessments within five (5) days after the attaching of such lien.

29.6.2 Notice of Suit. An Owner shall give notice to Association of every suit or other proceeding which may affect the title to his or her Home; such notice is to be given within five (5) days after the Owner receives knowledge thereof.

29.6.3 Failure to Comply. Failure to comply with this Section will not affect the validity of any judicial sale.

30. General Provisions.

30.1 Authority of Board. Except when a vote of the membership of Association is specifically required, all decisions, duties, and obligations of Association hereunder may be made by the Board. Association and Owners shall be bound thereby.

30.2 Interpretation. The Board shall be responsible for interpreting the provisions hereof and of any of the exhibits attached hereto. Such interpretation shall be binding upon all parties unless wholly unreasonable. An opinion of counsel that any interpretation adopted by Association is not unreasonable shall conclusively establish the validity of such interpretation.

30.3 Severability . Invalidation of any of the provisions of this Declaration by judgment or court order shall in no way affect any other provision, and the remainder of this Declaration shall remain in full force and effect.

30.4 Affirmative Obligation of Association. In the event that Association believes that Developer has failed in any respect to meet Developer's obligations under this Declaration or has failed to comply with any of Developer's obligations under law or the Common Areas are defective in any respect, Association shall give written notice to Developer detailing the alleged failure or defect. Association agrees that once Association has given written notice to Developer pursuant to this Section, Association shall be obligated to permit Developer and its agents to perform inspections of the Common Areas and to perform all tests and make all repairs/replacements deemed necessary by Developer to respond to such notice at all reasonable times. Association agrees that any inspection, test and/or repair/replacement scheduled on a

business day between 9 a.m. and 5 p.m. shall be deemed scheduled at a reasonable time. The rights reserved in this Section include the right of Developer to repair or address, in Developer's sole option and expense, any aspect of the Common Areas deemed defective by Developer during its inspections of the Common Areas. Association's failure to give the notice and/or otherwise comply with the provisions of this Section will damage Developer. At this time, it is impossible to determine the actual damages Developer might suffer. Accordingly, if Association fails to comply with its obligations under this Section in any respect, Association shall pay to Developer liquidated damages in the amount of $_____ which Association and Developer agree is a fair and reasonable remedy.

30.5 Execution of Documents. Developer's plan of development for LAKES AT COCOA GROVE (including, without limitation, the creation of one (1) or more special taxing districts) may necessitate from time to time the execution of certain documents as required by governmental agencies. To the extent that such documents require the joinder of Owners other than Developer, Developer, by its duly authorized officers, may, as the agent or the attorney-in-fact for the Owners, execute, acknowledge and deliver such documents (including, without limitation, any consents or other documents required by any governmental agencies in c01mection with the creation of any special taxing district); and the Owners, by virtue of their acceptance of deeds, irrevocably nominate, constitute and appoint Developer, through its duly authorized officers, as their proper and legal attorneys-in-fact, for such purpose. Such appointment is coupled with an interest and is therefore irrevocable. Any such documents executed pursuant to this Section may recite that it is made pursuant to this Section. Notwithstanding the foregoing, each Owner agrees, by its acceptance of a deed to a Home or any other portion of LAKES AT COCOA GROVE, to execute or otherwise join in any petition and/or other documents required in connection with the creation of a special taxing district relating to LAKES AT COCOA GROVE or any portion(s) thereof.

30.9 Disclosure Regarding Private Parcel and Cellular Tower. ALL OWNERS, OCCUPANTS AND USERS OF LAKES AT COCOA GROVE ARE HEREBY PLACED ON NOTICE THAT A CELLULAR TOWER AND/OR CELLULAR TOWER SITE MAY EXIST WITHIN OR IN CLOSE PROXIMITY TO LAKES AT COCOA GROVE. CELLULAR TOWERS, CELLULAR TOWER SITES AND THE OPERATION AND MAINTENANCE THEREOF CAN AND WILL EMIT UNPLEASANT NOISES AND/OR OTHER EMISSIONS WHICH COULD POTENTIALLY RESULT IN, AMONG OTHER THINGS, INCONVENIENCES, INTERRUPTIONS IN USE OR ENJOYMENT OF PROPERTY OR COMMON AREAS, AND/OR HEALTH ISSUES. BY THE ACCEPTANCE OF THEIR DEED OR OTHER CONVEYANCE OR MORTGAGE, LEASEHOLD, LICENSE OR OTHER INTEREST, AND BY USING ANY PORTION OF LAKES AT COCOA GROVE, EACH SUCH OWNER, OCCUPANT AND USER AUTOMATICALLY ACKNOWLEDGES, STIPULATES AND AGREES (i) THAT SUCH OWNER AND/OR SUCH OWNER'S INVITEES, GUESTS, TENANTS OR OTHER OCCUPANTS DO NOT OBJECT TO THE PRESENCE OF THE CELLULAR TOWER OR CELLULAR TOWER SITE, (ii) THAT THE CELLULAR TOWER, CELLULAR TOWER SITE AND THE USE, OPERATION, AND/OR MAINTENANCE THEREOF SHALL NOT BE DEEMED NUISANCES OR NOXIOUS OR OFFENSIVE ACTIVITIES, HEREUNDER OR AT LAW GENERALLY, (iii) NOT TO ENTER UPON, OR ALLOW THEIR CHILDREN OR OTHER PERSONS UNDER THEIR CONTROL OR DIRECTION TO ENTER UPON (REGARDLESS OF WHETHER SUCH ENTRY IS A TRESPASS OR OTHERWISE) THE CELLULAR TOWER AND/OR CELLULAR TOWER SITE WITHIN OR IN PROXIMITY TO LAKES AT COCOA GROVE (EVEN IF NOT BEING ACTIVELY USED AT THE TIME OF ENTRY), (iv) THE OWNER OF THE CELLULAR TOWER AND/OR CELLULAR TOWER SITE SHALL NOT BE LIABLE FOR ANY AND ALL LOSSES, DAMAGES (COMPENSATORY, CONSEQUENTIAL, PUNITIVE OR OTHERWISE), INJURIES OR DEATHS ARISING FROM OR RELATING TO THE CELLULAR TOWER AND/OR CELLULAR TOWER SITE, EXCEPT RESULTING DIRECTLY FROM THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF THE RESPECTIVE OWNER THEREOF, AND (v) ANY PURCHASE OR USE OF ANY PORTION OF LAKES AT COCOA GROVE HAS BEEN AND WILL BE MADE WITH FULL KNOWLEDGE OF THE FOREGOING.

30.10 Construction Activities. ALL OWNERS, OCCUPANTS AND USERS OF LAKES AT COCOA GROVE ARE HEREBY PLACED ON NOTICE THAT (1) DEVELOPER AND/OR ITS AGENTS, CONTRACTORS, SUBCONTRACTORS, LICENSEES AND OTHER DESIGNEES AND/OR (2) ANY OTHER PARTIES MAY BE, FROM TIME TO TIME, CONDUCTING BLASTING, EXCAVATION, CONSTRUCTION AND OTHER ACTIVITIES WITHIN OR IN PROXIMITY TO LAKES AT COCOA GROVE. BY THE ACCEPTANCE OF THEIR DEED OR OTHER CONVEYANCE OR MORTGAGE, LEASEHOLD, LICENSE OR OTHER INTEREST, AND BY USING ANY PORTION OF LAKES AT COCOA GROVE, EACH SUCH OWNER, OCCUPANT AND USER AUTOMATICALLY ACKNOWLEDGES, STIPULATES AND AGREES (i) THAT NONE OF THE AFORESAID ACTIVITIES SHALL BE DEEMED NUISANCES OR NOXIOUS OR OFFENSIVE ACTIVITIES, HEREUNDER OR AT LAW GENERALLY, (ii) NOT TO ENTER UPON, OR ALLOW THEIR CHILDREN OR OTHER PERSONS UNDER THEIR CONTROL OR DIRECTION TO ENTER UPON (REGARDLESS OF WHETHER SUCH ENTRY IS A TRESPASS OR OTHERWISE) ANY PROPERTY WITHIN OR IN PROXIMITY TO LAKES AT COCOA GROVE WHERE SUCH ACTIVITY IS BEING CONDUCTED (EVEN IF NOT BEING ACTIVELY CONDUCTED AT THE TIME OF ENTRY, SUCH AS AT NIGHT OR OTHERWISE DURING NON-WORKING HOURS), (iii) DEVELOPER AND THE OTHER AFORESAID RELATED PARTIES SHALL NOT BE LIABLE FOR ANY AND ALL LOSSES, DAMAGES (COMPENSATORY, CONSEQUENTIAL, PUNITIVE OR OTHERWISE), INJURIES OR DEATHS ARISING FROM OR RELATING TO THE AFORESAID ACTIVITIES, EXCEPT RESULTING DIRECTLY FROM DEVELOPER'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, AND (iv) ANY PURCHASE OR USE OF ANY PORTION OF LAKES AT COCOA GROVE HAS BEEN AND WILL BE MADE WITH FULL KNOWLEDGE OF THE FOREGOING.

30.11 Development Agreement Obligations. Intentionally Left Blank

30.12 Groundwater Disclosure: Intentionally Left Blank

30.13 Soil Disclosure: Intentionally Left Blank

30.1 LME Areas – Association Maintenance. Intentionally Left Blank

30.2 Title Documents. Each Owner by acceptance of a deed to a Lot or Home acknowledges that such Lot/Home is subject to certain land use and title documents and all amendments thereto, which include among other items, the Plat, Club Plan and those documents listed in the Owner's title commitment and title insurance policy, as well as further title documents described in this Declaration (collectively, the "**Title Documents**"**):**

Developer's plan of development for LAKES AT COCOA GROVE may necessitate from time to time the further amendment, modification and/or termination of the Title Documents. DEVELOPER RESERVES THE UNCONDITIONAL RIGHT TO SEEK AMENDMENTS AND MODIFICATIONS OF THE TITLE DOCUMENTS. It is possible that a governmental subdivision or agency may require the execution of one or more documents in connection with an amendment, modification, and/or termination of the Title Documents. To the extent that such

documents require the joinder of Owners other than Developer, Developer, by any one of its duly authorized officers, may, as the agent and/or the attorney-in-fact for the Owners, execute, acknowledge and deliver any documents required by applicable governmental subdivision or agency; and the Owners, by virtue of their acceptance of deeds, irrevocably nominate, constitute and appoint Developer, through any one of its duly authorized officers, as their proper and legal attorney- in-fact for such purpose. This appointment is coupled with an interest and is therefore irrevocable. Any such documents executed pursuant to this Section may recite that it is made pursuant to this Section. Notwithstanding the foregoing, each Owner agrees, by its acceptance of a deed to a Home: (i) to execute or otherwise join in any documents required in connection with the amendment, modification, or termination of the Title Documents; and (ii) that such Owner has waived its right to object to or comment the form or substance of any amendment, modification, or termination of the Title Documents. Without limiting the foregoing, upon the Community Completion Date, Association shall assume all of the obligations of Developer under the Title Documents unless otherwise provided by Developer by amendment to this Declaration recorded by Developer in the Public Records, from time to time, and in the sole and absolute discretion of Developer.

In WITNESS WHEREOF, the undersigned, being Developer here under, has hereunto set its hand and seal

This: _____ day of _____, 2023

WITNESSES:

Mountain Cove Homes, at the Lakes of Cocoa Grove LLC,
(A Florida Limited liability company)

_____

Print Name: _____ By: _____

_____ Name: _____

Print Name: _____ Title: _____

STATE OF FLORIDA

County of: _____

The foregoing instrument was acknowledged before me this _____day of _____, 2023 by

_____of MOUNTAIN COVE HOMES AT THE LAKES OF COCOA GROVE, LLC, a Florida limited liability Company, who is personally known to me or who produced _____as identification, on behalf of the company.

My commission expires: _____

DECLARATION FOR

THE LAKES AT COCOA GROVE

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Lakes at Cocoa Grove Development

Traffic Impact Analysis

PROPOSED LOTS PER PHASE	
Phase	Number of Lots
1	81
2	103
3	53
4	113
Total	350

COCOA FLORIDA

Prepared by:

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December 2022

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Appendix J – Unsignalized Alternative Analysis and Signal Warrants

PROFESSIONAL ENGINEER'S CERTIFICATION

I hereby certify that I am a Licensed Professional Engineer in the State of Florida practicing with DRMP, Inc. and I have supervised the preparation of and approve the evaluations, findings, opinions, conclusions, and technical advice hereby reported for:

PROJECT: Lakes at Cocoa Grove Development
Traffic Impact Analysis

LOCATION: Vacant property West of Grissom Parkway and northeast of the I-95 and S.R. 528 interchange
City of Cocoa, Florida

This document was prepared by DRMP, Inc. for the account of Mountain Cove Homes LLC. The material in it reflects DRMP's best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. DRMP, Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Prepared by: Chris Silver, P.E.

Reviewed by: John Alaghemand, P.E.

December 23, 2022
Date

INTRODUCTION

The purpose of this report is to document the traffic impacts of the proposed development known as Lakes at Cocoa Groves Community, involving 350 single family units and a new connector road. As depicted in **Figure 1,** the project is generally located west of Grissom Parkway and northeast of the I-95 and S.R. 528 interchange in the City of Cocoa. Construction of the project is anticipated to begin in 2022 and be completed in four phases with full-build out in 2027. This report was submitted to Brevard County and comments from the county were received on December 6, 2021. This report was updated based on these comments and a follow up discussion meeting held on December 15, 2021. Additional comments were received on May 12, 2022, including a request to review alternative access for the build conditions. This report has been updated to address the county comments and include the alternative analysis.

Figure 1: Location Map

Ingress and egress to this development will be provided through a proposed connector road on the east side of the development, which will connect to Grissom Parkway and serve as the main entrance to the

Lakes at Cocoa Grove Community, and a gated entrance on Bahia Street on the north side of the development. **Figure 2** depicts the preliminary concept plans of the master site plan and implementation plan for each of the four phases, which includes storm water ponds and the 350 single-family lots:

- Phase 1 (Year 2023) – 81 Lots
- Phase 2 (Year 2025) – 103 Lots
- Phase 3 (Year 2026) – 53 Lots
- Phase 4 (Year 2027) – 113 Lots

There are two options for the proposed connector road from the development to Grissom Parkway. Option A constructs a new Road from the development to Grissom Parkway. The new road would cross the existing SW Alan Shepard Ave allowing for local traffic to use the new connection. Option B utilize the existing local streets to provide connection to Grissom Parkway and the development. In this option the development will tie to the existing Osage St; Osage St will be extended to connect Angelica St; Angelica St will be extended to connect to Grissom Parkway. **Figures 3A and 3B** depicts the concept plans of the proposed access road and connection to Grissom Parkway.

PROPOSED LOTS PER PHASE	
Phase	Number of Lots
1	81
2	103
3	53
4	113
Total	350

Figure 2: Preliminary Concept Plan – Site Plan (Not to Scale)

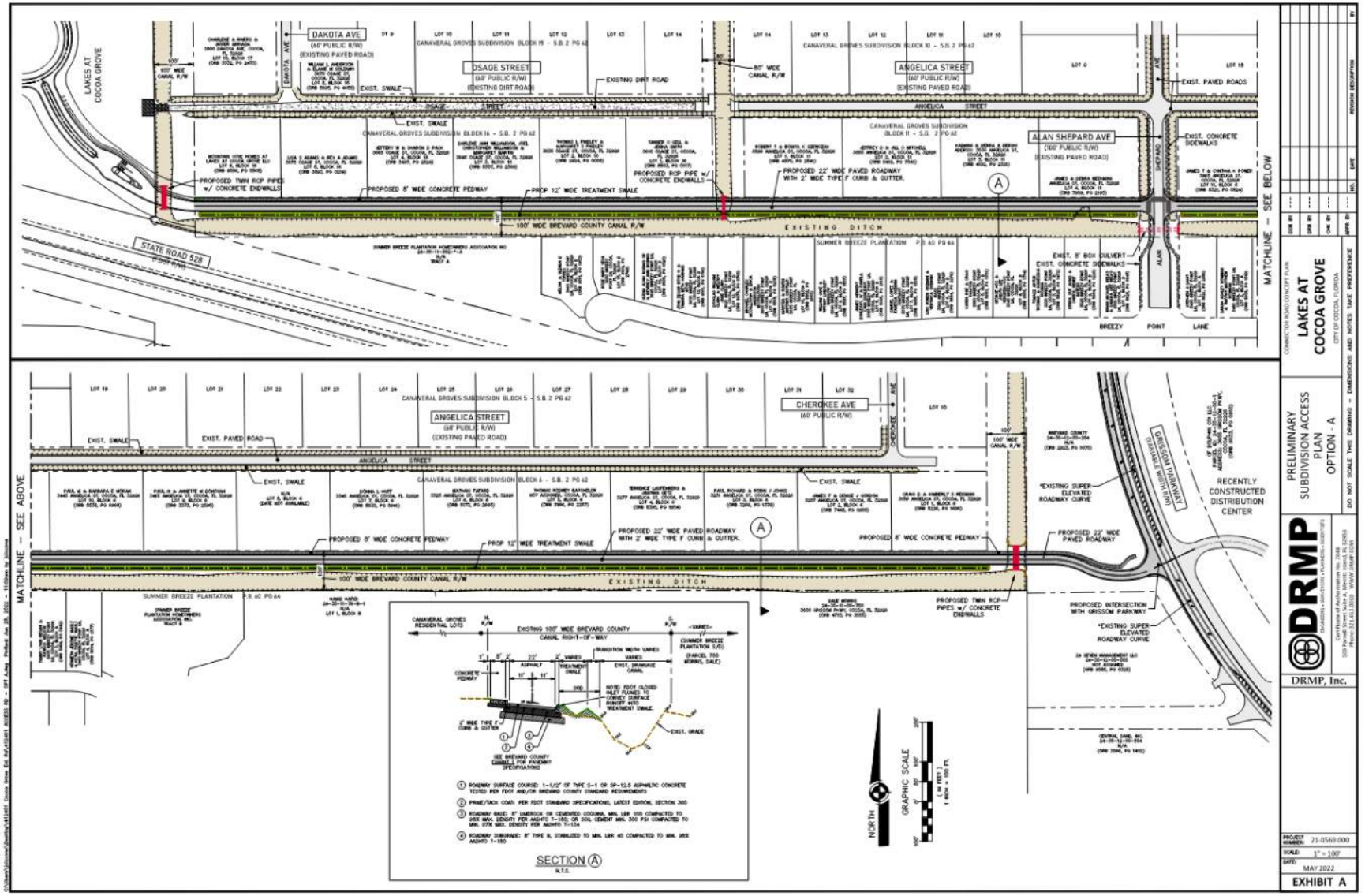


Figure 3A: Preliminary Concept Plan – Proposed Connector (Not to Scale)

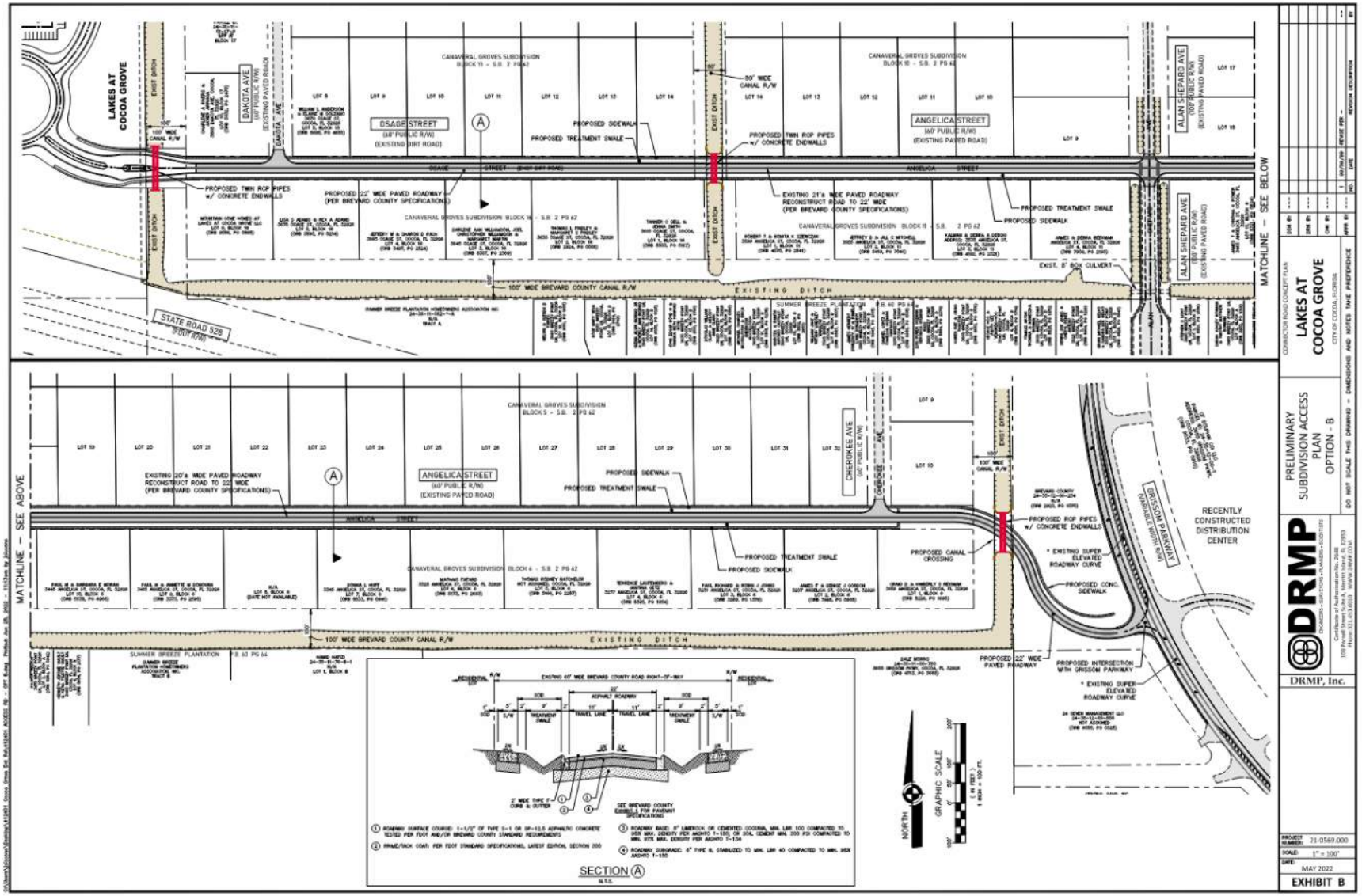


Figure 3B: Preliminary Concept Plan – Proposed Connector Road Alternative (Not to Scale)

The following traffic-related issues are addressed in this report:

- Existing traffic conditions (2021)
- Project-generated traffic volumes and trip distribution
- Background traffic conditions for each phase (2023, 2025, 2026 & 2027), including recently approved development
- Full-Build Out Year for each phase (2023, 2025, 2026 2027) traffic conditions
- Capacity and LOS analysis of existing, background and total traffic conditions for the weekday AM and PM peak hour
- Proposed Access Road Alternative Analysis
- Access Management
- Crash analyses
- Signal Warrant Analysis at Grissom Parkway and the Proposed Connector Road
- Recommendations for mitigation of traffic impacts and conclusion

Traffic Calming measures could additionally be considered for Option B along the proposed connector road to address speed and safety concerns for the new roadway. The FHWA Traffic Calming ePrimer provides a variety of traffic calming tools and guidance for traffic calming and traffic control measures. Traffic calming resources are categorized based on their primary function to select the most appropriate traffic calming measure. The four main categories and their measures are summarized in **Table 1**, below.

The advantages, disadvantages, criteria for use, effectiveness and cost are all considered when selecting measures. Not all treatments may be suitable for all situations and some solutions may require a combination of traffic calming measures. Typically, A traffic calming study is performed to evaluate and determine the appropriate combination measures to apply in order to address concerns.

Table 1: Traffic Calming Measures

Category	Description	Measure types
Horizontal Deflection	Horizontal deflection measures are used to address speeding concerns and pedestrian safety by creating a horizontal shift or narrowing width of travel lanes in the roadway. Horizontal shifts reduce the driver's ability to drive in a straight line, and both horizontal shifts and narrowing roadway force drivers to slow down.	• bulb-outs • chicanes • gateways • on-street parking • raised medians islands • traffic circles
Vertical Deflection	Vertical deflection measures are used to address speeding concerns and, in some cases, improve pedestrian safety by creating changes in height within the roadway. To avoid unpleasant bumps in the road, these types of deflections cause the drive to reduce travel speed.	• textured crosswalks • speed humps/cushions • raised crosswalks • raised intersections
Street Width Reduction	Street width reductions are used for vehicle speed reduction and improving pedestrian safety by narrowing the width of a vehicle travel lane, reducing the distance the pedestrian walks to cross the street and exposure conflicts between vehicle and pedestrian.	• corner extensions • chokers • median islands • on-street parking • road diet
Routing Restriction	Routing restriction prevents select vehicle movements thus discouraging or eliminating portions of cut-through traffic.	• diagonal diverters • semi-diverters • full/half closures • median barriers • forced turn islands • right-in/right-out islands • raised medians through intersections • street closures and one-way streets

STUDY AREA

The study area consists of the following roadway segments and intersections as shown in **Figure 1**.

Roadway Segments:

1.) Grissom Parkway, between Canaveral Groves Boulevard and Camp Road
2.) Grissom Parkway, between Industry Road and Canaveral Groves Boulevard
3.) Canaveral Groves Boulevard from Lee to Grissom Parkway
4.) Canaveral Groves Boulevard from Grissom Parkway to US-1
5.) Industry Road from SR 524 to Grissom Parkway

Intersections:

1. Grissom Parkway and Canaveral Groves Boulevard
2. Grissom Parkway and the Proposed Connector Road/Amazon Access Point 1
3. Canaveral Groves Boulevard at Hartville Avenue
4. Grissom Parkway at Industry Road
5. Citrus Boulevard at Bahia Street

TRIP GENERATION

Traffic volumes generated by the project were estimated using the Institute of Transportation Engineers (ITE), *Trip Generation Manual – the 10th Edition*. Land Use 210 (Single-Family Detached Housing, by dwelling units) was used to estimate the Daily, AM and PM peak-hour trip generation potential. The project trips were estimated for each phase and the ultimate condition based on ITE Equation for the LUC. Based on the *ITE Trip Gen Web-Based App*, depicted in **Appendix A** the total estimated trips generated by the project are 3,292 daily trips, 253 AM peak hour trips (25% entering, 75% exiting) and 338 PM peak-hour trips (63% entering; 37% exiting). The values from the web-based app were verified by calculating trips with the ITE equation. The calculated trips were rounded up for a conservative value and are summarized in **Table 2**.

Table 2: Phased and Ultimate Trip Generation

AM Peak Hour Trip Distribution						
210 -Single Family Detatched Housing	Total Dwelling Units	AM Enter Split	AM Exit Split	AM Peak Trips		
				Total	Enter	Exit
Phase 1	81	25%	75%	63	16	47
Phase 2	184	25%	75%	136	34	102
Phase 3	237	25%	75%	174	44	130
Phase 4	350	25%	75%	254	64	190
PM Peak Hour Trip Distribution						
210 -Single Family Detatched Housing	Total Dwelling Units	PM Enter Split	PM Exit Split	PM Peak Trips		
				Total	Enter	Exit
Phase 1	81	63%	37%	83	53	30
Phase 2	184	63%	37%	183	116	67
Phase 3	237	63%	37%	233	147	86
Phase 4	350	63%	37%	339	214	125
Daily Trip Distribution						
210 -Single Family Detatched Housing	Total Dwelling Units	Daily Enter Split	Daily Exit Split	Daily Trips		
				Total	Enter	Exit
Phase 1	81	50%	50%	857	429	428
Phase 2	184	50%	50%	1823	912	911
Phase 3	237	50%	50%	2300	1150	1150
Phase 4	350	50%	50%	3293	1647	1646

Note: Total Dwellings includes those built in previous phases.

PROJECT TRAFFIC DISTRIBUTION/ASSIGNMENT

Project traffic for the proposed development was distributed using existing traffic volumes, turning movement counts, and local knowledge of the area for the AM and PM peak hour. The AM Peak Hour project traffic distribution is shown in **Figure 4** and the PM Peak Hour project traffic distribution is shown in **Figure 5**. The AM and PM ultimate traffic assignment is shown in **Figure 6** and **7**. The traffic assignment for each construction phase is shown in **Appendix B.**

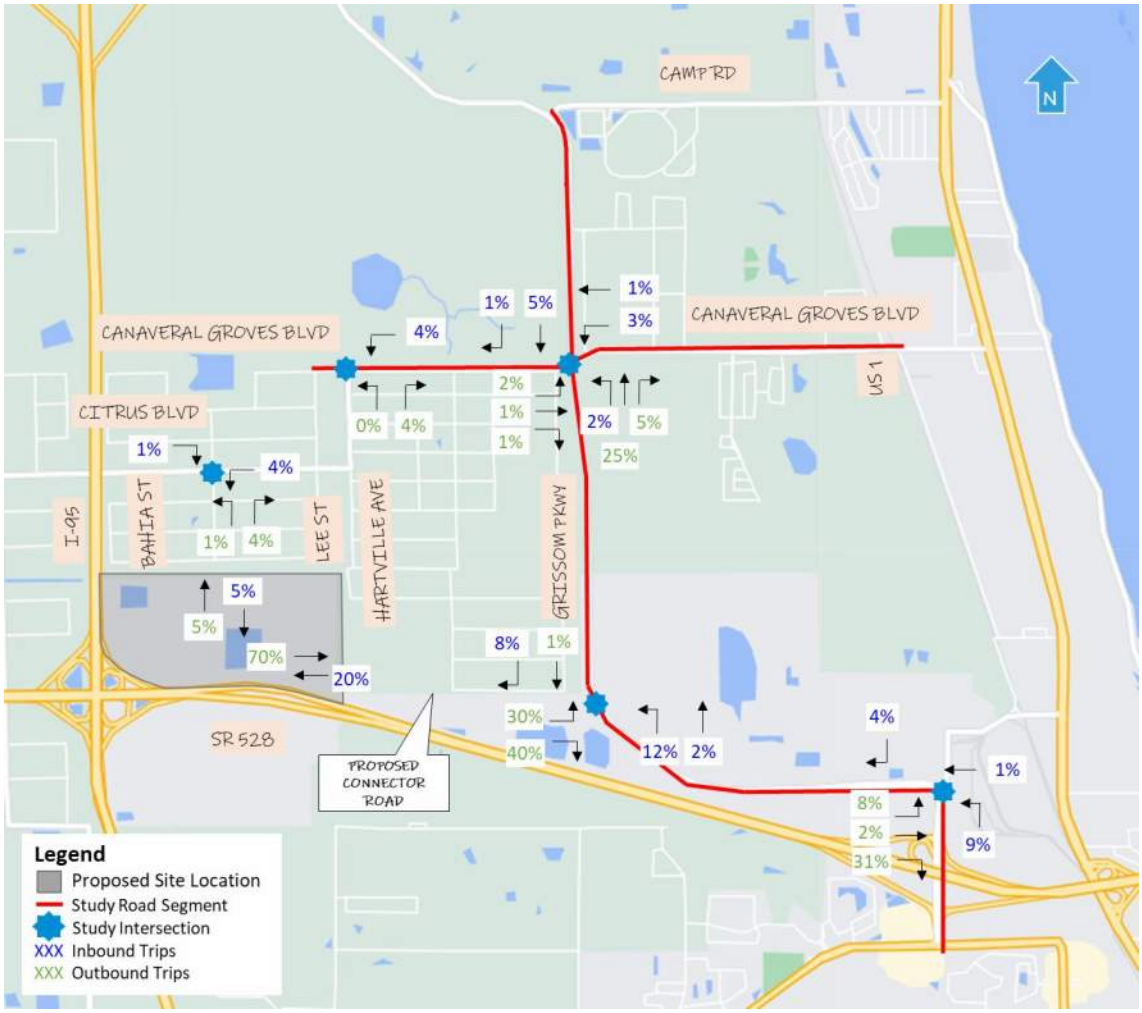


Figure 4: AM Peak Hour Project Traffic Distribution

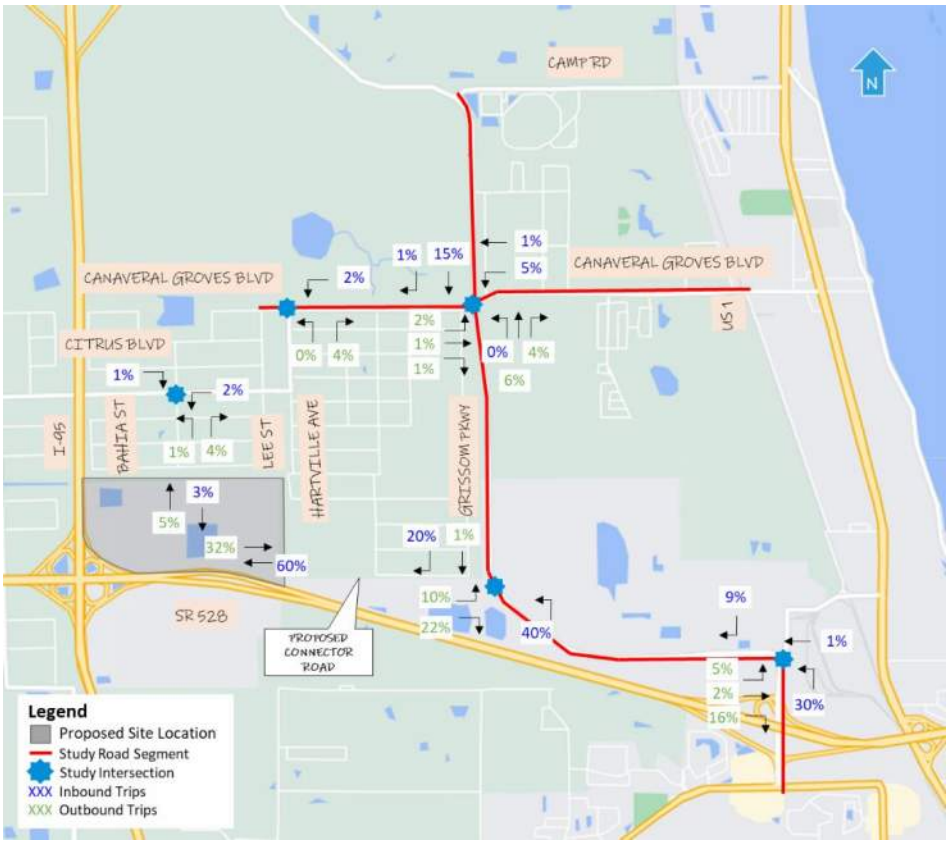


Figure 5: PM Peak Hour Project Traffic Distribution

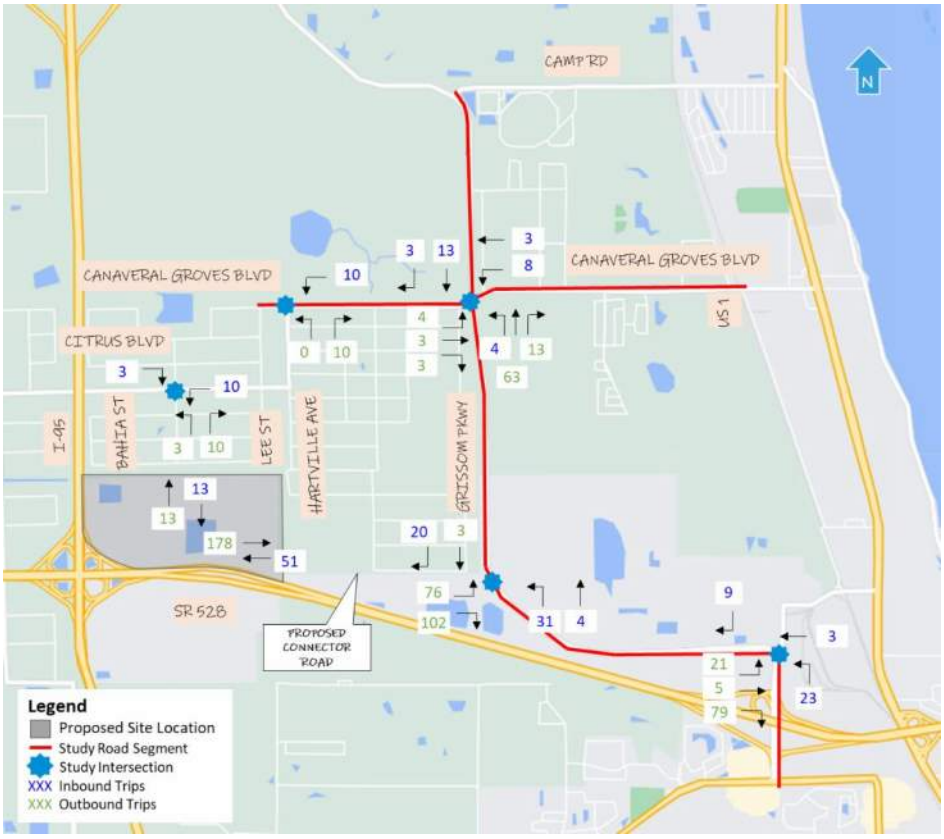


Figure 6: AM Peak Hour Trip Assignment

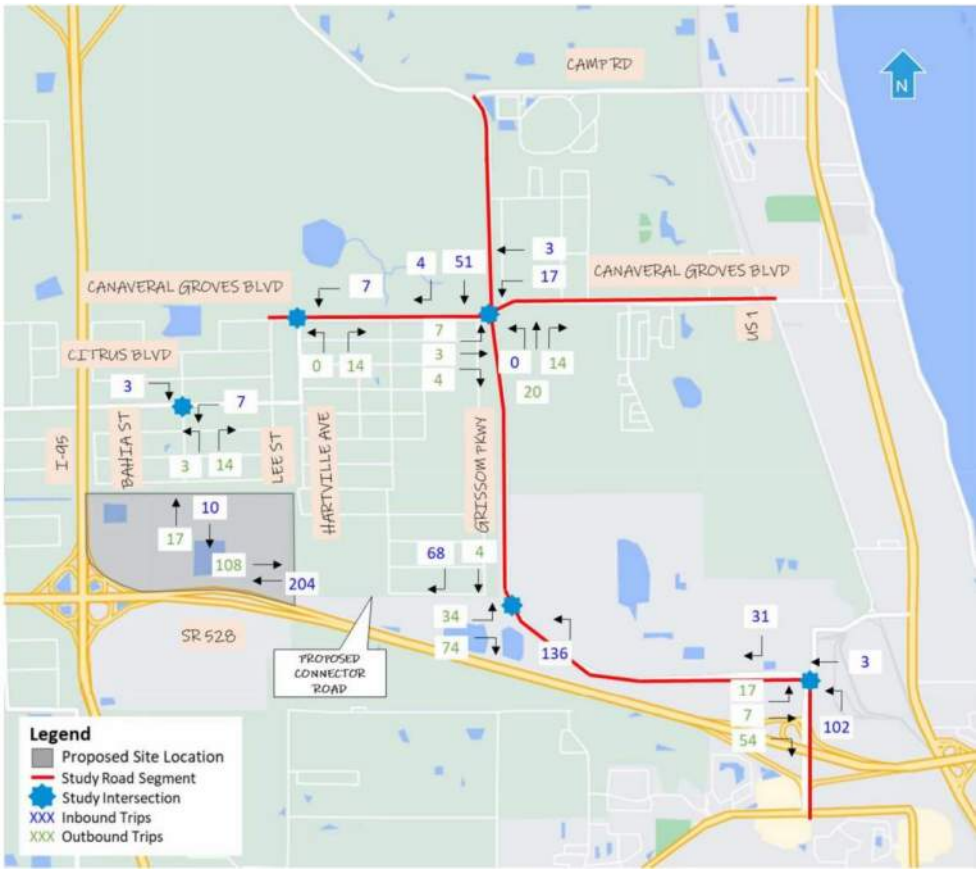


Figure 7: PM Peak Hour Trip Assignment

EXISTING TRAFFIC CONDITIONS - 2021

Counts were conducted at the study area intersections of Grissom Parkway and Canaveral Groves Boulevard on Thursday, August 12, 2021 and at Grissom Parkway and Industry Road, Canaveral Groves and Hartville Avenue, and Citrus Boulevard and Bahia Street on January 13, 2022. The turning movement counts (TMC) were then adjusted using the Florida Department of Transportation (FDOT) peak-season conversion factors for Brevard County. The existing peak-hour traffic volumes are shown in **Figure 8**. The peak-season factors and raw turning movement counts are attached in **Appendix C**.

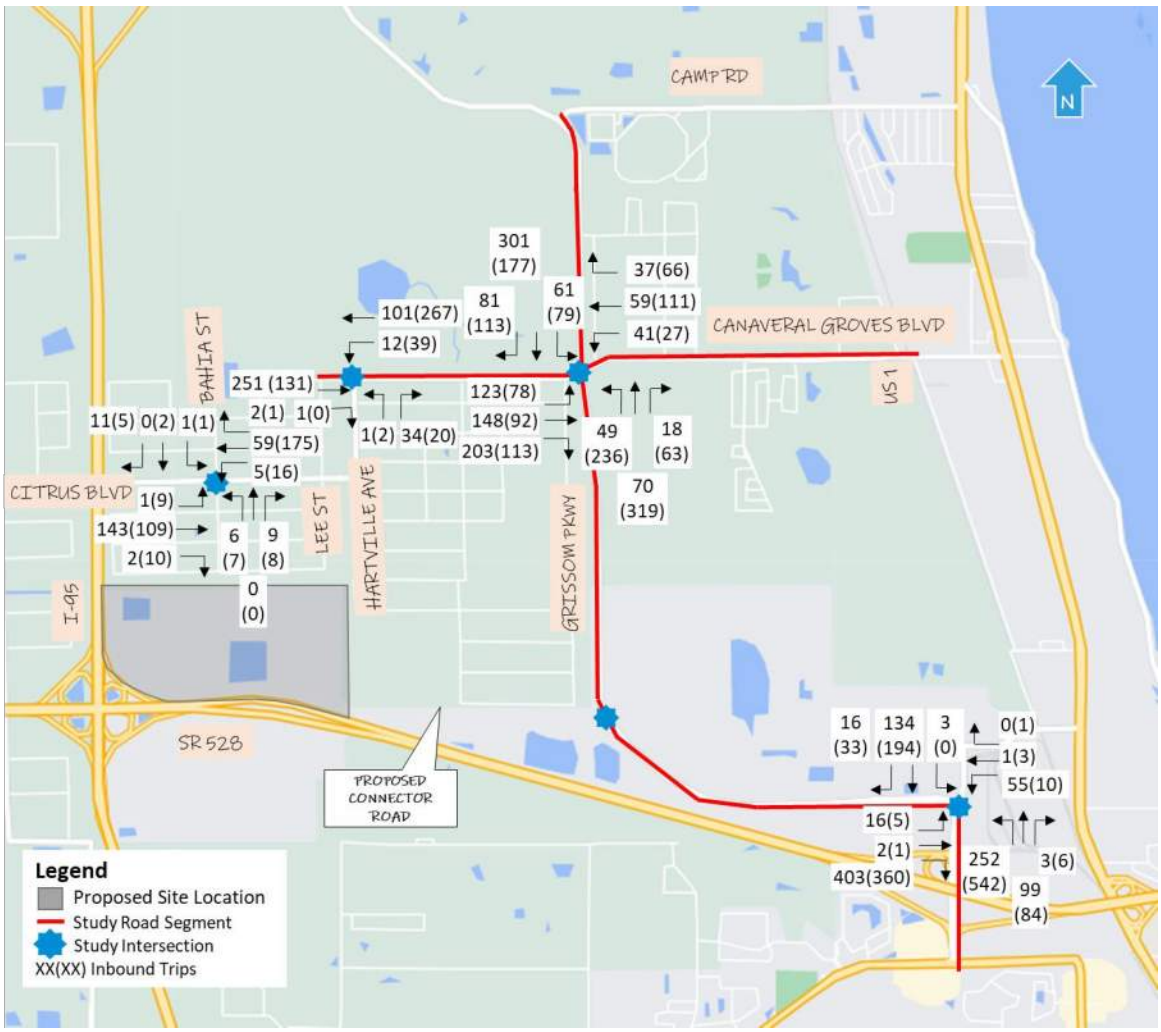


Figure 8: Existing Peak-Hour TMC Volumes

The following intersections were added to the study area after turning movements had been collected:

- Angelica Street at Cherokee Avenue
- Angelica Street at SW Alan Shepard Avenue
- Osage Street at SW Dakota Avenue
- Citrus Boulevard at Hartville Avenue
- Canaveral Groves Boulevard at Alan Shepard Avenue

At these locations ITE Trip Generation 11th edition for Land Use Code (LUC) 210 Single Family Detached Housing was used to estimate the volume of traffic generated along the adjacent streets. The trips generated along the adjacent streets were then distributed based on access, such as a dead-end street, and engineering judgement through review of the TMC at the other intersections in the study area. The resulting existing traffic volumes are shown in **Figure 9.** The ITE trip generation for the added intersection is included in **Appendix A**.

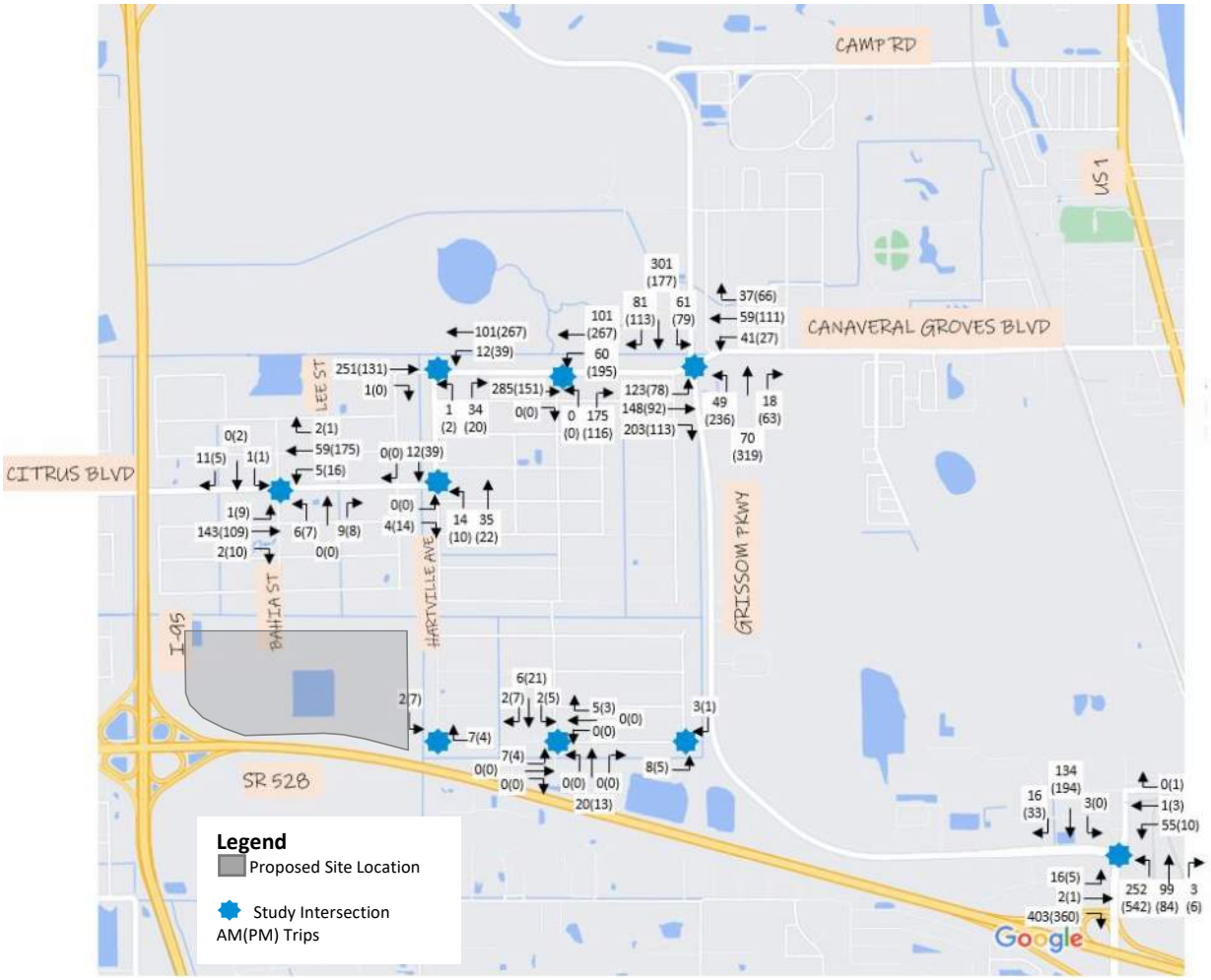


Figure 9: Existing Traffic Volumes

Analysis of the roadway segment in the study area was performed for daily traffic and bi-directional AM and PM peak hour traffic. The daily traffic analysis used the existing 2019 segment volumes from the *Space Coast Transportation Planning Organization (SCTPO) Traffic Counts* as of June 11, 2021 grown to 2021 values. (2020 segment volumes are presumed to have experienced a decrease due to COVID-19). Growth rates were calculated used the FDOT Trend Analysis Tool.

The bi-directional analysis used service volumes taken from the latest *FDOT Generalized Service Volume Tables* and based on the Brevard County Code of Ordinances level-of-service. Existing segment volumes were obtained from the peak-season traffic counts entering/exiting the study intersection during the AM and PM peak-hour. The results of the 2021 existing capacity and level-of-service analysis are summarized

in **Table 3** and **4** and indicate that all roadway segments in the study area currently operate within the County's adopted level-of-service standards.

Table 3: 2021 Existing Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily					
					LOS Standard	No. of Lanes	Max Volume	2019 AADT	2019 Vol/MAV	2021 AADT	2021 Vol/MAV	Exceeds LOS?
Grissom Parkway												
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10640	0.6	11070	0.63	No
	Canaveral Groves Blvd to Industry Rd											
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	9470	0.54	9853	0.56	No
	Camp Rd to Canaveral Groves Blvd											
Canaveral Groves Blvd												
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7680	0.49	8592	0.55	No
	Grissom Pkwy to Lee St											
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6020	0.39	9947	0.64	No
	US-1 to Grissom Pkwy											
Industry Rd												
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	20700	0.5	23158	0.55	No
	Grissom Pkwy to SR 524											

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 4: 2021 Existing Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2021 Exist	2021 Vol/MAV	Exceeds Standard	2021 Exist	2021 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	662	0.41	No	943	0.59	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	677	0.42	No	832	0.52	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	647	0.46	No	744	0.53	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	390	0.28	No	438	0.31	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	927	0.25	No	1193	0.32	No
	Grissom Pkwy to SR 524												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

The intersection analysis at the existing study intersections were performed using the Synchro Software. The HCM 6th results of the Synchro intersection analysis are summarized in **Table 5** and **6** and indicate that the study intersection is currently operating at an acceptable level-of-service during both AM and PM peak hours. The intersection volume tables are provided in **Appendix D** and 2021 existing traffic analysis Synchro intersection worksheets are provided in **Appendix E**.

Table 5: 2021 AM Existing Intersection Analysis

Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length (ft)	95th Queue length (ft)
			Standard	Analysis										
2021 Existing AM Results														
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	18.9	0.61	N/A	-	-
								TL	A	0.0	0.00	N/A	-	205
								R	B	17.1	0.50	N/A	180	45
					WB	B	16.7	-	B	16.7	0.46	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	99
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.4	L	B	13.2	0.15	N/A	480	30
								TR	A	0.0	0.00	N/A	-	66
								-	B	15.0	0.20	N/A	-	-
					SB	B	16.0	L	B	12.3	0.16	N/A	430	43
								T	B	17.4	0.60	N/A	-	213
								R	B	14.2	0.14	N/A	430	18
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	A	WB	A	0	LR	-	0	-	N/A	-	-
					NB	A*	0	T	-	-	-	N/A	-	-
								R	A	0	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-	N/A	-	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	18.9	L	B	19.0	0.06	N/A	150	18
								T	B	18.7	0.01	N/A	-	5
								R	A	0.0	-	N/A	full	62
					WB	B	19.8	L	B	19.8	0.18	N/A	-	42
								T	A	0.0	0.00	N/A	-	-
								R	A	0.0	0.00	N/A	-	-
					NB	B	15.9	L	C	20.4	0.57	N/A	140	74
								T	A	7.8	0.12	N/A	-	57
								R	A	7.6	0.06	N/A	-	0
					SB	B	12.6	L	D	48.5	0.41	N/A	260	8
								T	B	12.0	0.22	N/A	-	87
								R	B	11.1	0.03	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.1	LTR	A	7.3	0.001	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.004	N/A	-	-
					NB	A	9.6	LTR	A	9.6	0.02	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	7.8	0.01	N/A	-	-
					NB	B	10	LR	B	10	0.052	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A	3	TL	A	8	0.052	N/A	-	-
					NB	B	11.7	LR	B	11.7	0.261	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.4	LR	A	7.3	0.004	N/A	-	-
					NB	A*	2.1	TL	A	0	0.009	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Angelica St	Unsignalized	E	A	EB	A	7.2	TRL	A	7.2	0.009	N/A	-	-
					WB	A	6.4	TRL	A	6.4	0.005	N/A	-	-
					NB	A	7.1	TRL	A	7.1	0.024	N/A	-	-
					SB	A	6.9	TRL	A	6.9	0.012	N/A	-	-
9	SW Dakota Ave and Osage St	Unsignalized	E	A	EB	A	0	TL	A	0	-	N/A	-	-
					WB	-	-	TR	-	-	-	N/A	-	-
					SB	-	-	LR	-	-	-	N/A	-	-
10	Cherokee Ave and Angelica St	Unsignalized	E	A	EB	A*	7.2	TL	A	7.2	0.005	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	8.3	LR	A	8.3	0.003	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 6: 2021 PM Existing Intersection Analysis

Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
2021 Existing PM Results														
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	19.8	-	C	20.1	0.45	N/A	-	-
								TL	A	0.0	0.00	N/A	-	143
								R	B	19.4	0.39	N/A	180	38
					WB	C	21.4	-	C	21.4	0.59	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	154
								-	A	0.0	0.00	N/A	-	-
					NB	B	13.7	L	B	11.1	0.43	N/A	480	110
								TR	A	0.0	0.00	N/A	-	272
								-	B	15.4	0.64	N/A	-	-
					SB	B	15.0	L	B	12.6	0.21	N/A	430	41
								T	B	15.9	0.37	N/A	-	144
								R	B	15.4	0.28	N/A	430	40
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	A	WB	A	0	LR	-	0	-	N/A	-	-
					NB	A*	0	T	-	-	-	N/A	-	-
								R	A	0	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-	N/A	-	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.0	L	C	23.0	0.03	N/A	150	10
								T	C	22.9	0.01	N/A	-	4
								R	A	0.0	-	N/A	full	67
					WB	C	23.1	L	C	23.1	0.05	N/A	-	16
								T	C	23.1	0.04	N/A	-	8
								R	C	22.9	0.02	N/A	-	0
					NB	B	16.7	L	B	19.0	0.74	N/A	140	177
								T	A	2.9	0.07	N/A	-	33
								R	A	2.7	0.01	N/A	-	0
					SB	B	13.8	L	A	0.0	0.00	N/A	260	-
								T	B	14.1	0.37	N/A	-	141
								R	B	12.4	0.08	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.6	0.007	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.012	N/A	-	-
					NB	B	10.1	LTR	B	10.1	0.023	N/A	-	-
					SB	B	10.1	LTR	B	10.1	0.012	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.029	N/A	-	-
					NB	A	9.4	LR	A	9.4	0.028	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	3.4	TL	A	8	0.15	N/A	-	-
					NB	A	9.8	LR	A	9.8	0.143	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.6	LR	A	8.6	0.015	N/A	-	-
					NB	A*	2.3	TL	A	7.3	0.007	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Angelica St	Unsignalized	E	A	EB	A	7.3	TRL	A	7.3	0.005	N/A	-	-
					WB	A	6.5	TRL	A	6.5	0.003	N/A	-	-
					NB	A	7	TRL	A	7	0.015	N/A	-	-
					SB	A	7	TRL	A	7	0.039	N/A	-	-
9	SW Dakota Ave and Osage St	Unsignalized	E	A	EB	A	0	TL	A	0	-	N/A	-	-
					WB	-	-	TR	-	-	-	N/A	-	-
					SB	-	-	LR	-	-	-	N/A	-	-
10	Cherokee Ave and Angelica St	Unsignalized	E	-	EB	A*	7.2	TL	A	7.2	0.003	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	8.4	LR	A	8.3	0.009	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

BACKGROUND TRAFFIC CONDITIONS -2023, 2025, 2026, 2027

The background traffic conditions were analyzed for each phase of construction. Historical AADT count data was provided by the SCTPO Traffic Counts. The growth rates were developed by inputting the Historical AADTs into the FDOT Trend Analysis Tool. Therefore, the existing 2021 volumes were adjusted using the FDOT peak season factor for Brevard County and grown at the annual growth rates summarized in **Table 7**.

Table 7: Growth Rates

Roadway	Segment	Growth Rate (SCTPO)
Grissom Pkwy	Canaveral to Camp	2.00%*
Grissom Pkwy	Industry to Canaveral	2.00%*
Canaveral	Grissom to US 1	2.97%
Canaveral	Lee to Grissom	3.03%
Industry	SR 524 to Grissom Pkwy	2.90%
Industry	Grissom Pkwy to Cidco Rd	2.00%*
Citrus Blvd	Pine to Lee	6.11%
Bahia St	no SCTPO counts	2.00%*
Hartville	no SCTPO counts	2.00%*

**If the calculated growth rate is under 2%, a growth rate of 2% is assumed*

Rerouted Development Trips

The proposed access road will provide a new connection benefit for the community directly east of the proposed development. Approximately 300 single family home will benefit, based on Brevard County comments. AM and PM peak hour trip generations were calculated to account for the traffic that will reroute from the intersection at Grissom Parkway and Canaveral Boulevard to the intersection of Grissom Parkway and the proposed access road. The trip generation is based on the ITE Trip Generation for Land Use 210 and is shown in **Table 8**.

Table 8: Proposed Access Road Rerouted Trip Generation

AM Peak Hour						
	Total	AM Enter	PM Exit	AM Peak Trips		
210 -Single Family	Dwelling	Split	Split	Total	Enter	Exit
Detatched Housing	300	25%	75%	218	55	163
PM Peak Hour						
	Total	PM Enter	PM Exit	PM Peak Trips		
210 -Single Family	Dwelling	Split	Split	Total	Enter	Exit
Detatched Housing	300	63%	37%	292	184	108

The trip generation estimates 218 trips will be rerouted in the AM and 292 trips will be rerouted in the PM. These trips are assumed to reroute during Phase 1 construction in 2023 and are included in each

background year analysis. The proposed trip distribution for the rerouted trips is shown in **Figure 10** and the trip assignment is shown in **Figure 11**.

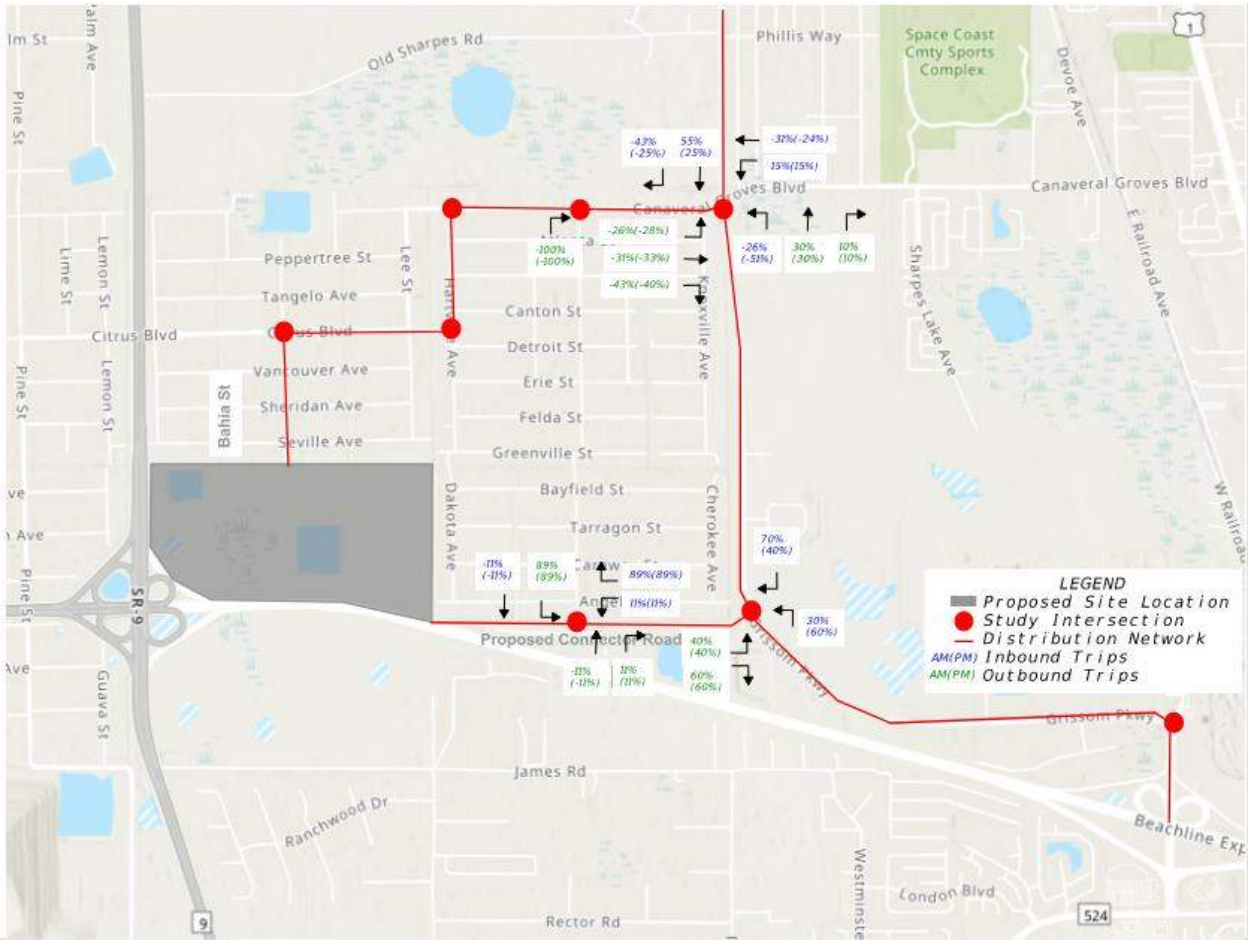


Figure 10: Rerouted Trip Distribution

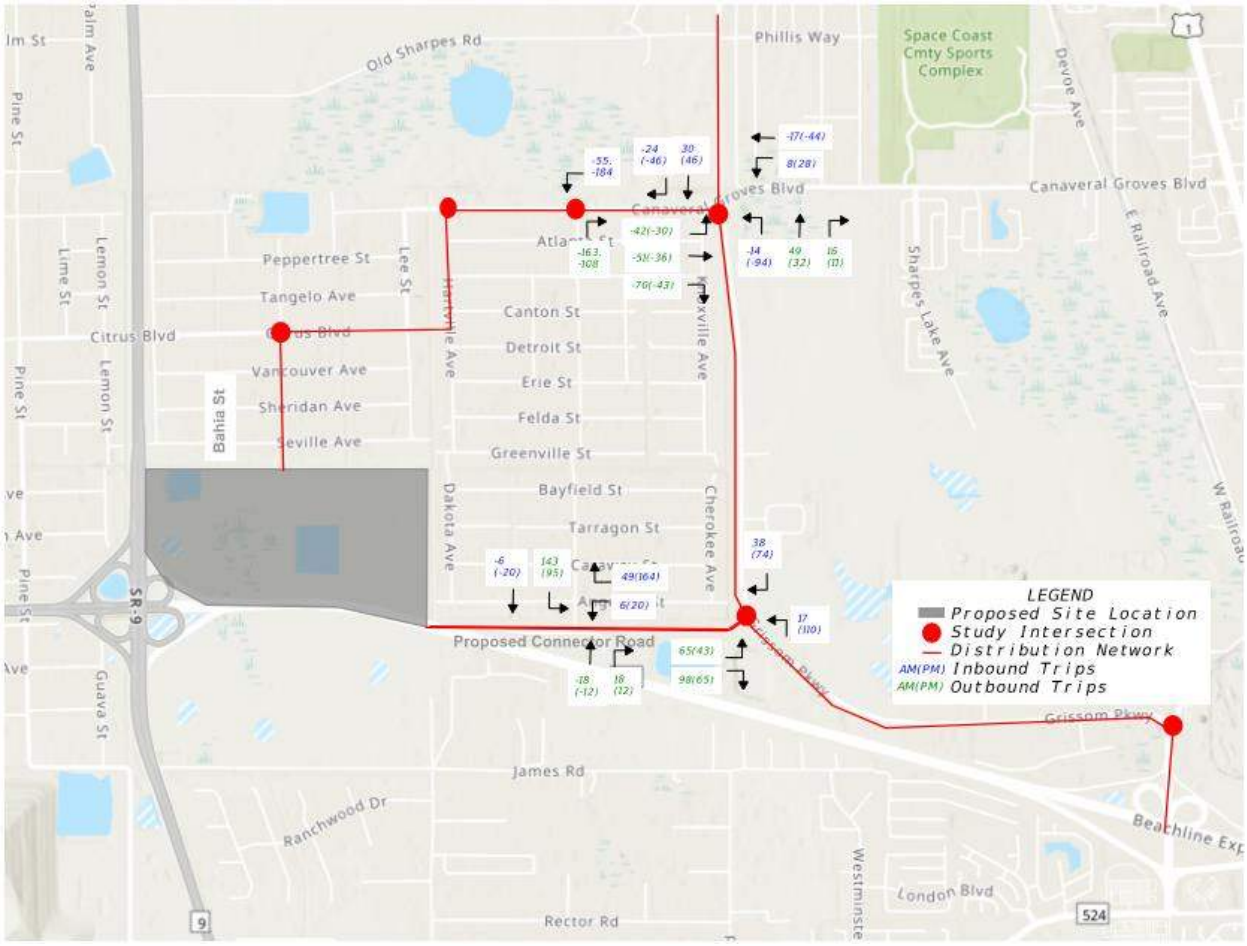


Figure 11: Rerouted Trip Assignment

Amazon Distribution Center Trips

Background traffic is anticipated to include the Amazon Distribution Center proposed trips. The Amazon Distribution Center is currently under construction and the development traffic was included in the background traffic. As depicted in **Figure 12**, the Amazon distribution center is located on the east side of Grissom Parkway and is accessed via three driveways.

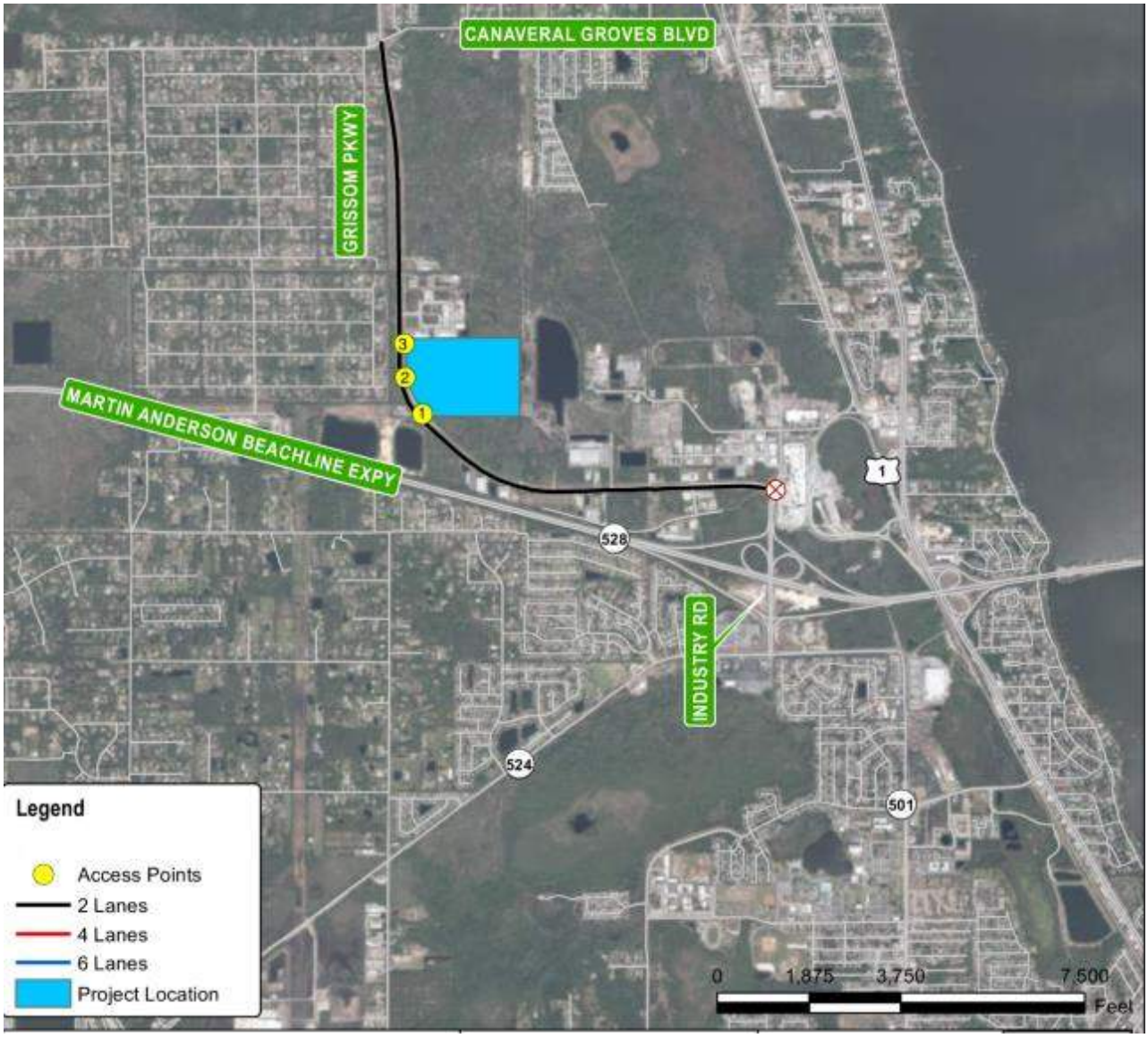


Figure 9: Amazon Distribution Center Location Map
Source: Amazon Distribution Center TIA

Based on the Lakes at Cocoa Grove connector road preliminary concept plan in **Figure 3**, the proposed connector will line up with Amazon Access Point 1. All Amazon Access Points are full-access driveways. Due to the nature of the site, the center is accessed at different times throughout the day. Based on the Amazon Distribution Center TIA, the total estimated trips generated by the development are 2,196 daily trips and 92 peak-hour two-way trip ends (2 Entering; 90 Exiting) during the main street PM peak-hour (4:30 PM-5:30 PM). The PM peak-hour Amazon Distribution Center traffic distribution is shown in **Figure 13,** the traffic assignment is shown in **Figure 14.**

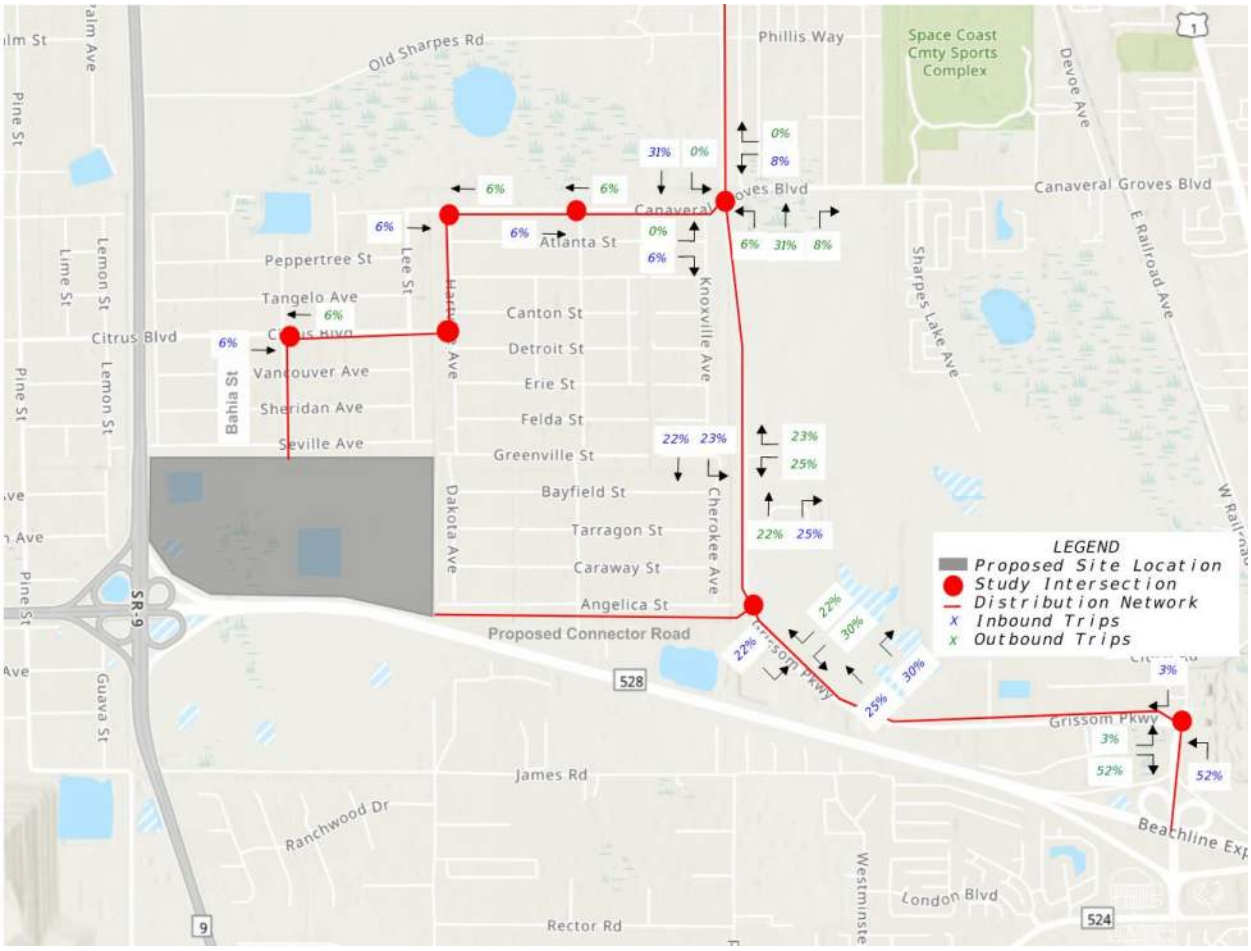


Figure 10: Amazon Distribution Center PM Peak-Hour Traffic Distribution

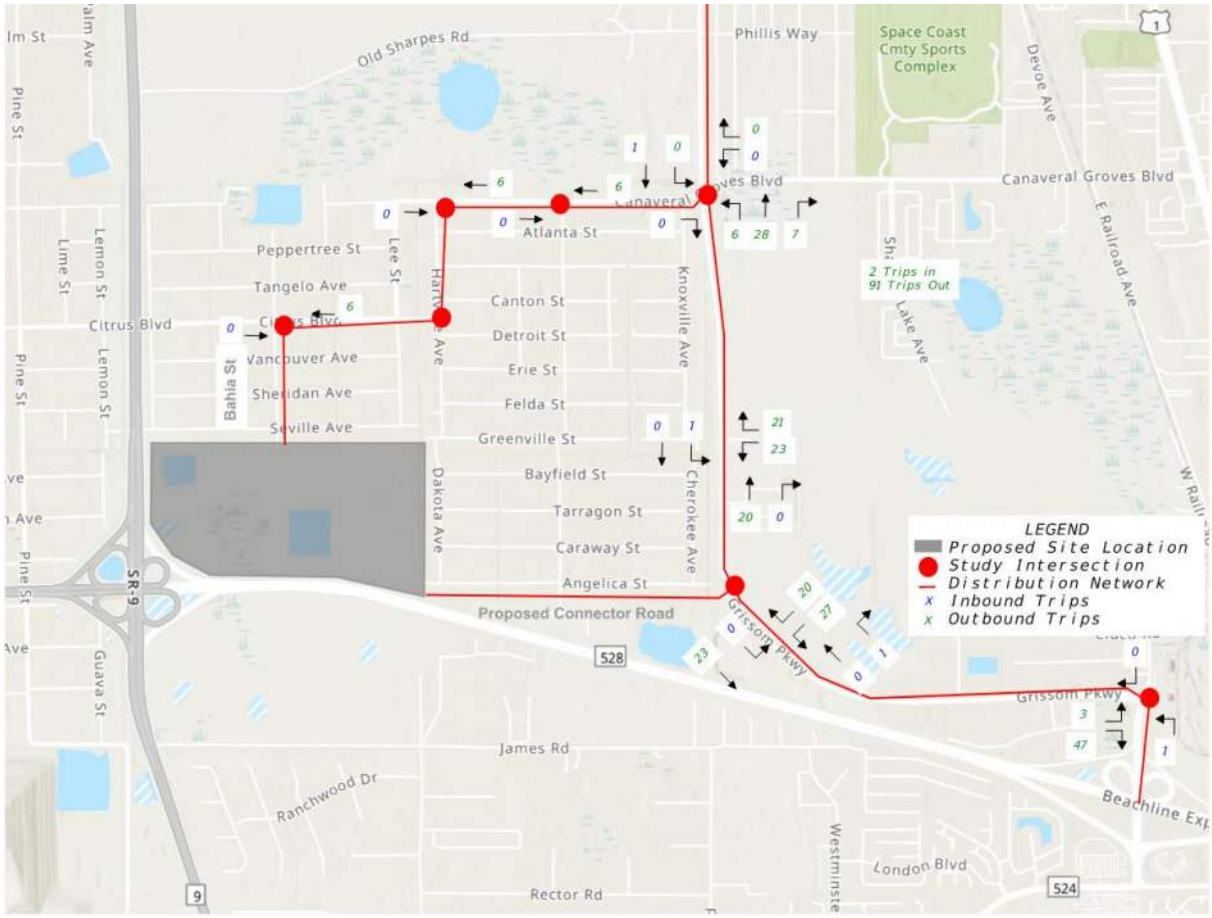


Figure 114: Amazon Distribution Center PM Peak Hour Traffic Assignment:

Background Phase 1 - 2023

The first phase of construction will take place in 2023. This phase will include 81 single family homes and is expected to generate 63 AM peak hour trips and 83 PM peak hour trips. A roadway and intersection analysis were conducted for Phase 1 as shown in **Tables 9**, **10, 11 and 12**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 9*:* Phase 1 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2023 Bkgd	2023 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11518	0.65	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10252	0.58	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	8685	0.56	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	10547	0.68	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	24521	0.59	No
	Grissom Pkwy to SR 524									

Table 10: Phase 1 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2023 Bkgd	2023 Vol/MAV	Exceeds Standard	2023 Bkgd	2023 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	695	0.43	No	1042	0.65	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	709	0.44	No	898	0.56	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	684	0.49	No	788	0.56	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	412	0.29	No	469	0.33	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	971	0.26	No	1299	0.35	No
	Grissom Pkwy to SR 524												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 11: Phase 1 AM Intersection Analysis

2023 Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	19.1	0.64	N/A	-	-
								TL	A	0.0	0.00	N/A	-	222
								R	B	16.6	0.48	N/A	180	53
					WB	B	16.9	-	B	16.9	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	108
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.4	L	B	14.2	0.17	N/A	480	31
								TR	A	0.0	0.00	N/A	-	69
								-	B	16.1	0.22	N/A	-	-
					SB	B	17.4	L	B	13.2	0.17	N/A	430	44
								T	B	19.0	0.65	N/A	-	223
								R	B	15.3	0.16	N/A	430	21
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	C	WB	C	16.5	LR	C	16.5	0.003	N/A	-	-
					NB	-	0	T	-	-	-	N/A	-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-	N/A	-	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.1	L	B	19.1	0.06	N/A	150	20
								T	B	18.8	0.01	N/A	-	5
								R	A	0.0	-	N/A	full	63
					WB	B	19.9	L	B	19.9	0.18	N/A	-	42
								T	A	0.0	0.00	N/A	-	-
								R	A	0.0	0.00	N/A	-	-
					NB	B	15.9	L	C	20.5	0.59	N/A	140	79
								T	A	7.8	0.12	N/A	-	60
								R	A	7.6	0.06	N/A	-	0
					SB	B	12.8	L	D	48.7	0.41	N/A	260	8
								T	B	12.2	0.23	N/A	-	90
								R	B	11.2	0.03	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.6	LTR	A	7.6	0.005	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.023	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	7.9	0.01	N/A	-	-
					NB	B	10.1	LR	B	10.1	0.056	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	3	TL	A	8.1	0.057	N/A	-	-
					NB	B	12	LR	B	12	0.278	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.4	LR	A	8.4	0.005	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Not Built	-	-	-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 12: Phase 1 PM Intersection Analysis

2023 Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	19.9	-	C	20.3	0.47	N/A	-	-
								TL	A	0.0	0.00	N/A	-	162
								R	B	19.4	0.38	N/A	180	41
					WB	C	21.7	-	C	21.7	0.61	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	175
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.1	L	B	11.6	0.46	N/A	480	117
								TR	A	0.0	0.00	N/A	-	314
								-	B	17.1	0.73	N/A	-	-
					SB	B	16.1	L	B	13.7	0.24	N/A	430	41
								T	B	17.0	0.40	N/A	-	151
								R	B	16.4	0.30	N/A	430	40
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	C	WB	C	18.5	LR	C	18.5	0.161	N/A	-	-
					NB	-	0	T	-	-	-	N/A	-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-	N/A	-	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.3	L	C	23.3	0.04	N/A	150	15
								T	C	23.1	0.01	N/A	-	4
								R	A	0.0	-	N/A	full	73
					WB	C	23.3	L	C	23.3	0.05	N/A	-	15
								T	C	23.2	0.04	N/A	-	8
								R	C	23.1	0.01	N/A	-	0
					NB	B	16.9	L	B	19.3	0.76	N/A	140	196
								T	A	2.9	0.08	N/A	-	38
								R	A	2.8	0.01	N/A	-	0
					SB	B	14.4	L	A	0.0	0.00	N/A	260	-
								T	B	14.7	0.39	N/A	-	70
								R	B	12.9	0.08	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.7	0.008	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.014	N/A	-	-
					NB	B	10.5	LTR	B	10.5	0.024	N/A	-	-
					SB	B	10.4	LTR	B	10.4	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.6	0.031	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.03	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	3.4	TL	A	8.1	0.16	N/A	-	-
					NB	A	9.9	LR	A	9.9	0.151	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.6	LR	A	8.6	0.017	N/A	-	-
					NB	A*	2.2	TL	A	7.3	0.007	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Not Built	-	-	-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-

*Approach LOS not available, taken from Lane Group LOS

Background Phase 2 - 2025

The second phase of construction will take place in 2025. This phase will include a total of 184 single family homes and is expected to generate 136 AM peak hour trips and 183 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 2 as shown in **Tables 13, 14, 15 and 16**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 13: Phase 2 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2025 Bkgd	2025 v/c	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13315	0.75	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10940	0.62	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6894	0.44	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11269	0.72	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	26307	0.63	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	3714	0.24	No
	Grissom Pkwy to Alan Shepard Ave									

Table 14: Phase 2 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2025 Bkgd	Vol/MAV	Exceeds Standard	2025 Bkgd	Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	763	0.48	No	1145	0.72	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	775	0.48	No	959	0.6	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	510	0.36	No	539	0.38	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	396	0.28	No	460	0.33	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1040	0.28	No	1397	0.37	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	275	0.2	No	369	0.26	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 15: Phase 2 AM Intersection Analysis

2025 Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.2	-	B	18.4	0.51	N/A	-	-
								TL	A	0.0	0.00	N/A	-	165
								R	B	18.0	0.49	N/A	180	43
					WB	B	18.7	-	B	18.7	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	115
								-	A	0.0	0.00	N/A	-	-
					NB	B	13.7	L	B	11.7	0.12	N/A	480	26
								TR	A	0.0	0.00	N/A	-	124
								-	B	14.2	0.37	N/A	-	-
					SB	B	14.3	L	B	10.7	0.18	N/A	430	45
								T	B	15.5	0.64	N/A	-	255
								R	B	11.8	0.09	N/A	430	7
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	D	EB	C	22.2	-	-	-	-	-	-	-
								TL	D	31.9	0.409	N/A	-	-
								R	C	15.6	0.283	N/A	150	-
					WB	D	31.1	LTR	D	31.1	0.008	N/A	-	-
					NB	A*	0.8	L	A	9.1	0.03	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.3	L	B	19.3	0.08	N/A	150	25
								T	B	18.9	0.01	N/A	-	7
								R	A	0.0	-	N/A	full	66
					WB	B	20.0	L	B	20.0	0.18	N/A	-	43
								T	B	18.9	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	C	20.7	0.61	N/A	140	85
								T	A	8.0	0.13	N/A	-	64
								R	A	7.7	0.07	N/A	-	0
					SB	B	13.1	L	D	49.1	0.41	N/A	260	9
								T	B	12.6	0.25	N/A	-	95
								R	B	11.6	0.04	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.007	N/A	-	-
					NB	B	10	LTR	B	10	0.029	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.9	0.013	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.061	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	8	0.012	N/A	-	-
					NB	B	10.4	LR	B	10.4	0.041	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.6	LR	A	8.6	0.008	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.6	LTR	A	7.3	0.004	N/A	-	-
					NB	A	8.8	LTR	A	8.8	0.025	N/A	-	-
					SB	B	10.3	LTR	B	10.3	0.185	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 16: Phase 2 PM Intersection Analysis

2025 Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	19.5	-	B	19.7	0.33	N/A	-	-
								TL	A	0.0	0.00	N/A	-	127
								R	B	19.3	0.28	N/A	180	37
					WB	C	22.8	-	C	22.8	0.61	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	194
								-	A	0.0	0.00	N/A	-	-
					NB	B	16.8	L	B	11.0	0.34	N/A	480	77
								TR	A	0.0	0.00	N/A	-	378
								-	B	18.7	0.81	N/A	-	-
					SB	B	14.5	L	B	13.0	0.28	N/A	430	42
								T	B	15.3	0.44	N/A	-	186
								R	B	13.5	0.16	N/A	430	28
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	E	36.8	-	-	-	-	-	-	-
								TL	F	78.7	0.554	N/A	-	-
								R	B	11.4	0.14	N/A	150	-
					WB	F	54.3	LTR	F	54.3	0.419	N/A	-	-
					NB	A*	1.7	L	A	9	0.146	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.7	L	C	23.8	0.06	N/A	150	19
								T	C	23.5	0.03	N/A	-	8
								R	A	0.0	-	N/A	full	77
					WB	C	23.6	L	C	23.7	0.05	N/A	-	16
								T	C	23.6	0.04	N/A	-	9
								R	C	23.4	0.01	N/A	-	0
					NB	B	18.2	L	C	20.6	0.78	N/A	140	#248
								T	A	3.1	0.08	N/A	-	39
								R	A	2.9	0.01	N/A	-	0
					SB	B	15.4	L	A	0.0	0.00	N/A	260	-
								T	B	15.8	0.42	N/A	-	153
								R	B	13.9	0.10	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.009	N/A	-	-
					WB	A*	0.7	LTR	A	7.6	0.017	N/A	-	-
					NB	B	10.7	LTR	B	10.7	0.035	N/A	-	-
					SB	B	10.7	LTR	B	10.7	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.034	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.034	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	7.7	0.028	N/A	-	-
					NB	A	9.3	LR	A	9.3	0.023	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.023	N/A	-	-
					NB	A*	2.3	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.6	LTR	A	7.3	0.014	N/A	-	-
					NB	A	8.9	LTR	A	8.9	0.016	N/A	-	-
					SB	B	11	LTR	B	11	0.15	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Background Phase 3 - 2026

The third phase of construction will take place in 2026. This phase will include a total of 237 single family homes and is expected to generate 174 AM peak hour trips and 233 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 3 as shown in **Tables 17**, **18**,**19** and **20**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 17: Phase 3 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2026 Bkgd	2026 v/c	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13767	0.78	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11462	0.65	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7264	0.47	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11697	0.75	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	27446	0.66	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	4680	0.3	No
	Grissom Pkwy to Alan Shepard Ave									

Table 18: Phase 3 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2026 Bkgd	2026 Vol/MAV	Exceeds Standard	2026 Bkgd	2026 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	820	0.51	No	1234	0.77	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	815	0.51	No	1002	0.63	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	536	0.38	No	567	0.4	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	416	0.29	No	486	0.34	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1092	0.29	No	1475	0.39	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	340	0.24	No	461	0.33	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 19: Phase 3 AM Intersection Analysis

2026 Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.0	-	B	18.3	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	178
								R	B	17.6	0.48	N/A	180	44
					WB	B	18.8	-	B	18.8	0.52	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	122
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.7	L	B	12.3	0.14	N/A	480	27
								TR	A	0.0	0.00	N/A	-	140
								-	B	15.2	0.43	N/A	-	-
					SB	B	15.3	L	B	11.3	0.20	N/A	430	46
								T	B	16.6	0.68	N/A	-	263
								R	B	12.4	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	14.0	-	B	13.0	0.23	N/A	-	-
								TL	A	0.0	0.00	N/A	-	78
								R	B	14.7	0.52	N/A	150	41
					WB	B	13.7	-	B	13.7	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	7.6	L	B	14.0	0.12	N/A	300	16
								T	A	6.8	0.34	N/A	-	78
								R	A	5.5	0.00	N/A	450	0
					SB	A	9.7	L	A	0.0	0.00	N/A	350	-
								T	B	10.0	0.77	N/A	-	217
								R	A	5.8	0.07	N/A	300	11
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.5	0.10	N/A	150	29
								T	B	19.0	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	69
					WB	C	20.0	L	C	20.1	0.17	N/A	-	43
								T	B	18.9	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.62	N/A	140	89
								T	A	8.1	0.14	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.4	L	D	49.5	0.41	N/A	260	9
								T	B	12.9	0.25	N/A	-	97
								R	B	11.9	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10.1	LTR	B	10.1	0.036	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.4	LR	B	10.4	0.068	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8.1	0.014	N/A	-	-
					NB	B	10.6	LR	B	10.6	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.5	LTR	A	7.4	0.004	N/A	-	-
					NB	A	9.1	LTR	A	9.1	0.027	N/A	-	-
					SB	B	11	LTR	B	11	0.208	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 20: Phase 3 PM Intersection Analysis

2026 Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	C	20.1	-	C	20.4	0.36	N/A	-	-
								TL	A	0.0	0.00	N/A	-	139
								R	B	19.8	0.27	N/A	180	39
					WB	C	24.1	-	C	24.1	0.64	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	216
								-	A	0.0	0.00	N/A	-	-
					NB	B	17.8	L	B	11.7	0.36	N/A	480	78
								TR	A	0.0	0.00	N/A	-	395
								-	B	19.9	0.83	N/A	-	-
					SB	B	15.5	L	B	14.0	0.30	N/A	430	43
								T	B	16.3	0.46	N/A	-	201
								R	B	14.3	0.16	N/A	430	29
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	15.2	-	B	14.4	0.15	N/A	-	-
								TL	A	0.0	0.00	N/A	-	51
								R	B	15.7	0.40	N/A	150	36
					WB	B	14.2	-	B	14.2	0.13	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.5	L	B	11.1	0.40	N/A	300	67
								T	A	9.1	0.73	N/A	-	234
								R	A	5.0	0.00	N/A	450	0
					SB	A	6.4	L	A	0.0	0.00	N/A	350	-
								T	A	6.7	0.43	N/A	-	113
								R	A	5.5	0.15	N/A	300	16
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	24.1	L	C	24.2	0.08	N/A	150	23
								T	C	23.8	0.04	N/A	-	10
								R	A	0.0	-	N/A	full	79
					WB	C	23.9	L	C	24.0	0.04	N/A	-	16
								T	C	23.8	0.04	N/A	-	10
								R	C	23.6	0.01	N/A	-	0
					NB	B	19.5	L	C	22.0	0.81	N/A	140	#279
								T	A	3.2	0.08	N/A	-	40
								R	A	3.0	0.01	N/A	-	0
					SB	B	16.3	L	A	0.0	0.00	N/A	260	-
								T	B	16.7	0.43	N/A	-	154
								R	B	14.8	0.13	N/A	260	4
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.01	N/A	-	-
					WB	A*	0.7	LTR	A	7.6	0.02	N/A	-	-
					NB	B	10.8	LTR	B	10.8	0.044	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.038	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.041	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.7	0.033	N/A	-	-
					NB	A	9.4	LR	A	9.4	0.026	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.029	N/A	-	-
					NB	A*	2.3	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.5	LTR	A	7.4	0.014	N/A	-	-
					NB	A	9.1	LTR	A	9.1	0.017	N/A	-	-
					SB	B	12.2	LTR	B	12.2	0.175	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Background Phase 4 – 2027

The fourth and final phase of construction will take place in 2027. This phase will include all 350 single family homes and is expected to generate 174 AM peak hour trips and 233 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 4 as shown in **Tables 21, 22, 23** and **24**. The analysis determined that all study area roadway segments and intersections would operate at an acceptable capacity and LOS.

Table 21: Phase 4 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2027 Bkgd	2027 v/c	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	14116	0.8	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11833	0.67	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7605	0.49	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	12087	0.77	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	28412	0.68	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	5157	0.33	No
	Grissom Pkwy to Alan Shepard Ave									

Table 22: Phase 4 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2027 Bkgd	2027 Vol/MAV	Exceeds Standard	2027 Bkgd	2027 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	892	0.56	No	1344	0.84	Yes
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	892	0.56	No	1054	0.66	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	566	0.4	No	597	0.42	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	437	0.31	No	513	0.36	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1155	0.31	No	1566	0.42	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	433	0.31	No	583	0.41	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 23: Phase 4 AM Intersection Analysis

2027 Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	17.7	-	B	18.1	0.54	N/A	-	-
								TL	A	0.0	0.00	N/A	-	194
								R	B	17.0	0.45	N/A	180	45
					WB	B	19.2	-	B	19.2	0.54	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	133
								-	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	B	13.3	0.16	N/A	480	28
								TR	A	0.0	0.00	N/A	-	162
								-	B	16.7	0.51	N/A	-	-
					SB	B	16.8	L	B	12.3	0.22	N/A	430	46
								T	B	18.3	0.73	N/A	-	273
								R	B	13.4	0.11	N/A	430	10
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	15.2	-	B	13.6	0.29	N/A	-	-
								TL	A	0.0	0.00	N/A	-	#100
								R	B	16.3	0.65	N/A	150	47
					WB	B	14.5	-	B	14.5	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	8.0	L	B	14.8	0.17	N/A	300	21
								T	A	6.8	0.35	N/A	-	80
								R	A	5.5	0.00	N/A	450	0
					SB	A	9.8	L	A	0.0	0.00	N/A	350	-
								T	B	10.2	0.78	N/A	-	224
								R	A	5.8	0.08	N/A	300	11
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.6	L	B	19.8	0.13	N/A	150	34
								T	B	19.1	0.03	N/A	-	11
								R	A	0.0	-	N/A	full	75
					WB	C	20.1	L	C	20.1	0.17	N/A	-	43
								T	B	19.0	0.01	N/A	-	7
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.7	L	C	21.2	0.63	N/A	140	94
								T	A	8.2	0.14	N/A	-	66
								R	A	7.9	0.07	N/A	-	1
					SB	B	13.8	L	D	49.9	0.41	N/A	260	9
								T	B	13.3	0.26	N/A	-	100
								R	B	12.3	0.06	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1.3	LTR	A	7.7	0.014	N/A	-	-
					NB	B	10.3	LTR	B	10.3	0.044	N/A	-	-
					SB	A	9	LTR	A	9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.3	TL	A	8	0.02	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.077	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8.1	0.016	N/A	-	-
					NB	B	10.7	LR	B	10.7	0.055	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.017	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.011	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.4	LTR	A	7.6	0.005	N/A	-	-
					NB	A	9.7	LTR	A	9.7	0.032	N/A	-	-
					SB	B	12.4	LTR	B	12.4	0.243	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table *24*: Phase 4 PM Intersection Analysis

2027 Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	C	20.9	-	C	21.3	0.38	N/A	-	-
								TL	A	0.0	0.00	N/A	-	155
								R	C	20.4	0.27	N/A	180	42
					WB	C	25.9	-	C	25.9	0.68	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#249
								-	A	0.0	0.00	N/A	-	-
					NB	B	19.2	L	B	12.6	0.39	N/A	480	79
								TR	A	0.0	0.00	N/A	-	416
								-	C	21.4	0.84	N/A	-	-
					SB	B	16.8	L	B	15.4	0.33	N/A	430	43
								T	B	17.7	0.50	N/A	-	218
								R	B	15.2	0.17	N/A	430	29
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	18.1	-	B	16.6	0.19	N/A	-	-
								TL	A	0.0	0.00	N/A	-	59
								R	B	18.9	0.54	N/A	150	40
					WB	B	16.3	-	B	16.3	0.14	N/A	-	-
								TLR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.3	L	B	11.8	0.50	N/A	300	93
								T	A	8.3	0.69	N/A	-	242
								R	A	4.7	0.00	N/A	450	0
					SB	A	6.0	L	A	0.0	0.00	N/A	350	-
								T	A	6.2	0.41	N/A	-	115
								R	A	5.2	0.17	N/A	300	17
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	24.5	L	C	24.7	0.11	N/A	150	30
								T	C	24.1	0.06	N/A	-	15
								R	A	0.0	-	N/A	full	84
					WB	C	24.2	L	C	24.3	0.04	N/A	-	16
								T	C	24.1	0.05	N/A	-	13
								R	C	23.9	0.01	N/A	-	0
					NB	C	21.6	L	C	24.2	0.84	N/A	140	#315
								T	A	3.4	0.09	N/A	-	41
								R	A	3.2	0.01	N/A	-	0
					SB	B	17.6	L	A	0.0	0.00	N/A	260	-
								T	B	18.0	0.46	N/A	-	156
								R	B	16.1	0.17	N/A	260	12
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.6	LTR	A	7.8	0.011	N/A	-	-
					WB	A*	0.8	LTR	A	7.7	0.023	N/A	-	-
					NB	B	10.9	LTR	B	10.9	0.056	N/A	-	-
					SB	B	11.1	LTR	B	11.1	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.7	0.04	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.049	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.8	0.039	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.03	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.9	LR	A	8.9	0.037	N/A	-	-
					NB	A*	2.2	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.4	LTR	A	7.5	0.015	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.021	N/A	-	-
					SB	B	14.3	LTR	B	14.3	0.217	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

The total traffic conditions intersection analysis evaluated the study intersection. Based on the Connector Road Preliminary Concept Plan in **Figure 3**, the proposed two-lane connector road would create a four-legged intersection with the Amazon Access Point 1 on Grissom Parkway, with stop control on the connector road and driveway. An exclusive northbound left turn lane and southbound right turn lane on Grissom Parkway to the Lakes at Cocoa Grove were included in the analysis. Based on FDOT Exhibits 212-2 and 212-3, storage lengths of 285 feet were used. At the intersection of Grissom Parkway and Canaveral Groves Boulevard, the existing lane configurations were used in the analysis.

BUILDOUT TRAFFIC CONDITIONS

Buildout Phase 1 - 2023

The first phase of construction will take place in 2023. This phase will include 81 single family homes and is expected to generate 63 AM peak hour trips and 83 PM peak hour trips. A roadway and intersection analysis were conducted for Phase 1 as shown in **Tables 25**, **26, 27 and 28**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS except Grissom Parkway at Amazon Driveway. In the PM peak hour analysis, the TWSC intersection operates with an LOS F.

Table 25: Phase 1 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2023 Build	2023 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	12850	0.73	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10526	0.59	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6333	0.41	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	10633	0.68	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	24864	0.59	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	3714	0.24	No
	Grissom Pkwy to Alan Shepard Ave									

Table 26: Phase 1 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2023 Build	2023 Vol/MAV	Exceeds Standard	2023 Build	2023 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	730	0.46	No	1095	0.68	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	743	0.46	No	921	0.58	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	470	0.33	No	499	0.35	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	373	0.26	No	435	0.31	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	996	0.26	No	1337	0.36	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	275	0.2	No	369	0.26	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 27: Phase 1 AM Intersection Analysis

2023 Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.2	-	B	18.3	0.48	N/A	-	-
								TL	A	0.0	0.00	N/A	-	149
								R	B	18.1	0.48	N/A	180	41
					WB	B	18.7	-	B	18.7	0.48	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	107
								-	A	0.0	0.00	N/A	-	-
					NB	B	13.0	L	B	11.1	0.11	N/A	480	25
								TR	A	0.00	0.00	N/A	-	121
								-	B	13.5	0.35	N/A	-	-
					SB	B	13.5	L	B	10.2	0.17	N/A	430	44
								T	B	14.5	0.60	N/A	-	244
								R	B	11.2	0.09	N/A	430	6
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	D	EB	D	33.8	LTR	D	33.8	0.66	N/A	-	-
					WB	D	29.5	LTR	D	29.5	0.007	N/A	-	-
					NB	A*	0.8	L	A	9	0.029	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.1	L	B	19.2	0.08	N/A	150	24
								T	B	18.8	0.01	N/A	-	7
								R	A	0.0	-	N/A	full	65
					WB	B	19.8	L	B	19.8	0.18	N/A	-	42
								T	B	18.7	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	C	20.7	0.59	N/A	140	81
								T	A	8.0	0.12	N/A	-	60
								R	A	7.7	0.06	N/A	-	0
					SB	B	13.0	L	D	48.9	0.41	N/A	260	8
								T	B	12.4	0.23	N/A	-	91
								R	B	11.4	0.04	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	A	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.006	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.027	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.9	0.012	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.059	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.6	TL	A	8	0.008	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.029	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.6	LR	A	8.6	0.007	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.6	LTR	A	7.3	0.004	N/A	-	-
					NB	A	8.8	LTR	A	8.8	0.023	N/A	-	-
					SB	B	10.3	LTR	B	10.3	0.185	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 28: Phase 1 PM Intersection Analysis

2023 Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	19.0	-	B	19.1	0.30	N/A	-	-
								TL	A	0.0	0.00	N/A	-	114
								R	B	18.8	0.27	N/A	180	33
					WB	C	21.8	-	C	21.8	0.58	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	179
								-	A	0.0	0.00	N/A	-	-
					NB	B	16.1	L	B	10.5	0.32	N/A	480	73
								TR	A	0.0	0.00	N/A	-	361
								-	B	17.9	0.80	N/A	-	-
					SB	B	13.8	L	B	12.3	0.26	N/A	430	41
								T	B	14.6	0.43	N/A	-	179
								R	B	12.9	0.15	N/A	430	25
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	E	47.2	LTR	E	47.2	0.655	N/A	-	-
					WB	F	50.1	LTR	F	50.1	0.396	N/A	-	-
					NB	A*	1.7	L	A	8.9	0.144	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.4	L	C	23.5	0.06	N/A	150	18
								T	C	23.2	0.03	N/A	-	8
								R	A	0.0	-	N/A	full	74
					WB	C	23.3	L	C	23.4	0.05	N/A	-	15
								T	C	23.2	0.04	N/A	-	9
								R	C	23.1	0.01	N/A	-	0
					NB	B	17.7	L	C	20.0	0.77	N/A	140	#212
								T	A	3.1	0.08	N/A	-	38
								R	A	2.9	0.01	N/A	-	0
					SB	B	15.0	L	A	0.0	0.00	N/A	260	-
								T	B	15.3	0.40	N/A	-	149
								R	B	13.5	0.10	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.7	0.008	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.014	N/A	-	-
					NB	B	10.4	LTR	B	10.4	0.03	N/A	-	-
					SB	B	10.4	LTR	B	10.4	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.032	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.034	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.6	TL	A	7.6	0.018	N/A	-	-
					NB	A	9.2	LR	A	9.2	0.016	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.021	N/A	-	-
					NB	A*	2.2	TL	A	7.3	0.007	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0.0	-	N/A	-	-
					WB	A*	0.6	LTR	A	7.3	0.014	N/A	-	-
					NB	A	8.9	LTR	A	8.9	0.016	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.148	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Buildout Phase 1 – 2023 Mitigated

Based on the results of the phase 1 analysis it was determined that improvements would be necessary for the intersection of Grissom Parkway at Amazon Driveway to operate at an acceptable LOS. Since the westbound approach is a private drive to amazon, additional turn lanes were evaluated for the eastbound proposed connector road. Based on the analysis it was determined the additional turn lane would provide adequate mitigation to the delay at the intersection for this phase. The results of the mitigated analysis

are shown in **Tables 29** and **30**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 29: Phase 1 AM Intersection Analysis (Mitigated)

2023 Build AM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.3	-	B	18.4	0.49	N/A	-	-
								TL	A	0.0	0.00	N/A	-	140
								R	B	18.2	0.49	N/A	180	39
					WB	B	18.7	-	B	18.7	0.49	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	105
								-	A	0.0	0.00	N/A	-	-
					NB	B	12.5	L	B	11.2	0.06	N/A	480	16
								TR	A	0.00	0.00	N/A	-	82
								-	B	12.7	0.22	N/A	-	-
					SB	B	12.3	L	B	10.0	0.15	N/A	430	44
								T	B	13.2	0.52	N/A	-	218
								R	B	10.6	0.08	N/A	430	8
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	D	EB	C	21	-	-	-	-	-	-	-
								TL	D	29.6	0.387	N/A	-	-
								R	C	15.1	0.273	N/A	150	-
					WB	D	29.5	LTR	D	29.5	0.007	N/A	-	-
					NB	A*	0.8	L	A	9	0.029	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.1	L	B	19.2	0.08	N/A	150	24
								T	B	18.8	0.01	N/A	-	7
								R	A	0.0	-	N/A	full	65
					WB	B	19.8	L	B	19.8	0.18	N/A	-	42
								T	B	18.7	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	C	20.7	0.59	N/A	140	81
								T	A	8.0	0.12	N/A	-	60
								R	A	7.7	0.06	N/A	-	0
					SB	B	13.0	L	D	48.9	0.41	N/A	260	8
								T	B	12.4	0.23	N/A	-	91
								R	B	11.4	0.04	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	A	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.006	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.027	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.9	0.012	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.059	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.6	TL	A	8	0.008	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.029	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.6	LR	A	8.6	0.007	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.6	LTR	A	7.3	0.004	N/A	-	-
					NB	A	8.8	LTR	A	8.8	0.023	N/A	-	-
					SB	B	10.3	LTR	B	10.3	0.185	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 30: Phase 1 PM Intersection Analysis (Mitigated)

2023 Build PM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	18.3	0.35	N/A	-	-
								TL	A	0.0	0.00	N/A	-	125
								R	B	17.4	0.20	N/A	180	16
					WB	C	20.4	-	C	20.4	0.58	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	181
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.6	L	B	10.2	0.28	N/A	480	66
								TR	A	0.0	0.00	N/A	-	320
								-	B	17.3	0.78	N/A	-	-
					SB	B	13.0	L	B	11.7	0.25	N/A	430	41
								T	B	13.7	0.36	N/A	-	144
								R	B	12.3	0.10	N/A	430	8
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	D	33.6	-	-	-	-	-	-	-
								TL	F	70.2	0.518	N/A	-	-
								R	B	11.3	0.138	N/A	150	-
					WB	F	50.1	LTR	F	50.1	0.396	N/A	-	-
					NB	A*	1.7	L	A	8.9	0.144	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.4	L	C	23.5	0.06	N/A	150	18
								T	C	23.2	0.03	N/A	-	8
								R	A	0.0	-	N/A	full	74
					WB	C	23.3	L	C	23.4	0.05	N/A	-	15
								T	C	23.2	0.04	N/A	-	9
								R	C	23.1	0.01	N/A	-	0
					NB	B	17.7	L	C	20.0	0.77	N/A	140	#212
								T	A	3.1	0.08	N/A	-	38
								R	A	2.9	0.01	N/A	-	0
					SB	B	15.0	L	A	0.0	0.00	N/A	260	-
								T	B	15.3	0.40	N/A	-	149
								R	B	13.5	0.10	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.7	0.008	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.014	N/A	-	-
					NB	B	10.4	LTR	B	10.4	0.03	N/A	-	-
					SB	B	10.4	LTR	B	10.4	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.032	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.034	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.6	TL	A	7.6	0.018	N/A	-	-
					NB	A	9.2	LR	A	9.2	0.016	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.021	N/A	-	-
					NB	A*	2.2	TL	A	7.3	0.007	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0.0	-	N/A	-	-
					WB	A*	0.6	LTR	A	7.3	0.014	N/A	-	-
					NB	A	8.9	LTR	A	8.9	0.016	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.148	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Buildout Phase 2 - 2025

The second phase of construction will take place in 2025. This phase will include a total of 184 single family homes and is expected to generate 136 AM peak hour trips and 183 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 2 as shown in **Tables 31, 32, 33A** and **33B**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS except Grissom Parkway at Amazon Driveway. In the PM peak hour analysis, the TWSC intersection operates with an LOS E and LOS F, respectively.

Table 31: Phase 2 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2025 Build	2025 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13527	0.76	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11249	0.64	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6971	0.45	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11365	0.73	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	26693	0.64	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	4680	0.3	No
	Grissom Pkwy to Alan Shepard Ave									

Table 32: Phase 2 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2025 Build	2025 Vol/MAV	Exceeds Standard	2025 Build	2025 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	803	0.5	No	1208	0.75	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	798	0.5	No	1003	0.63	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	516	0.37	No	550	0.39	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	404	0.29	No	480	0.34	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1069	0.28	No	1444	0.38	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	340	0.24	No	461	0.33	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 33A: Phase 2 AM Intersection Analysis

2025 Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	18.3	0.51	N/A	-	-
								TL	A	0.0	0.00	N/A	-	168
								R	B	17.8	0.48	N/A	180	43
					WB	B	18.8	-	B	18.8	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	118
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.2	L	B	11.9	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	138
								-	B	14.7	0.42	N/A	-	-
					SB	B	14.7	L	B	11.0	0.19	N/A	430	45
								T	B	15.9	0.66	N/A	-	258
								R	B	12.0	0.09	N/A	430	7
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	E	EB	D	26.4	-	-	-	-	-	-	-
								TL	E	40.2	0.541	N/A	-	-
								R	C	16.7	0.35	N/A	150	-
					WB	E	36.1	LTR	E	36.1	0.009	N/A	-	-
					NB	A*	1	L	A	9.2	0.04	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20.0	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.9	0.016	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.066	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	8	0.012	N/A	-	-
					NB	B	10.4	LR	B	10.4	0.041	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.011	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.5	LTR	A	7.4	0.004	N/A	-	-
					NB	A	9.1	LTR	A	9.1	0.027	N/A	-	-
					SB	B	11	LTR	B	11	0.206	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 33B: Phase 2 PM Intersection Analysis

2025 Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	C	20.0	-	C	20.3	0.34	N/A	-	-
								TL	A	0.0	0.00	N/A	-	135
								R	B	19.7	0.27	N/A	180	39
					WB	C	24.0	-	C	24.0	0.63	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	213
								-	A	0.0	0.00	N/A	-	-
					NB	B	17.7	L	B	11.6	0.36	N/A	480	76
								TR	A	0.0	0.00	N/A	-	395
								-	B	19.7	0.83	N/A	-	-
					SB	B	15.4	L	B	13.8	0.29	N/A	430	42
								T	B	16.2	0.47	N/A	-	207
								R	B	14.0	0.16	N/A	430	29
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	F	57.1	LTR	F	135.9	0.799	N/A	-	-
					WB	F	80.3	LTR	F	80.3	0.538	N/A	-	-
					NB	A*	2.1	L	A	9.3	0.19	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	24	L	C	24.0	0.08	N/A	150	23
								T	C	23.7	0.04	N/A	-	10
								R	A	0.0	-	N/A	full	79
					WB	C	23.7	L	C	23.8	0.04	N/A	-	16
								T	C	23.7	0.04	N/A	-	10
								R	C	23.5	0.01	N/A	-	0
					NB	B	19.2	L	C	21.6	0.80	N/A	140	#268
								T	A	3.2	0.08	N/A	-	39
								R	A	3.0	0.01	N/A	-	0
					SB	B	16.1	L	A	0.0	0.00	N/A	260	-
								T	B	16.5	0.43	N/A	-	153
								R	B	14.6	0.12	N/A	260	3
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.009	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.019	N/A	-	-
					NB	B	10.7	LTR	B	10.7	0.043	N/A	-	-
					SB	B	10.7	LTR	B	10.7	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.037	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.039	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	7.7	0.028	N/A	-	-
					NB	A	9.3	LR	A	9.3	0.023	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.028	N/A	-	-
					NB	A*	2.3	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.5	LTR	A	7.4	0.014	N/A	-	-
					NB	A	9.1	LTR	A	9.1	0.017	N/A	-	-
					SB	B	12.2	LTR	B	12.2	0.175	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Buildout Phase 2 – 2025 Mitigated

Based on the results of the phase 2 analysis it was determined that improvements would be necessary for the intersection of Grissom Parkway at Amazon Driveway to operate at an acceptable LOS. For mitigation the two-way stop controlled intersection was changed to a traffic signal with standard operating plan #1 and 60 second cycle length. The results of the mitigated analysis are shown in **Tables 34A** and **34B**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 34A: Phase 2 Daily Roadway Analysis (Mitigated)

2025 (Mitigated) Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	18.3	0.51	N/A	-	-
								TL	A	0.0	0.00	N/A	-	168
								R	B	17.8	0.48	N/A	180	43
					WB	B	18.8	-	B	18.8	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	118
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.2	L	B	11.9	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	138
								-	B	14.7	0.42	N/A	-	-
					SB	B	14.7	L	B	11.0	0.19	N/A	430	45
								T	B	15.9	0.66	N/A	-	258
								R	B	12.0	0.09	N/A	430	7
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	13.7	-	B	12.8	0.23	N/A	-	-
								TL	A	0.0	0.00	N/A	-	76
								R	B	14.4	0.51	N/A	150	41
					WB	B	13.4	-	B	13.4	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	7.6	L	B	13.8	0.11	N/A	300	16
								T	A	6.8	0.34	N/A	-	77
								R	A	5.6	0.00	N/A	450	0
					SB	A	9.7	L	A	0.0	0.00	N/A	350	-
								T	A	10.0	0.76	N/A	-	211
								R	A	5.8	0.07	N/A	300	11
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20.0	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.9	0.016	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.066	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	8	0.012	N/A	-	-
					NB	B	10.4	LR	B	10.4	0.041	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.011	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.5	LTR	A	7.4	0.004	N/A	-	-
					NB	A	9.1	LTR	A	9.1	0.027	N/A	-	-
					SB	B	11	LTR	B	11	0.206	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 34B: Phase 2 Daily Roadway Analysis (Mitigated)

2025 (Mitigated) Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	C	20.0	-	C	20.3	0.34	N/A	-	-
								TL	A	0.0	0.00	N/A	-	135
								R	B	19.7	0.27	N/A	180	39
					WB	C	24.0	-	C	24.0	0.63	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	213
								-	A	0.0	0.00	N/A	-	-
					NB	B	17.7	L	B	11.6	0.36	N/A	480	76
								TR	A	0.0	0.00	N/A	-	395
								-	B	19.7	0.83	N/A	-	-
					SB	B	15.4	L	B	13.8	0.29	N/A	430	42
								T	B	16.2	0.47	N/A	-	207
								R	B	14.0	0.16	N/A	430	29
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	15.0	-	B	14.2	0.15	N/A	-	-
								TL	A	0.0	0.00	N/A	-	51
								R	B	15.4	0.40	N/A	150	36
					WB	B	14.1	-	B	14.1	0.13	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.5	L	B	11.1	0.40	N/A	300	66
								T	A	9.0	0.72	N/A	-	227
								R	A	5.0	0.00	N/A	450	0
					SB	A	6.5	L	A	0.0	0.00	N/A	350	-
								T	A	6.7	0.43	N/A	-	110
								R	A	5.5	0.15	N/A	300	16
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	24	L	C	24.0	0.08	N/A	150	23
								T	C	23.7	0.04	N/A	-	10
								R	A	0.0	-	N/A	full	79
					WB	C	23.7	L	C	23.8	0.04	N/A	-	16
								T	C	23.7	0.04	N/A	-	10
								R	C	23.5	0.01	N/A	-	0
					NB	B	19.2	L	C	21.6	0.80	N/A	140	#268
								T	A	3.2	0.08	N/A	-	39
								R	A	3.0	0.01	N/A	-	0
					SB	B	16.1	L	A	0.0	0.00	N/A	260	-
								T	B	16.5	0.43	N/A	-	153
								R	B	14.6	0.12	N/A	260	3
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.009	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.019	N/A	-	-
					NB	B	10.7	LTR	B	10.7	0.043	N/A	-	-
					SB	B	10.7	LTR	B	10.7	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.037	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.039	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	7.7	0.028	N/A	-	-
					NB	A	9.3	LR	A	9.3	0.023	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.028	N/A	-	-
					NB	A*	2.3	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.5	LTR	A	7.4	0.014	N/A	-	-
					NB	A	9.1	LTR	A	9.1	0.017	N/A	-	-
					SB	B	12.2	LTR	B	12.2	0.175	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Buildout Phase 3 - 2026

The third phase of construction will take place in 2026. This phase will include a total of 237 single family homes and is expected to generate 174 AM peak hour trips and 233 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 3 as shown in **Tables 35, 36, 37** and **38**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 35: Phase 3 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2026 Build	2026 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13872	0.78	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11615	0.66	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7302	0.47	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11745	0.75	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	27637	0.66	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	5157	0.33	No
	Grissom Pkwy to Alan Shepard Ave									

Table 36: Phase 3 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2026 Build	2026 Vol/MAV	Exceeds Standard	2026 Build	2026 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	875	0.55	No	1317	0.82	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	850	0.53	No	1057	0.66	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	544	0.39	No	582	0.41	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	425	0.3	No	513	0.36	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1132	0.3	No	1534	0.41	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	433	0.31	No	583	0.41	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 37: Phase 3 AM Intersection Analysis

2026 Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	17.8	-	B	18.2	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	182
								R	B	17.3	0.46	N/A	180	44
					WB	B	19.0	-	B	19.0	0.53	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	128
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.5	L	B	12.7	0.15	N/A	480	27
								TR	A	0.0	0.00	N/A	-	161
								-	B	16.0	0.49	N/A	-	-
					SB	B	15.9	L	B	11.8	0.21	N/A	430	46
								T	B	17.3	0.70	N/A	-	268
								R	B	12.8	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	14.9	-	B	13.4	0.29	N/A	-	-
								TL	A	0.0	0.00	N/A	-	98
								R	B	15.9	0.64	N/A	150	46
					WB	B	14.2	-	B	14.2	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	8.0	L	B	14.6	0.17	N/A	300	21
								T	A	6.9	0.34	N/A	-	78
								R	A	5.6	0.00	N/A	450	0
					SB	A	9.8	L	A	0.0	0.00	N/A	350	-
								T	B	10.1	0.77	N/A	-	217
								R	A	5.9	0.09	N/A	300	12
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.6	L	B	19.7	0.13	N/A	150	34
								T	B	19.0	0.03	N/A	-	11
								R	A	0.0	-	N/A	full	74
					WB	C	20.0	L	C	20.1	0.17	N/A	-	43
								T	B	18.9	0.01	N/A	-	7
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.7	L	C	21.2	0.63	N/A	140	92
								T	A	8.2	0.14	N/A	-	64
								R	A	7.9	0.07	N/A	-	0
					SB	B	13.7	L	D	49.8	0.41	N/A	260	9
								T	B	13.2	0.26	N/A	-	98
								R	B	12.2	0.06	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1.3	LTR	A	7.7	0.013	N/A	-	-
					NB	B	10.2	LTR	B	10.2	0.043	N/A	-	-
					SB	A	9	LTR	A	9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.3	TL	A	8	0.02	N/A	-	-
					NB	B	10.4	LR	B	10.4	0.074	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8.1	0.014	N/A	-	-
					NB	B	10.6	LR	B	10.6	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.9	LR	A	8.9	0.016	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.4	LTR	A	7.6	0.005	N/A	-	-
					NB	A	9.6	LTR	A	9.6	0.03	N/A	-	-
					SB	B	12.3	LTR	B	12.3	0.242	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 38: Phase 3 PM Intersection Analysis

2026 Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	C	20.9	-	C	21.3	0.38	N/A	-	-
								TL	A	0.0	0.00	N/A	-	154
								R	C	20.3	0.26	N/A	180	41
					WB	C	26.1	-	C	26.1	0.68	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#260
								-	A	0.0	0.00	N/A	-	-
					NB	B	19.4	L	B	12.7	0.39	N/A	480	78
								TR	A	0.0	0.00	N/A	-	417
								-	C	21.5	0.84	N/A	-	-
					SB	B	16.9	L	B	15.4	0.33	N/A	430	42
								T	B	17.9	0.51	N/A	-	226
								R	B	15.2	0.16	N/A	430	29
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	17.9	-	B	16.4	0.19	N/A	-	-
								TL	A	0.0	0.00	N/A	-	59
								R	B	18.7	0.54	N/A	150	40
					WB	B	16.1	-	B	16.1	0.14	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.2	L	B	11.8	0.50	N/A	300	92
								T	A	8.3	0.68	N/A	-	234
								R	A	4.7	0.00	N/A	450	0
					SB	A	6.0	L	A	0.0	0.00	N/A	350	-
								T	A	6.3	0.40	N/A	-	113
								R	A	5.3	0.17	N/A	300	17
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	24.4	L	C	24.5	0.11	N/A	150	29
								T	C	24.0	0.06	N/A	-	15
								R	A	0.0	-	N/A	full	82
					WB	C	24.0	L	C	24.1	0.04	N/A	-	16
								T	C	23.9	0.05	N/A	-	13
								R	C	23.7	0.01	N/A	-	0
					NB	C	21.1	L	C	23.7	0.83	N/A	140	#303
								T	A	3.4	0.08	N/A	-	40
								R	A	3.2	0.01	N/A	-	0
					SB	B	17.3	L	A	0.0	0.00	N/A	260	-
								T	B	17.8	0.45	N/A	-	154
								R	B	15.9	0.17	N/A	260	12
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.01	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.022	N/A	-	-
					NB	B	10.7	LTR	B	10.7	0.054	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.7	0.039	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.048	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.7	0.033	N/A	-	-
					NB	A	9.4	LR	A	9.4	0.026	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.9	LR	A	8.9	0.036	N/A	-	-
					NB	A*	2.3	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.4	LTR	A	7.5	0.015	N/A	-	-
					NB	A	9.5	LTR	A	9.5	0.019	N/A	-	-
					SB	B	14.2	LTR	B	14.2	0.214	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Buildout Phase 4 – 2027

The fourth and final phase of construction will take place in 2027. This phase will include all 350 single family homes and is expected to generate 174 AM peak hour trips and 233 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 4 as shown in **Tables 39, 40, 41** and **42**. The analysis determined that all study area roadway segments and intersections would operate at an acceptable capacity and LOS.

Table 39: Phase 4 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2027 Build	2027 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	14334	0.81	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	12151	0.69	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7421	0.48	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11857	0.76	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	28809	0.69	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6150	0.39	No
	Grissom Pkwy to Alan Shepard Ave									

Table 40: Phase 4 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2027 Build	2027 Vol/MAV	Exceeds Standard	2027 Build	2027 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	977	0.61	No	1475	0.92	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	977	0.61	No	1136	0.71	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	578	0.41	No	618	0.44	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	455	0.32	No	550	0.39	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1217	0.32	No	1663	0.44	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	569	0.4	No	651	0.46	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 41: 2027 Buildout AM Intersection Analysis

2027 Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	17.4	-	B	17.9	0.53	N/A	-	-
								TL	A	0.0	0.00	N/A	-	199
								R	B	16.8	0.44	N/A	180	46
					WB	B	19.5	-	B	19.5	0.55	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	140
								-	A	0.0	0.00	N/A	-	-
					NB	B	17.5	L	B	13.7	0.17	N/A	480	29
								TR	A	0.0	0.00	N/A	-	195
								-	B	18.1	0.62	N/A	-	-
					SB	B	17.7	L	B	13.0	0.25	N/A	430	46
								T	B	19.3	0.76	N/A	-	280
								R	B	13.8	0.11	N/A	430	10
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	19.6	-	B	14.9	0.38	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#158
								-	C	22.9	0.78	N/A	-	63
					WB	B	16.2	-	B	16.2	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	8.9	L	B	16.2	0.23	N/A	300	29
								T	A	7.2	0.34	N/A	-	81
								R	A	5.8	0.00	N/A	450	0
					SB	B	10.1	L	A	0.0	0.00	N/A	350	-
								T	B	10.5	0.76	N/A	-	224
								R	A	6.2	0.10	N/A	300	12
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.9	L	C	20.0	0.17	N/A	150	44
								T	B	19.1	0.04	N/A	-	15
								R	A	0.0	-	N/A	full	80
					WB	C	20.1	L	C	20.2	0.17	N/A	-	44
								T	B	19.0	0.02	N/A	-	8
								R	A	0.0	0.00	N/A	-	-
					NB	B	17.1	L	C	21.5	0.65	N/A	140	98
								T	A	8.3	0.14	N/A	-	66
								R	A	8.0	0.07	N/A	-	1
					SB	B	14.1	L	D	50.3	0.41	N/A	260	9
								T	B	13.7	0.27	N/A	-	101
								R	B	12.7	0.07	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1.6	LTR	A	7.7	0.019	N/A	-	-
					NB	B	10.4	LTR	B	10.4	0.057	N/A	-	-
					SB	A	9	LTR	A	9	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.5	TL	A	8	0.026	N/A	-	-
					NB	B	10.6	LR	B	10.6	0.086	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8.1	0.016	N/A	-	-
					NB	B	10.8	LR	B	10.8	0.056	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	9	LR	A	9	0.025	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.011	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	C	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.4	LTR	A	7.9	0.005	N/A	-	-
					NB	B	10.6	LTR	B	10.6	0.037	N/A	-	-
					SB	C	15.2	LTR	C	15.2	0.307	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 42: 2027 Buildout PM Intersection Analysis

2027 Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	C	EB	C	22.4	-	C	23.0	0.41	N/A	-	-
								TL	A	0.0	0.00	N/A	-	176
								R	C	21.5	0.25	N/A	180	43
					WB	C	32.0	-	C	32.0	0.73	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#318
								-	A	0.0	0.00	N/A	-	-
					NB	C	22.0	L	B	14.6	0.43	N/A	480	78
								TR	A	0.0	0.00	N/A	-	451
								-	C	24.3	0.87	N/A	-	-
					SB	B	19.3	L	B	17.9	0.37	N/A	430	43
								T	C	20.3	0.56	N/A	-	254
								R	B	16.8	0.17	N/A	430	29
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	19.8	-	B	17.7	0.22	N/A	-	-
								TL	A	0.0	0.00	N/A	-	64
								R	C	21.0	0.63	N/A	150	42
					WB	B	17.3	-	B	17.3	0.15	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.1	L	B	12.2	0.55	N/A	300	109
								T	A	7.8	0.65	N/A	-	234
								R	A	4.5	0.00	N/A	450	0
					SB	A	5.7	L	A	0.0	0.00	N/A	350	-
								T	A	6.0	0.39	N/A	-	114
								R	A	5.1	0.18	N/A	300	18
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	25.1	L	C	25.3	0.15	N/A	150	38
								T	C	24.5	0.07	N/A	-	19
								R	A	0.0	-	N/A	full	88
					WB	C	24.5	L	C	24.7	0.04	N/A	-	16
								T	C	24.3	0.05	N/A	-	15
								R	C	24.1	0.01	N/A	-	0
					NB	C	24.6	L	C	27.5	0.87	N/A	140	#355
								T	A	3.6	0.09	N/A	-	41
								R	A	3.4	0.01	N/A	-	0
					SB	B	18.8	L	A	0.0	0.00	N/A	260	-
								T	B	19.3	0.47	N/A	-	156
								R	B	17.5	0.22	N/A	260	22
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.011	N/A	-	-
					WB	A*	0.9	LTR	A	7.7	0.027	N/A	-	-
					NB	B	10.9	LTR	B	10.9	0.072	N/A	-	-
					SB	B	11.2	LTR	B	11.2	0.017	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.7	0.044	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.059	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.8	0.039	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.03	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	9	LR	A	9	0.047	N/A	-	-
					NB	A*	2.2	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	C	EB	A*	0	LTR	A	0	-	N/A	-	-
					WB	A*	0.3	LTR	A	7.6	0.016	N/A	-	-
					NB	A	10.6	LTR	B	10.6	0.025	N/A	-	-
					SB	B	19.2	LTR	C	19.2	0.299	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

ALTERNATIVE ANALYSIS

An alternative access road was analyzed to determine if existing roads could be utilized to create the new connection for the proposed development as well as the community directly east of the proposed development.

And the additional intersections analyzed were:

1. Angelica Street at Cherokee Avenue
2. Angelica Street at SW Alan Shepard Avenue
3. Osage Street at SW Dakota Avenue
4. Citrus Boulevard at Hartville Avenue
5. Canaveral Groves Boulevard at Alan Shepard

Alternative Project Trip Distribution/Assignment

The alternative analysis shifts the Proposed Connector Road to connect the existing local streets of Osage Street and Angelica Street to Grissom Parkway. The project trip distribution was adjusted due to the availability of additional routes for project traffic, utilizing the internal network of the existing subdivision, via the intersections along Angelica Street and Osage Street as shown in **Figure 15** and **Figure 16**. The adjusted Trip Assignment for the ultimate condition AM and PM is shown in **Figures 17** and **18**, respectively. Trip Assignment for the phase of construction are provided in **Appendix B.**

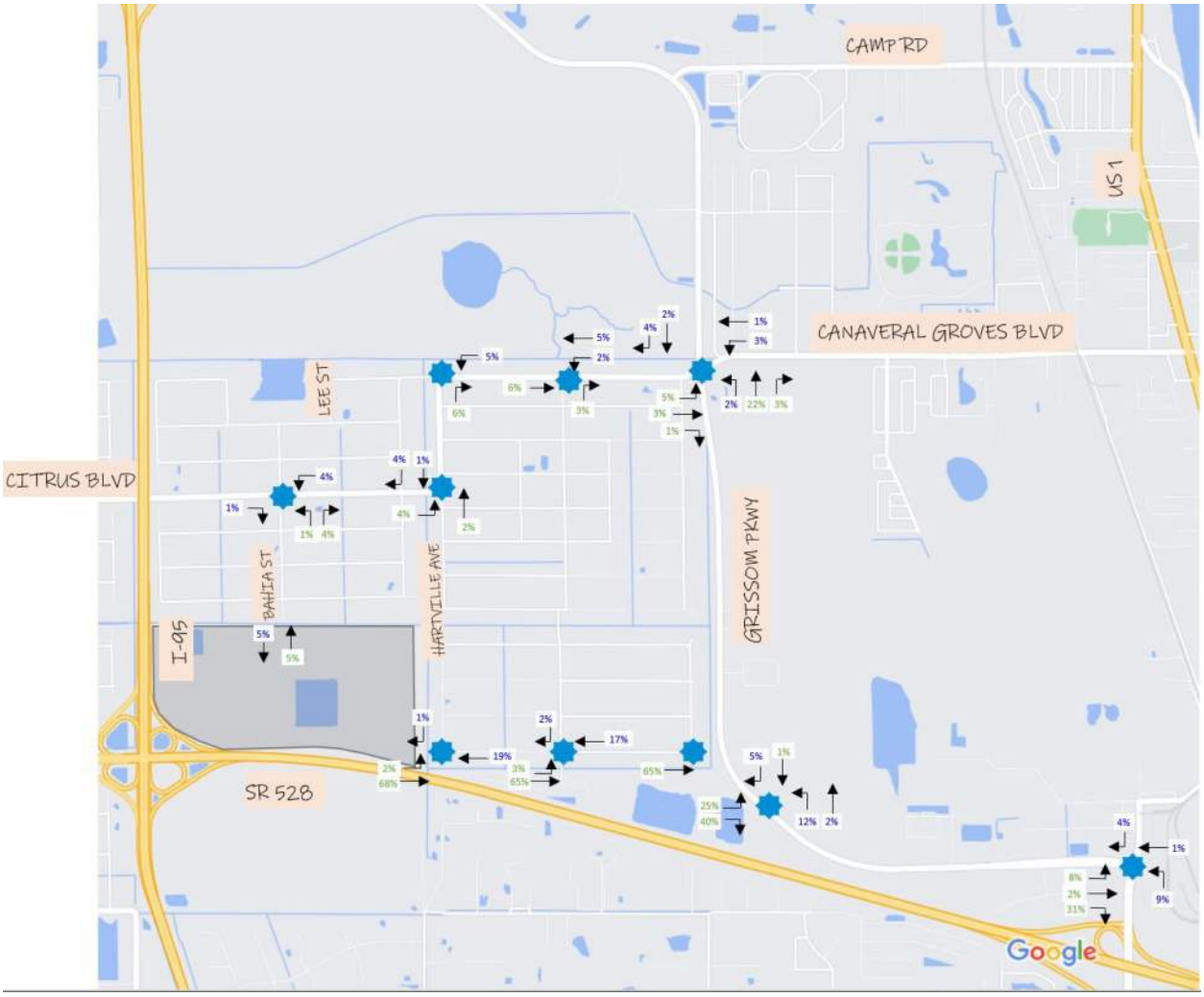


Figure 15: Alternative Trip Distribution AM

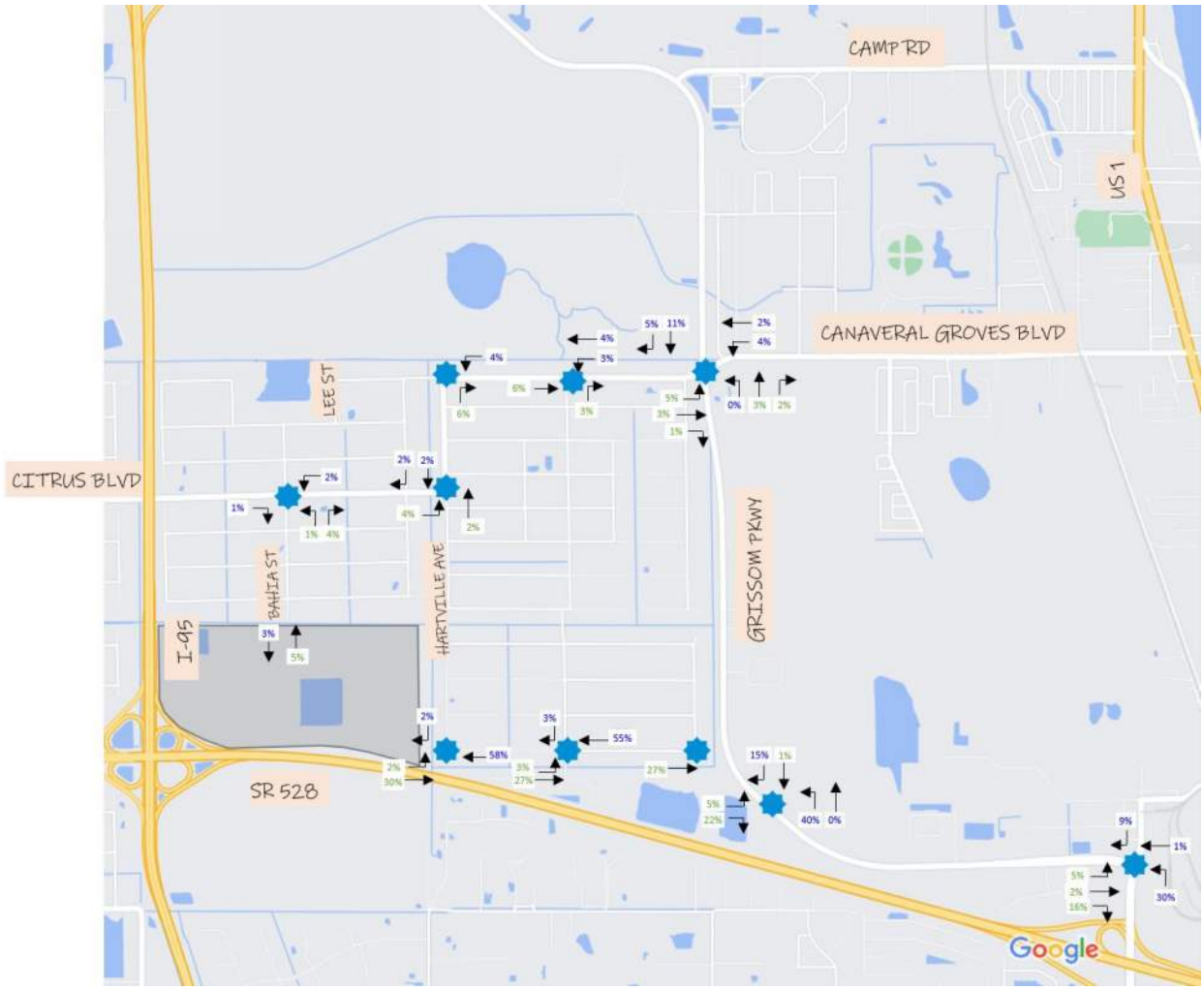


Figure 16: Alternative Trip Distribution PM

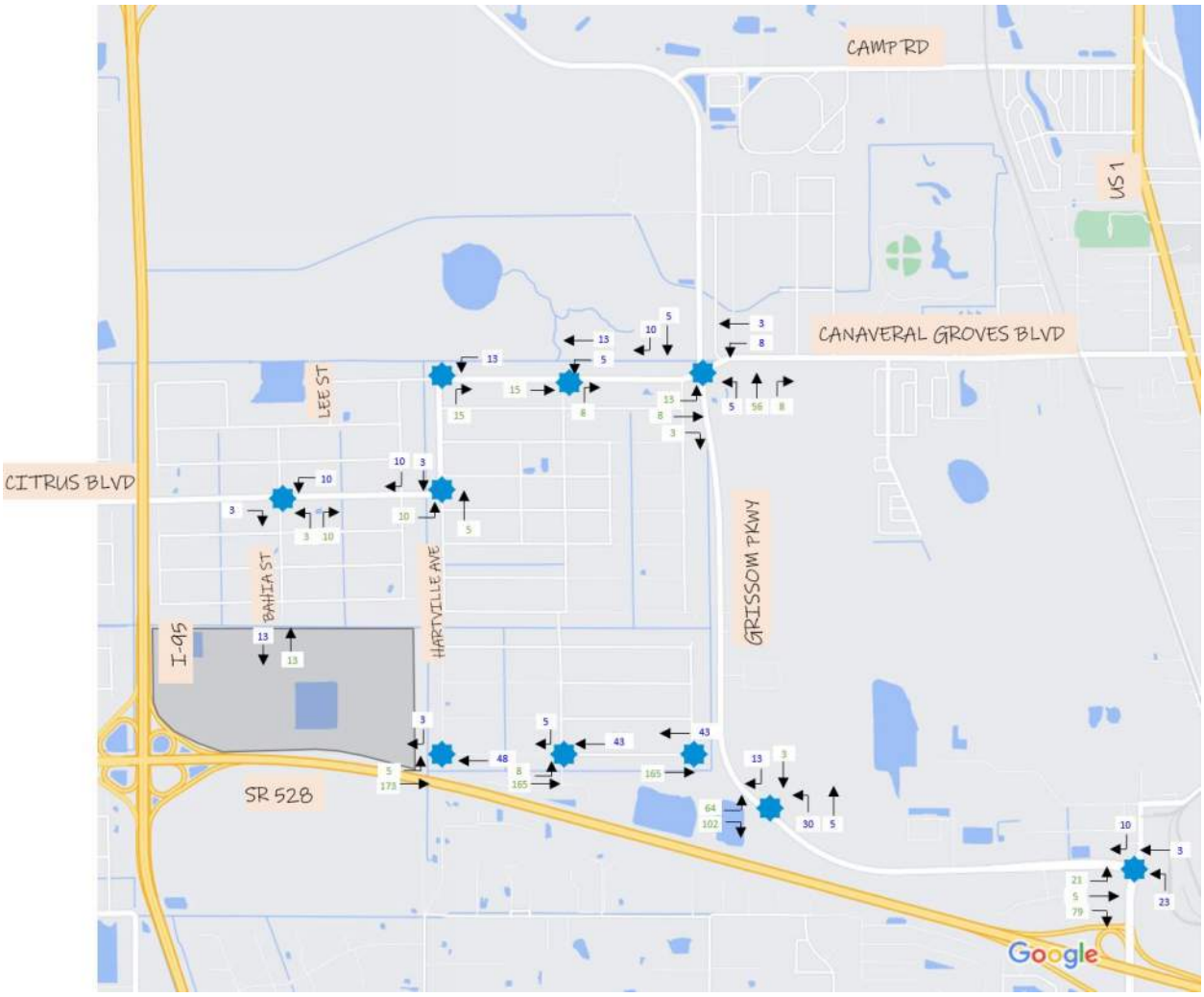


Figure 17: Alternative Trip Assignment AM

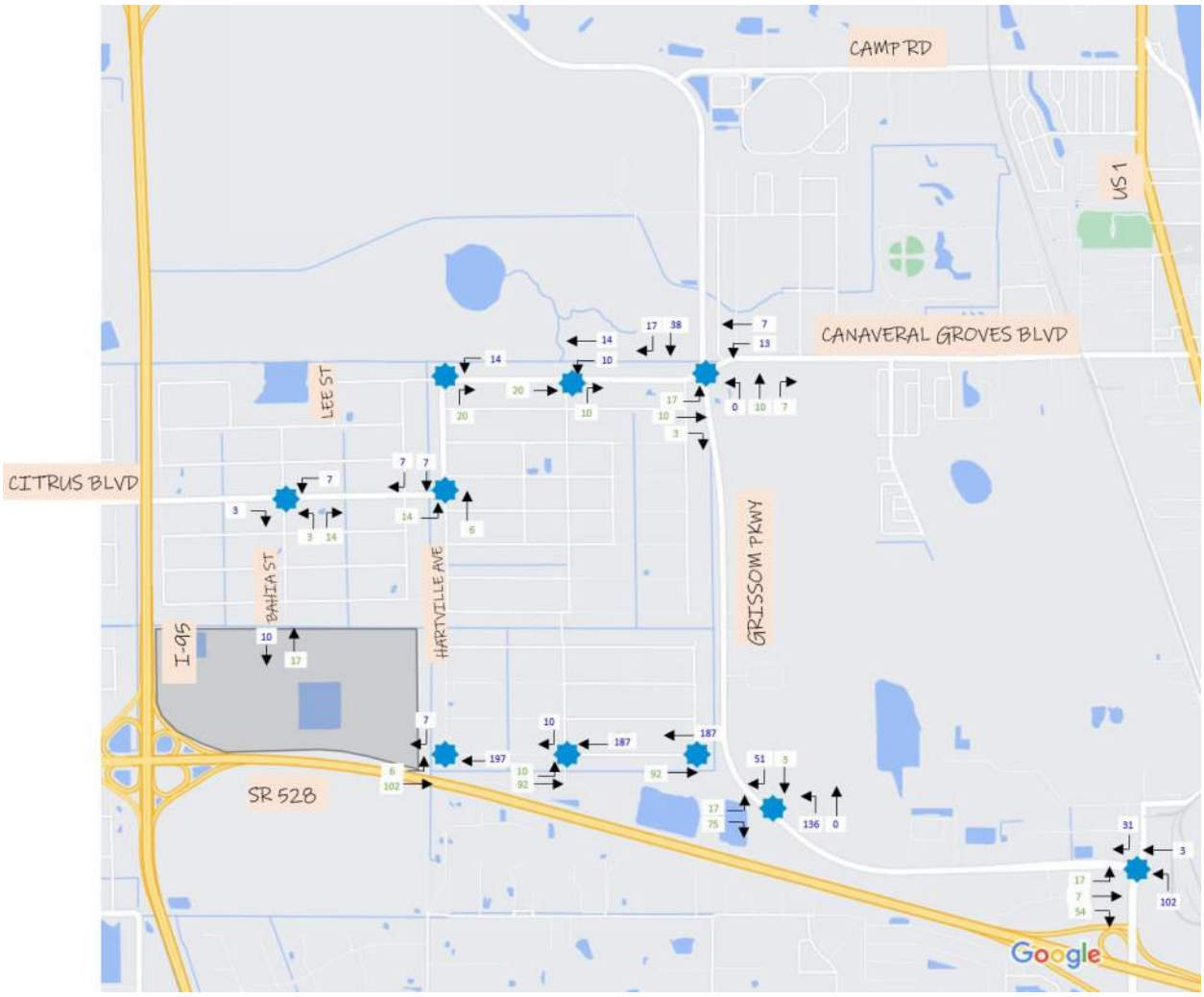


Figure 18: Alternative Trip Assignment PM

Alternative Rerouted Development Traffic

The existing development traffic reroute was updated based on the inclusion of additional intersections. The same trip generation and distribution used in the previous scenario was used, however, additional distribution was applied to the additional intersection that traffic could utilize to access the proposed connector road. The rerouted distribution is show in **Figure 19**.

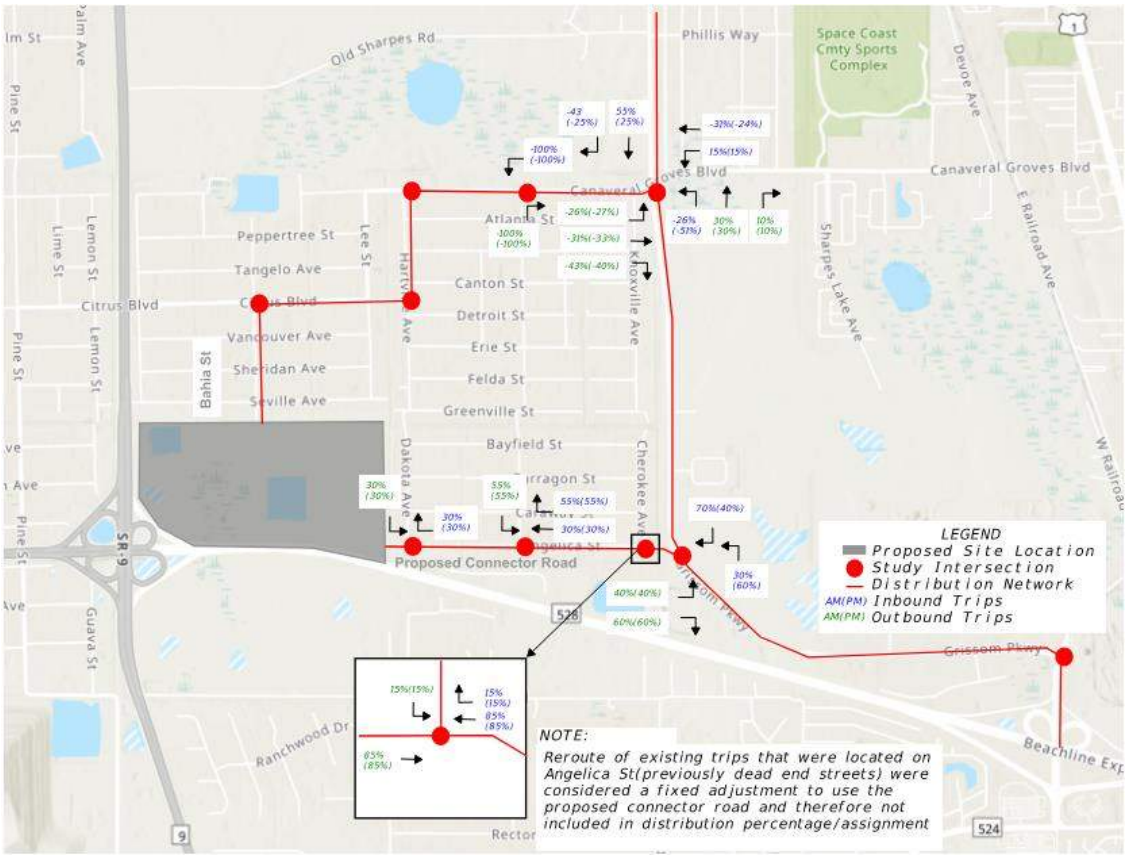


Figure 19: Rerouted Alternative Trip Distribution

Since the existing traffic at the additional intersections include the trips generated from homes that are also included in the rerouted trip generation the existing volumes were first reduced from the reroute before applying the distribution percentage. The existing volumes were then adjusted to redirect the trips in and out via the new proposed connector. The resulting total rerouted trip assignment is shown in **Figure 20**.

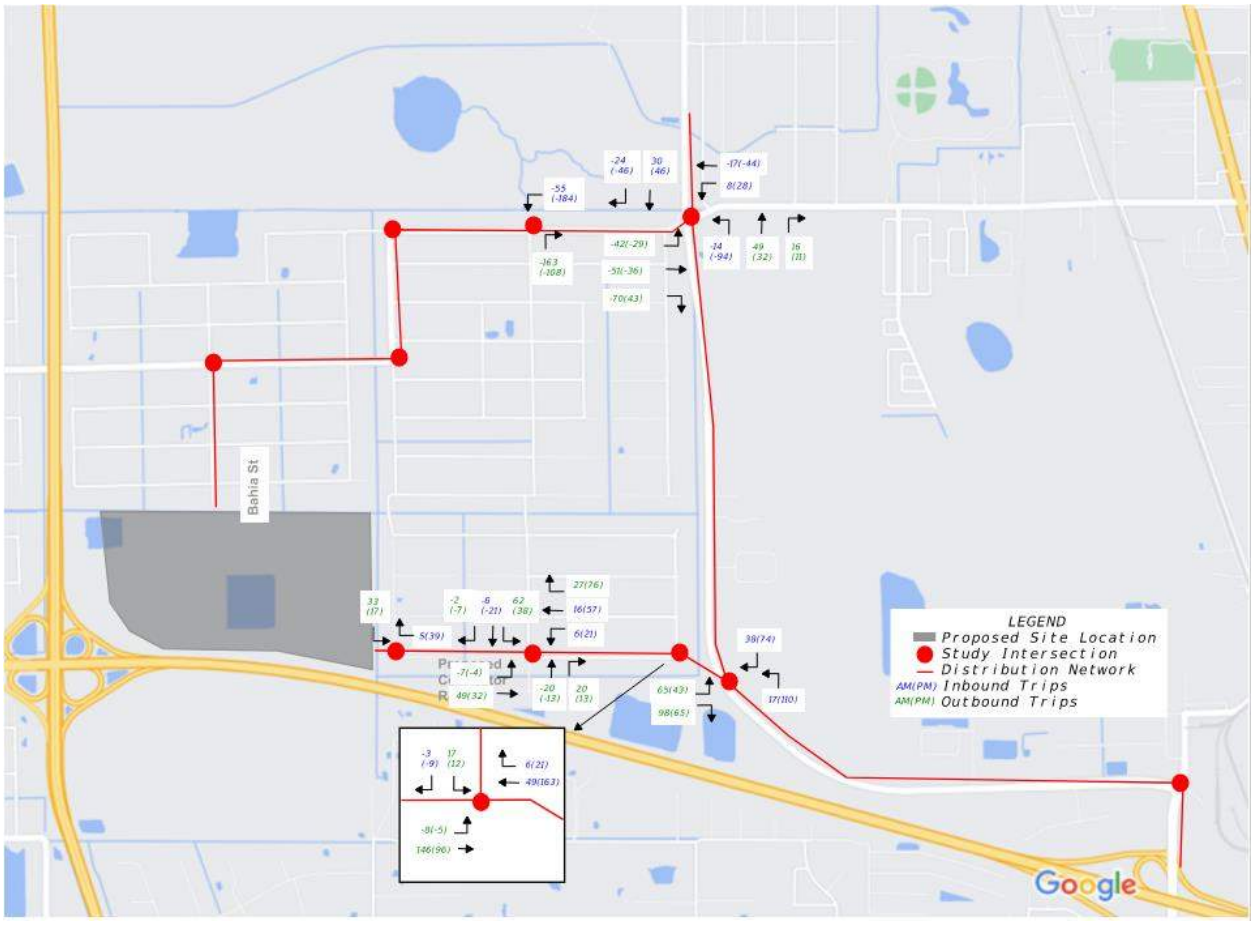


Figure 20: Rerouted Alternative Trip Assignment

Alternative Background Traffic Conditions – 2023, 2025, 2026, 2027

Background conditions were evaluated with the additional intersections using the same growth rates previously mentioned in **Table 6**. A minimum growth rate of 2% was applied to additional roadway segments as data was unavailable for historical AADT. Existing Development traffic re-route was updated based on the inclusion of additional intersections. Previous phase project trips were included in background analysis of phases 2-4 based on the alternative project trip distributions/assignments.

Alternative Background Phase 1 – 2023

Alternative background traffic volumes for phase 1 remains similar to previous background analysis. The inclusion of several additional intersections which will become part of the alternative proposed connector road is the primary change from the previous analysis. Roadway and intersection analysis were conducted for Phase 1 as shown in **Tables 43**, **44, 45, and 46**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 43: Phase 1 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2023 Bkgd	2023 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11518	0.65	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10252	0.58	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	8685	0.56	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	10547	0.68	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	24521	0.59	No
	Grissom Pkwy to SR 524									

Table 44: Phase 1 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2023 Bkgd	2023 Vol/MAV	Exceeds Standard	2023 Bkgd	2023 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	695	0.43	No	1042	0.65	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	709	0.44	No	898	0.56	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	684	0.49	No	788	0.56	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	412	0.29	No	469	0.33	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	971	0.26	No	1299	0.35	No
	Grissom Pkwy to SR 524												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 45: 2023 Alternative Background AM Intersection Analysis

2023 Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	19.1	0.64	N/A	-	-
								TL	A	0.0	0.00	N/A	-	222
								R	B	16.6	0.48	N/A	180	53
					WB	B	16.9	-	B	16.9	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	108
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.4	L	B	14.2	0.17	N/A	480	31
								TR	A	0.0	0.00	N/A	-	69
								-	B	16.1	0.22	N/A	-	-
					SB	B	17.4	L	B	13.2	0.17	N/A	430	44
								T	B	19.0	0.65	N/A	-	223
								R	B	15.3	0.16	N/A	430	21
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	C	WB	C	16.5	LR	C	16.5	0.003	N/A	-	-
					NB	-	0	T	-	-	-	N/A	-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-	N/A	-	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.1	L	B	19.1	0.06	N/A	150	20
								T	B	18.8	0.01	N/A	-	5
								R	A	0.0	-	N/A	full	63
					WB	B	19.9	L	B	19.9	0.18	N/A	-	42
								T	A	0.0	0.00	N/A	-	-
								R	A	0.0	0.00	N/A	-	-
					NB	B	15.9	L	C	20.5	0.59	N/A	140	79
								T	A	7.8	0.12	N/A	-	60
								R	A	7.6	0.06	N/A	-	0
					SB	B	12.8	L	D	48.7	0.41	N/A	260	8
								T	B	12.2	0.23	N/A	-	90
								R	B	11.2	0.03	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.6	LTR	A	7.6	0.005	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.023	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.8	TL	A	7.9	0.01	N/A	-	-
					NB	B	10.1	LR	B	10.1	0.056	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A	3	TL	A	8.1	0.057	N/A	-	-
					NB	B	12	LR	B	12	0.278	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.4	LR	A	8.4	0.005	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	SW Alan Shepard Ave and Angelica St	Unsignalized	E	A	EB	-	-	TRL	-	-	-	N/A	-	-
					WB	-	-	TRL	-	-	-	N/A	-	-
					NB	-	-	TRL	-	-	-	N/A	-	-
					SB	-	-	TRL	-	-	-	N/A	-	-
9	SW Dakota Ave and Osage St	Unsignalized	E	A	EB	-	-	TL	-	-	-	N/A	-	-
					WB	-	-	TR	-	-	-	N/A	-	-
					SB	-	-	LR	-	-	-	N/A	-	-
10	Cherokee Ave and Angelica St	Unsignalized	E	A	EB	A*	7.2	TL	A	7.2	0.005	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	8.3	LR	A	8.3	0.003	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 46: 2023 Alternative Background PM Intersection Analysis

2023 Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	19.9	-	C	20.3	0.47	N/A	-	-
								TL	A	0.0	0.00	N/A	-	162
								R	B	19.4	0.38	N/A	180	41
					WB	C	21.7	-	C	21.7	0.61	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	175
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.1	L	B	11.6	0.46	N/A	480	117
								TR	A	0.0	0.00	N/A	-	314
								-	B	17.1	0.73	N/A	-	-
					SB	B	16.1	L	B	13.7	0.24	N/A	430	41
								T	B	17.0	0.40	N/A	-	151
								R	B	16.4	0.30	N/A	430	40
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	C	WB	C	18.5	LR	C	18.5	0.161	N/A	-	-
					NB	-	-	T	-	-	-	N/A	-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-	N/A	-	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.3	L	C	23.3	0.04	N/A	150	15
								T	C	23.1	0.01	N/A	-	4
								R	A	0.0	-	N/A	full	73
					WB	C	23.3	L	C	23.3	0.05	N/A	-	15
								T	C	23.2	0.04	N/A	-	8
								R	C	23.1	0.01	N/A	-	0
					NB	B	16.9	L	B	19.3	0.76	N/A	140	196
								T	A	2.9	0.08	N/A	-	38
								R	A	2.8	0.01	N/A	-	0
					SB	B	14.4	L	A	0.0	0.00	N/A	260	-
								T	B	14.7	0.39	N/A	-	149
								R	B	12.9	0.08	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.7	0.008	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.014	N/A	-	-
					NB	B	10.5	LTR	B	10.5	0.024	N/A	-	-
					SB	B	10.4	LTR	B	10.4	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.6	0.031	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.03	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	3.4	TL	A	8.1	0.16	N/A	-	-
					NB	A	9.9	LR	A	9.9	0.151	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.6	LR	A	8.6	0.017	N/A	-	-
					NB	A*	2.2	TL	A	7.3	0.007	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	SW Alan Shepard Ave and Angelica St	Unsignalized	E	-	EB	-	-	TRL	-	-	-	N/A	-	-
					WB	-	-	TRL	-	-	-	N/A	-	-
					NB	-	-	TRL	-	-	-	N/A	-	-
					SB	-	-	TRL	-	-	-	N/A	-	-
9	SW Dakota Ave and Osage St	Unsignalized	E	-	EB	-	-	TL	-	-	-	N/A	-	-
					WB	-	-	TR	-	-	-	N/A	-	-
					SB	-	-	LR	-	-	-	N/A	-	-
10	Cherokee Ave and Angelica St	Unsignalized	E	A	EB	A*	7.2	TL	A	7.2	0.003	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	8.3	LR	A	8.4	0.009	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Background Phase 2 – 2025

Roadway and intersection analysis were conducted for Phase 2 as shown in **Tables 47, 48, 49, and 50**. Mitigation from Phase 1 build out was carried through to this background analysis. Reflecting a signalized intersection of Grissom Pkwy at Amazon Driveway. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 47: Phase 2 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2025 Bkgd	2025 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13315	0.75	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10940	0.62	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6894	0.44	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11269	0.72	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	26307	0.63	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	3714	0.24	No
	Grissom Pkwy to Alan Shepard Ave									

Table 48: Phase 2 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2025 Bkgd	2025 Vol/MAV	Exceeds Standard	2025 Bkgd	2025 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	762	0.48	No	1146	0.72	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	774	0.48	No	959	0.6	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	514	0.36	No	549	0.39	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	397	0.28	No	462	0.33	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1040	0.28	No	1397	0.37	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	270	0.19	No	362	0.26	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 49: 2025 Alternative Background AM Intersection Analysis

2025 Alternate Build AM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.0	-	B	18.4	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	173
								R	B	17.6	0.47	N/A	180	43
					WB	B	18.7	-	B	18.7	0.51	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	117
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.3	L	B	12.1	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	134
								-	B	14.8	0.41	N/A	-	-
					SB	B	14.9	L	B	11.1	0.19	N/A	430	45
								T	B	16.2	0.65	N/A	-	255
								R	B	12.3	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	13.7	-	B	12.7	0.22	N/A	-	-
								TL	A	0.0	0.00	N/A	-	72
								R	B	14.4	0.51	N/A	150	41
					WB	B	13.3	-	B	13.3	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	7.6	L	B	13.8	0.11	N/A	300	16
								T	A	6.8	0.34	N/A	-	77
								R	A	5.6	0.00	N/A	450	0
					SB	A	9.7	L	A	0.0	0.00	N/A	350	-
								T	A	10.0	0.76	N/A	-	211
								R	A	5.8	0.07	N/A	300	10
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.07	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8	0.014	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.106	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 50: 2025 Alternative Background PM Intersection Analysis

2025 Alternate Build PM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18	-	B	18.4	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	173
								R	B	17.6	0.47	N/A	180	43
					WB	B	18.7	-	B	18.7	0.51	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	117
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.3	L	B	12.1	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	134
								-	B	14.8	0.41	N/A	-	-
					SB	B	14.9	L	B	11.1	0.19	N/A	430	45
								T	B	16.2	0.65	N/A	-	255
								R	B	12.3	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	14.9	-	B	14.0	0.13	N/A	-	-
								TL	A	0.0	0.00	N/A	-	46
								R	B	15.4	0.40	N/A	150	36
					WB	B	14.0	-	B	14.0	0.13	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.4	L	B	11.0	0.40	N/A	300	65
								T	A	9.0	0.73	N/A	-	220
								R	A	5.0	0.00	N/A	450	0
					SB	A	6.4	L	A	0.0	0.00	N/A	350	-
								T	A	6.7	0.43	N/A	-	107
								R	A	5.5	0.14	N/A	300	15
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20.0	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	0
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	B	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A	1.2	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.07	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8	0.014	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.106	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Background Phase 3 – 2026

The third phase of construction will take place in 2026. Roadway and intersection analysis were conducted for Phase 3 as shown in **Tables 51**, **52**, **53** and **54**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 51: Phase 3 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2026 Bkgd	2026 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13767	0.78	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11462	0.65	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7264	0.47	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11697	0.75	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	27446	0.66	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	4680	0.3	No
	Grissom Pkwy to Alan Shepard Ave									

Table 52: Phase 3 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2026 Bkgd	2026 Vol/MAV	Exceeds Standard	2026 Bkgd	2026 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	819	0.51	No	1233	0.77	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	815	0.51	No	1003	0.63	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	547	0.39	No	586	0.42	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	416	0.29	No	486	0.34	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1092	0.29	No	1474	0.39	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	329	0.23	No	442	0.31	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 53: 2026 Alternative Background AM Intersection Analysis

2026 Alternate Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	17.9	-	B	18.4	0.53	N/A	-	-
								TL	A	0.0	0.00	N/A	-	183
								R	B	17.4	0.46	N/A	180	44
					WB	B	18.8	-	B	18.8	0.52	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	122
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.8	L	B	12.5	0.14	N/A	480	27
								TR	A	0.0	0.00	N/A	-	136
								-	B	15.3	0.42	N/A	-	-
					SB	B	15.5	L	B	11.5	0.20	N/A	430	46
								T	B	16.9	0.68	N/A	-	261
								R	B	12.7	0.11	N/A	430	11
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	14.0	-	B	13.0	0.22	N/A	-	-
								TL	A	0.0	0.00	N/A	-	73
								R	B	14.7	0.52	N/A	150	41
					WB	B	13.6	-	B	13.6	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	7.6	L	B	14.0	0.12	N/A	300	16
								T	A	6.8	0.34	N/A	-	78
								R	A	5.5	0.00	N/A	450	0
					SB	A	9.7	L	A	0.0	0.00	N/A	350	-
								T	A	10.0	0.77	N/A	-	217
								R	A	5.7	0.07	N/A	300	10
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.5	0.10	N/A	150	29
								T	B	19.0	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	69
					WB	C	20.0	L	C	20.1	0.17	N/A	-	43
								T	B	18.9	0.01	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.62	N/A	140	89
								T	A	8.1	0.14	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.4	L	D	49.5	0.41	N/A	260	9
								T	B	12.9	0.25	N/A	-	97
								R	B	11.9	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10.1	LTR	B	10.1	0.036	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	8	0.018	N/A	-	-
					NB	B	10.4	LR	B	10.4	0.073	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	8.1	0.016	N/A	-	-
					NB	B	10.6	LR	B	10.6	0.055	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	1.9	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.108	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	A	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	A	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 54: 2026 Alternative Background PM Intersection Analysis

2026 Alternate Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	20.0	-	C	20.3	0.38	N/A	-	-
								TL	A	0.0	0.00	N/A	-	148
								R	B	19.4	0.27	N/A	180	38
					WB	C	23.9	-	C	23.9	0.64	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	214
								-	A	0.0	0.00	N/A	-	-
					NB	B	18.0	L	B	11.9	0.37	N/A	480	78
								TR	A	0.0	0.00	N/A	-	386
								-	C	20.1	0.83	N/A	-	-
					SB	B	15.7	L	B	14.2	0.30	N/A	430	43
								T	B	16.6	0.46	N/A	-	196
								R	B	14.6	0.18	N/A	430	31
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	15.1	-	B	14.2	0.13	N/A	-	-
								TL	A	0.0	0.00	N/A	-	46
								R	B	15.6	0.40	N/A	150	36
					WB	B	14.2	-	B	14.2	0.13	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.5	L	B	11.1	0.40	N/A	300	65
								T	A	9.1	0.73	N/A	-	229
								R	A	5.0	0.00	N/A	450	0
					SB	A	6.4	L	A	0.0	0.00	N/A	350	-
								T	A	6.7	0.43	N/A	-	109
								R	A	5.4	0.14	N/A	300	15
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	24.1	L	C	24.2	0.08	N/A	150	23
								T	C	23.8	0.04	N/A	-	10
								R	A	0.0	-	N/A	full	79
					WB	C	23.9	L	C	24.0	0.04	N/A	-	16
								T	C	23.8	0.04	N/A	-	10
								R	C	23.6	0.01	N/A	-	0
					NB	B	19.5	L	C	22.0	0.81	N/A	140	#279
								T	A	3.2	0.08	N/A	-	40
								R	A	3.0	0.01	N/A	-	0
					SB	B	16.3	L	A	0.0	0.00	N/A	260	-
								T	B	16.7	0.43	N/A	-	154
								R	B	14.8	0.13	N/A	260	4
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.01	N/A	-	-
					WB	A*	0.7	LTR	A	7.6	0.02	N/A	-	-
					NB	B	10.8	LTR	B	10.8	0.044	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.7	0.041	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.046	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.7	0.037	N/A	-	-
					NB	A	9.4	LR	A	9.4	0.032	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.029	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.4	0.015	N/A	-	-
					NB	A	9	LTR	A	9	0.017	N/A	-	-
					SB	B	11.7	LTR	B	11.7	0.096	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.5	TL	A	7.5	0.003	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.7	LR	A	9.7	0.04	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0.1	TL	A	7.9	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	11.5	LR	B	11.5	0.025	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Background Phase 4 – 2027

The fourth and final phase of construction will take place in 2027. Roadway and intersection analysis were conducted for background traffic for Phase 4 as shown in **Tables 55, 56, 57** and **58**. The analysis determined that all study area roadway segments and intersections would operate at an acceptable capacity and LOS.

Table 55: Phase 4 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2027 Bkgd	2027 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	14116	0.8	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11833	0.67	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7605	0.49	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	12087	0.77	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	28412	0.68	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	5157	0.33	No
	Grissom Pkwy to Alan Shepard Ave									

Table 56: Phase 4 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2027 Bkgd	2027 Vol/MAV	Exceeds Standard	2027 Bkgd	2027 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	892	0.56	No	1345	0.84	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	892	0.56	No	1054	0.66	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	583	0.41	No	629	0.45	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	438	0.31	No	515	0.37	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1156	0.31	No	1566	0.42	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	413	0.29	No	553	0.39	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 57: 2027 Alternative Background AM Intersection Analysis

2027 Alternate Background AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	17.5	-	B	18.2	0.56	N/A	-	-
								TL	A	0.0	0.00	N/A	-	202
								R	B	16.6	0.43	N/A	180	45
					WB	B	19.2	-	B	19.2	0.55	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	131
								-	A	0.0	0.00	N/A	-	-
					NB	B	16.5	L	B	13.7	0.16	N/A	480	28
								TR	A	0.0	0.00	N/A	-	155
								-	B	17.1	0.49	N/A	-	-
					SB	B	17.2	L	B	12.7	0.22	N/A	430	46
								T	B	18.8	0.72	N/A	-	267
								R	B	13.9	0.13	N/A	430	14
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	15.1	-	B	13.4	0.27	N/A	-	-
								TL	A	0.0	0.00	N/A	-	91
								R	B	16.2	0.65	N/A	150	47
					WB	B	14.2	-	B	14.2	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	8.0	L	B	14.7	0.17	N/A	300	21
								T	A	6.8	0.35	N/A	-	80
								R	A	5.5	0.00	N/A	450	0
					SB	A	9.8	L	A	0.0	0.00	N/A	350	-
								T	B	10.2	0.77	N/A	-	223
								R	A	5.8	0.07	N/A	300	10
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.6	L	B	19.7	0.13	N/A	150	34
								T	B	19.1	0.03	N/A	-	11
								R	A	0.0	-	N/A	full	75
					WB	C	20.1	L	C	20.2	0.17	N/A	-	43
								T	B	19.0	0.01	N/A	-	5
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.7	L	C	21.2	0.63	N/A	140	94
								T	A	8.2	0.14	N/A	-	66
								R	A	7.9	0.07	N/A	-	1
					SB	B	13.8	L	D	49.9	0.41	N/A	260	9
								T	B	13.3	0.26	N/A	-	100
								R	B	12.3	0.06	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1.3	LTR	A	7.7	0.014	N/A	-	-
					NB	B	10.3	LTR	B	10.3	0.044	N/A	-	-
					SB	A	9	LTR	A	9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.4	TL	A	8	0.022	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.083	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	8.1	0.019	N/A	-	-
					NB	B	10.8	LR	B	10.8	0.067	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.9	LR	A	8.9	0.017	N/A	-	-
					NB	A*	2	TL	A	7.3	0.011	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.006	N/A	-	-
					WB	A*	0.5	LTR	A	7.7	0.005	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.032	N/A	-	-
					SB	B	12.1	LTR	B	12.1	0.129	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.003	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.1	LR	B	10.1	0.054	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	11.4	LR	B	11.4	0.032	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 58: 2027 Alternative Background PM Intersection Analysis

2027 Alternate Background PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	C	20.7	-	C	21.3	0.43	N/A	-	-
								TL	A	0.0	0.00	N/A	-	167
								R	B	19.8	0.25	N/A	180	41
					WB	C	25.7	-	C	25.7	0.68	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	236
								-	A	0.0	0.00	N/A	-	-
					NB	B	19.6	L	B	13.0	0.39	N/A	480	80
								TR	A	0.0	0.00	N/A	-	402
								-	C	21.8	0.84	N/A	-	-
					SB	B	17.2	L	B	15.7	0.33	N/A	430	44
								T	B	18.1	0.49	N/A	-	209
								R	B	16.0	0.20	N/A	430	32
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	18.0	-	B	16.3	0.16	N/A	-	-
								TL	A	0.0	0.00	N/A	-	50
								R	B	18.8	0.54	N/A	150	40
					WB	B	16.2	-	B	16.2	0.14	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.3	L	B	11.8	0.50	N/A	300	93
								T	A	8.3	0.69	N/A	-	242
								R	A	4.7	0.00	N/A	450	0
					SB	A	6.0	L	A	0.0	0.00	N/A	350	-
								T	A	6.2	0.41	N/A	-	115
								R	A	5.2	0.15	N/A	300	16
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	24.6	L	C	24.7	0.11	N/A	150	30
								T	C	24.1	0.06	N/A	-	15
								R	A	0.0	-	N/A	full	83
					WB	C	24.2	L	C	24.3	0.04	N/A	-	16
								T	C	24.0	0.05	N/A	-	13
								R	C	23.8	0.01	N/A	-	0
					NB	C	21.6	L	C	24.3	0.84	N/A	140	#317
								T	A	3.4	0.09	N/A	-	41
								R	A	3.2	0.01	N/A	-	0
					SB	B	17.6	L	A	0.0	0.00	N/A	260	-
								T	B	18.1	0.46	N/A	-	156
								R	B	16.1	0.17	N/A	260	12
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.6	LTR	A	7.8	0.011	N/A	-	-
					WB	A*	0.8	LTR	A	7.7	0.023	N/A	-	-
					NB	B	11	LTR	B	11	0.055	N/A	-	-
					SB	B	11.1	LTR	B	11.1	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.7	0.046	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.055	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.1	TL	A	7.8	0.047	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.042	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.9	LR	A	8.9	0.037	N/A	-	-
					NB	A*	1.9	TL	A	7.4	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.6	LTR	A	8	0.009	N/A	-	-
					WB	A*	0.5	LTR	A	7.5	0.016	N/A	-	-
					NB	A	9.6	LTR	A	9.6	0.02	N/A	-	-
					SB	B	13.3	LTR	B	13.3	0.125	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.5	TL	A	7.7	0.005	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.051	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	8.1	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	12.6	LR	B	12.6	0.029	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Buildout Traffic Conditions

The total traffic conditions analysis evaluated the study intersection. Based on the Connector Road Preliminary Concept Plan in Figure 3B, the proposed two-lane connector road would create a four-legged intersection with the Amazon Access Point 1 on Grissom Parkway, with stop control on the connector road and driveway. The proposed connector road will utilize the existing roadways to connect the new development to Grissom Parkway. Osage St and Angelica St will be connected together and then connected to Grissom Parkway. An exclusive northbound left turn lane and southbound right turn lane on Grissom Parkway to the Lakes at Cocoa Grove were included in the analysis. Based on FDOT Design Manual Exhibits 212-2 and 212-3, storage lengths of 300 feet were used to allow deceleration and some queue. At the intersection of Grissom Parkway and Canaveral Groves Boulevard, the existing lane configurations were used in the analysis.

Alternative Buildout Phase 1 – 2023

The first phase of construction will take place in 2023. This phase will include 81 single family homes and is expected to generate 63 AM peak hour trips and 83 PM peak hour trips. A roadway and intersection analysis were conducted for Phase 1 as shown in **Tables 59**, **and 60**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS except Grissom Parkway at Amazon Driveway. In the PM peak hour analysis, the TWSC intersection operates with an LOS F.

Table 59: Phase 1 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2023 Build	2023 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	12850	0.73	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	10526	0.59	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6333	0.41	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	10633	0.68	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	24864	0.59	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	3714	0.24	No
	Grissom Pkwy to Alan Shepard Ave									

Table 60: Phase 1 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2023 Build	Vol/MAV	Exceeds Standard	2023 Build	Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	729	0.46	No	1096	0.68	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	642	0.4	No	921	0.58	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	474	0.34	No	509	0.36	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	418	0.3	No	437	0.31	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	996	0.26	No	1337	0.36	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	262	0.19	No	369	0.26	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 61: 2023 Alternative Buildout AM Intersection Analysis

2023 Alternate Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.2	-	B	18.6	0.54	N/A	-	-
								TL	A	0.0	0.00	N/A	-	159
								R	B	17.3	0.38	N/A	180	35
					WB	B	18.6	-	B	18.6	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	105
								-	A	0.0	0.00	N/A	-	-
					NB	B	12.6	L	B	11.4	0.06	N/A	480	16
								TR	A	0.0	0.00	N/A	-	79
								-	B	12.9	0.22	N/A	-	-
					SB	B	12.5	L	B	10.2	0.15	N/A	430	44
								T	B	13.4	0.52	N/A	-	216
								R	B	10.8	0.09	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	E	EB	D	28.2	LTR	D	28.2	0.589	N/A	-	-
					WB	D	33.4	LTR	D	33.4	0.008	N/A	-	-
					NB	A*	1.4	L	A	9	0.054	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.1	L	B	19.2	0.08	N/A	150	24
								T	B	18.8	0.01	N/A	-	7
								R	A	0.0	-	N/A	full	65
					WB	B	19.9	L	B	19.9	0.18	N/A	-	42
								T	A	0.0	0.00	N/A	-	-
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	C	20.6	0.59	N/A	140	81
								T	A	7.9	0.12	N/A	-	60
								R	A	7.7	0.06	N/A	-	0
					SB	B	12.9	L	D	48.9	0.41	N/A	260	8
								T	B	12.4	0.23	N/A	-	91
								R	B	11.4	0.04	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	A	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.006	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.027	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.9	0.012	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.06	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.7	TL	A	8	0.009	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.032	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.6	LR	A	8.6	0.007	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.2	LTR	A	7.3	0.001	N/A	-	-
					WB	A*	0	LTR	A	0	-	N/A	-	-
					NB	A	8.9	LTR	A	8.9	0.024	N/A	-	-
					SB	B	10	LTR	B	10	0.089	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9	LR	A	9	0.041	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	0	-	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.2	LR	B	10.2	0.026	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 62: 2023 Alternative Buildout PM Intersection Analysis

2023 Alternate Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.9	-	B	19.0	0.31	N/A	-	-
								TL	A	0.0	0.00	N/A	-	117
								R	B	18.7	0.27	N/A	180	33
					WB	C	21.7	-	C	21.7	0.58	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	179
								-	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	B	10.6	0.32	N/A	480	73
								TR	A	0.0	0.00	N/A	-	357
								-	B	18.0	0.80	N/A	-	-
					SB	B	13.9	L	B	12.4	0.26	N/A	430	41
								T	B	14.7	0.43	N/A	-	177
								R	B	13.1	0.16	N/A	430	27
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	E	44.3	LTR	E	44.3	0.629	N/A	-	-
					WB	F	50.1	LTR	F	50.1	0.396	N/A	-	-
					NB	A*	1.7	L	A	8.9	0.144	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.4	L	C	23.5	0.06	N/A	150	19
								T	C	23.2	0.03	N/A	-	8
								R	A	0.0	-	N/A	full	74
					WB	C	23.3	L	C	23.3	0.05	N/A	-	15
								T	C	23.2	0.04	N/A	-	9
								R	C	23.1	0.01	N/A	-	0
					NB	B	17.7	L	C	20.1	0.77	N/A	140	#212
								T	A	3.1	0.08	N/A	-	38
								R	A	2.9	0.01	N/A	-	0
					SB	B	15.1	L	A	0.0	0.00	N/A	260	-
								T	B	15.4	0.40	N/A	-	149
								R	B	13.6	0.10	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.7	0.008	N/A	-	-
					WB	A*	0.7	LTR	A	7.5	0.015	N/A	-	-
					NB	B	10.4	LTR	B	10.4	0.003	N/A	-	-
					SB	B	10.4	LTR	B	10.4	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.034	N/A	-	-
					NB	A	9.4	LR	A	9.4	0.036	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.6	TL	A	7.6	0.019	N/A	-	-
					NB	B	9.2	LR	A	9.2	0.019	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.7	LR	A	8.7	0.021	N/A	-	-
					NB	A*	2.1	TL	A	7.3	0.007	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.6	0.002	N/A	-	-
					WB	A*	0.8	LTR	A	7.4	0.015	N/A	-	-
					NB	A	8.8	LTR	A	8.8	0.016	N/A	-	-
					SB	B	10.8	LTR	B	10.8	0.075	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.5	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.1	LR	A	9.1	0.032	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	0	-	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.8	LR	B	10.8	0.021	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Buildout Phase 1 – 2023 Mitigated

Based on the results of the phase 1 analysis it was determined that improvements would be necessary for the intersection of Grissom Parkway at Amazon Driveway to operate at an acceptable LOS. Since the westbound approach is a private drive to amazon, additional turn lanes were evaluated for the eastbound proposed connector road. Based on the analysis it was determined the additional turn lane would provide adequate mitigation to the delay at the intersection for this phase. The results of the mitigated analysis are shown in **Table 63** and **64.** The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 63: 2023 Alternative Buildout AM Intersection Analysis (Mitigated)

2023 Alternate Build AM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.2	-	B	18.6	0.54	N/A	-	-
								TL	A	0.0	0.00	N/A	-	74
								R	B	17.3	0.38	N/A	180	0
					WB	B	18.6	-	B	18.6	0.50	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	44
								-	A	0.0	0.00	N/A	-	-
					NB	B	12.6	L	B	11.4	0.06	N/A	480	4
								TR	A	0.0	0.00	N/A	-	32
								-	B	12.9	0.22	N/A	-	-
					SB	B	12.5	L	B	10.2	0.15	N/A	430	16
								T	B	13.4	0.52	N/A	-	73
								R	B	10.8	0.09	N/A	430	0
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	D	EB	C	19.1	-	-	-	-	-	-	-
								TL	D	27.9	0.273	N/A	-	-
								R	C	15.7	0.315	N/A	150	-
					WB	D	33.4	LTR	D	33.4	0.008	N/A	-	-
					NB	A*	1.4	L	A	9	0.054	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.1	L	B	19.2	0.08	N/A	150	24
								T	B	18.8	0.01	N/A	-	7
								R	A	0.0	-	N/A	full	65
					WB	B	19.9	L	B	19.9	0.18	N/A	-	42
								T	A	0.0	0.00	N/A	-	-
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.2	L	C	20.6	0.59	N/A	140	81
								T	A	7.9	0.12	N/A	-	60
								R	A	7.7	0.06	N/A	-	0
					SB	B	12.9	L	D	48.9	0.41	N/A	260	8
								T	B	12.4	0.23	N/A	-	91
								R	B	11.4	0.04	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	A	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.006	N/A	-	-
					NB	A	9.8	LTR	A	9.8	0.027	N/A	-	-
					SB	A	8.8	LTR	A	8.8	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	7.9	0.012	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.06	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.7	TL	A	8	0.009	N/A	-	-
					NB	B	10.2	LR	B	10.2	0.032	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	B	EB	A	8.9	LR	A	8.9	0.008	N/A	-	-
					NB	A*	2.1	TL	A	7.4	0.011	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.2	LTR	A	7.3	0.001	N/A	-	-
					WB	A*	0	LTR	A	0	-	N/A	-	-
					NB	A	8.9	LTR	A	8.9	0.024	N/A	-	-
					SB	B	10	LTR	B	10	0.089	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9	LR	A	9	0.041	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	0	-	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.2	LR	B	10.2	0.026	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 64: 2023 Alternative Buildout PM Intersection Analysis (Mitigated)

2023 Alternate Build PM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.1	-	B	18.3	0.36	N/A	-	-
								TL	A	0.0	0.00	N/A	-	128
								R	B	17.3	0.20	N/A	180	16
					WB	C	20.3	-	C	20.3	0.58	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	180
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.6	L	B	10.3	0.28	N/A	480	66
								TR	A	0.0	0.00	N/A	-	318
								-	B	17.3	0.78	N/A	-	-
					SB	B	13.0	L	B	11.7	0.25	N/A	430	41
								T	B	13.8	0.36	N/A	-	142
								R	B	12.4	0.10	N/A	430	10
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	D	32	-	-	-	-	-	-	-
								TL	F	68.2	0.492	N/A	-	-
								R	B	11.3	0.138	N/A	150	-
					WB	F	50.1	LTR	F	50.1	0.396	N/A	-	-
					NB	A*	1.7	L	A	8.9	0.144	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	C	23.4	L	C	23.5	0.06	N/A	150	19
								T	C	23.2	0.03	N/A	-	8
								R	A	0.0	-	N/A	full	74
					WB	C	23.3	L	C	23.3	0.05	N/A	-	15
								T	C	23.2	0.04	N/A	-	9
								R	C	23.1	0.01	N/A	-	0
					NB	B	17.7	L	C	20.1	0.77	N/A	140	#212
								T	A	3.1	0.08	N/A	-	38
								R	A	2.9	0.01	N/A	-	0
					SB	B	15.1	L	A	0.0	0.00	N/A	260	-
								T	B	15.4	0.40	N/A	-	149
								R	B	13.6	0.10	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.7	0.008	N/A	-	-
					WB	A*	0.7	LTR	A	7.5	0.015	N/A	-	-
					NB	B	10.4	LTR	A	10.4	0.003	N/A	-	-
					SB	B	10.4	LTR	A	10.4	0.014	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.6	0.034	N/A	-	-
					NB	A	9.4	LR	A	9.4	0.036	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.6	TL	A	7.6	0.019	N/A	-	-
					NB	B	9.2	LR	A	9.2	0.019	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	9.9	LR	A	9.9	0.027	N/A	-	-
					NB	A*	2.2	TL	A	7.8	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.6	0.002	N/A	-	-
					WB	A*	0.8	LTR	A	7.4	0.015	N/A	-	-
					NB	A	8.8	LTR	A	8.8	0.016	N/A	-	-
					SB	B	10.7	LTR	B	10.7	0.074	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.5	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.1	LR	A	9.1	0.031	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	0	-	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.4	LR	B	10.4	0.032	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Buildout Phase 2 – 2025

The second phase of construction will take place in 2025. This phase will include a total of 184 single family homes and is expected to generate 136 AM peak hour trips and 183 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 2 as shown in **Tables 65**, **66, 67A,** and **67B**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS except Grissom Parkway at Amazon Driveway. In the AM and PM peak hour analysis, the TWSC intersection operates with an LOS F.

Table 65: Phase 2 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2025 Build	2025 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13527	0.76	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11249	0.64	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6971	0.45	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11365	0.73	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	26693	0.64	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	4680	0.3	No
	Grissom Pkwy to Alan Shepard Ave									

Table 66: Phase 2 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2025 Build	2025 Vol/MAV	Exceeds Standard	2025 Build	2025 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	802	0.5	No	1207	0.75	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	798	0.5	No	1003	0.63	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	527	0.37	No	578	0.41	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	404	0.29	No	482	0.34	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1069	0.28	No	1443	0.38	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	329	0.23	No	461	0.33	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 67A: 2025 Alternative Buildout AM Intersection Analysis

2025 Alternate Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.0	-	B	18.4	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	173
								R	B	17.6	0.47	N/A	180	43
					WB	B	18.7	-	B	18.7	0.51	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	117
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.3	L	B	12.1	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	134
								-	B	14.8	0.41	N/A	-	-
					SB	B	14.9	L	B	11.1	0.19	N/A	430	45
								T	B	16.2	0.65	N/A	-	255
								R	B	12.3	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	F	57.2	-	-	-	-	-	-	-
								TL	E	38	0.505	N/A	-	-
								R	C	16.7	0.35	N/A	150	-
					WB	E	36.1	LTR	E	36.1	0.009	N/A	-	-
					NB	A*	1	L	A	9.2	0.04	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.07	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8	0.014	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.106	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 67B: 2025 Alternative Buildout PM Intersection Analysis

2025 Alternate Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18	-	B	18.4	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	173
								R	B	17.6	0.47	N/A	180	43
					WB	B	18.7	-	B	18.7	0.51	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	117
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.3	L	B	12.1	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	134
								-	B	14.8	0.41	N/A	-	-
					SB	B	14.9	L	B	11.1	0.19	N/A	430	45
								T	B	16.2	0.65	N/A	-	255
								R	B	12.3	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Unsignalized	E	F	EB	F	57.2	-	-	-	-	-	-	-
								TL	F	112.4	0.681	N/A	-	-
								R	B	11.7	0.176	N/A	150	
					WB	E	36.1	LTR	F	77.5	0.527	N/A	-	-
					NB	A*	1	L	A	9.2	0.189	N/A	300	-
								T	-	-	-		-	-
								R	-	-	-	N/A	450	-
					SB	A*	0	L	A	0	-	N/A	350	-
								T	-	-	-		-	-
								R	-	-	-	N/A	300	-
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20.0	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	0
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	B	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A	1.2	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.07	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8	0.014	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.106	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Buildout Phase 2 – 2025 Mitigated

Based on the results of the phase 2 analysis it was determined that improvements would be necessary for the intersection of Grissom Parkway at Amazon Driveway to operate at an acceptable LOS. For mitigation the two-way stop-controlled intersection was changed to a traffic signal with standard operating plan #1 and 60 second cycle length. The results of the mitigated analysis are shown in **Table 68A** and **68B.** The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 68A: 2025 Alternative Buildout AM Intersection Analysis (Mitigated)

2025 Alternate Build AM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18.0	-	B	18.4	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	173
								R	B	17.6	0.47	N/A	180	43
					WB	B	18.7	-	B	18.7	0.51	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	117
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.3	L	B	12.1	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	134
								-	B	14.8	0.41	N/A	-	-
					SB	B	14.9	L	B	11.1	0.19	N/A	430	45
								T	B	16.2	0.65	N/A	-	255
								R	B	12.3	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	13.7	-	B	12.7	0.22	N/A	-	-
								TL	A	0.0	0.00	N/A	-	72
								R	B	14.4	0.51	N/A	150	41
					WB	B	13.3	-	B	13.3	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	7.6	L	B	13.8	0.11	N/A	300	16
								T	A	6.8	0.34	N/A	-	77
								R	A	5.6	0.00	N/A	450	0
					SB	A	9.7	L	A	0.0	0.00	N/A	350	-
								T	A	10.0	0.76	N/A	-	211
								R	A	5.8	0.07	N/A	300	10
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	A	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.07	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8	0.014	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.106	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 68B: 2025 Alternative Buildout PM Intersection Analysis (Mitigated)

2025 Alternate Build PM Results (Mitigated)														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	18	-	B	18.4	0.52	N/A	-	-
								TL	A	0.0	0.00	N/A	-	173
								R	B	17.6	0.47	N/A	180	43
					WB	B	18.7	-	B	18.7	0.51	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	117
								-	A	0.0	0.00	N/A	-	-
					NB	B	14.3	L	B	12.1	0.13	N/A	480	27
								TR	A	0.0	0.00	N/A	-	134
								-	B	14.8	0.41	N/A	-	-
					SB	B	14.9	L	B	11.1	0.19	N/A	430	45
								T	B	16.2	0.65	N/A	-	255
								R	B	12.3	0.10	N/A	430	9
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	14.9	-	B	14.0	0.13	N/A	-	-
								TL	A	0.0	0.00	N/A	-	46
								R	B	15.4	0.40	N/A	150	36
					WB	B	14.0	-	B	14.0	0.13	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.4	L	B	11.0	0.40	N/A	300	65
								T	A	9.0	0.73	N/A	-	220
								R	A	5.0	0.00	N/A	450	0
					SB	A	6.4	L	A	0.0	0.00	N/A	350	-
								T	A	6.7	0.43	N/A	-	107
								R	A	5.5	0.14	N/A	300	15
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.4	L	B	19.4	0.10	N/A	150	29
								T	B	18.9	0.02	N/A	-	9
								R	A	0.0	-	N/A	full	68
					WB	B	20.0	L	B	20.0	0.17	N/A	-	43
								T	B	18.8	0.00	N/A	-	4
								R	A	0.0	0.00	N/A	-	0
					NB	B	16.4	L	C	20.9	0.61	N/A	140	87
								T	A	8.1	0.13	N/A	-	64
								R	A	7.8	0.07	N/A	-	0
					SB	B	13.3	L	D	49.4	0.41	N/A	260	9
								T	B	12.8	0.25	N/A	-	95
								R	B	11.8	0.05	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1	LTR	A	7.7	0.01	N/A	-	-
					NB	B	10	LTR	B	10	0.035	N/A	-	-
					SB	A	8.9	LTR	B	8.9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A	1.2	TL	A	7.9	0.017	N/A	-	-
					NB	B	10.3	LR	B	10.3	0.07	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	0.9	TL	A	8	0.014	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.048	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.8	LR	A	8.8	0.011	N/A	-	-
					NB	A*	2	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.004	N/A	-	-
					WB	A*	0.6	LTR	A	7.5	0.005	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.028	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.106	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	A	EB	A*	0.2	TL	A	7.3	0.002	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	A	9.4	LR	A	9.4	0.047	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.028	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Buildout Phase 3 – 2026

The third phase of construction will take place in 2026. This phase will include a total of 237 single family homes and is expected to generate 174 AM peak hour trips and 233 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 3 as shown in **Tables 69**, **70**, **71** and **72**. The analysis determined that all study area roadway segments and intersections are expected to operate at an acceptable capacity and LOS.

Table 69: Phase 3 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2026 Build	2026 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	13872	0.78	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	11615	0.66	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7302	0.47	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	11745	0.75	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	27637	0.66	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	5157	0.33	No
	Grissom Pkwy to Alan Shepard Ave									

Table 70: Phase 3 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2026 Build	2026 Vol/MAV	Exceeds Standard	2026 Build	2026 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	875	0.55	No	1318	0.82	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	848	0.53	No	1058	0.66	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	561	0.4	No	623	0.44	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	426	0.3	No	513	0.36	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1133	0.3	No	1534	0.41	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	413	0.29	No	583	0.41	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 71: 2026 Alternative Buildout AM Intersection Analysis

2026 Alternate Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	B	EB	B	17.7	-	B	18.2	0.54	N/A	-	-
								TL	A	0.0	0.00	N/A	-	191
								R	B	16.9	0.43	N/A	180	44
					WB	B	19.1	-	B	19.1	0.53	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	126
								-	A	0.0	0.00	N/A	-	-
					NB	B	15.8	L	B	13.1	0.15	N/A	480	27
								TR	A	0.0	0.00	N/A	-	153
								-	B	16.4	0.48	N/A	-	-
					SB	B	16.3	L	B	12.2	0.21	N/A	430	46
								T	B	17.7	0.70	N/A	-	262
								R	B	13.4	0.12	N/A	430	14
2	Grissom Pkwy and Amazon Drwy	Signalized	E	B	EB	B	14.8	-	B	13.2	0.27	N/A	-	-
								TL	A	0.0	0.00	N/A	-	90
								R	B	15.9	0.64	N/A	150	46
					WB	B	14.0	-	B	14.0	0.00	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	4
								-	A	0.0	0.00	N/A	-	-
					NB	A	8.0	L	B	14.5	0.16	N/A	300	22
								T	A	6.9	0.34	N/A	-	81
								R	A	5.6	0.00	N/A	450	0
					SB	A	9.8	L	A	0.0	0.00	N/A	350	-
								T	B	10.1	0.77	N/A	-	223
								R	A	5.8	0.07	N/A	300	11
3	Grissom Pkwy and Industry Road	Signalized	E	B	EB	B	19.6	L	B	19.7	0.13	N/A	150	34
								T	B	19.0	0.03	N/A	-	11
								R	A	0.0	-	N/A	full	73
					WB	C	20.0	L	C	20.1	0.17	N/A	-	43
								T	B	18.9	0.01	N/A	-	5
								R	A	0.0	0.00	N/A	-	-
					NB	B	16.7	L	C	21.1	0.63	N/A	140	93
								T	A	8.2	0.14	N/A	-	64
								R	A	7.9	0.07	N/A	-	0
					SB	B	13.7	L	D	49.8	0.41	N/A	260	9
								T	B	13.2	0.26	N/A	-	98
								R	B	12.2	0.06	N/A	260	0
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0	LTR	A	7.4	0.001	N/A	-	-
					WB	A*	1.3	LTR	A	7.7	0.013	N/A	-	-
					NB	B	10.2	LTR	B	10.2	0.043	N/A	-	-
					SB	A	9	LTR	A	9	0.015	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.4	TL	A	8	0.022	N/A	-	-
					NB	B	10.5	LR	B	10.5	0.08	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	B	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	8.1	0.017	N/A	-	-
					NB	B	10.7	LR	B	10.7	0.06	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.9	LR	A	8.9	0.016	N/A	-	-
					NB	A*	1.9	TL	A	7.3	0.01	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.3	LTR	A	7.4	0.006	N/A	-	-
					WB	A*	0.5	LTR	A	7.7	0.005	N/A	-	-
					NB	A	9.7	LTR	A	9.7	0.03	N/A	-	-
					SB	B	12.1	LTR	B	12.1	0.128	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.2	TL	A	7.3	0.003	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.1	LR	B	10.1	0.054	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	7.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	11.4	LR	B	11.4	0.032	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 72: 2026 Alternative Buildout PM Intersection Analysis

2026 Alternate Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	C	EB	C	20.6	-	C	21.2	0.43	N/A	-	-
								TL	A	0.0	0.00	N/A	-	169
								R	B	19.6	0.24	N/A	180	40
					WB	C	25.8	-	C	25.8	0.68	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#237
								-	A	0.0	0.00	N/A	-	-
					NB	B	19.9	L	B	13.2	0.39	N/A	480	78
								TR	A	0.0	0.00	N/A	-	398
								-	C	22.0	0.84	N/A	-	-
					SB	B	17.5	L	B	15.8	0.33	N/A	430	43
								T	B	18.5	0.50	N/A	-	216
								R	B	16.1	0.21	N/A	430	33
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	17.8	-	B	16.1	0.16	N/A	-	-
								TL	A	0.0	0.00	N/A	-	50
								R	B	18.6	0.54	N/A	150	40
					WB	B	16.0	-	B	16.0	0.14	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.2	L	B	11.7	0.50	N/A	300	93
								T	A	8.3	0.68	N/A	-	234
								R	A	4.7	0.00	N/A	450	0
					SB	A	6	L	A	0.0	0.00	N/A	350	-
								T	A	6.3	0.40	N/A	-	113
								R	A	5.2	0.15	N/A	300	16
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	24.4	L	C	24.5	0.11	N/A	150	30
								T	C	24.0	0.06	N/A	-	15
								R	A	0.0	-	N/A	full	82
					WB	C	24.0	L	C	24.1	0.04	N/A	-	16
								T	C	23.9	0.05	N/A	-	13
								R	C	23.7	0.01	N/A	-	0
					NB	C	21.2	L	C	23.8	0.83	N/A	140	#304
								T	A	3.4	0.08	N/A	-	40
								R	A	3.2	0.01	N/A	-	0
					SB	B	17.4	L	A	0.0	0.00	N/A	260	-
								T	B	17.8	0.45	N/A	-	154
								R	B	16.0	0.17	N/A	260	12
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.01	N/A	-	-
					WB	A*	0.8	LTR	A	7.6	0.023	N/A	-	-
					NB	B	10.8	LTR	B	10.8	0.053	N/A	-	-
					SB	B	10.9	LTR	B	10.9	0.016	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.7	0.045	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.055	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1	TL	A	7.8	0.041	N/A	-	-
					NB	A	9.5	LR	A	9.5	0.038	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	8.9	LR	A	8.9	0.035	N/A	-	-
					NB	A*	2	TL	A	7.4	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	B	EB	A*	0.6	LTR	A	8	0.008	N/A	-	-
					WB	A*	0.5	LTR	A	7.5	0.016	N/A	-	-
					NB	A	9.3	LTR	A	9.3	0.018	N/A	-	-
					SB	B	13.2	LTR	B	13.2	0.122	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.5	TL	A	7.7	0.005	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	10.6	LR	B	10.6	0.051	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	8.1	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	12.6	LR	B	12.6	0.029	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Alternative Buildout Phase 4 – 2027

The fourth and final phase of construction will take place in 2027. This phase will include all 350 single family homes and is expected to generate 174 AM peak hour trips and 233 PM peak hour trips (including previous phase trips). A roadway and intersection analysis were conducted for Phase 4 as shown in **Tables 73, 74, 75** and **76**. The analysis determined that all study area roadway segments and intersections would operate at an acceptable capacity and LOS.

Table 73: Phase 4 Daily Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Daily			
					LOS Standard	No. of Lanes	Max Volume	2027 Build	2027 Vol/MAV	Exceeds LOS?
Grissom Parkway										
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	14334	0.81	No
	Canaveral Groves Blvd to Industry Rd									
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	17700	12151	0.69	No
	Camp Rd to Canaveral Groves Blvd									
Canaveral Groves Blvd										
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	7684	0.49	No
	Grissom Pkwy to Lee St									
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	15600	12186	0.78	No
	US-1 to Grissom Pkwy									
Industry Rd										
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	41790	28809	0.69	No
	Grissom Pkwy to SR 524									
Proposed Connector Road										
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	15600	6150	0.39	No
	Grissom Pkwy to Alan Shepard Ave									

Table 74: Phase 4 Peak Roadway Analysis

Segment	Road Name	Functional Classification	Direction	Speed Limit (mph)	Adopted LOS		Two-Way Service Volume[1]	AM Peak Hour			PM Peak Hour		
					LOS Standard	No. of Lanes		2027 Build	2027 Vol/MAV	Exceeds Standard	2027 Build	2027 Vol/MAV	Exceeds Standard
Grissom Parkway													
Segment 197	*Industry Rd to Canaveral Groves Blvd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	977	0.61	No	1474	0.92	No
	Canaveral Groves Blvd to Industry Rd												
Segment 196	*Canaveral Groves Blvd to Camp Rd*	*Minor Arterial Urban*	NB/SB	50	E	2	1600	977	0.61	No	1136	0.71	No
	Camp Rd to Canaveral Groves Blvd												
Canaveral Groves Blvd													
Segment 212	*Lee St to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	611	0.43	No	683	0.48	No
	Grissom Pkwy to Lee St												
Segment 213	*Grissom Pkwy to US-1*	*Minor Collector Urban*	EB/WB	35	E	2	1410	455	0.32	No	552	0.39	No
	US-1 to Grissom Pkwy												
Industry Rd													
Segment 198	*SR 524 to Grissom Pkwy*	*Minor Arterial Urban*	NB/SB	45	D	4	3759	1217	0.32	No	1662	0.44	No
	Grissom Pkwy to SR 524												
Proposed Connector Road													
N/A	*Alan Shepard Ave to Grissom Pkwy*	*Minor Collector Urban*	EB/WB	35	E	2	1410	538	0.38	No	651	0.46	No
	Grissom Pkwy to Alan Shepard Ave												

[1] *Service volume obtained from Table 4 of the FDOT Generalized Level-of-Service Tables.*

Table 75: 2027 Alternative Buildout AM Intersection Analysis

2027 Alternate Build AM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	C	EB	C	22.1	-	C	23.1	0.50	N/A	-	-
								TL	A	0.0	0.00	N/A	-	#218
								R	C	20.2	0.22	N/A	180	42
					WB	C	33.5	-	C	33.5	0.75	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#312
								-	A	0.0	0.00	N/A	-	-
					NB	C	23.1	L	B	15.7	0.44	N/A	480	79
								TR	A	0.0	0.00	N/A	-	418
								-	C	25.5	0.86	N/A	-	-
					SB	C	20.6	L	B	18.9	0.38	N/A	430	43
								T	C	21.7	0.55	N/A	-	237
								R	B	18.7	0.24	N/A	430	34
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	19.6	-	B	17.2	0.17	N/A	-	-
								TL	A	0.0	0.00	N/A	-	51
								R	C	20.6	0.62	N/A	150	42
					WB	B	17.1	-	B	17.1	0.14	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.1	L	B	12.0	0.55	N/A	300	108
								T	A	7.9	0.66	N/A	-	234
								R	A	4.5	0.00	N/A	450	0
					SB	A	5.8	L	A	0.0	0.00	N/A	350	-
								T	A	6.0	0.39	N/A	-	113
								R	A	5.1	0.16	N/A	300	17
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	25.1	L	C	25.3	0.15	N/A	150	38
								T	C	24.5	0.07	N/A	-	19
								R	A	0.0	-	N/A	full	88
					WB	C	24.5	L	C	24.7	0.04	N/A	-	16
								T	C	24.3	0.05	N/A	-	15
								R	C	24.1	0.01	N/A	-	0
					NB	C	24.6	L	C	27.5	0.87	N/A	140	#355
								T	A	3.6	0.09	N/A	-	41
								R	A	3.4	0.01	N/A	-	0
					SB	B	18.8	L	A	0.0	0.00	N/A	260	-
								T	B	19.3	0.47	N/A	-	156
								R	B	17.5	0.22	N/A	260	22
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.011	N/A	-	-
					WB	A*	0.9	LTR	A	7.7	0.027	N/A	-	-
					NB	B	10.9	LTR	B	10.9	0.072	N/A	-	-
					SB	A	11.2	LTR	B	11.2	0.017	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.3	TL	A	7.7	0.053	N/A	-	-
					NB	B	9.6	LR	B	9.6	0.072	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.8	0.052	N/A	-	-
					NB	A	9.7	LR	A	9.7	0.051	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	9.1	LR	A	9.1	0.048	N/A	-	-
					NB	A*	1.8	TL	A	7.4	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Alan Shepard Ave and Proposed Connector Rd	Unsignalized	E	C	EB	A*	0.7	LTR	A	8.3	0.01	N/A	-	-
					WB	A*	0.4	LTR	A	7.6	0.016	N/A	-	-
					NB	B	10.2	LTR	B	10.2	0.023	N/A	-	-
					SB	C	16.4	LTR	C	16.4	0.178	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.5	TL	A	8.1	0.009	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	12.2	LR	B	12.2	0.072	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	8.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	14.8	LR	B	14.8	0.037	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

Table 76: 2027 Alternative Buildout PM Intersection Analysis

2027 Alternate Build PM Results														
Node	Intersection	Intersection Type	Overall LOS		Approach	Approach LOS	Approach Delay	Lane Group	LOS	Delay (sec/veh)	Max v/c Ratio	v/c >1	Storage Length	95th Queue length (ft)
			Standard	Analysis										
1	Grissom Pkwy and Canaveral Groves Blvd	Signalized	E	C	EB	C	22.1	-	C	23.1	0.50	N/A	-	-
								TL	A	0.0	0.00	N/A	-	#218
								R	C	20.2	0.22	N/A	180	42
					WB	C	33.5	-	C	33.5	0.75	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	#312
								-	A	0.0	0.00	N/A	-	-
					NB	C	23.1	L	B	15.7	0.44	N/A	480	79
								TR	A	0.0	0.00	N/A	-	418
								-	C	25.5	0.86	N/A	-	-
					SB	C	20.6	L	B	18.9	0.38	N/A	430	43
								T	C	21.7	0.55	N/A	-	237
								R	B	18.7	0.24	N/A	430	34
2	Grissom Pkwy and Amazon Drwy	Signalized	E	A	EB	B	19.6	-	B	17.2	0.17	N/A	-	-
								TL	A	0.0	0.00	N/A	-	51
								R	C	20.6	0.62	N/A	150	42
					WB	B	17.1	-	B	17.1	0.14	N/A	-	-
								LTR	A	0.0	0.00	N/A	-	16
								-	A	0.0	0.00	N/A	-	-
					NB	A	9.1	L	B	12.0	0.55	N/A	300	108
								T	A	7.9	0.66	N/A	-	234
								R	A	4.5	0.00	N/A	450	0
					SB	A	5.8	L	A	0.0	0.00	N/A	350	-
								T	A	6.0	0.39	N/A	-	113
								R	A	5.1	0.16	N/A	300	17
3	Grissom Pkwy and Industry Road	Signalized	E	C	EB	C	25.1	L	C	25.3	0.15	N/A	150	38
								T	C	24.5	0.07	N/A	-	19
								R	A	0.0	-	N/A	full	88
					WB	C	24.5	L	C	24.7	0.04	N/A	-	16
								T	C	24.3	0.05	N/A	-	15
								R	C	24.1	0.01	N/A	-	0
					NB	C	24.6	L	C	27.5	0.87	N/A	140	#355
								T	A	3.6	0.09	N/A	-	41
								R	A	3.4	0.01	N/A	-	0
					SB	B	18.8	L	A	0.0	0.00	N/A	260	-
								T	B	19.3	0.47	N/A	-	156
								R	B	17.5	0.22	N/A	260	22
4	Citrus Blvd and Bahia St	Unsignalized	E	B	EB	A*	0.5	LTR	A	7.8	0.011	N/A	-	-
					WB	A*	0.9	LTR	A	7.7	0.027	N/A	-	-
					NB	B	10.9	LTR	B	10.9	0.072	N/A	-	-
					SB	B	11.2	LTR	B	11.2	0.017	N/A	-	-
5	Canaveral Groves Blvd and Hartville Avenue	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.3	TL	A	7.7	0.053	N/A	-	-
					NB	A	9.6	LR	A	9.6	0.072	N/A	-	-
6	Canaveral Groves Blvd and Alan Shepard Ave	Unsignalized	E	A	EB	-	0	TR	-	-	-	N/A	-	-
					WB	A*	1.2	TL	A	7.8	0.052	N/A	-	-
					NB	A	9.7	LR	A	9.7	0.051	N/A	-	-
7	Citrus Blvd and Hartville Ave	Unsignalized	E	A	EB	A	9.1	LR	A	9.1	0.048	N/A	-	-
					NB	A*	1.8	TL	A	7.4	0.008	N/A	-	-
					SB	-	0	TR	-	-	-	N/A	-	-
8	Proposed Connector Rd and Alan Shepard Ave	Unsignalized	E	C	EB	A*	0.7	LTR	A	8.3	0.016	N/A	-	-
					WB	A*	0.4	LTR	A	7.6	0.016	N/A	-	-
					NB	B	10.2	LTR	B	10.2	0.023	N/A	-	-
					SB	C	16.4	LTR	C	16.4	0.178	N/A	-	-
9	SW Dakota Ave and Proposed Connector Rd	Unsignalized	E	B	EB	A*	0.5	TL	A	8.1	0.009	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	12.2	LR	B	12.2	0.072	N/A	-	-
10	Proposed Connector Rd and Cherokee Ave	Unsignalized	E	B	EB	A*	0	TL	A	8.4	0.001	N/A	-	-
					WB	-	0	TR	-	-	-	N/A	-	-
					SB	B	14.8	LR	B	14.8	0.037	N/A	-	-

*Approach LOS not available, taken from Lane Group LOS

ACCESS MANAGEMENT

Ingress and egress to the Lakes at Cocoa Grove community to and from Grissom Parkway is provided via Canaveral Groves Boulevard and the Proposed Connector Road shown in **Figures 3A and 3B**. The proposed two-lane connector road would create a four-legged intersection with the Amazon Access Point 1 at Grissom Parkway. The nearest connection is located approximately 2,000 feet south on southbound Grissom Parkway. The proposed connector road is located 1.5 miles south of the intersection of Grissom Parkway and Canaveral Groves Boulevard and 1.5 miles north of the intersection of Grissom Parkway and E Industry Road.

The County's requirements for driveway connections to the County roadway system are consistent with the FDOT and chapter 14-97 state highway system access classification system and access management standards. The proposed connection meets the required 440-foot connection spacing and 2,640 feet minimum signal spacing based on the FDOT Context Classification C2T Rural Town and non-restrictive medians.

The need for exclusive turn lanes on Grissom Parkway were evaluated based on the latest FDOT Access Management Guide. According to Section 6.2, exclusive right-turn lanes are useful where a combination of high roadway speeds and high right-turn volumes into a driveway are expected. Additional situations for considering exclusive right-turn lanes include congestion, very high operating speeds (such as 55 mph or above) and rural locations where turns are not expected by through drivers. According to Section 6.3, exclusive left-turn lanes should be considered at any location serving the public, especially on curves and where speeds are in excess of 45 mph. Safety is the main reason behind exclusive left-turn lanes.

The posted speed limit on Grissom Parkway is 50 mph and the proposed intersection is located on the existing horizontal curve. Additionally, because the existing traffic signals are located 1.5 miles north and south of the intersection and other access points along Grissom Parkway are sporadic, turns may not be expected by through drivers. Based on the evaluation, exclusive left-turn lanes and right-turn lanes on Grissom Parkway are recommended.

The need for a right turn lane on southbound Grissom Parkway was also evaluated using the National Cooperative Highway Research Program (NCHRP) Report 457. Based on Figure 2-6 on Page 23 of the report shown in **Figure 21**, the 91 southbound vehicles turning onto the proposed connector road in conjunction with the 445 southbound vehicles on Grissom Parkway warrants a southbound right turn lane at phase 1 build conditions.

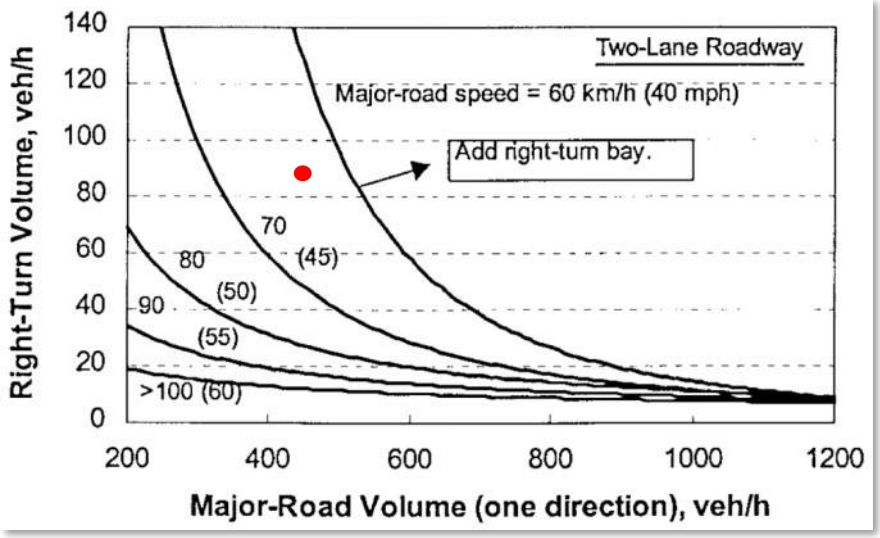


Figure 21: Figure 2-6 of NCHRP Report 457

The need for a left turn lane on northbound Grissom Parkway was also evaluated using the Turn Lane Warrant Workbook produced by the FDOT. Based on the warrant for left turns on two-lane highways with speed limits of 50 MPH, a left turn lane on Grissom Parkway is warranted at phase 1 build conditions. Results from the workbook are included in **Appendix F**.

CRASH ANALYSES

Crash records for the most recent three-year period (9/13/2018 to 9/13/2021) were collected from the University of Florida's Signal Four Analytics Database at the study intersections. Screen captures from the database depicting the crashes are provided in **Figure 22** and **Figure 23** on the following pages. Icons may represent the location of multiple crashes. The summaries of crash data are provided in **Appendix G.**

Grissom Parkway and the Proposed Connector Road/Amazon Access Point 1

A total of three crashes occurred within 0.75 mile of the proposed intersection during the three-year period. The nearest crash occurred approximately 1,500 feet north of the proposed intersection and the type of crash involving two vehicles is identified as other. The two other crashes occurred approximately 2,900 feet and 3,800 feet south of the intersection. The southernmost crash involved one vehicle as a result of rollover. The other crash also involved one vehicle and the type identified as other. None of the crashes appear to be susceptible to correction with the installation of a traffic signal.

Grissom Parkway and Canaveral Groves Boulevard

A total of 61 crashes occurred at the signalized intersection during the three-year period. There were 18 crashes resulting in injuries: one head-on collision, one opposing sideswipe, one rear end, one crash involving a parked vehicle, one right-angle crash, one single vehicle incident, four unknown crash types, and eight left turn crashes.

Figure 22: Crash Locations at the intersection of Grissom Parkway and Canaveral Groves Blvd

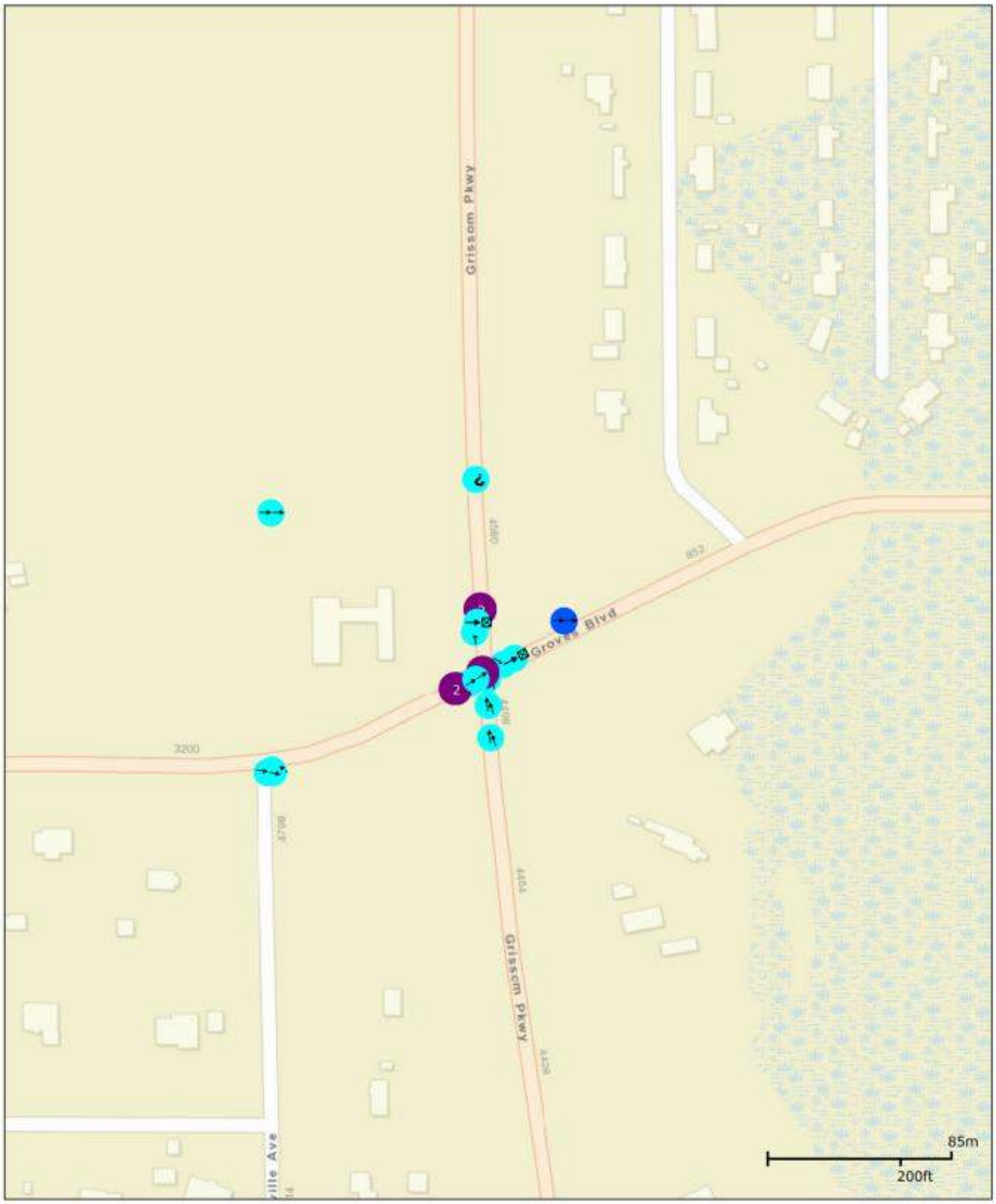


Figure 23: Crash Locations near the proposed intersection of Grissom Parkway and Proposed Connector Road/Amazon Access Point 1

SIGNAL WARRANT ANALYSIS

Signal warrant analysis was performed at the intersection of Grissom Parkway and the Proposed Connector Road/Amazon Access Point 1 to determine whether a traffic signal is warranted and if so, during which of the four phases of the development should be installed. Total daily and PM Peak-Hour traffic volumes generated by each phase were estimated using the Institute of Transportation Engineers (ITE), *Trip Generation Manual – the 10th Edition* and are summarized in the above **Table 2**.

The procedures used in completing this study are consistent with the latest FDOT Manual on Uniform Traffic Studies (MUTS), Manual of Uniform Traffic Control Devices (MUTCD), FDOT Design Standards and engineering judgment. The following sections include a description of existing conditions and a summary of the signal warrant analysis.

Existing and Future Conditions

At the proposed intersection, Grissom Parkway is a two-lane undivided urban minor arterial, 32-foot wide roadway running mostly south-north with 12-foot wide lanes and 4-foot wide paved shoulders in each direction. The posted speed limit on Grissom Parkway is 50 MPH at the proposed connector and the posted speed limit is assumed to be 35 MPH on the proposed connector road. There are no existing or proposed pedestrian facilities at the proposed intersection and the intersection will be located along the existing horizontal curve. Power poles appear to run along the right-of-way on the east side of Grissom Parkway approximately 130 feet from the edge of pavement and there is no existing lighting. Future land use along Grissom Parkway in the area consists of industrial and very low density residential in the City of Cocoa.

The study roadway segment of Grissom Parkway is a County Road that extends from the signalized intersections of Grissom Parkway and E Industry Road to Grissom Parkway and Canaveral Groves Boulevard. The Posted speed limit on Grissom Parkway varies within the project study area. The posted speed limit on both Grissom Parkway and E Industry Road is 30 MPH. The posted speed limit on Grissom Parkway at Canaveral Groves Boulevard is 45 mph, while the posted speed limit on Canaveral Groves Boulevard is 35 MPH. Between the two intersections, Grissom Parkway is 50 mph roadway starting half mile from Industry Road and then reducing to 45mph on approach to Canaveral Groves Boulevard. Approaching the intersection of Grissom Parkway and E Industry Road, Grissom Parkway widens to a four-lane divided urban minor arterial, 95-foot wide roadway running west-east with a 32-foot wide median, two 12-feet wide lanes in each direction and 4-foot wide paved shoulders. Land use in this area mostly consists of industrial and commercial with some residential, in the City of Cocoa. At the intersection of Grissom Parkway and Canaveral Groves Boulevard, Grissom Parkway is a two-lane undivided urban minor arterial, 32-foot wide roadway running north-south with 12-foot wide lanes in each direction and 4-foot wide paved shoulders. Canaveral Groves Boulevard runs east-west as a two-lane undivided urban major collector. Land use in this area generally consists of residential in Brevard County.

Signal Warrant Analyses Summary

Based on the existing conditions of the study intersections and project study area, warrants #4, 5, 6, 7, 8, and 9 were not applicable at the study intersection for the reasons described below.

Warrant #4: Pedestrian Volume
This warrant is intended where the traffic volumes on a major street are so heavy that pedestrians experience excessive delays in crossing the major street. There are no proposed pedestrian facilities and pedestrian traffic is not expected at the proposed intersection. In addition, the traffic counts at the nearby intersection of Grissom Parkway and Canaveral Groves Boulevard captured a total of three pedestrians during the 24-hour period.

Warrant #5: School Crossing
This warrant is intended for application where school children crossing is the principal reason to install a traffic control signal. There is no existing school crossing at the study intersection.

Warrant #6: Coordinated Signal System
Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles. The existing traffic signals located north of the study intersection at Canaveral Groves Boulevard and south of the study intersection at E Industry Road are approximately 1.5 miles away in either direction.

Warrant #7: Crash Experience
This warrant is intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. As discussed earlier, no more than three crashes occurred near the proposed intersection and none were susceptible to correction by a traffic control signal.

Warrant #8: Roadway Network
This warrant is intended for those intersection to encourage concentration and organization of traffic flow on a roadway network. The proposed connector road is not a part of a major route.

Warrant #9: Intersection Near a Grade Crossing
This warrant is intended for application where there are two or more approach lanes at track crossings. The study intersection is not located at or near track crossings.

Therefore, the installation of traffic signals at the study intersections were studied under Warrants #1, #2, and #3.

The signal warrant analysis requires the eight highest hour volumes for both approaches on the major street (Grissom Parkway) and in one direction on the minor street approach (the Proposed Connector Road in the eastbound direction). The projected volumes for this analysis were determined using the same methodology as the level of service analysis. To determine the eight-hour volumes for the project traffic, the SCTPO Station 297 24-hour machine counts were used along with the total daily trips generated by the project, the re-routed development trips, and the Amazon Distribution Center trips. To determine the Amazon distribution center traffic, the 24-hour traffic generation from the Amazon Distribution TIA was used and is included in **Appendix H**. A summary of the projected traffic volumes used and the signal warrant analysis sheets for Phase 1 are included in **Appendix I**.

Grissom Parkway is a 50 mph roadway at the proposed intersection location. Approximately 1 mile north, Grissom parkway is 45 mph as it approaches the existing signal at Canaveral groves Boulevard. To the east, Grissom Parkway reduces to 30 mph as it approaches another existing signal at E Industry road. Since the existing speed limit at the proposed intersection is greater than 40 mph, 70% volumes may be used to meet the traffic signal warrant. The results of the traffic signal analysis indicate that under Warrants #1, #2, and #3 the installation of a traffic signal is warranted after build phase 1 with 70% volume criteria. Warrant analysis was further performed to determine if 100% values would be met. A signal is warranted through warrants #2 & #3 at 100% volumes for Phase 3 buildout. The results of the analysis are summarized in **Table 77**.

Table 77: Summary of Buildout Signal Warrant Analysis

Warrant	Results							
	Buildout Phase 1		Buildout Phase 2		Buildout Phase 3		Buildout Phase 4	
	Year 2023		Year 2025		Year 2026		Year 2027	
	70%	100%	70%	100%	70%	100%	70%	100%
1. Eight Hour Vehicular Volume	Met	Not Met	Met	Not Met	Met	Not Met	Met	Met
Condition A – Minimum Vehicular Volume	Not Met	Not Met	Met	Not Met	Met	Not Met	Met	Met
Condition B – Interruption of Continuous Traffic	Met	Not Met	Met	Not Met	Met	Not Met	Met	Met
2. Four Hour Vehicular Volume	Met	Not Met	Met	Not Met	Met	Met	Met	Met
3. Peak Hour	Met	Not Met	Met	Met	Met	Met	Met	Met

Signal warrant analysis was also performed for the alternative buildout conditions. The signal warrants #1, #2, & #3 at 70% volumes for Phase 1 buildout and 100% volumes for phase 4 buildout are met. However, meeting these warrants does not constitute installation of a signal, other operational improvements such as addition of turn lanes and engineering judgments should be considered prior to installation of a signal. The results of the analysis are summarized in **Table 78**.

Table 78: Summary of Alternative Buildout Signal Warrant Analysis

Warrant	Results							
	Buildout Phase 1		Buildout Phase 2		Buildout Phase 3		Buildout Phase 4	
	Year 2023		Year 2025		Year 2026		Year 2028	
	70%	100%	70%	100%	70%	100%	70%	100%
1. Eight Hour Vehicular Volume	Not Met	Not Met	Met	Not Met	Met	Not Met	Met	Met
Condition A – Minimum Vehicular Volume	Not Met	Not Met	Met	Not Met	Met	Met	Met	Met
Condition B – Interruption of Continuous Traffic	Met	Not Met	Met	Not Met	Met	Not Met	Met	Met
2. Four Hour Vehicular Volume	Met	Not Met	Met	Not Met	Met	Met	Met	Met
3. Peak Hour	Met	Not Met	Met	Not Met	Met	Met	Met	Met

CONCLUSIONS

Based on the results of the transportation impact analysis, the following conclusions and recommendations are provided.

Project and Background Information

The proposed development known as Lakes at Cocoa Groves Community is generally located west of Grissom Parkway and northeast of the I-95 and S.R. 528 interchange in the City of Cocoa and involves 350 single family units and a proposed connector road. The proposed connector road would not only provide access for traffic generated by the Lakes at Cocoa Groves Community, but also for existing traffic from adjacent subdivision via SW Alan Sheppard Avenue. In the alternative scenario the proposed connector road would connect Osage Street, Angelica Street, and Grissom Parkway and provide access for existing traffic from the adjacent subdivision.

Construction of the site and proposed connector road is anticipated to begin in 2022 and be completed in phases with full-build out in 2027:

- Phase 1 (Year 2023) – 81 Lots
- Phase 2 (Year 2025) – 103 Lots
- Phase 3 (Year 2026) – 53 Lots
- Phase 4 (Year 2027) – 113 Lots

The development (ITE Land Use 210 – Single-Family Detached Housing) is estimated to generate 3,293 daily trips, 254 AM peak hour trips and estimated 339 new external PM peak-hour trips from existing neighborhood. Background traffic includes traffic re-rerouted on the proposed access road and generated by the Amazon Distribution Center, which is currently under construction and located east of the project on Grissom Parkway. The estimated external PM peak-hour trips exceeds the projected project trips by 30% and is considered as conservative/the worst-case scenario.

The roadway and intersection analysis found all study area roadway segments to operate within capacity during the AM and PM peak hours as well as for the daily analysis. The re-routed traffic due to the proposed access road allowed for all intersections and segments to operate within capacity. Results indicated the installation of a traffic signal would provide an overall LOS C (Eastbound through/left LOS D and Eastbound right LOS A) and overall delay of 22 seconds at final buildout in 2027.

Access Management

Ingress and egress points to the Lakes at Cocoa Grove Community meets the County's required spacing for access points on the County roads.

The need for exclusive turn lanes on Grissom Parkway to the proposed connector road was evaluated based on the latest FDOT Access Management Guide, the NCHRP Report 457 for right turn lanes, and the Turn Lane Warrant Workbook produced by FDOT for left turn lanes. As a result of the evaluation, an exclusive northbound left-turn lane and exclusive southbound right-turn lane on Grissom Parkway to the proposed connector road are warranted.

Signal Warrant Analyses

Signal warrant analysis was performed at the intersection of Grissom Parkway and the Proposed Connector Road/Amazon Access Point 1. The purpose of the signal warrant analysis was to determine whether a traffic signal is warranted and if so, during which of the four phases of the development should be installed.

The applicable Signal Warrants #1, #2, and #3 were analyzed and the results indicated that a traffic signal is warranted at the intersection of Grissom Parkway and the proposed access road during phase 1 based on use of 70% volumes intended for roadway with speeds over 40mph. The signal is also warranted in Phases 3 and 4 using 100% volumes.

The signal warrant analysis is based on 1 lane approach for Grissom Parkway and the Proposed Connector Road. This is based on the initial concept for the intersection, however through the traffic analysis a right turn lane is needed as mitigation for phase 1 build conditions. Additional Review was performed to verify operation of the intersection as an unsignalized intersection with 2 lane approach on the Proposed Connector Road. A comparison of the intersection operation is provided in **Tables 79 & 80**, below. The Synchro analysis for the unsignalized operation can be seen in **Appendix J.**

Table 79: Intersection Operational Comparison (AM/PM)

Grissom Parkway and the Proposed Connector Road/Amazon Access Point 1																				
		2025				2026								2027						
		Build				Background				Build				Background				Build		
		Stop Control		Traffic Signal		Stop Control		Traffic Signal		Stop Control		Traffic Signal		Stop Control		Traffic Signal		Stop Control		Traffic Signal	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Delay (s/veh)	EB	40.2	135.9	13.7	15	42.2	146.6	14	15.2	65.3	316	14.9	17.9	71.4	346.7	15.2	18.1	166.5	484.4	19.6	19.8
	WB	36.1	80.3	13.4	14.1	37.2	84.7	13.7	14.2	47.4	160.2	14.2	16.1	49.5	165.1	14.5	16.3	75.7	228.4	16.2	17.3
	NB	1(9.2*)	2.1(9.3*)	7.6	9.5	1(9.2*)	2.1(9.3*)	7.6	9.5	1.4(9.3*)	2.6(9.8*)	8	9.2	1.4(9.4*)	2.6(9.8*)	8	9.3	1.8(9.6*)	3(10.1*)	8.9	9.1
	SB	0	0	9.7	6.5	0	0	9.7	6.4	0	0	9.8	6.0	0	0	9.8	6.0	0	0	10.1	5.7
V/C*	EB	0.541	0.799	0.51	0.4	0.557	0.829	0.52	0.4	0.758	1.277	0.64	0.54	0.786	1.341	0.65	0.54	1.144	1.651	0.78	0.663
	WB	0.009	0.538	0	0.13	0.01	0.555	0	0.13	0.013	0.786	0	0.14	0.013	0.798	0	0.14	0.021	0.946	0	0.15
	NB	0.04	0.19	0.34	0.72	0.04	0.192	0.34	0.73	0.058	0.253	0.34	0.68	0.059	0.255	0.35	0.69	0.081	0.29	0.34	0.65
	SB	-	-	0.76	0.43	-	-	0.77	0.43	-	-	0.77	0.4	-	-	0.78	0.41	-	-	0.76	0.39
LOS	EB	E	F	B	B	E	F	B	B	F	F	B	B	F	F	B	B	F	F	B	B
	WB	E	F	B	B	E	F	B	B	E	F	B	B	E	F	B	B	F	F	B	B
	NB	A*	A*	A	A	A*	A*	A	A	A*	A*	A	A	A*	A*	A	A	A*	B	A	A
	SB	A*	A*	A	A	A*	A*	A	A	A*	A*	A	A	A*	A*	A	A	A*	A*	A	A
*LANE MOVEMENT																					

Table 80: Intersection Operational Comparison (Alternative AM/PM)

Grissom Parkway and the Proposed Connector Road/Amazon Access Point 1																				
		2025				2026								2027						
		Build				Background				Build				Background				Build		
		Stop Control		Traffic Signal		Stop Control		Traffic Signal		Stop Control		Traffic Signal		Stop Control		Traffic Signal		Stop Control		Traffic Signal	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Delay (s/veh)	EB	38	112.4	13.7	14.9	39.8	120.6	14	15.1	56.8	240.9	28.4	41.3	60.9	257	15.1	18	127.2	231.1	19.6	19.6
	WB	36.1	77.5	13.3	14	37.2	83.2	13.6	14.2	46.9	151.2	60.3	33.6	48.9	160.2	14.2	16.2	74.3	128.5	17.1	17.1
	NB	1(9.2*)	2.1(9.2*)	7.6	9.4	1(9.2*)	2.1(9.2*)	7.6	9.5	1.4(9.3*)	2.6(9.7*)	13.4	16.6	1.4(9.3*)	2.6(9.7*)	8	9.3	1.7(9.5*)	2.5(9.6*)	9.1	9.1
	SB	0	0	9.7	6.4	0	0	9.7	6.4	0	0	16.0	10.7	0	0	9.8	6	0	0	5.8	5.8
V/C*	EB	0.505	0.681	0.51	0.4	0.522	0.707	0.52	0.4	0.691	1.052	0.83	0.83	0.713	1.087	0.65	0.54	1.018	1.055	0.62	0.62
	WB	0.009	0.527	0	0.13	0.01	0.549	0	0.13	0.012	0.762	0.25	0.42	0.013	0.786	0	0.14	0.021	0.7	0.14	0.14
	NB	0.04	0.189	0.34	0.73	0.04	0.19	0.34	0.73	0.057	0.251	0.36	0.73	0.058	0.252	0.35	0.69	0.079	0.235	0.66	0.66
	SB	-	-	0.76	0.43	-	-	0.77	0.43	-	-	0.81	0.43	-	-	0.77	0.41	-	-	0.39	0.39
LOS	EB	E	F	B	B	E	F	B	B	F	F	C	D	F	F	B	B	F	F	B	B
	WB	E	F	B	B	E	F	B	B	E	F	E	C	E	F	B	B	F	F	B	B
	NB	A	A	A	A	A	A	A	A	A	A	B	B	A	A	A	A	A	A	A	A
	SB	A	A	A	A	A	A	A	A	A	A	B	B	A	A	A	A	A	A	A	A
*LANE MOVEMENT (HIGHES																					

Warrant analysis of the intersection with a two-lane minor street approach shows 100% volumes would still be met for condition B of Warrant 1 as well as meeting Warrants 2 & 3 for Phase 4 Buildout in either alternative. Additional signal warrant reports for the two-lane approach are included in **Appendix J**.

The warrants and operational needs are based on a conservative amount of existing traffic that may be rerouted to the new intersection and the proportion of eastbound left turning traffic at the intersection. The amount of rerouted traffic is nearly 30% more than the project volume, effectively more than doubling the traffic volume on the Proposed Connector Road. Since the LOS and operation of the approach is primarily controlled by the projected volume of eastbound left turning traffic, reduction to the assumed rerouted traffic and/or left turning traffic rapidly improves the intersection operation as stop controlled. A reduction in only the eastbound left turn traffic by 60% (50 vehicles) will result in a LOS E for the approach in the Phase 4 Buildout conditions.

RECOMMENDATIONS

Based on the traffic analysis and access management review, the following offsite improvements are recommended:

Recommendations		
Scenario	Intersection	Mitigation
2023 Build	Grissom Parkway at Proposed Connector Road	- Exclusive Right-turn lane Eastbound on Proposed Connector Road - Exclusive Right-turn lane Southbound on Grissom Parkway - Exclusive Left-turn lane Northbound on Grissom Parkway
2025 Build	Grissom Parkway at Proposed Connector Road	- Install Traffic Signal

These improvements would increase capacity, reduce delays and improve safety in the study area. Additionally, consideration should be given to reducing the posted speed limit to match approaches on Grissom Parkway. A reduced speed limit may improve operation and safety of the corridor.

APPENDIX A

ITE Trip Generation

Single-Family Detached Housing
(210)

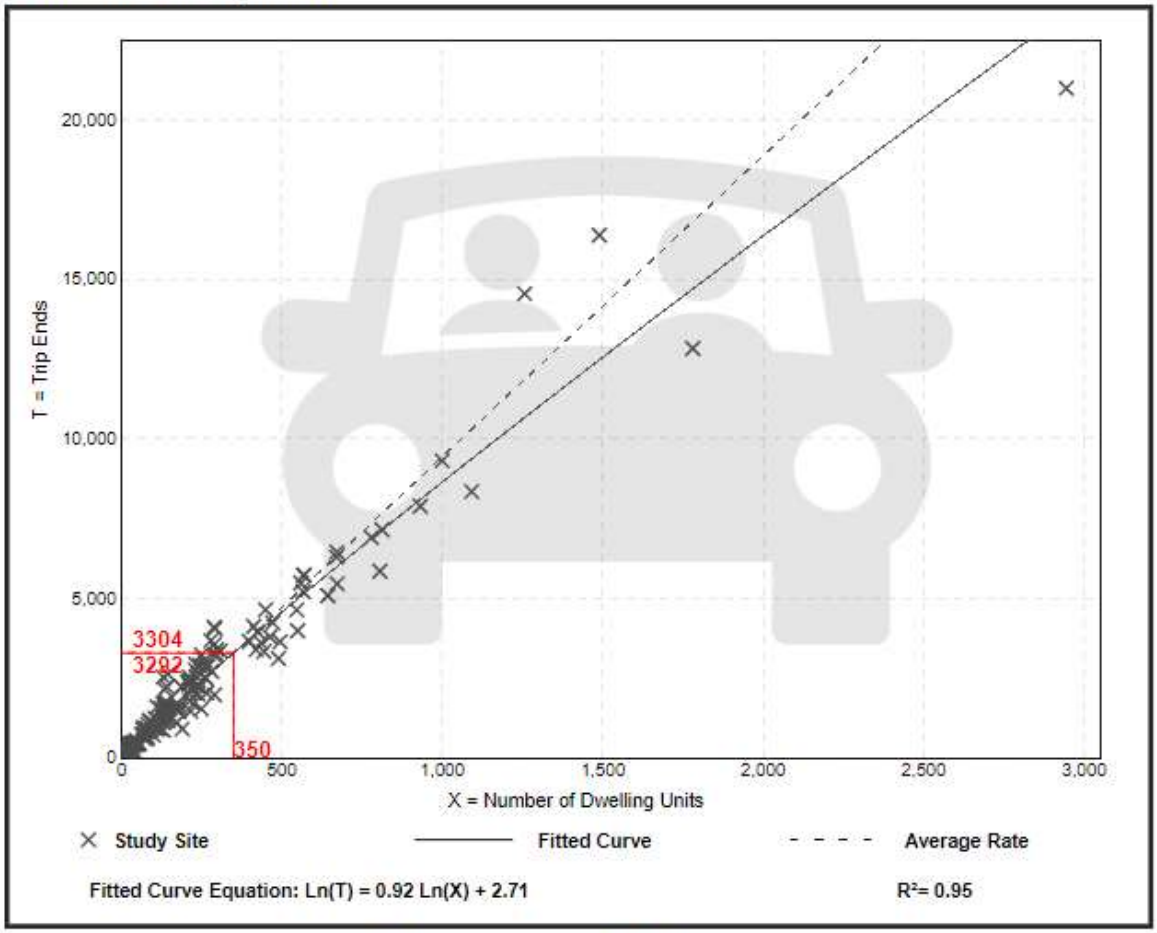
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement • Institute of Transportation Engineers

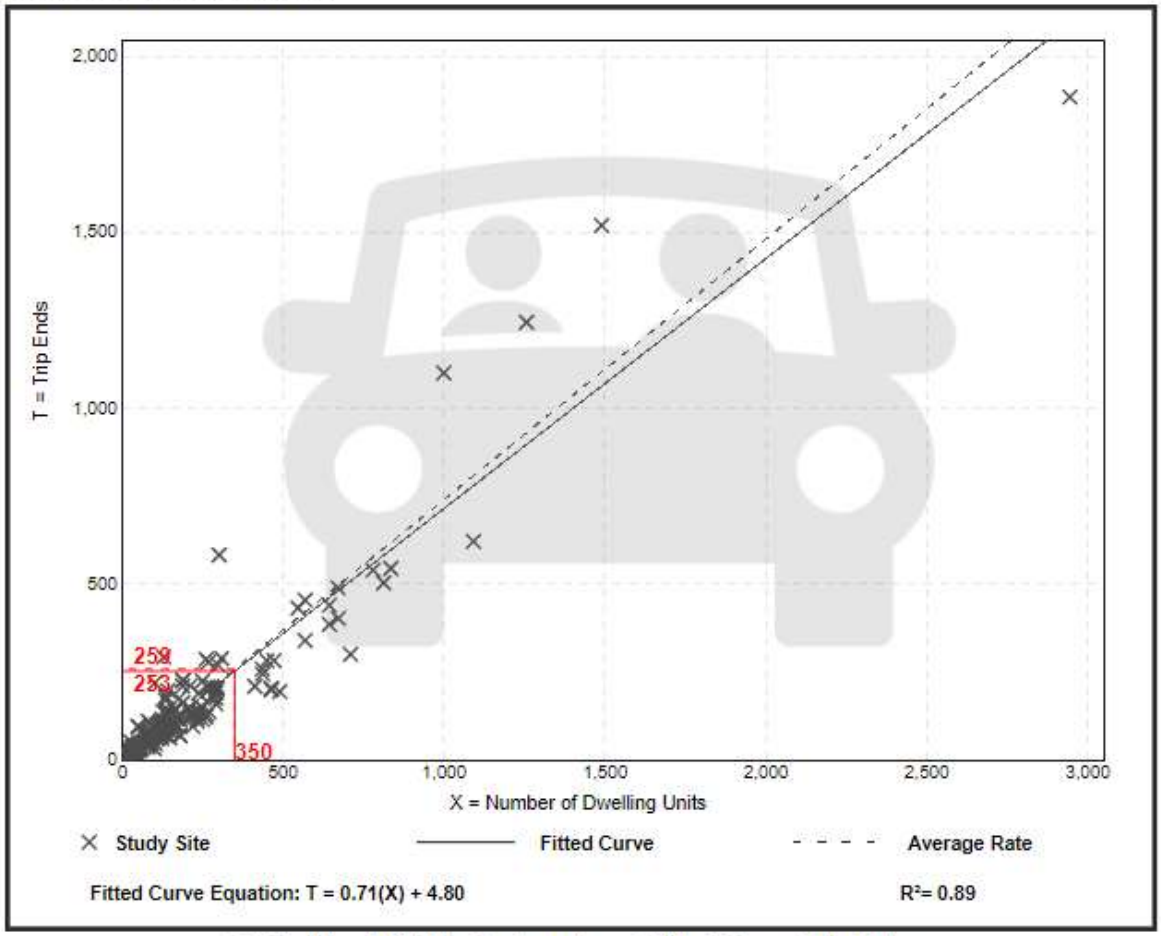
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	173
Avg. Num. of Dwelling Units:	219
Directional Distribution:	25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement • Institute of Transportation Engineers

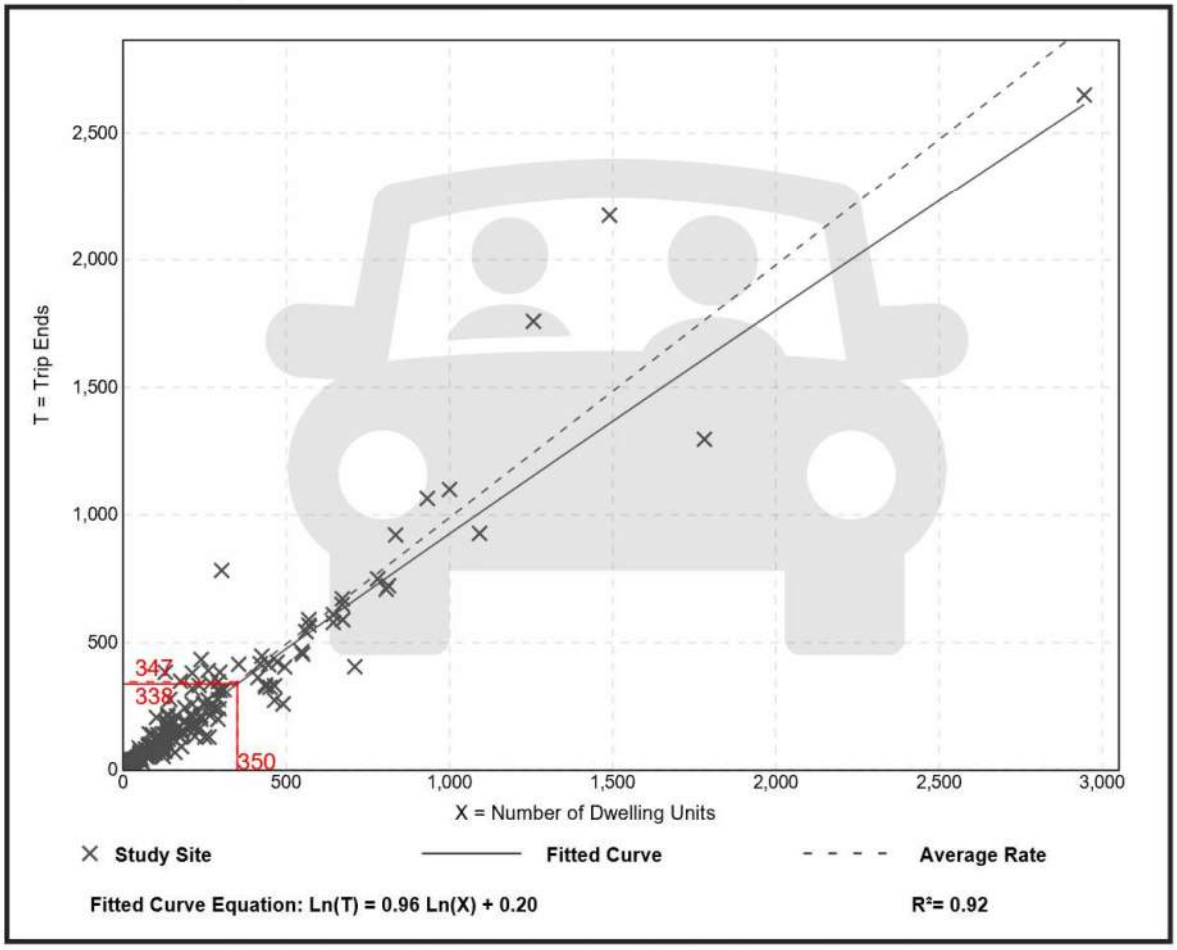
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 190
Avg. Num. of Dwelling Units: 242
Directional Distribution: 63% entering, 37% exiting

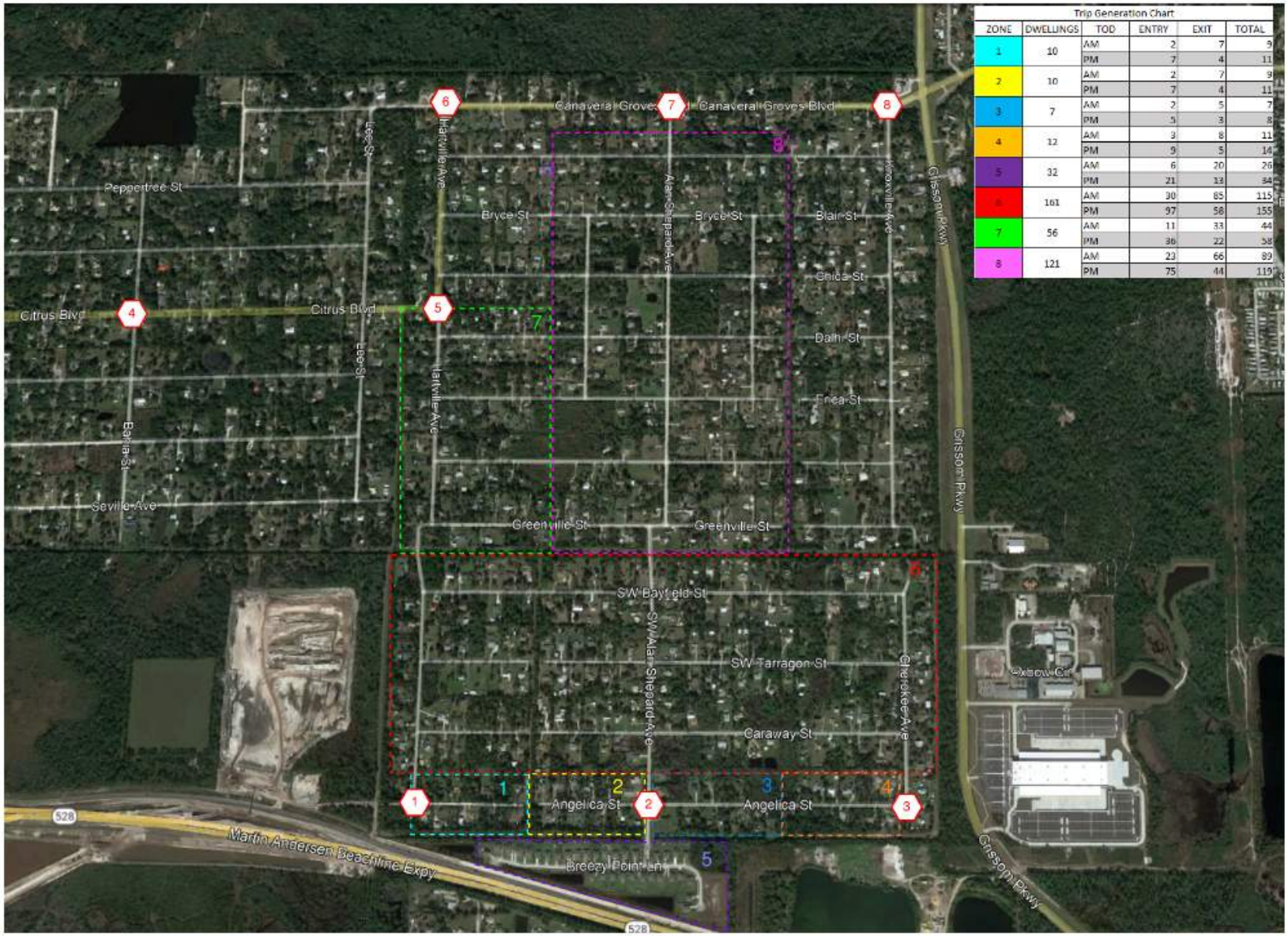
Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



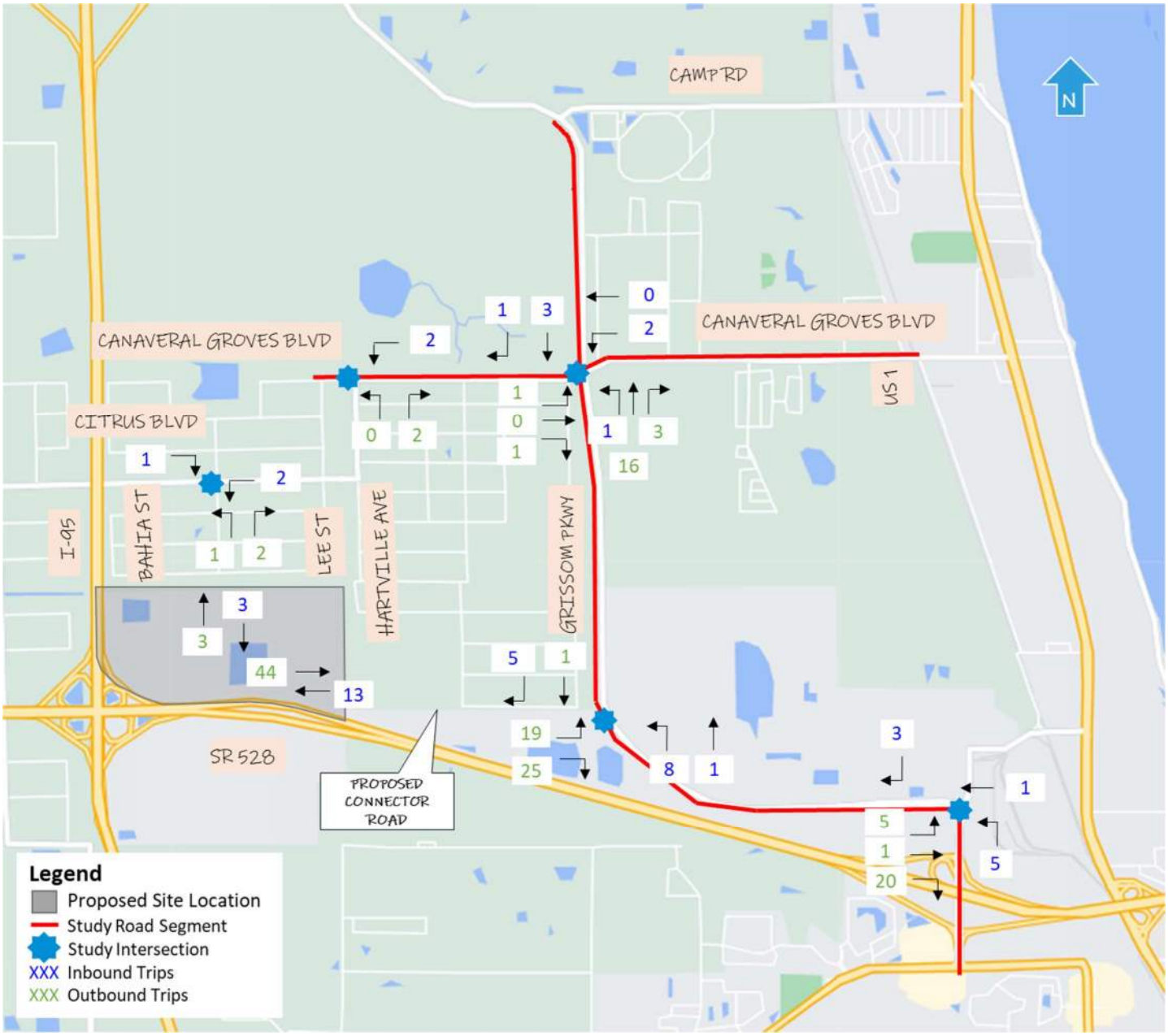
Trip Gen Manual, 10th Ed + Supplement • Institute of Transportation Engineers



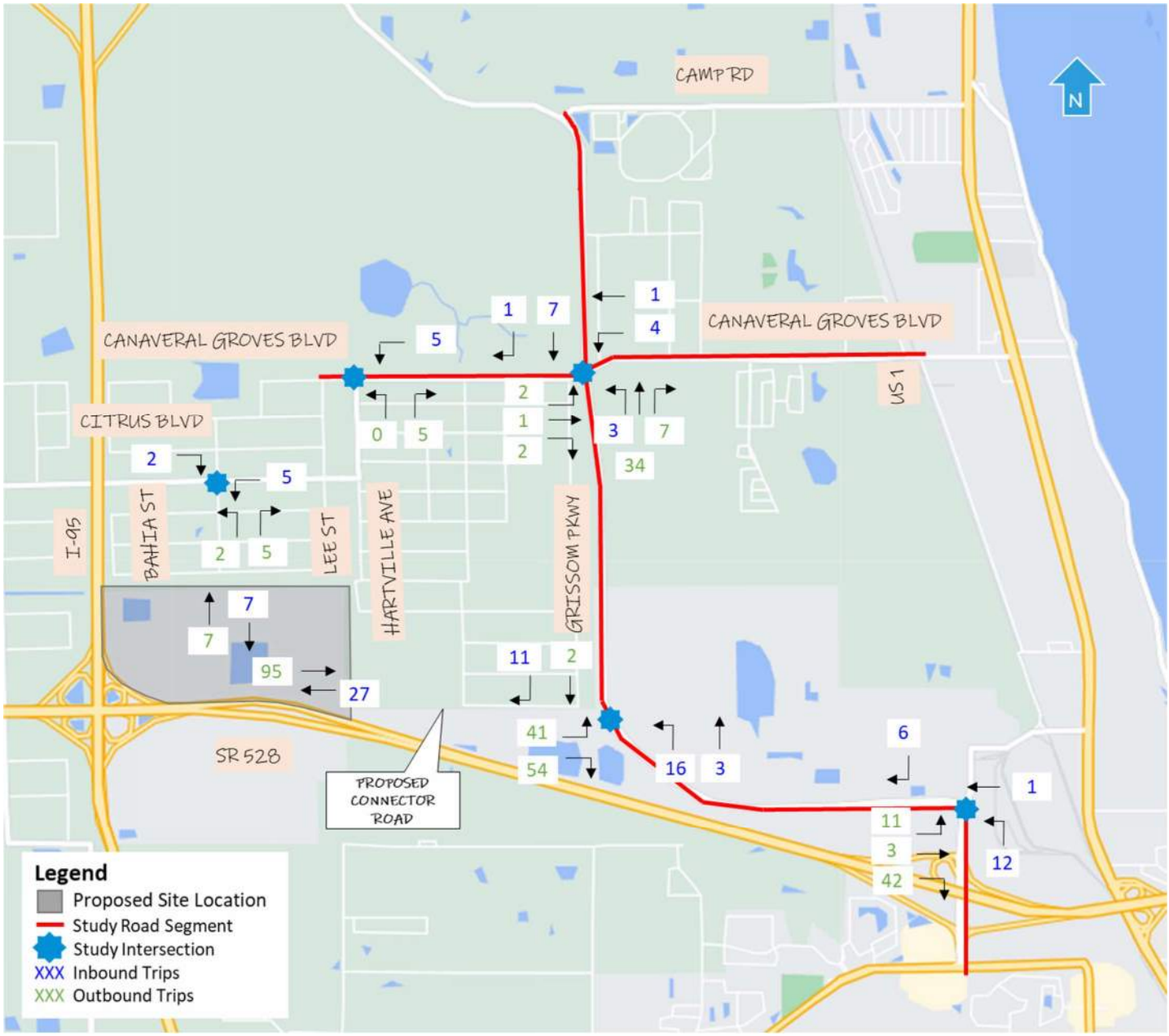
Existing Development Trip Generation

APPENDIX B

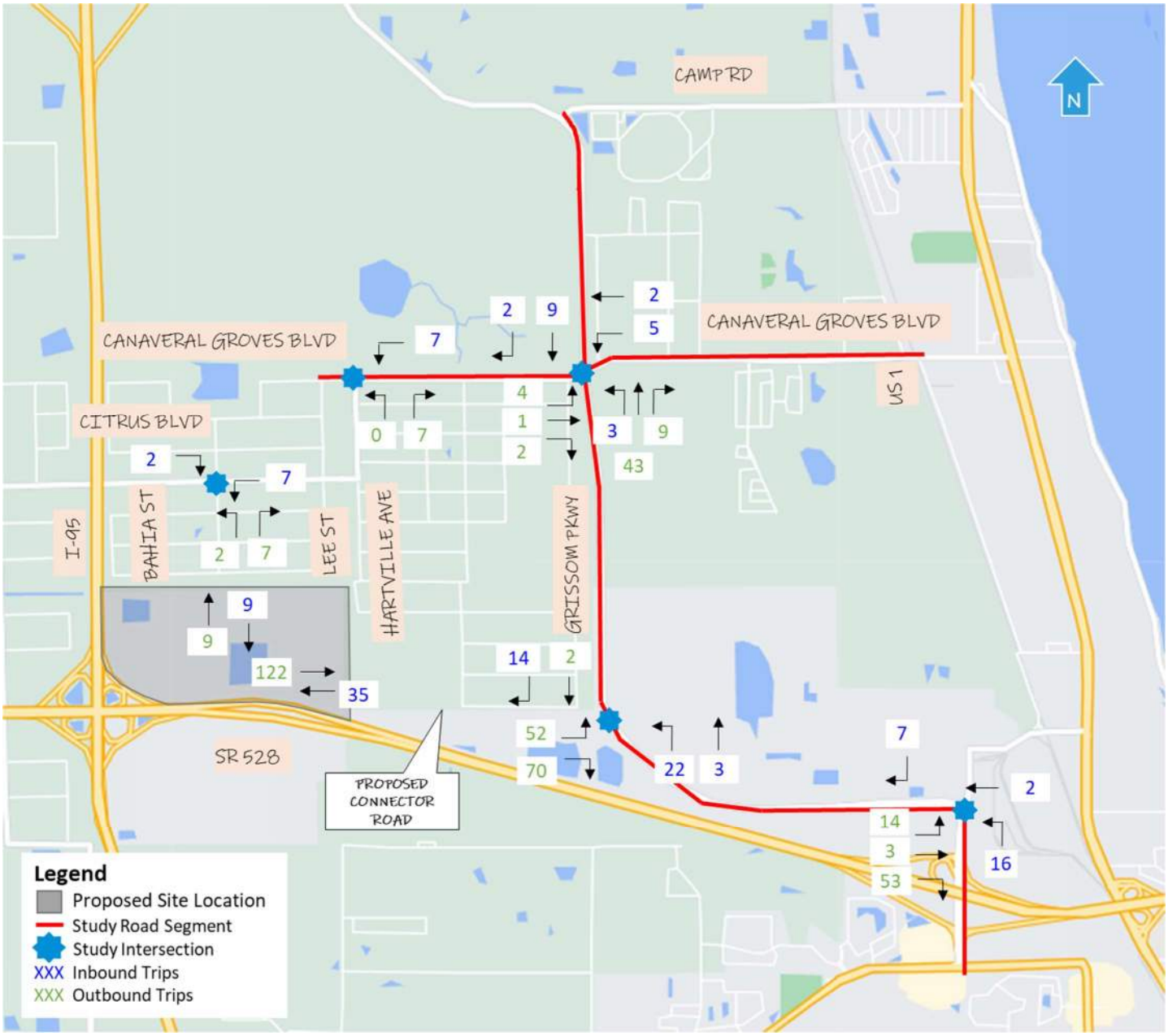
Project Trip Assignments



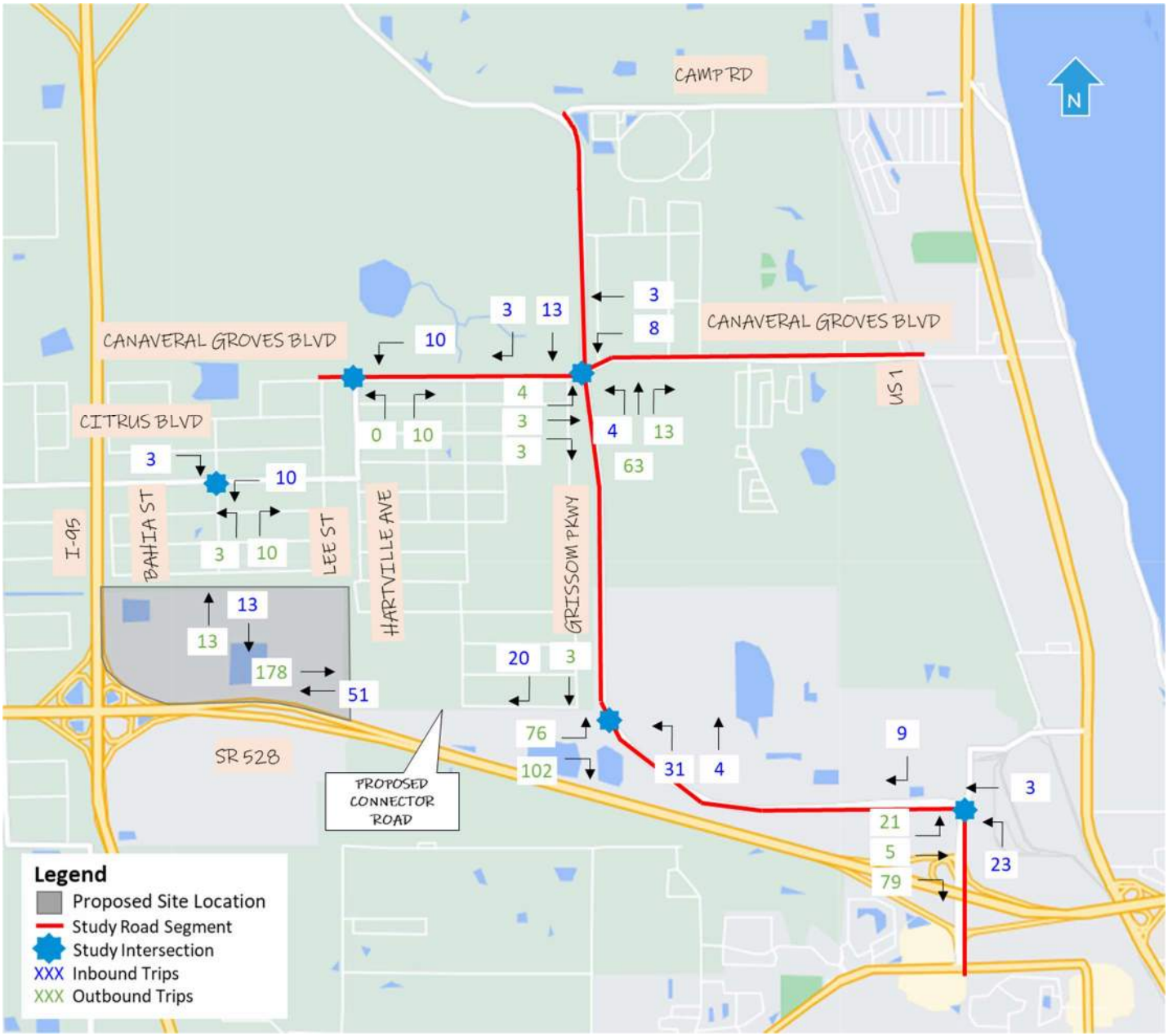
AM Peak Hour 2023 Project Trip Assignment



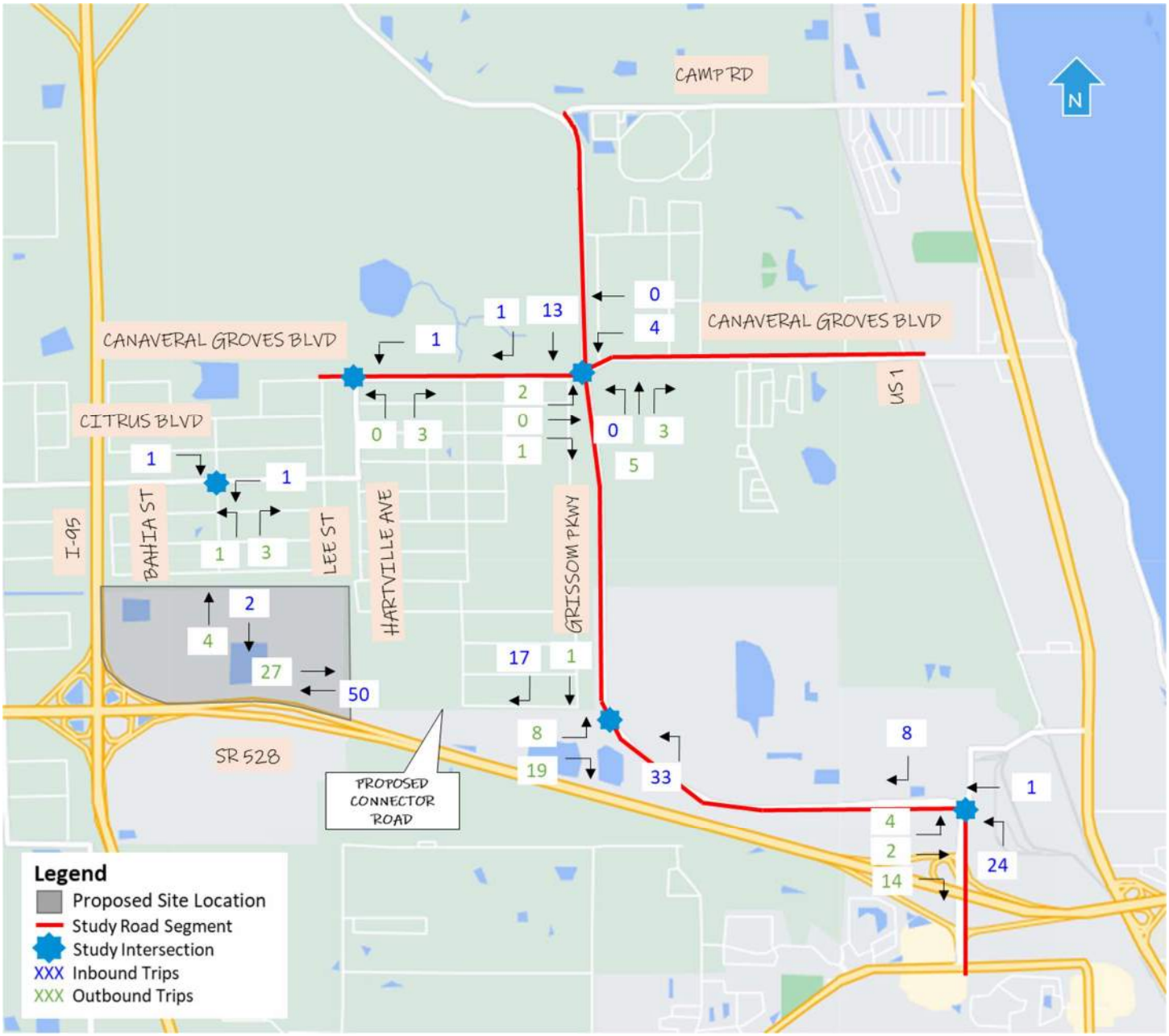
AM Peak Hour 2025 Project Trip Assignment



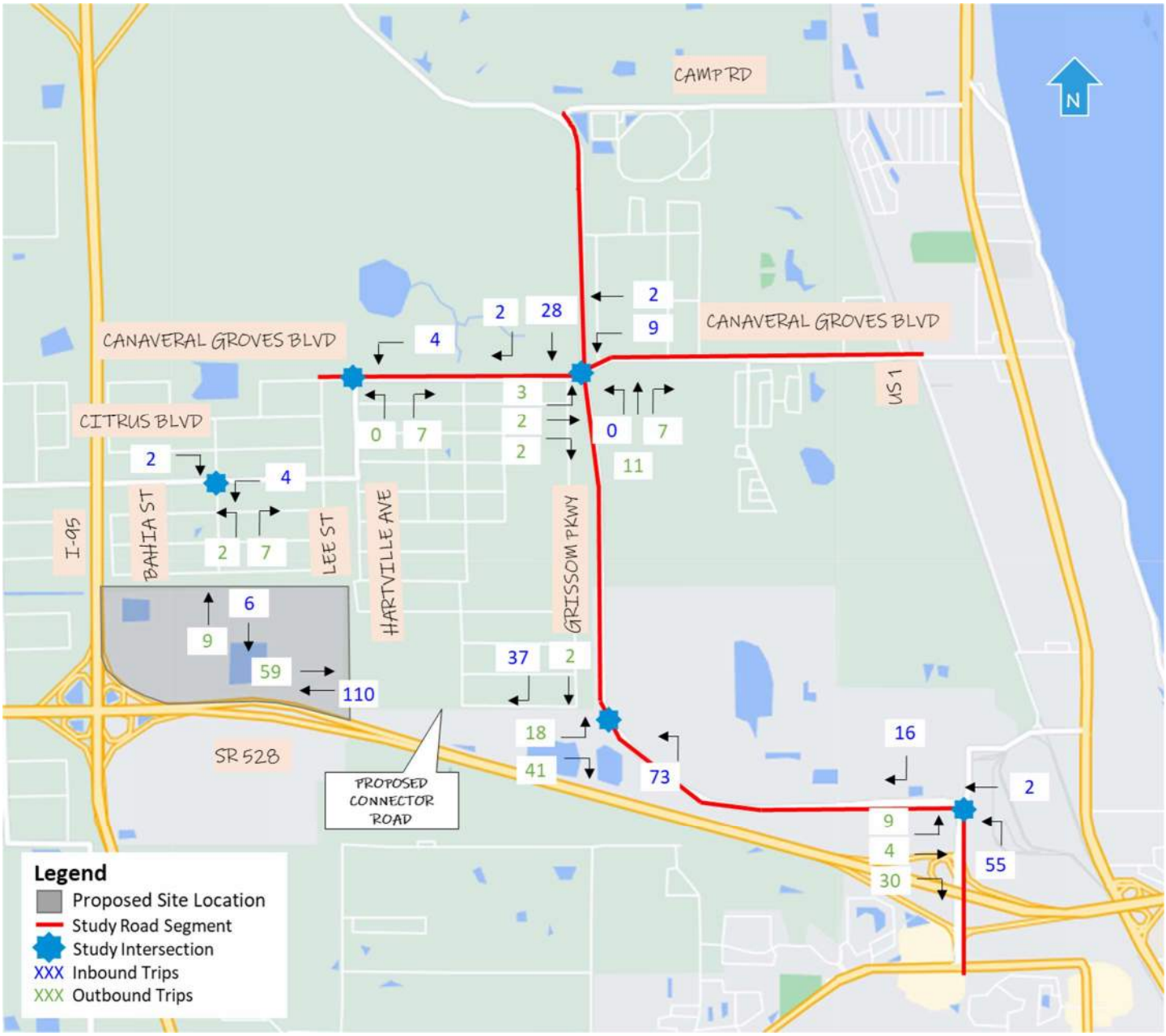
AM Peak Hour 2026 Project Trip Assignment



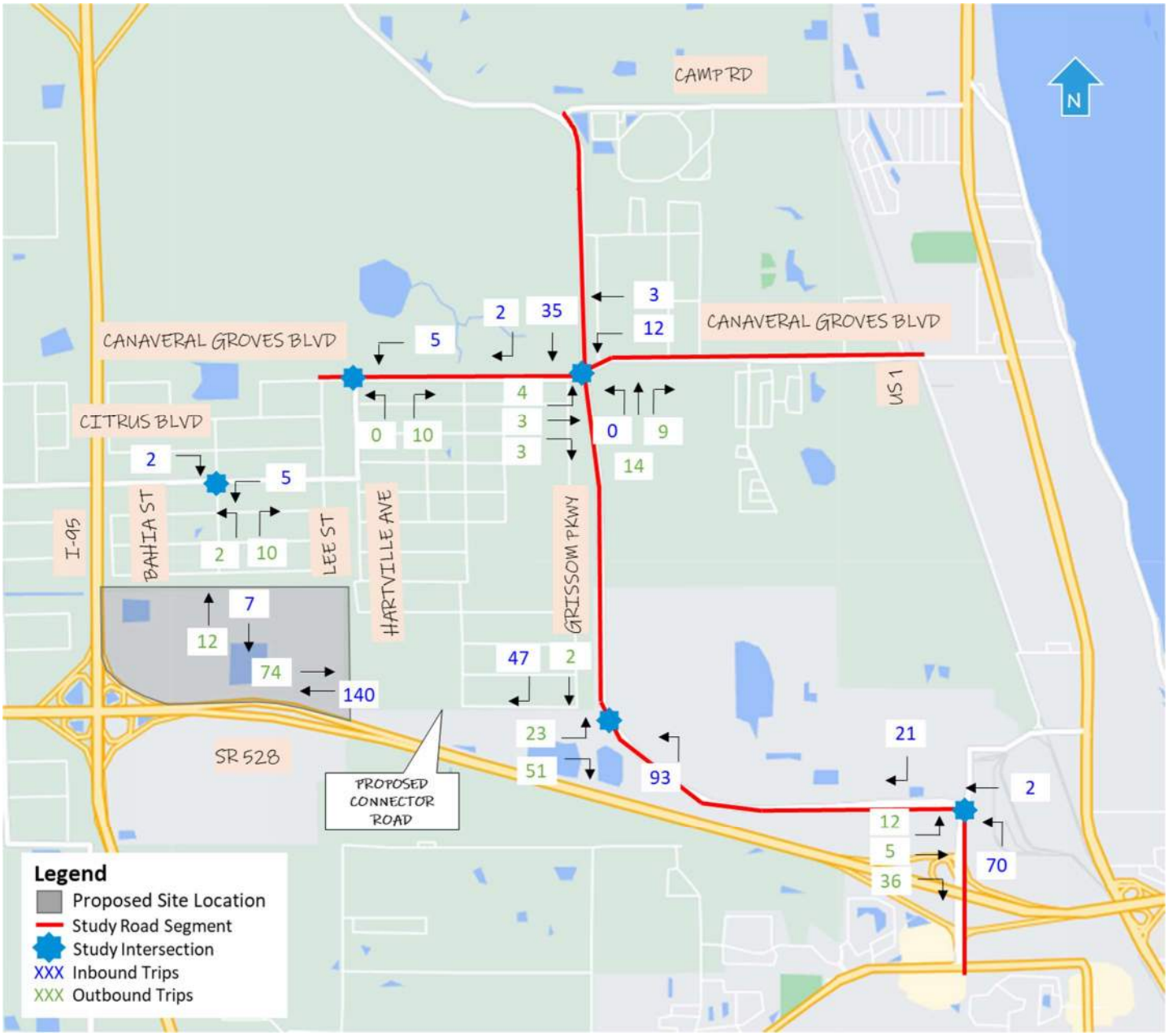
AM Peak Hour 2027 Project Trip Assignment



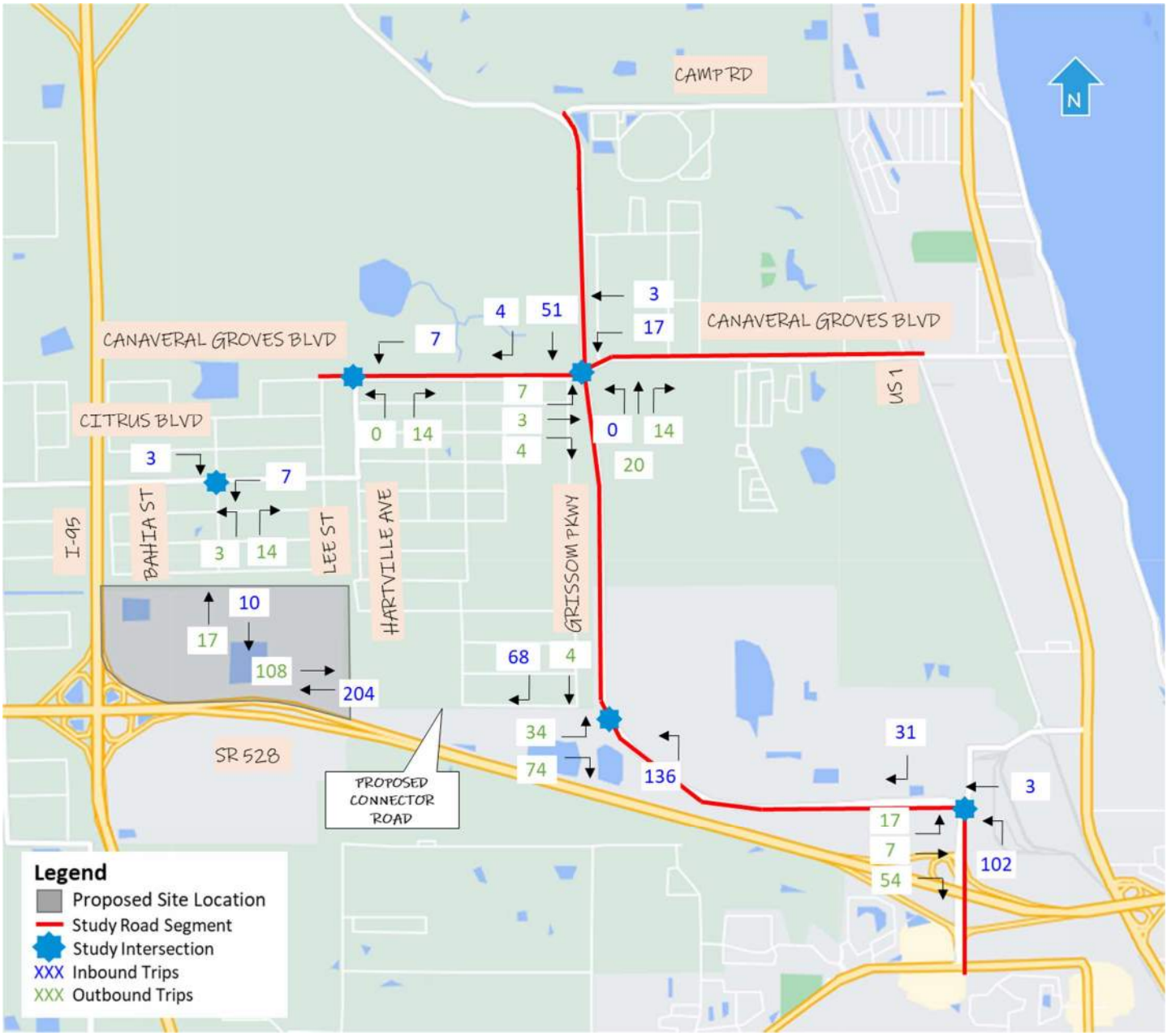
PM Peak Hour 2023 Project Trip Assignment



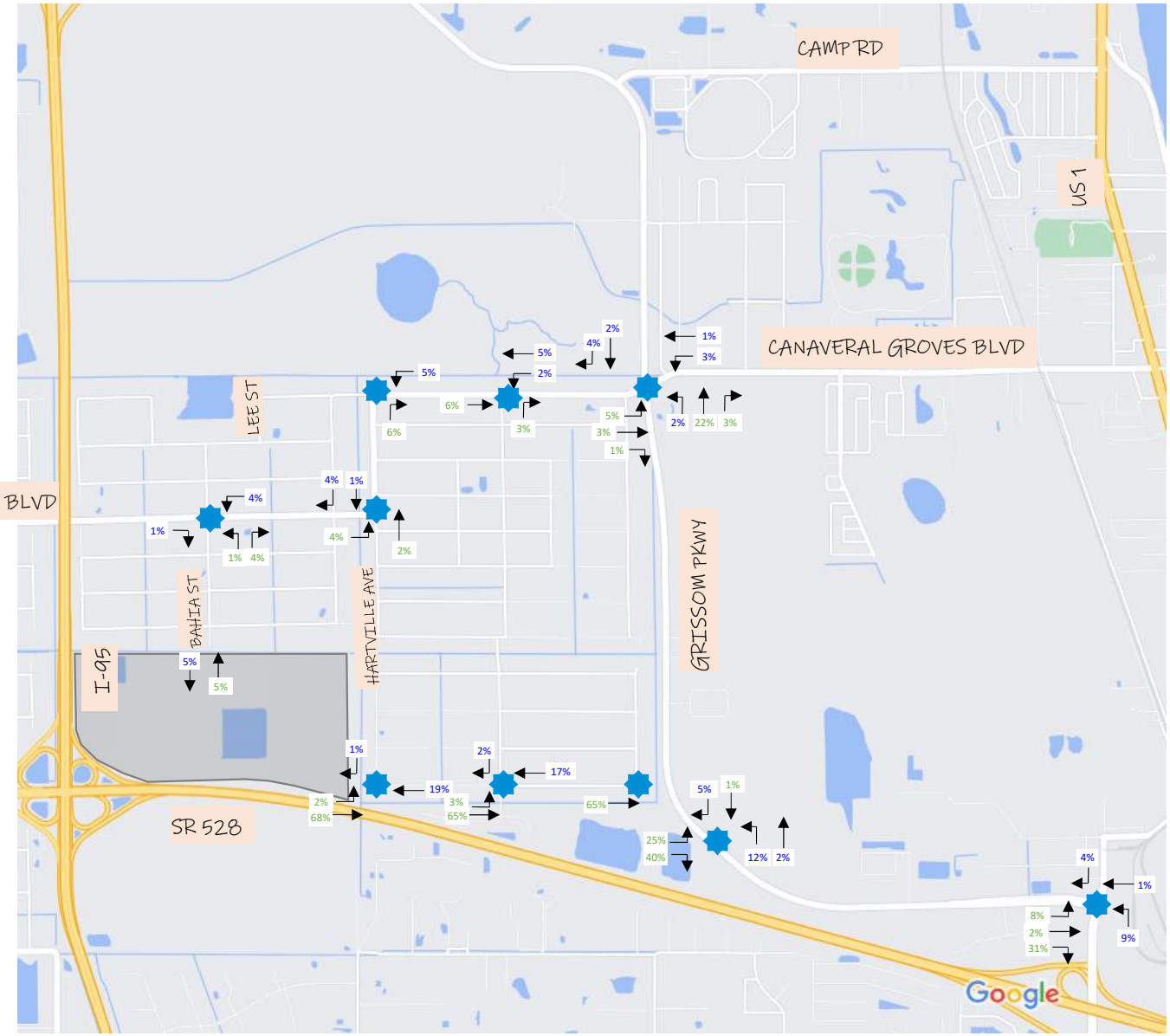
PM Peak Hour 2025 Project Trip Assignment



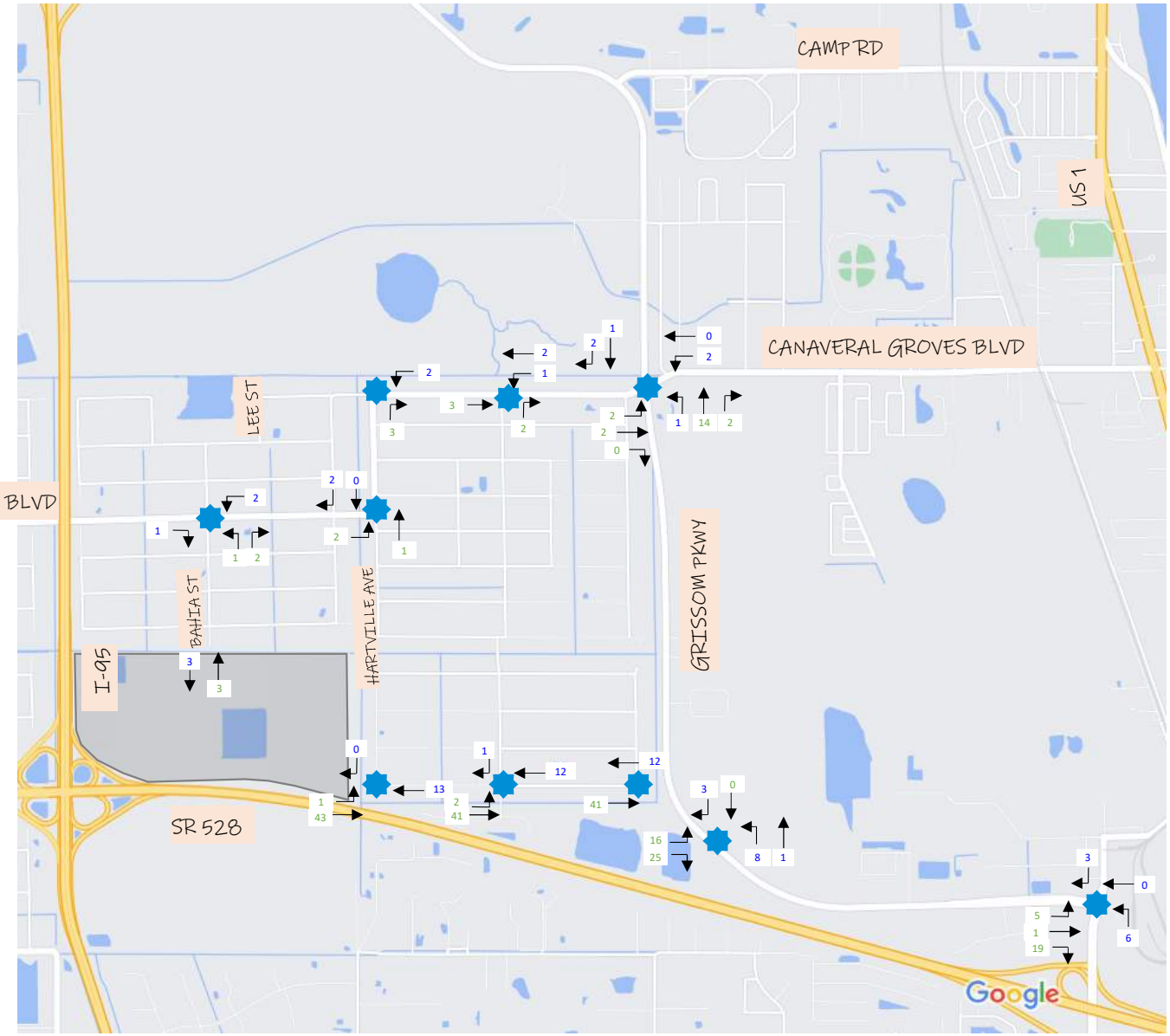
PM Peak Hour 2026 Project Trip Assignment



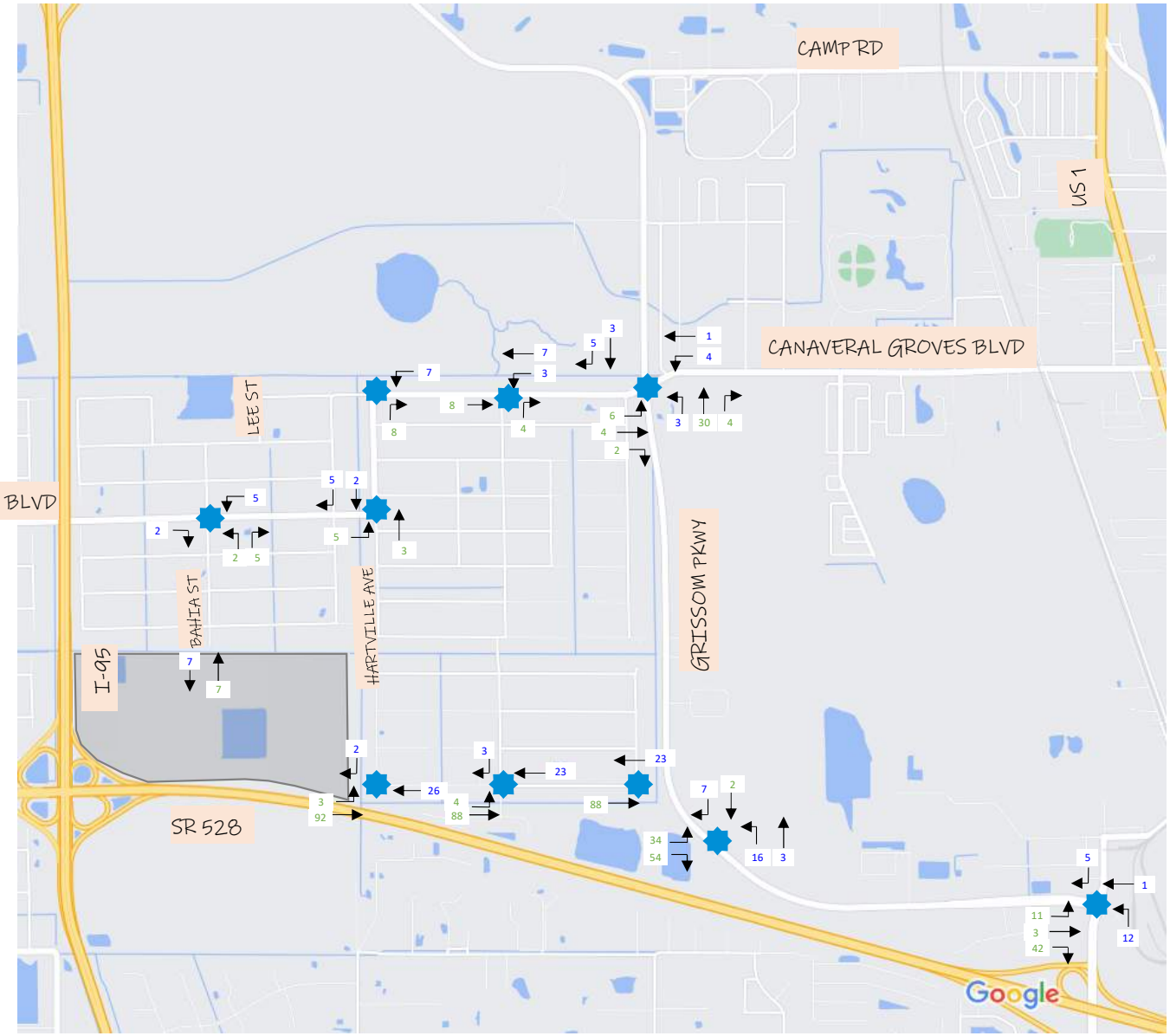
PM Peak Hour 2027 Project Trip Assignment



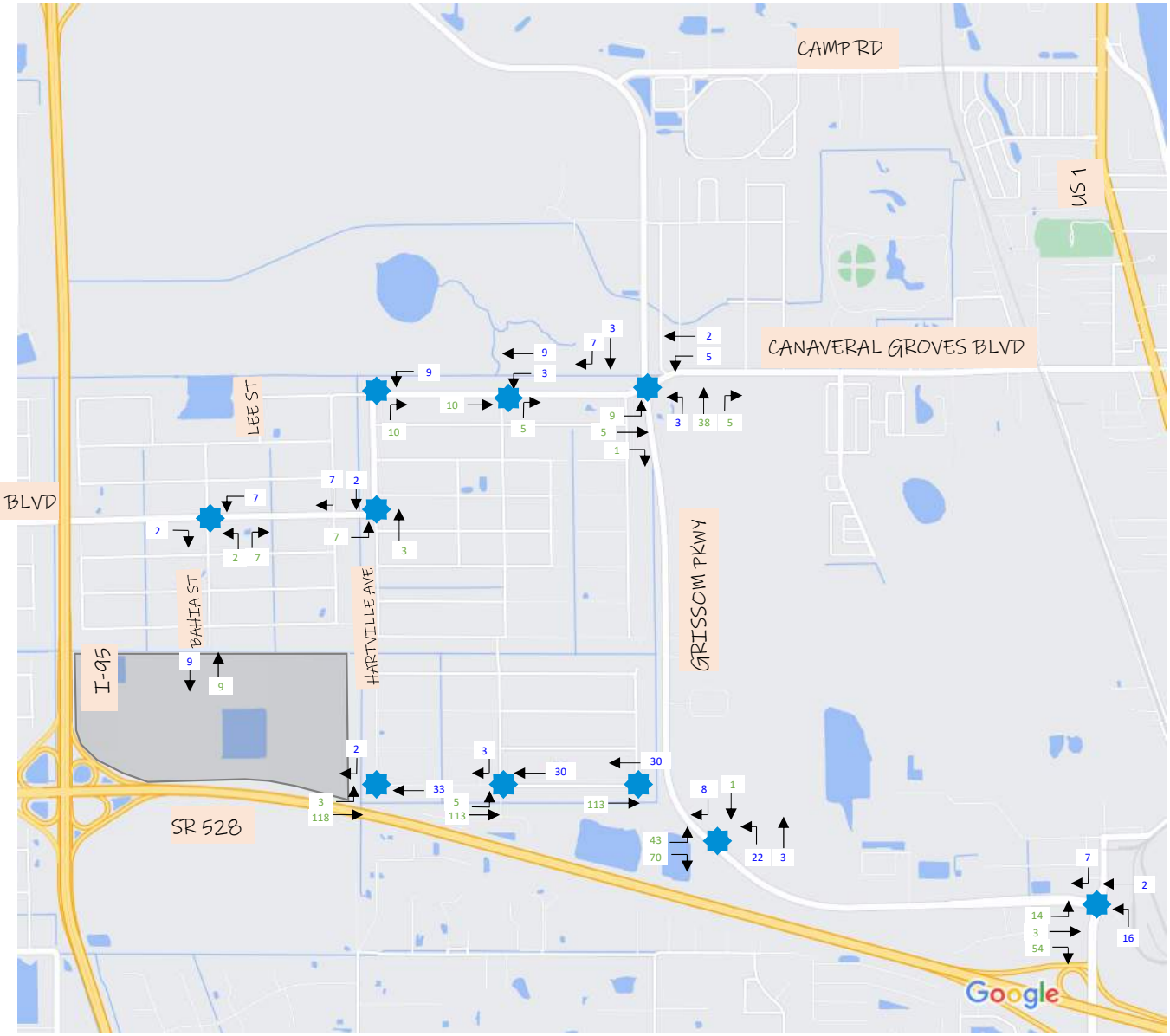
Alt Build
AM PEAK HOUR
Distribution



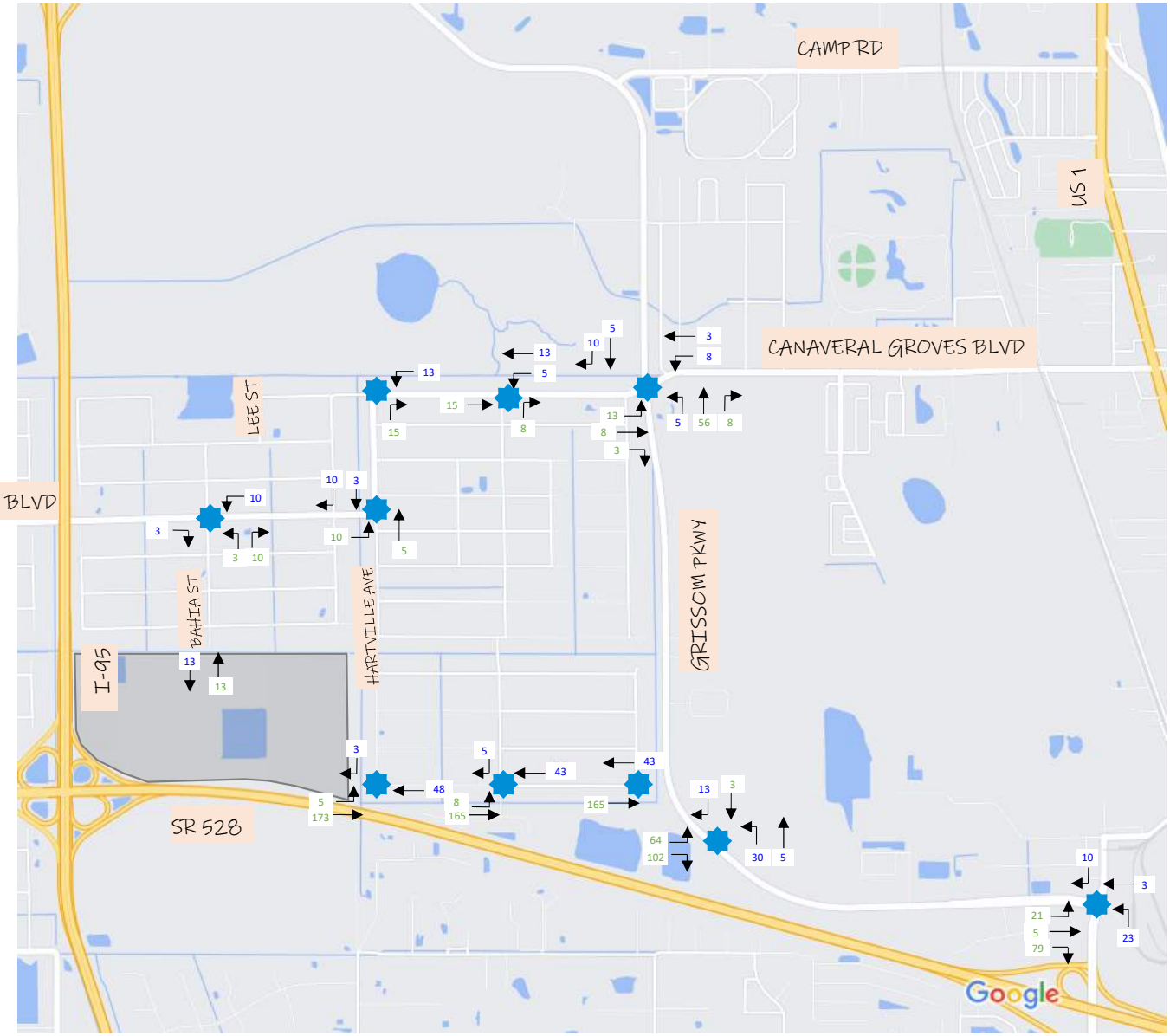
Alt Build
AM PEAK HOUR
Phase 1
63



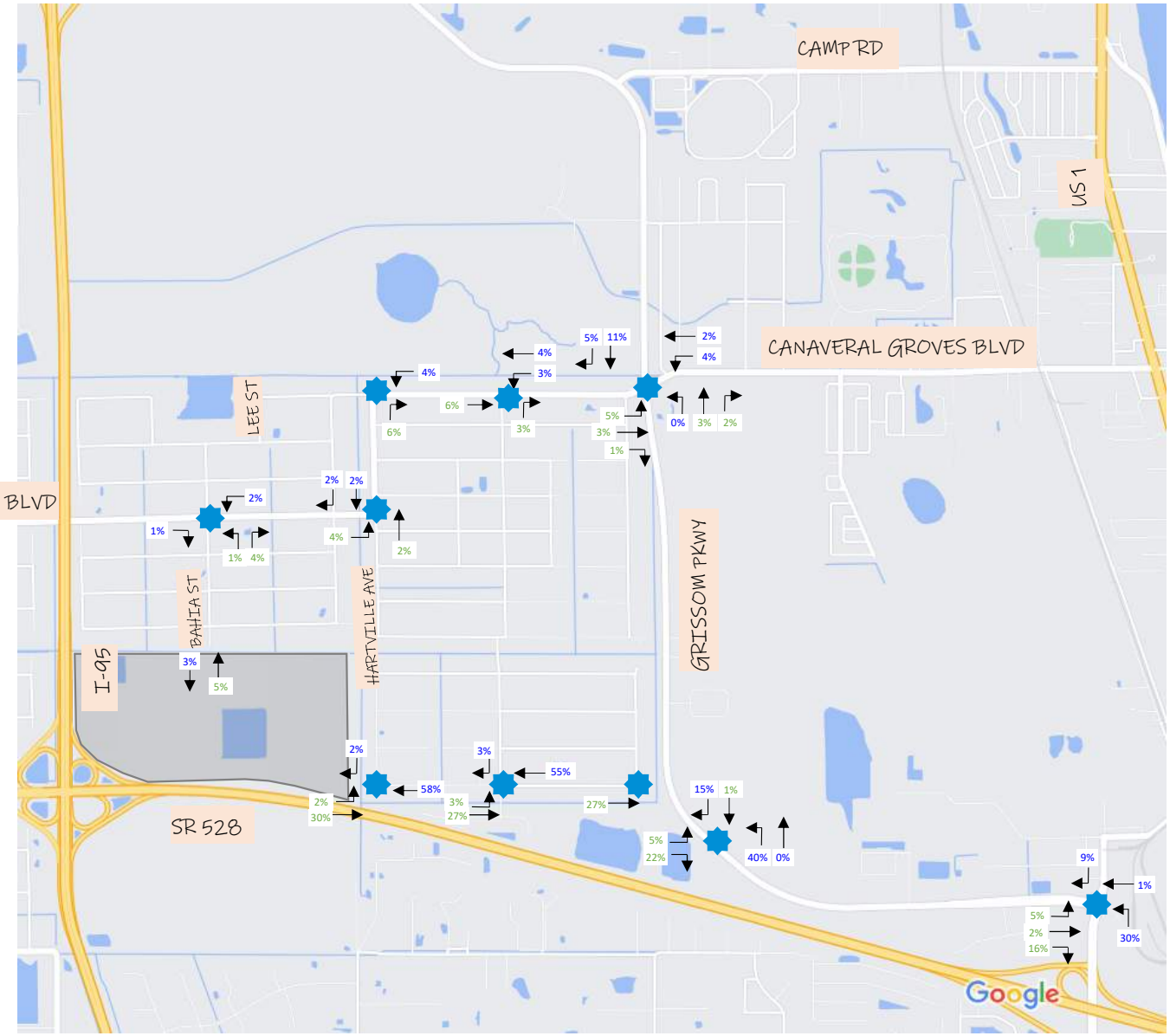
Alt Build
AM PEAK HOUR
Phase 2
136



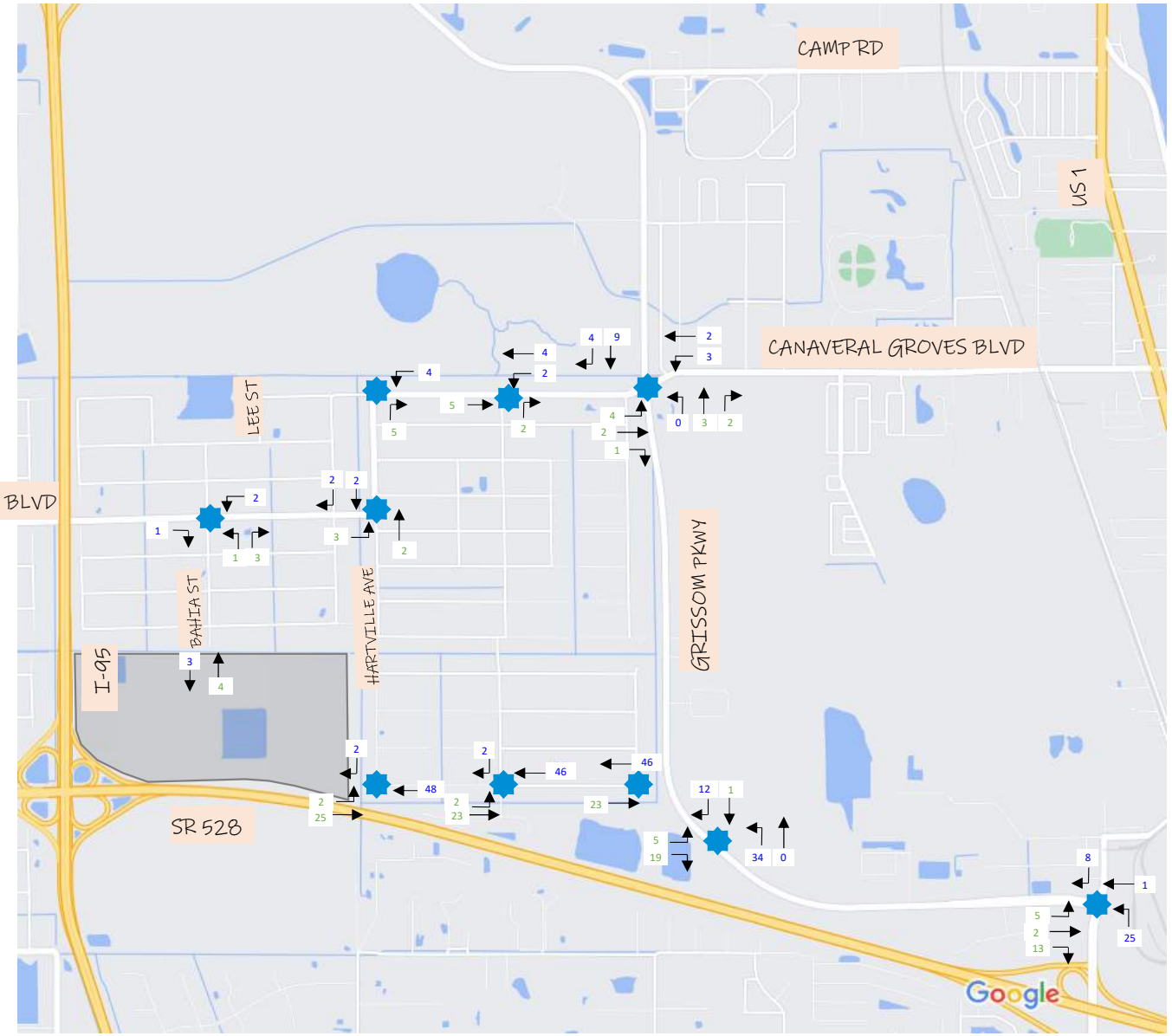
Alt Build
AM PEAK HOUR
Phase 3
174



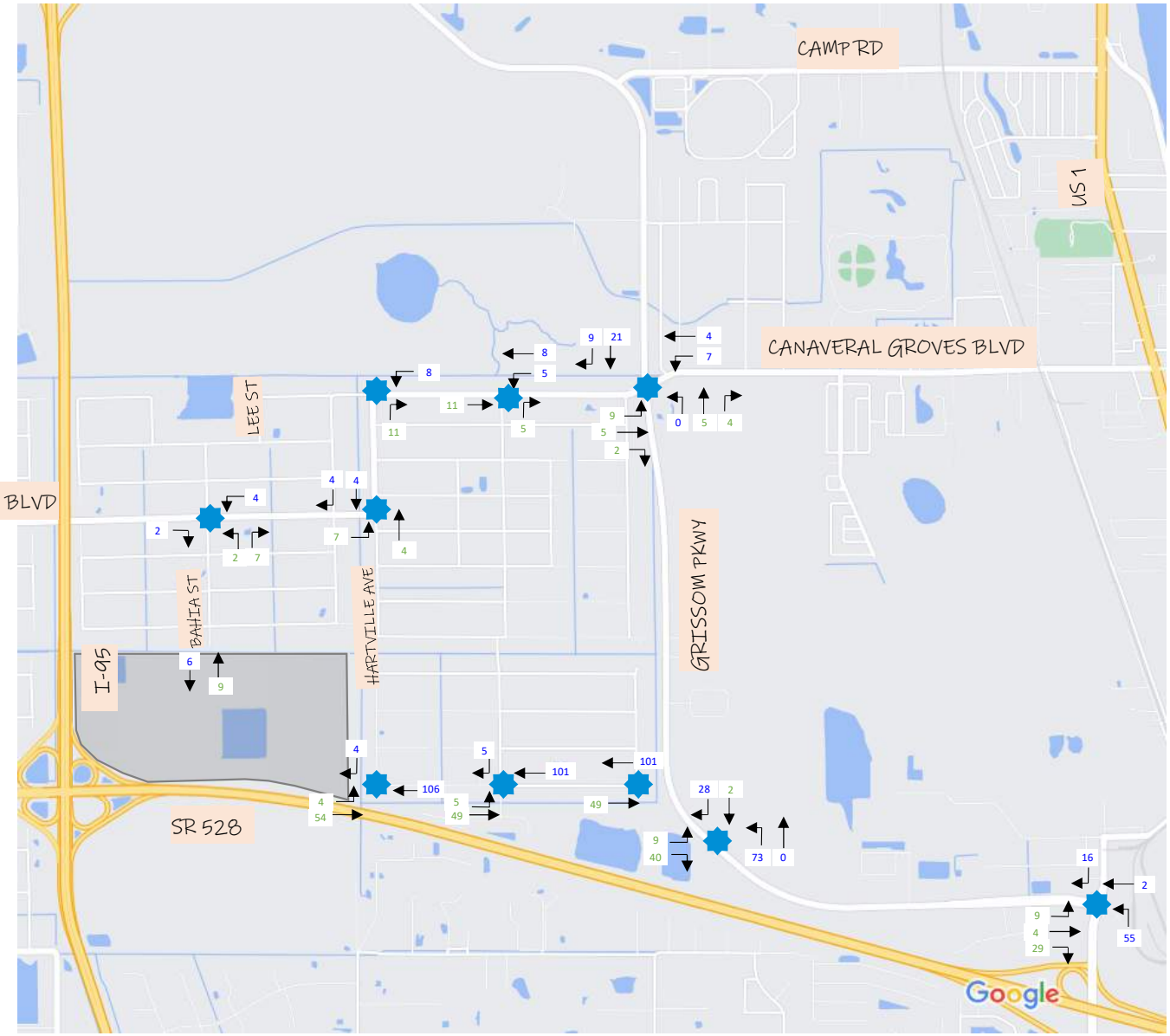
Alt Build
AM PEAK HOUR
Phase 4
254



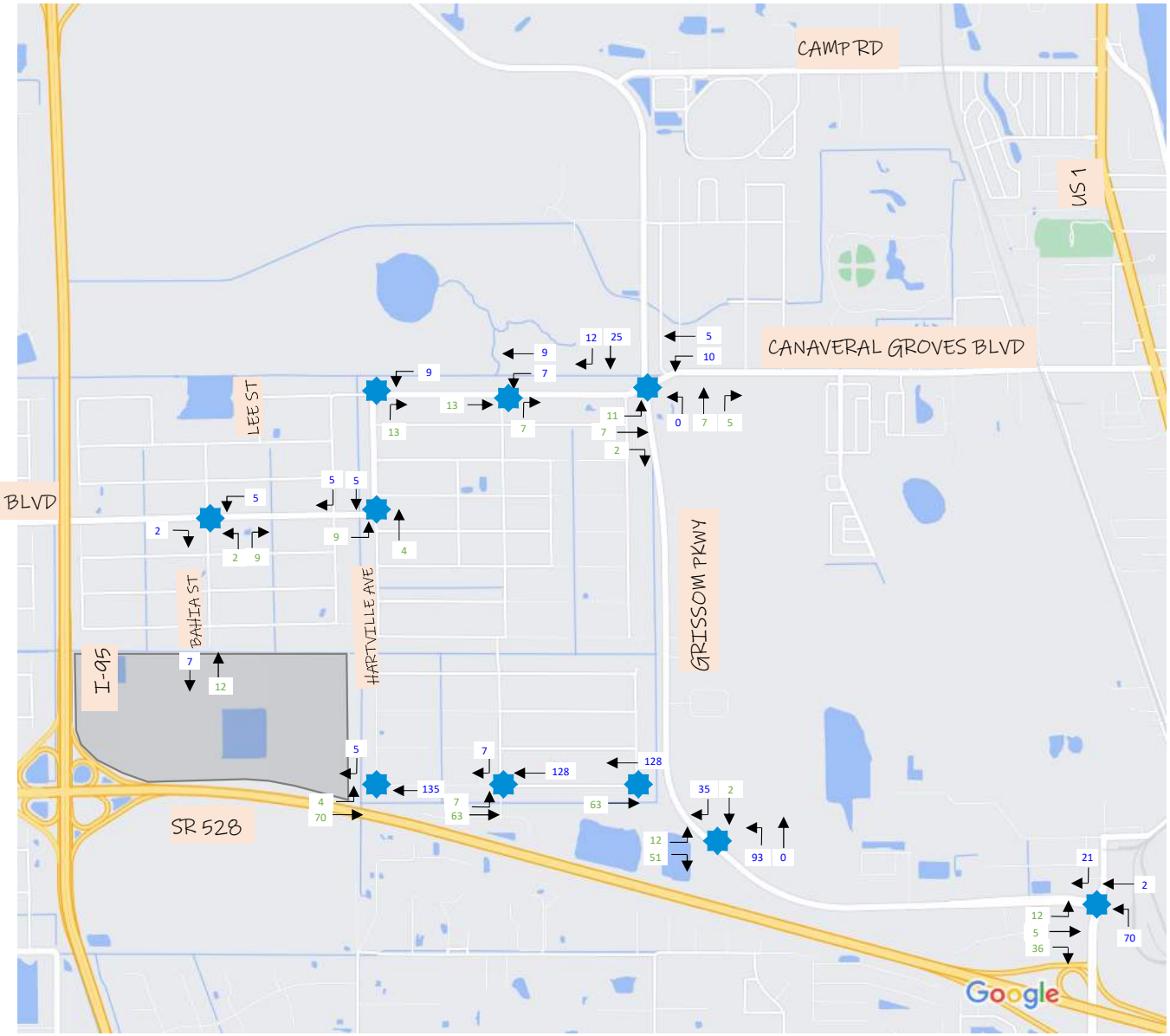
Alt Build
PM PEAK HOUR
Distribution



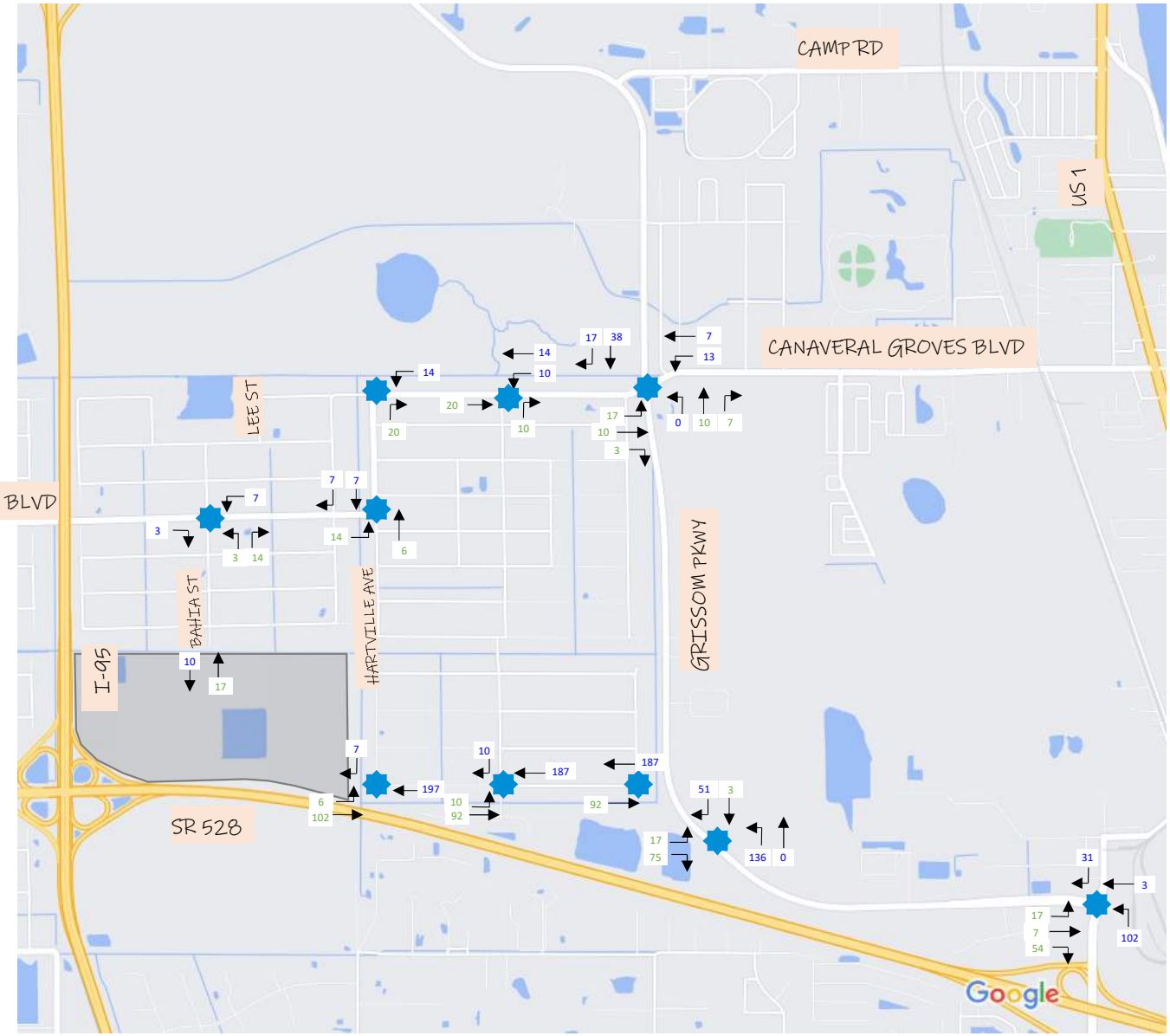
Alt Build
PM PEAK HOUR
Phase 1
83



Alt Build
PM PEAK HOUR
Phase 2
183

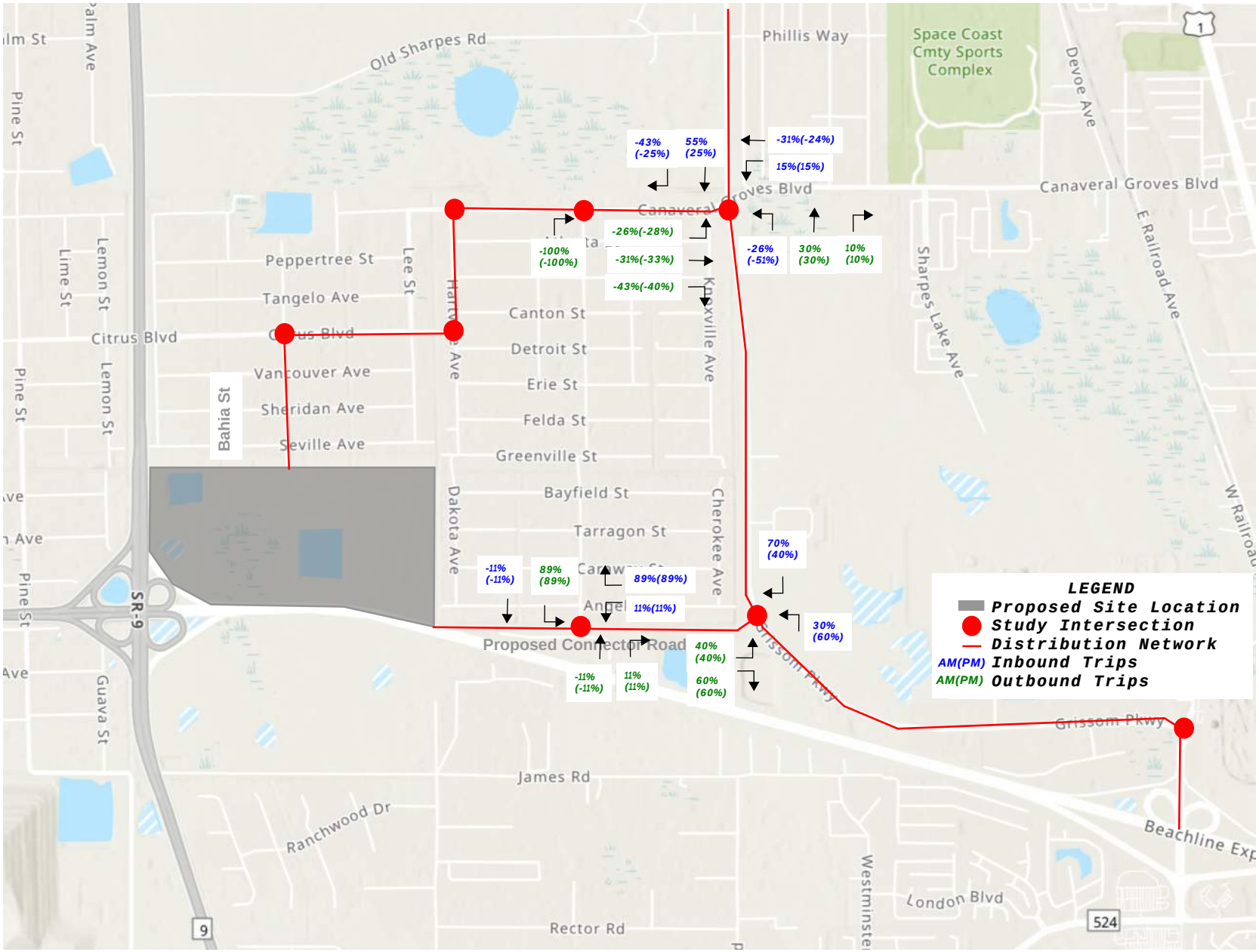


Alt Build
PM PEAK HOUR
Phase 3
233

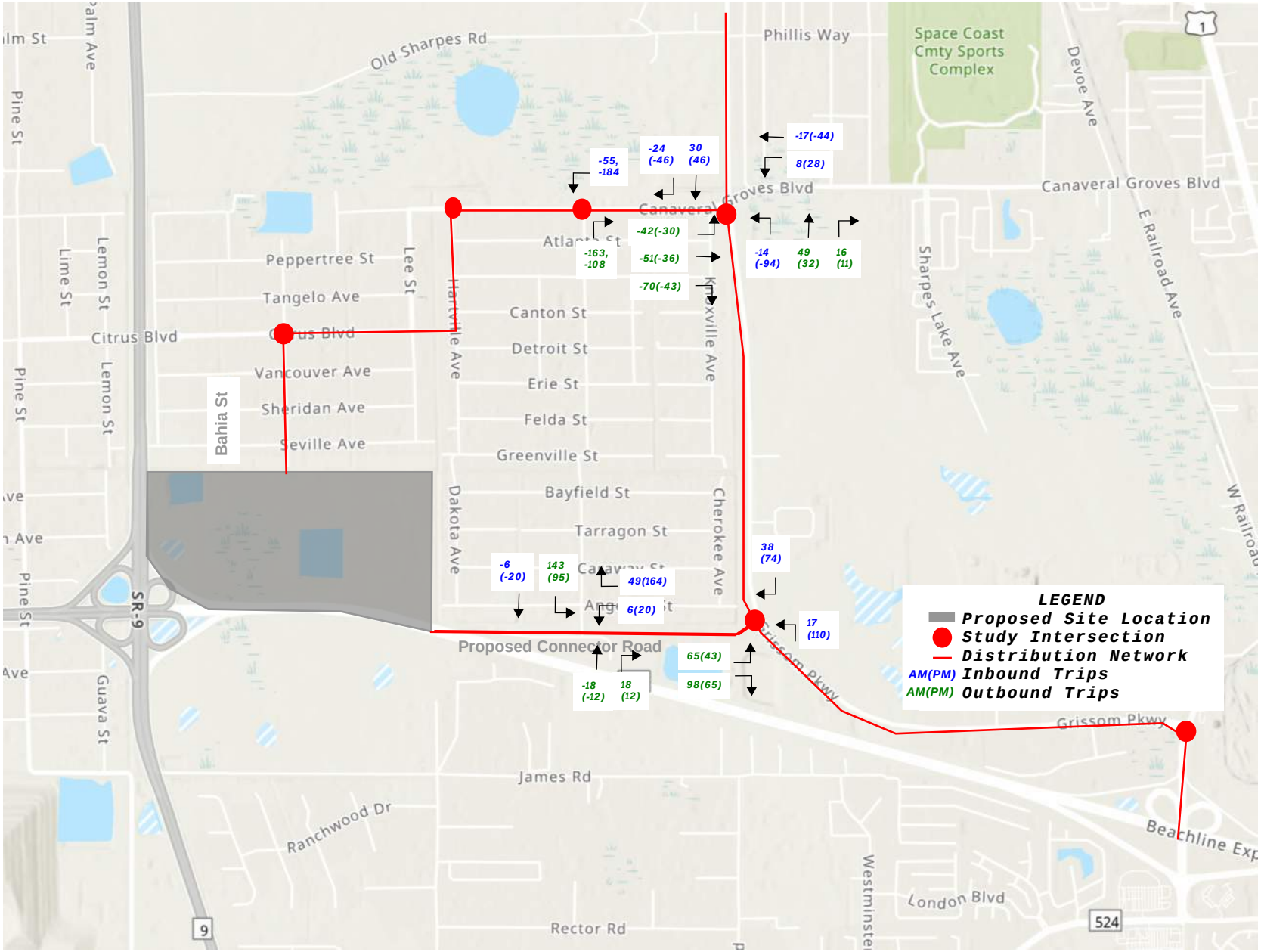


Alt Build
PM PEAK HOUR
Phase 4
339

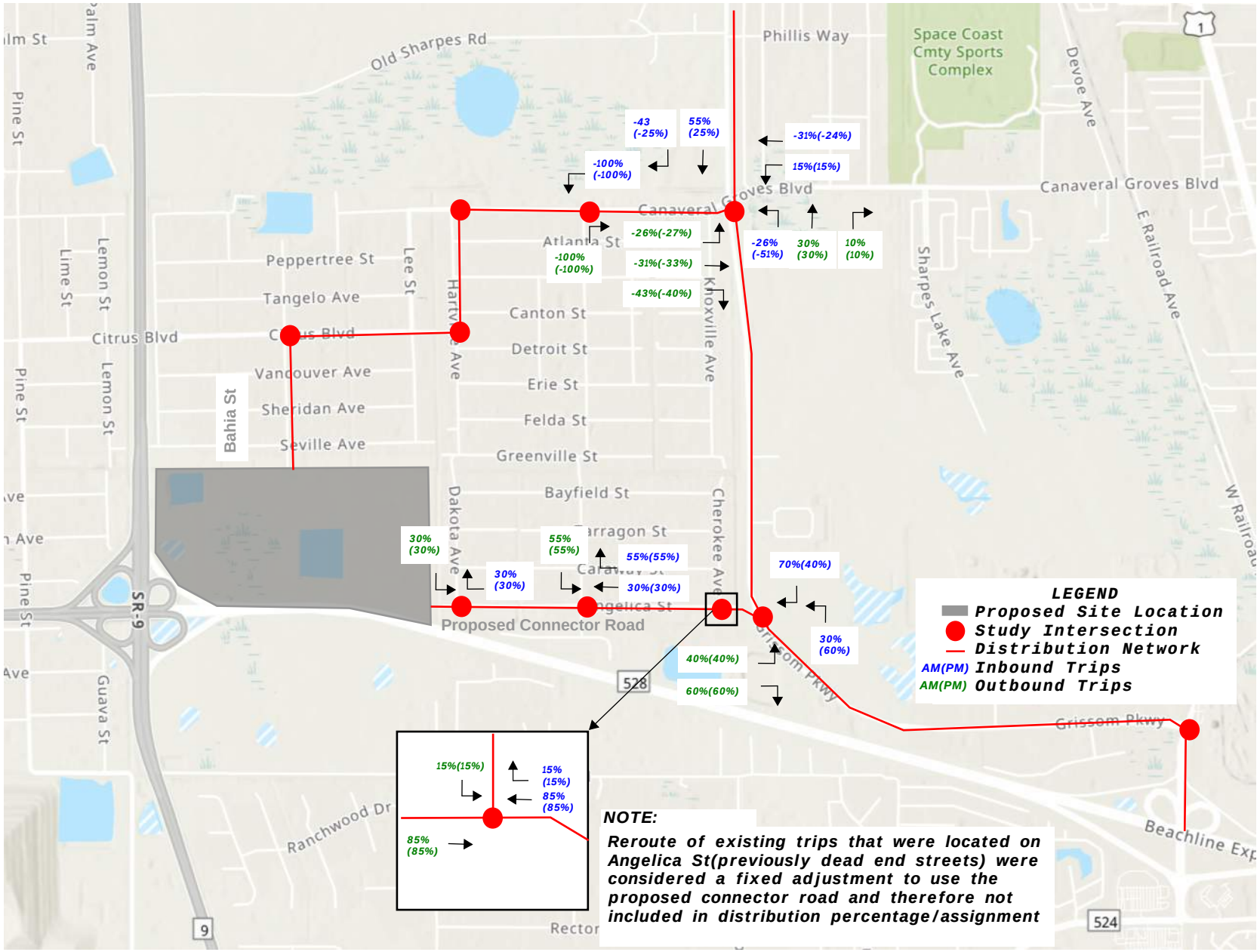
BUILD AM & PM REROUTED DEVELOPMENT TRAFFIC DISTRIBUTION



BUILD AM & PM REROUTED DEVELOPMENT TRAFFIC ASSIGNMENT



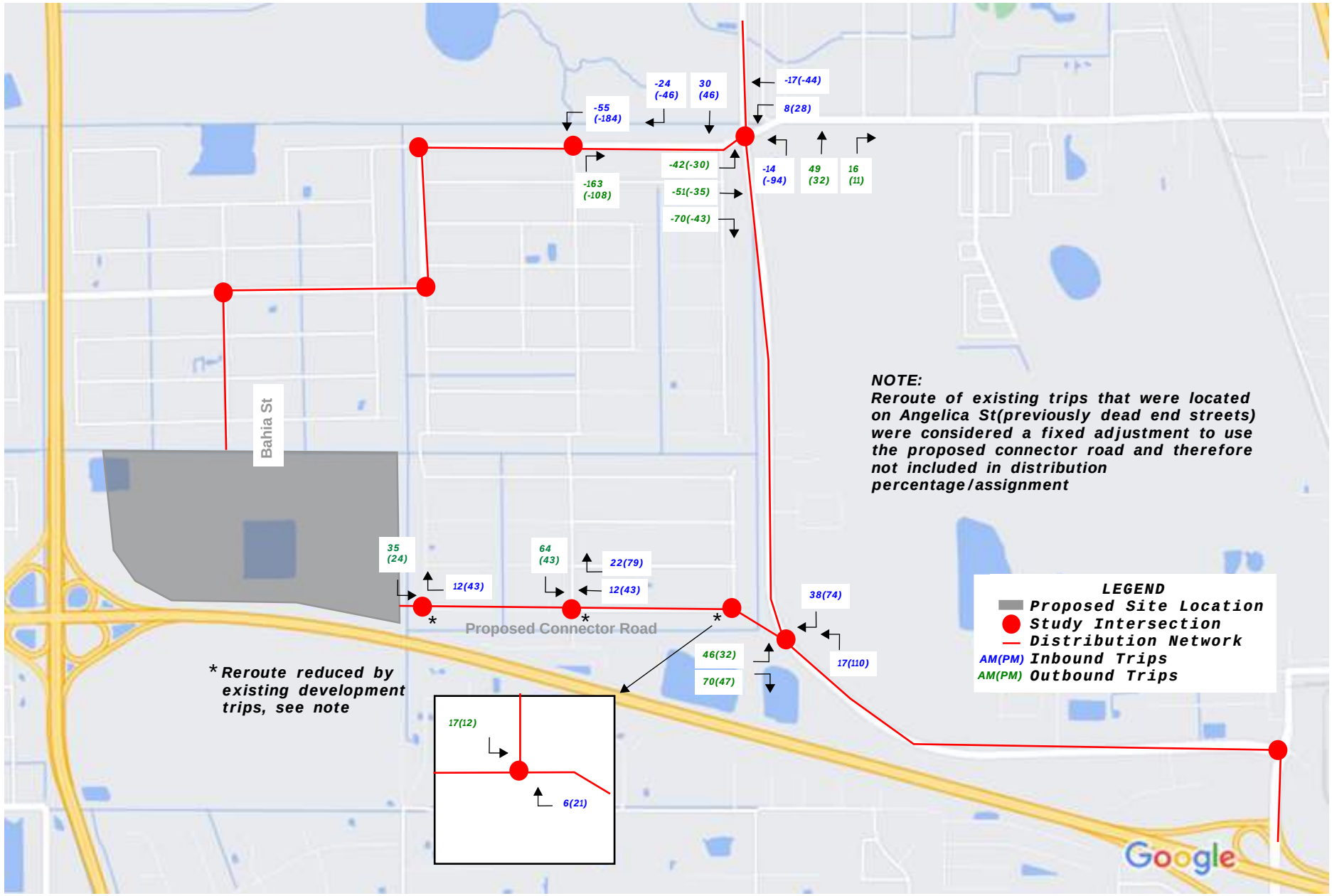
BUILD ALTERNATIVE AM & PM
REROUTED DEVELOPMENT
TRAFFIC DISTRIBUTION



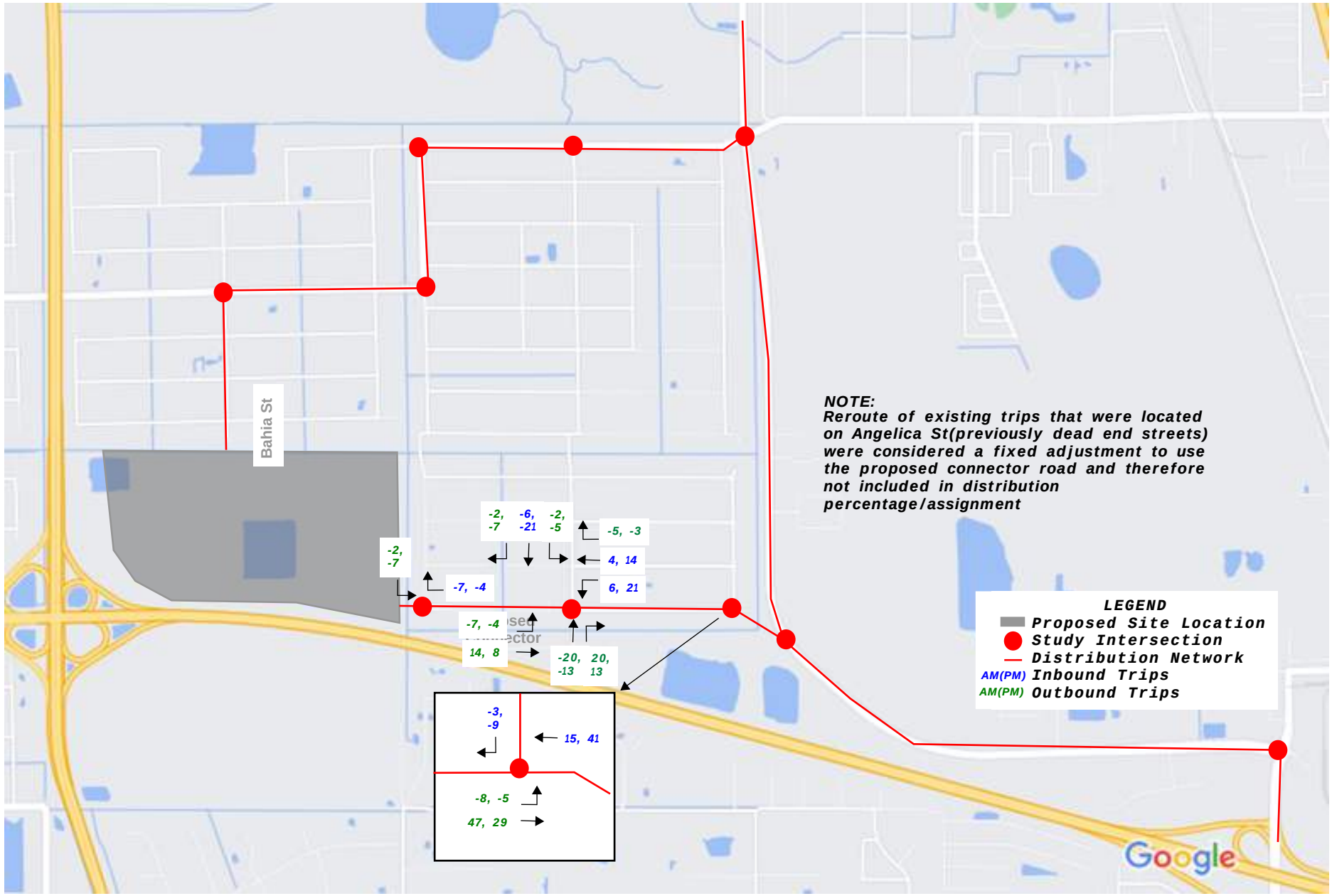
NOTE:

Reroute of existing trips that were located on Angelica St(previously dead end streets) were considered a fixed adjustment to use the proposed connector road and therefore not included in distribution percentage/assignment

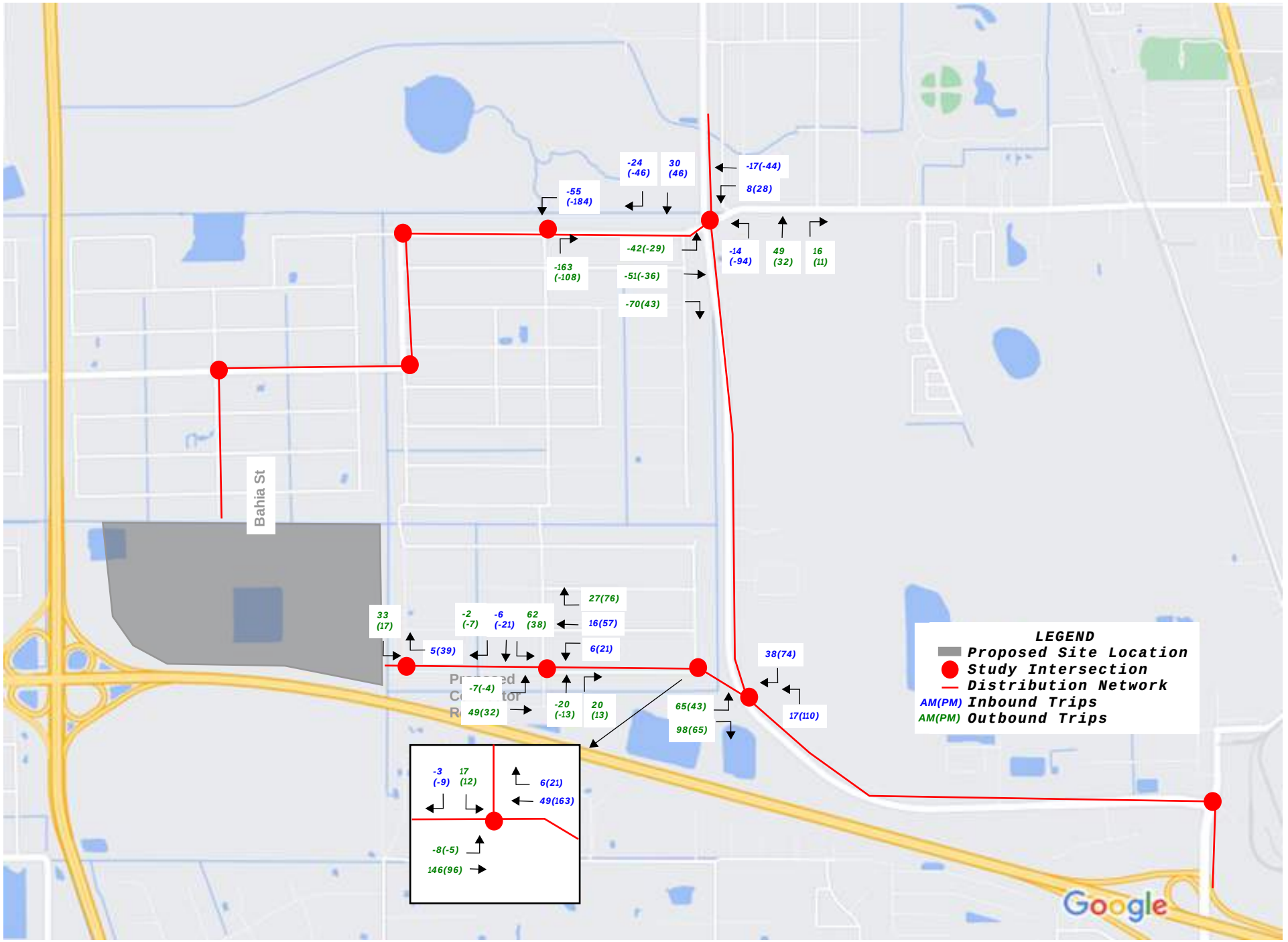
BUILD ALTERNATIVE AM & PM
REROUTED DEVELOPMENT TRAFFIC
ASSIGNMENT - PERCENTAGE



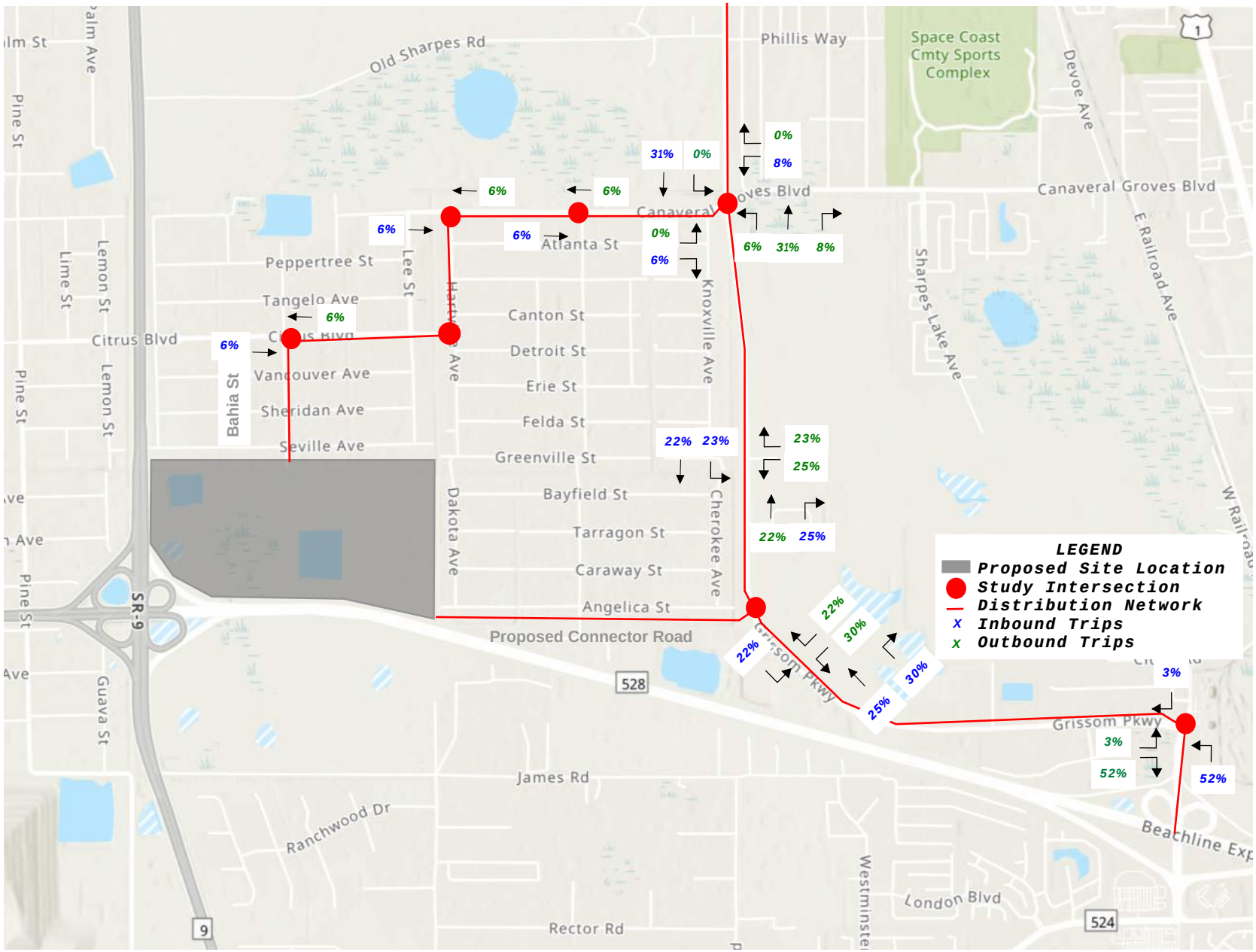
BUILD ALTERNATIVE AM & PM
REROUTED DEVELOPMENT
TRAFFIC ASSIGNMENT - FIXED



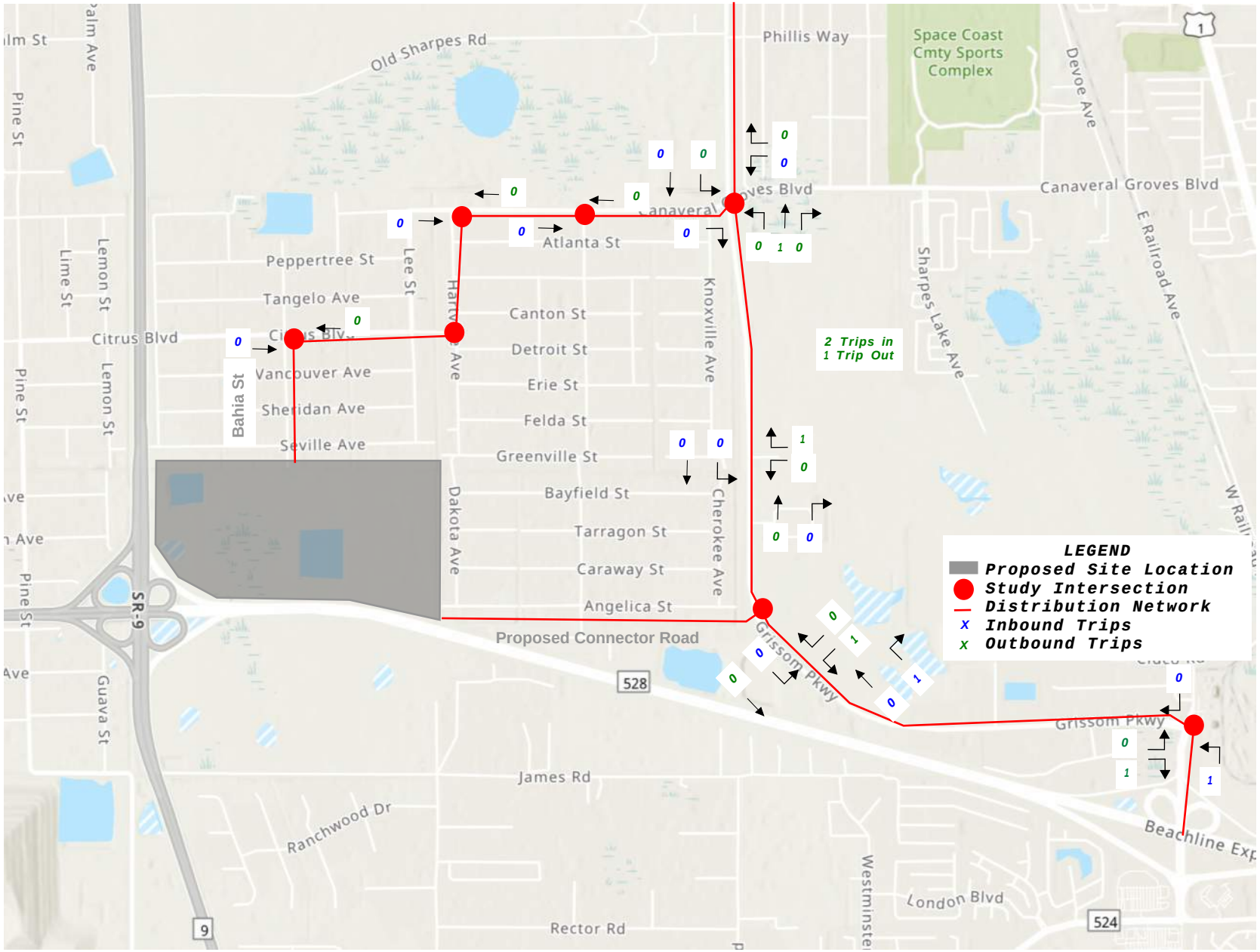
BUILD ALTERNATIVE AM & PM
REROUTED DEVELOPMENT
TRAFFIC ASSIGNMENT - TOTAL



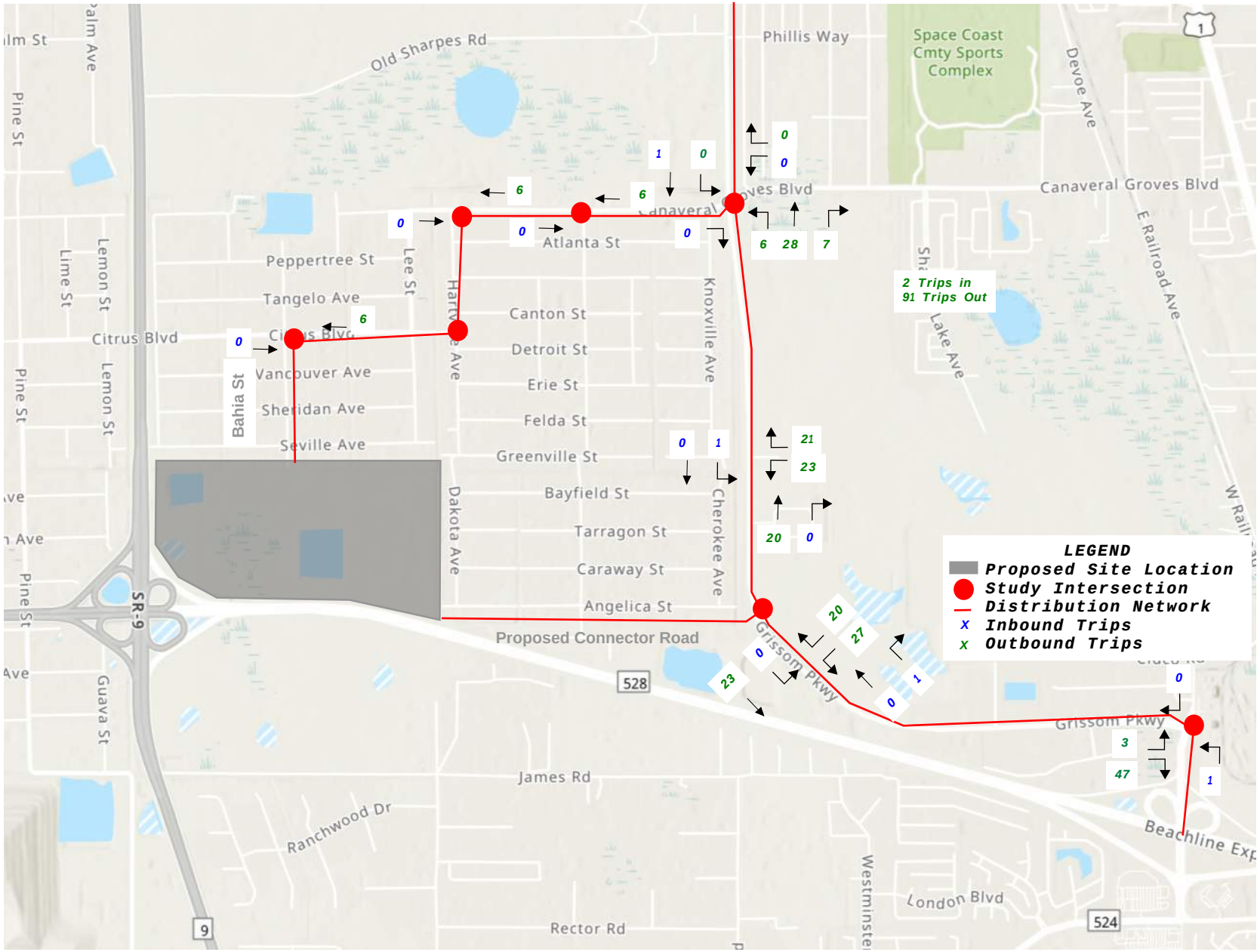
AMAZON DISTRIBUTION CENTER PROJECT TRAFFIC DISTRIBUTION



AMAZON DISTRIBUTION CENTER PROJECT TRAFFIC
ASSIGNMENT - AM 7:00 - 8:00



AMAZON DISTRIBUTION CENTER PROJECT TRAFFIC ASSIGNMENT - PM 4:30 - 5:30



APPENDIX C

FDOT Peak-Season Factors and Raw Turning Movement Counts

2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7000 BREVARD COUNTYWIDE

MOCF: 0.92

WEEK	DATES	SF	PSCF
* 1	01/01/2020 - 01/04/2020	1.00	1.09
* 2	01/05/2020 - 01/11/2020	0.95	1.03
* 3	01/12/2020 - 01/18/2020	0.90	0.98
* 4	01/19/2020 - 01/25/2020	0.88	0.96
* 5	01/26/2020 - 02/01/2020	0.87	0.95
* 6	02/02/2020 - 02/08/2020	0.85	0.92
* 7	02/09/2020 - 02/15/2020	0.84	0.91
* 8	02/16/2020 - 02/22/2020	0.86	0.93
* 9	02/23/2020 - 02/29/2020	0.89	0.97
*10	03/01/2020 - 03/07/2020	0.91	0.99
*11	03/08/2020 - 03/14/2020	0.94	1.02
*12	03/15/2020 - 03/21/2020	0.96	1.04
*13	03/22/2020 - 03/28/2020	1.05	1.14
14	03/29/2020 - 04/04/2020	1.14	1.24
15	04/05/2020 - 04/11/2020	1.23	1.34
16	04/12/2020 - 04/18/2020	1.33	1.45
17	04/19/2020 - 04/25/2020	1.26	1.37
18	04/26/2020 - 05/02/2020	1.19	1.29
19	05/03/2020 - 05/09/2020	1.12	1.22
20	05/10/2020 - 05/16/2020	1.05	1.14
21	05/17/2020 - 05/23/2020	1.04	1.13
22	05/24/2020 - 05/30/2020	1.03	1.12
23	05/31/2020 - 06/06/2020	1.02	1.11
24	06/07/2020 - 06/13/2020	1.02	1.11
25	06/14/2020 - 06/20/2020	1.01	1.10
26	06/21/2020 - 06/27/2020	1.02	1.11
27	06/28/2020 - 07/04/2020	1.02	1.11
28	07/05/2020 - 07/11/2020	1.03	1.12
29	07/12/2020 - 07/18/2020	1.04	1.13
30	07/19/2020 - 07/25/2020	1.04	1.13
31	07/26/2020 - 08/01/2020	1.04	1.13
32	08/02/2020 - 08/08/2020	1.04	1.13
33	08/09/2020 - 08/15/2020	1.04	1.13
34	08/16/2020 - 08/22/2020	1.03	1.12
35	08/23/2020 - 08/29/2020	1.03	1.12
36	08/30/2020 - 09/05/2020	1.02	1.11
37	09/06/2020 - 09/12/2020	1.02	1.11
38	09/13/2020 - 09/19/2020	1.01	1.10
39	09/20/2020 - 09/26/2020	1.01	1.10
40	09/27/2020 - 10/03/2020	1.00	1.09
41	10/04/2020 - 10/10/2020	1.00	1.09
42	10/11/2020 - 10/17/2020	0.99	1.08
43	10/18/2020 - 10/24/2020	1.00	1.09
44	10/25/2020 - 10/31/2020	1.00	1.09
45	11/01/2020 - 11/07/2020	1.01	1.10
46	11/08/2020 - 11/14/2020	1.01	1.10
47	11/15/2020 - 11/21/2020	1.02	1.11
48	11/22/2020 - 11/28/2020	1.01	1.10
49	11/29/2020 - 12/05/2020	1.01	1.10
50	12/06/2020 - 12/12/2020	1.00	1.09
51	12/13/2020 - 12/19/2020	1.00	1.09
52	12/20/2020 - 12/26/2020	0.95	1.03
53	12/27/2020 - 12/31/2020	0.90	0.98

* PEAK SEASON

27-FEB-2021 10:30:04 830UPD 5_7000_PKSEASON.TXT

2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7095 BREVARD I95

MOCF: 0.91

WEEK	DATES	SF	PSCF
* 1	01/01/2020 - 01/04/2020	0.90	0.99
* 2	01/05/2020 - 01/11/2020	0.88	0.97
* 3	01/12/2020 - 01/18/2020	0.87	0.96
* 4	01/19/2020 - 01/25/2020	0.86	0.95
* 5	01/26/2020 - 02/01/2020	0.85	0.93
* 6	02/02/2020 - 02/08/2020	0.85	0.93
* 7	02/09/2020 - 02/15/2020	0.84	0.92
* 8	02/16/2020 - 02/22/2020	0.87	0.96
* 9	02/23/2020 - 02/29/2020	0.89	0.98
*10	03/01/2020 - 03/07/2020	0.92	1.01
*11	03/08/2020 - 03/14/2020	0.94	1.03
*12	03/15/2020 - 03/21/2020	0.97	1.07
*13	03/22/2020 - 03/28/2020	1.16	1.27
14	03/29/2020 - 04/04/2020	1.36	1.49
15	04/05/2020 - 04/11/2020	1.55	1.70
16	04/12/2020 - 04/18/2020	1.74	1.91
17	04/19/2020 - 04/25/2020	1.60	1.76
18	04/26/2020 - 05/02/2020	1.45	1.59
19	05/03/2020 - 05/09/2020	1.31	1.44
20	05/10/2020 - 05/16/2020	1.17	1.29
21	05/17/2020 - 05/23/2020	1.13	1.24
22	05/24/2020 - 05/30/2020	1.10	1.21
23	05/31/2020 - 06/06/2020	1.07	1.18
24	06/07/2020 - 06/13/2020	1.04	1.14
25	06/14/2020 - 06/20/2020	1.01	1.11
26	06/21/2020 - 06/27/2020	1.01	1.11
27	06/28/2020 - 07/04/2020	1.02	1.12
28	07/05/2020 - 07/11/2020	1.02	1.12
29	07/12/2020 - 07/18/2020	1.03	1.13
30	07/19/2020 - 07/25/2020	1.03	1.13
31	07/26/2020 - 08/01/2020	1.03	1.13
32	08/02/2020 - 08/08/2020	1.03	1.13
33	08/09/2020 - 08/15/2020	1.03	1.13
34	08/16/2020 - 08/22/2020	1.02	1.12
35	08/23/2020 - 08/29/2020	1.02	1.12
36	08/30/2020 - 09/05/2020	1.02	1.12
37	09/06/2020 - 09/12/2020	1.01	1.11
38	09/13/2020 - 09/19/2020	1.01	1.11
39	09/20/2020 - 09/26/2020	1.00	1.10
40	09/27/2020 - 10/03/2020	0.99	1.09
41	10/04/2020 - 10/10/2020	0.98	1.08
42	10/11/2020 - 10/17/2020	0.98	1.08
43	10/18/2020 - 10/24/2020	0.97	1.07
44	10/25/2020 - 10/31/2020	0.96	1.05
45	11/01/2020 - 11/07/2020	0.95	1.04
46	11/08/2020 - 11/14/2020	0.94	1.03
47	11/15/2020 - 11/21/2020	0.93	1.02
48	11/22/2020 - 11/28/2020	0.92	1.01
49	11/29/2020 - 12/05/2020	0.92	1.01
50	12/06/2020 - 12/12/2020	0.91	1.00
51	12/13/2020 - 12/19/2020	0.90	0.99
52	12/20/2020 - 12/26/2020	0.88	0.97
53	12/27/2020 - 12/31/2020	0.87	0.96

* PEAK SEASON

27-FEB-2021 10:30:04 830UPD 5_7095_PKSEASON.TXT

Grissom Pkwy & Canaveral Groves Blvd
Weekday TMC

Florida Transportation Engineering, Inc.
(FTE)
8250 Pascal Dr
Punta Gorda, Florida, United States 33950
(800) 639-4851

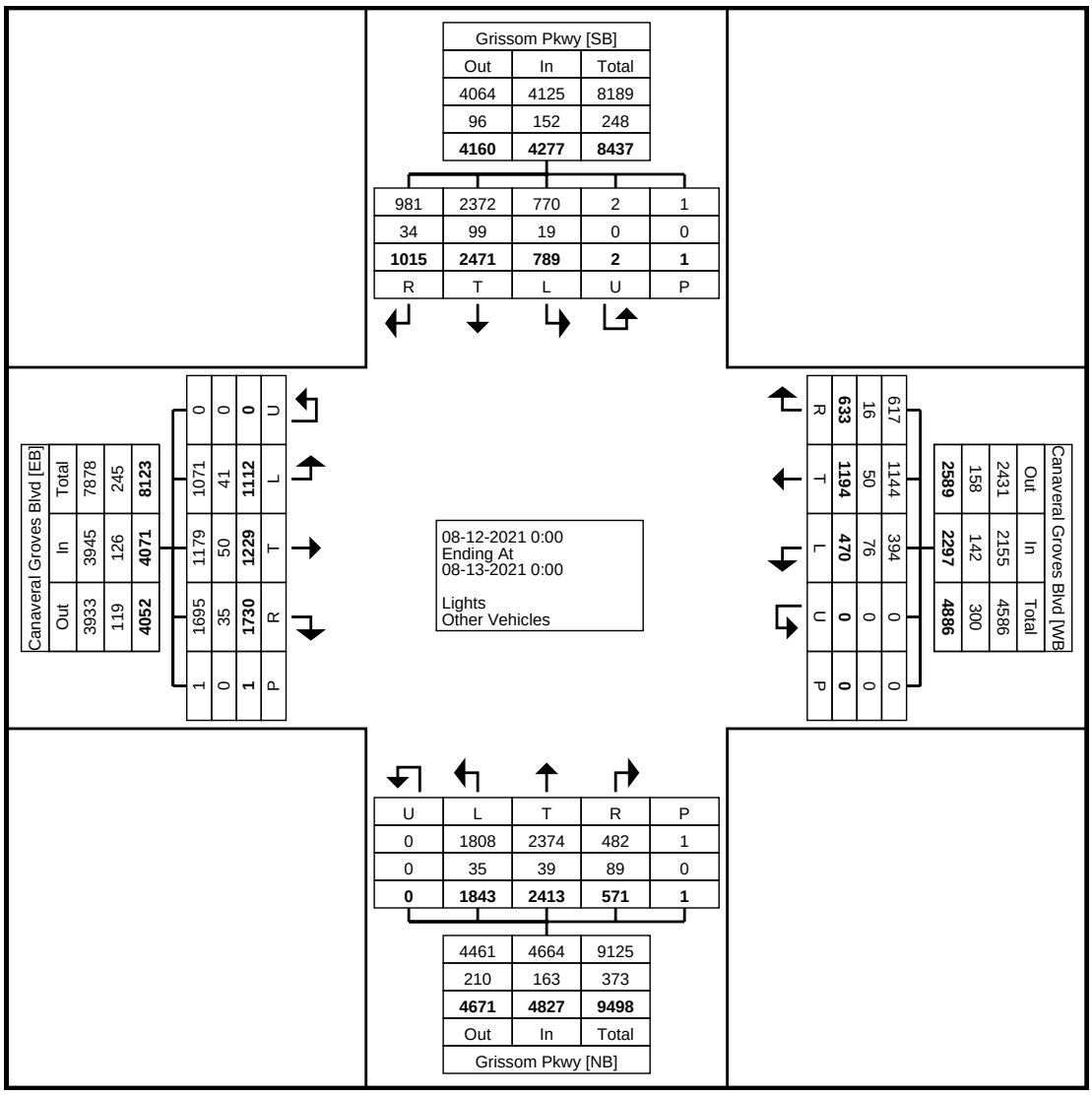
Count Name: 1_Grissom Pkwy & Canaveral Groves Blvd
Site Code: 1
Start Date: 08-12-2021

Turning Movement Data

Start Time	Canaveral Groves Blvd Eastbound						Canaveral Groves Blvd Westbound						Grissom Pkwy Northbound						Grissom Pkwy Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
0:00	0	5	1	2	0	8	0	0	1	2	0	3	0	4	3	2	0	9	0	0	2	3	0	5	25
0:15	0	1	2	0	0	3	0	0	1	0	0	1	0	4	4	0	0	8	0	0	3	3	0	6	18
0:30	0	0	0	1	0	1	0	0	1	0	0	1	0	1	4	1	0	6	0	1	3	0	0	4	12
0:45	0	1	2	0	0	3	0	0	2	0	0	2	0	3	6	3	0	12	0	1	6	2	0	9	26
Hourly Total	0	7	5	3	0	15	0	0	5	2	0	7	0	12	17	6	0	35	0	2	14	8	0	24	81
1:00	0	0	0	2	1	2	0	1	0	0	0	1	0	1	4	0	0	5	0	1	2	2	0	5	13
1:15	0	1	0	0	0	1	0	0	0	2	0	2	0	2	14	0	0	16	0	0	5	0	0	5	24
1:30	0	1	0	0	0	1	0	2	2	0	0	4	0	0	6	0	0	6	0	0	6	0	0	6	17
1:45	0	0	0	1	0	1	0	0	0	1	0	1	0	0	2	1	0	3	0	0	5	0	0	5	10
Hourly Total	0	2	0	3	1	5	0	3	2	3	0	8	0	3	26	1	0	30	0	1	18	2	0	21	64
2:00	0	3	0	2	0	5	0	0	1	0	0	1	0	6	3	1	0	10	0	0	1	1	0	2	18
2:15	0	2	1	0	0	3	0	0	1	0	0	1	0	2	2	0	0	4	0	0	5	1	0	6	14
2:30	0	2	0	0	0	2	0	0	2	0	0	2	0	1	0	0	0	1	0	0	3	0	0	3	8
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	3	0	0	3	5
Hourly Total	0	7	1	2	0	10	0	0	4	0	0	4	0	10	6	1	0	17	0	0	12	2	0	14	45
3:00	0	0	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	6	0	0	6	9
3:15	0	2	0	1	0	3	0	1	0	0	0	1	0	0	3	1	0	4	0	0	2	1	0	3	11
3:30	0	3	1	1	0	5	0	2	2	0	0	4	0	1	1	1	0	3	0	2	6	1	0	9	21
3:45	0	2	2	5	0	9	0	0	0	0	0	0	0	2	0	0	0	2	0	1	4	0	0	5	16
Hourly Total	0	7	3	9	0	19	0	3	2	0	0	5	0	3	5	2	0	10	0	3	18	2	0	23	57
4:00	0	2	1	0	0	3	0	3	0	1	0	4	0	2	2	1	0	5	0	0	5	0	0	5	17
4:15	0	0	1	3	0	4	0	0	1	3	0	4	0	1	0	0	0	1	0	0	8	0	0	8	17
4:30	0	2	4	11	0	17	0	1	0	0	0	1	0	0	1	1	0	2	0	2	21	0	0	23	43
4:45	0	2	5	4	0	11	0	1	0	2	0	3	0	1	1	0	0	2	0	0	18	0	0	18	34
Hourly Total	0	6	11	18	0	35	0	5	1	6	0	12	0	4	4	2	0	10	0	2	52	0	0	54	111
5:00	0	3	9	6	0	18	0	2	0	0	0	2	0	1	6	2	0	9	0	2	16	0	0	18	47
5:15	0	3	5	14	0	22	0	1	0	0	0	1	0	0	2	0	0	2	0	5	18	1	0	24	49
5:30	0	8	18	15	0	41	0	1	0	3	0	4	0	0	8	1	0	9	0	1	34	4	0	39	93
5:45	0	10	12	22	0	44	0	10	2	6	0	18	0	0	3	0	0	3	0	6	33	2	0	41	106
Hourly Total	0	24	44	57	0	125	0	14	2	9	0	25	0	1	19	3	0	23	0	14	101	7	0	122	295
6:00	0	9	16	26	0	51	0	2	6	5	0	13	0	2	5	0	0	7	0	11	23	0	0	34	105
6:15	0	14	29	33	0	76	0	6	6	5	0	17	0	5	12	1	0	18	0	16	40	5	0	61	172
6:30	0	18	25	42	0	85	0	3	5	3	0	11	0	5	8	1	0	14	0	15	53	4	0	72	182
6:45	0	16	30	21	0	67	0	4	5	2	0	11	0	4	14	3	0	21	0	13	72	12	0	97	196
Hourly Total	0	57	100	122	0	279	0	15	22	15	0	52	0	16	39	5	0	60	0	55	188	21	0	264	655
7:00	0	23	36	35	0	94	0	7	5	5	0	17	0	7	22	3	0	32	0	16	51	4	0	71	214
7:15	0	30	32	55	0	117	0	4	14	10	0	28	0	16	23	4	0	43	0	22	60	9	0	91	279
7:30	0	33	52	50	0	135	0	13	12	8	0	33	0	9	12	5	0	26	0	16	71	12	0	99	293
7:45	0	28	30	46	0	104	0	10	21	9	0	40	0	13	18	4	0	35	0	22	89	18	0	129	308
Hourly Total	0	114	150	186	0	450	0	34	52	32	0	118	0	45	75	16	0	136	0	76	271	43	0	390	1094
8:00	0	27	28	44	0	99	0	14	12	10	0	36	0	11	17	5	0	33	1	18	69	20	0	108	276
8:15	0	16	15	52	0	83	0	6	4	6	0	16	0	13	20	7	0	40	0	4	51	17	0	72	211
8:30	0	14	29	35	0	78	0	11	12	7	0	30	0	21	30	3	0	54	0	22	42	17	0	81	243
8:45	0	12	23	27	0	62	0	6	11	7	0	24	0	16	21	8	0	45	0	13	31	14	0	58	189
Hourly Total	0	69	95	158	0	322	0	37	39	30	0	106	0	61	88	23	0	172	1	57	193	68	0	319	919
9:00	0	17	9	25	0	51	0	10	11	3	0	24	0	27	15	3	0	45	0	9	34	8	0	51	171
9:15	0	13	24	30	0	67	0	8	14	5	0	27	0	19	19	10	0	48	0	4	49	10	0	63	205
9:30	0	11	17	29	0	57	0	7	11	10	0	28	0	17	22	6	0	45	0	11	41	12	0	64	194
9:45	0	23	26	25	0	74	0	8	15	11	0	34	0	23	34	8	0	65	0	14	27	9	0	50	223
Hourly Total	0	64	76	109	0	249	0	33	51	29	0	113	0	86	90	27	0	203	0	38	151	39	0	228	793
10:00	0	12	17	30	0	59	0	6	11	7	0	24	0	29	21	6	0	56	0	3	30	13	0	46	185
10:15	0	13	22	17	0	52	0	10	14	10	0	34	0	21	23	10	0	54	0	6	29	12	0	47	187
10:30	0	16	25	21	0	62	0	4	17	5	0	26	0	15	20	7	0	42	0	8	34	16	0	58	188
10:45	0	18	11	25	0	54	0	8	18	7	0	33	0	16	24	10	0	50	0	7	23	9	0	39	176
Hourly Total	0	59	75	93	0	227	0	28	60	29	0	117	0	81	88	33	0	202	0	24	116	50	0	190	736
11:00	0	16	14	21	0	51	0	6	26	4	0	36	0	25	21	9	0	55	0	11	28	13	0	52	194
11:15	0	19	16	36	0	71	0	7	20	5	0	32	0	37	24	10	0	71	0	9	30	20	0	59	233
11:30	0	12	20	26	0	58	0	13	17	4	0	34	0	18	24	11	1	53	0	6	41	20	0	67	212
11:45	0	15	10	24	0	49	0	12	20	8	0	40	0	16	21	5	0	42	1	7	48	13	0	69	200
Hourly Total	0	62	60	107	0	229	0	38	83	21	0	142	0	96	90	35	1	221	1	33	147	66	0	247	839

12:00	0	17	16	25	0	58	0	6	18	12	0	36	0	38	28	13	0	79	0	16	32	6	0	54	227
12:15	0	20	20	27	0	67	0	8	27	8	0	43	0	21	37	16	0	74	0	18	37	11	0	66	250
12:30	0	7	16	32	0	55	0	7	18	6	0	31	0	37	24	8	0	69	0	7	36	9	0	52	207
12:45	0	12	16	26	0	54	0	3	15	7	0	25	0	29	43	14	0	86	0	8	30	16	0	54	219
Hourly Total	0	56	68	110	0	234	0	24	78	33	0	135	0	125	132	51	0	308	0	49	135	42	0	226	903
13:00	0	23	20	32	0	75	0	5	7	3	0	15	0	24	51	9	0	84	0	9	26	16	0	51	225
13:15	0	18	18	23	0	59	0	11	10	4	0	25	0	31	48	10	0	89	0	8	37	13	0	58	231
13:30	0	19	9	28	0	56	0	12	10	9	0	31	0	23	29	4	0	56	0	6	38	6	0	50	193
13:45	0	7	20	33	0	60	0	8	17	4	0	29	0	30	31	9	0	70	0	6	34	13	0	53	212
Hourly Total	0	67	67	116	0	250	0	36	44	20	0	100	0	108	159	32	0	299	0	29	135	48	0	212	861
14:00	0	15	18	25	0	58	0	4	17	8	0	29	0	37	42	9	0	88	0	11	26	17	0	54	229
14:15	0	29	17	20	0	66	0	8	15	5	0	28	0	29	53	7	0	89	0	7	28	9	0	44	227
14:30	0	19	23	35	0	77	0	8	27	7	0	42	0	31	39	8	0	78	0	11	34	26	1	71	268
14:45	0	27	17	32	0	76	0	8	41	16	0	65	0	34	50	15	0	99	0	8	35	24	0	67	307
Hourly Total	0	90	75	112	0	277	0	28	100	36	0	164	0	131	184	39	0	354	0	37	123	76	1	236	1031
15:00	0	27	11	26	0	64	0	10	18	5	0	33	0	43	49	18	0	110	0	10	27	30	0	67	274
15:15	0	18	13	32	0	63	0	7	31	8	0	46	0	47	46	10	0	103	0	11	45	21	0	77	289
15:30	0	18	9	26	0	53	0	9	29	21	0	59	0	44	64	19	0	127	0	13	26	25	0	64	303
15:45	0	24	20	21	0	65	0	5	33	15	0	53	0	62	60	18	0	140	0	8	41	21	0	70	328
Hourly Total	0	87	53	105	0	245	0	31	111	49	0	191	0	196	219	65	0	480	0	42	139	97	0	278	1194
16:00	0	17	18	14	0	49	0	6	34	14	0	54	0	61	74	16	0	151	0	13	42	28	0	83	337
16:15	0	20	12	23	0	55	0	12	26	12	0	50	0	47	77	14	0	138	0	9	39	33	0	81	324
16:30	0	23	25	26	0	74	0	7	30	18	0	55	0	58	62	11	0	131	0	16	47	23	0	86	346
16:45	0	15	17	25	0	57	0	9	25	7	0	41	0	51	71	11	0	133	0	21	52	33	0	106	337
Hourly Total	0	75	72	88	0	235	0	34	115	51	0	200	0	217	284	52	0	553	0	59	180	117	0	356	1344
17:00	0	19	21	27	0	67	0	6	35	17	0	58	0	63	81	17	0	161	0	14	33	30	0	77	363
17:15	0	18	25	31	0	74	0	4	17	21	0	42	0	55	93	22	0	170	0	25	38	23	0	86	372
17:30	0	15	20	20	0	55	0	5	20	9	0	34	0	50	68	19	0	137	0	34	35	30	0	99	325
17:45	0	13	21	18	0	52	0	1	40	14	0	55	0	50	58	12	0	120	0	49	24	14	0	87	314
Hourly Total	0	65	87	96	0	248	0	16	112	61	0	189	0	218	300	70	0	588	0	122	130	97	0	349	1374
18:00	0	14	20	22	0	56	0	6	33	14	0	53	0	55	55	9	0	119	0	25	35	25	0	85	313
18:15	0	16	23	31	0	70	0	7	28	17	0	52	0	37	47	8	0	92	0	11	32	20	0	63	277
18:30	0	11	18	29	0	58	0	1	22	14	0	37	0	39	53	8	0	100	0	15	32	20	0	67	262
18:45	0	18	11	13	0	42	0	9	15	5	0	29	0	22	40	9	0	71	0	21	35	22	0	78	220
Hourly Total	0	59	72	95	0	226	0	23	98	50	0	171	0	153	195	34	0	382	0	72	134	87	0	293	1072
19:00	0	13	11	21	0	45	0	5	14	5	0	24	0	26	34	4	0	64	0	5	26	10	0	41	174
19:15	0	14	11	12	0	37	0	6	16	22	0	44	0	21	27	7	0	55	0	3	16	18	0	37	173
19:30	0	11	14	15	0	40	0	11	20	24	0	55	0	23	44	8	0	75	0	11	24	7	0	42	212
19:45	0	11	11	11	0	33	0	10	26	23	0	59	0	17	29	8	0	54	0	7	15	9	0	31	177
Hourly Total	0	49	47	59	0	155	0	32	76	74	0	182	0	87	134	27	0	248	0	26	81	44	0	151	736
20:00	0	16	8	12	0	36	0	4	21	22	0	47	0	21	31	4	0	56	0	6	16	14	0	36	175
20:15	0	11	1	14	0	26	0	9	23	14	0	46	0	22	31	4	0	57	0	6	16	8	0	30	159
20:30	0	8	13	9	0	30	0	2	11	10	0	23	0	21	31	3	0	55	0	6	11	12	0	29	137
20:45	0	5	11	5	0	21	0	2	14	2	0	18	0	14	18	4	0	36	0	4	12	8	0	24	99
Hourly Total	0	40	33	40	0	113	0	17	69	48	0	134	0	78	111	15	0	204	0	22	55	42	0	119	570
21:00	0	10	4	8	0	22	0	4	13	10	0	27	0	24	24	4	0	52	0	3	14	7	0	24	125
21:15	0	5	3	9	0	17	0	1	9	5	0	15	0	17	20	5	0	42	0	5	9	10	0	24	98
21:30	0	9	10	8	0	27	0	3	11	3	0	17	0	9	11	2	0	22	0	7	11	9	0	27	93
21:45	0	4	2	4	0	10	0	3	7	4	0	14	0	12	13	4	0	29	0	1	7	5	0	13	66
Hourly Total	0	28	19	29	0	76	0	11	40	22	0	73	0	62	68	15	0	145	0	16	41	31	0	88	382
22:00	0	5	5	2	0	12	0	2	8	5	0	15	0	14	13	4	0	31	0	2	3	3	0	8	66
22:15	0	3	3	2	0	8	0	2	3	1	0	6	0	8	10	1	0	19	0	2	8	3	0	13	46
22:30	0	1	1	2	0	4	0	2	6	0	0	8	0	3	11	2	0	16	0	2	3	3	0	8	36
22:45	0	0	0	2	0	2	0	0	3	5	0	8	0	6	15	2	0	23	0	0	5	2	0	7	40
Hourly Total	0	9	9	8	0	26	0	6	20	11	0	37	0	31	49	9	0	89	0	6	19	11	0	36	188
23:00	0	2	3	2	0	7	0	0	0	0	0	0	0	7	9	2	0	18	0	0	7	5	0	12	37
23:15	0	6	1	1	0	8	0	1	3	0	0	4	0	7	11	3	0	21	0	1	7	2	0	10	43
23:30	0	0	2	1	0	3	0	1	2	1	0	4	0	5	5	1	0	11	0	1	1	3	0	5	23
23:45	0	1	1	1	0	3	0	0	3	1	0	4	0	0	6	2	0	8	0	2	3	5	0	10	25
Hourly Total	0	9	7	5	0	21	0	2	8	2	0	12	0	19	31	8	0	58	0	4	18	15	0	37	128
Grand Total	0	1112	1229	1730	1	4071	0	470	1194	633	0	2297	0	1843	2413	571	1	4827	2	789	2471	1015	1	4277	15472
Approach %	0.0	27.3	30.2	42.5	-	-	0.0	20.5	52.0	27.6	-	-	0.0	38.2	50.0	11.8	-	-	0.0	18.4	57.8	23.7	-	-	-
Total %	0.0	7.2	7.9	11.2	-	26.3	0.0	3.0	7.7	4.1	-	14.8	0.0	11.9	15.6	3.7	-	31.2	0.0	5.1	16.0	6.6	-	27.6	-
Lights	0	1071	1179	1695	1	3945	0	394	1144	617	0	2155	0	1808	2374	482	1	4664	2	770	2372	981	1	4125	14889
% Lights	-	96.3	95.9	98.0	100.0	96.9	-	83.8	95.8	97.5	-	93.8	-	98.1	98.4	84.4	100.0	96.6	100.0	97.6	96.0	96.7	100.0	96.4	96.2
Other Vehicles	0	41	50	35	0	126	0	76	50	16	0	142	0	35	39	89	0	163	0	19	99	34	0	152	583
% Other Vehicles	-	3.7	4.1	2.0	0.0	3.1	-	16.2	4.2	2.5	-	6.2	-	1.9	1.6	15.6	0.0	3.4	0.0	2.4	4.0	3.3	0.0	3.6	3.8

Florida Transportation Engineering, Inc.
(FTE)
8250 Pascal Dr
Punta Gorda, Florida, United States 33950
(800) 639-4851



Turning Movement Data Plot

Grissom Pkwy & Canaveral Groves Blvd
Weekday TMC

Florida Transportation Engineering, Inc.
(FTE)
8250 Pascal Dr
Punta Gorda, Florida, United States 33950
(800) 639-4851

Count Name: 1_Grissom Pkwy & Canaveral Groves Blvd
Site Code: 1
Start Date: 08-12-2021

Turning Movement Peak Hour Data (7:15)

Start Time	Canaveral Groves Blvd Eastbound						Canaveral Groves Blvd Westbound						Grissom Pkwy Northbound						Grissom Pkwy Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15	0	30	32	55	0	117	0	4	14	10	0	28	0	16	23	4	0	43	0	22	60	9	0	91	279
7:30	0	33	52	50	0	135	0	13	12	8	0	33	0	9	12	5	0	26	0	16	71	12	0	99	293
7:45	0	28	30	46	0	104	0	10	21	9	0	40	0	13	18	4	0	35	0	22	89	18	0	129	308
8:00	0	27	28	44	0	99	0	14	12	10	0	36	0	11	17	5	0	33	1	18	69	20	0	108	276
Total	0	118	142	195	0	455	0	41	59	37	0	137	0	49	70	18	0	137	1	78	289	59	0	427	1156
Approach %	0.0	25.9	31.2	42.9	-	-	0.0	29.9	43.1	27.0	-	-	0.0	35.8	51.1	13.1	-	-	0.2	18.3	67.7	13.8	-	-	-
Total %	0.0	10.2	12.3	16.9	-	39.4	0.0	3.5	5.1	3.2	-	11.9	0.0	4.2	6.1	1.6	-	11.9	0.1	6.7	25.0	5.1	-	36.9	-
PHF	0.000	0.894	0.683	0.886	-	0.843	0.000	0.732	0.702	0.925	-	0.856	0.000	0.766	0.761	0.900	-	0.797	0.250	0.886	0.812	0.738	-	0.828	0.938
Lights	0	116	134	194	0	444	0	30	54	35	0	119	0	47	66	12	0	125	1	76	283	57	0	417	1105
% Lights	-	98.3	94.4	99.5	-	97.6	-	73.2	91.5	94.6	-	86.9	-	95.9	94.3	66.7	-	91.2	100.0	97.4	97.9	96.6	-	97.7	95.6
Other Vehicles	0	2	8	1	0	11	0	11	5	2	0	18	0	2	4	6	0	12	0	2	6	2	0	10	51
% Other Vehicles	-	1.7	5.6	0.5	-	2.4	-	26.8	8.5	5.4	-	13.1	-	4.1	5.7	33.3	-	8.8	0.0	2.6	2.1	3.4	-	2.3	4.4

Florida Transportation Engineering, Inc.
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Punta Gorda, Florida, United States 33950
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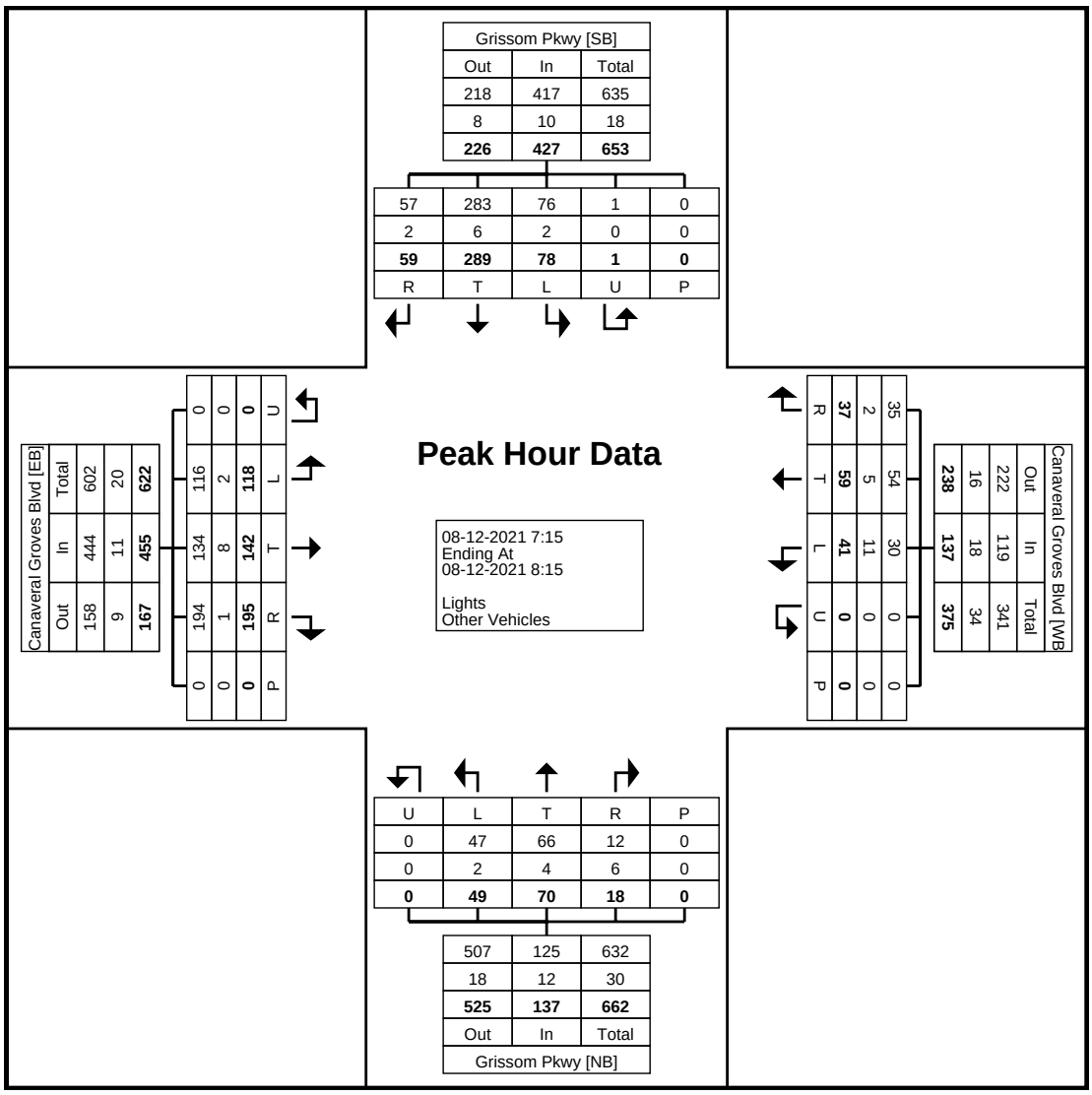

Turning Movement Peak Hour Data Plot (7:15)

Grissom Pkwy & Canaveral Groves Blvd
Weekday TMC

Florida Transportation Engineering, Inc.
(FTE)
8250 Pascal Dr
Punta Gorda, Florida, United States 33950
(800) 639-4851

Count Name: 1_Grissom Pkwy & Canaveral Groves Blvd
Site Code: 1
Start Date: 08-12-2021

Turning Movement Peak Hour Data (16:30)

Start Time	Canaveral Groves Blvd Eastbound						Canaveral Groves Blvd Westbound						Grissom Pkwy Northbound						Grissom Pkwy Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
16:30	0	23	25	26	0	74	0	7	30	18	0	55	0	58	62	11	0	131	0	16	47	23	0	86	346
16:45	0	15	17	25	0	57	0	9	25	7	0	41	0	51	71	11	0	133	0	21	52	33	0	106	337
17:00	0	19	21	27	0	67	0	6	35	17	0	58	0	63	81	17	0	161	0	14	33	30	0	77	363
17:15	0	18	25	31	0	74	0	4	17	21	0	42	0	55	93	22	0	170	0	25	38	23	0	86	372
Total	0	75	88	109	0	272	0	26	107	63	0	196	0	227	307	61	0	595	0	76	170	109	0	355	1418
Approach %	0.0	27.6	32.4	40.1	-	-	0.0	13.3	54.6	32.1	-	-	0.0	38.2	51.6	10.3	-	-	0.0	21.4	47.9	30.7	-	-	-
Total %	0.0	5.3	6.2	7.7	-	19.2	0.0	1.8	7.5	4.4	-	13.8	0.0	16.0	21.7	4.3	-	42.0	0.0	5.4	12.0	7.7	-	25.0	-
PHF	0.000	0.815	0.880	0.879	-	0.919	0.000	0.722	0.764	0.750	-	0.845	0.000	0.901	0.825	0.693	-	0.875	0.000	0.760	0.817	0.826	-	0.837	0.953
Lights	0	73	85	108	0	266	0	24	105	63	0	192	0	226	306	59	0	591	0	76	164	107	0	347	1396
% Lights	-	97.3	96.6	99.1	-	97.8	-	92.3	98.1	100.0	-	98.0	-	99.6	99.7	96.7	-	99.3	-	100.0	96.5	98.2	-	97.7	98.4
Other Vehicles	0	2	3	1	0	6	0	2	2	0	0	4	0	1	1	2	0	4	0	0	6	2	0	8	22
% Other Vehicles	-	2.7	3.4	0.9	-	2.2	-	7.7	1.9	0.0	-	2.0	-	0.4	0.3	3.3	-	0.7	-	0.0	3.5	1.8	-	2.3	1.6

Florida Transportation Engineering, Inc.
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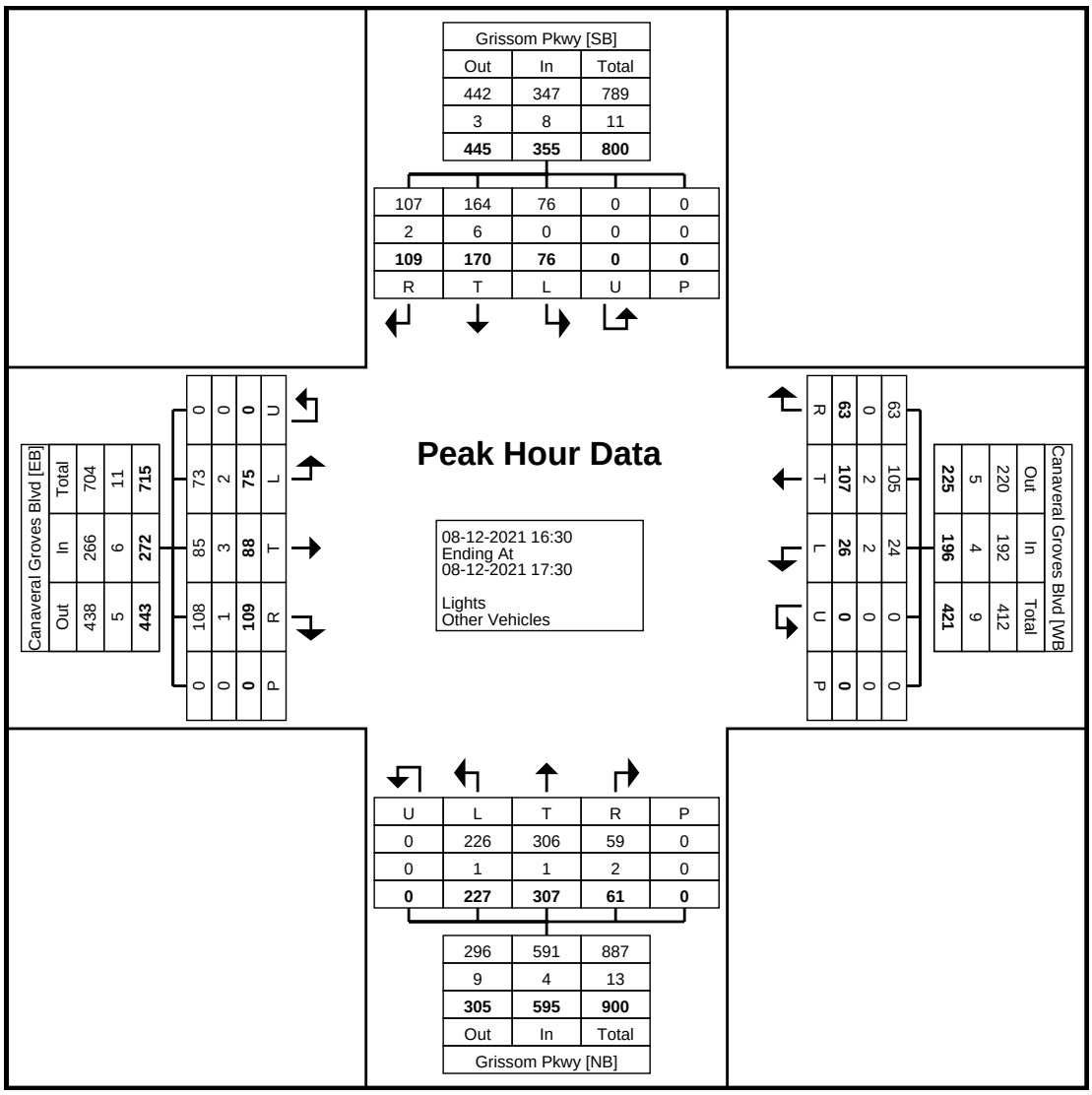

Turning Movement Peak Hour Data Plot (16:30)

HSA Consulting Group
1315 Country Club Rd
Gulf Breeze Fl 32563

Counter:
Counted By:
Weather:
Other:

File Name : Grissom Parkway at Industry Road
Site Code : 00000000
Start Date : 1/13/2022
Page No : 1

Groups Printed- Cars - Trucks

	Grissom Pkwy Eastbound					Grissom Pkwy Westbound					Industry Rd Northbound					Industry Rd Southbound					
Start Time	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
06:00	6	0	48	0	54	9	1	0	0	10	25	29	11	7	72	1	19	0	0	20	156
06:15	3	1	66	0	70	14	0	2	0	16	35	30	17	4	86	0	23	5	0	28	200
06:30	5	1	58	0	64	18	1	1	0	20	45	27	13	4	89	3	28	4	0	35	208
06:45	3	1	89	0	93	17	0	0	0	17	57	30	11	2	100	2	30	4	0	36	246
Total	17	3	261	0	281	58	2	3	0	63	162	116	52	17	347	6	100	13	0	119	810
07:00	3	0	72	0	75	16	0	0	0	16	45	31	12	1	89	2	30	4	0	36	216
07:15	3	1	100	0	104	15	0	0	0	15	70	29	13	1	113	3	33	5	0	41	273
07:30	4	0	131	0	135	13	0	0	0	13	60	19	7	3	89	0	34	7	0	41	278
07:45	6	1	117	0	124	13	0	0	0	13	67	26	9	4	106	0	34	1	1	36	279
Total	16	2	420	0	438	57	0	0	0	57	242	105	41	9	397	5	131	17	1	154	1046
08:00	5	0	100	0	105	14	1	0	1	16	55	25	13	6	99	0	33	3	0	36	256
08:15	3	0	77	0	80	15	0	0	0	15	47	21	9	9	86	0	34	5	0	39	220
08:30	1	0	96	0	97	10	1	0	0	11	51	22	7	1	81	0	36	1	0	37	226
08:45	3	2	132	0	137	9	1	2	0	12	56	21	12	6	95	2	36	6	0	44	288
Total	12	2	405	0	419	48	3	2	1	54	209	89	41	22	361	2	139	15	0	156	990
09:00	3	0	133	0	136	22	1	1	0	24	55	17	6	3	81	0	30	0	0	30	271
09:15	4	0	102	0	106	8	0	0	1	9	45	36	14	0	95	0	28	2	0	30	240
09:30	5	1	87	0	93	12	1	1	0	14	43	23	6	6	78	2	33	1	0	36	221
09:45	3	1	75	0	79	12	0	0	0	12	58	28	3	5	94	1	21	3	0	25	210
Total	15	2	397	0	414	54	2	2	1	59	201	104	29	14	348	3	112	6	0	121	942
******																					
11:00	3	0	76	0	79	9	1	1	0	11	64	28	9	2	103	0	33	2	0	35	228
11:15	3	0	61	0	64	11	0	0	0	11	72	30	4	6	112	0	46	4	0	50	237
11:30	4	0	75	0	79	6	0	0	0	6	52	32	11	5	100	1	53	1	0	55	240
11:45	1	1	77	0	79	20	1	2	0	23	71	29	11	2	113	1	40	2	0	43	258
Total	11	1	289	0	301	46	2	3	0	51	259	119	35	15	428	2	172	9	0	183	963
12:00	2	1	95	0	98	12	2	0	0	14	72	31	4	3	110	1	61	2	0	64	286
12:15	6	2	90	0	98	14	1	1	0	16	90	40	15	5	150	0	40	3	1	44	308
12:30	2	1	93	0	96	19	2	0	0	21	78	33	7	4	122	0	36	3	0	39	278
12:45	4	1	83	0	88	11	0	0	0	11	91	18	3	6	118	0	38	3	0	41	258
Total	14	5	361	0	380	56	5	1	0	62	331	122	29	18	500	1	175	11	1	188	1130

HSA Consulting Group
1315 Country Club Rd
Gulf Breeze Fl 32563

File Name : Grissom Parkway at Industry Road
Site Code : 00000000
Start Date : 1/13/2022
Page No : 2

Groups Printed- Cars - Trucks

	Grissom Pkwy Eastbound					Grissom Pkwy Westbound					Industry Rd Northbound					Industry Rd Southbound					
Start Time	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
13:00	3	0	70	0	73	6	0	0	0	6	68	26	8	9	111	0	37	6	0	43	233
13:15	3	0	87	0	90	9	0	0	0	9	90	43	7	4	144	0	37	7	0	44	287
13:30	1	0	86	0	87	14	0	0	0	14	98	20	6	3	127	0	31	5	0	36	264
13:45	2	1	80	0	83	11	0	0	0	11	88	25	9	2	124	1	32	0	0	33	251
Total	9	1	323	0	333	40	0	0	0	40	344	114	30	18	506	1	137	18	0	156	1035
******																					
15:00	2	0	84	0	86	12	0	0	0	12	91	22	7	3	123	1	41	5	0	47	268
15:15	5	1	90	0	96	8	1	0	0	9	98	26	1	1	126	0	33	5	0	38	269
15:30	4	0	83	0	87	5	0	2	0	7	133	22	4	0	159	0	54	6	0	60	313
15:45	3	0	79	0	82	6	0	0	0	6	144	34	3	0	181	0	64	9	0	73	342
Total	14	1	336	0	351	31	1	2	0	34	466	104	15	4	589	1	192	25	0	218	1192
16:00	0	0	99	0	99	2	1	0	0	3	129	35	4	0	168	0	70	7	0	77	347
16:15	2	0	74	0	76	2	0	0	0	2	138	26	2	2	168	0	51	10	0	61	307
16:30	3	0	85	0	88	4	1	0	0	5	132	18	1	1	152	0	60	7	0	67	312
16:45	1	0	99	0	100	7	0	0	0	7	144	17	1	0	162	0	62	15	1	78	347
Total	6	0	357	0	363	15	2	0	0	17	543	96	8	3	650	0	243	39	1	283	1313
17:00	2	0	109	0	111	1	1	0	0	2	149	28	3	0	180	0	75	9	0	84	377
17:15	0	0	98	0	98	1	1	1	0	3	159	25	2	0	186	0	34	10	0	44	331
17:30	2	1	94	0	97	1	1	0	0	2	150	23	1	0	174	0	43	3	0	46	319
17:45	4	0	70	0	74	4	1	0	0	5	102	29	0	0	131	1	43	4	0	48	258
Total	8	1	371	0	380	7	4	1	0	12	560	105	6	0	671	1	195	26	0	222	1285
Grand Total	122	18	3520	0	3660	412	21	14	2	449	3317	1074	286	120	4797	22	1596	179	3	1800	10706
Apprch %	3.3	0.5	96.2	0.0		91.8	4.7	3.1	0.4		69.1	22.4	6.0	2.5		1.2	88.7	9.9	0.2		
Total %	1.1	0.2	32.9	0.0	34.2	3.8	0.2	0.1	0.0	4.2	31.0	10.0	2.7	1.1	44.8	0.2	14.9	1.7	0.0	16.8	

HSA Consulting Group
1315 Country Club Rd
Gulf Breeze Fl 32563

File Name : Grissom Parkway at Industry Road
Site Code : 00000000
Start Date : 1/13/2022
Page No : 3

	Grissom Pkwy Eastbound					Grissom Pkwy Westbound					Industry Rd Northbound					Industry Rd Southbound					
Start Time	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Int. Total
Peak Hour From 06:00 to 09:45 - Peak 1 of 1																					
Intersection	07:15																				
Volume	18	2	448	0	468	55	1	0	1	57	252	99	42	14	407	3	134	16	1	154	1086
Percent	3.8	0.4	95.7	0.0		96.5	1.8	0.0	1.8		61.9	24.3	10.3	3.4		1.9	87.0	10.4	0.6		
07:45 Volume	6	1	117	0	124	13	0	0	0	13	67	26	9	4	106	0	34	1	1	36	279
Peak Factor																					0.973
High Int.	07:30					08:00					07:15					07:15					
Volume	4	0	131	0	135	14	1	0	1	16	70	29	13	1	113	3	33	5	0	41	
Peak Factor					0.867					0.891					0.900					0.939	

	Grissom Pkwy Eastbound					Grissom Pkwy Westbound					Industry Rd Northbound					Industry Rd Southbound					
Start Time	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																					
Intersection	11:45																				
Volume	11	5	355	0	371	65	6	3	0	74	311	133	37	14	495	2	177	10	1	190	1130
Percent	3.0	1.3	95.7	0.0		87.8	8.1	4.1	0.0		62.8	26.9	7.5	2.8		1.1	93.2	5.3	0.5		
12:15 Volume	6	2	90	0	98	14	1	1	0	16	90	40	15	5	150	0	40	3	1	44	308
Peak Factor																					0.917
High Int.	12:00					11:45					12:15					12:00					
Volume	2	1	95	0	98	20	1	2	0	23	90	40	15	5	150	1	61	2	0	64	
Peak Factor					0.946					0.804					0.825					0.742	

	Grissom Pkwy Eastbound					Grissom Pkwy Westbound					Industry Rd Northbound					Industry Rd Southbound					
Start Time	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Left	Thru	Right	RTO R	App. Total	Int. Total
Peak Hour From 15:00 to 17:45 - Peak 1 of 1																					
Intersection	16:45																				
Volume	5	1	400	0	406	10	3	1	0	14	602	93	7	0	702	0	214	37	1	252	1374
Percent	1.2	0.2	98.5	0.0		71.4	21.4	7.1	0.0		85.8	13.2	1.0	0.0		0.0	84.9	14.7	0.4		
17:00 Volume	2	0	109	0	111	1	1	0	0	2	149	28	3	0	180	0	75	9	0	84	377
Peak Factor																					0.911
High Int.	17:00					16:45					17:15					17:00					
Volume	2	0	109	0	111	7	0	0	0	7	159	25	2	0	186	0	75	9	0	84	
Peak Factor					0.914					0.500					0.944					0.750	

HSA Consulting Group
1315 Country Club Rd
Gulf Breeze Fl 32563

Counter: Tablet
Counted By: TN
Weather:
Other:

File Name : CANAVE~1
Site Code : 00000000
Start Date : 1/13/2022
Page No : 1

Groups Printed- Cars - Trucks

	Canaveral Groves Blvd Eastbound				Canaveral Groves Blvd Westbound				Hartville Ave Northbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
06:00	0	26	0	26	1	2	0	3	0	0	5	5	34
06:15	0	31	0	31	1	7	0	8	0	0	1	1	40
06:30	0	38	0	38	1	5	0	6	0	0	8	8	52
06:45	0	56	0	56	1	16	0	17	0	0	3	3	76
Total	0	151	0	151	4	30	0	34	0	0	17	17	202
07:00	0	51	1	52	4	8	0	12	0	0	9	9	73
07:15	0	68	1	69	2	23	0	25	0	0	7	7	101
07:30	0	82	0	82	3	20	0	23	0	0	10	10	115
07:45	0	67	0	67	2	33	0	35	1	0	10	11	113
Total	0	268	2	270	11	84	0	95	1	0	36	37	402
08:00	0	62	0	62	6	36	0	42	0	0	11	11	115
08:15	0	53	0	53	1	24	0	25	0	0	5	5	83
08:30	0	38	0	38	2	24	0	26	0	0	9	9	73
08:45	0	39	0	39	4	34	0	38	2	0	7	9	86
Total	0	192	0	192	13	118	0	131	2	0	32	34	357
09:00	0	34	0	34	5	20	0	25	0	0	10	10	69
09:15	0	33	0	33	0	23	0	23	0	0	4	4	60
09:30	0	31	0	31	2	25	0	27	0	0	8	8	66
09:45	0	47	0	47	6	27	0	33	0	0	6	6	86
Total	0	145	0	145	13	95	0	108	0	0	28	28	281

******

11:00	0	40	0	40	8	29	0	37	0	0	5	5	82
11:15	0	37	1	38	3	34	0	37	0	0	3	3	78
11:30	0	42	0	42	5	25	0	30	0	0	6	6	78
11:45	0	28	0	28	4	41	0	45	0	0	3	3	76
Total	0	147	1	148	20	129	0	149	0	0	17	17	314
12:00	0	34	0	34	3	45	0	48	0	0	8	8	90
12:15	0	34	1	35	3	43	0	46	1	0	3	4	85
12:30	0	45	0	45	5	31	0	36	0	0	6	6	87
12:45	0	31	0	31	1	30	0	31	0	0	4	4	66
Total	0	144	1	145	12	149	0	161	1	0	21	22	328

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File Name : CANAVE~1
Site Code : 00000000
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Groups Printed- Cars - Trucks

	Canaveral Groves Blvd Eastbound				Canaveral Groves Blvd Westbound				Hartville Ave Northbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
13:00	0	28	0	28	9	40	0	49	0	0	4	4	81
13:15	0	26	1	27	4	42	0	46	1	0	2	3	76
13:30	0	28	0	28	4	34	0	38	0	0	3	3	69
13:45	0	34	0	34	4	33	0	37	0	0	1	1	72
Total	0	116	1	117	21	149	0	170	1	0	10	11	298
******													
15:00	0	48	0	48	6	34	0	40	0	0	8	8	96
15:15	0	31	0	31	7	47	0	54	0	0	2	2	87
15:30	0	23	0	23	6	38	0	44	0	0	6	6	73
15:45	0	39	0	39	11	51	0	62	0	0	4	4	105
Total	0	141	0	141	30	170	0	200	0	0	20	20	361
16:00	0	44	0	44	9	77	0	86	2	0	5	7	137
16:15	0	32	0	32	10	79	0	89	0	0	6	6	127
16:30	0	43	0	43	10	76	0	86	0	0	4	4	133
16:45	0	29	0	29	3	64	0	67	0	0	6	6	102
Total	0	148	0	148	32	296	0	328	2	0	21	23	499
17:00	0	35	0	35	11	90	0	101	0	0	5	5	141
17:15	0	38	0	38	16	80	0	96	0	0	5	5	139
17:30	0	39	0	39	9	66	0	75	2	0	8	10	124
17:45	0	34	0	34	7	61	0	68	0	0	4	4	106
Total	0	146	0	146	43	297	0	340	2	0	22	24	510
Grand Total	0	1598	5	1603	199	1517	0	1716	9	0	224	233	3552
Apprch %	0.0	99.7	0.3		11.6	88.4	0.0		3.9	0.0	96.1		
Total %	0.0	45.0	0.1	45.1	5.6	42.7	0.0	48.3	0.3	0.0	6.3	6.6	

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File Name : CANAVE~1
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	Canaveral Groves Blvd Eastbound				Canaveral Groves Blvd Westbound				Hartville Ave Northbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 06:00 to 09:45 - Peak 1 of 1													
Intersection	07:15												
Volume	0	279	1	280	13	112	0	125	1	0	38	39	444
Percent	0.0	99.6	0.4		10.4	89.6	0.0		2.6	0.0	97.4		
08:00 Volume	0	62	0	62	6	36	0	42	0	0	11	11	115
Peak Factor													0.965
High Int.	07:30				08:00				07:45				
Volume	0	82	0	82	6	36	0	42	1	0	10	11	
Peak Factor				0.854				0.744				0.886	

	Canaveral Groves Blvd Eastbound				Canaveral Groves Blvd Westbound				Hartville Ave Northbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1													
Intersection	11:45												
Volume	0	141	1	142	15	160	0	175	1	0	20	21	338
Percent	0.0	99.3	0.7		8.6	91.4	0.0		4.8	0.0	95.2		
12:00 Volume	0	34	0	34	3	45	0	48	0	0	8	8	90
Peak Factor													0.939
High Int.	12:30				12:00				12:00				
Volume	0	45	0	45	3	45	0	48	0	0	8	8	
Peak Factor				0.789				0.911				0.656	

	Canaveral Groves Blvd Eastbound				Canaveral Groves Blvd Westbound				Hartville Ave Northbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 15:00 to 17:45 - Peak 1 of 1													
Intersection	16:30												
Volume	0	145	0	145	40	310	0	350	0	0	20	20	515
Percent	0.0	100.0	0.0		11.4	88.6	0.0		0.0	0.0	100.0		
17:00 Volume	0	35	0	35	11	90	0	101	0	0	5	5	141
Peak Factor													0.913
High Int.	16:30				17:00				16:45				
Volume	0	43	0	43	11	90	0	101	0	0	6	6	
Peak Factor				0.843				0.866				0.833	

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Counter:
Counted By:
Weather:
Other:

File Name : Citrus Blvd at Bahia Street
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Groups Printed- Cars - Trucks

	Citrus Blvd Eastbound				Citrus Blvd Westbound				Bahia St Northbound				Bahia St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
06:00	0	19	0	19	0	4	0	4	3	0	3	6	0	0	1	1	30
06:15	0	22	0	22	1	4	0	5	2	0	6	8	0	0	1	1	36
06:30	3	21	0	24	0	6	1	7	1	0	3	4	0	0	0	0	35
06:45	1	24	0	25	0	6	0	6	1	0	3	4	0	0	0	0	35
Total	4	86	0	90	1	20	1	22	7	0	15	22	0	0	2	2	136
07:00	0	30	2	32	0	21	0	21	1	0	2	3	0	0	2	2	58
07:15	0	41	0	41	1	13	1	15	0	0	4	4	0	0	6	6	66
07:30	1	48	0	49	3	14	1	18	3	0	2	5	1	0	4	5	77
07:45	0	40	0	40	2	18	0	20	3	0	2	5	0	0	0	0	65
Total	1	159	2	162	6	66	2	74	7	0	10	17	1	0	12	13	266
08:00	1	33	0	34	0	18	0	18	1	0	5	6	0	0	0	0	58
08:15	0	24	0	24	1	16	0	17	2	0	3	5	0	0	1	1	47
08:30	1	25	1	27	0	12	0	12	3	0	5	8	0	0	0	0	47
08:45	0	19	1	20	1	22	2	25	1	0	4	5	0	0	2	2	52
Total	2	101	2	105	2	68	2	72	7	0	17	24	0	0	3	3	204
09:00	0	24	1	25	1	23	1	25	1	0	3	4	0	0	2	2	56
09:15	0	17	0	17	3	17	0	20	2	0	4	6	0	0	0	0	43
09:30	0	35	1	36	4	13	0	17	0	0	7	7	0	0	1	1	61
09:45	0	25	3	28	1	25	0	26	2	0	2	4	0	0	1	1	59
Total	0	101	5	106	9	78	1	88	5	0	16	21	0	0	4	4	219
******																	
11:00	2	23	0	25	1	24	0	25	0	1	1	2	0	1	4	5	57
11:15	2	23	1	26	0	19	0	19	2	0	1	3	1	1	0	2	50
11:30	3	22	2	27	2	26	0	28	3	0	5	8	0	0	1	1	64
11:45	0	37	1	38	1	20	0	21	1	0	2	3	0	0	0	0	62
Total	7	105	4	116	4	89	0	93	6	1	9	16	1	2	5	8	233
12:00	1	22	2	25	3	29	1	33	2	0	2	4	0	2	3	5	67
12:15	2	30	1	33	2	31	0	33	2	0	1	3	0	0	1	1	70
12:30	1	28	2	31	1	21	0	22	2	1	2	5	0	0	1	1	59
12:45	2	28	4	34	0	29	0	29	5	0	2	7	0	0	0	0	70
Total	6	108	9	123	6	110	1	117	11	1	7	19	0	2	5	7	266

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File Name : Citrus Blvd at Bahia Street
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Groups Printed- Cars - Trucks

	Citrus Blvd Eastbound				Citrus Blvd Westbound				Bahia St Northbound				Bahia St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
13:00	0	12	2	14	3	24	0	27	2	0	5	7	0	0	1	1	49
13:15	0	22	4	26	2	20	0	22	0	1	5	6	0	0	1	1	55
13:30	1	28	4	33	0	27	0	27	1	0	5	6	0	0	1	1	67
13:45	0	32	2	34	2	32	0	34	0	0	6	6	0	0	1	1	75
Total	1	94	12	107	7	103	0	110	3	1	21	25	0	0	4	4	246
******																	
15:00	1	26	1	28	1	36	0	37	2	0	1	3	1	0	1	2	70
15:15	2	32	4	38	4	24	0	28	0	0	1	1	0	0	0	0	67
15:30	1	25	2	28	3	47	0	50	1	0	0	1	0	0	2	2	81
15:45	1	28	2	31	4	39	1	44	1	0	2	3	0	0	5	5	83
Total	5	111	9	125	12	146	1	159	4	0	4	8	1	0	8	9	301
16:00	2	18	4	24	6	40	0	46	3	0	2	5	0	0	0	0	75
16:15	0	28	1	29	4	45	0	49	2	0	7	9	2	0	1	3	90
16:30	4	25	2	31	5	36	0	41	1	0	4	5	2	1	2	5	82
16:45	2	27	4	33	3	43	0	46	1	0	5	6	0	0	4	4	89
Total	8	98	11	117	18	164	0	182	7	0	18	25	4	1	7	12	336
17:00	2	45	4	51	5	48	1	54	2	0	2	4	0	0	1	1	110
17:15	2	22	4	28	6	53	0	59	4	0	3	7	0	1	3	4	98
17:30	4	31	1	36	3	40	0	43	0	0	1	1	1	1	1	3	83
17:45	2	23	2	27	4	53	0	57	2	0	3	5	0	0	1	1	90
Total	10	121	11	142	18	194	1	213	8	0	9	17	1	2	6	9	381
Grand Total	44	1084	65	1193	83	1038	9	1130	65	3	126	194	8	7	56	71	2588
Apprch %	3.7	90.9	5.4		7.3	91.9	0.8		33.5	1.5	64.9		11.3	9.9	78.9		
Total %	1.7	41.9	2.5	46.1	3.2	40.1	0.3	43.7	2.5	0.1	4.9	7.5	0.3	0.3	2.2	2.7	

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File Name : Citrus Blvd at Bahia Street
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	Citrus Blvd Eastbound				Citrus Blvd Westbound				Bahia St Northbound				Bahia St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 06:00 to 09:45 - Peak 1 of 1																	
Intersection	07:00																
Volume	1	159	2	162	6	66	2	74	7	0	10	17	1	0	12	13	266
Percent	0.6	98.1	1.2		8.1	89.2	2.7		41.2	0.0	58.8		7.7	0.0	92.3		
07:30 Volume	1	48	0	49	3	14	1	18	3	0	2	5	1	0	4	5	77
Peak Factor																	0.864
High Int.	07:30				07:00				07:30				07:15				
Volume	1	48	0	49	0	21	0	21	3	0	2	5	0	0	6	6	
Peak Factor				0.827				0.881				0.850				0.542	

	Citrus Blvd Eastbound				Citrus Blvd Westbound				Bahia St Northbound				Bahia St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 11:00 to 13:45 - Peak 1 of 1																	
Intersection	12:00																
Volume	6	108	9	123	6	110	1	117	11	1	7	19	0	2	5	7	266
Percent	4.9	87.8	7.3		5.1	94.0	0.9		57.9	5.3	36.8		0.0	28.6	71.4		
12:45 Volume	2	28	4	34	0	29	0	29	5	0	2	7	0	0	0	0	70
Peak Factor																	0.950
High Int.	12:45				12:00				12:45				12:00				
Volume	2	28	4	34	3	29	1	33	5	0	2	7	0	2	3	5	
Peak Factor				0.904				0.886				0.679				0.350	

	Citrus Blvd Eastbound				Citrus Blvd Westbound				Bahia St Northbound				Bahia St Southbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 15:00 to 17:45 - Peak 1 of 1																	
Intersection	17:00																
Volume	10	121	11	142	18	194	1	213	8	0	9	17	1	2	6	9	381
Percent	7.0	85.2	7.7		8.5	91.1	0.5		47.1	0.0	52.9		11.1	22.2	66.7		
17:00 Volume	2	45	4	51	5	48	1	54	2	0	2	4	0	0	1	1	110
Peak Factor																	0.866
High Int.	17:00				17:15				17:15				17:15				
Volume	2	45	4	51	6	53	0	59	4	0	3	7	0	1	3	4	
Peak Factor				0.696				0.903				0.607				0.563	

APPENDIX D

Intersection Volume Tables

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Canaveral Groves Boulevard
Count Date: 8/12/2021
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1.04
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	118	142	195	41	59	37	49	70	18	78	289	59
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2021 Existing Conditions	**123**	**148**	**203**	**43**	**61**	**38**	**51**	**73**	**19**	**81**	**301**	**61**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	3.03%	3.03%	3.03%	2.97%	2.97%	2.97%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	1	0	0	0	0
Phase 1 - 2023	**130**	**157**	**215**	**45**	**65**	**41**	**53**	**77**	**19**	**84**	**313**	**64**
Rerouted Development Trips	-42	-51	-70	8	-17	0	-14	49	16	0	30	-24
Phase 2 - 2025	**97**	**115**	**160**	**58**	**52**	**43**	**42**	**145**	**39**	**88**	**358**	**43**
Phase 3 - 2026	**102**	**121**	**167**	**61**	**55**	**45**	**45**	**164**	**44**	**90**	**369**	**45**
Phase 4 - 2027	**110**	**127**	**176**	**66**	**58**	**46**	**47**	**191**	**49**	**91**	**380**	**48**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	130	157	215	45	65	41	53	77	19	84	313	64
Rerouted Development Trips	-42	-51	-70	8	-17	0	-14	49	16	0	30	-24
2023 Project Trips	1	0	1	2	0	0	1	16	3	0	3	1
Phase 1 - 2023	**89**	**106**	**146**	**55**	**48**	**41**	**40**	**142**	**38**	**84**	**346**	**41**
2025 Background Traffic	97	115	160	58	52	43	42	145	39	88	358	43
2025 Project Trips	1	1	1	2	1	0	2	18	4	0	4	0
Phase 2 - 2025	**98**	**116**	**161**	**60**	**53**	**43**	**44**	**163**	**43**	**88**	**362**	**43**
2026 Background Traffic	102	121	167	61	55	45	45	164	44	90	369	45
2026 Project Trips	3	0	1	3	1	0	1	25	5	0	5	2
Phase 3 - 2026	**105**	**121**	**168**	**64**	**56**	**45**	**46**	**189**	**49**	**90**	**374**	**47**
2027 Background Traffic	110	127	176	66	58	46	47	191	49	91	380	48
2027 Project Trips	1	3	2	5	2	0	3	38	8	0	8	1
Phase 4 - 2027	**111**	**130**	**178**	**71**	**60**	**46**	**50**	**229**	**57**	**91**	**388**	**49**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Proposed Connector Road/Amazon Access Point 1
Count Date: N/A
A.M. Peak Time Period: 7:15AM - 8:15AM
Peak Season Factor: 1.04
Years to Buildout: 6

	Proposed Connector Rd			Amazon Access Point 2			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts*	0	0	0	0	0	0	0	268	0	0	525	0
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.9	0.9	0.9	1.04	1.04	1.04
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**241**	**0**	**0**	**546**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	1	0	0	0	0	1	0	0	0
Phase 1 - 2023	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**251**	**1**	**0**	**568**	**0**
Rerouted Development Trips	65	0	98	0	0	0	17	0	0	0	0	38
Phase 2 - 2025	**84**	**0**	**123**	**1**	**0**	**0**	**25**	**262**	**1**	**0**	**592**	**43**
Phase 3 - 2026	**106**	**0**	**152**	**1**	**0**	**0**	**33**	**269**	**1**	**0**	**605**	**49**
Phase 4 - 2027	**136**	**0**	**193**	**1**	**0**	**0**	**47**	**276**	**1**	**0**	**618**	**57**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	1	0	0	0	251	1	0	568	0
Rerouted Development Trips	65	0	98	0	0	0	17	0	0	0	0	38
2023 Project Trips	19	0	25	0	0	0	8	1	0	0	1	5
Phase 1 - 2023	**84**	**0**	**123**	**1**	**0**	**0**	**25**	**252**	**1**	**0**	**569**	**43**
2025 Background Traffic	84	0	123	1	0	0	25	262	1	0	592	43
2025 Project Trips	22	0	29	0	0	0	8	2	0	0	1	6
Phase 2 - 2025	**106**	**0**	**152**	**1**	**0**	**0**	**33**	**264**	**1**	**0**	**593**	**49**
2026 Background Traffic	106	0	152	1	0	0	33	269	1	0	605	49
2026 Project Trips	30	0	41	0	0	0	14	1	0	0	1	8
Phase 3 - 2026	**136**	**0**	**193**	**1**	**0**	**0**	**47**	**270**	**1**	**0**	**606**	**57**
2027 Background Traffic	136	0	193	1	0	0	47	276	1	0	618	57
2027 Project Trips	46	0	61	0	0	0	17	3	0	0	2	12
Phase 4 - 2027	**182**	**0**	**254**	**1**	**0**	**0**	**64**	**279**	**1**	**0**	**620**	**69**

*Taken from the intersection of Grissom Pkwy at Industry Road & Grissom Pkwy at Canaveral Grove Blvd

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Industry Road
Count Date: 1/13/2022
A.M. Peak Time Period: 7:15-8:15 AM
Peak Season Factor: 0.9
Years to Buildout: 6

	Grissom Pkwy			Cemex Entrance			Industry Rd			Industry Rd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	18	2	448	55	0	0	252	99	42	3	134	16
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**16**	**2**	**403**	**50**	**0**	**0**	**227**	**89**	**38**	**3**	**121**	**14**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	2.90%	2.90%	2.90%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	1	0	0	0	1	0	0		0	0
Phase 1 - 2023	**17**	**2**	**420**	**50**	**0**	**0**	**241**	**94**	**40**	**3**	**125**	**15**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**23**	**3**	**457**	**50**	**1**	**0**	**260**	**100**	**42**	**3**	**131**	**19**
Phase 3 - 2026	**29**	**5**	**488**	**50**	**1**	**0**	**275**	**103**	**44**	**3**	**133**	**22**
Phase 4 - 2027	**37**	**6**	**528**	**50**	**3**	**0**	**291**	**106**	**45**	**3**	**136**	**26**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	17	2	420	50	0	0	241	94	40	3	125	15
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	5	1	20	0	1	0	5	0	0	0	0	3
Phase 1 - 2023	**22**	**3**	**440**	**50**	**1**	**0**	**246**	**94**	**40**	**3**	**125**	**18**
2025 Background Traffic	23	3	457	50	1	0	260	100	42	3	131	19
2025 Project Trips	6	2	22	0	0	0	7	0	0	0	0	3
Phase 2 - 2025	**29**	**5**	**479**	**50**	**1**	**0**	**267**	**100**	**42**	**3**	**131**	**22**
2026 Background Traffic	29	5	488	50	1	0	275	103	44	3	133	22
2026 Project Trips	8	1	31	0	2	0	9	0	0	0	0	4
Phase 3 - 2026	**37**	**6**	**519**	**50**	**3**	**0**	**284**	**103**	**44**	**3**	**133**	**26**
2027 Background Traffic	37	6	528	50	3	0	291	106	45	3	136	26
2027 Project Trips	13	4	48	0	1	0	14	0	0	0	0	5
Phase 4 - 2027	**50**	**10**	**576**	**50**	**4**	**0**	**305**	**106**	**45**	**3**	**136**	**31**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Bahia Rd and Citrus Blvd
Count Date: 1/13/2022
A.M. Peak Time Period: 7:00-8:00 AM
Peak Season Factor: 0.9
Years to Buildout: 6

	Citrus Blvd			Citrus Blvd			Bahia St			Bahia St		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts*	1	159	2	6	66	2	7	0	10	1	0	12
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**1**	**143**	**2**	**5**	**59**	**2**	**6**	**0**	**9**	**1**	**0**	**11**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	6.11%	6.11%	6.11%	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**1**	**161**	**2**	**6**	**67**	**2**	**7**	**0**	**9**	**1**	**0**	**11**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**1**	**181**	**3**	**9**	**75**	**2**	**8**	**0**	**12**	**1**	**0**	**12**
Phase 3 - 2026	**1**	**192**	**4**	**12**	**80**	**2**	**9**	**0**	**15**	**1**	**0**	**12**
Phase 4 - 2027	**1**	**204**	**6**	**17**	**85**	**3**	**10**	**0**	**19**	**1**	**0**	**12**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	1	161	2	6	67	2	7	0	9	1	0	11
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	1	2	0	0	1	0	2	0	0	0
Phase 1 - 2023	**1**	**161**	**3**	**8**	**67**	**2**	**8**	**0**	**11**	**1**	**0**	**11**
2025 Background Traffic	1	181	3	9	75	2	8	0	12	1	0	12
2025 Project Trips	0	0	1	3	0	0	1	0	3	0	0	0
Phase 2 - 2025	**1**	**181**	**4**	**12**	**75**	**2**	**9**	**0**	**15**	**1**	**0**	**12**
2026 Background Traffic	1	192	4	12	80	2	9	0	15	1	0	12
2026 Project Trips	0	0	1	4	0	0	1	0	4	0	0	0
Phase 3 - 2026	**1**	**192**	**5**	**16**	**80**	**2**	**10**	**0**	**19**	**1**	**0**	**12**
2027 Background Traffic	1	204	6	17	85	3	10	0	19	1	0	12
2027 Project Trips	0	0	2	6	0	0	2	0	6	0	0	0
Phase 4 - 2027	**1**	**204**	**8**	**23**	**85**	**3**	**12**	**0**	**25**	**1**	**0**	**12**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Hartville Ave
Count Date: 1/13/2022
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 0.9
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Raw Turning Movement Counts	0	279	1	13	112	0	1	0	39
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**0**	**251**	**1**	**12**	**101**	**0**	**1**	**0**	**35**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Background Traffic	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**267**	**1**	**12**	**107**	**0**	**1**	**0**	**37**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**0**	**283**	**1**	**15**	**114**	**0**	**1**	**0**	**40**
Phase 3 - 2026	**0**	**292**	**1**	**19**	**117**	**0**	**1**	**0**	**44**
Phase 4 - 2027	**0**	**300**	**1**	**23**	**121**	**0**	**1**	**0**	**49**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	267	1	12	107	0	1	0	37
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	0	2	0	0	0	0	2
Phase 1 - 2023	**0**	**267**	**1**	**14**	**107**	**0**	**1**	**0**	**39**
2025 Background Traffic	0	283	1	15	114	0	1	0	40
2025 Project Trips	0	0	0	3	0	0	0	0	3
Phase 2 - 2025	**0**	**283**	**1**	**18**	**114**	**0**	**1**	**0**	**43**
2026 Background Traffic	0	292	1	19	117	0	1	0	44
2026 Project Trips	0	0	0	4	0	0	0	0	4
Phase 3 - 2026	**0**	**292**	**1**	**23**	**117**	**0**	**1**	**0**	**48**
2027 Background Traffic	0	300	1	23	121	0	1	0	49
2027 Project Trips	0	0	0	6	0	0	0	0	6
Phase 4 - 2027	**0**	**300**	**1**	**29**	**121**	**0**	**1**	**0**	**55**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Estimated Volumes	0	285	0	60	101	0	0	0	175
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**285**	**0**	**60**	**101**	**0**	**0**	**0**	**175**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Background Traffic	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**303**	**0**	**64**	**107**	**0**	**0**	**0**	**182**
Rerouted Development Trips	0	0	0	-55	0	0	0	0	-163
Phase 2 - 2025	**0**	**323**	**0**	**13**	**116**	**0**	**0**	**0**	**26**
Phase 3 - 2026	**0**	**336**	**0**	**15**	**122**	**0**	**0**	**0**	**30**
Phase 4 - 2027	**0**	**350**	**0**	**17**	**130**	**0**	**0**	**0**	**34**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	303	0	64	107	0	0	0	182
Rerouted Development Trips	0	0	0	-55	0	0	0	0	-163
2023 Project Trips	0	2	0	0	2	0	0	0	0
Phase 1 - 2023	**0**	**305**	**0**	**9**	**109**	**0**	**0**	**0**	**19**
2025 Background Traffic	0	323	0	13	116	0	0	0	26
2025 Project Trips	0	3	0	0	3	0	0	0	0
Phase 2 - 2025	**0**	**326**	**0**	**13**	**119**	**0**	**0**	**0**	**26**
2026 Background Traffic	0	336	0	15	122	0	0	0	30
2026 Project Trips	0	4	0	0	4	0	0	0	0
Phase 3 - 2026	**0**	**340**	**0**	**15**	**126**	**0**	**0**	**0**	**30**
2027 Background Traffic	0	350	0	17	130	0	0	0	34
2027 Project Trips	0	6	0	0	6	0	0	0	0
Phase 4 - 2027	**0**	**356**	**0**	**17**	**136**	**0**	**0**	**0**	**34**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Hartville Ave at Citrus Blvd
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Citrus Blvd			Hartville Ave			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	4	14	35	0	0	12	0
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**0**	**4**	**14**	**35**	**0**	**0**	**12**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**5**	**15**	**36**	**0**	**0**	**12**	**0**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**2**	**0**	**5**	**15**	**38**	**0**	**0**	**13**	**2**
Phase 3 - 2026	**5**	**0**	**5**	**15**	**39**	**0**	**0**	**13**	**5**
Phase 4 - 2027	**9**	**0**	**6**	**16**	**39**	**0**	**0**	**14**	**9**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	5	15	36	0	0	12	0
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	2	0	0	0	0	0	0	0	2
Phase 1 - 2023	**2**	**0**	**5**	**15**	**36**	**0**	**0**	**12**	**2**
2025 Background Traffic	2	0	5	15	38	0	0	13	2
2025 Project Trips	3	0	0	0	0	0	0	0	3
Phase 2 - 2025	**5**	**0**	**5**	**15**	**38**	**0**	**0**	**13**	**5**
2026 Background Traffic	5	0	5	15	39	0	0	13	5
2026 Project Trips	4	0	0	0	0	0	0	0	4
Phase 3 - 2026	**9**	**0**	**5**	**15**	**39**	**0**	**0**	**13**	**9**
2027 Background Traffic	9	0	6	16	39	0	0	14	9
2027 Project Trips	6	0	0	0	0	0	0	0	6
Phase 4 - 2027	**15**	**0**	**6**	**16**	**39**	**0**	**0**	**14**	**15**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Proposed Connector & Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Proposed Connector Rd			Proposed Connector Rd			Alan Shepard Ave			Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	0	0	0	0	0	20	0	0	6	0
Peak Season Factor	1	1	1	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**6**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic							2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**6**	**0**
Rerouted Development Trips	0	0	0	6	0	49	0	-18	18	143	-6	0
Phase 2 - 2025	**0**	**44**	**0**	**6**	**13**	**49**	**0**	**4**	**18**	**143**	**0**	**0**
Phase 3 - 2026	**0**	**95**	**0**	**6**	**27**	**49**	**0**	**4**	**18**	**143**	**1**	**0**
Phase 4 - 2027	**0**	**166**	**0**	**6**	**48**	**49**	**0**	**5**	**18**	**143**	**1**	**0**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	0	0	0	0	21	0	0	6	0
Rerouted Development Trips	0	0	0	6	0	49	0	-18	18	143	-6	0
2023 Project Trips	0	44	0	0	13	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**44**	**0**	**6**	**13**	**49**	**0**	**3**	**18**	**143**	**0**	**0**
2025 Background Traffic	0	44	0	6	13	49	0	4	18	143	0	0
2025 Project Trips	0	51	0	0	14	0	0	0	0	0	0	0
Phase 2 - 2025	**0**	**95**	**0**	**6**	**27**	**49**	**0**	**4**	**18**	**143**	**0**	**0**
2026 Background Traffic	0	95	0	6	27	49	0	4	18	143	1	0
2026 Project Trips	0	71	0	0	21	0	0	0	0	0	0	0
Phase 3 - 2026	**0**	**166**	**0**	**6**	**48**	**49**	**0**	**4**	**18**	**143**	**1**	**0**
2027 Background Traffic	0	166	0	6	48	49	0	5	18	143	1	0
2027 Project Trips	0	107	0	0	30	0	0	0	0	0	0	0
Phase 4 - 2027	**0**	**273**	**0**	**6**	**78**	**49**	**0**	**5**	**18**	**143**	**1**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Canaveral Groves Boulevard
Count Date: 8/12/2021
P.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1.04
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	75	88	109	26	107	63	227	307	61	76	170	109
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2021 Existing Conditions	**78**	**92**	**113**	**27**	**111**	**66**	**236**	**319**	**63**	**79**	**177**	**113**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	3.03%	3.03%	3.03%	2.97%	2.97%	2.97%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	6	28	7	0	1	0
Phase 1 - 2023	**83**	**97**	**120**	**29**	**118**	**69**	**252**	**360**	**73**	**82**	**185**	**118**
Rerouted Development Trips	-30	-36	-43	28	-44	0	-94	32	11	0	46	-46
Phase 2 - 2025	**60**	**67**	**86**	**62**	**81**	**74**	**168**	**411**	**90**	**86**	**251**	**78**
Phase 3 - 2026	**64**	**72**	**91**	**68**	**87**	**76**	**173**	**424**	**95**	**87**	**270**	**81**
Phase 4 - 2027	**69**	**76**	**97**	**76**	**92**	**78**	**178**	**439**	**101**	**89**	**294**	**85**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	83	97	120	29	118	69	252	360	73	82	185	118
Rerouted Development Trips	-30	-36	-43	28	-44	0	-94	32	11	0	46	-46
2023 Project Trips	2	0	1	4	0	0	0	5	3	0	13	1
Phase 1 - 2023	**55**	**61**	**78**	**61**	**74**	**69**	**158**	**397**	**87**	**82**	**244**	**73**
2025 Background Traffic	60	67	86	62	81	74	168	411	90	86	251	78
2025 Project Trips	1	2	1	5	2	0	0	6	4	0	15	1
Phase 2 - 2025	**63**	**69**	**88**	**71**	**83**	**74**	**168**	**422**	**97**	**86**	**279**	**80**
2026 Background Traffic	64	72	91	68	87	76	173	424	95	87	270	81
2026 Project Trips	3	1	2	7	1	0	0	8	5	0	20	1
Phase 3 - 2026	**68**	**75**	**94**	**80**	**90**	**76**	**173**	**438**	**104**	**87**	**305**	**83**
2027 Background Traffic	69	76	97	76	92	78	178	439	101	89	294	85
2027 Project Trips	4	2	2	10	2	0	0	12	9	0	31	3
Phase 4 - 2027	**76**	**79**	**101**	**93**	**95**	**78**	**178**	**459**	**115**	**89**	**345**	**89**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Proposed Connector Road/Amazon Access Point 1
Count Date: N/A
P.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1.04
Years to Buildout: 6

	Proposed Connector Rd			Amazon Access Point 2			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts*	0	0	0	0	0	0	0	642	0	0	305	0
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.9	0.9	0.9	1.04	1.04	1.04
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**578**	**0**	**0**	**317**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	27	0	20	0	0	1	0	23	0
Phase 1 - 2023	**0**	**0**	**0**	**27**	**0**	**20**	**0**	**601**	**1**	**0**	**353**	**0**
Rerouted Development Trips	43	0	65	0	0	0	110	0	0	0	0	74
Phase 2 - 2025	**51**	**0**	**84**	**27**	**0**	**20**	**143**	**625**	**1**	**0**	**367**	**91**
Phase 3 - 2026	**61**	**0**	**106**	**27**	**0**	**20**	**183**	**638**	**1**	**0**	**375**	**111**
Phase 4 - 2027	**74**	**0**	**135**	**27**	**0**	**20**	**236**	**651**	**1**	**0**	**383**	**138**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	27	0	20	0	601	1	0	353	0
Rerouted Development Trips	43	0	65	0	0	0	110	0	0	0	0	74
2023 Project Trips	8	0	19	0	0	0	33	0	0	0	1	17
Phase 1 - 2023	**51**	**0**	**84**	**27**	**0**	**20**	**143**	**601**	**1**	**0**	**354**	**91**
2025 Background Traffic	51	0	84	27	0	20	143	625	1	0	367	91
2025 Project Trips	10	0	22	0	0	0	40	0	0	0	1	20
Phase 2 - 2025	**61**	**0**	**106**	**27**	**0**	**20**	**183**	**625**	**1**	**0**	**368**	**111**
2026 Background Traffic	61	0	106	27	0	20	183	638	1	0	375	111
2026 Project Trips	13	0	29	0	0	0	53	0	0	0	1	27
Phase 3 - 2026	**74**	**0**	**135**	**27**	**0**	**20**	**236**	**638**	**1**	**0**	**376**	**138**
2027 Background Traffic	61	0	106	27	0	20	183	638	1	0	375	111
2027 Project Trips	21	0	45	0	0	0	83	0	0	0	3	41
Phase 4 - 2027	**82**	**0**	**151**	**27**	**0**	**20**	**266**	**638**	**1**	**0**	**378**	**152**

*Taken from the intersection of Grissom Pkwy at Industry Road & Grissom Pkwy at Canaveral Grove Blvd

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Industry Road
Count Date: 1/13/2022
P.M. Peak Time Period: 4:45PM - 5:45PM
Peak Season Factor: 0.9
Years to Buildout: 6

	Grissom Pkwy			Cemex Entrance			Industry Rd			Industry Rd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	5	1	400	10	3	1	602	93	7	0	214	37
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**5**	**1**	**360**	**9**	**3**	**1**	**542**	**84**	**6**	**0**	**193**	**33**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	2.90%	2.90%	2.90%	1.40%	1.40%	1.40%
Amazon Delivery Station Traffic	3	0	47	0	0	0	1	0	0	0	0	0
Phase 1 - 2023	**8**	**1**	**422**	**9**	**3**	**1**	**575**	**89**	**7**	**0**	**198**	**34**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**12**	**3**	**451**	**9**	**4**	**1**	**632**	**94**	**7**	**0**	**204**	**43**
Phase 3 - 2026	**17**	**5**	**474**	**9**	**5**	**1**	**681**	**97**	**7**	**0**	**206**	**52**
Phase 4 - 2027	**24**	**8**	**502**	**9**	**6**	**1**	**738**	**99**	**7**	**0**	**209**	**65**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	8	1	422	9	3	1	575	89	7	0	198	34
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	4	2	14	0	1	0	24	0	0	0	0	8
Phase 1 - 2023	**12**	**3**	**436**	**9**	**4**	**1**	**599**	**89**	**7**	**0**	**198**	**42**
2025 Background Traffic	12	3	451	9	4	1	632	94	7	0	204	43
2025 Project Trips	5	2	16	0	1	0	31	0	0	0	0	8
Phase 2 - 2025	**17**	**5**	**467**	**9**	**5**	**1**	**663**	**94**	**7**	**0**	**204**	**51**
2026 Background Traffic	17	5	474	9	5	1	681	97	7	0	206	52
2026 Project Trips	7	3	20	0	1	0	39	0	0	0	0	13
Phase 3 - 2026	**24**	**8**	**494**	**9**	**6**	**1**	**720**	**97**	**7**	**0**	**206**	**65**
2027 Background Traffic	24	8	502	9	6	1	738	99	7	0	209	65
2027 Project Trips	10	4	34	0	2	0	63	0	0	0	0	18
Phase 4 - 2027	**34**	**12**	**536**	**9**	**8**	**1**	**801**	**99**	**7**	**0**	**209**	**83**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Bahia Rd and Citrus Blvd
Count Date: 1/13/2022
P.M. Peak Time Period: 5:00 PM - 6:00 PM
Peak Season Factor: 0.9
Years to Buildout: 6

	Citrus Blvd			Citrus Blvd			Bahia St			Bahia St		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	10	121	11	18	194	1	8	0	9	1	2	6
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**9**	**109**	**10**	**16**	**175**	**1**	**7**	**0**	**8**	**1**	**2**	**5**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	6.11%	6.11%	6.11%	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	6	0	0	0	0	0	0	0
Phase 1 - 2023	**10**	**123**	**11**	**18**	**203**	**1**	**7**	**0**	**8**	**1**	**2**	**6**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**11**	**138**	**14**	**22**	**227**	**1**	**9**	**0**	**12**	**1**	**2**	**6**
Phase 3 - 2026	**12**	**146**	**15**	**26**	**241**	**1**	**10**	**0**	**16**	**1**	**2**	**6**
Phase 4 - 2027	**13**	**155**	**17**	**29**	**255**	**1**	**11**	**0**	**22**	**1**	**2**	**6**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	10	123	11	18	203	1	7	0	8	1	2	6
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	1	1	0	0	1	0	3	0	0	0
Phase 1 - 2023	**10**	**123**	**12**	**19**	**203**	**1**	**8**	**0**	**11**	**1**	**2**	**6**
2025 Background Traffic	11	138	14	22	227	1	9	0	12	1	2	6
2025 Project Trips	0	0	1	3	0	0	1	0	4	0	0	0
Phase 2 - 2025	**11**	**138**	**15**	**25**	**227**	**1**	**10**	**0**	**16**	**1**	**2**	**6**
2026 Background Traffic	12	146	15	26	241	1	10	0	16	1	2	6
2026 Project Trips	0	0	1	2	0	0	1	0	6	0	0	0
Phase 3 - 2026	**12**	**146**	**16**	**28**	**241**	**1**	**11**	**0**	**22**	**1**	**2**	**6**
2027 Background Traffic	13	155	17	29	255	1	11	0	22	1	2	6
2027 Project Trips	0	0	2	5	0	0	2	0	8	0	0	0
Phase 4 - 2027	**13**	**155**	**19**	**34**	**255**	**1**	**13**	**0**	**30**	**1**	**2**	**6**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Hartville Ave
Count Date: 1/13/2022
P.M. Peak Time Period: 5:00 PM - 6:00 PM
Peak Season Factor: 0.9
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Raw Turning Movement Counts	0	146	0	43	297	0	2	0	22
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**0**	**131**	**0**	**39**	**267**	**0**	**2**	**0**	**20**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Annual Growth Rate	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	6	0	0	0	0
Phase 1 - 2023	**0**	**139**	**0**	**41**	**290**	**0**	**2**	**0**	**21**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**0**	**148**	**0**	**45**	**307**	**0**	**2**	**0**	**24**
Phase 3 - 2026	**0**	**153**	**0**	**49**	**316**	**0**	**2**	**0**	**29**
Phase 4 - 2027	**0**	**157**	**0**	**52**	**326**	**0**	**2**	**0**	**35**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	139	0	41	290	0	2	0	21
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	0	1	0	0	0	0	3
Phase 1 - 2023	**0**	**139**	**0**	**42**	**290**	**0**	**2**	**0**	**24**
2025 Background Traffic	0	148	0	45	307	0	2	0	24
2025 Project Trips	0	0	0	3	0	0	0	0	4
Phase 2 - 2025	**0**	**148**	**0**	**48**	**307**	**0**	**2**	**0**	**28**
2026 Background Traffic	0	153	0	49	316	0	2	0	29
2026 Project Trips	0	0	0	2	0	0	0	0	6
Phase 3 - 2026	**0**	**153**	**0**	**51**	**316**	**0**	**2**	**0**	**35**
2027 Background Traffic	0	157	0	52	326	0	2	0	35
2027 Project Trips	0	0	0	5	0	0	0	0	8
Phase 4 - 2027	**0**	**157**	**0**	**57**	**326**	**0**	**2**	**0**	**43**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Estimated Volumes	0	151	0	195	267	0	0	0	116
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**151**	**0**	**195**	**267**	**0**	**0**	**0**	**116**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Background Traffic	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	6	0	0	0	0
Phase 1 - 2023	**0**	**160**	**0**	**207**	**289**	**0**	**0**	**0**	**121**
Rerouted Development Trips	0	0	0	-184	0	0	0	0	-108
Phase 2 - 2025	**0**	**173**	**0**	**36**	**308**	**0**	**0**	**0**	**18**
Phase 3 - 2026	**0**	**182**	**0**	**42**	**320**	**0**	**0**	**0**	**20**
Phase 4 - 2027	**0**	**194**	**0**	**49**	**331**	**0**	**0**	**0**	**23**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	160	0	207	289	0	0	0	121
Rerouted Development Trips	0	0	0	-184	0	0	0	0	-108
2023 Project Trips	0	3	0	0	1	0	0	0	0
Phase 1 - 2023	**0**	**163**	**0**	**23**	**290**	**0**	**0**	**0**	**13**
2025 Background Traffic	0	173	0	36	308	0	0	0	18
2025 Project Trips	0	4	0	0	3	0	0	0	0
Phase 2 - 2025	**0**	**177**	**0**	**36**	**311**	**0**	**0**	**0**	**18**
2026 Background Traffic	0	182	0	42	320	0	0	0	20
2026 Project Trips	0	6	0	0	2	0	0	0	0
Phase 3 - 2026	**0**	**188**	**0**	**42**	**322**	**0**	**0**	**0**	**20**
2027 Background Traffic	0	194	0	49	331	0	0	0	23
2027 Project Trips	0	8	0	0	5	0	0	0	0
Phase 4 - 2027	**0**	**202**	**0**	**49**	**336**	**0**	**0**	**0**	**23**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Hartville Ave at Citrus Blvd
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Citrus Blvd			Hartville Ave			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	14	10	22	0	0	39	0
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**0**	**14**	**10**	**22**	**0**	**0**	**39**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**16**	**10**	**23**	**0**	**0**	**41**	**0**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**3**	**0**	**18**	**11**	**24**	**0**	**0**	**42**	**1**
Phase 3 - 2026	**7**	**0**	**19**	**11**	**24**	**0**	**0**	**43**	**4**
Phase 4 - 2027	**13**	**0**	**20**	**11**	**25**	**0**	**0**	**44**	**6**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	16	10	23	0	0	41	0
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	3	0	0	0	0	0	0	0	1
Phase 1 - 2023	**3**	**0**	**16**	**10**	**23**	**0**	**0**	**41**	**1**
2025 Background Traffic	3	0	18	11	24	0	0	42	1
2025 Project Trips	4	0	0	0	0	0	0	0	3
Phase 2 - 2025	**7**	**0**	**18**	**11**	**24**	**0**	**0**	**42**	**4**
2026 Background Traffic	7	0	19	11	24	0	0	43	4
2026 Project Trips	6	0	0	0	0	0	0	0	2
Phase 3 - 2026	**13**	**0**	**19**	**11**	**24**	**0**	**0**	**43**	**6**
2027 Background Traffic	13	0	20	11	25	0	0	44	6
2027 Project Trips	8	0	0	0	0	0	0	0	5
Phase 4 - 2027	**21**	**0**	**20**	**11**	**25**	**0**	**0**	**44**	**11**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Proposed Connector Rd			Proposed Connector Rd			Alan Shepard Ave			Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	0	0	0	0	0	13	0	0	21	0
Peak Season Factor	1	1	1	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**21**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic							2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**22**	**0**
Rerouted Development Trips	0	0	0	20	0	164	0	-12	12	95	-20	0
Phase 2 - 2025	**0**	**27**	**0**	**20**	**50**	**164**	**0**	**2**	**12**	**95**	**3**	**0**
Phase 3 - 2026	**0**	**59**	**0**	**20**	**110**	**164**	**0**	**2**	**12**	**95**	**3**	**0**
Phase 4 - 2027	**0**	**101**	**0**	**20**	**190**	**164**	**0**	**3**	**12**	**95**	**4**	**0**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	0	0	0	0	14	0	0	22	0
Rerouted Development Trips	0	0	0	20	0	164	0	-12	12	95	-20	0
2023 Project Trips	0	27	0	0	50	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**27**	**0**	**20**	**50**	**164**	**0**	**2**	**12**	**95**	**2**	**0**
2025 Background Traffic	0	27	0	20	50	164	0	2	12	95	3	0
2025 Project Trips	0	32	0	0	60	0	0	0	0	0	0	0
Phase 2 - 2025	**0**	**59**	**0**	**20**	**110**	**164**	**0**	**2**	**12**	**95**	**3**	**0**
2026 Background Traffic	0	59	0	20	110	164	0	2	12	95	3	0
2026 Project Trips	0	42	0	0	80	0	0	0	0	0	0	0
Phase 3 - 2026	**0**	**101**	**0**	**20**	**190**	**164**	**0**	**2**	**12**	**95**	**3**	**0**
2027 Background Traffic	0	101	0	20	190	164	0	3	12	95	4	0
2027 Project Trips	0	66	0	0	124	0	0	0	0	0	0	0
Phase 4 - 2027	**0**	**167**	**0**	**20**	**314**	**164**	**0**	**3**	**12**	**95**	**4**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Canaveral Groves Boulevard
Count Date: 8/12/2021
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1.04
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	118	142	195	41	59	37	49	70	18	78	289	59
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2021 Existing Conditions	**123**	**148**	**203**	**43**	**61**	**38**	**51**	**73**	**19**	**81**	**301**	**61**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	3.03%	3.03%	3.03%	2.97%	2.97%	2.97%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	1	0	0	0	0
Phase 1 - 2023	**130**	**157**	**215**	**45**	**65**	**41**	**53**	**77**	**19**	**84**	**313**	**64**
Rerouted Development Trips	-42	-51	-70	8	-17	0	-14	49	16	0	30	-24
Phase 2 - 2025	**98**	**117**	**159**	**58**	**52**	**43**	**42**	**143**	**38**	**88**	**356**	**45**
Phase 3 - 2026	**106**	**124**	**167**	**61**	**55**	**45**	**45**	**160**	**41**	**90**	**365**	**49**
Phase 4 - 2027	**116**	**133**	**174**	**66**	**58**	**46**	**47**	**184**	**44**	**91**	**372**	**55**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	130	157	215	45	65	41	53	77	19	84	313	64
Rerouted Development Trips	-65	0	-98	0	0	0	-33	0	0	0	0	-22
2023 Project Trips	2	2	0	2	0	0	1	14	2	0	1	3
Phase 1 - 2023	**67**	**159**	**117**	**47**	**65**	**41**	**21**	**91**	**21**	**84**	**314**	**45**
2025 Background Traffic	98	117	159	58	52	43	42	143	38	88	356	45
2025 Project Trips	4	2	2	2	1	0	2	16	2	0	2	2
Phase 2 - 2025	**102**	**119**	**161**	**60**	**53**	**43**	**44**	**159**	**40**	**88**	**358**	**47**
2026 Background Traffic	106	124	167	61	55	45	45	160	41	90	365	49
2026 Project Trips	5	3	-1	3	1	0	1	22	3	0	1	5
Phase 3 - 2026	**111**	**127**	**166**	**64**	**56**	**45**	**46**	**182**	**44**	**90**	**366**	**54**
2027 Background Traffic	116	133	174	66	58	46	47	184	44	91	372	55
2027 Project Trips	8	5	4	5	2	0	4	34	5	0	4	5
Phase 4 - 2027	**124**	**138**	**178**	**71**	**60**	**46**	**51**	**218**	**49**	**91**	**376**	**60**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Proposed Connector Road/Amazon Access Point 1
Count Date: N/A
A.M. Peak Time Period: 7:15AM - 8:15AM
Peak Season Factor: 1.04
Years to Buildout: 6

	Proposed Connector Rd			Amazon Access Point 2			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts*	0	0	0	0	0	0	0	268	0	0	525	0
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.9	0.9	0.9	1.04	1.04	1.04
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**241**	**0**	**0**	**546**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	1	0	0	0	0	1	0	0	0
Phase 1 - 2023	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**251**	**1**	**0**	**568**	**0**
Rerouted Development Trips	65	0	98	0	0	0	17	0	0	0	0	38
Phase 2 - 2025	**81**	**0**	**123**	**1**	**0**	**0**	**25**	**262**	**1**	**0**	**591**	**41**
Phase 3 - 2026	**99**	**0**	**152**	**1**	**0**	**0**	**33**	**269**	**1**	**0**	**605**	**45**
Phase 4 - 2027	**124**	**0**	**193**	**1**	**0**	**0**	**47**	**276**	**1**	**0**	**616**	**49**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	1	0	0	0	251	1	0	568	0
Rerouted Development Trips	38	0	117	0	0	0	39	0	0	0	0	16
2023 Project Trips	16	0	25	0	0	0	8	1	0	0	0	3
Phase 1 - 2023	**54**	**0**	**142**	**1**	**0**	**0**	**47**	**252**	**1**	**0**	**568**	**19**
2025 Background Traffic	81	0	123	1	0	0	25	262	1	0	591	41
2025 Project Trips	18	0	29	0	0	0	8	2	0	0	2	4
Phase 2 - 2025	**99**	**0**	**152**	**1**	**0**	**0**	**33**	**264**	**1**	**0**	**593**	**45**
2026 Background Traffic	99	0	152	1	0	0	33	269	1	0	605	45
2026 Project Trips	25	0	41	0	0	0	14	1	0	0	-1	4
Phase 3 - 2026	**124**	**0**	**193**	**1**	**0**	**0**	**47**	**270**	**1**	**0**	**604**	**49**
2027 Background Traffic	124	0	193	1	0	0	47	276	1	0	616	49
2027 Project Trips	39	0	61	0	0	0	16	4	0	0	4	9
Phase 4 - 2027	**163**	**0**	**254**	**1**	**0**	**0**	**63**	**280**	**1**	**0**	**620**	**58**

*Taken from the intersection of Grissom Pkwy at Industry Road & Grissom Pkwy at Canaveral Grove Blvd

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Industry Road
Count Date: 1/13/2022
A.M. Peak Time Period: 7:15-8:15 AM
Peak Season Factor: 0.9
Years to Buildout: 6

	Grissom Pkwy			Cemex Entrance			Industry Rd			Industry Rd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	18	2	448	55	0	0	252	99	42	3	134	16
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**16**	**2**	**403**	**50**	**0**	**0**	**227**	**89**	**38**	**3**	**121**	**14**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	2.90%	2.90%	2.90%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	1	0	0	0	1	0	0		0	0
Phase 1 - 2023	**17**	**2**	**420**	**50**	**0**	**0**	**241**	**94**	**40**	**3**	**125**	**15**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**23**	**3**	**456**	**50**	**0**	**0**	**261**	**100**	**42**	**3**	**131**	**19**
Phase 3 - 2026	**29**	**5**	**488**	**50**	**1**	**0**	**275**	**103**	**44**	**3**	**133**	**21**
Phase 4 - 2027	**37**	**6**	**528**	**50**	**2**	**0**	**292**	**106**	**45**	**3**	**136**	**26**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	17	2	420	50	0	0	241	94	40	3	125	15
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	5	1	19	0	0	0	6	0	0	0	0	3
Phase 1 - 2023	**22**	**3**	**439**	**50**	**0**	**0**	**247**	**94**	**40**	**3**	**125**	**18**
2025 Background Traffic	23	3	456	50	0	0	261	100	42	3	131	19
2025 Project Trips	6	2	23	0	1	0	6	0	0	0	0	2
Phase 2 - 2025	**29**	**5**	**479**	**50**	**1**	**0**	**267**	**100**	**42**	**3**	**131**	**21**
2026 Background Traffic	29	5	488	50	1	0	275	103	44	3	133	21
2026 Project Trips	8	1	31	0	1	0	10	0	0	0	0	5
Phase 3 - 2026	**37**	**6**	**519**	**50**	**2**	**0**	**285**	**103**	**44**	**3**	**133**	**26**
2027 Background Traffic	37	6	528	50	2	0	292	106	45	3	136	26
2027 Project Trips	13	4	48	0	2	0	13	0	0	0	0	5
Phase 4 - 2027	**50**	**10**	**576**	**50**	**4**	**0**	**305**	**106**	**45**	**3**	**136**	**31**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Bahia Rd and Citrus Blvd
Count Date: 1/13/2022
A.M. Peak Time Period: 7:00-8:00 AM
Peak Season Factor: 0.9
Years to Buildout: 6

	Citrus Blvd			Citrus Blvd			Bahia St			Bahia St		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts*	1	159	2	6	66	2	7	0	10	1	0	12
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**1**	**143**	**2**	**5**	**59**	**2**	**6**	**0**	**9**	**1**	**0**	**11**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	6.11%	6.11%	6.11%	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**1**	**161**	**2**	**6**	**67**	**2**	**7**	**0**	**9**	**1**	**0**	**11**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**1**	**181**	**3**	**9**	**75**	**2**	**8**	**0**	**12**	**1**	**0**	**12**
Phase 3 - 2026	**1**	**192**	**4**	**12**	**80**	**2**	**9**	**0**	**15**	**1**	**0**	**12**
Phase 4 - 2027	**1**	**204**	**6**	**17**	**85**	**3**	**10**	**0**	**19**	**1**	**0**	**12**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	1	161	2	6	67	2	7	0	9	1	0	11
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	1	2	0	0	1	0	2	0	0	0
Phase 1 - 2023	**1**	**161**	**3**	**8**	**67**	**2**	**8**	**0**	**11**	**1**	**0**	**11**
2025 Background Traffic	1	181	3	9	75	2	8	0	12	1	0	12
2025 Project Trips	0	0	1	3	0	0	1	0	3	0	0	0
Phase 2 - 2025	**1**	**181**	**4**	**12**	**75**	**2**	**9**	**0**	**15**	**1**	**0**	**12**
2026 Background Traffic	1	192	4	12	80	2	9	0	15	1	0	12
2026 Project Trips	0	0	1	4	0	0	1	0	4	0	0	0
Phase 3 - 2026	**1**	**192**	**5**	**16**	**80**	**2**	**10**	**0**	**19**	**1**	**0**	**12**
2027 Background Traffic	1	204	6	17	85	3	10	0	19	1	0	12
2027 Project Trips	0	0	2	6	0	0	2	0	6	0	0	0
Phase 4 - 2027	**1**	**204**	**8**	**23**	**85**	**3**	**12**	**0**	**25**	**1**	**0**	**12**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Hartville Ave
Count Date: 1/13/2022
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 0.9
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Raw Turning Movement Counts	0	279	1	13	112	0	1	0	39
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**0**	**251**	**1**	**12**	**101**	**0**	**1**	**0**	**35**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Background Traffic	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**267**	**1**	**12**	**107**	**0**	**1**	**0**	**37**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**0**	**283**	**1**	**15**	**114**	**0**	**1**	**0**	**41**
Phase 3 - 2026	**0**	**292**	**1**	**21**	**117**	**0**	**1**	**0**	**47**
Phase 4 - 2027	**0**	**300**	**1**	**25**	**121**	**0**	**1**	**0**	**53**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	267	1	12	107	0	1	0	37
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	0	2	0	0	0	0	3
Phase 1 - 2023	**0**	**267**	**1**	**14**	**107**	**0**	**1**	**0**	**40**
2025 Background Traffic	0	283	1	15	114	0	1	0	41
2025 Project Trips	0	0	0	5	0	0	0	0	5
Phase 2 - 2025	**0**	**283**	**1**	**20**	**114**	**0**	**1**	**0**	**46**
2026 Background Traffic	0	292	1	21	117	0	1	0	47
2026 Project Trips	0	0	0	4	0	0	0	0	5
Phase 3 - 2026	**0**	**292**	**1**	**25**	**117**	**0**	**1**	**0**	**52**
2027 Background Traffic	0	300	1	25	121	0	1	0	53
2027 Project Trips	0	0	0	9	0	0	0	0	10
Phase 4 - 2027	**0**	**300**	**1**	**34**	**121**	**0**	**1**	**0**	**63**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Estimated Volumes	0	285	0	60	101	0	0	0	175
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**285**	**0**	**60**	**101**	**0**	**0**	**0**	**175**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Background Traffic	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**303**	**0**	**64**	**107**	**0**	**0**	**0**	**182**
Rerouted Development Trips	0	0	0	-55	0	0	0	0	-163
Phase 2 - 2025	**0**	**324**	**0**	**14**	**117**	**0**	**0**	**0**	**28**
Phase 3 - 2026	**0**	**339**	**0**	**18**	**124**	**0**	**0**	**0**	**34**
Phase 4 - 2027	**0**	**354**	**0**	**21**	**133**	**0**	**0**	**0**	**41**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	303	0	64	107	0	0	0	182
Rerouted Development Trips	0	0	0	-55	0	0	0	0	-163
2023 Project Trips	0	3	0	1	3	0	0	0	2
Phase 1 - 2023	**0**	**306**	**0**	**10**	**110**	**0**	**0**	**0**	**21**
2025 Background Traffic	0	324	0	14	117	0	0	0	28
2025 Project Trips	0	5	0	2	4	0	0	0	2
Phase 2 - 2025	**0**	**329**	**0**	**16**	**121**	**0**	**0**	**0**	**30**
2026 Background Traffic	0	339	0	18	124	0	0	0	34
2026 Project Trips	0	5	0	1	5	0	0	0	3
Phase 3 - 2026	**0**	**344**	**0**	**19**	**129**	**0**	**0**	**0**	**37**
2027 Background Traffic	0	354	0	21	133	0	0	0	41
2027 Project Trips	0	10	0	4	8	0	0	0	5
Phase 4 - 2027	**0**	**364**	**0**	**25**	**141**	**0**	**0**	**0**	**46**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Hartville Ave & Citrus Blvd
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Citrus Blvd			Hartville Ave			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	4	14	35	0	0	12	0
Peak Season Factor	1	1	1	1	1	1	6	6	6
2021 Existing Conditions	**0**	**0**	**4**	**14**	**35**	**0**	**0**	**72**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**5**	**15**	**36**	**0**	**0**	**75**	**0**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**2**	**0**	**5**	**15**	**39**	**0**	**0**	**78**	**2**
Phase 3 - 2026	**5**	**0**	**5**	**15**	**42**	**0**	**0**	**81**	**5**
Phase 4 - 2027	**9**	**0**	**6**	**16**	**43**	**0**	**0**	**83**	**9**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	5	15	36	0	0	75	0
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	2	0	0	0	1	0	0	0	2
Phase 1 - 2023	**2**	**0**	**5**	**15**	**37**	**0**	**0**	**75**	**2**
2025 Background Traffic	2	0	5	15	39	0	0	78	2
2025 Project Trips	3	0	0	0	2	0	0	2	3
Phase 2 - 2025	**5**	**0**	**5**	**15**	**41**	**0**	**0**	**80**	**5**
2026 Background Traffic	5	0	5	15	42	0	0	81	5
2026 Project Trips	4	0	0	0	1	0	0	0	4
Phase 3 - 2026	**9**	**0**	**5**	**15**	**43**	**0**	**0**	**81**	**9**
2027 Background Traffic	9	0	6	16	43	0	0	83	9
2027 Project Trips	6	0	0	0	4	0	0	3	6
Phase 4 - 2027	**15**	**0**	**6**	**16**	**47**	**0**	**0**	**86**	**15**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Osage St & Hartville Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Proposed Connector Rd			Osage St			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	0	0	0	7	2	0	0
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**0**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**0**	**0**	**0**	**7**	**2**	**0**	**0**
Rerouted Development Trips	0	0	0	0	0	5	33	0	0
Phase 2 - 2025	**1**	**43**	**0**	**0**	**13**	**13**	**35**	**0**	**0**
Phase 3 - 2026	**3**	**92**	**0**	**0**	**26**	**13**	**37**	**0**	**0**
Phase 4 - 2027	**4**	**161**	**0**	**0**	**46**	**13**	**37**	**0**	**0**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	0	0	7	2	0	0
Rerouted Development Trips	0	0	0	0	0	5	33	0	0
2023 Project Trips	1	43	0	0	13	0	0	0	0
Phase 1 - 2023	**1**	**43**	**0**	**0**	**13**	**12**	**35**	**0**	**0**
2025 Background Traffic	1	43	0	0	13	13	35	0	0
2025 Project Trips	2	49	0	0	13	0	2	0	0
Phase 2 - 2025	**3**	**92**	**0**	**0**	**26**	**13**	**37**	**0**	**0**
2026 Background Traffic	3	92	0	0	26	13	37	0	0
2026 Project Trips	1	69	0	0	20	0	0	0	0
Phase 3 - 2026	**4**	**161**	**0**	**0**	**46**	**13**	**37**	**0**	**0**
2027 Background Traffic	4	161	0	0	46	13	37	0	0
2027 Project Trips	4	104	0	0	28	0	3	0	0
Phase 4 - 2027	**8**	**265**	**0**	**0**	**74**	**13**	**40**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Angelica St & SW Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Angelica St			Angelica St			SW Alan Shepard Ave			SW Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	7	0	0	0	0	5	0	20	0	2	6	2
Peak Season Factor	1	1	1	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**7**	**0**	**0**	**0**	**0**	**5**	**0**	**20**	**0**	**2**	**6**	**2**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**7**	**0**	**0**	**0**	**0**	**5**	**0**	**21**	**0**	**2**	**6**	**2**
Rerouted Development Trips	-7	49	0	6	16	27	0	-20	20	62	-6	-2
Phase 2 - 2025	**3**	**90**	**0**	**6**	**28**	**32**	**0**	**2**	**20**	**65**	**0**	**0**
Phase 3 - 2026	**5**	**137**	**0**	**6**	**39**	**33**	**0**	**2**	**20**	**67**	**1**	**0**
Phase 4 - 2027	**8**	**203**	**0**	**6**	**58**	**33**	**0**	**3**	**20**	**68**	**1**	**0**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	7	0	0	0	0	5	0	21	0	2	6	2
Rerouted Development Trips	-7	49	0	0	12	22	0	-20	20	62	-6	-2
2023 Project Trips	2	41	0	0	12	0	0	0	0	1	0	0
Phase 1 - 2023	**2**	**90**	**0**	**0**	**24**	**27**	**0**	**1**	**20**	**65**	**0**	**0**
2025 Background Traffic	3	90	0	6	28	32	0	2	20	65	0	0
2025 Project Trips	2	47	0	0	11	0	0	0	0	2	0	0
Phase 2 - 2025	**5**	**137**	**0**	**6**	**39**	**32**	**0**	**2**	**20**	**67**	**0**	**0**
2026 Background Traffic	5	137	0	6	39	33	0	2	20	67	1	0
2026 Project Trips	3	66	0	0	19	0	0	0	0	1	0	0
Phase 3 - 2026	**8**	**203**	**0**	**6**	**58**	**33**	**0**	**2**	**20**	**68**	**1**	**0**
2027 Background Traffic	8	203	0	6	58	33	0	3	20	68	1	0
2027 Project Trips	5	99	0	0	24	0	0	0	0	4	0	0
Phase 4 - 2027	**13**	**302**	**0**	**6**	**82**	**33**	**0**	**3**	**20**	**72**	**1**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Angelica St & Cherokee Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Angelica St			Proposed Connector Rd			Cherokee Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	8	0	0	0	0	0	0	0	3
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Rerouted Development Trips	-8	146	0	0	49	6	17	0	-3
Phase 2 - 2025	**1**	**187**	**0**	**0**	**61**	**6**	**17**	**0**	**0**
Phase 3 - 2026	**1**	**234**	**0**	**0**	**72**	**6**	**17**	**0**	**0**
Phase 4 - 2027	**1**	**300**	**0**	**0**	**91**	**6**	**17**	**0**	**0**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	8	0	0	0	0	0	0	0	3
Rerouted Development Trips	-8	146	0	0	49	6	17	0	-3
2023 Project Trips	0	41	0	0	12	0	0	0	0
Phase 1 - 2023	**0**	**187**	**0**	**0**	**61**	**6**	**17**	**0**	**0**
2025 Background Traffic	1	187	0	0	61	6	17	0	0
2025 Project Trips	0	47	0	0	11	0	0	0	0
Phase 2 - 2025	**1**	**234**	**0**	**0**	**72**	**6**	**17**	**0**	**0**
2026 Background Traffic	1	234	0	0	72	6	17	0	0
2026 Project Trips	0	66	0	0	19	0	0	0	0
Phase 3 - 2026	**1**	**300**	**0**	**0**	**91**	**6**	**17**	**0**	**0**
2027 Background Traffic	1	300	0	0	91	6	17	0	0
2027 Project Trips	0	99	0	0	24	0	0	0	0
Phase 4 - 2027	**1**	**399**	**0**	**0**	**115**	**6**	**17**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Canaveral Groves Boulevard
Count Date: 8/12/2021
P.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1.04
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	75	88	109	26	107	63	227	307	61	76	170	109
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2021 Existing Conditions	**78**	**92**	**113**	**27**	**111**	**66**	**236**	**319**	**63**	**79**	**177**	**113**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	3.03%	3.03%	3.03%	2.97%	2.97%	2.97%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	6	28	7	0	1	0
Phase 1 - 2023	**83**	**97**	**120**	**29**	**118**	**69**	**252**	**360**	**73**	**82**	**185**	**118**
Rerouted Development Trips	-29	-36	-43	28	-44	0	-94	32	11	0	46	-46
Phase 2 - 2025	**63**	**69**	**86**	**61**	**83**	**74**	**168**	**409**	**89**	**86**	**247**	**81**
Phase 3 - 2026	**71**	**75**	**91**	**66**	**89**	**76**	**173**	**418**	**92**	**87**	**263**	**88**
Phase 4 - 2027	**79**	**82**	**96**	**73**	**96**	**78**	**178**	**430**	**96**	**89**	**280**	**98**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	83	97	120	29	118	69	252	360	73	82	185	118
Rerouted Development Trips	-29	-36	-43	28	-44	0	-94	32	11	0	46	-46
2023 Project Trips	4	2	1	3	2	0	0	3	2	0	9	4
Phase 1 - 2023	**58**	**63**	**78**	**60**	**76**	**69**	**158**	**395**	**86**	**82**	**240**	**76**
2025 Background Traffic	63	69	86	61	83	74	168	409	89	86	247	81
2025 Total Project Trips	9	5	2	7	4	0	0	5	4	0	21	9
2025 Project Trips	5	3	1	4	2	0	0	2	2	0	12	5
Phase 2 - 2025	**72**	**74**	**88**	**68**	**87**	**74**	**168**	**414**	**93**	**86**	**268**	**90**
2026 Background Traffic	71	75	91	66	89	76	173	418	92	87	263	88
2026 Total Project Trips	11	7	2	10	5	0	0	7	5	0	25	12
2026 Project Trips	6	4	1	6	3	0	0	5	3	0	13	7
Phase 3 - 2026	**82**	**82**	**93**	**76**	**94**	**76**	**173**	**425**	**97**	**87**	**288**	**100**
2027 Background Traffic	79	82	96	73	96	78	178	430	96	89	280	98
2027 Total Project Trips	17	10	3	13	7	0	0	10	7	0	38	17
2027 Project Trips	11	6	2	7	4	0	0	5	4	0	25	10
Phase 4 - 2027	**96**	**92**	**99**	**86**	**103**	**78**	**178**	**440**	**103**	**89**	**318**	**115**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Proposed Connector Road/Amazon Access Point 1
Count Date: N/A
P.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1.04
Years to Buildout: 6

	Proposed Connector Rd			Amazon Access Point 2			Grissom Pkwy			Grissom Pkwy		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts*	0	0	0	0	0	0	0	642	0	0	305	0
Peak Season Factor	1.04	1.04	1.04	1.04	1.04	1.04	0.9	0.9	0.9	1.04	1.04	1.04
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**578**	**0**	**0**	**317**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	27	0	20	0	0	1	0	23	0
Phase 1 - 2023	**0**	**0**	**0**	**27**	**0**	**20**	**0**	**601**	**1**	**0**	**353**	**0**
Rerouted Development Trips	43	0	65	0	0	0	110	0	0	0	0	74
Phase 2 - 2025	**48**	**0**	**84**	**27**	**0**	**20**	**144**	**625**	**1**	**0**	**367**	**86**
Phase 3 - 2026	**52**	**0**	**105**	**27**	**0**	**20**	**183**	**638**	**1**	**0**	**375**	**102**
Phase 4 - 2027	**60**	**0**	**135**	**27**	**0**	**20**	**237**	**651**	**1**	**0**	**383**	**121**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	27	0	20	0	601	1	0	353	0
Rerouted Development Trips	43	0	65	0	0	0	110	0	0	0	0	74
2023 Project Trips	5	0	19	0	0	0	34	0	0	0	1	12
Phase 1 - 2023	**48**	**0**	**84**	**27**	**0**	**20**	**144**	**601**	**1**	**0**	**354**	**86**
2025 Background Traffic	48	0	84	27	0	20	144	625	1	0	367	86
2025 Total Project Trips	9	0	40	0	0	0	73	0	0	0	2	28
2025 Project Trips	4	0	21	0	0	0	39	0	0	0	1	16
Phase 2 - 2025	**52**	**0**	**105**	**27**	**0**	**20**	**183**	**625**	**1**	**0**	**368**	**102**
2026 Background Traffic	52	0	105	27	0	20	183	638	1	0	375	102
2026 Total Project Trips	12	0	51	0	0	0	93	0	0	0	2	35
2026 Project Trips	8	0	30	0	0	0	54	0	0	0	1	19
Phase 3 - 2026	**60**	**0**	**135**	**27**	**0**	**20**	**237**	**638**	**1**	**0**	**376**	**121**
2027 Background Traffic	52	0	105	27	0	20	183	638	1	0	375	102
2027 Total Project Trips	17	0	75	0	0	0	136	0	0	0	3	51
2027 Project Trips	9	0	45	0	0	0	82	0	0	0	2	32
Phase 4 - 2027	**61**	**0**	**150**	**27**	**0**	**20**	**265**	**638**	**1**	**0**	**377**	**134**

*Taken from the intersection of Grissom Pkwy at Industry Road & Grissom Pkwy at Canaveral Grove Blvd

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Grissom Parkway and Industry Road
Count Date: 1/13/2022
P.M. Peak Time Period: 4:45PM - 5:45PM
Peak Season Factor: 0.9
Years to Buildout: 6

	Grissom Pkwy			Cemex Entrance			Industry Rd			Industry Rd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	5	1	400	10	3	1	602	93	7	0	214	37
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**5**	**1**	**360**	**9**	**3**	**1**	**542**	**84**	**6**	**0**	**193**	**33**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	2.00%	2.00%	2.00%	0.00%	0.00%	0.00%	2.90%	2.90%	2.90%	1.40%	1.40%	1.40%
Amazon Delivery Station Traffic	3	0	47	0	0	0	1	0	0	0	0	0
Phase 1 - 2023	**8**	**1**	**422**	**9**	**3**	**1**	**575**	**89**	**7**	**0**	**198**	**34**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**13**	**3**	**450**	**9**	**4**	**1**	**633**	**94**	**7**	**0**	**204**	**43**
Phase 3 - 2026	**17**	**5**	**473**	**9**	**5**	**1**	**681**	**97**	**7**	**0**	**206**	**52**
Phase 4 - 2027	**25**	**8**	**501**	**9**	**6**	**1**	**739**	**99**	**7**	**0**	**209**	**65**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	8	1	422	9	3	1	575	89	7	0	198	34
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	5	2	13	0	1	0	25	0	0	0	0	8
Phase 1 - 2023	**13**	**3**	**435**	**9**	**4**	**1**	**600**	**89**	**7**	**0**	**198**	**42**
2025 Background Traffic	13	3	450	9	4	1	633	94	7	0	204	43
2025 Total Project Trips	9	4	29	0	2	0	55	0	0	0	0	16
2025 Project Trips	4	2	16	0	1	0	30	0	0	0	0	8
Phase 2 - 2025	**17**	**5**	**466**	**9**	**5**	**1**	**663**	**94**	**7**	**0**	**204**	**51**
2026 Background Traffic	17	5	473	9	5	1	681	97	7	0	206	52
2026 Total Project Trips	12	5	36	0	2	0	70	0	0	0	0	21
2026 Project Trips	8	3	20	0	1	0	40	0	0	0	0	13
Phase 3 - 2026	**25**	**8**	**493**	**9**	**6**	**1**	**721**	**97**	**7**	**0**	**206**	**65**
2027 Background Traffic	25	8	501	9	6	1	739	99	7	0	209	65
2027 Total Project Trips	17	7	54	0	3	0	102	0	0	0	0	31
2027 Project Trips	9	4	34	0	2	0	62	0	0	0	0	18
Phase 4 - 2027	**34**	**12**	**535**	**9**	**8**	**1**	**801**	**99**	**7**	**0**	**209**	**83**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Bahia Rd and Citrus Blvd
Count Date: 1/13/2022
P.M. Peak Time Period: 5:00 PM - 6:00 PM
Peak Season Factor: 0.9
Years to Buildout: 6

	Citrus Blvd			Citrus Blvd			Bahia St			Bahia St		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Turning Movement Counts	10	121	11	18	194	1	8	0	9	1	2	6
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**9**	**109**	**10**	**16**	**175**	**1**	**7**	**0**	**8**	**1**	**2**	**5**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Annual Growth Rate	6.11%	6.11%	6.11%	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	6	0	0	0	0	0	0	0
Phase 1 - 2023	**10**	**123**	**11**	**18**	**203**	**1**	**7**	**0**	**8**	**1**	**2**	**6**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**11**	**138**	**14**	**23**	**227**	**1**	**9**	**0**	**12**	**1**	**2**	**6**
Phase 3 - 2026	**12**	**146**	**15**	**26**	**241**	**1**	**10**	**0**	**16**	**1**	**2**	**6**
Phase 4 - 2027	**13**	**155**	**17**	**30**	**255**	**1**	**11**	**0**	**21**	**1**	**2**	**6**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	10	123	11	18	203	1	7	0	8	1	2	6
Rerouted Development Trips	0	0	0	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	1	2	0	0	1	0	3	0	0	0
Phase 1 - 2023	**10**	**123**	**12**	**20**	**203**	**1**	**8**	**0**	**11**	**1**	**2**	**6**
2025 Background Traffic	11	138	14	23	227	1	9	0	12	1	2	6
2025 Total Project Trips	0	0	2	4	0	0	2	0	7	0	0	0
2025 Project Trips	0	0	1	2	0	0	1	0	4	0	0	0
Phase 2 - 2025	**11**	**138**	**15**	**25**	**227**	**1**	**10**	**0**	**16**	**1**	**2**	**6**
2026 Background Traffic	12	146	15	26	241	1	10	0	16	1	2	6
2026 Total Project Trips	0	0	2	5	0	0	2	0	9	0	0	0
2026 Project Trips	0	0	1	3	0	0	1	0	5	0	0	0
Phase 3 - 2026	**12**	**146**	**16**	**29**	**241**	**1**	**11**	**0**	**21**	**1**	**2**	**6**
2027 Background Traffic	13	155	17	30	255	1	11	0	21	1	2	6
2027 Total Project Trips	0	0	3	7	0	0	3	0	14	0	0	0
2027 Project Trips	0	0	2	4	0	0	2	0	9	0	0	0
Phase 4 - 2027	**13**	**155**	**19**	**34**	**255**	**1**	**13**	**0**	**30**	**1**	**2**	**6**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Hartville Ave
Count Date: 1/13/2022
P.M. Peak Time Period: 5:00 PM - 6:00 PM
Peak Season Factor: 0.9
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Raw Turning Movement Counts	0	146	0	43	297	0	2	0	22
Peak Season Factor	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
2021 Existing Conditions	**0**	**131**	**0**	**39**	**267**	**0**	**2**	**0**	**20**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Annual Growth Rate	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	6	0	0	0	0
Phase 1 - 2023	**0**	**139**	**0**	**41**	**290**	**0**	**2**	**0**	**21**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**0**	**148**	**0**	**48**	**307**	**0**	**2**	**0**	**26**
Phase 3 - 2026	**0**	**153**	**0**	**53**	**316**	**0**	**2**	**0**	**33**
Phase 4 - 2027	**0**	**157**	**0**	**59**	**326**	**0**	**2**	**0**	**40**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	139	0	41	290	0	2	0	21
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	0	0	0	4	0	0	0	0	5
Phase 1 - 2023	**0**	**139**	**0**	**45**	**290**	**0**	**2**	**0**	**26**
2025 Background Traffic	0	148	0	48	307	0	2	0	26
2025 Total Project Trips	0	0	0	8	0	0	0	0	11
2025 Project Trips	0	0	0	4	0	0	0	0	6
Phase 2 - 2025	**0**	**148**	**0**	**52**	**307**	**0**	**2**	**0**	**32**
2026 Background Traffic	0	153	0	53	316	0	2	0	33
2026 Total Project Trips	0	0	0	9	0	0	0	0	13
2026 Project Trips	0	0	0	5	0	0	0	0	7
Phase 3 - 2026	**0**	**153**	**0**	**58**	**316**	**0**	**2**	**0**	**40**
2027 Background Traffic	0	157	0	59	326	0	2	0	40
2027 Total Project Trips	0	0	0	14	0	0	0	0	20
2027 Project Trips	0	0	0	9	0	0	0	0	13
Phase 4 - 2027	**0**	**157**	**0**	**68**	**326**	**0**	**2**	**0**	**53**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Canaveral Groves Blvd & Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Canaveral Groves Blvd			Canaveral Groves Blvd			Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Estimated Volumes	0	151	0	195	267	0	0	0	116
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**151**	**0**	**195**	**267**	**0**	**0**	**0**	**116**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
Background Traffic	3.03%	3.03%	3.03%	3.03%	3.03%	3.03%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	6	0	0	0	0
Phase 1 - 2023	**0**	**160**	**0**	**207**	**289**	**0**	**0**	**0**	**121**
Rerouted Development Trips	0	0	0	-184	0	0	0	0	-108
Phase 2 - 2025	**0**	**175**	**0**	**38**	**311**	**0**	**0**	**0**	**20**
Phase 3 - 2026	**0**	**186**	**0**	**47**	**324**	**0**	**0**	**0**	**25**
Phase 4 - 2027	**0**	**199**	**0**	**58**	**338**	**0**	**0**	**0**	**32**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**
2023 Background Traffic	0	160	0	207	289	0	0	0	121
Rerouted Development Trips	0	0	0	-184	0	0	0	0	-108
2023 Project Trips	0	5	0	2	4	0	0	0	2
Phase 1 - 2023	**0**	**165**	**0**	**25**	**293**	**0**	**0**	**0**	**15**
2025 Background Traffic	0	175	0	38	311	0	0	0	20
2025 Total Project Trips	0	11	0	5	8	0	0	0	5
2025 Project Trips	0	6	0	3	4	0	0	0	3
Phase 2 - 2025	**0**	**181**	**0**	**41**	**315**	**0**	**0**	**0**	**23**
2026 Background Traffic	0	186	0	47	324	0	0	0	25
2026 Total Project Trips	0	13	0	7	9	0	0	0	7
2026 Project Trips	0	7	0	4	5	0	0	0	4
Phase 3 - 2026	**0**	**193**	**0**	**51**	**329**	**0**	**0**	**0**	**29**
2027 Background Traffic	0	199	0	58	338	0	0	0	32
2027 Total Project Trips	0	20	0	10	14	0	0	0	10
2027 Project Trips	0	13	0	6	9	0	0	0	6
Phase 4 - 2027	**0**	**212**	**0**	**64**	**347**	**0**	**0**	**0**	**38**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Hartville Ave & Citrus Blvd
Count Date: N/A
A.M. Peak Time Period: 7:15 - 8:15 AM
Peak Season Factor: 1
Years to Buildout 6

	Citrus Blvd			Hartville Ave			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	14	10	22	0	0	39	0
Peak Season Factor	1	1	1	1	1	1	6	6	6
2021 Existing Conditions	**0**	**0**	**14**	**10**	**22**	**0**	**0**	**234**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	6.11%	6.11%	6.11%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**16**	**10**	**23**	**0**	**0**	**243**	**0**
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
Phase 2 - 2025	**3**	**0**	**18**	**11**	**26**	**0**	**0**	**255**	**2**
Phase 3 - 2026	**7**	**0**	**19**	**11**	**28**	**0**	**0**	**262**	**4**
Phase 4 - 2027	**12**	**0**	**20**	**11**	**31**	**0**	**0**	**271**	**7**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	16	10	23	0	0	243	0
Rerouted Development Trips	0	0	0	0	0	0	0	0	0
2023 Project Trips	3	0	0	0	2	0	0	2	2
Phase 1 - 2023	**3**	**0**	**16**	**10**	**25**	**0**	**0**	**245**	**2**
2025 Background Traffic	3	0	18	11	26	0	0	255	2
2025 Total Project Trips	7	0	0	0	4	0	0	4	4
2025 Project Trips	4	0	0	0	2	0	0	2	2
Phase 2 - 2025	**7**	**0**	**18**	**11**	**28**	**0**	**0**	**257**	**4**
2026 Background Traffic	7	0	19	11	28	0	0	262	4
2026 Total Project Trips	9	0	0	0	4	0	0	5	5
2026 Project Trips	5	0	0	0	2	0	0	3	3
Phase 3 - 2026	**12**	**0**	**19**	**11**	**30**	**0**	**0**	**265**	**7**
2027 Background Traffic	12	0	20	11	31	0	0	271	7
2027 Total Project Trips	14	0	0	0	6	0	0	7	7
2027 Project Trips	9	0	0	0	4	0	0	4	4
Phase 4 - 2027	**21**	**0**	**20**	**11**	**35**	**0**	**0**	**275**	**11**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Osage St & Hartville Ave
Count Date: N/A
A.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1
Years to Buildout 6

	Proposed Connector Rd			Osage St			Hartville Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	0	0	0	0	0	4	7	0	0
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**0**	**0**	**0**	**0**	**0**	**4**	**7**	**0**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**0**	**0**	**0**	**0**	**0**	**4**	**7**	**0**	**0**
Rerouted Development Trips	0	0	0	0	0	39	17	0	0
Phase 2 - 2025	**2**	**25**	**0**	**0**	**48**	**43**	**25**	**0**	**2**
Phase 3 - 2026	**4**	**54**	**0**	**0**	**106**	**43**	**25**	**0**	**4**
Phase 4 - 2027	**6**	**95**	**0**	**0**	**183**	**44**	**25**	**0**	**7**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	0	0	0	0	0	4	7	0	0
Rerouted Development Trips	0	0	0	0	0	39	17	0	0
2023 Project Trips	2	25	0	0	48	0	0	0	2
Phase 1 - 2023	**2**	**25**	**0**	**0**	**48**	**43**	**24**	**0**	**2**
2025 Background Traffic	2	25	0	0	48	43	25	0	2
2025 Total Project Trips	4	54	0	0	106	0	0	0	4
2025 Project Trips	2	29	0	0	58	0	0	0	2
Phase 2 - 2025	**4**	**54**	**0**	**0**	**106**	**43**	**25**	**0**	**4**
2026 Background Traffic	4	54	0	0	106	43	25	0	4
2026 Total Project Trips	4	70	0	0	135	0	0	0	5
2026 Project Trips	2	41	0	0	77	0	0	0	3
Phase 3 - 2026	**6**	**95**	**0**	**0**	**183**	**43**	**25**	**0**	**7**
2027 Background Traffic	6	95	0	0	183	44	25	0	7
2027 Total Project Trips	6	102	0	0	197	0	0	0	7
2027 Project Trips	4	61	0	0	120	0	0	0	4
Phase 4 - 2027	**10**	**156**	**0**	**0**	**303**	**44**	**25**	**0**	**11**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Angelica St & SW Alan Shepard Ave
Count Date: N/A
A.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1
Years to Buildout 6

	Angelica St			Angelica St			SW Alan Shepard Ave			SW Alan Shepard Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	4	0	0	0	0	3	0	13	0	5	21	7
Peak Season Factor	1	1	1	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**4**	**0**	**0**	**0**	**0**	**3**	**0**	**13**	**0**	**5**	**21**	**7**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**4**	**0**	**0**	**0**	**0**	**3**	**0**	**14**	**0**	**5**	**22**	**7**
Rerouted Development Trips	-4	32	0	21	57	76	0	-13	13	38	-21	-7
Phase 2 - 2025	**2**	**55**	**0**	**21**	**103**	**79**	**0**	**1**	**13**	**43**	**2**	**3**
Phase 3 - 2026	**5**	**81**	**0**	**21**	**158**	**79**	**0**	**1**	**13**	**44**	**2**	**6**
Phase 4 - 2027	**10**	**118**	**0**	**21**	**231**	**79**	**0**	**2**	**13**	**44**	**3**	**10**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	4	0	0	0	0	3	0	14	0	5	22	7
Rerouted Development Trips	-4	32	0	21	57	76	0	-13	13	38	-21	-7
2023 Project Trips	2	23	0	0	46	0	0	0	0	0	0	2
Phase 1 - 2023	**2**	**55**	**0**	**21**	**103**	**79**	**0**	**1**	**13**	**43**	**1**	**2**
2025 Background Traffic	2	55	0	21	103	79	0	1	13	43	2	3
2025 Total Project Trips	5	49	0	0	101	0	0	0	0	0	0	5
2025 Project Trips	3	26	0	0	55	0	0	0	0	0	0	3
Phase 2 - 2025	**5**	**81**	**0**	**21**	**158**	**79**	**0**	**1**	**13**	**43**	**2**	**6**
2026 Background Traffic	5	81	0	21	158	79	0	1	13	44	2	6
2026 Total Project Trips	7	63	0	0	128	0	0	0	0	0	0	7
2026 Project Trips	4	37	0	0	73	0	0	0	0	0	0	4
Phase 3 - 2026	**9**	**118**	**0**	**21**	**231**	**79**	**0**	**1**	**13**	**44**	**2**	**10**
2027 Background Traffic	10	118	0	21	231	79	0	2	13	44	3	10
2027 Total Project Trips	10	92	0	0	187	0	0	0	0	0	0	10
2027 Project Trips	6	55	0	0	114	0	0	0	0	0	0	6
Phase 4 - 2027	**16**	**173**	**0**	**21**	**345**	**79**	**0**	**2**	**13**	**44**	**3**	**16**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Angelica St & Cherokee Ave
Count Date: N/A
A.M. Peak Time Period: 4:30PM - 5:30PM
Peak Season Factor: 1
Years to Buildout 6

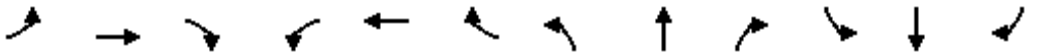
	Angelica St			Proposed Connector Rd			Cherokee Ave		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Estimated Volumes	5	0	0	0	0	0	0	0	9
Peak Season Factor	1	1	1	1	1	1	1	1	1
2021 Existing Conditions	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
Background Traffic	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Amazon Delivery Station Traffic	0	0	0	0	0	0	0	0	0
Phase 1 - 2023	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**
Rerouted Development Trips	-5	96	0	0	163	21	12	0	-9
Phase 2 - 2025	**0**	**119**	**0**	**0**	**209**	**21**	**12**	**0**	**1**
Phase 3 - 2026	**1**	**145**	**0**	**0**	**264**	**21**	**12**	**0**	**1**
Phase 4 - 2027	**1**	**182**	**0**	**0**	**337**	**21**	**12**	**0**	**1**

Buildout Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**SBL**	**SBT**	**SBR**
2023 Background Traffic	5	0	0	0	0	0	0	0	9
Rerouted Development Trips	-5	96	0	0	163	21	12	0	-9
2023 Project Trips	0	23	0	0	46	0	0	0	0
Phase 1 - 2023	**0**	**119**	**0**	**0**	**209**	**21**	**12**	**0**	**0**
2025 Background Traffic	0	119	0	0	209	21	12	0	1
2025 Total Project Trips	0	49	0	0	101	0	0	0	0
2025 Project Trips	0	26	0	0	55	0	0	0	0
Phase 2 - 2025	**0**	**145**	**0**	**0**	**264**	**21**	**12**	**0**	**1**
2026 Background Traffic	1	145	0	0	264	21	12	0	1
2026 Total Project Trips	0	63	0	0	128	0	0	0	0
2026 Project Trips	0	37	0	0	73	0	0	0	0
Phase 3 - 2026	**1**	**182**	**0**	**0**	**337**	**21**	**12**	**0**	**1**
2027 Background Traffic	1	182	0	0	337	21	12	0	1
2027 Total Project Trips	0	92	0	0	187	0	0	0	0
2027 Project Trips	0	55	0	0	114	0	0	0	0
Phase 4 - 2027	**1**	**237**	**0**	**0**	**451**	**21**	**12**	**0**	**1**

APPENDIX E

Synchro Worksheets

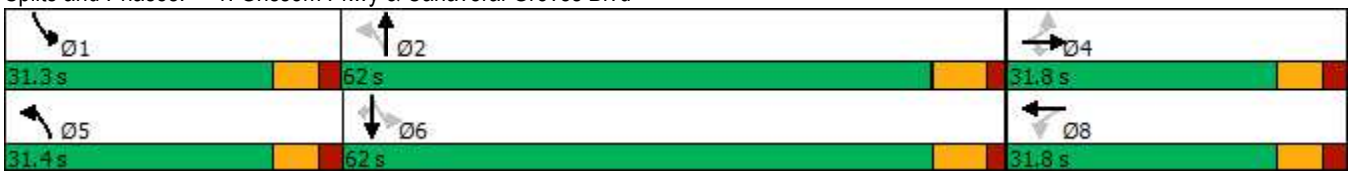


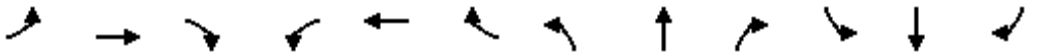
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	148	203	43	61	38	51	73	19	81	301	61
Future Volume (vph)	123	148	203	43	61	38	51	73	19	81	301	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964			0.968				0.850
Flt Protected		0.978			0.985		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1769	0	1770	1803	0	1770	1863	1583
Flt Permitted		0.791			0.826		0.487			0.642		
Satd. Flow (perm)	0	1473	1583	0	1483	0	907	1803	0	1196	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221		13			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	161	221	47	66	41	55	79	21	88	327	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	295	221	0	154	0	55	100	0	88	327	66
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		24.0	17.8		26.0	20.7	20.7
Actuated g/C Ratio		0.37	0.37		0.37		0.35	0.26		0.38	0.30	0.30
v/c Ratio		0.54	0.30		0.27		0.13	0.21		0.17	0.58	0.12
Control Delay		23.5	4.3		17.7		11.5	19.4		11.6	26.1	3.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		23.5	4.3		17.7		11.5	19.4		11.6	26.1	3.8
LOS		C	A		B		B	B		B	C	A
Approach Delay		15.3			17.7			16.6			20.4	
Approach LOS		B			B			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		97	0		41		13	29		21	127	0
Queue Length 95th (ft)		205	45		99		30	66		43	213	18
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		549	729		561		743	1477		771	1522	1309
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.54	0.30		0.27		0.07	0.07		0.11	0.21	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 68			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Future Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	161	221	47	66	41	55	79	21	88	327	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	233	445	119	149	66	368	396	105	560	547	463
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	533	831	1585	115	530	234	1781	1424	378	1781	1870	1585
Grp Volume(v), veh/h	295	0	221	154	0	0	55	0	100	88	327	66
Grp Sat Flow(s),veh/h/ln	1365	0	1585	879	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	6.3	0.8	0.0	0.0	1.1	0.0	2.3	1.8	8.1	1.7
Cycle Q Clear(g_c), s	11.1	0.0	6.3	12.0	0.0	0.0	1.1	0.0	2.3	1.8	8.1	1.7
Prop In Lane	0.45		1.00	0.31		0.27	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	445	334	0	0	368	0	502	560	547	463
V/C Ratio(X)	0.61	0.00	0.50	0.46	0.00	0.00	0.15	0.00	0.20	0.16	0.60	0.14
Avail Cap(c_a), veh/h	764	0	735	595	0	0	1101	0	1839	1266	1909	1618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	16.2	15.7	0.0	0.0	13.0	0.0	14.9	12.2	16.4	14.1
Incr Delay (d2), s/veh	1.3	0.0	0.9	1.0	0.0	0.0	0.2	0.0	0.2	0.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	2.1	1.4	0.0	0.0	0.4	0.0	0.8	0.6	2.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	0.0	17.1	16.7	0.0	0.0	13.2	0.0	15.0	12.3	17.4	14.2
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		516			154			155			481	
Approach Delay, s/veh		18.1			16.7			14.4			16.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		21.9	9.2	22.8		21.9				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	4.3		13.1	3.1	10.1		14.0				
Green Ext Time (p_c), s	0.2	0.5		2.0	0.1	2.1		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Future Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	161	221	47	66	41	55	79	21	88	327	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	247	233	445	119	149	66	368	396	105	560	547	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.9	0.0	17.1	16.7	0.0	0.0	13.2	0.0	15.0	12.3	17.4	14.2
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		516			154			155			481	
Approach Delay, s/veh		18.1			16.7			14.4			16.0	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	22.0		21.9	9.2	22.8		21.9
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.7		5.5
Max Q Clear (g_c+I1), s	3.8	4.3		13.1	3.1	10.1		14.0
Green Ext Time (g_e), s	0.2	0.5		2.0	0.1	2.1		0.6
Prob of Phs Call (p_c)	0.73	1.00		1.00	0.56	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.12	0.00	0.00		0.05

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			533	1781			115

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1424		831		1870		530

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		378		1585		1585		234

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	88	0	0	295	55	0	0	154
Grp Sat Flow (s), veh/h/ln	1781	0	0	1365	1781	0	0	879
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	1.1	0.0	0.0	0.8
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	11.1	1.1	0.0	0.0	12.0
Perm LT Sat Flow (s_l), veh/h/ln	1295	0	0	1307	991	0	0	1017
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1234	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	15.1	15.0	0.0	0.0	15.1
Perm LT Serve Time (g_u), s	12.7	0.0	0.0	3.2	7.7	0.0	0.0	4.0
Perm LT Q Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.8
Time to First Blk (g_f), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	4.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.7
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.45	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	560	0	0	480	368	0	0	334
V/C Ratio (X)	0.16	0.00	0.00	0.61	0.15	0.00	0.00	0.46
Avail Cap (c_a), veh/h	1266	0	0	764	1101	0	0	595
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.2	0.0	0.0	17.6	13.0	0.0	0.0	15.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.3	0.2	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.3	0.0	0.0	18.9	13.2	0.0	0.0	16.7
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.9	0.4	0.0	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	3.1	0.4	0.0	0.0	1.4
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	327	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	547	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1909	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	100	0	221	0	66	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	2.3	0.0	6.3	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	6.3	0.0	1.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	502	0	445	0	463	0	0
V/C Ratio (X)	0.00	0.20	0.00	0.50	0.00	0.14	0.00	0.00
Avail Cap (c_a), veh/h	0	1839	0	735	0	1618	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.9	0.0	16.2	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.0	0.0	17.1	0.0	14.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	2.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	2.1	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.29	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	268	0	0	525
Future Volume (vph)	0	0	268	0	0	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	1863	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	1863	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	291	0	0	571
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	291	0	0	571
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	268	0	0	525
Future Vol, veh/h	0	0	268	0	0	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	291	0	0	571

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	862	291	0	0	291	0
Stage 1	291	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	325	748	-	-	1271	-
Stage 1	759	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	325	748	-	-	1271	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

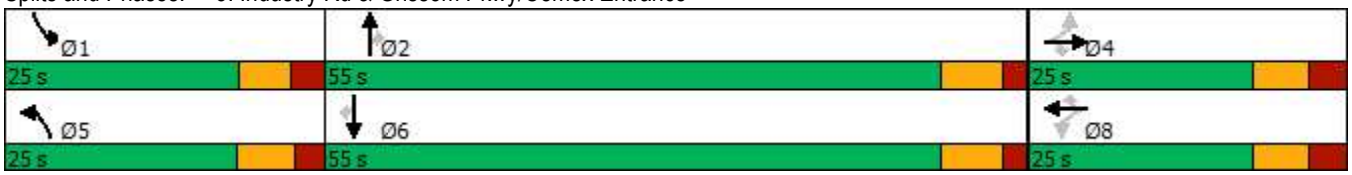
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1271	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

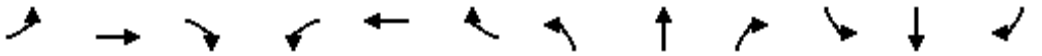
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	2	403	50	0	0	227	89	38	3	121	14
Future Volume (vph)	16	2	403	50	0	0	227	89	38	3	121	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.757			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1410	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			438						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	2	438	54	0	0	247	97	41	3	132	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	2	438	54	0	0	247	97	41	3	132	15
Turn Type	Perm	NA	Perm	Perm		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.1	10.1	10.1	10.1			11.7	26.0	26.0	5.3	15.5	15.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19			0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.06	0.01	0.67	0.20			0.33	0.11	0.05	0.02	0.24	0.03
Control Delay	19.5	18.5	8.2	21.6			22.1	9.8	0.1	26.0	19.1	0.1
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	18.5	8.2	21.6			22.1	9.8	0.1	26.0	19.1	0.1
LOS	B	B	A	C			C	A	A	C	B	A
Approach Delay		8.7			21.6			16.7			17.3	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	5	1	0	15			36	12	0	1	32	0
Queue Length 95th (ft)	18	5	62	42			74	57	0	8	87	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	481	636	829	481			1219	1642	1409	632	1642	1409
Starvation Cap Reductn	0	0	0	0			0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0			0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0			0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.00	0.53	0.11			0.20	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Future Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	2	0	54	0	0	247	97	41	3	132	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	196		302	196	166	431	818	693	7	588	499
Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.12	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1418	1870	1585	1415	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	17	2	0	54	0	0	247	97	41	3	132	15
Grp Sat Flow(s),veh/h/ln	1418	1870	1585	1415	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.0	0.0	1.7	0.0	0.0	3.1	1.4	0.7	0.1	2.4	0.3
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.7	0.0	0.0	3.1	1.4	0.7	0.1	2.4	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	196		302	196	166	431	818	693	7	588	499
V/C Ratio(X)	0.06	0.01		0.18	0.00	0.00	0.57	0.12	0.06	0.41	0.22	0.03
Avail Cap(c_a), veh/h	688	703		686	703	596	1352	1934	1639	701	1934	1639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	18.7	0.0	19.4	0.0	0.0	19.2	7.8	7.6	23.1	11.8	11.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.2	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	18.7	0.0	19.8	0.0	0.0	20.4	7.8	7.6	48.5	12.0	11.1
LnGrp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		19	A		54			385			150	
Approach Delay, s/veh		18.9			19.8			15.9			12.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.3		12.4	12.6	21.5		12.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.4		2.5	5.1	4.4		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		15.5
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Future Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	2	0	54	0	0	247	97	41	3	132	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	304	196		302	196	166	431	818	693	7	588	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.12	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.0	18.7	0.0	19.8	0.0	0.0	20.4	7.8	7.6	48.5	12.0	11.1
Ln Grp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		19			54			385			150	
Approach Delay, s/veh		18.9			19.8			15.9			12.6	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.3		12.4	12.6	21.5		12.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.4		2.5	5.1	4.4		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.0		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.61	1.00	0.98		0.61
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1418	3456			1415

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	17	247	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1418	1728	0	0	1415
Q Serve Time (g_s), s	0.1	0.0	0.0	0.5	3.1	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.5	3.1	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1418	0	0	0	1415
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	304	431	0	0	302
V/C Ratio (X)	0.41	0.00	0.00	0.06	0.57	0.00	0.00	0.18
Avail Cap (c_a), veh/h	701	0	0	688	1352	0	0	686
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.1	0.0	0.0	18.9	19.2	0.0	0.0	19.4
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.5	0.0	0.0	19.0	20.4	0.0	0.0	19.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	1.1	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.2	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.03	0.22	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	2	0	132	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.4	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	818	0	196	0	588	0	196
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.22	0.00	0.00
Avail Cap (c_a), veh/h	0	1934	0	703	0	1934	0	703
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	18.7	0.0	11.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	18.7	0.0	12.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

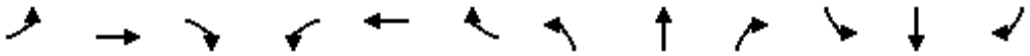
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	41	0	0	0	15	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	693	0	166	0	499	0	166
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	1639	0	596	0	1639	0	596
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	0.0	0.0	11.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.6	0.0	0.0	0.0	11.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	143	2	5	59	2	6	0	9	1	0	11
Future Volume (vph)	1	143	2	5	59	2	6	0	9	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.996			0.921			0.875	
Flt Protected					0.996			0.980			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1681	0	0	1623	0
Flt Permitted					0.996			0.980			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1681	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	155	2	5	64	2	7	0	10	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	71	0	0	17	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	143	2	5	59	2	6	0	9	1	0	11
Future Vol, veh/h	1	143	2	5	59	2	6	0	9	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	155	2	5	64	2	7	0	10	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	66	0	0	157	0	0	239	234	156	238	234	65
Stage 1	-	-	-	-	-	-	158	158	-	75	75	-
Stage 2	-	-	-	-	-	-	81	76	-	163	159	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1536	-	-	1423	-	-	715	666	890	716	666	999
Stage 1	-	-	-	-	-	-	844	767	-	934	833	-
Stage 2	-	-	-	-	-	-	927	832	-	839	766	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1536	-	-	1423	-	-	704	663	890	705	663	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	704	663	-	705	663	-
Stage 1	-	-	-	-	-	-	843	766	-	933	830	-
Stage 2	-	-	-	-	-	-	912	829	-	829	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	9.6	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	805	1536	-	-	1423	-	-	965
HCM Lane V/C Ratio	0.02	0.001	-	-	0.004	-	-	0.014
HCM Control Delay (s)	9.6	7.3	0	-	7.5	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	251	1	12	101	1	35
Future Volume (vph)	251	1	12	101	1	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.995	0.999	
Satd. Flow (prot)	1863	0	0	1853	1615	0
Flt Permitted				0.995	0.999	
Satd. Flow (perm)	1863	0	0	1853	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	1	13	110	1	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	274	0	0	123	39	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	251	1	12	101	1	35
Future Vol, veh/h	251	1	12	101	1	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	273	1	13	110	1	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	274	0	410	274
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1289	-	598	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1289	-	591	765
Mov Cap-2 Maneuver	-	-	-	-	591	-
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	759	-	-	1289	-
HCM Lane V/C Ratio	0.052	-	-	0.01	-
HCM Control Delay (s)	10	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	285	0	60	101	0	175
Future Volume (vph)	285	0	60	101	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.982		
Satd. Flow (prot)	1863	0	0	1829	1611	0
Flt Permitted				0.982		
Satd. Flow (perm)	1863	0	0	1829	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	0	65	110	0	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	310	0	0	175	190	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			

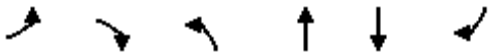
Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	285	0	60	101	0	175
Future Vol, veh/h	285	0	60	101	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	310	0	65	110	0	190

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	550	310
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	240	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1250	-	496	730
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	800	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1250	-	469	730
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	756	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	730	-	-	1250	-
HCM Lane V/C Ratio	0.261	-	-	0.052	-
HCM Control Delay (s)	11.7	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	4	14	35	12	0
Future Volume (vph)	0	4	14	35	12	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.986		
Satd. Flow (prot)	1611	0	0	1837	1863	0
Flt Permitted				0.986		
Satd. Flow (perm)	1611	0	0	1837	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	4	15	38	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	53	13	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			

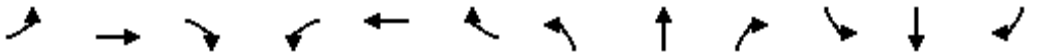
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	14	35	12	0
Future Vol, veh/h	0	4	14	35	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	15	38	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	81	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	921	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	912	1067	1606	-	-	-
Mov Cap-2 Maneuver	912	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	1067	-	-
HCM Lane V/C Ratio	0.009	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

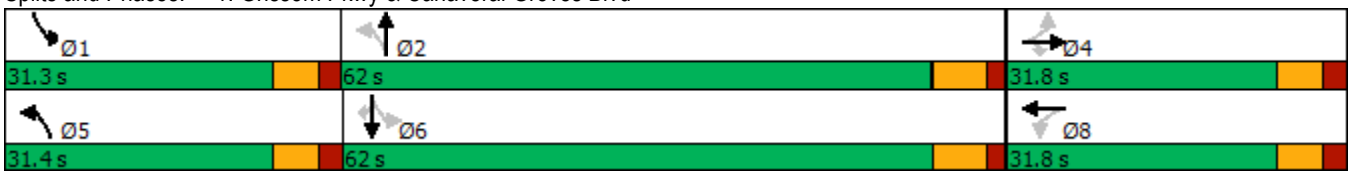


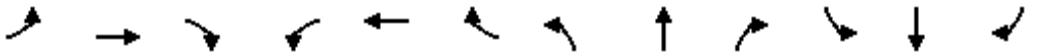
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	92	113	27	111	66	236	319	63	79	177	113
Future Volume (vph)	78	92	113	27	111	66	236	319	63	79	177	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956			0.975				0.850
Flt Protected		0.978			0.994		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1770	0	1770	1816	0	1770	1863	1583
Flt Permitted		0.737			0.935		0.475			0.519		
Satd. Flow (perm)	0	1373	1583	0	1665	0	885	1816	0	967	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		17			10				123
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	100	123	29	121	72	257	347	68	86	192	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	185	123	0	222	0	257	415	0	86	192	123
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		19.3	19.3		19.3		36.7	25.9		25.4	17.2	17.2
Actuated g/C Ratio		0.28	0.28		0.28		0.52	0.37		0.36	0.25	0.25
v/c Ratio		0.49	0.23		0.47		0.41	0.61		0.20	0.42	0.26
Control Delay		27.1	5.9		23.8		11.7	24.7		11.2	27.0	6.7
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		27.1	5.9		23.8		11.7	24.7		11.2	27.0	6.7
LOS		C	A		C		B	C		B	C	A
Approach Delay		18.6			23.8			19.7			17.4	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		64	0		70		57	151		17	70	0
Queue Length 95th (ft)		143	38		154		110	272		41	144	40
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		499	653		616		793	1457		808	1490	1290
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.37	0.19		0.36		0.32	0.28		0.11	0.13	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 70.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Future Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	100	123	29	121	72	257	347	68	86	192	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	195	316	96	184	98	600	544	107	417	524	444
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.14	0.36	0.36	0.07	0.28	0.28
Sat Flow, veh/h	570	979	1585	103	924	493	1781	1519	298	1781	1870	1585
Grp Volume(v), veh/h	185	0	123	222	0	0	257	0	415	86	192	123
Grp Sat Flow(s),veh/h/ln	1549	0	1585	1519	0	0	1781	0	1817	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.6	2.1	0.0	0.0	5.2	0.0	10.2	1.8	4.4	3.2
Cycle Q Clear(g_c), s	5.6	0.0	3.6	7.6	0.0	0.0	5.2	0.0	10.2	1.8	4.4	3.2
Prop In Lane	0.46		1.00	0.13		0.32	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	407	0	316	379	0	0	600	0	650	417	524	444
V/C Ratio(X)	0.45	0.00	0.39	0.59	0.00	0.00	0.43	0.00	0.64	0.21	0.37	0.28
Avail Cap(c_a), veh/h	803	0	740	818	0	0	1176	0	1866	1129	1921	1628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	18.6	20.0	0.0	0.0	10.6	0.0	14.3	12.4	15.5	15.0
Incr Delay (d2), s/veh	0.8	0.0	0.8	1.4	0.0	0.0	0.5	0.0	1.0	0.2	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.2	2.5	0.0	0.0	1.6	0.0	3.4	0.6	1.6	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	19.4	21.4	0.0	0.0	11.1	0.0	15.4	12.6	15.9	15.4
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		308			222			672			401	
Approach Delay, s/veh		19.8			21.4			13.7			15.0	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	26.2		17.5	14.1	22.0		17.5				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	12.2		7.6	7.2	6.4		9.6				
Green Ext Time (p_c), s	0.2	2.5		1.3	0.6	1.4		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Future Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	100	123	29	121	72	257	347	68	86	192	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	212	195	316	96	184	98	600	544	107	417	524	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.14	0.36	0.36	0.07	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.1	0.0	19.4	21.4	0.0	0.0	11.1	0.0	15.4	12.6	15.9	15.4
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		308			222			672			401	
Approach Delay, s/veh		19.8			21.4			13.7			15.0	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	9.9	26.2		17.5	14.1	22.0		17.5
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.5		5.3
Max Q Clear (g_c+I1), s	3.8	12.2		7.6	7.2	6.4		9.6
Green Ext Time (g_e), s	0.2	2.5		1.3	0.6	1.4		1.1
Prob of Phs Call (p_c)	0.72	1.00		1.00	0.98	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			570	1781			103

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1519		979		1870		924

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		298		1585		1585		493

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	86	0	0	185	257	0	0	222
Grp Sat Flow (s), veh/h/ln	1781	0	0	1549	1781	0	0	1519
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	5.2	0.0	0.0	2.1
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	5.6	5.2	0.0	0.0	7.6
Perm LT Sat Flow (s_l), veh/h/ln	971	0	0	1209	1065	0	0	1176
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1487	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	10.7	15.0	0.0	0.0	10.7
Perm LT Serve Time (g_u), s	9.0	0.0	0.0	3.1	10.6	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	1.4	0.0	0.0	2.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	4.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	4.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.13
Lane Grp Cap (c), veh/h	417	0	0	407	600	0	0	379
V/C Ratio (X)	0.21	0.00	0.00	0.45	0.43	0.00	0.00	0.59
Avail Cap (c_a), veh/h	1129	0	0	803	1176	0	0	818
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.4	0.0	0.0	19.3	10.6	0.0	0.0	20.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.8	0.5	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.6	0.0	0.0	20.1	11.1	0.0	0.0	21.4
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	1.8	1.5	0.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	1.9	1.6	0.0	0.0	2.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.08	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	192	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	524	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1921	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	415	0	123	0	123	0	0
Grp Sat Flow (s), veh/h/ln	0	1817	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	10.2	0.0	3.6	0.0	3.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.2	0.0	3.6	0.0	3.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.16	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	650	0	316	0	444	0	0
V/C Ratio (X)	0.00	0.64	0.00	0.39	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	1866	0	740	0	1628	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	18.6	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.8	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.4	0.0	19.4	0.0	15.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	1.2	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.4	0.0	1.2	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.18	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	578	0	0	317
Future Volume (vph)	0	0	578	0	0	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	1863	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	1863	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	628	0	0	345
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	628	0	0	345
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.8%		ICU Level of Service A	
Analysis Period (min) 15			

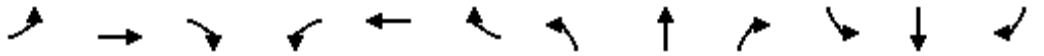
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	578	0	0	317
Future Vol, veh/h	0	0	578	0	0	317
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	628	0	0	345

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	973	628	0	0	628	0
Stage 1	628	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	280	483	-	-	954	-
Stage 1	532	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	280	483	-	-	954	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	717	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	954	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

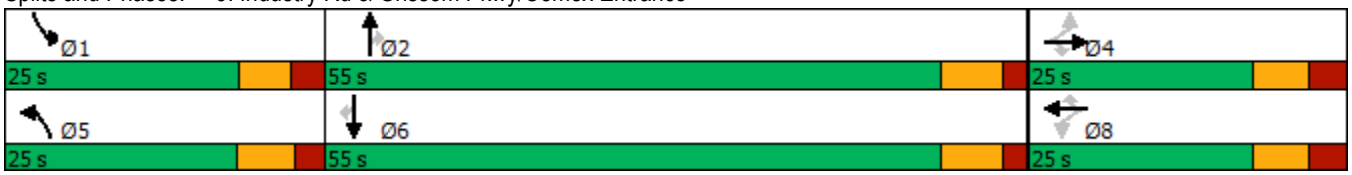


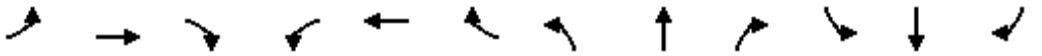
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	360	9	3	1	542	84	6	0	193	33
Future Volume (vph)	5	1	360	9	3	1	542	84	6	0	193	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.756			0.757			0.950					
Satd. Flow (perm)	1408	1863	1583	1410	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			391			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	391	10	3	1	589	91	7	0	210	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1	391	10	3	1	589	91	7	0	210	36
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	9.8	9.8	9.8	9.8	9.8	9.8	18.0	40.5	40.5		15.6	15.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.28	0.63	0.63		0.24	0.24
v/c Ratio	0.02	0.00	0.68	0.05	0.01	0.00	0.62	0.08	0.01		0.47	0.08
Control Delay	23.4	23.0	10.0	23.8	23.0	0.0	24.3	5.5	0.0		25.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.4	23.0	10.0	23.8	23.0	0.0	24.3	5.5	0.0		25.5	0.3
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.2			21.9			21.5			21.9	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	2	0	0	3	1	0	97	11	0		68	0
Queue Length 95th (ft)	10	4	67	16	8	0	177	33	0		141	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	382	506	714	383	506	511	969	1391	1211		1391	1211
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.01	0.00	0.55	0.03	0.01	0.00	0.61	0.07	0.01		0.15	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 64.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Future Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1	0	10	3	1	589	91	7	0	210	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	73		200	73	62	794	1252	1061	4	564	478
Arrive On Green	0.04	0.04	0.00	0.04	0.04	0.04	0.23	0.67	0.67	0.00	0.30	0.30
Sat Flow, veh/h	1412	1870	1585	1416	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	5	1	0	10	3	1	589	91	7	0	210	36
Grp Sat Flow(s),veh/h/ln	1412	1870	1585	1416	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.2	0.0	0.0	0.3	0.1	0.0	7.8	0.8	0.1	0.0	4.4	0.8
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.4	0.1	0.0	7.8	0.8	0.1	0.0	4.4	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	73		200	73	62	794	1252	1061	4	564	478
V/C Ratio(X)	0.03	0.01		0.05	0.04	0.02	0.74	0.07	0.01	0.00	0.37	0.08
Avail Cap(c_a), veh/h	645	664		648	664	562	1275	1824	1546	661	1824	1546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	22.8	0.0	23.0	22.8	22.8	17.6	2.8	2.7	0.0	13.6	12.3
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.3	0.1	1.4	0.0	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	2.9	0.2	0.0	0.0	1.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	22.9	0.0	23.1	23.1	22.9	19.0	2.9	2.7	0.0	14.1	12.4
LnGrp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		6	A		14			687			246	
Approach Delay, s/veh		23.0			23.1			16.7			13.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	39.9		9.4	18.1	21.8		9.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.8		2.2	9.8	6.4		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.5	1.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Future Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1	0	10	3	1	589	91	7	0	210	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	199	73		200	73	62	794	1252	1061	4	564	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.04	0.00	0.04	0.04	0.04	0.23	0.67	0.67	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.0	22.9	0.0	23.1	23.1	22.9	19.0	2.9	2.7	0.0	14.1	12.4
Ln Grp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		6			14			687			246	
Approach Delay, s/veh		23.0			23.1			16.7			13.8	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	39.9		9.4	18.1	21.8		9.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.6		4.6
Max Q Clear (g_c+I1), s	0.0	2.8		2.2	9.8	6.4		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.5	1.7		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.24	1.00	0.99		0.24
Prob of Max Out (p_x)	0.00	0.00		0.00	0.14	0.00		0.00

Left-Turn Movement Data												
Assigned Mvmt		1			7	5			3			
Mvmt Sat Flow, veh/h		1781			1412	3456			1416			

Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1870		1870		1870		1870			

Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			1585		1585		1585		1585			

Left Lane Group Data												
Assigned Mvmt		1	0	0	7	5	0	0	3			
Lane Assignment		L (Prot)			L	L (Prot)			L			

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	5	589	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1412	1728	0	0	1416
Q Serve Time (g_s), s	0.0	0.0	0.0	0.2	7.8	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.2	7.8	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1412	0	0	0	1416
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	4	0	0	199	794	0	0	200
V/C Ratio (X)	0.00	0.00	0.00	0.03	0.74	0.00	0.00	0.05
Avail Cap (c_a), veh/h	661	0	0	645	1275	0	0	648
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.9	17.6	0.0	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.4	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.0	19.0	0.0	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	2.7	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	2.9	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.52	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	91	0	1	0	210	0	3
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	4.4	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	4.4	0.0	0.1
Lane Grp Cap (c), veh/h	0	1252	0	73	0	564	0	73
V/C Ratio (X)	0.00	0.07	0.00	0.01	0.00	0.37	0.00	0.04
Avail Cap (c_a), veh/h	0	1824	0	664	0	1824	0	664
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	22.8	0.0	13.6	0.0	22.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	22.9	0.0	14.1	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

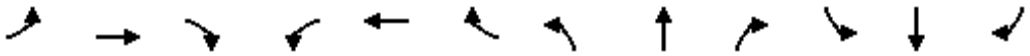
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	7	0	0	0	36	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1061	0	62	0	478	0	62
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.02
Avail Cap (c_a), veh/h	0	1546	0	562	0	1546	0	562
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.7	0.0	0.0	0.0	12.3	0.0	22.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	12.4	0.0	22.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	109	10	16	175	1	7	0	8	1	2	5
Future Volume (vph)	9	109	10	16	175	1	7	0	8	1	2	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.999			0.929			0.916	
Flt Protected		0.996			0.996			0.977			0.994	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1691	0	0	1696	0
Flt Permitted		0.996			0.996			0.977			0.994	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1691	0	0	1696	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	118	11	17	190	1	8	0	9	1	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	208	0	0	17	0	0	8	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	9	109	10	16	175	1	7	0	8	1	2	5
Future Vol, veh/h	9	109	10	16	175	1	7	0	8	1	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	118	11	17	190	1	8	0	9	1	2	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	129	0	0	372	369	124	373	374	191
Stage 1	-	-	-	-	-	-	144	144	-	225	225	-
Stage 2	-	-	-	-	-	-	228	225	-	148	149	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1383	-	-	1457	-	-	585	560	927	584	557	851
Stage 1	-	-	-	-	-	-	859	778	-	778	718	-
Stage 2	-	-	-	-	-	-	775	718	-	855	774	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1383	-	-	1457	-	-	570	548	927	569	545	851
Mov Cap-2 Maneuver	-	-	-	-	-	-	570	548	-	569	545	-
Stage 1	-	-	-	-	-	-	852	772	-	772	709	-
Stage 2	-	-	-	-	-	-	758	709	-	840	768	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	10.1	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	717	1383	-	-	1457	-	-	708
HCM Lane V/C Ratio	0.023	0.007	-	-	0.012	-	-	0.012
HCM Control Delay (s)	10.1	7.6	0	-	7.5	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	131	0	39	267	2	20
Future Volume (vph)	131	0	39	267	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1625	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1625	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	142	0	42	290	2	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	142	0	0	332	24	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	131	0	39	267	2	20
Future Vol, veh/h	131	0	39	267	2	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	142	0	42	290	2	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	142	0	516	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	374	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1441	-	519	906
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1441	-	501	906
Mov Cap-2 Maneuver	-	-	-	-	501	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	672	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	1441	-
HCM Lane V/C Ratio	0.028	-	-	0.029	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	151	0	195	267	0	116
Future Volume (vph)	151	0	195	267	0	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.979		
Satd. Flow (prot)	1863	0	0	1824	1611	0
Flt Permitted				0.979		
Satd. Flow (perm)	1863	0	0	1824	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	164	0	212	290	0	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	0	0	502	126	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.0%		ICU Level of Service A	
Analysis Period (min) 15			

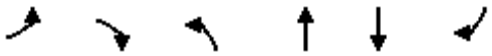
Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	151	0	195	267	0	116
Future Vol, veh/h	151	0	195	267	0	116
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	164	0	212	290	0	126

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	164	0	878	164
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	714	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1414	-	318	881
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1414	-	261	881
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	398	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	881	-	-	1414	-
HCM Lane V/C Ratio	0.143	-	-	0.15	-
HCM Control Delay (s)	9.8	-	-	8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.5	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	14	10	22	39	0
Future Volume (vph)	0	14	10	22	39	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.985		
Satd. Flow (prot)	1611	0	0	1835	1863	0
Flt Permitted				0.985		
Satd. Flow (perm)	1611	0	0	1835	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	15	11	24	42	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	35	42	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	10	22	39	0
Future Vol, veh/h	0	14	10	22	39	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	11	24	42	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	88	42	42	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	913	1029	1567	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	1029	1567	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.3	0
HCM LOS	A		

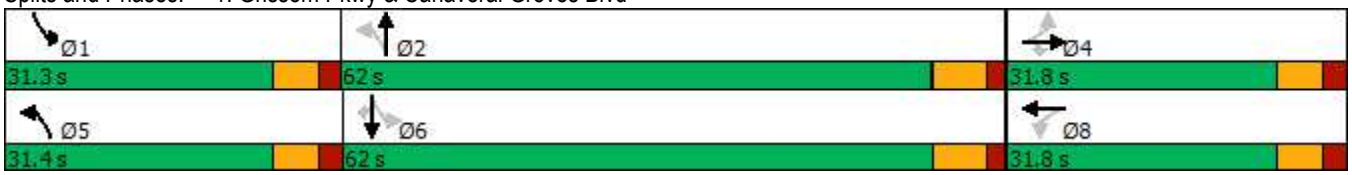
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1567	-	1029	-	-
HCM Lane V/C Ratio	0.007	-	0.015	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

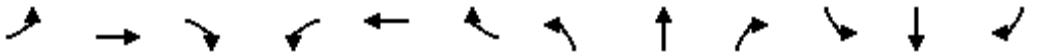
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	157	215	45	65	41	53	77	19	84	313	64
Future Volume (vph)	130	157	215	45	65	41	53	77	19	84	313	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.970				0.850
Flt Protected		0.978			0.985		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1767	0	1770	1807	0	1770	1863	1583
Flt Permitted		0.794			0.823		0.468			0.640		
Satd. Flow (perm)	0	1479	1583	0	1476	0	872	1807	0	1192	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221		13			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	171	234	49	71	45	58	84	21	91	340	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	234	0	165	0	58	105	0	91	340	70
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		24.6	18.3		26.5	21.2	21.2
Actuated g/C Ratio		0.37	0.37		0.37		0.36	0.27		0.39	0.31	0.31
v/c Ratio		0.57	0.32		0.30		0.14	0.21		0.17	0.59	0.13
Control Delay		24.7	5.0		18.4		11.4	19.7		11.5	26.4	4.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.7	5.0		18.4		11.4	19.7		11.5	26.4	4.1
LOS		C	A		B		B	B		B	C	A
Approach Delay		16.2			18.4			16.7			20.6	
Approach LOS		B			B			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		106	4		46		13	31		21	133	0
Queue Length 95th (ft)		222	53		108		31	69		44	223	21
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		548	726		555		741	1470		773	1511	1301
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.57	0.32		0.30		0.08	0.07		0.12	0.23	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 68.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Future Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	171	234	49	71	45	58	84	21	91	340	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	239	483	113	147	66	342	388	97	537	526	446
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.05	0.27	0.27	0.07	0.28	0.28
Sat Flow, veh/h	500	785	1585	98	484	218	1781	1444	361	1781	1870	1585
Grp Volume(v), veh/h	312	0	234	165	0	0	58	0	105	91	340	70
Grp Sat Flow(s),veh/h/ln	1284	0	1585	800	0	0	1781	0	1805	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	6.7	1.1	0.0	0.0	1.3	0.0	2.5	2.0	8.9	1.9
Cycle Q Clear(g_c), s	13.1	0.0	6.7	14.2	0.0	0.0	1.3	0.0	2.5	2.0	8.9	1.9
Prop In Lane	0.45		1.00	0.30		0.27	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	485	0	483	327	0	0	342	0	484	537	526	446
V/C Ratio(X)	0.64	0.00	0.48	0.50	0.00	0.00	0.17	0.00	0.22	0.17	0.65	0.16
Avail Cap(c_a), veh/h	705	0	709	530	0	0	1044	0	1776	1213	1840	1559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	15.9	15.6	0.0	0.0	13.9	0.0	15.9	13.0	17.7	15.1
Incr Delay (d2), s/veh	1.4	0.0	0.8	1.2	0.0	0.0	0.2	0.0	0.2	0.1	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	2.2	1.5	0.0	0.0	0.4	0.0	0.9	0.7	3.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	16.6	16.9	0.0	0.0	14.2	0.0	16.1	13.2	19.0	15.3
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		546			165			163			501	
Approach Delay, s/veh		18.1			16.9			15.4			17.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		23.8	9.4	22.7		23.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	4.5		15.1	3.3	10.9		16.2				
Green Ext Time (p_c), s	0.2	0.5		1.9	0.1	2.2		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			17.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Future Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	171	234	49	71	45	58	84	21	91	340	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	246	239	483	113	147	66	342	388	97	537	526	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.05	0.27	0.27	0.07	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.1	0.0	16.6	16.9	0.0	0.0	14.2	0.0	16.1	13.2	19.0	15.3
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		546			165			163			501	
Approach Delay, s/veh		18.1			16.9			15.4			17.4	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		23.8	9.4	22.7		23.8
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.7		5.5
Max Q Clear (g_c+I1), s	4.0	4.5		15.1	3.3	10.9		16.2
Green Ext Time (g_e), s	0.2	0.5		1.9	0.1	2.2		0.6
Prob of Phs Call (p_c)	0.76	1.00		1.00	0.59	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.23	0.00	0.00		0.19

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			500	1781			98

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1444		785		1870		484

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		361		1585		1585		218

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	91	0	0	312	58	0	0	165
Grp Sat Flow (s), veh/h/ln	1781	0	0	1284	1781	0	0	800
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	1.3	0.0	0.0	1.1
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	13.1	1.3	0.0	0.0	14.2
Perm LT Sat Flow (s_l), veh/h/ln	1289	0	0	1296	976	0	0	996
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1150	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	17.0	15.0	0.0	0.0	17.0
Perm LT Serve Time (g_u), s	12.5	0.0	0.0	2.8	6.8	0.0	0.0	3.9
Perm LT Q Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.5	0.0	0.0	1.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	4.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	4.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.45	1.00	0.00	0.00	0.30
Lane Grp Cap (c), veh/h	537	0	0	485	342	0	0	327
V/C Ratio (X)	0.17	0.00	0.00	0.64	0.17	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1213	0	0	705	1044	0	0	530
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.0	0.0	0.0	17.7	13.9	0.0	0.0	15.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.4	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.2	0.0	0.0	19.1	14.2	0.0	0.0	16.9
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	3.2	0.4	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	3.4	0.4	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	340	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	526	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1840	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	105	0	234	0	70	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	2.5	0.0	6.7	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	6.7	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	484	0	483	0	446	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.48	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1776	0	709	0	1559	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.9	0.0	15.9	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.8	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.1	0.0	16.6	0.0	15.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	2.1	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	2.2	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.31	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	0	251	1	0	568
Future Volume (vph)	1	0	251	1	0	568
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	1863	1583	1863	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	1863	1583	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	0	273	1	0	617
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	0	273	1	0	617
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			

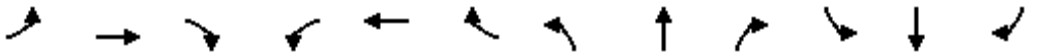
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	251	1	0	568
Future Vol, veh/h	1	0	251	1	0	568
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	273	1	0	617

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	890	273	0	0	274	0
Stage 1	273	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	313	766	-	-	1289	-
Stage 1	773	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	766	-	-	1289	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	773	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	313	1289	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	16.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

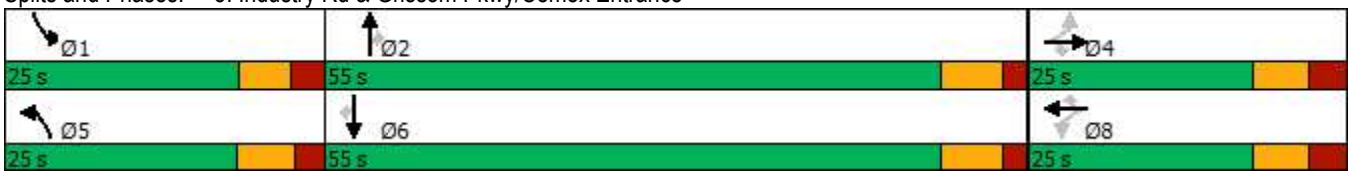


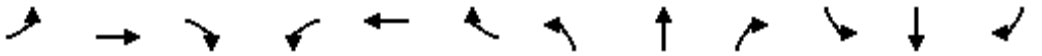
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	2	420	50	0	0	241	94	40	3	125	15
Future Volume (vph)	17	2	420	50	0	0	241	94	40	3	125	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.757			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1410	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			457						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	2	457	54	0	0	262	102	43	3	136	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	2	457	54	0	0	262	102	43	3	136	16
Turn Type	Perm	NA	Perm	Perm		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2			11.9	26.2	26.2	5.3	15.5	15.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19			0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.07	0.01	0.68	0.20			0.34	0.11	0.05	0.02	0.25	0.03
Control Delay	19.6	18.5	8.3	21.7			22.2	9.9	0.1	26.0	19.5	0.1
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	18.5	8.3	21.7			22.2	9.9	0.1	26.0	19.5	0.1
LOS	B	B	A	C			C	A	A	C	B	A
Approach Delay		8.8			21.7			16.8			17.6	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	5	1	0	15			38	12	0	1	33	0
Queue Length 95th (ft)	20	5	63	42			79	60	0	8	90	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	479	632	839	479			1213	1633	1402	629	1633	1402
Starvation Cap Reductn	0	0	0	0			0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0			0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0			0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.00	0.54	0.11			0.22	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53.3			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Future Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	2	0	54	0	0	262	102	43	3	136	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	197		301	197	167	447	824	698	7	586	497
Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1418	1870	1585	1415	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	2	0	54	0	0	262	102	43	3	136	16
Grp Sat Flow(s),veh/h/ln	1418	1870	1585	1415	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.0	0.0	1.7	0.0	0.0	3.4	1.5	0.7	0.1	2.5	0.3
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.7	0.0	0.0	3.4	1.5	0.7	0.1	2.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	197		301	197	167	447	824	698	7	586	497
V/C Ratio(X)	0.06	0.01		0.18	0.00	0.00	0.59	0.12	0.06	0.41	0.23	0.03
Avail Cap(c_a), veh/h	682	698		680	698	591	1341	1918	1625	695	1918	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	18.8	0.0	19.6	0.0	0.0	19.2	7.8	7.5	23.3	11.9	11.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.3	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	18.8	0.0	19.9	0.0	0.0	20.5	7.8	7.6	48.7	12.2	11.2
LnGrp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		20	A		54			407			155	
Approach Delay, s/veh		19.1			19.9			15.9			12.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.6		12.5	12.9	21.6		12.5				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.5		2.5	5.4	4.5		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Future Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	2	0	54	0	0	262	102	43	3	136	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	303	197		301	197	167	447	824	698	7	586	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.1	18.8	0.0	19.9	0.0	0.0	20.5	7.8	7.6	48.7	12.2	11.2
Ln Grp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		20			54			407			155	
Approach Delay, s/veh		19.1			19.9			15.9			12.8	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.6		12.5	12.9	21.6		12.5
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.5		2.5	5.4	4.5		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.62	1.00	0.98		0.62
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1418	3456			1415

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	18	262	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1418	1728	0	0	1415
Q Serve Time (g_s), s	0.1	0.0	0.0	0.5	3.4	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.5	3.4	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1418	0	0	0	1415
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	4.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	303	447	0	0	301
V/C Ratio (X)	0.41	0.00	0.00	0.06	0.59	0.00	0.00	0.18
Avail Cap (c_a), veh/h	695	0	0	682	1341	0	0	680
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.3	0.0	0.0	19.0	19.2	0.0	0.0	19.6
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.7	0.0	0.0	19.1	20.5	0.0	0.0	19.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.3	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.03	0.23	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	2	0	136	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.5	0.0	0.0	0.0	2.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.0	0.0	2.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	824	0	197	0	586	0	197
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	1918	0	698	0	1918	0	698
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	18.8	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	18.8	0.0	12.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

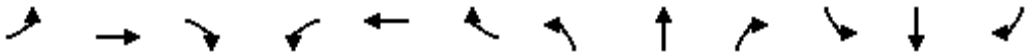
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	0	0	16	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	698	0	167	0	497	0	167
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	1625	0	591	0	1625	0	591
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.6	0.0	0.0	0.0	11.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	161	2	6	67	2	7	0	9	1	0	11
Future Volume (vph)	1	161	2	6	67	2	7	0	9	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.925			0.875	
Flt Protected					0.996			0.978			0.996	
Satd. Flow (prot)	0	1859	0	0	1850	0	0	1685	0	0	1623	0
Flt Permitted					0.996			0.978			0.996	
Satd. Flow (perm)	0	1859	0	0	1850	0	0	1685	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	175	2	7	73	2	8	0	10	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	82	0	0	18	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	161	2	6	67	2	7	0	9	1	0	11
Future Vol, veh/h	1	161	2	6	67	2	7	0	9	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	175	2	7	73	2	8	0	10	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	177	0	0	272	267	176	271	267	74
Stage 1	-	-	-	-	-	-	178	178	-	88	88	-
Stage 2	-	-	-	-	-	-	94	89	-	183	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1399	-	-	680	639	867	682	639	988
Stage 1	-	-	-	-	-	-	824	752	-	920	822	-
Stage 2	-	-	-	-	-	-	913	821	-	819	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1399	-	-	668	635	867	671	635	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	668	635	-	671	635	-
Stage 1	-	-	-	-	-	-	823	751	-	919	818	-
Stage 2	-	-	-	-	-	-	897	817	-	809	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1524	-	-	1399	-	-	951
HCM Lane V/C Ratio	0.023	0.001	-	-	0.005	-	-	0.014
HCM Control Delay (s)	9.8	7.4	0	-	7.6	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	267	1	12	107	1	37
Future Volume (vph)	267	1	12	107	1	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.995	0.999	
Satd. Flow (prot)	1863	0	0	1853	1615	0
Flt Permitted				0.995	0.999	
Satd. Flow (perm)	1863	0	0	1853	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1	13	116	1	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	0	0	129	41	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	267	1	12	107	1	37
Future Vol, veh/h	267	1	12	107	1	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	1	13	116	1	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	291	0	433	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1271	-	580	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1271	-	574	748
Mov Cap-2 Maneuver	-	-	-	-	574	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	875	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	742	-	-	1271	-
HCM Lane V/C Ratio	0.056	-	-	0.01	-
HCM Control Delay (s)	10.1	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	303	0	64	107	0	182
Future Volume (vph)	303	0	64	107	0	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.982		
Satd. Flow (prot)	1863	0	0	1829	1611	0
Flt Permitted				0.982		
Satd. Flow (perm)	1863	0	0	1829	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	329	0	70	116	0	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	329	0	0	186	198	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.4%		ICU Level of Service A	
Analysis Period (min) 15			

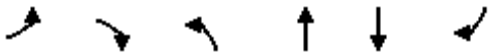
Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	303	0	64	107	0	182
Future Vol, veh/h	303	0	64	107	0	182
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	329	0	70	116	0	198

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	329	0	585	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1231	-	473	712
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1231	-	444	712
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	712	-	-	1231	-
HCM Lane V/C Ratio	0.278	-	-	0.057	-
HCM Control Delay (s)	12	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	15	36	12	0
Future Volume (vph)	0	5	15	36	12	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.986		
Satd. Flow (prot)	1611	0	0	1837	1863	0
Flt Permitted				0.986		
Satd. Flow (perm)	1611	0	0	1837	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	5	16	39	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	55	13	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	15	36	12	0
Future Vol, veh/h	0	5	15	36	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	16	39	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	84	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	918	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	909	1067	1606	-	-	-
Mov Cap-2 Maneuver	909	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	2.1	0
HCM LOS	A		

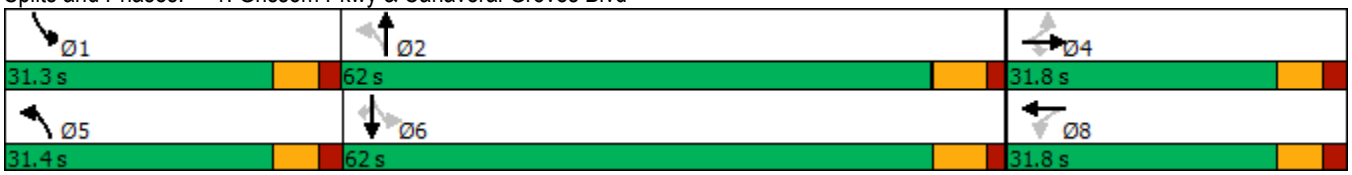
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	1067	-	-
HCM Lane V/C Ratio	0.01	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

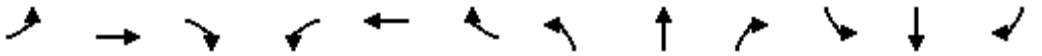
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	97	120	29	118	69	252	360	73	82	185	118
Future Volume (vph)	83	97	120	29	118	69	252	360	73	82	185	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.957			0.975				0.850
Flt Protected		0.977			0.993		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1770	0	1770	1816	0	1770	1863	1583
Flt Permitted		0.718			0.932		0.479			0.440		
Satd. Flow (perm)	0	1337	1583	0	1661	0	892	1816	0	820	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		17			10				128
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	90	105	130	32	128	75	274	391	79	89	201	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	130	0	235	0	274	470	0	89	201	128
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		22.4	22.4		22.4		39.5	28.4		27.1	18.9	18.9
Actuated g/C Ratio		0.30	0.30		0.30		0.52	0.38		0.36	0.25	0.25
v/c Ratio		0.49	0.23		0.47		0.44	0.69		0.23	0.43	0.26
Control Delay		28.4	5.9		24.9		12.6	27.4		12.1	28.0	6.4
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		28.4	5.9		24.9		12.6	27.4		12.1	28.0	6.4
LOS		C	A		C		B	C		B	C	A
Approach Delay		19.4			24.9			22.0			18.0	
Approach LOS		B			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		73	0		80		71	198		21	82	0
Queue Length 95th (ft)		162	41		175		117	314		41	151	40
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		448	617		568		764	1386		751	1375	1202
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.44	0.21		0.41		0.36	0.34		0.12	0.15	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 75.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 69.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Future Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	105	130	32	128	75	274	391	79	89	201	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	199	338	96	192	100	591	538	109	371	507	430
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.36	0.36	0.07	0.27	0.27
Sat Flow, veh/h	545	934	1585	102	898	469	1781	1510	305	1781	1870	1585
Grp Volume(v), veh/h	195	0	130	235	0	0	274	0	470	89	201	128
Grp Sat Flow(s),veh/h/ln	1479	0	1585	1469	0	0	1781	0	1815	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.9	2.3	0.0	0.0	5.8	0.0	12.4	1.9	4.9	3.5
Cycle Q Clear(g_c), s	6.4	0.0	3.9	8.7	0.0	0.0	5.8	0.0	12.4	1.9	4.9	3.5
Prop In Lane	0.46		1.00	0.14		0.32	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	338	387	0	0	591	0	646	371	507	430
V/C Ratio(X)	0.47	0.00	0.38	0.61	0.00	0.00	0.46	0.00	0.73	0.24	0.40	0.30
Avail Cap(c_a), veh/h	762	0	716	777	0	0	1128	0	1805	1056	1859	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	0.0	18.6	20.2	0.0	0.0	11.1	0.0	15.5	13.3	16.5	16.0
Incr Delay (d2), s/veh	0.9	0.0	0.7	1.5	0.0	0.0	0.6	0.0	1.6	0.3	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.3	2.7	0.0	0.0	1.8	0.0	4.3	0.7	1.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	19.4	21.7	0.0	0.0	11.6	0.0	17.1	13.7	17.0	16.4
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		325			235			744			418	
Approach Delay, s/veh		19.9			21.7			15.1			16.1	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.7		18.6	14.7	22.0		18.6				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	14.4		8.4	7.8	6.9		10.7				
Green Ext Time (p_c), s	0.2	3.0		1.4	0.7	1.5		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		17.1	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Future Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	105	130	32	128	75	274	391	79	89	201	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	199	338	96	192	100	591	538	109	371	507	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.36	0.36	0.07	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	0.0	19.4	21.7	0.0	0.0	11.6	0.0	17.1	13.7	17.0	16.4
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		325			235			744			418	
Approach Delay, s/veh		19.9			21.7			15.1			16.1	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	26.7		18.6	14.7	22.0		18.6
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.5		5.3
Max Q Clear (g_c+I1), s	3.9	14.4		8.4	7.8	6.9		10.7
Green Ext Time (g_e), s	0.2	3.0		1.4	0.7	1.5		1.1
Prob of Phs Call (p_c)	0.75	1.00		1.00	0.99	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.02

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			545	1781			102

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1510		934		1870		898

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		305		1585		1585		469

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	89	0	0	195	274	0	0	235
Grp Sat Flow (s), veh/h/ln	1781	0	0	1479	1781	0	0	1469
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	5.8	0.0	0.0	2.3
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	6.4	5.8	0.0	0.0	8.7
Perm LT Sat Flow (s_l), veh/h/ln	923	0	0	1198	1051	0	0	1163
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1375	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	11.8	15.3	0.0	0.0	11.8
Perm LT Serve Time (g_u), s	7.3	0.0	0.0	3.1	10.1	0.0	0.0	5.4
Perm LT Q Serve Time (g_ps), s	0.8	0.0	0.0	0.0	1.8	0.0	0.0	2.3
Time to First Blk (g_f), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.8
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.8
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.14
Lane Grp Cap (c), veh/h	371	0	0	411	591	0	0	387
V/C Ratio (X)	0.24	0.00	0.00	0.47	0.46	0.00	0.00	0.61
Avail Cap (c_a), veh/h	1056	0	0	762	1128	0	0	777
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.3	0.0	0.0	19.4	11.1	0.0	0.0	20.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.9	0.6	0.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.7	0.0	0.0	20.3	11.6	0.0	0.0	21.7
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.0	1.7	0.0	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	2.1	1.8	0.0	0.0	2.7
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.09	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	201	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	507	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1859	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	470	0	130	0	128	0	0
Grp Sat Flow (s), veh/h/ln	0	1815	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	12.4	0.0	3.9	0.0	3.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.4	0.0	3.9	0.0	3.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	646	0	338	0	430	0	0
V/C Ratio (X)	0.00	0.73	0.00	0.38	0.00	0.30	0.00	0.00
Avail Cap (c_a), veh/h	0	1805	0	716	0	1576	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	18.6	0.0	16.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.7	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.1	0.0	19.4	0.0	16.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.0	0.0	1.3	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	1.3	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.19	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	27	20	601	1	0	353
Future Volume (vph)	27	20	601	1	0	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942			0.850		
Flt Protected	0.972					
Satd. Flow (prot)	1706	0	1863	1583	1863	1863
Flt Permitted	0.972					
Satd. Flow (perm)	1706	0	1863	1583	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	22	653	1	0	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	653	1	0	384
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	20	601	1	0	353
Future Vol, veh/h	27	20	601	1	0	353
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	22	653	1	0	384

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1037	653	0	0	654	0
Stage 1	653	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	256	467	-	-	933	-
Stage 1	518	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	467	-	-	933	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	518	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0
HCM LOS	C		

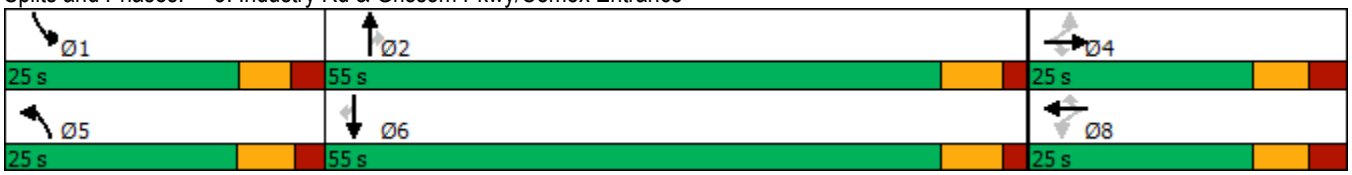
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	317	933	-
HCM Lane V/C Ratio	-	-	0.161	-	-
HCM Control Delay (s)	-	-	18.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

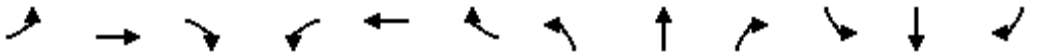
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	422	9	3	1	575	89	7	0	198	34
Future Volume (vph)	8	1	422	9	3	1	575	89	7	0	198	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.756			0.757			0.950					
Satd. Flow (perm)	1408	1863	1583	1410	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			459			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1	459	10	3	1	625	97	8	0	215	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1	459	10	3	1	625	97	8	0	215	37
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2	10.2	10.2	18.3	40.8	40.8		15.7	15.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.04	0.00	0.72	0.05	0.01	0.00	0.65	0.08	0.01		0.48	0.08
Control Delay	23.4	23.0	10.2	23.4	22.7	0.0	25.5	5.9	0.0		26.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.4	23.0	10.2	23.4	22.7	0.0	25.5	5.9	0.0		26.3	0.3
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.5			21.6			22.6			22.5	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	3	0	0	3	1	0	104	12	0		70	0
Queue Length 95th (ft)	15	4	73	15	8	0	196	38	0		149	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	377	500	761	378	500	506	959	1375	1199		1375	1199
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.02	0.00	0.60	0.03	0.01	0.00	0.65	0.07	0.01		0.16	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 65.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Future Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	0	10	3	1	625	97	8	0	215	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	85		206	85	72	825	1252	1061	4	553	468
Arrive On Green	0.05	0.05	0.00	0.05	0.05	0.05	0.24	0.67	0.67	0.00	0.30	0.30
Sat Flow, veh/h	1412	1870	1585	1416	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	9	1	0	10	3	1	625	97	8	0	215	37
Grp Sat Flow(s),veh/h/ln	1412	1870	1585	1416	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.3	0.0	0.0	0.3	0.1	0.0	8.5	0.9	0.1	0.0	4.6	0.8
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.4	0.1	0.0	8.5	0.9	0.1	0.0	4.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	85		206	85	72	825	1252	1061	4	553	468
V/C Ratio(X)	0.04	0.01		0.05	0.04	0.01	0.76	0.08	0.01	0.00	0.39	0.08
Avail Cap(c_a), veh/h	631	649		634	649	550	1247	1784	1512	646	1784	1512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	23.0	0.0	23.2	23.0	23.0	17.8	2.9	2.8	0.0	14.1	12.8
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.2	0.1	1.5	0.0	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	3.1	0.2	0.0	0.0	1.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	23.1	0.0	23.3	23.2	23.1	19.3	2.9	2.8	0.0	14.7	12.9
LnGrp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		10	A		14			730			252	
Approach Delay, s/veh		23.3			23.3			16.9			14.4	
Approach LOS		C			C			B			B	

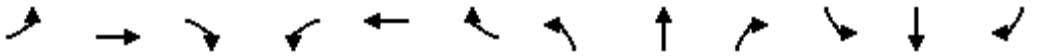
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	40.6		9.8	18.8	21.8		9.8				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.9		2.4	10.5	6.6		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Future Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	0	10	3	1	625	97	8	0	215	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	205	85		206	85	72	825	1252	1061	4	553	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.05	0.00	0.05	0.05	0.05	0.24	0.67	0.67	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.3	23.1	0.0	23.3	23.2	23.1	19.3	2.9	2.8	0.0	14.7	12.9
Ln Grp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		10			14			730			252	
Approach Delay, s/veh		23.3			23.3			16.9			14.4	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	40.6		9.8	18.8	21.8		9.8
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.4	3.8	5.6		4.6
Max Q Clear (g_c+I1), s	0.0	2.9		2.4	10.5	6.6		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.8		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.29	1.00	0.99		0.29
Prob of Max Out (p_x)	0.00	0.00		0.00	0.21	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1412	3456			1416

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	9	625	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1412	1728	0	0	1416
Q Serve Time (g_s), s	0.0	0.0	0.0	0.3	8.5	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.4	8.5	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1412	0	0	0	1416
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	2.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	4	0	0	205	825	0	0	206
V/C Ratio (X)	0.00	0.00	0.00	0.04	0.76	0.00	0.00	0.05
Avail Cap (c_a), veh/h	646	0	0	631	1247	0	0	634
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.2	17.8	0.0	0.0	23.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.5	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.3	19.3	0.0	0.0	23.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	3.0	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	3.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.57	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	1	0	215	0	3
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	4.6	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	4.6	0.0	0.1
Lane Grp Cap (c), veh/h	0	1252	0	85	0	553	0	85
V/C Ratio (X)	0.00	0.08	0.00	0.01	0.00	0.39	0.00	0.04
Avail Cap (c_a), veh/h	0	1784	0	649	0	1784	0	649
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	23.0	0.0	14.1	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	23.1	0.0	14.7	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

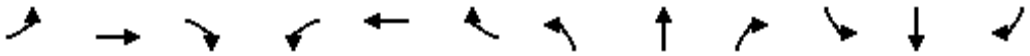
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	37	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1061	0	72	0	468	0	72
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.01
Avail Cap (c_a), veh/h	0	1512	0	550	0	1512	0	550
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	0.0	0.0	12.8	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.8	0.0	0.0	0.0	12.9	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	123	11	18	203	1	7	0	8	1	2	6
Future Volume (vph)	10	123	11	18	203	1	7	0	8	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.999			0.929			0.905	
Flt Protected		0.997			0.996			0.977			0.995	
Satd. Flow (prot)	0	1839	0	0	1853	0	0	1691	0	0	1677	0
Flt Permitted		0.997			0.996			0.977			0.995	
Satd. Flow (perm)	0	1839	0	0	1853	0	0	1691	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	134	12	20	221	1	8	0	9	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	0	0	242	0	0	17	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	123	11	18	203	1	7	0	8	1	2	6
Future Vol, veh/h	10	123	11	18	203	1	7	0	8	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	134	12	20	221	1	8	0	9	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	146	0	0	428	424	140	429	430	222
Stage 1	-	-	-	-	-	-	162	162	-	262	262	-
Stage 2	-	-	-	-	-	-	266	262	-	167	168	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1436	-	-	537	522	908	536	518	818
Stage 1	-	-	-	-	-	-	840	764	-	743	691	-
Stage 2	-	-	-	-	-	-	739	691	-	835	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1436	-	-	521	509	908	521	505	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	521	509	-	521	505	-
Stage 1	-	-	-	-	-	-	832	757	-	736	680	-
Stage 2	-	-	-	-	-	-	719	680	-	820	752	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	10.5	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	1347	-	-	1436	-	-	681
HCM Lane V/C Ratio	0.024	0.008	-	-	0.014	-	-	0.014
HCM Control Delay (s)	10.5	7.7	0	-	7.5	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	139	0	41	290	2	21
Future Volume (vph)	139	0	41	290	2	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1625	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1625	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	0	45	315	2	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	360	25	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	0	41	290	2	21
Future Vol, veh/h	139	0	41	290	2	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	0	45	315	2	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	556	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	405	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1430	-	492	895
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1430	-	473	895
Mov Cap-2 Maneuver	-	-	-	-	473	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	831	-	-	1430	-
HCM Lane V/C Ratio	0.03	-	-	0.031	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	0	207	289	0	121
Future Volume (vph)	160	0	207	289	0	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.980		
Satd. Flow (prot)	1863	0	0	1825	1611	0
Flt Permitted				0.980		
Satd. Flow (perm)	1863	0	0	1825	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	0	225	314	0	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	0	0	539	132	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.6%		ICU Level of Service A	
Analysis Period (min) 15			

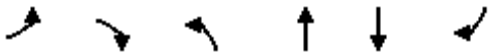
Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	160	0	207	289	0	121
Future Vol, veh/h	160	0	207	289	0	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	0	225	314	0	132

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	174	0	938	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	764	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1403	-	293	869
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	460	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1403	-	236	869
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	869	-	-	1403	-
HCM Lane V/C Ratio	0.151	-	-	0.16	-
HCM Control Delay (s)	9.9	-	-	8.1	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.6	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	16	10	23	41	0
Future Volume (vph)	0	16	10	23	41	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.985		
Satd. Flow (prot)	1611	0	0	1835	1863	0
Flt Permitted				0.985		
Satd. Flow (perm)	1611	0	0	1835	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	17	11	25	45	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	36	45	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	10	23	41	0
Future Vol, veh/h	0	16	10	23	41	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	11	25	45	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	92	45	45	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	908	1025	1563	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	902	1025	1563	-	-	-
Mov Cap-2 Maneuver	902	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.2	0
HCM LOS	A		

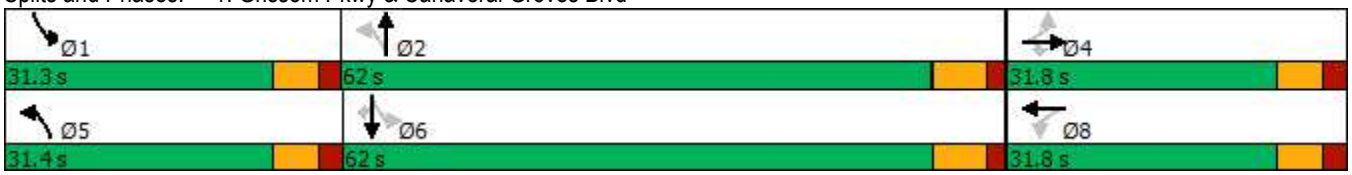
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1563	-	1025	-	-
HCM Lane V/C Ratio	0.007	-	0.017	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

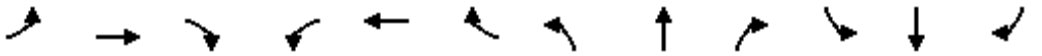
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	106	146	55	48	41	40	142	38	84	346	41
Future Volume (vph)	89	106	146	55	48	41	40	142	38	84	346	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.961			0.968				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1756	0	1770	1803	0	1770	1863	1583
Flt Permitted		0.806			0.785		0.491			0.582		
Satd. Flow (perm)	0	1501	1583	0	1405	0	915	1803	0	1084	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		14			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	115	159	60	52	45	43	154	41	91	376	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	159	0	157	0	43	195	0	91	376	45
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		16.6	16.6		16.6		25.2	19.4		27.8	22.7	22.7
Actuated g/C Ratio		0.27	0.27		0.27		0.41	0.32		0.45	0.37	0.37
v/c Ratio		0.52	0.29		0.40		0.09	0.34		0.16	0.54	0.07
Control Delay		26.0	5.6		22.1		9.2	19.1		9.3	21.6	1.3
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		26.0	5.6		22.1		9.2	19.1		9.3	21.6	1.3
LOS		C	A		C		A	B		A	C	A
Approach Delay		17.2			22.1			17.3			17.6	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		68	0		44		7	53		16	121	0
Queue Length 95th (ft)		149	41		107		25	121		44	244	6
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		651	777		617		872	1578		893	1669	1427
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.33	0.20		0.25		0.05	0.12		0.10	0.23	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 61.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	106	146	55	48	41	40	142	38	84	346	41
Future Volume (veh/h)	89	106	146	55	48	41	40	142	38	84	346	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	115	159	60	52	45	43	154	41	91	376	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	206	329	151	114	65	388	438	117	543	623	528
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.31	0.31	0.07	0.33	0.33
Sat Flow, veh/h	611	994	1585	235	549	315	1781	1423	379	1781	1870	1585
Grp Volume(v), veh/h	212	0	159	157	0	0	43	0	195	91	376	45
Grp Sat Flow(s),veh/h/ln	1605	0	1585	1099	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.3	1.6	0.0	0.0	0.8	0.0	4.1	1.6	8.2	0.9
Cycle Q Clear(g_c), s	5.7	0.0	4.3	7.4	0.0	0.0	0.8	0.0	4.1	1.6	8.2	0.9
Prop In Lane	0.46		1.00	0.38		0.29	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	440	0	329	330	0	0	388	0	555	543	623	528
V/C Ratio(X)	0.48	0.00	0.48	0.48	0.00	0.00	0.11	0.00	0.35	0.17	0.60	0.09
Avail Cap(c_a), veh/h	916	0	813	764	0	0	1221	0	2033	1327	2110	1788
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	17.0	17.6	0.0	0.0	11.0	0.0	13.1	10.0	13.6	11.2
Incr Delay (d2), s/veh	0.8	0.0	1.1	1.1	0.0	0.0	0.1	0.0	0.4	0.1	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.4	1.4	0.0	0.0	0.2	0.0	1.3	0.5	2.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	18.1	18.7	0.0	0.0	11.1	0.0	13.5	10.2	14.5	11.2
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		371			157			238			512	
Approach Delay, s/veh		18.2			18.7			13.0			13.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	22.0		16.9	8.6	23.2		16.9				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.6	6.1		7.7	2.8	10.2		9.4				
Green Ext Time (p_c), s	0.2	1.1		1.6	0.1	2.3		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		15.4	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	106	146	55	48	41	40	142	38	84	346	41
Future Volume (veh/h)	89	106	146	55	48	41	40	142	38	84	346	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	115	159	60	52	45	43	154	41	91	376	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	234	206	329	151	114	65	388	438	117	543	623	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.31	0.31	0.07	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.3	0.0	18.1	18.7	0.0	0.0	11.1	0.0	13.5	10.2	14.5	11.2
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		371			157			238			512	
Approach Delay, s/veh		18.2			18.7			13.0			13.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	9.8	22.0		16.9	8.6	23.2		16.9
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.6	6.1		7.7	2.8	10.2		9.4
Green Ext Time (g_e), s	0.2	1.1		1.6	0.1	2.3		0.7
Prob of Phs Call (p_c)	0.71	1.00		1.00	0.44	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			611	1781			235

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1423		994		1870		549

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		379		1585		1585		315

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

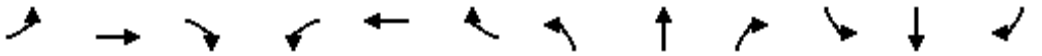
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	91	0	0	212	43	0	0	157
Grp Sat Flow (s), veh/h/ln	1781	0	0	1605	1781	0	0	1099
Q Serve Time (g_s), s	1.6	0.0	0.0	0.0	0.8	0.0	0.0	1.6
Cycle Q Clear Time (g_c), s	1.6	0.0	0.0	5.7	0.8	0.0	0.0	7.4
Perm LT Sat Flow (s_l), veh/h/ln	1188	0	0	1319	966	0	0	1123
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1562	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	10.1	15.0	0.0	0.0	10.1
Perm LT Serve Time (g_u), s	10.9	0.0	0.0	2.7	8.1	0.0	0.0	4.4
Perm LT Q Serve Time (g_ps), s	0.3	0.0	0.0	0.0	0.3	0.0	0.0	1.6
Time to First Blk (g_f), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.8
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	2.8
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	543	0	0	440	388	0	0	330
V/C Ratio (X)	0.17	0.00	0.00	0.48	0.11	0.00	0.00	0.48
Avail Cap (c_a), veh/h	1327	0	0	916	1221	0	0	764
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.0	0.0	0.0	17.5	11.0	0.0	0.0	17.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.1	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.2	0.0	0.0	18.3	11.1	0.0	0.0	18.7
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	1.8	0.2	0.0	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.9	0.2	0.0	0.0	1.4
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.01	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	376	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	623	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2110	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	13.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	14.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	195	0	159	0	45	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	4.1	0.0	4.3	0.0	0.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.1	0.0	4.3	0.0	0.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.29
Lane Grp Cap (c), veh/h	0	555	0	329	0	528	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.48	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	2033	0	813	0	1788	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.1	0.0	17.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	1.1	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.5	0.0	18.1	0.0	11.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	1.3	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.3	0.0	1.4	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.20	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.4
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	0	123	1	0	0	25	252	1	0	569	43
Future Volume (vph)	84	0	123	1	0	0	25	252	1	0	569	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		450	350		300
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.920							0.850			0.850
Flt Protected		0.980			0.950		0.950					
Satd. Flow (prot)	0	1679	0	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.980			0.950		0.950					
Satd. Flow (perm)	0	1679	0	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	0	134	1	0	0	27	274	1	0	618	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	225	0	0	1	0	27	274	1	0	618	47
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.5%		ICU Level of Service A	
Analysis Period (min) 15			

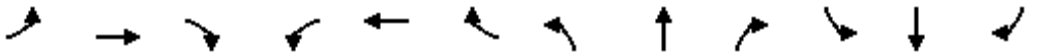
Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	0	123	1	0	0	25	252	1	0	569	43
Future Vol, veh/h	84	0	123	1	0	0	25	252	1	0	569	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	0	134	1	0	0	27	274	1	0	618	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	947	947	618	1037	993	274	665	0	0	275	0	0
Stage 1	618	618	-	328	328	-	-	-	-	-	-	-
Stage 2	329	329	-	709	665	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	241	261	489	209	245	765	924	-	-	1288	-	-
Stage 1	477	481	-	685	647	-	-	-	-	-	-	-
Stage 2	684	646	-	425	458	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	236	253	489	148	238	765	924	-	-	1288	-	-
Mov Cap-2 Maneuver	236	253	-	148	238	-	-	-	-	-	-	-
Stage 1	463	481	-	665	628	-	-	-	-	-	-	-
Stage 2	664	627	-	309	458	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.8	29.5	0.8	0
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	924	-	-	341	148	1288	-	-
HCM Lane V/C Ratio	0.029	-	-	0.66	0.007	-	-	-
HCM Control Delay (s)	9	-	-	33.8	29.5	0	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.5	0	0	-	-

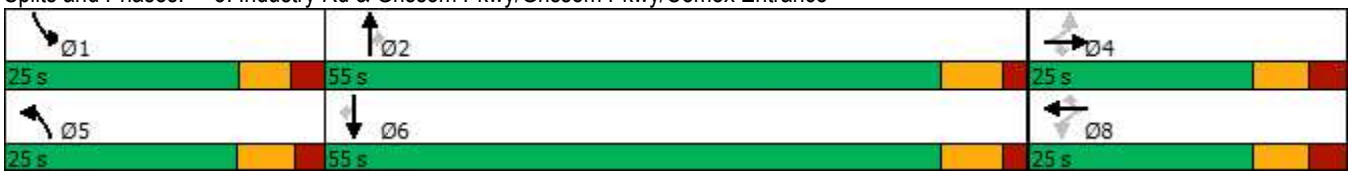


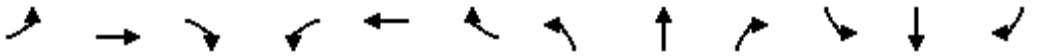
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3	440	50	1	0	246	94	40	3	125	18
Future Volume (vph)	22	3	440	50	1	0	246	94	40	3	125	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.756			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1408	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			478						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	3	478	54	1	0	267	102	43	3	136	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	3	478	54	1	0	267	102	43	3	136	20
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5		12.0	26.3	26.3	5.3	15.5	15.5
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.09	0.01	0.69	0.20	0.00		0.35	0.11	0.05	0.02	0.25	0.04
Control Delay	19.9	18.7	8.3	21.5	18.0		22.4	10.1	0.1	26.7	19.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	18.7	8.3	21.5	18.0		22.4	10.1	0.1	26.7	19.8	0.1
LOS	B	B	A	C	B		C	B	A	C	B	A
Approach Delay		8.9			21.4			17.0			17.5	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	7	1	0	16	0		39	12	0	1	33	0
Queue Length 95th (ft)	24	7	65	42	4		81	60	0	8	91	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	476	629	851	475	629		1205	1622	1393	625	1622	1393
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.56	0.11	0.00		0.22	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Future Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	3	0	54	1	0	267	102	43	3	136	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	208		307	208	177	451	821	696	7	581	493
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	24	3	0	54	1	0	267	102	43	3	136	20
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	1.7	0.0	0.0	3.5	1.5	0.7	0.1	2.6	0.4
Cycle Q Clear(g_c), s	0.7	0.1	0.0	1.7	0.0	0.0	3.5	1.5	0.7	0.1	2.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	208		307	208	177	451	821	696	7	581	493
V/C Ratio(X)	0.08	0.01		0.18	0.00	0.00	0.59	0.12	0.06	0.41	0.23	0.04
Avail Cap(c_a), veh/h	674	691		672	691	585	1327	1898	1609	688	1898	1609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	18.7	0.0	19.5	18.7	0.0	19.4	7.9	7.7	23.5	12.1	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.3	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	18.8	0.0	19.8	18.7	0.0	20.7	8.0	7.7	48.9	12.4	11.4
LnGrp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		27	A		55			412			159	
Approach Delay, s/veh		19.1			19.8			16.2			13.0	
Approach LOS		B			B			B			B	

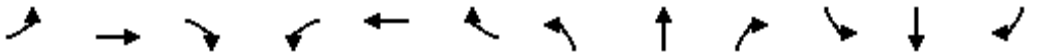
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.7		12.8	13.0	21.6		12.8				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.5		2.7	5.5	4.6		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Future Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	3	0	54	1	0	267	102	43	3	136	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	309	208		307	208	177	451	821	696	7	581	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.2	18.8	0.0	19.8	18.7	0.0	20.7	8.0	7.7	48.9	12.4	11.4
Ln Grp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		27			55			412			159	
Approach Delay, s/veh		19.1			19.8			16.2			13.0	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.7		12.8	13.0	21.6		12.8
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.5		2.7	5.5	4.6		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.66	1.00	0.98		0.66
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	24	267	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1414
Q Serve Time (g_s), s	0.1	0.0	0.0	0.7	3.5	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.7	3.5	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	309	451	0	0	307
V/C Ratio (X)	0.41	0.00	0.00	0.08	0.59	0.00	0.00	0.18
Avail Cap (c_a), veh/h	688	0	0	674	1327	0	0	672
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.5	0.0	0.0	19.0	19.4	0.0	0.0	19.5
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.9	0.0	0.0	19.2	20.7	0.0	0.0	19.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.3	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.04	0.24	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	3	0	136	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.5	0.0	0.1	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.1	0.0	2.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	821	0	208	0	581	0	208
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	1898	0	691	0	1898	0	691
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	18.7	0.0	12.1	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	18.8	0.0	12.4	0.0	18.7
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

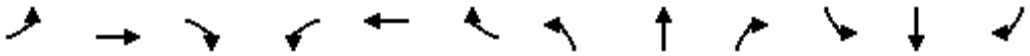
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	0	0	20	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	696	0	177	0	493	0	177
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	1609	0	585	0	1609	0	585
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.7	0.0	0.0	0.0	11.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	161	3	8	67	2	8	0	11	1	0	11
Future Volume (vph)	1	161	3	8	67	2	8	0	11	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.923			0.875	
Flt Protected					0.995			0.979			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1683	0	0	1623	0
Flt Permitted					0.995			0.979			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1683	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	175	3	9	73	2	9	0	12	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	84	0	0	21	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	161	3	8	67	2	8	0	11	1	0	11
Future Vol, veh/h	1	161	3	8	67	2	8	0	11	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	175	3	9	73	2	9	0	12	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	178	0	0	277	272	177	277	272	74
Stage 1	-	-	-	-	-	-	179	179	-	92	92	-
Stage 2	-	-	-	-	-	-	98	93	-	185	180	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1398	-	-	675	635	866	675	635	988
Stage 1	-	-	-	-	-	-	823	751	-	915	819	-
Stage 2	-	-	-	-	-	-	908	818	-	817	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1398	-	-	663	630	866	662	630	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	663	630	-	662	630	-
Stage 1	-	-	-	-	-	-	822	750	-	914	813	-
Stage 2	-	-	-	-	-	-	891	812	-	805	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1524	-	-	1398	-	-	949
HCM Lane V/C Ratio	0.027	0.001	-	-	0.006	-	-	0.014
HCM Control Delay (s)	9.8	7.4	0	-	7.6	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	267	1	14	107	1	39
Future Volume (vph)	267	1	14	107	1	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.994	0.999	
Satd. Flow (prot)	1863	0	0	1852	1615	0
Flt Permitted				0.994	0.999	
Satd. Flow (perm)	1863	0	0	1852	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1	15	116	1	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	0	0	131	43	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	267	1	14	107	1	39
Future Vol, veh/h	267	1	14	107	1	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	1	15	116	1	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	291	0	437	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1271	-	577	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	881	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1271	-	569	748
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	870	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	742	-	-	1271	-
HCM Lane V/C Ratio	0.059	-	-	0.012	-
HCM Control Delay (s)	10.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	305	0	9	109	0	19
Future Volume (vph)	305	0	9	109	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1863	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1863	0	0	1855	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	332	0	10	118	0	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	332	0	0	128	21	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

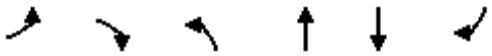
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	305	0	9	109	0	19
Future Vol, veh/h	305	0	9	109	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	332	0	10	118	0	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	332	0	470	332
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	138	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1227	-	552	710
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1227	-	547	710
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	881	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	710	-	-	1227	-
HCM Lane V/C Ratio	0.029	-	-	0.008	-
HCM Control Delay (s)	10.2	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	15	36	12	2
Future Volume (vph)	2	5	15	36	12	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.982	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1660	0	0	1837	1829	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1660	0	0	1837	1829	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	16	39	13	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	55	15	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

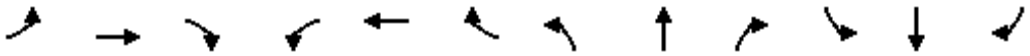
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	15	36	12	2
Future Vol, veh/h	2	5	15	36	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	16	39	13	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	85	14	15	0	-	0
Stage 1	14	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	916	1066	1603	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	1066	1603	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1603	-	1015	-	-
HCM Lane V/C Ratio	0.01	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	44	0	6	13	49	0	3	18	143	0	0
Future Volume (vph)	0	44	0	6	13	49	0	3	18	143	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.903			0.883				
Flt Protected					0.995						0.950	
Satd. Flow (prot)	0	1863	0	0	1674	0	0	1645	0	0	1770	0
Flt Permitted					0.995						0.950	
Satd. Flow (perm)	0	1863	0	0	1674	0	0	1645	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	48	0	7	14	53	0	3	20	155	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	74	0	0	23	0	0	155	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	44	0	6	13	49	0	3	18	143	0	0
Future Vol, veh/h	0	44	0	6	13	49	0	3	18	143	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	0	7	14	53	0	3	20	155	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	67	0	0	48	0	0	103	129	48	115	103	41
Stage 1	-	-	-	-	-	-	48	48	-	55	55	-
Stage 2	-	-	-	-	-	-	55	81	-	60	48	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1535	-	-	1559	-	-	877	762	1021	862	787	1030
Stage 1	-	-	-	-	-	-	965	855	-	957	849	-
Stage 2	-	-	-	-	-	-	957	828	-	951	855	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1535	-	-	1559	-	-	873	758	1021	840	783	1030
Mov Cap-2 Maneuver	-	-	-	-	-	-	873	758	-	840	783	-
Stage 1	-	-	-	-	-	-	965	855	-	957	845	-
Stage 2	-	-	-	-	-	-	952	824	-	929	855	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.8	10.3
HCM LOS			A	B

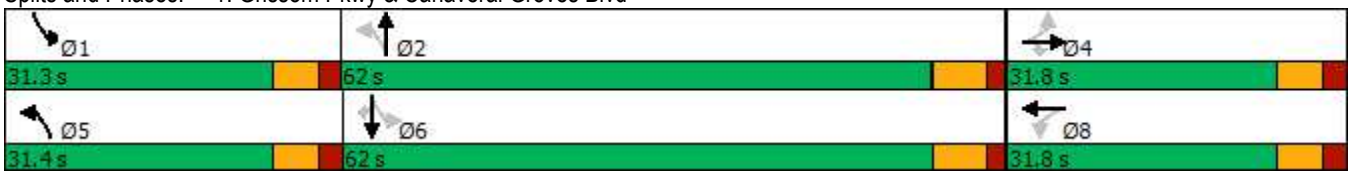
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	973	1535	-	-	1559	-	-	840
HCM Lane V/C Ratio	0.023	-	-	-	0.004	-	-	0.185
HCM Control Delay (s)	8.8	0	-	-	7.3	0	-	10.3
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.7

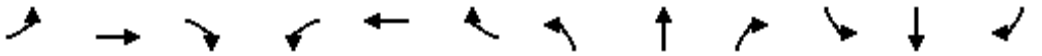
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	61	78	61	74	69	158	397	87	82	244	73
Future Volume (vph)	55	61	78	61	74	69	158	397	87	82	244	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.954			0.973				0.850
Flt Protected		0.977			0.985		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1750	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.723			0.854		0.486			0.359		
Satd. Flow (perm)	0	1347	1583	0	1518	0	905	1812	0	669	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		18			11				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	66	85	66	80	75	172	432	95	89	265	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	126	85	0	221	0	172	527	0	89	265	79
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		16.4	16.4		16.4		39.3	30.4		32.3	24.1	24.1
Actuated g/C Ratio		0.23	0.23		0.23		0.55	0.42		0.45	0.34	0.34
v/c Ratio		0.41	0.20		0.62		0.28	0.68		0.21	0.42	0.13
Control Delay		30.1	7.1		32.4		8.9	24.0		9.3	21.7	4.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		30.1	7.1		32.4		8.9	24.0		9.3	21.7	4.5
LOS		C	A		C		A	C		A	C	A
Approach Delay		20.8			32.4			20.3			16.0	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		46	0		78		31	190		15	87	0
Queue Length 95th (ft)		114	33		179		73	361		41	179	25
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		489	632		562		839	1429		789	1465	1264
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.26	0.13		0.39		0.21	0.37		0.11	0.18	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 71.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

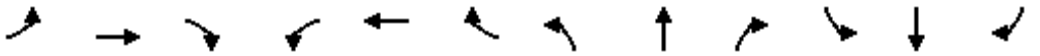




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	61	78	61	74	69	158	397	87	82	244	73
Future Volume (veh/h)	55	61	78	61	74	69	158	397	87	82	244	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	66	85	66	80	75	172	432	95	89	265	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	202	316	149	132	100	535	537	118	342	618	524
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.36	0.36	0.07	0.33	0.33
Sat Flow, veh/h	587	1016	1585	317	663	503	1781	1485	327	1781	1870	1585
Grp Volume(v), veh/h	126	0	85	221	0	0	172	0	527	89	265	79
Grp Sat Flow(s),veh/h/ln	1603	0	1585	1483	0	0	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	2.5	4.4	0.0	0.0	3.3	0.0	14.2	1.7	6.0	1.9
Cycle Q Clear(g_c), s	3.4	0.0	2.5	7.7	0.0	0.0	3.3	0.0	14.2	1.7	6.0	1.9
Prop In Lane	0.48		1.00	0.30		0.34	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	417	0	316	382	0	0	535	0	656	342	618	524
V/C Ratio(X)	0.30	0.00	0.27	0.58	0.00	0.00	0.32	0.00	0.80	0.26	0.43	0.15
Avail Cap(c_a), veh/h	811	0	731	785	0	0	1183	0	1839	1042	1898	1609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	18.4	20.4	0.0	0.0	10.2	0.0	15.6	11.9	14.1	12.8
Incr Delay (d2), s/veh	0.4	0.0	0.5	1.4	0.0	0.0	0.3	0.0	2.4	0.4	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.8	2.5	0.0	0.0	1.0	0.0	4.9	0.5	2.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	18.8	21.8	0.0	0.0	10.5	0.0	17.9	12.3	14.6	12.9
LnGrp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		211			221			699			433	
Approach Delay, s/veh		19.0			21.8			16.1			13.8	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.6		17.6	11.7	24.9		17.6				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.7	16.2		5.4	5.3	8.0		9.7				
Green Ext Time (p_c), s	0.2	3.4		0.9	0.4	1.7		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	61	78	61	74	69	158	397	87	82	244	73
Future Volume (veh/h)	55	61	78	61	74	69	158	397	87	82	244	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	66	85	66	80	75	172	432	95	89	265	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	202	316	149	132	100	535	537	118	342	618	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.36	0.36	0.07	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.1	0.0	18.8	21.8	0.0	0.0	10.5	0.0	17.9	12.3	14.6	12.9
Ln Grp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		211			221			699			433	
Approach Delay, s/veh		19.0			21.8			16.1			13.8	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	26.6		17.6	11.7	24.9		17.6
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.3
Max Q Clear (g_c+I1), s	3.7	16.2		5.4	5.3	8.0		9.7
Green Ext Time (g_e), s	0.2	3.4		0.9	0.4	1.7		1.1
Prob of Phs Call (p_c)	0.74	1.00		1.00	0.92	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			587	1781			317

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1485		1016		1870		663

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		327		1585		1585		503

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

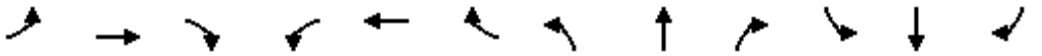
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	89	0	0	126	172	0	0	221
Grp Sat Flow (s), veh/h/ln	1781	0	0	1603	1781	0	0	1483
Q Serve Time (g_s), s	1.7	0.0	0.0	0.0	3.3	0.0	0.0	4.4
Cycle Q Clear Time (g_c), s	1.7	0.0	0.0	3.4	3.3	0.0	0.0	7.7
Perm LT Sat Flow (s_l), veh/h/ln	876	0	0	1251	1037	0	0	1256
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1558	0	0	0	0
Perm LT Eff Green (g_p), s	17.9	0.0	0.0	10.8	17.9	0.0	0.0	10.8
Perm LT Serve Time (g_u), s	5.4	0.0	0.0	3.0	11.9	0.0	0.0	7.4
Perm LT Q Serve Time (g_ps), s	1.4	0.0	0.0	0.0	1.2	0.0	0.0	4.4
Time to First Blk (g_f), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.6
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.30
Lane Grp Cap (c), veh/h	342	0	0	417	535	0	0	382
V/C Ratio (X)	0.26	0.00	0.00	0.30	0.32	0.00	0.00	0.58
Avail Cap (c_a), veh/h	1042	0	0	811	1183	0	0	785
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.9	0.0	0.0	18.7	10.2	0.0	0.0	20.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.4	0.3	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.3	0.0	0.0	19.1	10.5	0.0	0.0	21.8
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	1.2	1.0	0.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.3	1.0	0.0	0.0	2.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.01	0.05	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	265	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	618	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1898	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	14.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	527	0	85	0	79	0	0
Grp Sat Flow (s), veh/h/ln	0	1812	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	14.2	0.0	2.5	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.2	0.0	2.5	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	656	0	316	0	524	0	0
V/C Ratio (X)	0.00	0.80	0.00	0.27	0.00	0.15	0.00	0.00
Avail Cap (c_a), veh/h	0	1839	0	731	0	1609	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.6	0.0	18.4	0.0	12.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.4	0.0	0.5	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.9	0.0	18.8	0.0	12.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.5	0.0	0.8	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.8	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.12	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	84	27	0	20	143	601	1	0	354	91
Future Volume (vph)	51	0	84	27	0	20	143	601	1	0	354	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		450	350		300
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.916			0.942				0.850			0.850
Flt Protected		0.982			0.972		0.950					
Satd. Flow (prot)	0	1676	0	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.982			0.972		0.950					
Satd. Flow (perm)	0	1676	0	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	0	91	29	0	22	155	653	1	0	385	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	51	0	155	653	1	0	385	99
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.6%		ICU Level of Service A	
Analysis Period (min) 15			

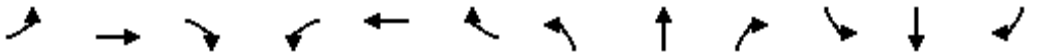
Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	0	84	27	0	20	143	601	1	0	354	91
Future Vol, veh/h	51	0	84	27	0	20	143	601	1	0	354	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	0	91	29	0	22	155	653	1	0	385	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1360	1349	385	1443	1447	653	484	0	0	654	0	0
Stage 1	385	385	-	963	963	-	-	-	-	-	-	-
Stage 2	975	964	-	480	484	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	126	151	663	110	131	467	1079	-	-	933	-	-
Stage 1	638	611	-	307	334	-	-	-	-	-	-	-
Stage 2	303	334	-	567	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	129	663	84	112	467	1079	-	-	933	-	-
Mov Cap-2 Maneuver	107	129	-	84	112	-	-	-	-	-	-	-
Stage 1	546	611	-	263	286	-	-	-	-	-	-	-
Stage 2	247	286	-	489	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.2	50.1	1.7	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1079	-	-	224	129	933	-	-
HCM Lane V/C Ratio	0.144	-	-	0.655	0.396	-	-	-
HCM Control Delay (s)	8.9	-	-	47.2	50.1	0	-	-
HCM Lane LOS	A	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	4	1.7	0	-	-

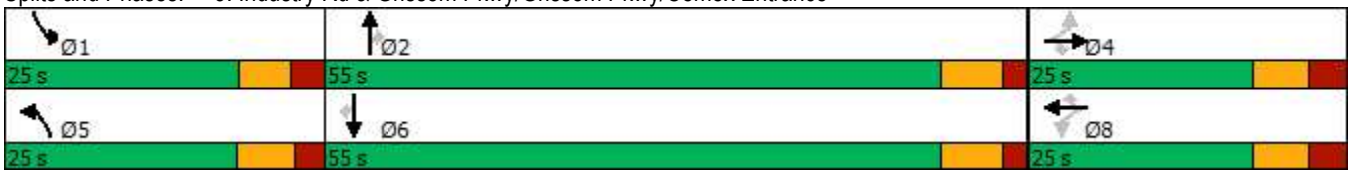


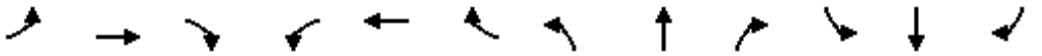
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	3	436	9	4	1	599	89	7	0	198	42
Future Volume (vph)	12	3	436	9	4	1	599	89	7	0	198	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.755			0.756			0.950					
Satd. Flow (perm)	1406	1863	1583	1408	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			474			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	3	474	10	4	1	651	97	8	0	215	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	3	474	10	4	1	651	97	8	0	215	46
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2	10.2	10.2	18.3	40.8	40.8		15.7	15.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.06	0.01	0.73	0.05	0.01	0.00	0.68	0.08	0.01		0.48	0.10
Control Delay	23.7	22.7	10.3	23.4	22.8	0.0	26.4	5.9	0.0		26.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.7	22.7	10.3	23.4	22.8	0.0	26.4	5.9	0.0		26.3	0.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.7			21.7			23.5			21.8	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	4	1	0	3	1	0	109	12	0		70	0
Queue Length 95th (ft)	18	8	74	15	9	0	#212	38	0		149	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	377	500	772	377	500	506	958	1375	1199		1375	1199
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.03	0.01	0.61	0.03	0.01	0.00	0.68	0.07	0.01		0.16	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 65.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Future Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	3	0	10	4	1	651	97	8	0	215	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	104		216	104	88	845	1244	1055	3	541	458
Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.24	0.67	0.67	0.00	0.29	0.29
Sat Flow, veh/h	1411	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	13	3	0	10	4	1	651	97	8	0	215	46
Grp Sat Flow(s),veh/h/ln	1411	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.1	0.0	0.3	0.1	0.0	9.1	0.9	0.1	0.0	4.8	1.1
Cycle Q Clear(g_c), s	0.6	0.1	0.0	0.4	0.1	0.0	9.1	0.9	0.1	0.0	4.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	104		216	104	88	845	1244	1055	3	541	458
V/C Ratio(X)	0.06	0.03		0.05	0.04	0.01	0.77	0.08	0.01	0.00	0.40	0.10
Avail Cap(c_a), veh/h	615	634		617	634	537	1219	1743	1477	632	1743	1477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	23.1	0.0	23.3	23.1	23.0	18.1	3.0	2.9	0.0	14.7	13.4
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.2	0.1	1.9	0.0	0.0	0.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	3.4	0.2	0.0	0.0	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	23.2	0.0	23.4	23.2	23.1	20.0	3.1	2.9	0.0	15.3	13.5
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		16	A		15			756			261	
Approach Delay, s/veh		23.4			23.3			17.7			15.0	
Approach LOS		C			C			B			B	

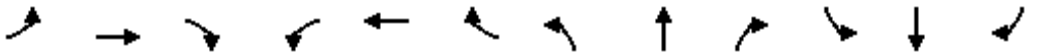
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	41.2		10.4	19.4	21.8		10.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.9		2.6	11.1	6.8		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Future Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	3	0	10	4	1	651	97	8	0	215	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	104		216	104	88	845	1244	1055	3	541	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.24	0.67	0.67	0.00	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.5	23.2	0.0	23.4	23.2	23.1	20.0	3.1	2.9	0.0	15.3	13.5
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		16			15			756			261	
Approach Delay, s/veh		23.4			23.3			17.7			15.0	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	41.2		10.4	19.4	21.8		10.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	2.9		2.6	11.1	6.8		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.8		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.36	1.00	0.99		0.36
Prob of Max Out (p_x)	0.00	0.00		0.00	0.28	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1411	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	13	651	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1411	1728	0	0	1414
Q Serve Time (g_s), s	0.0	0.0	0.0	0.5	9.1	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.6	9.1	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1411	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	215	845	0	0	216
V/C Ratio (X)	0.00	0.00	0.00	0.06	0.77	0.00	0.00	0.05
Avail Cap (c_a), veh/h	632	0	0	615	1219	0	0	617
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.3	18.1	0.0	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.9	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.5	20.0	0.0	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	3.2	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	3.4	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.62	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	3	0	215	0	4
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.9	0.0	0.1	0.0	4.8	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.1	0.0	4.8	0.0	0.1
Lane Grp Cap (c), veh/h	0	1244	0	104	0	541	0	104
V/C Ratio (X)	0.00	0.08	0.00	0.03	0.00	0.40	0.00	0.04
Avail Cap (c_a), veh/h	0	1743	0	634	0	1743	0	634
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	23.1	0.0	14.7	0.0	23.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	23.2	0.0	15.3	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

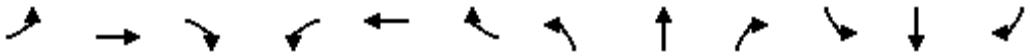
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	46	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1055	0	88	0	458	0	88
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.10	0.00	0.01
Avail Cap (c_a), veh/h	0	1477	0	537	0	1477	0	537
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	13.4	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	13.5	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	123	12	19	203	1	8	0	11	1	2	6
Future Volume (vph)	10	123	12	19	203	1	8	0	11	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.999			0.923			0.905	
Flt Protected		0.997			0.996			0.979			0.995	
Satd. Flow (prot)	0	1837	0	0	1853	0	0	1683	0	0	1677	0
Flt Permitted		0.997			0.996			0.979			0.995	
Satd. Flow (perm)	0	1837	0	0	1853	0	0	1683	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	134	13	21	221	1	9	0	12	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	243	0	0	21	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	123	12	19	203	1	8	0	11	1	2	6
Future Vol, veh/h	10	123	12	19	203	1	8	0	11	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	134	13	21	221	1	9	0	12	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	147	0	0	431	427	141	433	433	222
Stage 1	-	-	-	-	-	-	163	163	-	264	264	-
Stage 2	-	-	-	-	-	-	268	264	-	169	169	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1435	-	-	535	520	907	533	516	818
Stage 1	-	-	-	-	-	-	839	763	-	741	690	-
Stage 2	-	-	-	-	-	-	738	690	-	833	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1435	-	-	518	506	907	515	503	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	518	506	-	515	503	-
Stage 1	-	-	-	-	-	-	831	756	-	734	678	-
Stage 2	-	-	-	-	-	-	717	678	-	815	752	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	10.4	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	689	1347	-	-	1435	-	-	679
HCM Lane V/C Ratio	0.03	0.008	-	-	0.014	-	-	0.014
HCM Control Delay (s)	10.4	7.7	0	-	7.5	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	139	0	42	290	2	24
Future Volume (vph)	139	0	42	290	2	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.875	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1623	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1623	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	0	46	315	2	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	361	28	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	0	42	290	2	24
Future Vol, veh/h	139	0	42	290	2	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	0	46	315	2	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	558	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1430	-	491	895
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1430	-	472	895
Mov Cap-2 Maneuver	-	-	-	-	472	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	646	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	837	-	-	1430	-
HCM Lane V/C Ratio	0.034	-	-	0.032	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	0	23	290	0	13
Future Volume (vph)	163	0	23	290	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1863	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1863	0	0	1855	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	177	0	25	315	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	177	0	0	340	14	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

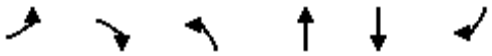
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	163	0	23	290	0	13
Future Vol, veh/h	163	0	23	290	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	0	25	315	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	177	0	542	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	365	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1399	-	501	866
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1399	-	490	866
Mov Cap-2 Maneuver	-	-	-	-	490	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	866	-	-	1399	-
HCM Lane V/C Ratio	0.016	-	-	0.018	-
HCM Control Delay (s)	9.2	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	16	10	23	41	1
Future Volume (vph)	3	16	10	23	41	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885				0.997	
Flt Protected	0.993			0.985		
Satd. Flow (prot)	1637	0	0	1835	1857	0
Flt Permitted	0.993			0.985		
Satd. Flow (perm)	1637	0	0	1835	1857	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	17	11	25	45	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	36	46	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

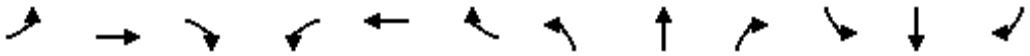
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	10	23	41	1
Future Vol, veh/h	3	16	10	23	41	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	17	11	25	45	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	93	46	46	0	-	0
Stage 1	46	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	907	1023	1562	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	901	1023	1562	-	-	-
Mov Cap-2 Maneuver	901	-	-	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1562	-	1002	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	0	20	50	164	0	2	12	95	2	0
Future Volume (vph)	0	27	0	20	50	164	0	2	12	95	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.905			0.883				
Flt Protected					0.996						0.953	
Satd. Flow (prot)	0	1863	0	0	1679	0	0	1645	0	0	1775	0
Flt Permitted					0.996						0.953	
Satd. Flow (perm)	0	1863	0	0	1679	0	0	1645	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	29	0	22	54	178	0	2	13	103	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	254	0	0	15	0	0	105	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

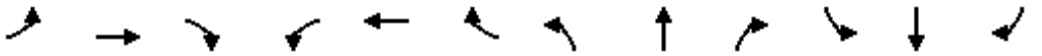
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	27	0	20	50	164	0	2	12	95	2	0
Future Vol, veh/h	0	27	0	20	50	164	0	2	12	95	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	0	22	54	178	0	2	13	103	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	29	0	0	217	305	29	224	216	143
Stage 1	-	-	-	-	-	-	29	29	-	187	187	-
Stage 2	-	-	-	-	-	-	188	276	-	37	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1584	-	-	739	608	1046	732	682	905
Stage 1	-	-	-	-	-	-	988	871	-	815	745	-
Stage 2	-	-	-	-	-	-	814	682	-	978	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1336	-	-	1584	-	-	728	598	1046	712	671	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	598	-	712	671	-
Stage 1	-	-	-	-	-	-	988	871	-	815	733	-
Stage 2	-	-	-	-	-	-	799	671	-	963	871	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.9	10.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	945	1336	-	-	1584	-	-	711
HCM Lane V/C Ratio	0.016	-	-	-	0.014	-	-	0.148
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	10.9
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.5

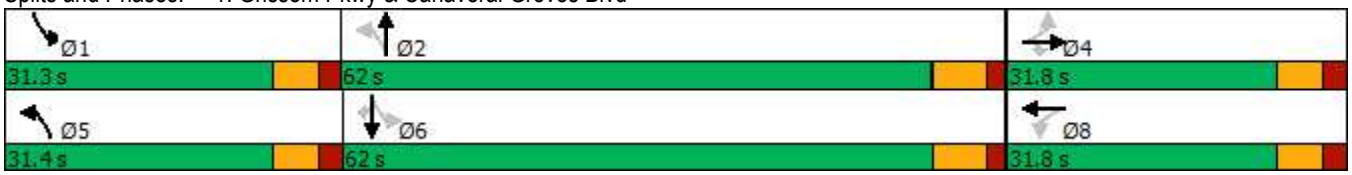


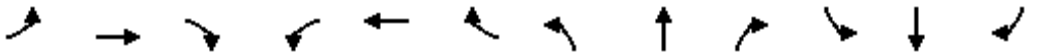
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	106	146	47	65	41	21	93	22	84	316	43
Future Volume (vph)	89	106	146	47	65	41	21	93	22	84	316	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964			0.971				0.850
Flt Protected		0.978			0.985		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1769	0	1770	1809	0	1770	1863	1583
Flt Permitted		0.804			0.827		0.555			0.574		
Satd. Flow (perm)	0	1498	1583	0	1485	0	1034	1809	0	1069	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159		13			12				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	115	159	51	71	45	23	101	24	91	343	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	159	0	167	0	23	125	0	91	343	47
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		16.5	16.5		16.5		22.9	17.6		27.4	23.8	23.8
Actuated g/C Ratio		0.28	0.28		0.28		0.39	0.30		0.46	0.40	0.40
v/c Ratio		0.51	0.29		0.39		0.05	0.23		0.16	0.46	0.07
Control Delay		24.3	5.2		20.6		9.5	18.5		9.5	18.4	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.3	5.2		20.6		9.5	18.5		9.5	18.4	1.6
LOS		C	A		C		A	B		A	B	A
Approach Delay		16.1			20.6			17.1			15.1	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		63	0		44		4	31		15	68	0
Queue Length 95th (ft)		140	39		105		16	82		44	218	8
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		665	791		666		878	1628		883	1673	1431
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.32	0.20		0.25		0.03	0.08		0.10	0.21	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 59.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 51.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	106	146	47	65	41	21	93	22	84	316	43
Future Volume (veh/h)	89	106	146	47	65	41	21	93	22	84	316	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	115	159	51	71	45	23	101	24	91	343	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	203	327	136	137	65	401	450	107	603	657	557
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.31	0.31	0.07	0.35	0.35
Sat Flow, veh/h	606	986	1585	192	667	317	1781	1461	347	1781	1870	1585
Grp Volume(v), veh/h	212	0	159	167	0	0	23	0	125	91	343	47
Grp Sat Flow(s),veh/h/ln	1592	0	1585	1175	0	0	1781	0	1808	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.3	1.5	0.0	0.0	0.4	0.0	2.5	1.6	7.1	1.0
Cycle Q Clear(g_c), s	5.8	0.0	4.3	7.3	0.0	0.0	0.4	0.0	2.5	1.6	7.1	1.0
Prop In Lane	0.46		1.00	0.31		0.27	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	436	0	327	339	0	0	401	0	557	603	657	557
V/C Ratio(X)	0.49	0.00	0.49	0.49	0.00	0.00	0.06	0.00	0.22	0.15	0.52	0.08
Avail Cap(c_a), veh/h	910	0	814	795	0	0	1267	0	2043	1388	2114	1791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	17.0	17.6	0.0	0.0	11.1	0.0	12.5	9.9	12.5	10.5
Incr Delay (d2), s/veh	0.8	0.0	1.1	1.1	0.0	0.0	0.1	0.0	0.2	0.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.4	1.5	0.0	0.0	0.1	0.0	0.8	0.5	2.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	18.2	18.7	0.0	0.0	11.2	0.0	12.7	10.0	13.2	10.6
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		371			167			148			481	
Approach Delay, s/veh		18.3			18.7			12.5			12.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	22.0		16.8	7.7	24.1		16.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.6	4.5		7.8	2.4	9.1		9.3				
Green Ext Time (p_c), s	0.2	0.7		1.6	0.0	2.1		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		15.2	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	106	146	47	65	41	21	93	22	84	316	43
Future Volume (veh/h)	89	106	146	47	65	41	21	93	22	84	316	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	115	159	51	71	45	23	101	24	91	343	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	233	203	327	136	137	65	401	450	107	603	657	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.31	0.31	0.07	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.4	0.0	18.2	18.7	0.0	0.0	11.2	0.0	12.7	10.0	13.2	10.6
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		371			167			148			481	
Approach Delay, s/veh		18.3			18.7			12.5			12.3	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	9.8	22.0		16.8	7.7	24.1		16.8
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.4
Max Q Clear (g_c+I1), s	3.6	4.5		7.8	2.4	9.1		9.3
Green Ext Time (g_e), s	0.2	0.7		1.6	0.0	2.1		0.8
Prob of Phs Call (p_c)	0.71	1.00		1.00	0.27	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			606	1781			192

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1461		986		1870		667

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		347		1585		1585		317

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

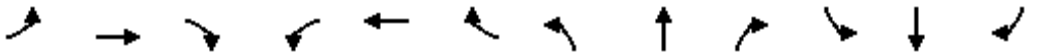
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	91	0	0	212	23	0	0	167
Grp Sat Flow (s), veh/h/ln	1781	0	0	1592	1781	0	0	1175
Q Serve Time (g_s), s	1.6	0.0	0.0	0.0	0.4	0.0	0.0	1.5
Cycle Q Clear Time (g_c), s	1.6	0.0	0.0	5.8	0.4	0.0	0.0	7.3
Perm LT Sat Flow (s_l), veh/h/ln	1266	0	0	1296	994	0	0	1123
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1547	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	10.0	15.0	0.0	0.0	10.0
Perm LT Serve Time (g_u), s	12.5	0.0	0.0	2.8	10.0	0.0	0.0	4.2
Perm LT Q Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.1	0.0	0.0	1.5
Time to First Blk (g_f), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	3.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	3.1
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	603	0	0	436	401	0	0	339
V/C Ratio (X)	0.15	0.00	0.00	0.49	0.06	0.00	0.00	0.49
Avail Cap (c_a), veh/h	1388	0	0	910	1267	0	0	795
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	9.9	0.0	0.0	17.5	11.1	0.0	0.0	17.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.1	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.0	0.0	0.0	18.4	11.2	0.0	0.0	18.7
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	1.9	0.1	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	2.0	0.1	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.01	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	343	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	657	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2114	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	13.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	125	0	159	0	47	0	0
Grp Sat Flow (s), veh/h/ln	0	1808	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	2.5	0.0	4.3	0.0	1.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	4.3	0.0	1.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	557	0	327	0	557	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.49	0.00	0.08	0.00	0.00
Avail Cap (c_a), veh/h	0	2043	0	814	0	1791	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.5	0.0	17.0	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	1.1	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.7	0.0	18.2	0.0	10.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.3	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	1.4	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.20	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	0	123	1	0	0	25	252	1	0	569	43
Future Volume (vph)	84	0	123	1	0	0	25	252	1	0	569	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	0	134	1	0	0	27	274	1	0	618	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	134	0	1	0	27	274	1	0	618	47
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			

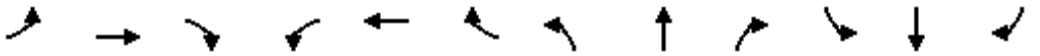
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	0	123	1	0	0	25	252	1	0	569	43
Future Vol, veh/h	84	0	123	1	0	0	25	252	1	0	569	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	0	134	1	0	0	27	274	1	0	618	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	947	947	618	1037	993	274	665	0	0	275	0	0
Stage 1	618	618	-	328	328	-	-	-	-	-	-	-
Stage 2	329	329	-	709	665	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	241	261	489	209	245	765	924	-	-	1288	-	-
Stage 1	477	481	-	685	647	-	-	-	-	-	-	-
Stage 2	684	646	-	425	458	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	236	253	489	148	238	765	924	-	-	1288	-	-
Mov Cap-2 Maneuver	236	253	-	148	238	-	-	-	-	-	-	-
Stage 1	463	481	-	665	628	-	-	-	-	-	-	-
Stage 2	664	627	-	309	458	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21	29.5	0.8	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	924	-	-	236	489	148	1288	-	-
HCM Lane V/C Ratio	0.029	-	-	0.387	0.273	0.007	-	-	-
HCM Control Delay (s)	9	-	-	29.6	15.1	29.5	0	-	-
HCM Lane LOS	A	-	-	D	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.7	1.1	0	0	-	-

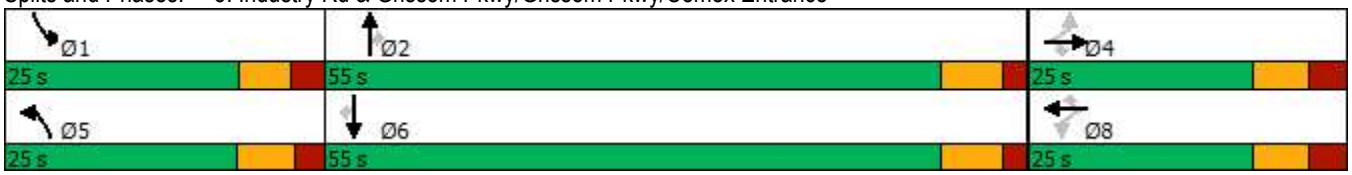


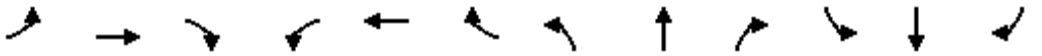
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3	440	50	1	0	246	94	40	3	125	18
Future Volume (vph)	22	3	440	50	1	0	246	94	40	3	125	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.756			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1408	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			478						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	3	478	54	1	0	267	102	43	3	136	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	3	478	54	1	0	267	102	43	3	136	20
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5		12.0	26.3	26.3	5.3	15.5	15.5
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.09	0.01	0.69	0.20	0.00		0.35	0.11	0.05	0.02	0.25	0.04
Control Delay	19.9	18.7	8.3	21.5	18.0		22.4	10.1	0.1	26.7	19.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	18.7	8.3	21.5	18.0		22.4	10.1	0.1	26.7	19.8	0.1
LOS	B	B	A	C	B		C	B	A	C	B	A
Approach Delay		8.9			21.4			17.0			17.5	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	7	1	0	16	0		39	12	0	1	33	0
Queue Length 95th (ft)	24	7	65	42	4		81	60	0	8	91	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	476	629	851	475	629		1205	1622	1393	625	1622	1393
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.56	0.11	0.00		0.22	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Future Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	3	0	54	1	0	267	102	43	3	136	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	208		307	208	177	451	821	696	7	581	493
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	24	3	0	54	1	0	267	102	43	3	136	20
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	1.7	0.0	0.0	3.5	1.5	0.7	0.1	2.6	0.4
Cycle Q Clear(g_c), s	0.7	0.1	0.0	1.7	0.0	0.0	3.5	1.5	0.7	0.1	2.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	208		307	208	177	451	821	696	7	581	493
V/C Ratio(X)	0.08	0.01		0.18	0.00	0.00	0.59	0.12	0.06	0.41	0.23	0.04
Avail Cap(c_a), veh/h	674	691		672	691	585	1327	1898	1609	688	1898	1609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	18.7	0.0	19.5	18.7	0.0	19.4	7.9	7.7	23.5	12.1	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.3	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	18.8	0.0	19.8	18.7	0.0	20.7	8.0	7.7	48.9	12.4	11.4
LnGrp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		27	A		55			412			159	
Approach Delay, s/veh		19.1			19.8			16.2			13.0	
Approach LOS		B			B			B			B	

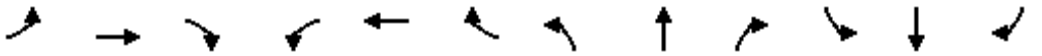
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.7		12.8	13.0	21.6		12.8				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.5		2.7	5.5	4.6		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Future Volume (veh/h)	22	3	440	50	1	0	246	94	40	3	125	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	3	0	54	1	0	267	102	43	3	136	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	309	208		307	208	177	451	821	696	7	581	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.2	18.8	0.0	19.8	18.7	0.0	20.7	8.0	7.7	48.9	12.4	11.4
Ln Grp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		27			55			412			159	
Approach Delay, s/veh		19.1			19.8			16.2			13.0	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.7		12.8	13.0	21.6		12.8
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.5		2.7	5.5	4.6		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.66	1.00	0.98		0.66
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	24	267	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1414
Q Serve Time (g_s), s	0.1	0.0	0.0	0.7	3.5	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.7	3.5	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	309	451	0	0	307
V/C Ratio (X)	0.41	0.00	0.00	0.08	0.59	0.00	0.00	0.18
Avail Cap (c_a), veh/h	688	0	0	674	1327	0	0	672
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.5	0.0	0.0	19.0	19.4	0.0	0.0	19.5
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.9	0.0	0.0	19.2	20.7	0.0	0.0	19.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.3	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.04	0.24	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	3	0	136	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.5	0.0	0.1	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.1	0.0	2.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	821	0	208	0	581	0	208
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	1898	0	691	0	1898	0	691
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	18.7	0.0	12.1	0.0	18.7
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	18.8	0.0	12.4	0.0	18.7
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

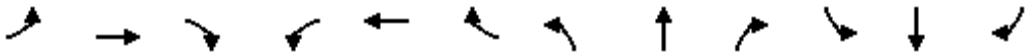
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	0	0	20	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	696	0	177	0	493	0	177
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	1609	0	585	0	1609	0	585
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.7	0.0	0.0	0.0	11.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	161	3	8	67	2	8	0	11	1	0	11
Future Volume (vph)	1	161	3	8	67	2	8	0	11	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.923			0.875	
Flt Protected					0.995			0.979			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1683	0	0	1623	0
Flt Permitted					0.995			0.979			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1683	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	175	3	9	73	2	9	0	12	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	84	0	0	21	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	161	3	8	67	2	8	0	11	1	0	11
Future Vol, veh/h	1	161	3	8	67	2	8	0	11	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	175	3	9	73	2	9	0	12	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	178	0	0	277	272	177	277	272	74
Stage 1	-	-	-	-	-	-	179	179	-	92	92	-
Stage 2	-	-	-	-	-	-	98	93	-	185	180	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1398	-	-	675	635	866	675	635	988
Stage 1	-	-	-	-	-	-	823	751	-	915	819	-
Stage 2	-	-	-	-	-	-	908	818	-	817	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1398	-	-	663	630	866	662	630	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	663	630	-	662	630	-
Stage 1	-	-	-	-	-	-	822	750	-	914	813	-
Stage 2	-	-	-	-	-	-	891	812	-	805	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1524	-	-	1398	-	-	949
HCM Lane V/C Ratio	0.027	0.001	-	-	0.006	-	-	0.014
HCM Control Delay (s)	9.8	7.4	0	-	7.6	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	267	1	14	107	1	39
Future Volume (vph)	267	1	14	107	1	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.994	0.999	
Satd. Flow (prot)	1863	0	0	1852	1615	0
Flt Permitted				0.994	0.999	
Satd. Flow (perm)	1863	0	0	1852	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1	15	116	1	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	0	0	131	43	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	267	1	14	107	1	39
Future Vol, veh/h	267	1	14	107	1	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	1	15	116	1	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	291	0	437	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1271	-	577	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	881	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1271	-	569	748
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	870	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	742	-	-	1271	-
HCM Lane V/C Ratio	0.059	-	-	0.012	-
HCM Control Delay (s)	10.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	305	0	9	109	0	19
Future Volume (vph)	305	0	9	109	0	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1863	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1863	0	0	1855	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	332	0	10	118	0	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	332	0	0	128	21	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

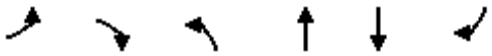
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	305	0	9	109	0	19
Future Vol, veh/h	305	0	9	109	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	332	0	10	118	0	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	332	0	470	332
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	138	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1227	-	552	710
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	889	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1227	-	547	710
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	881	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	710	-	-	1227	-
HCM Lane V/C Ratio	0.029	-	-	0.008	-
HCM Control Delay (s)	10.2	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	15	36	12	2
Future Volume (vph)	2	5	15	36	12	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.982	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1660	0	0	1837	1829	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1660	0	0	1837	1829	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	16	39	13	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	55	15	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

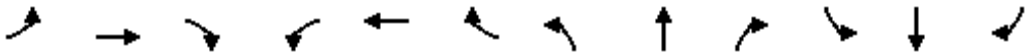
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	15	36	12	2
Future Vol, veh/h	2	5	15	36	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	16	39	13	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	85	14	15	0	-	0
Stage 1	14	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	916	1066	1603	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	1066	1603	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	952	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1603	-	1015	-	-
HCM Lane V/C Ratio	0.01	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	44	0	6	13	49	0	3	18	143	0	0
Future Volume (vph)	0	44	0	6	13	49	0	3	18	143	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.903			0.883				
Flt Protected					0.995						0.950	
Satd. Flow (prot)	0	1863	0	0	1674	0	0	1645	0	0	1770	0
Flt Permitted					0.995						0.950	
Satd. Flow (perm)	0	1863	0	0	1674	0	0	1645	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	48	0	7	14	53	0	3	20	155	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	74	0	0	23	0	0	155	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.5%		ICU Level of Service A	
Analysis Period (min) 15			

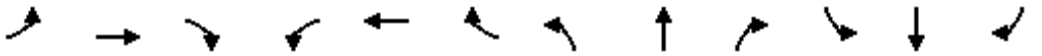
Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	44	0	6	13	49	0	3	18	143	0	0
Future Vol, veh/h	0	44	0	6	13	49	0	3	18	143	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	0	7	14	53	0	3	20	155	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	67	0	0	48	0	0	103	129	48	115	103	41
Stage 1	-	-	-	-	-	-	48	48	-	55	55	-
Stage 2	-	-	-	-	-	-	55	81	-	60	48	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1535	-	-	1559	-	-	877	762	1021	862	787	1030
Stage 1	-	-	-	-	-	-	965	855	-	957	849	-
Stage 2	-	-	-	-	-	-	957	828	-	951	855	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1535	-	-	1559	-	-	873	758	1021	840	783	1030
Mov Cap-2 Maneuver	-	-	-	-	-	-	873	758	-	840	783	-
Stage 1	-	-	-	-	-	-	965	855	-	957	845	-
Stage 2	-	-	-	-	-	-	952	824	-	929	855	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.8	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	973	1535	-	-	1559	-	-	840
HCM Lane V/C Ratio	0.023	-	-	-	0.004	-	-	0.185
HCM Control Delay (s)	8.8	0	-	-	7.3	0	-	10.3
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.7

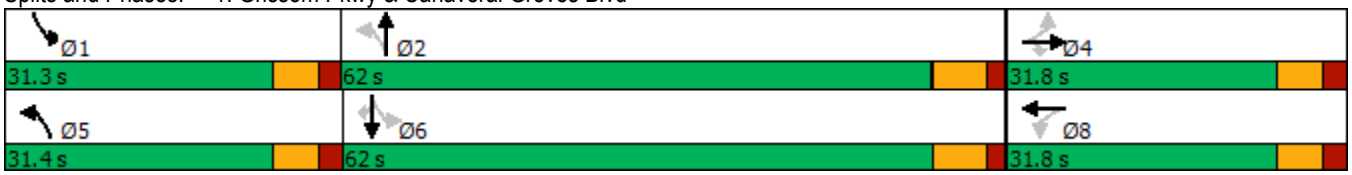


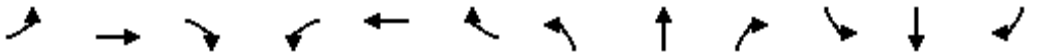
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	97	56	33	118	69	142	365	76	82	198	45
Future Volume (vph)	42	97	56	33	118	69	142	365	76	82	198	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.958			0.974				0.850
Flt Protected		0.985			0.993		0.950			0.950		
Satd. Flow (prot)	0	1835	1583	0	1772	0	1770	1814	0	1770	1863	1583
Flt Permitted		0.784			0.921		0.536			0.403		
Satd. Flow (perm)	0	1460	1583	0	1644	0	998	1814	0	751	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		16			11				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	105	61	36	128	75	154	397	83	89	215	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	61	0	239	0	154	480	0	89	215	49
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		15.5	15.5		15.5		36.1	27.7		30.3	22.1	22.1
Actuated g/C Ratio		0.23	0.23		0.23		0.53	0.41		0.44	0.32	0.32
v/c Ratio		0.45	0.14		0.62		0.24	0.65		0.20	0.36	0.09
Control Delay		29.1	3.4		30.9		8.7	23.2		9.1	20.6	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		29.1	3.4		30.9		8.7	23.2		9.1	20.6	1.6
LOS		C	A		C		A	C		A	C	A
Approach Delay		21.7			30.9			19.7			15.0	
Approach LOS		C			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		53	0		81		26	162		15	66	0
Queue Length 95th (ft)		125	16		181		66	320		41	144	8
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		555	657		634		864	1495		818	1531	1317
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.27	0.09		0.38		0.18	0.32		0.11	0.14	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 68.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 64.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	97	56	33	118	69	142	365	76	82	198	45
Future Volume (veh/h)	42	97	56	33	118	69	142	365	76	82	198	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	105	61	36	128	75	154	397	83	89	215	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	273	307	112	194	103	557	507	106	360	590	500
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.34	0.34	0.07	0.32	0.32
Sat Flow, veh/h	356	1412	1585	157	1004	531	1781	1500	314	1781	1870	1585
Grp Volume(v), veh/h	151	0	61	239	0	0	154	0	480	89	215	49
Grp Sat Flow(s),veh/h/ln	1768	0	1585	1691	0	0	1781	0	1814	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	1.6	3.0	0.0	0.0	2.8	0.0	12.0	1.6	4.5	1.1
Cycle Q Clear(g_c), s	3.6	0.0	1.6	6.6	0.0	0.0	2.8	0.0	12.0	1.6	4.5	1.1
Prop In Lane	0.30		1.00	0.15		0.31	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	435	0	307	409	0	0	557	0	613	360	590	500
V/C Ratio(X)	0.35	0.00	0.20	0.58	0.00	0.00	0.28	0.00	0.78	0.25	0.36	0.10
Avail Cap(c_a), veh/h	913	0	784	905	0	0	1277	0	1975	1115	2036	1725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	17.1	19.0	0.0	0.0	10.0	0.0	15.1	11.3	13.4	12.2
Incr Delay (d2), s/veh	0.5	0.0	0.3	1.3	0.0	0.0	0.3	0.0	2.2	0.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.5	2.4	0.0	0.0	0.8	0.0	4.1	0.5	1.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	17.4	20.4	0.0	0.0	10.2	0.0	17.3	11.7	13.7	12.3
LnGrp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		212			239			634			353	
Approach Delay, s/veh		18.1			20.4			15.6			13.0	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	24.1		16.6	11.0	23.0		16.6				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.6	14.0		5.6	4.8	6.5		8.6				
Green Ext Time (p_c), s	0.2	3.0		0.9	0.4	1.3		1.2				

Intersection Summary			
HCM 6th Ctrl Delay		16.1	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	97	56	33	118	69	142	365	76	82	198	45
Future Volume (veh/h)	42	97	56	33	118	69	142	365	76	82	198	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	105	61	36	128	75	154	397	83	89	215	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	162	273	307	112	194	103	557	507	106	360	590	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.09	0.34	0.34	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.3	0.0	17.4	20.4	0.0	0.0	10.2	0.0	17.3	11.7	13.7	12.3
Ln Grp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		212			239			634			353	
Approach Delay, s/veh		18.1			20.4			15.6			13.0	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	9.9	24.1		16.6	11.0	23.0		16.6
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.9	3.7	4.7		5.3
Max Q Clear (g_c+I1), s	3.6	14.0		5.6	4.8	6.5		8.6
Green Ext Time (g_e), s	0.2	3.0		0.9	0.4	1.3		1.2
Prob of Phs Call (p_c)	0.71	1.00		1.00	0.88	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			356	1781			157

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1500		1412		1870		1004

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		314		1585		1585		531

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

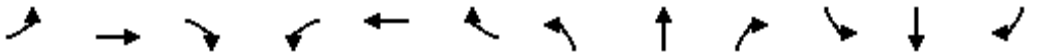
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	89	0	0	151	154	0	0	239
Grp Sat Flow (s), veh/h/ln	1781	0	0	1768	1781	0	0	1691
Q Serve Time (g_s), s	1.6	0.0	0.0	0.0	2.8	0.0	0.0	3.0
Cycle Q Clear Time (g_c), s	1.6	0.0	0.0	3.6	2.8	0.0	0.0	6.6
Perm LT Sat Flow (s_l), veh/h/ln	915	0	0	1198	1115	0	0	1239
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1842	0	0	0	0
Perm LT Eff Green (g_p), s	16.0	0.0	0.0	9.8	16.0	0.0	0.0	9.8
Perm LT Serve Time (g_u), s	5.0	0.0	0.0	3.2	11.5	0.0	0.0	6.2
Perm LT Q Serve Time (g_ps), s	1.2	0.0	0.0	0.0	0.7	0.0	0.0	3.0
Time to First Blk (g_f), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.6
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.30	1.00	0.00	0.00	0.15
Lane Grp Cap (c), veh/h	360	0	0	435	557	0	0	409
V/C Ratio (X)	0.25	0.00	0.00	0.35	0.28	0.00	0.00	0.58
Avail Cap (c_a), veh/h	1115	0	0	913	1277	0	0	905
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.3	0.0	0.0	17.9	10.0	0.0	0.0	19.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.5	0.3	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.7	0.0	0.0	18.3	10.2	0.0	0.0	20.4
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	1.3	0.8	0.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	1.4	0.8	0.0	0.0	2.4
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.01	0.04	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	215	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	590	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2036	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	13.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	480	0	61	0	49	0	0
Grp Sat Flow (s), veh/h/ln	0	1814	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	12.0	0.0	1.6	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	1.6	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	1.00	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	613	0	307	0	500	0	0
V/C Ratio (X)	0.00	0.78	0.00	0.20	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	1975	0	784	0	1725	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.1	0.0	17.1	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.3	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.3	0.0	17.4	0.0	12.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.7	0.0	0.5	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.1	0.0	0.5	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.08	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	84	27	0	20	143	601	1	0	354	91
Future Volume (vph)	51	0	84	27	0	20	143	601	1	0	354	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	0	91	29	0	22	155	653	1	0	385	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	91	0	51	0	155	653	1	0	385	99
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

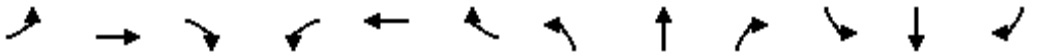
Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	0	84	27	0	20	143	601	1	0	354	91
Future Vol, veh/h	51	0	84	27	0	20	143	601	1	0	354	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	0	91	29	0	22	155	653	1	0	385	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1360	1349	385	1443	1447	653	484	0	0	654	0	0
Stage 1	385	385	-	963	963	-	-	-	-	-	-	-
Stage 2	975	964	-	480	484	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	126	151	663	110	131	467	1079	-	-	933	-	-
Stage 1	638	611	-	307	334	-	-	-	-	-	-	-
Stage 2	303	334	-	567	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	129	663	84	112	467	1079	-	-	933	-	-
Mov Cap-2 Maneuver	107	129	-	84	112	-	-	-	-	-	-	-
Stage 1	546	611	-	263	286	-	-	-	-	-	-	-
Stage 2	247	286	-	489	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.6	50.1	1.7	0
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1079	-	-	107	663	129	933	-	-
HCM Lane V/C Ratio	0.144	-	-	0.518	0.138	0.396	-	-	-
HCM Control Delay (s)	8.9	-	-	70.2	11.3	50.1	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.4	0.5	1.7	0	-	-

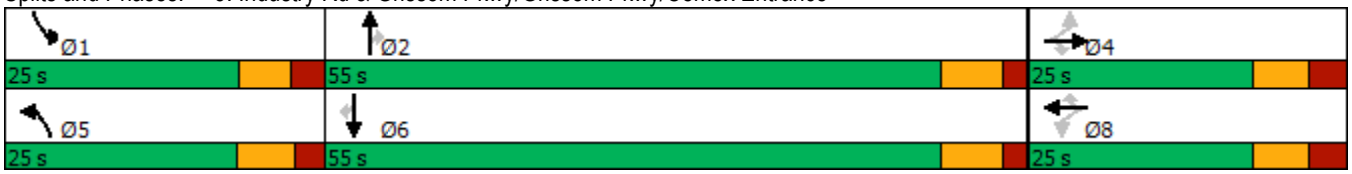


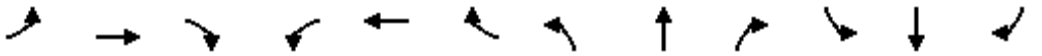
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	3	436	9	4	1	599	89	7	0	198	42
Future Volume (vph)	12	3	436	9	4	1	599	89	7	0	198	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.755			0.756			0.950					
Satd. Flow (perm)	1406	1863	1583	1408	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			474			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	3	474	10	4	1	651	97	8	0	215	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	3	474	10	4	1	651	97	8	0	215	46
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2	10.2	10.2	18.3	40.8	40.8		15.7	15.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.06	0.01	0.73	0.05	0.01	0.00	0.68	0.08	0.01		0.48	0.10
Control Delay	23.7	22.7	10.3	23.4	22.8	0.0	26.4	5.9	0.0		26.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.7	22.7	10.3	23.4	22.8	0.0	26.4	5.9	0.0		26.3	0.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.7			21.7			23.5			21.8	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	4	1	0	3	1	0	109	12	0		70	0
Queue Length 95th (ft)	18	8	74	15	9	0	#212	38	0		149	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	377	500	772	377	500	506	958	1375	1199		1375	1199
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.03	0.01	0.61	0.03	0.01	0.00	0.68	0.07	0.01		0.16	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 65.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Future Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	3	0	10	4	1	651	97	8	0	215	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	104		216	104	88	845	1244	1055	3	541	458
Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.24	0.67	0.67	0.00	0.29	0.29
Sat Flow, veh/h	1411	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	13	3	0	10	4	1	651	97	8	0	215	46
Grp Sat Flow(s),veh/h/ln	1411	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.1	0.0	0.3	0.1	0.0	9.1	0.9	0.1	0.0	4.8	1.1
Cycle Q Clear(g_c), s	0.6	0.1	0.0	0.4	0.1	0.0	9.1	0.9	0.1	0.0	4.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	104		216	104	88	845	1244	1055	3	541	458
V/C Ratio(X)	0.06	0.03		0.05	0.04	0.01	0.77	0.08	0.01	0.00	0.40	0.10
Avail Cap(c_a), veh/h	615	634		617	634	537	1219	1743	1477	632	1743	1477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	23.1	0.0	23.3	23.1	23.0	18.1	3.0	2.9	0.0	14.7	13.4
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.2	0.1	1.9	0.0	0.0	0.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	3.4	0.2	0.0	0.0	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	23.2	0.0	23.4	23.2	23.1	20.0	3.1	2.9	0.0	15.3	13.5
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		16	A		15			756			261	
Approach Delay, s/veh		23.4			23.3			17.7			15.0	
Approach LOS		C			C			B			B	

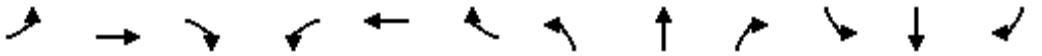
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	41.2		10.4	19.4	21.8		10.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.9		2.6	11.1	6.8		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Future Volume (veh/h)	12	3	436	9	4	1	599	89	7	0	198	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	3	0	10	4	1	651	97	8	0	215	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	104		216	104	88	845	1244	1055	3	541	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.24	0.67	0.67	0.00	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.5	23.2	0.0	23.4	23.2	23.1	20.0	3.1	2.9	0.0	15.3	13.5
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		16			15			756			261	
Approach Delay, s/veh		23.4			23.3			17.7			15.0	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	41.2		10.4	19.4	21.8		10.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	2.9		2.6	11.1	6.8		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.8		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.36	1.00	0.99		0.36
Prob of Max Out (p_x)	0.00	0.00		0.00	0.28	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1411	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	13	651	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1411	1728	0	0	1414
Q Serve Time (g_s), s	0.0	0.0	0.0	0.5	9.1	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.6	9.1	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1411	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	215	845	0	0	216
V/C Ratio (X)	0.00	0.00	0.00	0.06	0.77	0.00	0.00	0.05
Avail Cap (c_a), veh/h	632	0	0	615	1219	0	0	617
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.3	18.1	0.0	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.9	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.5	20.0	0.0	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	3.2	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	3.4	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.62	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	3	0	215	0	4
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.9	0.0	0.1	0.0	4.8	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.1	0.0	4.8	0.0	0.1
Lane Grp Cap (c), veh/h	0	1244	0	104	0	541	0	104
V/C Ratio (X)	0.00	0.08	0.00	0.03	0.00	0.40	0.00	0.04
Avail Cap (c_a), veh/h	0	1743	0	634	0	1743	0	634
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	23.1	0.0	14.7	0.0	23.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	23.2	0.0	15.3	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

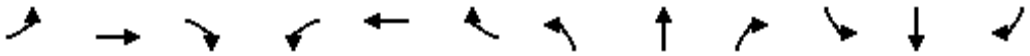
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	46	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1055	0	88	0	458	0	88
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.10	0.00	0.01
Avail Cap (c_a), veh/h	0	1477	0	537	0	1477	0	537
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	13.4	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	13.5	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	123	12	19	203	1	8	0	11	1	2	6
Future Volume (vph)	10	123	12	19	203	1	8	0	11	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.999			0.923			0.905	
Flt Protected		0.997			0.996			0.979			0.995	
Satd. Flow (prot)	0	1837	0	0	1853	0	0	1683	0	0	1677	0
Flt Permitted		0.997			0.996			0.979			0.995	
Satd. Flow (perm)	0	1837	0	0	1853	0	0	1683	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	134	13	21	221	1	9	0	12	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	243	0	0	21	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	123	12	19	203	1	8	0	11	1	2	6
Future Vol, veh/h	10	123	12	19	203	1	8	0	11	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	134	13	21	221	1	9	0	12	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	147	0	0	431	427	141	433	433	222
Stage 1	-	-	-	-	-	-	163	163	-	264	264	-
Stage 2	-	-	-	-	-	-	268	264	-	169	169	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1435	-	-	535	520	907	533	516	818
Stage 1	-	-	-	-	-	-	839	763	-	741	690	-
Stage 2	-	-	-	-	-	-	738	690	-	833	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1435	-	-	518	506	907	515	503	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	518	506	-	515	503	-
Stage 1	-	-	-	-	-	-	831	756	-	734	678	-
Stage 2	-	-	-	-	-	-	717	678	-	815	752	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	10.4	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	689	1347	-	-	1435	-	-	679
HCM Lane V/C Ratio	0.03	0.008	-	-	0.014	-	-	0.014
HCM Control Delay (s)	10.4	7.7	0	-	7.5	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	139	0	42	290	2	24
Future Volume (vph)	139	0	42	290	2	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.875	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1623	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1623	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	0	46	315	2	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	361	28	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	0	42	290	2	24
Future Vol, veh/h	139	0	42	290	2	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	0	46	315	2	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	558	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1430	-	491	895
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1430	-	472	895
Mov Cap-2 Maneuver	-	-	-	-	472	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	646	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	837	-	-	1430	-
HCM Lane V/C Ratio	0.034	-	-	0.032	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	0	23	290	0	13
Future Volume (vph)	163	0	23	290	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1863	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1863	0	0	1855	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	177	0	25	315	0	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	177	0	0	340	14	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

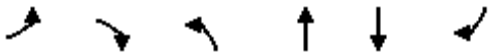
Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	163	0	23	290	0	13
Future Vol, veh/h	163	0	23	290	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	0	25	315	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	177	0	542	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	365	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1399	-	501	866
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1399	-	490	866
Mov Cap-2 Maneuver	-	-	-	-	490	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	866	-	-	1399	-
HCM Lane V/C Ratio	0.016	-	-	0.018	-
HCM Control Delay (s)	9.2	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	16	10	23	41	1
Future Volume (vph)	3	16	10	23	41	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885				0.997	
Flt Protected	0.993			0.985		
Satd. Flow (prot)	1637	0	0	1835	1857	0
Flt Permitted	0.993			0.985		
Satd. Flow (perm)	1637	0	0	1835	1857	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	17	11	25	45	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	36	46	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

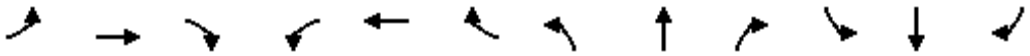
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	10	23	41	1
Future Vol, veh/h	3	16	10	23	41	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	17	11	25	45	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	93	46	46	0	-	0
Stage 1	46	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	907	1023	1562	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	901	1023	1562	-	-	-
Mov Cap-2 Maneuver	901	-	-	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1562	-	1002	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	0	20	50	164	0	2	12	95	2	0
Future Volume (vph)	0	27	0	20	50	164	0	2	12	95	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.905			0.883				
Flt Protected					0.996						0.953	
Satd. Flow (prot)	0	1863	0	0	1679	0	0	1645	0	0	1775	0
Flt Permitted					0.996						0.953	
Satd. Flow (perm)	0	1863	0	0	1679	0	0	1645	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	29	0	22	54	178	0	2	13	103	2	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	254	0	0	15	0	0	105	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

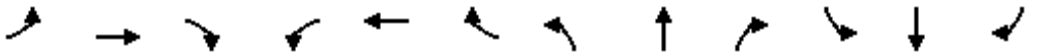
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	27	0	20	50	164	0	2	12	95	2	0
Future Vol, veh/h	0	27	0	20	50	164	0	2	12	95	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	0	22	54	178	0	2	13	103	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	29	0	0	217	305	29	224	216	143
Stage 1	-	-	-	-	-	-	29	29	-	187	187	-
Stage 2	-	-	-	-	-	-	188	276	-	37	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1584	-	-	739	608	1046	732	682	905
Stage 1	-	-	-	-	-	-	988	871	-	815	745	-
Stage 2	-	-	-	-	-	-	814	682	-	978	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1336	-	-	1584	-	-	728	598	1046	712	671	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	598	-	712	671	-
Stage 1	-	-	-	-	-	-	988	871	-	815	733	-
Stage 2	-	-	-	-	-	-	799	671	-	963	871	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.9	10.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	945	1336	-	-	1584	-	-	711
HCM Lane V/C Ratio	0.016	-	-	-	0.014	-	-	0.148
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	10.9
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.5

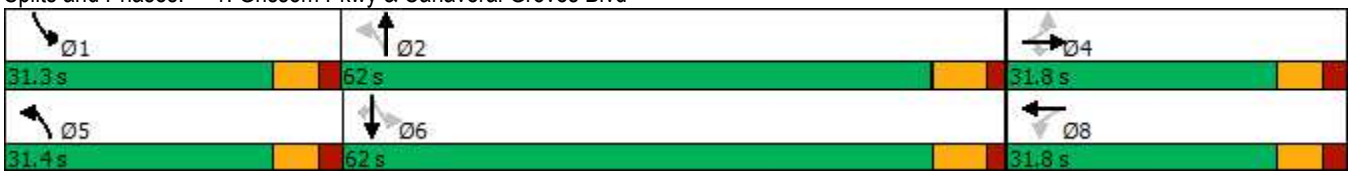


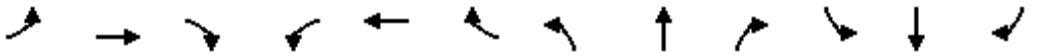
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	115	160	58	52	43	42	145	39	88	358	43
Future Volume (vph)	97	115	160	58	52	43	42	145	39	88	358	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.962			0.968				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1758	0	1770	1803	0	1770	1863	1583
Flt Permitted		0.800			0.785		0.459			0.580		
Satd. Flow (perm)	0	1490	1583	0	1407	0	855	1803	0	1080	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			174		14			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	105	125	174	63	57	47	46	158	42	96	389	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	174	0	167	0	46	200	0	96	389	47
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		18.7	18.7		18.7		25.7	19.8		28.2	23.1	23.1
Actuated g/C Ratio		0.29	0.29		0.29		0.40	0.31		0.44	0.36	0.36
v/c Ratio		0.53	0.30		0.39		0.10	0.35		0.17	0.58	0.07
Control Delay		25.9	5.3		21.8		9.7	20.0		9.9	23.1	1.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		25.9	5.3		21.8		9.7	20.0		9.9	23.1	1.5
LOS		C	A		C		A	C		A	C	A
Approach Delay		17.0			21.8			18.1			18.8	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		77	0		49		9	59		18	136	0
Queue Length 95th (ft)		165	43		115		26	124		45	255	7
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		618	758		591		834	1526		862	1573	1350
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.37	0.23		0.28		0.06	0.13		0.11	0.25	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 63.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 55.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	115	160	58	52	43	42	145	39	88	358	43
Future Volume (veh/h)	97	115	160	58	52	43	42	145	39	88	358	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	125	174	63	57	47	46	158	42	96	389	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	214	354	147	122	66	369	428	114	527	608	515
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.30	0.30	0.07	0.32	0.32
Sat Flow, veh/h	592	959	1585	214	545	297	1781	1424	378	1781	1870	1585
Grp Volume(v), veh/h	230	0	174	167	0	0	46	0	200	96	389	47
Grp Sat Flow(s),veh/h/ln	1551	0	1585	1056	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.8	1.7	0.0	0.0	0.9	0.0	4.4	1.8	8.9	1.0
Cycle Q Clear(g_c), s	6.7	0.0	4.8	8.4	0.0	0.0	0.9	0.0	4.4	1.8	8.9	1.0
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	451	0	354	335	0	0	369	0	541	527	608	515
V/C Ratio(X)	0.51	0.00	0.49	0.50	0.00	0.00	0.12	0.00	0.37	0.18	0.64	0.09
Avail Cap(c_a), veh/h	882	0	794	726	0	0	1177	0	1985	1288	2060	1746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	16.9	17.5	0.0	0.0	11.5	0.0	13.7	10.5	14.4	11.7
Incr Delay (d2), s/veh	0.9	0.0	1.1	1.1	0.0	0.0	0.2	0.0	0.4	0.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.6	1.5	0.0	0.0	0.3	0.0	1.4	0.5	3.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	18.0	18.7	0.0	0.0	11.7	0.0	14.2	10.7	15.5	11.8
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		404			167			246			532	
Approach Delay, s/veh		18.2			18.7			13.7			14.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		18.0	8.8	23.2		18.0				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	6.4		8.7	2.9	10.9		10.4				
Green Ext Time (p_c), s	0.2	1.1		1.7	0.1	2.4		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		15.9	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	115	160	58	52	43	42	145	39	88	358	43
Future Volume (veh/h)	97	115	160	58	52	43	42	145	39	88	358	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	125	174	63	57	47	46	158	42	96	389	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	237	214	354	147	122	66	369	428	114	527	608	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.30	0.30	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.4	0.0	18.0	18.7	0.0	0.0	11.7	0.0	14.2	10.7	15.5	11.8
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		404			167			246			532	
Approach Delay, s/veh		18.2			18.7			13.7			14.3	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	22.0		18.0	8.8	23.2		18.0
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.8	6.4		8.7	2.9	10.9		10.4
Green Ext Time (g_e), s	0.2	1.1		1.7	0.1	2.4		0.8
Prob of Phs Call (p_c)	0.74	1.00		1.00	0.47	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			592	1781			214

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1424		959		1870		545

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		378		1585		1585		297

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	96	0	0	230	46	0	0	167
Grp Sat Flow (s), veh/h/ln	1781	0	0	1551	1781	0	0	1056
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	0.9	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	6.7	0.9	0.0	0.0	8.4
Perm LT Sat Flow (s_l), veh/h/ln	1182	0	0	1311	953	0	0	1097
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1480	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	11.2	15.0	0.0	0.0	11.2
Perm LT Serve Time (g_u), s	10.6	0.0	0.0	2.8	7.4	0.0	0.0	4.5
Perm LT Q Serve Time (g_ps), s	0.4	0.0	0.0	0.0	0.4	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.1
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	527	0	0	451	369	0	0	335
V/C Ratio (X)	0.18	0.00	0.00	0.51	0.12	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1288	0	0	882	1177	0	0	726
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.5	0.0	0.0	17.5	11.5	0.0	0.0	17.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.7	0.0	0.0	18.4	11.7	0.0	0.0	18.7
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	2.1	0.3	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	2.2	0.3	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.01	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	389	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	608	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2060	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	200	0	174	0	47	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	4.4	0.0	4.8	0.0	1.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.4	0.0	4.8	0.0	1.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	541	0	354	0	515	0	0
V/C Ratio (X)	0.00	0.37	0.00	0.49	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	1985	0	794	0	1746	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.7	0.0	16.9	0.0	11.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	1.1	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.2	0.0	18.0	0.0	11.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	1.5	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	1.6	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.22	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	0	123	1	0	0	25	262	1	0	592	43
Future Volume (vph)	84	0	123	1	0	0	25	262	1	0	592	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	0	134	1	0	0	27	285	1	0	643	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	134	0	1	0	27	285	1	0	643	47
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.1%		ICU Level of Service A	
Analysis Period (min) 15			

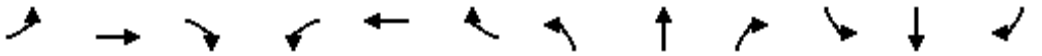
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	0	123	1	0	0	25	262	1	0	592	43
Future Vol, veh/h	84	0	123	1	0	0	25	262	1	0	592	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	0	134	1	0	0	27	285	1	0	643	47

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	983	983	643	1073	1029	285	690	0	0	286	0	0
Stage 1	643	643	-	339	339	-	-	-	-	-	-	-
Stage 2	340	340	-	734	690	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	228	249	473	198	234	754	905	-	-	1276	-	-
Stage 1	462	468	-	676	640	-	-	-	-	-	-	-
Stage 2	675	639	-	412	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	223	242	473	139	227	754	905	-	-	1276	-	-
Mov Cap-2 Maneuver	223	242	-	139	227	-	-	-	-	-	-	-
Stage 1	448	468	-	656	621	-	-	-	-	-	-	-
Stage 2	655	620	-	296	446	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	31.1	0.8	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	905	-	-	223	473	139	1276	-	-
HCM Lane V/C Ratio	0.03	-	-	0.409	0.283	0.008	-	-	-
HCM Control Delay (s)	9.1	-	-	31.9	15.6	31.1	0	-	-
HCM Lane LOS	A	-	-	D	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	1.2	0	0	-	-

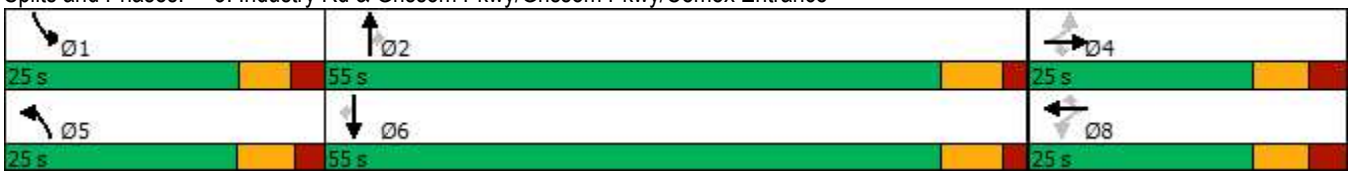


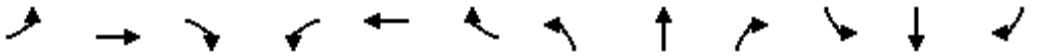
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	3	457	50	1	0	260	100	42	3	131	19
Future Volume (vph)	23	3	457	50	1	0	260	100	42	3	131	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.756			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1408	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			497						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	3	497	54	1	0	283	109	46	3	142	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	3	497	54	1	0	283	109	46	3	142	21
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5		12.3	26.6	26.6	5.3	15.6	15.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.09	0.01	0.70	0.20	0.00		0.36	0.12	0.05	0.02	0.26	0.04
Control Delay	20.1	18.7	8.5	21.7	19.0		22.4	10.0	0.1	26.7	20.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	18.7	8.5	21.7	19.0		22.4	10.0	0.1	26.7	20.2	0.2
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.1			21.6			17.0			17.8	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	7	1	0	16	0		42	13	0	1	35	0
Queue Length 95th (ft)	25	7	66	43	4		85	64	0	9	95	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	473	626	862	473	626		1200	1614	1387	622	1614	1387
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.58	0.11	0.00		0.24	0.07	0.03	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 54			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	3	457	50	1	0	260	100	42	3	131	19
Future Volume (veh/h)	23	3	457	50	1	0	260	100	42	3	131	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	3	0	54	1	0	283	109	46	3	142	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	209		307	209	177	467	828	702	7	579	490
Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	25	3	0	54	1	0	283	109	46	3	142	21
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.8	0.1	0.0	1.7	0.0	0.0	3.7	1.6	0.8	0.1	2.7	0.4
Cycle Q Clear(g_c), s	0.8	0.1	0.0	1.8	0.0	0.0	3.7	1.6	0.8	0.1	2.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	209		307	209	177	467	828	702	7	579	490
V/C Ratio(X)	0.08	0.01		0.18	0.00	0.00	0.61	0.13	0.07	0.41	0.25	0.04
Avail Cap(c_a), veh/h	669	685		666	685	580	1316	1882	1595	682	1882	1595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	18.9	0.0	19.7	18.9	0.0	19.5	7.9	7.6	23.7	12.3	11.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.4	0.5	0.2	0.1	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	18.9	0.0	20.0	18.9	0.0	20.7	8.0	7.7	49.1	12.6	11.6
LnGrp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		28	A		55			438			166	
Approach Delay, s/veh		19.3			20.0			16.2			13.1	
Approach LOS		B			B			B			B	

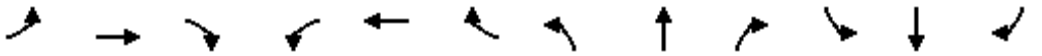
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.1		12.8	13.3	21.7		12.8				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.6		2.8	5.7	4.7		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.8	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	3	457	50	1	0	260	100	42	3	131	19
Future Volume (veh/h)	23	3	457	50	1	0	260	100	42	3	131	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	3	0	54	1	0	283	109	46	3	142	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	308	209		307	209	177	467	828	702	7	579	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.11	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.3	18.9	0.0	20.0	18.9	0.0	20.7	8.0	7.7	49.1	12.6	11.6
Ln Grp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		28			55			438			166	
Approach Delay, s/veh		19.3			20.0			16.2			13.1	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.1		12.8	13.3	21.7		12.8
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.6		2.8	5.7	4.7		3.8
Green Ext Time (g_e), s	0.0	1.0		0.0	0.8	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.67	1.00	0.99		0.67
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	25	283	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1414
Q Serve Time (g_s), s	0.1	0.0	0.0	0.8	3.7	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.8	3.7	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	308	467	0	0	307
V/C Ratio (X)	0.41	0.00	0.00	0.08	0.61	0.00	0.00	0.18
Avail Cap (c_a), veh/h	682	0	0	669	1316	0	0	666
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.7	0.0	0.0	19.2	19.5	0.0	0.0	19.7
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.1	0.0	0.0	19.3	20.7	0.0	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.3	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.4	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.04	0.26	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	109	0	3	0	142	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.6	0.0	0.1	0.0	2.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	0.1	0.0	2.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	828	0	209	0	579	0	209
V/C Ratio (X)	0.00	0.13	0.00	0.01	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	1882	0	685	0	1882	0	685
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	18.9	0.0	12.3	0.0	18.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	18.9	0.0	12.6	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

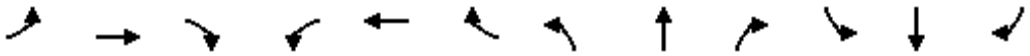
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	46	0	0	0	21	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	702	0	177	0	490	0	177
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	1595	0	580	0	1595	0	580
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	0.0	0.0	11.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.7	0.0	0.0	0.0	11.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	181	3	9	75	2	8	0	12	1	0	12
Future Volume (vph)	1	181	3	9	75	2	8	0	12	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.920			0.875	
Flt Protected					0.995			0.980			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1679	0	0	1623	0
Flt Permitted					0.995			0.980			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1679	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	197	3	10	82	2	9	0	13	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	94	0	0	22	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	181	3	9	75	2	8	0	12	1	0	12
Future Vol, veh/h	1	181	3	9	75	2	8	0	12	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	197	3	10	82	2	9	0	13	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	200	0	0	311	305	199	310	305	83
Stage 1	-	-	-	-	-	-	201	201	-	103	103	-
Stage 2	-	-	-	-	-	-	110	104	-	207	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1513	-	-	1372	-	-	642	608	842	642	608	976
Stage 1	-	-	-	-	-	-	801	735	-	903	810	-
Stage 2	-	-	-	-	-	-	895	809	-	795	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1513	-	-	1372	-	-	629	603	842	628	603	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	629	603	-	628	603	-
Stage 1	-	-	-	-	-	-	800	734	-	902	804	-
Stage 2	-	-	-	-	-	-	876	803	-	782	733	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	10	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	742	1513	-	-	1372	-	-	936
HCM Lane V/C Ratio	0.029	0.001	-	-	0.007	-	-	0.015
HCM Control Delay (s)	10	7.4	0	-	7.6	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	283	1	15	114	1	40
Future Volume (vph)	283	1	15	114	1	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.994	0.999	
Satd. Flow (prot)	1863	0	0	1852	1615	0
Flt Permitted				0.994	0.999	
Satd. Flow (perm)	1863	0	0	1852	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	1	16	124	1	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	309	0	0	140	44	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	1	15	114	1	40
Future Vol, veh/h	283	1	15	114	1	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	1	16	124	1	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	465	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	156	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1252	-	556	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	872	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	548	731
Mov Cap-2 Maneuver	-	-	-	-	548	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	725	-	-	1252	-
HCM Lane V/C Ratio	0.061	-	-	0.013	-
HCM Control Delay (s)	10.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	323	0	13	116	0	26
Future Volume (vph)	323	0	13	116	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	351	0	14	126	0	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	351	0	0	140	28	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.0%		ICU Level of Service A	
Analysis Period (min) 15			

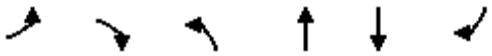
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	323	0	13	116	0	26
Future Vol, veh/h	323	0	13	116	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	351	0	14	126	0	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	351	0	505	351
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1208	-	527	692
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	874	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1208	-	521	692
Mov Cap-2 Maneuver	-	-	-	-	521	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	864	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	692	-	-	1208	-
HCM Lane V/C Ratio	0.041	-	-	0.012	-
HCM Control Delay (s)	10.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	15	38	13	2
Future Volume (vph)	2	5	15	38	13	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.983	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1660	0	0	1837	1831	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1660	0	0	1837	1831	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	16	41	14	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	57	16	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

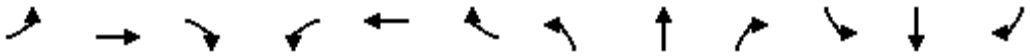
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	15	38	13	2
Future Vol, veh/h	2	5	15	38	13	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	16	41	14	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	88	15	16	0	-	0
Stage 1	15	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	913	1065	1602	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	904	1065	1602	-	-	-
Mov Cap-2 Maneuver	904	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1013	-	-
HCM Lane V/C Ratio	0.01	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	44	0	6	13	49	0	4	18	143	0	0
Future Volume (vph)	0	44	0	6	13	49	0	4	18	143	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.903			0.887				
Flt Protected					0.995						0.950	
Satd. Flow (prot)	0	1863	0	0	1674	0	0	1652	0	0	1770	0
Flt Permitted					0.995						0.950	
Satd. Flow (perm)	0	1863	0	0	1674	0	0	1652	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	48	0	7	14	53	0	4	20	155	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	74	0	0	24	0	0	155	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	44	0	6	13	49	0	4	18	143	0	0
Future Vol, veh/h	0	44	0	6	13	49	0	4	18	143	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	0	7	14	53	0	4	20	155	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	67	0	0	48	0	0	103	129	48	115	103	41
Stage 1	-	-	-	-	-	-	48	48	-	55	55	-
Stage 2	-	-	-	-	-	-	55	81	-	60	48	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1535	-	-	1559	-	-	877	762	1021	862	787	1030
Stage 1	-	-	-	-	-	-	965	855	-	957	849	-
Stage 2	-	-	-	-	-	-	957	828	-	951	855	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1535	-	-	1559	-	-	873	758	1021	839	783	1030
Mov Cap-2 Maneuver	-	-	-	-	-	-	873	758	-	839	783	-
Stage 1	-	-	-	-	-	-	965	855	-	957	845	-
Stage 2	-	-	-	-	-	-	952	824	-	928	855	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.8	10.3
HCM LOS			A	B

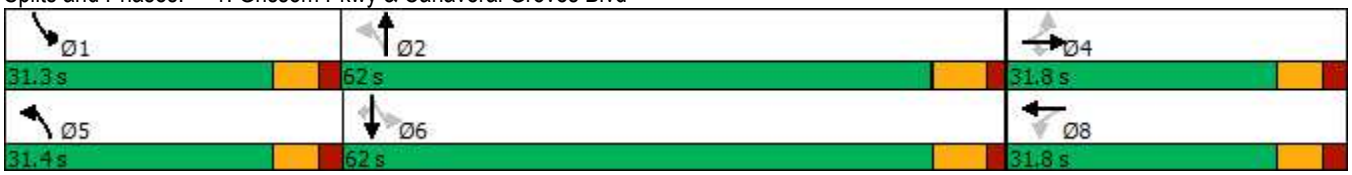
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	960	1535	-	-	1559	-	-	839
HCM Lane V/C Ratio	0.025	-	-	-	0.004	-	-	0.185
HCM Control Delay (s)	8.8	0	-	-	7.3	0	-	10.3
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.7

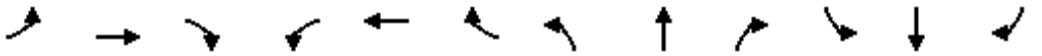
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	67	86	62	81	74	168	411	90	86	251	78
Future Volume (vph)	60	67	86	62	81	74	168	411	90	86	251	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.954			0.973				0.850
Flt Protected		0.977			0.986		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1752	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.707			0.856		0.465			0.337		
Satd. Flow (perm)	0	1317	1583	0	1521	0	866	1812	0	628	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			93		19			11				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	73	93	67	88	80	183	447	98	93	273	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	138	93	0	235	0	183	545	0	93	273	85
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		18.2	18.2		18.2		41.1	31.9		33.5	25.1	25.1
Actuated g/C Ratio		0.24	0.24		0.24		0.55	0.42		0.45	0.33	0.33
v/c Ratio		0.43	0.21		0.62		0.30	0.70		0.24	0.44	0.14
Control Delay		31.1	7.5		32.6		9.5	25.4		10.0	22.7	5.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.1	7.5		32.6		9.5	25.4		10.0	22.7	5.0
LOS		C	A		C		A	C		A	C	A
Approach Delay		21.6			32.6			21.4			16.7	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		54	0		88		36	212		17	96	0
Queue Length 95th (ft)		127	37		194		77	378		42	186	28
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		456	608		539		811	1379		757	1413	1222
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.30	0.15		0.44		0.23	0.40		0.12	0.19	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 75.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 21.7		Intersection LOS: C	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	67	86	62	81	74	168	411	90	86	251	78
Future Volume (veh/h)	60	67	86	62	81	74	168	411	90	86	251	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	73	93	67	88	80	183	447	98	93	273	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	205	334	143	140	104	532	549	120	331	624	529
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.10	0.37	0.37	0.07	0.33	0.33
Sat Flow, veh/h	561	972	1585	292	666	494	1781	1486	326	1781	1870	1585
Grp Volume(v), veh/h	138	0	93	235	0	0	183	0	545	93	273	85
Grp Sat Flow(s),veh/h/ln	1533	0	1585	1452	0	0	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	2.8	4.9	0.0	0.0	3.7	0.0	15.5	1.9	6.5	2.2
Cycle Q Clear(g_c), s	4.0	0.0	2.8	8.9	0.0	0.0	3.7	0.0	15.5	1.9	6.5	2.2
Prop In Lane	0.47		1.00	0.29		0.34	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	416	0	334	387	0	0	532	0	669	331	624	529
V/C Ratio(X)	0.33	0.00	0.28	0.61	0.00	0.00	0.34	0.00	0.81	0.28	0.44	0.16
Avail Cap(c_a), veh/h	756	0	695	738	0	0	1132	0	1747	991	1804	1529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	18.9	21.3	0.0	0.0	10.6	0.0	16.2	12.6	14.8	13.4
Incr Delay (d2), s/veh	0.5	0.0	0.4	1.5	0.0	0.0	0.4	0.0	2.5	0.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.0	2.8	0.0	0.0	1.1	0.0	5.5	0.6	2.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	19.3	22.8	0.0	0.0	11.0	0.0	18.7	13.0	15.3	13.5
LnGrp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		231			235			728			451	
Approach Delay, s/veh		19.5			22.8			16.8			14.5	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	28.1		18.8	12.2	26.0		18.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	17.5		6.0	5.7	8.5		10.9				
Green Ext Time (p_c), s	0.2	3.6		1.0	0.4	1.8		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		17.4	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	67	86	62	81	74	168	411	90	86	251	78
Future Volume (veh/h)	60	67	86	62	81	74	168	411	90	86	251	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	73	93	67	88	80	183	447	98	93	273	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	205	334	143	140	104	532	549	120	331	624	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.10	0.37	0.37	0.07	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.7	0.0	19.3	22.8	0.0	0.0	11.0	0.0	18.7	13.0	15.3	13.5
Ln Grp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		231			235			728			451	
Approach Delay, s/veh		19.5			22.8			16.8			14.5	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.2	28.1		18.8	12.2	26.0		18.8
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.3
Max Q Clear (g_c+I1), s	3.9	17.5		6.0	5.7	8.5		10.9
Green Ext Time (g_e), s	0.2	3.6		1.0	0.4	1.8		1.1
Prob of Phs Call (p_c)	0.77	1.00		1.00	0.94	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.02

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			561	1781			292

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1486		972		1870		666

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		326		1585		1585		494

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

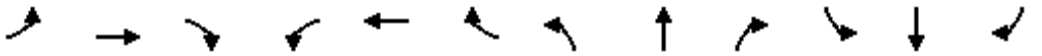
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	93	0	0	138	183	0	0	235
Grp Sat Flow (s), veh/h/ln	1781	0	0	1533	1781	0	0	1452
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	3.7	0.0	0.0	4.9
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	4.0	3.7	0.0	0.0	8.9
Perm LT Sat Flow (s_l), veh/h/ln	862	0	0	1237	1023	0	0	1239
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1440	0	0	0	0
Perm LT Eff Green (g_p), s	19.0	0.0	0.0	12.0	19.0	0.0	0.0	12.0
Perm LT Serve Time (g_u), s	5.6	0.0	0.0	3.1	12.5	0.0	0.0	8.0
Perm LT Q Serve Time (g_ps), s	1.6	0.0	0.0	0.0	1.4	0.0	0.0	4.9
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.9
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.47	1.00	0.00	0.00	0.29
Lane Grp Cap (c), veh/h	331	0	0	416	532	0	0	387
V/C Ratio (X)	0.28	0.00	0.00	0.33	0.34	0.00	0.00	0.61
Avail Cap (c_a), veh/h	991	0	0	756	1132	0	0	738
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.6	0.0	0.0	19.2	10.6	0.0	0.0	21.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.4	0.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.0	0.0	0.0	19.7	11.0	0.0	0.0	22.8
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	1.4	1.1	0.0	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	1.5	1.1	0.0	0.0	2.8
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.01	0.06	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	273	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	624	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.44	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1804	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	545	0	93	0	85	0	0
Grp Sat Flow (s), veh/h/ln	0	1812	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	15.5	0.0	2.8	0.0	2.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.5	0.0	2.8	0.0	2.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	669	0	334	0	529	0	0
V/C Ratio (X)	0.00	0.81	0.00	0.28	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1747	0	695	0	1529	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.2	0.0	18.9	0.0	13.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	19.3	0.0	13.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	0.9	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.5	0.0	1.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.14	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	84	27	0	20	143	625	1	0	367	91
Future Volume (vph)	51	0	84	27	0	20	143	625	1	0	367	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	0	91	29	0	22	155	679	1	0	399	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	91	0	51	0	155	679	1	0	399	99
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

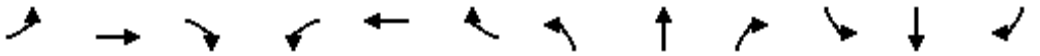
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	0	84	27	0	20	143	625	1	0	367	91
Future Vol, veh/h	51	0	84	27	0	20	143	625	1	0	367	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	0	91	29	0	22	155	679	1	0	399	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1400	1389	399	1483	1487	679	498	0	0	680	0	0
Stage 1	399	399	-	989	989	-	-	-	-	-	-	-
Stage 2	1001	990	-	494	498	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	118	142	651	103	124	452	1066	-	-	912	-	-
Stage 1	627	602	-	297	325	-	-	-	-	-	-	-
Stage 2	293	324	-	557	544	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	100	121	651	79	106	452	1066	-	-	912	-	-
Mov Cap-2 Maneuver	100	121	-	79	106	-	-	-	-	-	-	-
Stage 1	536	602	-	254	278	-	-	-	-	-	-	-
Stage 2	238	277	-	479	544	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	36.8	54.3	1.7	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1066	-	-	100	651	122	912	-	-
HCM Lane V/C Ratio	0.146	-	-	0.554	0.14	0.419	-	-	-
HCM Control Delay (s)	9	-	-	78.7	11.4	54.3	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.6	0.5	1.8	0	-	-

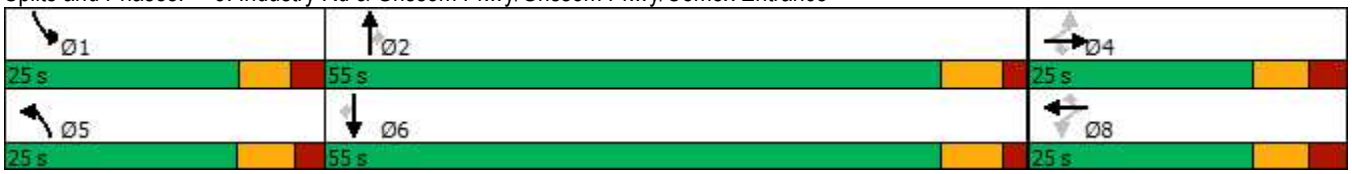


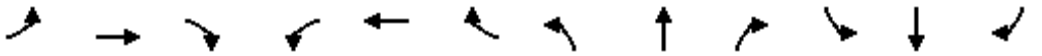
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	3	451	9	4	1	632	94	7	0	204	43
Future Volume (vph)	12	3	451	9	4	1	632	94	7	0	204	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.755			0.756			0.950					
Satd. Flow (perm)	1406	1863	1583	1408	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			490			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	3	490	10	4	1	687	102	8	0	222	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	3	490	10	4	1	687	102	8	0	222	47
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.4	10.4	10.4	10.4	10.4	10.4	18.3	41.2	41.2		16.0	16.0
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.06	0.01	0.74	0.05	0.01	0.00	0.72	0.09	0.01		0.49	0.10
Control Delay	23.9	23.0	10.4	23.7	23.2	0.0	28.3	5.9	0.0		26.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.9	23.0	10.4	23.7	23.2	0.0	28.3	5.9	0.0		26.5	0.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.8			22.0			25.1			22.0	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	4	1	0	3	1	0	117	12	0		73	0
Queue Length 95th (ft)	19	8	77	16	9	0	#248	39	0		153	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	496	781	374	496	503	951	1364	1191		1364	1191
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.03	0.01	0.63	0.03	0.01	0.00	0.72	0.07	0.01		0.16	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 20.0		Intersection LOS: B	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3	451	9	4	1	632	94	7	0	204	43
Future Volume (veh/h)	12	3	451	9	4	1	632	94	7	0	204	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	3	0	10	4	1	687	102	8	0	222	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	104		214	104	88	876	1252	1061	3	534	453
Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.25	0.67	0.67	0.00	0.29	0.29
Sat Flow, veh/h	1411	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	13	3	0	10	4	1	687	102	8	0	222	47
Grp Sat Flow(s),veh/h/ln	1411	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.1	0.0	0.4	0.1	0.0	9.7	1.0	0.1	0.0	5.0	1.1
Cycle Q Clear(g_c), s	0.6	0.1	0.0	0.4	0.1	0.0	9.7	1.0	0.1	0.0	5.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	104		214	104	88	876	1252	1061	3	534	453
V/C Ratio(X)	0.06	0.03		0.05	0.04	0.01	0.78	0.08	0.01	0.00	0.42	0.10
Avail Cap(c_a), veh/h	607	626		609	626	530	1202	1720	1458	623	1720	1458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	23.4	0.0	23.6	23.4	23.3	18.2	3.0	2.9	0.0	15.1	13.8
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.2	0.1	2.4	0.0	0.0	0.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.0	3.7	0.2	0.0	0.0	2.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	23.5	0.0	23.7	23.6	23.4	20.6	3.1	2.9	0.0	15.8	13.9
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		16	A		15			797			269	
Approach Delay, s/veh		23.7			23.6			18.2			15.4	
Approach LOS		C			C			B			B	

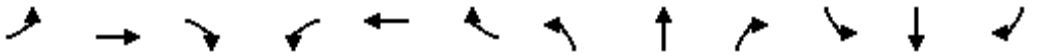
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	41.9		10.4	20.1	21.8		10.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.0		2.6	11.7	7.0		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.9		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3	451	9	4	1	632	94	7	0	204	43
Future Volume (veh/h)	12	3	451	9	4	1	632	94	7	0	204	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	3	0	10	4	1	687	102	8	0	222	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	213	104		214	104	88	876	1252	1061	3	534	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.25	0.67	0.67	0.00	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.8	23.5	0.0	23.7	23.6	23.4	20.6	3.1	2.9	0.0	15.8	13.9
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		16			15			797			269	
Approach Delay, s/veh		23.7			23.6			18.2			15.4	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	41.9		10.4	20.1	21.8		10.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	3.0		2.6	11.7	7.0		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.9		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.36	1.00	1.00		0.36
Prob of Max Out (p_x)	0.00	0.00		0.00	0.37	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1411	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	13	687	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1411	1728	0	0	1414
Q Serve Time (g_s), s	0.0	0.0	0.0	0.5	9.7	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.6	9.7	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1411	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	213	876	0	0	214
V/C Ratio (X)	0.00	0.00	0.00	0.06	0.78	0.00	0.00	0.05
Avail Cap (c_a), veh/h	623	0	0	607	1202	0	0	609
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.6	18.2	0.0	0.0	23.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	2.4	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.8	20.6	0.0	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	3.4	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	3.7	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.67	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	3	0	222	0	4
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.0	0.0	0.1	0.0	5.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.1	0.0	5.0	0.0	0.1
Lane Grp Cap (c), veh/h	0	1252	0	104	0	534	0	104
V/C Ratio (X)	0.00	0.08	0.00	0.03	0.00	0.42	0.00	0.04
Avail Cap (c_a), veh/h	0	1720	0	626	0	1720	0	626
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	23.4	0.0	15.1	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	23.5	0.0	15.8	0.0	23.6
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

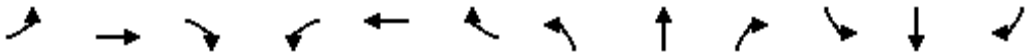
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	2.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	47	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1061	0	88	0	453	0	88
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.10	0.00	0.01
Avail Cap (c_a), veh/h	0	1458	0	530	0	1458	0	530
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	13.8	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	13.9	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	138	14	22	227	1	9	0	12	1	2	6
Future Volume (vph)	11	138	14	22	227	1	9	0	12	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.924			0.905	
Flt Protected		0.997			0.996			0.979			0.995	
Satd. Flow (prot)	0	1837	0	0	1855	0	0	1685	0	0	1677	0
Flt Permitted		0.997			0.996			0.979			0.995	
Satd. Flow (perm)	0	1837	0	0	1855	0	0	1685	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	150	15	24	247	1	10	0	13	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	177	0	0	272	0	0	23	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	138	14	22	227	1	9	0	12	1	2	6
Future Vol, veh/h	11	138	14	22	227	1	9	0	12	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	150	15	24	247	1	10	0	13	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	248	0	0	165	0	0	482	478	158	484	485	248
Stage 1	-	-	-	-	-	-	182	182	-	296	296	-
Stage 2	-	-	-	-	-	-	300	296	-	188	189	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1318	-	-	1413	-	-	495	486	887	493	482	791
Stage 1	-	-	-	-	-	-	820	749	-	712	668	-
Stage 2	-	-	-	-	-	-	709	668	-	814	744	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1318	-	-	1413	-	-	478	471	887	475	468	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	478	471	-	475	468	-
Stage 1	-	-	-	-	-	-	812	742	-	705	655	-
Stage 2	-	-	-	-	-	-	687	655	-	794	737	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	10.7	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	649	1318	-	-	1413	-	-	645
HCM Lane V/C Ratio	0.035	0.009	-	-	0.017	-	-	0.015
HCM Control Delay (s)	10.7	7.8	0	-	7.6	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	148	0	45	307	2	24
Future Volume (vph)	148	0	45	307	2	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.875	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1623	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1623	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	49	334	2	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	383	28	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	45	307	2	24
Future Vol, veh/h	148	0	45	307	2	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	0	49	334	2	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	593	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	468	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	448	884
Mov Cap-2 Maneuver	-	-	-	-	448	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	627	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	822	-	-	1418	-
HCM Lane V/C Ratio	0.034	-	-	0.034	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	173	0	36	308	0	18
Future Volume (vph)	173	0	36	308	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	0	39	335	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	188	0	0	374	20	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.6%		ICU Level of Service A	
Analysis Period (min) 15			

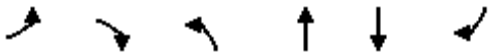
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	173	0	36	308	0	18
Future Vol, veh/h	173	0	36	308	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	188	0	39	335	0	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	188	0	601	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1386	-	463	854
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1386	-	447	854
Mov Cap-2 Maneuver	-	-	-	-	447	-
Stage 1	-	-	-	-	844	-
Stage 2	-	-	-	-	645	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	854	-	-	1386	-
HCM Lane V/C Ratio	0.023	-	-	0.028	-
HCM Control Delay (s)	9.3	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	18	11	24	42	1
Future Volume (vph)	3	18	11	24	42	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.997	
Flt Protected	0.994			0.984		
Satd. Flow (prot)	1635	0	0	1833	1857	0
Flt Permitted	0.994			0.984		
Satd. Flow (perm)	1635	0	0	1833	1857	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	20	12	26	46	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	38	47	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			

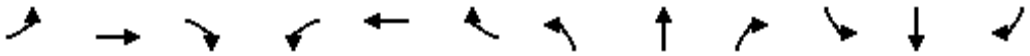
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	18	11	24	42	1
Future Vol, veh/h	3	18	11	24	42	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	20	12	26	46	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	97	47	47	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	902	1022	1560	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	895	1022	1560	-	-	-
Mov Cap-2 Maneuver	895	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1560	-	1002	-	-
HCM Lane V/C Ratio	0.008	-	0.023	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	27	0	20	50	164	0	2	12	95	3	0
Future Volume (vph)	0	27	0	20	50	164	0	2	12	95	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.905			0.883				
Flt Protected					0.996						0.954	
Satd. Flow (prot)	0	1863	0	0	1679	0	0	1645	0	0	1777	0
Flt Permitted					0.996						0.954	
Satd. Flow (perm)	0	1863	0	0	1679	0	0	1645	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	29	0	22	54	178	0	2	13	103	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	29	0	0	254	0	0	15	0	0	106	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	27	0	20	50	164	0	2	12	95	3	0
Future Vol, veh/h	0	27	0	20	50	164	0	2	12	95	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	0	22	54	178	0	2	13	103	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	232	0	0	29	0	0	218	305	29	224	216	143
Stage 1	-	-	-	-	-	-	29	29	-	187	187	-
Stage 2	-	-	-	-	-	-	189	276	-	37	29	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1336	-	-	1584	-	-	738	608	1046	732	682	905
Stage 1	-	-	-	-	-	-	988	871	-	815	745	-
Stage 2	-	-	-	-	-	-	813	682	-	978	871	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1336	-	-	1584	-	-	726	598	1046	712	671	905
Mov Cap-2 Maneuver	-	-	-	-	-	-	726	598	-	712	671	-
Stage 1	-	-	-	-	-	-	988	871	-	815	733	-
Stage 2	-	-	-	-	-	-	796	671	-	963	871	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	8.9	11
HCM LOS			A	B

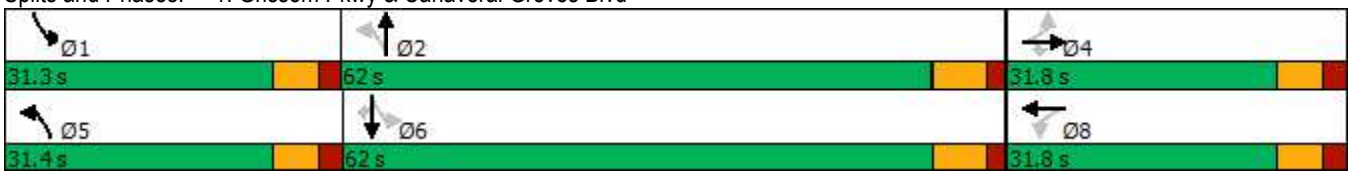
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	945	1336	-	-	1584	-	-	711
HCM Lane V/C Ratio	0.016	-	-	-	0.014	-	-	0.15
HCM Control Delay (s)	8.9	0	-	-	7.3	0	-	11
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.5

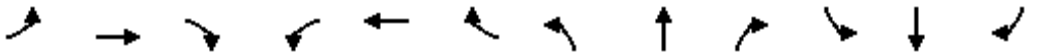
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	116	161	60	53	43	44	163	43	88	362	43
Future Volume (vph)	98	116	161	60	53	43	44	163	43	88	362	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.969				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1760	0	1770	1805	0	1770	1863	1583
Flt Permitted		0.797			0.782		0.446			0.571		
Satd. Flow (perm)	0	1485	1583	0	1403	0	831	1805	0	1064	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175		14			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	126	175	65	58	47	48	177	47	96	393	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	233	175	0	170	0	48	224	0	96	393	47
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		19.5	19.5		19.5		25.9	19.9		28.4	23.2	23.2
Actuated g/C Ratio		0.30	0.30		0.30		0.40	0.31		0.44	0.36	0.36
v/c Ratio		0.52	0.29		0.39		0.11	0.40		0.17	0.59	0.08
Control Delay		25.7	5.2		21.7		10.0	21.0		10.2	23.8	1.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		25.7	5.2		21.7		10.0	21.0		10.2	23.8	1.5
LOS		C	A		C		A	C		B	C	A
Approach Delay		16.9			21.7			19.0			19.4	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		79	0		50		9	69		19	143	0
Queue Length 95th (ft)		168	43		118		27	138		45	258	7
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		607	750		581		822	1510		851	1553	1335
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.38	0.23		0.29		0.06	0.15		0.11	0.25	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 64.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Future Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	126	175	65	58	47	48	177	47	96	393	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	217	364	149	122	66	362	424	113	503	600	508
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.30	0.30	0.07	0.32	0.32
Sat Flow, veh/h	589	946	1585	218	533	287	1781	1424	378	1781	1870	1585
Grp Volume(v), veh/h	233	0	175	170	0	0	48	0	224	96	393	47
Grp Sat Flow(s),veh/h/ln	1534	0	1585	1038	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.8	1.9	0.0	0.0	0.9	0.0	5.0	1.8	9.1	1.0
Cycle Q Clear(g_c), s	6.9	0.0	4.8	8.8	0.0	0.0	0.9	0.0	5.0	1.8	9.1	1.0
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	456	0	364	337	0	0	362	0	537	503	600	508
V/C Ratio(X)	0.51	0.00	0.48	0.50	0.00	0.00	0.13	0.00	0.42	0.19	0.66	0.09
Avail Cap(c_a), veh/h	870	0	787	712	0	0	1161	0	1969	1257	2043	1732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	16.8	17.6	0.0	0.0	11.7	0.0	14.2	10.8	14.7	12.0
Incr Delay (d2), s/veh	0.9	0.0	1.0	1.2	0.0	0.0	0.2	0.0	0.5	0.2	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.6	1.5	0.0	0.0	0.3	0.0	1.7	0.6	3.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	17.8	18.8	0.0	0.0	11.9	0.0	14.7	11.0	15.9	12.0
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		408			170			272			536	
Approach Delay, s/veh		18.1			18.8			14.2			14.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		18.4	8.8	23.1		18.4				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	7.0		8.9	2.9	11.1		10.8				
Green Ext Time (p_c), s	0.2	1.3		1.7	0.1	2.5		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		16.1	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Future Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	126	175	65	58	47	48	177	47	96	393	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	239	217	364	149	122	66	362	424	113	503	600	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.30	0.30	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.3	0.0	17.8	18.8	0.0	0.0	11.9	0.0	14.7	11.0	15.9	12.0
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		408			170			272			536	
Approach Delay, s/veh		18.1			18.8			14.2			14.7	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	22.0		18.4	8.8	23.1		18.4
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.8	7.0		8.9	2.9	11.1		10.8
Green Ext Time (g_e), s	0.2	1.3		1.7	0.1	2.5		0.8
Prob of Phs Call (p_c)	0.74	1.00		1.00	0.49	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.02	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			589	1781			218

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1424		946		1870		533

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		378		1585		1585		287

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

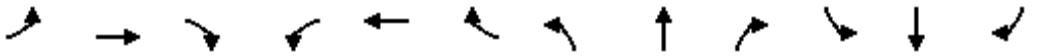
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	96	0	0	233	48	0	0	170
Grp Sat Flow (s), veh/h/ln	1781	0	0	1534	1781	0	0	1038
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	0.9	0.0	0.0	1.9
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	6.9	0.9	0.0	0.0	8.8
Perm LT Sat Flow (s_l), veh/h/ln	1157	0	0	1309	949	0	0	1095
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1456	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	11.6	15.0	0.0	0.0	11.6
Perm LT Serve Time (g_u), s	10.0	0.0	0.0	2.8	7.1	0.0	0.0	4.7
Perm LT Q Serve Time (g_ps), s	0.5	0.0	0.0	0.0	0.4	0.0	0.0	1.9
Time to First Blk (g_f), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	503	0	0	456	362	0	0	337
V/C Ratio (X)	0.19	0.00	0.00	0.51	0.13	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1257	0	0	870	1161	0	0	712
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.8	0.0	0.0	17.4	11.7	0.0	0.0	17.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.0	0.0	0.0	18.3	11.9	0.0	0.0	18.8
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	2.1	0.3	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.2	0.3	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	393	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	600	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2043	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	224	0	175	0	47	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	5.0	0.0	4.8	0.0	1.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	4.8	0.0	1.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	537	0	364	0	508	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.48	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	1969	0	787	0	1732	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.2	0.0	16.8	0.0	12.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.7	0.0	17.8	0.0	12.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	1.5	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	1.6	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.23	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	0	152	1	0	0	33	264	1	0	593	49
Future Volume (vph)	106	0	152	1	0	0	33	264	1	0	593	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	0	165	1	0	0	36	287	1	0	645	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	165	0	1	0	36	287	1	0	645	53
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

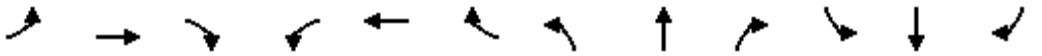
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	0	152	1	0	0	33	264	1	0	593	49
Future Vol, veh/h	106	0	152	1	0	0	33	264	1	0	593	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	0	165	1	0	0	36	287	1	0	645	53

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1005	1005	645	1113	1057	287	698	0	0	288	0	0
Stage 1	645	645	-	359	359	-	-	-	-	-	-	-
Stage 2	360	360	-	754	698	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	220	241	472	186	225	752	898	-	-	1274	-	-
Stage 1	461	467	-	659	627	-	-	-	-	-	-	-
Stage 2	658	626	-	401	442	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	213	231	472	117	216	752	898	-	-	1274	-	-
Mov Cap-2 Maneuver	213	231	-	117	216	-	-	-	-	-	-	-
Stage 1	443	467	-	633	602	-	-	-	-	-	-	-
Stage 2	632	601	-	261	442	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	36.1	1	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	898	-	-	213	472	117	1274	-	-
HCM Lane V/C Ratio	0.04	-	-	0.541	0.35	0.009	-	-	-
HCM Control Delay (s)	9.2	-	-	40.2	16.7	36.1	0	-	-
HCM Lane LOS	A	-	-	E	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	1.6	0	0	-	-

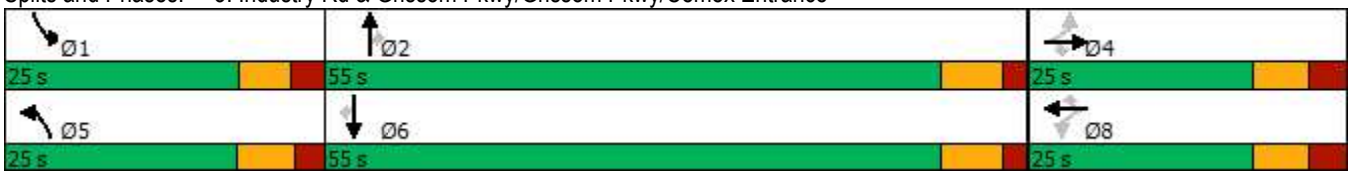


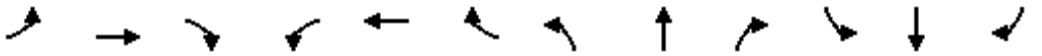
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	5	479	50	1	0	267	100	42	3	131	22
Future Volume (vph)	29	5	479	50	1	0	267	100	42	3	131	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.754			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1405	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			521						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	5	521	54	1	0	290	109	46	3	142	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	5	521	54	1	0	290	109	46	3	142	24
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.6	10.6	10.6	10.6	10.6		12.4	26.7	26.7	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.12	0.01	0.72	0.20	0.00		0.37	0.12	0.05	0.02	0.27	0.04
Control Delay	20.5	18.8	8.6	21.7	19.0		22.4	10.1	0.1	27.0	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	18.8	8.6	21.7	19.0		22.4	10.1	0.1	27.0	20.3	0.1
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.4			21.6			17.1			17.5	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	1	0	16	0		43	13	0	1	36	0
Queue Length 95th (ft)	29	9	68	43	4		87	64	0	9	95	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	472	624	877	471	624		1196	1610	1384	620	1610	1384
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.59	0.11	0.00		0.24	0.07	0.03	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 54.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Future Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	290	109	46	3	142	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	220		311	220	186	473	826	700	7	573	486
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	32	5	0	54	1	0	290	109	46	3	142	24
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.1	0.0	1.7	0.0	0.0	3.8	1.7	0.8	0.1	2.8	0.5
Cycle Q Clear(g_c), s	1.0	0.1	0.0	1.8	0.0	0.0	3.8	1.7	0.8	0.1	2.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	220		311	220	186	473	826	700	7	573	486
V/C Ratio(X)	0.10	0.02		0.17	0.00	0.00	0.61	0.13	0.07	0.41	0.25	0.05
Avail Cap(c_a), veh/h	662	678		657	678	574	1302	1863	1579	675	1863	1579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	18.9	0.0	19.7	18.8	0.0	19.6	8.0	7.8	24.0	12.6	11.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.0	1.5	0.6	0.2	0.1	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	18.9	0.0	20.0	18.8	0.0	20.9	8.1	7.8	49.4	12.8	11.8
LnGrp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37	A		55			445			169	
Approach Delay, s/veh		19.4			20.0			16.4			13.3	
Approach LOS		B			B			B			B	

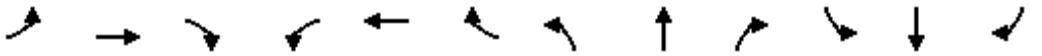
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.2		13.2	13.4	21.7		13.2				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.0	5.8	4.8		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.8	1.1		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		16.1
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Future Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	290	109	46	3	142	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	315	220		311	220	186	473	826	700	7	573	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.4	18.9	0.0	20.0	18.8	0.0	20.9	8.1	7.8	49.4	12.8	11.8
Ln Grp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37			55			445			169	
Approach Delay, s/veh		19.4			20.0			16.4			13.3	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.2		13.2	13.4	21.7		13.2
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.7		3.0	5.8	4.8		3.8
Green Ext Time (g_e), s	0.0	1.0		0.1	0.8	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.71	1.00	0.99		0.71
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	32	290	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1411
Q Serve Time (g_s), s	0.1	0.0	0.0	1.0	3.8	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.0	3.8	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	315	473	0	0	311
V/C Ratio (X)	0.41	0.00	0.00	0.10	0.61	0.00	0.00	0.17
Avail Cap (c_a), veh/h	675	0	0	662	1302	0	0	657
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.0	0.0	0.0	19.3	19.6	0.0	0.0	19.7
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.4	0.0	0.0	19.4	20.9	0.0	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	1.4	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.3	1.5	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.05	0.26	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	109	0	5	0	142	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	826	0	220	0	573	0	220
V/C Ratio (X)	0.00	0.13	0.00	0.02	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	1863	0	678	0	1863	0	678
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.0	0.0	18.9	0.0	12.6	0.0	18.8
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	18.9	0.0	12.8	0.0	18.8
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

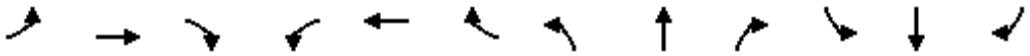
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	46	0	0	0	24	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	700	0	186	0	486	0	186
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.00
Avail Cap (c_a), veh/h	0	1579	0	574	0	1579	0	574
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	0.0	0.0	11.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	0.0	11.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	181	4	12	75	2	9	0	15	1	0	12
Future Volume (vph)	1	181	4	12	75	2	9	0	15	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.917			0.875	
Flt Protected					0.993			0.981			0.996	
Satd. Flow (prot)	0	1857	0	0	1844	0	0	1676	0	0	1623	0
Flt Permitted					0.993			0.981			0.996	
Satd. Flow (perm)	0	1857	0	0	1844	0	0	1676	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	197	4	13	82	2	10	0	16	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	0	0	97	0	0	26	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	181	4	12	75	2	9	0	15	1	0	12
Future Vol, veh/h	1	181	4	12	75	2	9	0	15	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	197	4	13	82	2	10	0	16	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	201	0	0	317	311	199	318	312	83
Stage 1	-	-	-	-	-	-	201	201	-	109	109	-
Stage 2	-	-	-	-	-	-	116	110	-	209	203	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1513	-	-	1371	-	-	636	604	842	635	603	976
Stage 1	-	-	-	-	-	-	801	735	-	896	805	-
Stage 2	-	-	-	-	-	-	889	804	-	793	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1513	-	-	1371	-	-	622	597	842	617	596	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	622	597	-	617	596	-
Stage 1	-	-	-	-	-	-	800	734	-	895	797	-
Stage 2	-	-	-	-	-	-	868	796	-	777	732	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	10	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	743	1513	-	-	1371	-	-	934
HCM Lane V/C Ratio	0.035	0.001	-	-	0.01	-	-	0.015
HCM Control Delay (s)	10	7.4	0	-	7.7	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	283	1	18	114	1	43
Future Volume (vph)	283	1	18	114	1	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.993	0.999	
Satd. Flow (prot)	1863	0	0	1850	1615	0
Flt Permitted				0.993	0.999	
Satd. Flow (perm)	1863	0	0	1850	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	1	20	124	1	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	309	0	0	144	48	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	1	18	114	1	43
Future Vol, veh/h	283	1	18	114	1	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	1	20	124	1	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	473	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1252	-	550	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	541	731
Mov Cap-2 Maneuver	-	-	-	-	541	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	850	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	725	-	-	1252	-
HCM Lane V/C Ratio	0.066	-	-	0.016	-
HCM Control Delay (s)	10.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	326	0	13	119	0	26
Future Volume (vph)	326	0	13	119	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	354	0	14	129	0	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	354	0	0	143	28	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.2%		ICU Level of Service A	
Analysis Period (min) 15			

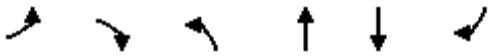
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	326	0	13	119	0	26
Future Vol, veh/h	326	0	13	119	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	354	0	14	129	0	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	354	0	511	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	157	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1205	-	523	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	516	690
Mov Cap-2 Maneuver	-	-	-	-	516	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	690	-	-	1205	-
HCM Lane V/C Ratio	0.041	-	-	0.012	-
HCM Control Delay (s)	10.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	15	38	13	5
Future Volume (vph)	5	5	15	38	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.964	
Flt Protected	0.976			0.986		
Satd. Flow (prot)	1694	0	0	1837	1796	0
Flt Permitted	0.976			0.986		
Satd. Flow (perm)	1694	0	0	1837	1796	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	5	16	41	14	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	57	19	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

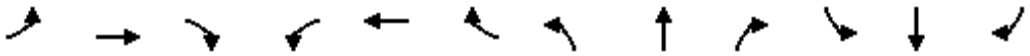
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	15	38	13	5
Future Vol, veh/h	5	5	15	38	13	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	16	41	14	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	90	17	19	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	910	1062	1597	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	901	1062	1597	-	-	-
Mov Cap-2 Maneuver	901	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1597	-	975	-	-
HCM Lane V/C Ratio	0.01	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	95	0	6	27	49	0	4	18	143	0	0
Future Volume (vph)	0	95	0	6	27	49	0	4	18	143	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.920			0.887				
Flt Protected					0.996						0.950	
Satd. Flow (prot)	0	1863	0	0	1707	0	0	1652	0	0	1770	0
Flt Permitted					0.996						0.950	
Satd. Flow (perm)	0	1863	0	0	1707	0	0	1652	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	103	0	7	29	53	0	4	20	155	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	89	0	0	24	0	0	155	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	95	0	6	27	49	0	4	18	143	0	0
Future Vol, veh/h	0	95	0	6	27	49	0	4	18	143	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	103	0	7	29	53	0	4	20	155	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	103	0	0	173	199	103	185	173	56
Stage 1	-	-	-	-	-	-	103	103	-	70	70	-
Stage 2	-	-	-	-	-	-	70	96	-	115	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1515	-	-	1489	-	-	790	697	952	776	720	1011
Stage 1	-	-	-	-	-	-	903	810	-	940	837	-
Stage 2	-	-	-	-	-	-	940	815	-	890	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1515	-	-	1489	-	-	787	694	952	753	716	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	787	694	-	753	716	-
Stage 1	-	-	-	-	-	-	903	810	-	940	833	-
Stage 2	-	-	-	-	-	-	935	811	-	867	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.1	11
HCM LOS			A	B

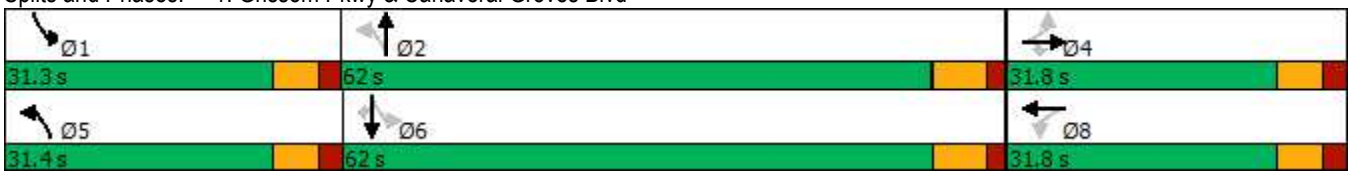
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	892	1515	-	-	1489	-	-	753
HCM Lane V/C Ratio	0.027	-	-	-	0.004	-	-	0.206
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	11
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.8

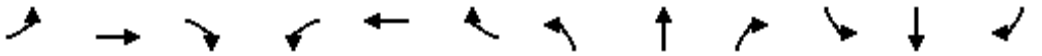
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	69	88	71	83	74	168	422	97	86	279	80
Future Volume (vph)	63	69	88	71	83	74	168	422	97	86	279	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956			0.972				0.850
Flt Protected		0.977			0.985		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1754	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.697			0.842		0.429			0.308		
Satd. Flow (perm)	0	1298	1583	0	1499	0	799	1811	0	574	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		17			12				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	75	96	77	90	80	183	459	105	93	303	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	96	0	247	0	183	564	0	93	303	87
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		20.2	20.2		20.2		42.7	33.4		34.9	26.5	26.5
Actuated g/C Ratio		0.26	0.26		0.26		0.54	0.42		0.44	0.34	0.34
v/c Ratio		0.43	0.20		0.62		0.32	0.73		0.25	0.48	0.15
Control Delay		31.4	7.4		33.5		10.1	26.8		10.6	24.0	5.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.4	7.4		33.5		10.1	26.8		10.6	24.0	5.1
LOS		C	A		C		B	C		B	C	A
Approach Delay		21.8			33.5			22.7			18.0	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		59	0		100		41	241		20	117	0
Queue Length 95th (ft)		135	39		213		76	395		42	207	29
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		428	586		506		774	1320		721	1352	1172
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.33	0.16		0.49		0.24	0.43		0.13	0.22	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 78.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.8		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Future Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	75	96	77	90	80	183	459	105	93	303	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	204	357	149	141	101	509	555	127	316	638	541
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.38	0.38	0.07	0.34	0.34
Sat Flow, veh/h	548	904	1585	313	625	449	1781	1473	337	1781	1870	1585
Grp Volume(v), veh/h	143	0	96	247	0	0	183	0	564	93	303	87
Grp Sat Flow(s),veh/h/ln	1452	0	1585	1387	0	0	1781	0	1810	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.0	5.9	0.0	0.0	3.9	0.0	17.1	2.0	7.7	2.3
Cycle Q Clear(g_c), s	4.7	0.0	3.0	10.5	0.0	0.0	3.9	0.0	17.1	2.0	7.7	2.3
Prop In Lane	0.48		1.00	0.31		0.32	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	357	391	0	0	509	0	682	316	638	541
V/C Ratio(X)	0.34	0.00	0.27	0.63	0.00	0.00	0.36	0.00	0.83	0.29	0.47	0.16
Avail Cap(c_a), veh/h	695	0	655	678	0	0	1068	0	1646	936	1701	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	19.3	22.3	0.0	0.0	11.1	0.0	17.1	13.3	15.7	13.9
Incr Delay (d2), s/veh	0.5	0.0	0.4	1.7	0.0	0.0	0.4	0.0	2.6	0.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.1	3.2	0.0	0.0	1.2	0.0	6.1	0.7	2.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	19.7	24.0	0.0	0.0	11.6	0.0	19.7	13.8	16.2	14.0
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		239			247			747			483	
Approach Delay, s/veh		20.0			24.0			17.7			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	29.8		20.4	12.4	27.6		20.4				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	19.1		6.7	5.9	9.7		12.5				
Green Ext Time (p_c), s	0.2	3.7		1.0	0.4	2.0		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Future Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	75	96	77	90	80	183	459	105	93	303	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	204	357	149	141	101	509	555	127	316	638	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.38	0.38	0.07	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	0.0	19.7	24.0	0.0	0.0	11.6	0.0	19.7	13.8	16.2	14.0
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		239			247			747			483	
Approach Delay, s/veh		20.0			24.0			17.7			15.4	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.3	29.8		20.4	12.4	27.6		20.4
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.0	19.1		6.7	5.9	9.7		12.5
Green Ext Time (g_e), s	0.2	3.7		1.0	0.4	2.0		1.1
Prob of Phs Call (p_c)	0.79	1.00		1.00	0.95	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.05

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			548	1781			313

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1473		904		1870		625

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		337		1585		1585		449

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

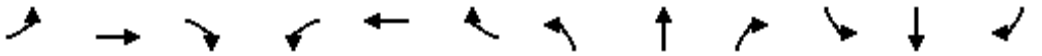
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	93	0	0	143	183	0	0	247
Grp Sat Flow (s), veh/h/ln	1781	0	0	1452	1781	0	0	1387
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	3.9	0.0	0.0	5.9
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	4.7	3.9	0.0	0.0	10.5
Perm LT Sat Flow (s_l), veh/h/ln	847	0	0	1234	994	0	0	1233
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1328	0	0	0	0
Perm LT Eff Green (g_p), s	20.6	0.0	0.0	13.6	20.6	0.0	0.0	13.6
Perm LT Serve Time (g_u), s	5.7	0.0	0.0	3.1	12.9	0.0	0.0	9.0
Perm LT Q Serve Time (g_ps), s	1.8	0.0	0.0	0.0	1.7	0.0	0.0	5.9
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	316	0	0	415	509	0	0	391
V/C Ratio (X)	0.29	0.00	0.00	0.34	0.36	0.00	0.00	0.63
Avail Cap (c_a), veh/h	936	0	0	695	1068	0	0	678
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.3	0.0	0.0	19.8	11.1	0.0	0.0	22.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.4	0.0	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.8	0.0	0.0	20.3	11.6	0.0	0.0	24.0
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	1.5	1.2	0.0	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	1.6	1.2	0.0	0.0	3.2
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.07	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	303	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	638	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1701	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	564	0	96	0	87	0	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	17.1	0.0	3.0	0.0	2.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.1	0.0	3.0	0.0	2.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	682	0	357	0	541	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.27	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1646	0	655	0	1442	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.1	0.0	19.3	0.0	13.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.7	0.0	19.7	0.0	14.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	1.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.1	0.0	1.1	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.15	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	106	27	0	20	183	625	1	0	368	111
Future Volume (vph)	61	0	106	27	0	20	183	625	1	0	368	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	115	29	0	22	199	679	1	0	400	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	115	0	51	0	199	679	1	0	400	121
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	10

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	106	27	0	20	183	625	1	0	368	111
Future Vol, veh/h	61	0	106	27	0	20	183	625	1	0	368	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	0	115	29	0	22	199	679	1	0	400	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1489	1478	400	1595	1598	679	521	0	0	680	0	0
Stage 1	400	400	-	1077	1077	-	-	-	-	-	-	-
Stage 2	1089	1078	-	518	521	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	126	650	86	106	452	1045	-	-	912	-	-
Stage 1	626	602	-	265	295	-	-	-	-	-	-	-
Stage 2	261	295	-	541	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	102	650	60	86	452	1045	-	-	912	-	-
Mov Cap-2 Maneuver	83	102	-	60	86	-	-	-	-	-	-	-
Stage 1	507	602	-	215	239	-	-	-	-	-	-	-
Stage 2	201	239	-	445	532	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.1	80.3	2.1	0
HCM LOS	F	F		

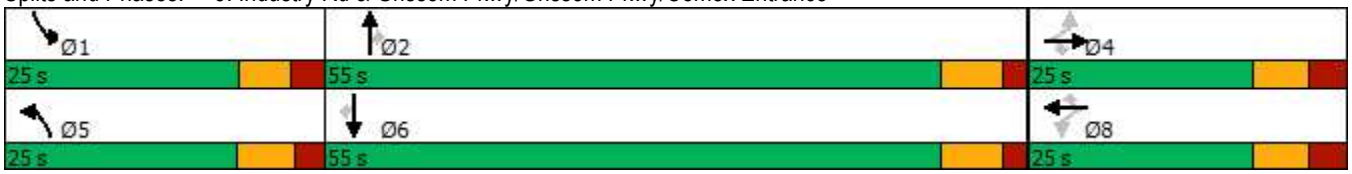
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1045	-	-	83	650	95	912	-	-
HCM Lane V/C Ratio	0.19	-	-	0.799	0.177	0.538	-	-	-
HCM Control Delay (s)	9.3	-	-	135.9	11.7	80.3	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	4.1	0.6	2.4	0	-	-

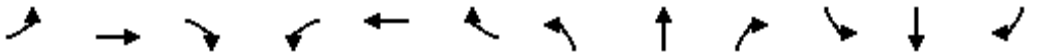
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	467	9	5	1	663	94	7	0	204	51
Future Volume (vph)	17	5	467	9	5	1	663	94	7	0	204	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.754			0.754			0.950					
Satd. Flow (perm)	1405	1863	1583	1405	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			508			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	5	508	10	5	1	721	102	8	0	222	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	508	10	5	1	721	102	8	0	222	55
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.0	16.0
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.08	0.02	0.75	0.05	0.02	0.00	0.76	0.09	0.01		0.49	0.12
Control Delay	24.4	23.2	10.5	23.7	23.2	0.0	29.7	6.0	0.0		26.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.4	23.2	10.5	23.7	23.2	0.0	29.7	6.0	0.0		26.5	0.7
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.1			22.0			26.5			21.4	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	6	2	0	3	2	0	124	12	0		73	0
Queue Length 95th (ft)	23	10	79	16	10	0	#268	39	0		153	3
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	496	794	374	496	502	950	1363	1190		1363	1190
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.01	0.64	0.03	0.01	0.00	0.76	0.07	0.01		0.16	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Future Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	123		223	123	104	901	1246	1056	3	521	442
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.26	0.67	0.67	0.00	0.28	0.28
Sat Flow, veh/h	1410	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Grp Sat Flow(s),veh/h/ln	1410	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	0.4	0.1	0.0	10.5	1.0	0.1	0.0	5.2	1.4
Cycle Q Clear(g_c), s	0.8	0.1	0.0	0.5	0.1	0.0	10.5	1.0	0.1	0.0	5.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	123		223	123	104	901	1246	1056	3	521	442
V/C Ratio(X)	0.08	0.04		0.04	0.04	0.01	0.80	0.08	0.01	0.00	0.43	0.12
Avail Cap(c_a), veh/h	590	610		591	610	517	1172	1676	1420	607	1676	1420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	23.5	0.0	23.7	23.5	23.4	18.5	3.2	3.0	0.0	15.8	14.5
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	3.1	0.0	0.0	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.1	0.1	0.0	4.1	0.2	0.0	0.0	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	23.7	0.0	23.8	23.7	23.5	21.6	3.2	3.0	0.0	16.5	14.6
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23	A		16			831			277	
Approach Delay, s/veh		24.0			23.7			19.2			16.1	
Approach LOS		C			C			B			B	

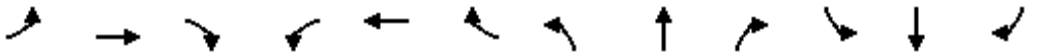
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	42.6		11.0	20.8	21.9		11.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.0		2.8	12.5	7.2		2.5				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.5	1.9		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Future Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	223	123		223	123	104	901	1246	1056	3	521	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.26	0.67	0.67	0.00	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.0	23.7	0.0	23.8	23.7	23.5	21.6	3.2	3.0	0.0	16.5	14.6
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23			16			831			277	
Approach Delay, s/veh		24.0			23.7			19.2			16.1	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	42.6		11.0	20.8	21.9		11.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	3.0		2.8	12.5	7.2		2.5
Green Ext Time (g_e), s	0.0	0.7		0.0	1.5	1.9		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.44	1.00	1.00		0.44
Prob of Max Out (p_x)	0.00	0.00		0.00	0.51	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1410	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	18	721	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1410	1728	0	0	1411
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	10.5	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.8	10.5	0.0	0.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1410	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	223	901	0	0	223
V/C Ratio (X)	0.00	0.00	0.00	0.08	0.80	0.00	0.00	0.04
Avail Cap (c_a), veh/h	607	0	0	590	1172	0	0	591
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.9	18.5	0.0	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	3.1	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.0	21.6	0.0	0.0	23.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	3.7	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	4.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.74	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	5	0	222	0	5
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.0	0.0	0.1	0.0	5.2	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.1	0.0	5.2	0.0	0.1
Lane Grp Cap (c), veh/h	0	1246	0	123	0	521	0	123
V/C Ratio (X)	0.00	0.08	0.00	0.04	0.00	0.43	0.00	0.04
Avail Cap (c_a), veh/h	0	1676	0	610	0	1676	0	610
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	23.5	0.0	15.8	0.0	23.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	23.7	0.0	16.5	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.1	0.0	2.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

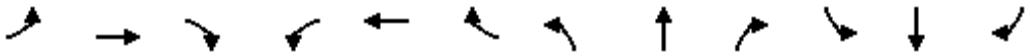
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.1	0.0	2.1	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	55	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1056	0	104	0	442	0	104
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.12	0.00	0.01
Avail Cap (c_a), veh/h	0	1420	0	517	0	1420	0	517
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	0.0	0.0	14.5	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	14.6	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	138	15	25	227	1	10	0	16	1	2	6
Future Volume (vph)	11	138	15	25	227	1	10	0	16	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.918			0.905	
Flt Protected		0.997			0.995			0.981			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1678	0	0	1677	0
Flt Permitted		0.997			0.995			0.981			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1678	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	150	16	27	247	1	11	0	17	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	275	0	0	28	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	138	15	25	227	1	10	0	16	1	2	6
Future Vol, veh/h	11	138	15	25	227	1	10	0	16	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	150	16	27	247	1	11	0	17	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	248	0	0	166	0	0	488	484	158	493	492	248
Stage 1	-	-	-	-	-	-	182	182	-	302	302	-
Stage 2	-	-	-	-	-	-	306	302	-	191	190	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1318	-	-	1412	-	-	490	483	887	486	478	791
Stage 1	-	-	-	-	-	-	820	749	-	707	664	-
Stage 2	-	-	-	-	-	-	704	664	-	811	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1318	-	-	1412	-	-	472	468	887	465	463	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	472	468	-	465	463	-
Stage 1	-	-	-	-	-	-	812	742	-	700	649	-
Stage 2	-	-	-	-	-	-	681	649	-	787	736	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.8	10.7	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	663	1318	-	-	1412	-	-	640
HCM Lane V/C Ratio	0.043	0.009	-	-	0.019	-	-	0.015
HCM Control Delay (s)	10.7	7.8	0	-	7.6	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	148	0	48	307	2	28
Future Volume (vph)	148	0	48	307	2	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.873	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1621	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1621	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	52	334	2	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	386	32	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	48	307	2	28
Future Vol, veh/h	148	0	48	307	2	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	0	52	334	2	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	599	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	465	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	444	884
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	829	-	-	1418	-
HCM Lane V/C Ratio	0.039	-	-	0.037	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	177	0	36	311	0	18
Future Volume (vph)	177	0	36	311	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	0	39	338	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	0	0	377	20	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

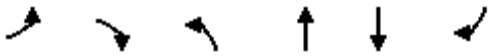
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	177	0	36	311	0	18
Future Vol, veh/h	177	0	36	311	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	192	0	39	338	0	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	192	0	608	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1381	-	459	850
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1381	-	443	850
Mov Cap-2 Maneuver	-	-	-	-	443	-
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	643	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	850	-	-	1381	-
HCM Lane V/C Ratio	0.023	-	-	0.028	-
HCM Control Delay (s)	9.3	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	18	11	24	42	4
Future Volume (vph)	7	18	11	24	42	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.989	
Flt Protected	0.986			0.984		
Satd. Flow (prot)	1660	0	0	1833	1842	0
Flt Permitted	0.986			0.984		
Satd. Flow (perm)	1660	0	0	1833	1842	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	20	12	26	46	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	38	50	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			

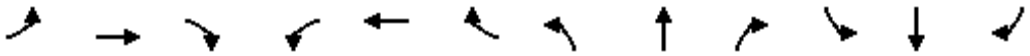
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	18	11	24	42	4
Future Vol, veh/h	7	18	11	24	42	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	20	12	26	46	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	98	48	50	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	901	1021	1557	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	894	1021	1557	-	-	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1557	-	982	-	-
HCM Lane V/C Ratio	0.008	-	0.028	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	59	0	20	110	164	0	2	12	95	3	0
Future Volume (vph)	0	59	0	20	110	164	0	2	12	95	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.925			0.883				
Flt Protected					0.997						0.954	
Satd. Flow (prot)	0	1863	0	0	1718	0	0	1645	0	0	1777	0
Flt Permitted					0.997						0.954	
Satd. Flow (perm)	0	1863	0	0	1718	0	0	1645	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	64	0	22	120	178	0	2	13	103	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	320	0	0	15	0	0	106	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	59	0	20	110	164	0	2	12	95	3	0
Future Vol, veh/h	0	59	0	20	110	164	0	2	12	95	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	64	0	22	120	178	0	2	13	103	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	64	0	0	319	406	64	325	317	209
Stage 1	-	-	-	-	-	-	64	64	-	253	253	-
Stage 2	-	-	-	-	-	-	255	342	-	72	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1263	-	-	1538	-	-	634	534	1000	628	599	831
Stage 1	-	-	-	-	-	-	947	842	-	751	698	-
Stage 2	-	-	-	-	-	-	749	638	-	938	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1263	-	-	1538	-	-	623	524	1000	609	588	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	524	-	609	588	-
Stage 1	-	-	-	-	-	-	947	842	-	751	685	-
Stage 2	-	-	-	-	-	-	732	627	-	923	842	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.1	12.2
HCM LOS			A	B

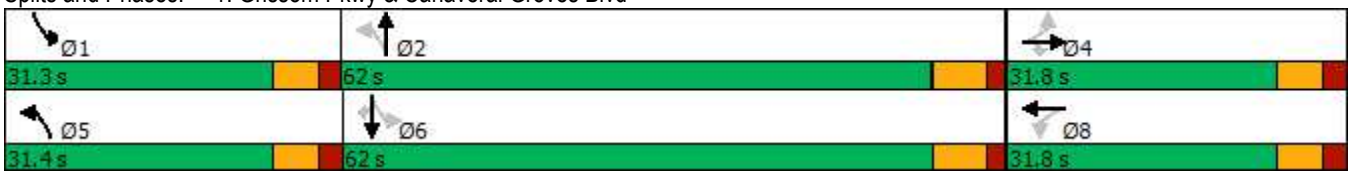
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	885	1263	-	-	1538	-	-	608
HCM Lane V/C Ratio	0.017	-	-	-	0.014	-	-	0.175
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	12.2
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	116	161	60	53	43	44	163	43	88	362	43
Future Volume (vph)	98	116	161	60	53	43	44	163	43	88	362	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.969				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1760	0	1770	1805	0	1770	1863	1583
Flt Permitted		0.797			0.782		0.446			0.571		
Satd. Flow (perm)	0	1485	1583	0	1403	0	831	1805	0	1064	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175		14			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	126	175	65	58	47	48	177	47	96	393	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	233	175	0	170	0	48	224	0	96	393	47
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		19.5	19.5		19.5		25.9	19.9		28.4	23.2	23.2
Actuated g/C Ratio		0.30	0.30		0.30		0.40	0.31		0.44	0.36	0.36
v/c Ratio		0.52	0.29		0.39		0.11	0.40		0.17	0.59	0.08
Control Delay		25.7	5.2		21.7		10.0	21.0		10.2	23.8	1.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		25.7	5.2		21.7		10.0	21.0		10.2	23.8	1.5
LOS		C	A		C		A	C		B	C	A
Approach Delay		16.9			21.7			19.0			19.4	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		79	0		50		9	69		19	143	0
Queue Length 95th (ft)		168	43		118		27	138		45	258	7
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		607	750		581		822	1510		851	1553	1335
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.38	0.23		0.29		0.06	0.15		0.11	0.25	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 64.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Future Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	126	175	65	58	47	48	177	47	96	393	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	217	364	149	122	66	362	424	113	503	600	508
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.30	0.30	0.07	0.32	0.32
Sat Flow, veh/h	589	946	1585	218	533	287	1781	1424	378	1781	1870	1585
Grp Volume(v), veh/h	233	0	175	170	0	0	48	0	224	96	393	47
Grp Sat Flow(s),veh/h/ln	1534	0	1585	1038	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.8	1.9	0.0	0.0	0.9	0.0	5.0	1.8	9.1	1.0
Cycle Q Clear(g_c), s	6.9	0.0	4.8	8.8	0.0	0.0	0.9	0.0	5.0	1.8	9.1	1.0
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	456	0	364	337	0	0	362	0	537	503	600	508
V/C Ratio(X)	0.51	0.00	0.48	0.50	0.00	0.00	0.13	0.00	0.42	0.19	0.66	0.09
Avail Cap(c_a), veh/h	870	0	787	712	0	0	1161	0	1969	1257	2043	1732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	16.8	17.6	0.0	0.0	11.7	0.0	14.2	10.8	14.7	12.0
Incr Delay (d2), s/veh	0.9	0.0	1.0	1.2	0.0	0.0	0.2	0.0	0.5	0.2	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.6	1.5	0.0	0.0	0.3	0.0	1.7	0.6	3.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	17.8	18.8	0.0	0.0	11.9	0.0	14.7	11.0	15.9	12.0
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		408			170			272			536	
Approach Delay, s/veh		18.1			18.8			14.2			14.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		18.4	8.8	23.1		18.4				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	7.0		8.9	2.9	11.1		10.8				
Green Ext Time (p_c), s	0.2	1.3		1.7	0.1	2.5		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		16.1	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Future Volume (veh/h)	98	116	161	60	53	43	44	163	43	88	362	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	126	175	65	58	47	48	177	47	96	393	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	239	217	364	149	122	66	362	424	113	503	600	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.30	0.30	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.3	0.0	17.8	18.8	0.0	0.0	11.9	0.0	14.7	11.0	15.9	12.0
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		408			170			272			536	
Approach Delay, s/veh		18.1			18.8			14.2			14.7	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	22.0		18.4	8.8	23.1		18.4
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.8	7.0		8.9	2.9	11.1		10.8
Green Ext Time (g_e), s	0.2	1.3		1.7	0.1	2.5		0.8
Prob of Phs Call (p_c)	0.74	1.00		1.00	0.49	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.02	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			589	1781			218

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1424		946		1870		533

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		378		1585		1585		287

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

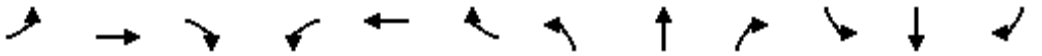
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	96	0	0	233	48	0	0	170
Grp Sat Flow (s), veh/h/ln	1781	0	0	1534	1781	0	0	1038
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	0.9	0.0	0.0	1.9
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	6.9	0.9	0.0	0.0	8.8
Perm LT Sat Flow (s_l), veh/h/ln	1157	0	0	1309	949	0	0	1095
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1456	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	11.6	15.0	0.0	0.0	11.6
Perm LT Serve Time (g_u), s	10.0	0.0	0.0	2.8	7.1	0.0	0.0	4.7
Perm LT Q Serve Time (g_ps), s	0.5	0.0	0.0	0.0	0.4	0.0	0.0	1.9
Time to First Blk (g_f), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	503	0	0	456	362	0	0	337
V/C Ratio (X)	0.19	0.00	0.00	0.51	0.13	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1257	0	0	870	1161	0	0	712
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.8	0.0	0.0	17.4	11.7	0.0	0.0	17.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.0	0.0	0.0	18.3	11.9	0.0	0.0	18.8
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	2.1	0.3	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.2	0.3	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	393	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	600	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.66	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2043	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	224	0	175	0	47	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	5.0	0.0	4.8	0.0	1.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.0	0.0	4.8	0.0	1.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	537	0	364	0	508	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.48	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	1969	0	787	0	1732	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.2	0.0	16.8	0.0	12.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	1.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.7	0.0	17.8	0.0	12.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	1.5	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	1.6	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.23	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

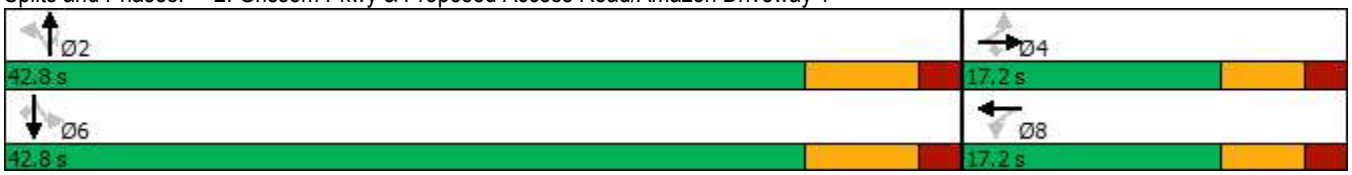


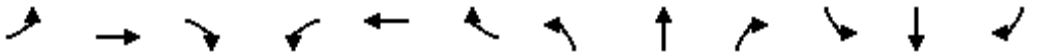
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	0	152	1	0	0	33	264	1	0	593	49
Future Volume (vph)	106	0	152	1	0	0	33	264	1	0	593	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.683		0.349					
Satd. Flow (perm)	0	1410	1583	0	1272	0	650	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165						49			53
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	0	165	1	0	0	36	287	1	0	645	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	165	0	1	0	36	287	1	0	645	53
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.4	9.4		9.4		26.7	26.7	26.7		26.7	26.7
Actuated g/C Ratio		0.21	0.21		0.21		0.60	0.60	0.60		0.60	0.60
v/c Ratio		0.39	0.35		0.00		0.09	0.26	0.00		0.57	0.05
Control Delay		21.5	6.6		17.0		6.5	6.9	0.0		10.3	2.2
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.5	6.6		17.0		6.5	6.9	0.0		10.3	2.2
LOS		C	A		B		A	A	A		B	A
Approach Delay		12.7			17.0			6.8			9.7	
Approach LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		23	0		0		4	36	0		106	0
Queue Length 95th (ft)		76	41		4		16	77	0		211	11
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		376	543		339		539	1545	1321		1545	1322
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.31	0.30		0.00		0.07	0.19	0.00		0.42	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.3			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





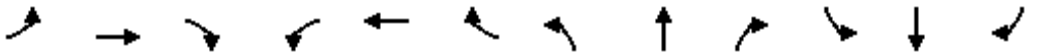
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	0	152	1	0	0	33	264	1	0	593	49
Future Volume (veh/h)	106	0	152	1	0	0	33	264	1	0	593	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	0	165	1	0	0	36	287	1	0	645	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	503	0	323	375	0	0	316	844	716	194	844	716
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.45	0.45	0.45	0.00	0.45	0.45
Sat Flow, veh/h	1517	0	1585	891	0	0	748	1870	1585	1091	1870	1585
Grp Volume(v), veh/h	115	0	165	1	0	0	36	287	1	0	645	53
Grp Sat Flow(s),veh/h/ln	1517	0	1585	891	0	0	748	1870	1585	1091	1870	1585
Q Serve(g_s), s	0.0	0.0	3.4	0.0	0.0	0.0	1.6	3.7	0.0	0.0	10.7	0.7
Cycle Q Clear(g_c), s	2.0	0.0	3.4	2.1	0.0	0.0	12.3	3.7	0.0	0.0	10.7	0.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	0	323	376	0	0	316	844	716	194	844	716
V/C Ratio(X)	0.23	0.00	0.51	0.00	0.00	0.00	0.11	0.34	0.00	0.00	0.76	0.07
Avail Cap(c_a), veh/h	653	0	491	505	0	0	697	1799	1525	751	1799	1525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	13.1	13.4	0.0	0.0	13.7	6.6	5.6	0.0	8.5	5.8
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.0	0.0	0.0	0.2	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.1	0.0	0.0	0.0	0.2	0.7	0.0	0.0	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	0.0	14.4	13.4	0.0	0.0	13.8	6.8	5.6	0.0	10.0	5.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		280			1			324			698	
Approach Delay, s/veh		13.7			13.4			7.6			9.7	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.9		13.3		23.9		13.3				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		14.3		5.4		12.7		4.1				
Green Ext Time (p_c), s		1.6		0.6		4.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	0	152	1	0	0	33	264	1	0	593	49
Future Volume (veh/h)	106	0	152	1	0	0	33	264	1	0	593	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	0	165	1	0	0	36	287	1	0	645	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	503	0	323	375	0	0	316	844	716	194	844	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.45	0.45	0.45	0.00	0.45	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh	12.8	0.0	14.4	13.4	0.0	0.0	13.8	6.8	5.6	0.0	10.0	5.8
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		280			1			324			698	
Approach Delay, s/veh		13.7			13.4			7.6			9.7	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		23.9		13.3		23.9		13.3
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.5		4.8		5.8
Max Q Clear (g_c+I1), s		14.3		5.4		12.7		4.1
Green Ext Time (g_e), s		1.6		0.6		4.0		0.0
Prob of Phs Call (p_c)		1.00		0.94		1.00		0.94
Prob of Max Out (p_x)		0.00		0.43		0.02		0.04

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		748		1517		1091		891

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	115	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	748	0	1517	0	1091	0	891
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.3	0.0	2.0	0.0	0.0	0.0	2.1
Perm LT Sat Flow (s_l), veh/h/ln	0	748	0	1440	0	1091	0	1240
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	16.8	0.0	7.6	0.0	0.0	0.0	7.6
Perm LT Serve Time (g_u), s	0.0	6.0	0.0	5.5	0.0	0.0	0.0	5.5
Perm LT Q Serve Time (g_ps), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	316	0	503	0	194	0	376
V/C Ratio (X)	0.00	0.11	0.00	0.23	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	697	0	653	0	751	0	505
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.7	0.0	12.6	0.0	0.0	0.0	13.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.8	0.0	12.8	0.0	0.0	0.0	13.4
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	287	0	0	0	645	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.7	0.0	0.0	0.0	10.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.7	0.0	0.0	0.0	10.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	844	0	0	0	844	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	1799	0	0	0	1799	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.6	0.0	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.8	0.0	0.0	0.0	10.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

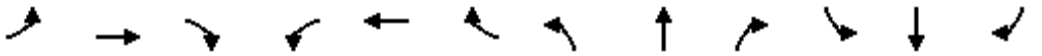
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	165	0	53	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.4	0.0	0.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.4	0.0	0.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	716	0	323	0	716	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.51	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1525	0	491	0	1525	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.1	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	14.4	0.0	5.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.18	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

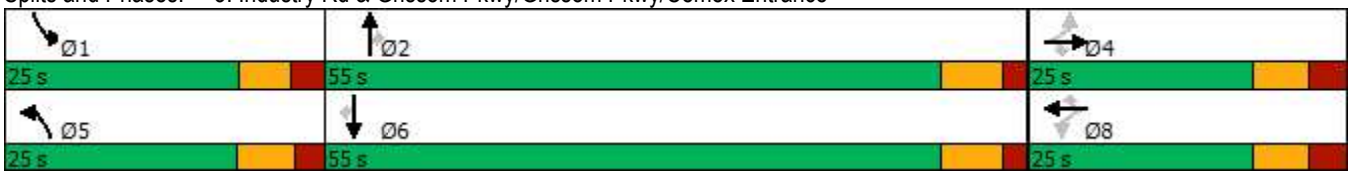


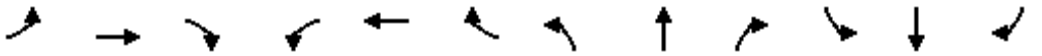
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	5	479	50	1	0	267	100	42	3	131	22
Future Volume (vph)	29	5	479	50	1	0	267	100	42	3	131	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.754			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1405	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			521						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	5	521	54	1	0	290	109	46	3	142	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	5	521	54	1	0	290	109	46	3	142	24
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.6	10.6	10.6	10.6	10.6		12.4	26.7	26.7	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.12	0.01	0.72	0.20	0.00		0.37	0.12	0.05	0.02	0.27	0.04
Control Delay	20.5	18.8	8.6	21.7	19.0		22.4	10.1	0.1	27.0	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	18.8	8.6	21.7	19.0		22.4	10.1	0.1	27.0	20.3	0.1
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.4			21.6			17.1			17.5	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	1	0	16	0		43	13	0	1	36	0
Queue Length 95th (ft)	29	9	68	43	4		87	64	0	9	95	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	472	624	877	471	624		1196	1610	1384	620	1610	1384
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.59	0.11	0.00		0.24	0.07	0.03	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 54.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Future Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	290	109	46	3	142	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	220		311	220	186	473	826	700	7	573	486
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	32	5	0	54	1	0	290	109	46	3	142	24
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.1	0.0	1.7	0.0	0.0	3.8	1.7	0.8	0.1	2.8	0.5
Cycle Q Clear(g_c), s	1.0	0.1	0.0	1.8	0.0	0.0	3.8	1.7	0.8	0.1	2.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	220		311	220	186	473	826	700	7	573	486
V/C Ratio(X)	0.10	0.02		0.17	0.00	0.00	0.61	0.13	0.07	0.41	0.25	0.05
Avail Cap(c_a), veh/h	662	678		657	678	574	1302	1863	1579	675	1863	1579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	18.9	0.0	19.7	18.8	0.0	19.6	8.0	7.8	24.0	12.6	11.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.0	1.5	0.6	0.2	0.1	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	18.9	0.0	20.0	18.8	0.0	20.9	8.1	7.8	49.4	12.8	11.8
LnGrp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37	A		55			445			169	
Approach Delay, s/veh		19.4			20.0			16.4			13.3	
Approach LOS		B			B			B			B	

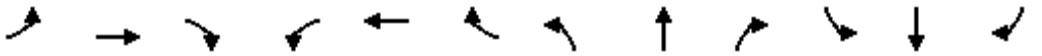
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.2		13.2	13.4	21.7		13.2				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.0	5.8	4.8		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.8	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Future Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	290	109	46	3	142	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	315	220		311	220	186	473	826	700	7	573	486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.4	18.9	0.0	20.0	18.8	0.0	20.9	8.1	7.8	49.4	12.8	11.8
Ln Grp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37			55			445			169	
Approach Delay, s/veh		19.4			20.0			16.4			13.3	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.2		13.2	13.4	21.7		13.2
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.7		3.0	5.8	4.8		3.8
Green Ext Time (g_e), s	0.0	1.0		0.1	0.8	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.71	1.00	0.99		0.71
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	32	290	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1411
Q Serve Time (g_s), s	0.1	0.0	0.0	1.0	3.8	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.0	3.8	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	315	473	0	0	311
V/C Ratio (X)	0.41	0.00	0.00	0.10	0.61	0.00	0.00	0.17
Avail Cap (c_a), veh/h	675	0	0	662	1302	0	0	657
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.0	0.0	0.0	19.3	19.6	0.0	0.0	19.7
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.4	0.0	0.0	19.4	20.9	0.0	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	1.4	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.3	1.5	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.05	0.26	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	109	0	5	0	142	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	826	0	220	0	573	0	220
V/C Ratio (X)	0.00	0.13	0.00	0.02	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	1863	0	678	0	1863	0	678
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.0	0.0	18.9	0.0	12.6	0.0	18.8
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	18.9	0.0	12.8	0.0	18.8
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

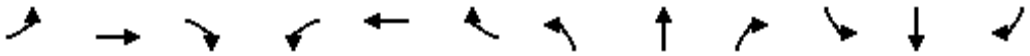
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	46	0	0	0	24	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	700	0	186	0	486	0	186
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.00
Avail Cap (c_a), veh/h	0	1579	0	574	0	1579	0	574
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	0.0	0.0	11.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	0.0	11.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	181	4	12	75	2	9	0	15	1	0	12
Future Volume (vph)	1	181	4	12	75	2	9	0	15	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.917			0.875	
Flt Protected					0.993			0.981			0.996	
Satd. Flow (prot)	0	1857	0	0	1844	0	0	1676	0	0	1623	0
Flt Permitted					0.993			0.981			0.996	
Satd. Flow (perm)	0	1857	0	0	1844	0	0	1676	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	197	4	13	82	2	10	0	16	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	0	0	97	0	0	26	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	181	4	12	75	2	9	0	15	1	0	12
Future Vol, veh/h	1	181	4	12	75	2	9	0	15	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	197	4	13	82	2	10	0	16	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	201	0	0	317	311	199	318	312	83
Stage 1	-	-	-	-	-	-	201	201	-	109	109	-
Stage 2	-	-	-	-	-	-	116	110	-	209	203	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1513	-	-	1371	-	-	636	604	842	635	603	976
Stage 1	-	-	-	-	-	-	801	735	-	896	805	-
Stage 2	-	-	-	-	-	-	889	804	-	793	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1513	-	-	1371	-	-	622	597	842	617	596	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	622	597	-	617	596	-
Stage 1	-	-	-	-	-	-	800	734	-	895	797	-
Stage 2	-	-	-	-	-	-	868	796	-	777	732	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	10	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	743	1513	-	-	1371	-	-	934
HCM Lane V/C Ratio	0.035	0.001	-	-	0.01	-	-	0.015
HCM Control Delay (s)	10	7.4	0	-	7.7	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	283	1	18	114	1	43
Future Volume (vph)	283	1	18	114	1	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.993	0.999	
Satd. Flow (prot)	1863	0	0	1850	1615	0
Flt Permitted				0.993	0.999	
Satd. Flow (perm)	1863	0	0	1850	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	1	20	124	1	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	309	0	0	144	48	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	1	18	114	1	43
Future Vol, veh/h	283	1	18	114	1	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	1	20	124	1	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	473	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1252	-	550	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	541	731
Mov Cap-2 Maneuver	-	-	-	-	541	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	850	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	725	-	-	1252	-
HCM Lane V/C Ratio	0.066	-	-	0.016	-
HCM Control Delay (s)	10.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	326	0	13	119	0	26
Future Volume (vph)	326	0	13	119	0	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	354	0	14	129	0	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	354	0	0	143	28	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.2%		ICU Level of Service A	
Analysis Period (min) 15			

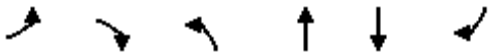
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	326	0	13	119	0	26
Future Vol, veh/h	326	0	13	119	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	354	0	14	129	0	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	354	0	511	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	157	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1205	-	523	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	516	690
Mov Cap-2 Maneuver	-	-	-	-	516	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	690	-	-	1205	-
HCM Lane V/C Ratio	0.041	-	-	0.012	-
HCM Control Delay (s)	10.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	15	38	13	5
Future Volume (vph)	5	5	15	38	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.964	
Flt Protected	0.976			0.986		
Satd. Flow (prot)	1694	0	0	1837	1796	0
Flt Permitted	0.976			0.986		
Satd. Flow (perm)	1694	0	0	1837	1796	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	5	16	41	14	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	57	19	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

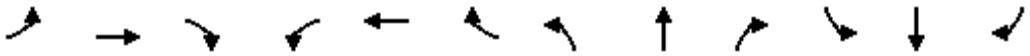
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	15	38	13	5
Future Vol, veh/h	5	5	15	38	13	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	16	41	14	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	90	17	19	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	910	1062	1597	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	901	1062	1597	-	-	-
Mov Cap-2 Maneuver	901	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1597	-	975	-	-
HCM Lane V/C Ratio	0.01	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	95	0	6	27	49	0	4	18	143	0	0
Future Volume (vph)	0	95	0	6	27	49	0	4	18	143	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.920			0.887				
Flt Protected					0.996						0.950	
Satd. Flow (prot)	0	1863	0	0	1707	0	0	1652	0	0	1770	0
Flt Permitted					0.996						0.950	
Satd. Flow (perm)	0	1863	0	0	1707	0	0	1652	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	103	0	7	29	53	0	4	20	155	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	89	0	0	24	0	0	155	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	95	0	6	27	49	0	4	18	143	0	0
Future Vol, veh/h	0	95	0	6	27	49	0	4	18	143	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	103	0	7	29	53	0	4	20	155	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	103	0	0	173	199	103	185	173	56
Stage 1	-	-	-	-	-	-	103	103	-	70	70	-
Stage 2	-	-	-	-	-	-	70	96	-	115	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1515	-	-	1489	-	-	790	697	952	776	720	1011
Stage 1	-	-	-	-	-	-	903	810	-	940	837	-
Stage 2	-	-	-	-	-	-	940	815	-	890	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1515	-	-	1489	-	-	787	694	952	753	716	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	787	694	-	753	716	-
Stage 1	-	-	-	-	-	-	903	810	-	940	833	-
Stage 2	-	-	-	-	-	-	935	811	-	867	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.1	11
HCM LOS			A	B

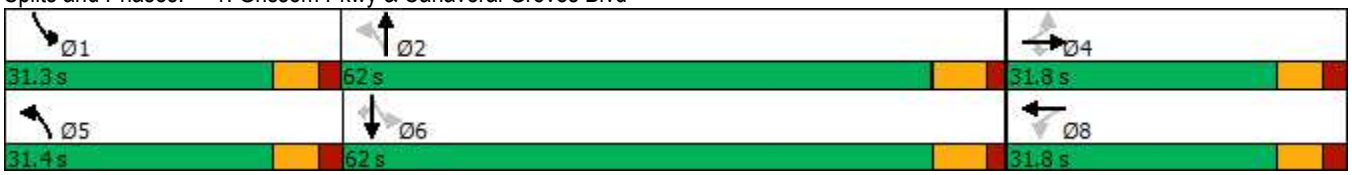
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	892	1515	-	-	1489	-	-	753
HCM Lane V/C Ratio	0.027	-	-	-	0.004	-	-	0.206
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	11
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.8

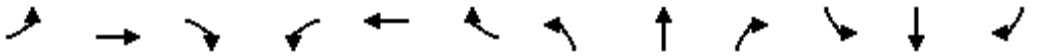
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	69	88	71	83	74	168	422	97	86	279	80
Future Volume (vph)	63	69	88	71	83	74	168	422	97	86	279	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956			0.972				0.850
Flt Protected		0.977			0.985		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1754	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.697			0.842		0.429			0.308		
Satd. Flow (perm)	0	1298	1583	0	1499	0	799	1811	0	574	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		17			12				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	75	96	77	90	80	183	459	105	93	303	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	96	0	247	0	183	564	0	93	303	87
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		20.2	20.2		20.2		42.7	33.4		34.9	26.5	26.5
Actuated g/C Ratio		0.26	0.26		0.26		0.54	0.42		0.44	0.34	0.34
v/c Ratio		0.43	0.20		0.62		0.32	0.73		0.25	0.48	0.15
Control Delay		31.4	7.4		33.5		10.1	26.8		10.6	24.0	5.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.4	7.4		33.5		10.1	26.8		10.6	24.0	5.1
LOS		C	A		C		B	C		B	C	A
Approach Delay		21.8			33.5			22.7			18.0	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		59	0		100		41	241		20	117	0
Queue Length 95th (ft)		135	39		213		76	395		42	207	29
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		428	586		506		774	1320		721	1352	1172
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.33	0.16		0.49		0.24	0.43		0.13	0.22	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 78.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.8		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Future Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	75	96	77	90	80	183	459	105	93	303	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	204	357	149	141	101	509	555	127	316	638	541
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.38	0.38	0.07	0.34	0.34
Sat Flow, veh/h	548	904	1585	313	625	449	1781	1473	337	1781	1870	1585
Grp Volume(v), veh/h	143	0	96	247	0	0	183	0	564	93	303	87
Grp Sat Flow(s),veh/h/ln	1452	0	1585	1387	0	0	1781	0	1810	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.0	5.9	0.0	0.0	3.9	0.0	17.1	2.0	7.7	2.3
Cycle Q Clear(g_c), s	4.7	0.0	3.0	10.5	0.0	0.0	3.9	0.0	17.1	2.0	7.7	2.3
Prop In Lane	0.48		1.00	0.31		0.32	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	357	391	0	0	509	0	682	316	638	541
V/C Ratio(X)	0.34	0.00	0.27	0.63	0.00	0.00	0.36	0.00	0.83	0.29	0.47	0.16
Avail Cap(c_a), veh/h	695	0	655	678	0	0	1068	0	1646	936	1701	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	19.3	22.3	0.0	0.0	11.1	0.0	17.1	13.3	15.7	13.9
Incr Delay (d2), s/veh	0.5	0.0	0.4	1.7	0.0	0.0	0.4	0.0	2.6	0.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.1	3.2	0.0	0.0	1.2	0.0	6.1	0.7	2.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	19.7	24.0	0.0	0.0	11.6	0.0	19.7	13.8	16.2	14.0
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		239			247			747			483	
Approach Delay, s/veh		20.0			24.0			17.7			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	29.8		20.4	12.4	27.6		20.4				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	19.1		6.7	5.9	9.7		12.5				
Green Ext Time (p_c), s	0.2	3.7		1.0	0.4	2.0		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Future Volume (veh/h)	63	69	88	71	83	74	168	422	97	86	279	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	75	96	77	90	80	183	459	105	93	303	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	204	357	149	141	101	509	555	127	316	638	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.38	0.38	0.07	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	0.0	19.7	24.0	0.0	0.0	11.6	0.0	19.7	13.8	16.2	14.0
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		239			247			747			483	
Approach Delay, s/veh		20.0			24.0			17.7			15.4	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.3	29.8		20.4	12.4	27.6		20.4
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.0	19.1		6.7	5.9	9.7		12.5
Green Ext Time (g_e), s	0.2	3.7		1.0	0.4	2.0		1.1
Prob of Phs Call (p_c)	0.79	1.00		1.00	0.95	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.05

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			548	1781			313

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1473		904		1870		625

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		337		1585		1585		449

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

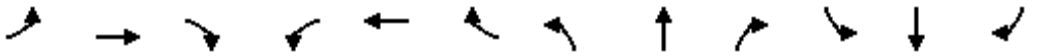
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	93	0	0	143	183	0	0	247
Grp Sat Flow (s), veh/h/ln	1781	0	0	1452	1781	0	0	1387
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	3.9	0.0	0.0	5.9
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	4.7	3.9	0.0	0.0	10.5
Perm LT Sat Flow (s_l), veh/h/ln	847	0	0	1234	994	0	0	1233
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1328	0	0	0	0
Perm LT Eff Green (g_p), s	20.6	0.0	0.0	13.6	20.6	0.0	0.0	13.6
Perm LT Serve Time (g_u), s	5.7	0.0	0.0	3.1	12.9	0.0	0.0	9.0
Perm LT Q Serve Time (g_ps), s	1.8	0.0	0.0	0.0	1.7	0.0	0.0	5.9
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	316	0	0	415	509	0	0	391
V/C Ratio (X)	0.29	0.00	0.00	0.34	0.36	0.00	0.00	0.63
Avail Cap (c_a), veh/h	936	0	0	695	1068	0	0	678
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.3	0.0	0.0	19.8	11.1	0.0	0.0	22.3
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.4	0.0	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.8	0.0	0.0	20.3	11.6	0.0	0.0	24.0
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	1.5	1.2	0.0	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	1.6	1.2	0.0	0.0	3.2
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.07	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	303	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	638	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1701	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	564	0	96	0	87	0	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	17.1	0.0	3.0	0.0	2.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.1	0.0	3.0	0.0	2.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	682	0	357	0	541	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.27	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1646	0	655	0	1442	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.1	0.0	19.3	0.0	13.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.6	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.7	0.0	19.7	0.0	14.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.6	0.0	1.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.1	0.0	1.1	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.15	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

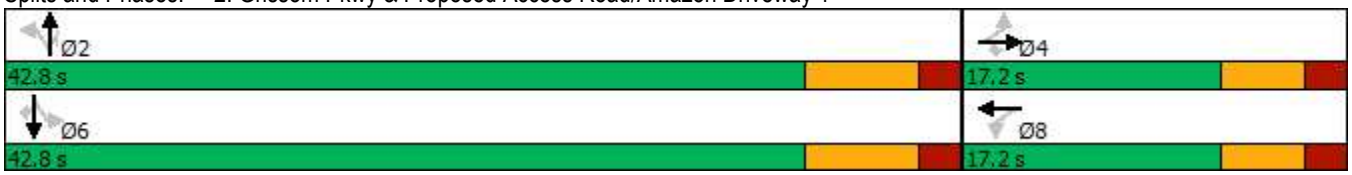


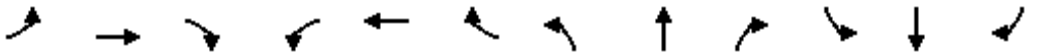
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	106	27	0	20	183	625	1	0	368	111
Future Volume (vph)	61	0	106	27	0	20	183	625	1	0	368	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.787		0.526					
Satd. Flow (perm)	0	1349	1583	0	1381	0	980	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		75				49			121
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	115	29	0	22	199	679	1	0	400	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	115	0	51	0	199	679	1	0	400	121
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		8.9	8.9		8.9		27.8	27.8	27.8		27.8	27.8
Actuated g/C Ratio		0.20	0.20		0.20		0.62	0.62	0.62		0.62	0.62
v/c Ratio		0.25	0.28		0.15		0.33	0.59	0.00		0.35	0.12
Control Delay		20.5	7.2		5.0		8.2	10.1	0.0		7.1	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		20.5	7.2		5.0		8.2	10.1	0.0		7.1	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		12.0			5.0			9.6			5.9	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		13	0		0		26	110	0		52	0
Queue Length 95th (ft)		51	36		16		66	227	0		110	16
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		356	503		420		804	1528	1308		1528	1320
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.19	0.23		0.12		0.25	0.44	0.00		0.26	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.9			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.5		Intersection LOS: A	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





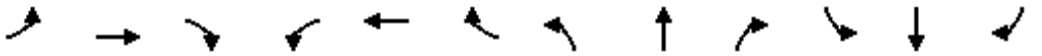
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	106	27	0	20	183	625	1	0	368	111
Future Volume (veh/h)	61	0	106	27	0	20	183	625	1	0	368	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	115	29	0	22	199	679	1	0	400	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	0	290	256	35	115	499	937	794	178	937	794
Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.50	0.50	0.50	0.00	0.50	0.50
Sat Flow, veh/h	1443	0	1585	638	193	630	881	1870	1585	760	1870	1585
Grp Volume(v), veh/h	66	0	115	51	0	0	199	679	1	0	400	121
Grp Sat Flow(s),veh/h/ln	1443	0	1585	1461	0	0	881	1870	1585	760	1870	1585
Q Serve(g_s), s	0.4	0.0	2.6	0.0	0.0	0.0	7.5	11.5	0.0	0.0	5.5	1.7
Cycle Q Clear(g_c), s	1.4	0.0	2.6	1.0	0.0	0.0	13.0	11.5	0.0	0.0	5.5	1.7
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	0	290	407	0	0	499	937	794	178	937	794
V/C Ratio(X)	0.15	0.00	0.40	0.13	0.00	0.00	0.40	0.72	0.00	0.00	0.43	0.15
Avail Cap(c_a), veh/h	582	0	450	548	0	0	835	1649	1397	467	1649	1397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	14.6	13.9	0.0	0.0	10.5	7.9	5.0	0.0	6.4	5.5
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.1	0.0	0.0	0.5	1.1	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.8	0.4	0.0	0.0	0.9	2.3	0.0	0.0	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	0.0	15.4	14.1	0.0	0.0	11.1	9.0	5.0	0.0	6.7	5.5
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		181			51			879			521	
Approach Delay, s/veh		15.0			14.1			9.5			6.5	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.4		13.1		27.4		13.1				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		15.0		4.6		7.5		3.0				
Green Ext Time (p_c), s		5.3		0.3		2.6		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	106	27	0	20	183	625	1	0	368	111
Future Volume (veh/h)	61	0	106	27	0	20	183	625	1	0	368	111
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	115	29	0	22	199	679	1	0	400	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	442	0	290	256	35	115	499	937	794	178	937	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.50	0.50	0.50	0.00	0.50	0.50
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.2	0.0	15.4	14.1	0.0	0.0	11.1	9.0	5.0	0.0	6.7	5.5
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		181			51			879			521	
Approach Delay, s/veh		15.0			14.1			9.5			6.5	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		27.4		13.1		27.4		13.1
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		15.0		4.6		7.5		3.0
Green Ext Time (g_e), s		5.3		0.3		2.6		0.1
Prob of Phs Call (p_c)		1.00		0.93		1.00		0.93
Prob of Max Out (p_x)		0.10		0.19		0.00		0.10

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		881		1443		760		638

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		193

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		630

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	199	0	66	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	881	0	1443	0	760	0	1461
Q Serve Time (g_s), s	0.0	7.5	0.0	0.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.0	0.0	1.4	0.0	0.0	0.0	1.0
Perm LT Sat Flow (s_l), veh/h/ln	0	881	0	1412	0	760	0	1298
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.3	0.0	7.4	0.0	0.0	0.0	7.4
Perm LT Serve Time (g_u), s	0.0	14.8	0.0	6.4	0.0	0.0	0.0	6.1
Perm LT Q Serve Time (g_ps), s	0.0	7.5	0.0	0.4	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	499	0	442	0	178	0	407
V/C Ratio (X)	0.00	0.40	0.00	0.15	0.00	0.00	0.00	0.13
Avail Cap (c_a), veh/h	0	835	0	582	0	467	0	548
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.5	0.0	14.0	0.0	0.0	0.0	13.9
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.1	0.0	14.2	0.0	0.0	0.0	14.1
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	679	0	0	0	400	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	11.5	0.0	0.0	0.0	5.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.5	0.0	0.0	0.0	5.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	937	0	0	0	937	0	0
V/C Ratio (X)	0.00	0.72	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1649	0	0	0	1649	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	6.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.0	0.0	0.0	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

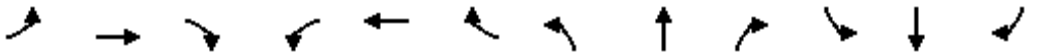
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	115	0	121	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.6	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.6	0.0	1.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	794	0	290	0	794	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.40	0.00	0.15	0.00	0.00
Avail Cap (c_a), veh/h	0	1397	0	450	0	1397	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	14.6	0.0	5.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.0	0.0	15.4	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

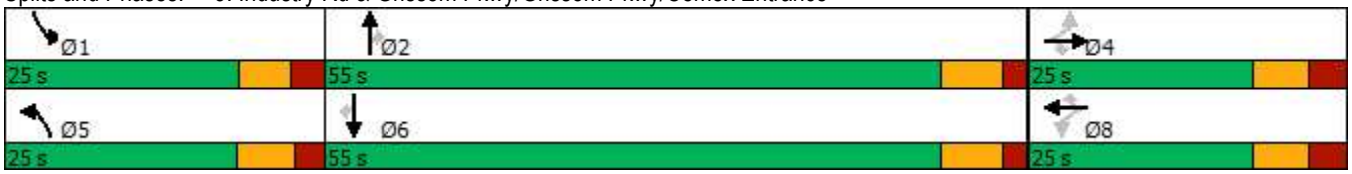


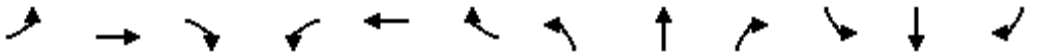
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	467	9	5	1	663	94	7	0	204	51
Future Volume (vph)	17	5	467	9	5	1	663	94	7	0	204	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.754			0.754			0.950					
Satd. Flow (perm)	1405	1863	1583	1405	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			508			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	5	508	10	5	1	721	102	8	0	222	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	508	10	5	1	721	102	8	0	222	55
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.0	16.0
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.08	0.02	0.75	0.05	0.02	0.00	0.76	0.09	0.01		0.49	0.12
Control Delay	24.4	23.2	10.5	23.7	23.2	0.0	29.7	6.0	0.0		26.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.4	23.2	10.5	23.7	23.2	0.0	29.7	6.0	0.0		26.5	0.7
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.1			22.0			26.5			21.4	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	6	2	0	3	2	0	124	12	0		73	0
Queue Length 95th (ft)	23	10	79	16	10	0	#268	39	0		153	3
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	496	794	374	496	502	950	1363	1190		1363	1190
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.01	0.64	0.03	0.01	0.00	0.76	0.07	0.01		0.16	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Future Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	123		223	123	104	901	1246	1056	3	521	442
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.26	0.67	0.67	0.00	0.28	0.28
Sat Flow, veh/h	1410	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Grp Sat Flow(s),veh/h/ln	1410	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	0.4	0.1	0.0	10.5	1.0	0.1	0.0	5.2	1.4
Cycle Q Clear(g_c), s	0.8	0.1	0.0	0.5	0.1	0.0	10.5	1.0	0.1	0.0	5.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	123		223	123	104	901	1246	1056	3	521	442
V/C Ratio(X)	0.08	0.04		0.04	0.04	0.01	0.80	0.08	0.01	0.00	0.43	0.12
Avail Cap(c_a), veh/h	590	610		591	610	517	1172	1676	1420	607	1676	1420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	23.5	0.0	23.7	23.5	23.4	18.5	3.2	3.0	0.0	15.8	14.5
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	3.1	0.0	0.0	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.1	0.1	0.0	4.1	0.2	0.0	0.0	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	23.7	0.0	23.8	23.7	23.5	21.6	3.2	3.0	0.0	16.5	14.6
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23	A		16			831			277	
Approach Delay, s/veh		24.0			23.7			19.2			16.1	
Approach LOS		C			C			B			B	

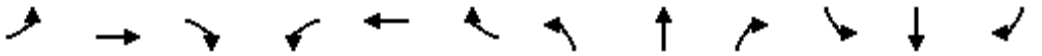
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	42.6		11.0	20.8	21.9		11.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.0		2.8	12.5	7.2		2.5				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.5	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		18.6	
HCM 6th LOS		B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Future Volume (veh/h)	17	5	467	9	5	1	663	94	7	0	204	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	223	123		223	123	104	901	1246	1056	3	521	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.26	0.67	0.67	0.00	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.0	23.7	0.0	23.8	23.7	23.5	21.6	3.2	3.0	0.0	16.5	14.6
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23			16			831			277	
Approach Delay, s/veh		24.0			23.7			19.2			16.1	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	42.6		11.0	20.8	21.9		11.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	3.0		2.8	12.5	7.2		2.5
Green Ext Time (g_e), s	0.0	0.7		0.0	1.5	1.9		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.44	1.00	1.00		0.44
Prob of Max Out (p_x)	0.00	0.00		0.00	0.51	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1410	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	18	721	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1410	1728	0	0	1411
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	10.5	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.8	10.5	0.0	0.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1410	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	223	901	0	0	223
V/C Ratio (X)	0.00	0.00	0.00	0.08	0.80	0.00	0.00	0.04
Avail Cap (c_a), veh/h	607	0	0	590	1172	0	0	591
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.9	18.5	0.0	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	3.1	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.0	21.6	0.0	0.0	23.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	3.7	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	4.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.74	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	5	0	222	0	5
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.0	0.0	0.1	0.0	5.2	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.1	0.0	5.2	0.0	0.1
Lane Grp Cap (c), veh/h	0	1246	0	123	0	521	0	123
V/C Ratio (X)	0.00	0.08	0.00	0.04	0.00	0.43	0.00	0.04
Avail Cap (c_a), veh/h	0	1676	0	610	0	1676	0	610
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	23.5	0.0	15.8	0.0	23.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	23.7	0.0	16.5	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.1	0.0	2.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

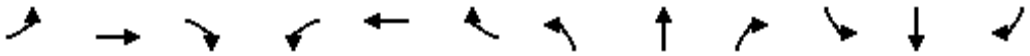
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.1	0.0	2.1	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	55	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1056	0	104	0	442	0	104
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.12	0.00	0.01
Avail Cap (c_a), veh/h	0	1420	0	517	0	1420	0	517
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	0.0	0.0	14.5	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	14.6	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	138	15	25	227	1	10	0	16	1	2	6
Future Volume (vph)	11	138	15	25	227	1	10	0	16	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.918			0.905	
Flt Protected		0.997			0.995			0.981			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1678	0	0	1677	0
Flt Permitted		0.997			0.995			0.981			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1678	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	150	16	27	247	1	11	0	17	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	275	0	0	28	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	138	15	25	227	1	10	0	16	1	2	6
Future Vol, veh/h	11	138	15	25	227	1	10	0	16	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	150	16	27	247	1	11	0	17	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	248	0	0	166	0	0	488	484	158	493	492	248
Stage 1	-	-	-	-	-	-	182	182	-	302	302	-
Stage 2	-	-	-	-	-	-	306	302	-	191	190	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1318	-	-	1412	-	-	490	483	887	486	478	791
Stage 1	-	-	-	-	-	-	820	749	-	707	664	-
Stage 2	-	-	-	-	-	-	704	664	-	811	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1318	-	-	1412	-	-	472	468	887	465	463	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	472	468	-	465	463	-
Stage 1	-	-	-	-	-	-	812	742	-	700	649	-
Stage 2	-	-	-	-	-	-	681	649	-	787	736	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.8	10.7	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	663	1318	-	-	1412	-	-	640
HCM Lane V/C Ratio	0.043	0.009	-	-	0.019	-	-	0.015
HCM Control Delay (s)	10.7	7.8	0	-	7.6	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	148	0	48	307	2	28
Future Volume (vph)	148	0	48	307	2	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.873	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1621	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1621	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	52	334	2	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	386	32	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	48	307	2	28
Future Vol, veh/h	148	0	48	307	2	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	0	52	334	2	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	599	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	465	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	444	884
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	829	-	-	1418	-
HCM Lane V/C Ratio	0.039	-	-	0.037	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	177	0	36	311	0	18
Future Volume (vph)	177	0	36	311	0	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	0	39	338	0	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	192	0	0	377	20	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

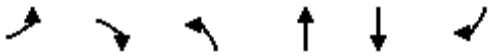
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	177	0	36	311	0	18
Future Vol, veh/h	177	0	36	311	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	192	0	39	338	0	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	192	0	608	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	416	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1381	-	459	850
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1381	-	443	850
Mov Cap-2 Maneuver	-	-	-	-	443	-
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	643	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	850	-	-	1381	-
HCM Lane V/C Ratio	0.023	-	-	0.028	-
HCM Control Delay (s)	9.3	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	18	11	24	42	4
Future Volume (vph)	7	18	11	24	42	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.989	
Flt Protected	0.986			0.984		
Satd. Flow (prot)	1660	0	0	1833	1842	0
Flt Permitted	0.986			0.984		
Satd. Flow (perm)	1660	0	0	1833	1842	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	20	12	26	46	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	38	50	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			

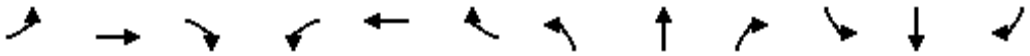
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	18	11	24	42	4
Future Vol, veh/h	7	18	11	24	42	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	20	12	26	46	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	98	48	50	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	901	1021	1557	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	894	1021	1557	-	-	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1557	-	982	-	-
HCM Lane V/C Ratio	0.008	-	0.028	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	59	0	20	110	164	0	2	12	95	3	0
Future Volume (vph)	0	59	0	20	110	164	0	2	12	95	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.925			0.883				
Flt Protected					0.997						0.954	
Satd. Flow (prot)	0	1863	0	0	1718	0	0	1645	0	0	1777	0
Flt Permitted					0.997						0.954	
Satd. Flow (perm)	0	1863	0	0	1718	0	0	1645	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	64	0	22	120	178	0	2	13	103	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	320	0	0	15	0	0	106	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	59	0	20	110	164	0	2	12	95	3	0
Future Vol, veh/h	0	59	0	20	110	164	0	2	12	95	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	64	0	22	120	178	0	2	13	103	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	64	0	0	319	406	64	325	317	209
Stage 1	-	-	-	-	-	-	64	64	-	253	253	-
Stage 2	-	-	-	-	-	-	255	342	-	72	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1263	-	-	1538	-	-	634	534	1000	628	599	831
Stage 1	-	-	-	-	-	-	947	842	-	751	698	-
Stage 2	-	-	-	-	-	-	749	638	-	938	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1263	-	-	1538	-	-	623	524	1000	609	588	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	524	-	609	588	-
Stage 1	-	-	-	-	-	-	947	842	-	751	685	-
Stage 2	-	-	-	-	-	-	732	627	-	923	842	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.1	12.2
HCM LOS			A	B

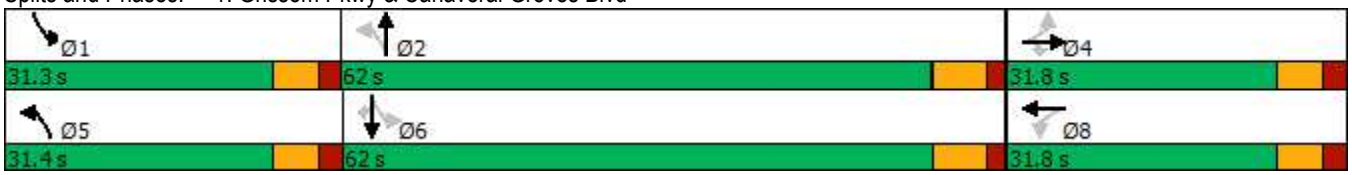
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	885	1263	-	-	1538	-	-	608
HCM Lane V/C Ratio	0.017	-	-	-	0.014	-	-	0.175
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	12.2
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

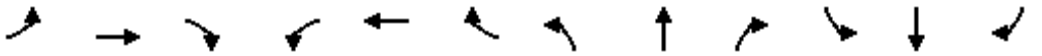
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	121	167	61	55	45	45	164	44	90	369	45
Future Volume (vph)	102	121	167	61	55	45	45	164	44	90	369	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.962			0.968				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1758	0	1770	1803	0	1770	1863	1583
Flt Permitted		0.792			0.787		0.419			0.567		
Satd. Flow (perm)	0	1475	1583	0	1410	0	780	1803	0	1056	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182		14			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	132	182	66	60	49	49	178	48	98	401	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	243	182	0	175	0	49	226	0	98	401	49
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		22.1	22.1		22.1		26.0	20.1		28.5	23.3	23.3
Actuated g/C Ratio		0.33	0.33		0.33		0.39	0.30		0.42	0.35	0.35
v/c Ratio		0.50	0.28		0.37		0.12	0.41		0.18	0.62	0.08
Control Delay		24.9	5.0		21.1		10.6	22.0		10.9	25.4	1.7
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.9	5.0		21.1		10.6	22.0		10.9	25.4	1.7
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.4			21.1			20.0			20.7	
Approach LOS		B			C			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		83	0		52		11	75		22	157	0
Queue Length 95th (ft)		178	44		122		27	140		46	263	9
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		574	727		557		782	1463		816	1507	1297
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.42	0.25		0.31		0.06	0.15		0.12	0.27	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 67.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	121	167	61	55	45	45	164	44	90	369	45
Future Volume (veh/h)	102	121	167	61	55	45	45	164	44	90	369	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	132	182	66	60	49	49	178	48	98	401	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	223	381	147	124	68	349	416	112	493	590	500
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.29	0.29	0.07	0.32	0.32
Sat Flow, veh/h	574	929	1585	209	515	281	1781	1419	383	1781	1870	1585
Grp Volume(v), veh/h	243	0	182	175	0	0	49	0	226	98	401	49
Grp Sat Flow(s),veh/h/ln	1502	0	1585	1005	0	0	1781	0	1801	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.0	2.1	0.0	0.0	1.0	0.0	5.2	1.9	9.6	1.1
Cycle Q Clear(g_c), s	7.4	0.0	5.0	9.5	0.0	0.0	1.0	0.0	5.2	1.9	9.6	1.1
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	464	0	381	339	0	0	349	0	528	493	590	500
V/C Ratio(X)	0.52	0.00	0.48	0.52	0.00	0.00	0.14	0.00	0.43	0.20	0.68	0.10
Avail Cap(c_a), veh/h	848	0	775	686	0	0	1132	0	1937	1233	2011	1704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	16.7	17.6	0.0	0.0	12.1	0.0	14.6	11.1	15.3	12.4
Incr Delay (d2), s/veh	0.9	0.0	0.9	1.2	0.0	0.0	0.2	0.0	0.5	0.2	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.7	1.6	0.0	0.0	0.3	0.0	1.8	0.6	3.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	17.6	18.8	0.0	0.0	12.3	0.0	15.2	11.3	16.6	12.4
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		425			175			275			548	
Approach Delay, s/veh		18.0			18.8			14.7			15.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		19.1	8.9	23.1		19.1				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	7.2		9.4	3.0	11.6		11.5				
Green Ext Time (p_c), s	0.2	1.3		1.8	0.1	2.5		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		16.4	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	121	167	61	55	45	45	164	44	90	369	45
Future Volume (veh/h)	102	121	167	61	55	45	45	164	44	90	369	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	132	182	66	60	49	49	178	48	98	401	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	240	223	381	147	124	68	349	416	112	493	590	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.29	0.29	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.3	0.0	17.6	18.8	0.0	0.0	12.3	0.0	15.2	11.3	16.6	12.4
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		425			175			275			548	
Approach Delay, s/veh		18.0			18.8			14.7			15.3	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		19.1	8.9	23.1		19.1
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.9	7.2		9.4	3.0	11.6		11.5
Green Ext Time (g_e), s	0.2	1.3		1.8	0.1	2.5		0.8
Prob of Phs Call (p_c)	0.75	1.00		1.00	0.50	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.02	0.00	0.00		0.02

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			574	1781			209

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1419		929		1870		515

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		383		1585		1585		281

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	98	0	0	243	49	0	0	175
Grp Sat Flow (s), veh/h/ln	1781	0	0	1502	1781	0	0	1005
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	1.0	0.0	0.0	2.1
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	7.4	1.0	0.0	0.0	9.5
Perm LT Sat Flow (s_l), veh/h/ln	1155	0	0	1305	940	0	0	1082
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1411	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	12.3	15.0	0.0	0.0	12.3
Perm LT Serve Time (g_u), s	9.8	0.0	0.0	2.8	6.6	0.0	0.0	4.9
Perm LT Q Serve Time (g_ps), s	0.5	0.0	0.0	0.0	0.5	0.0	0.0	2.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.1
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	493	0	0	464	349	0	0	339
V/C Ratio (X)	0.20	0.00	0.00	0.52	0.14	0.00	0.00	0.52
Avail Cap (c_a), veh/h	1233	0	0	848	1132	0	0	686
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.1	0.0	0.0	17.4	12.1	0.0	0.0	17.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.3	0.0	0.0	18.3	12.3	0.0	0.0	18.8
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.2	0.3	0.0	0.0	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.3	0.3	0.0	0.0	1.6
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	401	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	590	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2011	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	226	0	182	0	49	0	0
Grp Sat Flow (s), veh/h/ln	0	1801	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	5.2	0.0	5.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.2	0.0	5.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	528	0	381	0	500	0	0
V/C Ratio (X)	0.00	0.43	0.00	0.48	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	1937	0	775	0	1704	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.6	0.0	16.7	0.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.2	0.0	17.6	0.0	12.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.6	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.8	0.0	1.7	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.24	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

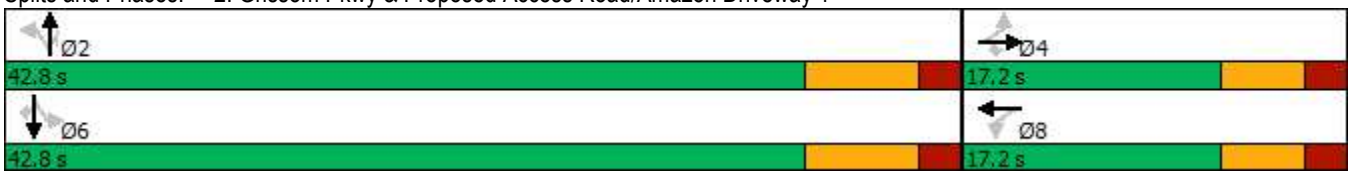
Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	0	152	1	0	0	33	269	1	0	605	49
Future Volume (vph)	106	0	152	1	0	0	33	269	1	0	605	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.683		0.340					
Satd. Flow (perm)	0	1410	1583	0	1272	0	633	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165						49			53
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	0	165	1	0	0	36	292	1	0	658	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	165	0	1	0	36	292	1	0	658	53
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.4	9.4		9.4		27.2	27.2	27.2		27.2	27.2
Actuated g/C Ratio		0.21	0.21		0.21		0.61	0.61	0.61		0.61	0.61
v/c Ratio		0.39	0.36		0.00		0.09	0.26	0.00		0.58	0.05
Control Delay		21.9	6.7		18.0		6.5	6.9	0.0		10.4	2.1
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.9	6.7		18.0		6.5	6.9	0.0		10.4	2.1
LOS		C	A		B		A	A	A		B	A
Approach Delay		12.9			18.0			6.8			9.8	
Approach LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		24	0		0		4	37	0		110	0
Queue Length 95th (ft)		78	41		4		16	78	0		217	11
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		373	540		336		520	1530	1309		1530	1309
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.31	0.31		0.00		0.07	0.19	0.00		0.43	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.8			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	0	152	1	0	0	33	269	1	0	605	49
Future Volume (veh/h)	106	0	152	1	0	0	33	269	1	0	605	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	0	165	1	0	0	36	292	1	0	658	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	498	0	320	371	0	0	312	856	725	192	856	725
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Sat Flow, veh/h	1518	0	1585	887	0	0	739	1870	1585	1086	1870	1585
Grp Volume(v), veh/h	115	0	165	1	0	0	36	292	1	0	658	53
Grp Sat Flow(s),veh/h/ln	1518	0	1585	887	0	0	739	1870	1585	1086	1870	1585
Q Serve(g_s), s	0.0	0.0	3.5	0.0	0.0	0.0	1.6	3.8	0.0	0.0	11.1	0.7
Cycle Q Clear(g_c), s	2.1	0.0	3.5	2.1	0.0	0.0	12.7	3.8	0.0	0.0	11.1	0.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	0	320	371	0	0	312	856	725	192	856	725
V/C Ratio(X)	0.23	0.00	0.52	0.00	0.00	0.00	0.12	0.34	0.00	0.00	0.77	0.07
Avail Cap(c_a), veh/h	646	0	485	498	0	0	676	1778	1506	727	1778	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	13.4	13.7	0.0	0.0	13.8	6.5	5.5	0.0	8.5	5.7
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.0	0.0	0.0	0.2	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	1.1	0.0	0.0	0.0	0.2	0.7	0.0	0.0	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	0.0	14.7	13.7	0.0	0.0	14.0	6.8	5.5	0.0	10.0	5.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		280			1			329			711	
Approach Delay, s/veh		14.0			13.7			7.6			9.7	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	24.3	13.3	24.3	13.3
Change Period (Y+Rc), s	7.1	* 5.7	7.1	* 5.7
Max Green Setting (Gmax), s	35.7	* 12	35.7	* 12
Max Q Clear Time (g_c+I1), s	14.7	5.5	13.1	4.1
Green Ext Time (p_c), s	1.6	0.6	4.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	0	152	1	0	0	33	269	1	0	605	49
Future Volume (veh/h)	106	0	152	1	0	0	33	269	1	0	605	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	0	165	1	0	0	36	292	1	0	658	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	498	0	320	371	0	0	312	856	725	192	856	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.0	0.0	14.7	13.7	0.0	0.0	14.0	6.8	5.5	0.0	10.0	5.8
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		280			1			329			711	
Approach Delay, s/veh		14.0			13.7			7.6			9.7	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		24.3		13.3		24.3		13.3
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.5		4.8		5.8
Max Q Clear (g_c+I1), s		14.7		5.5		13.1		4.1
Green Ext Time (g_e), s		1.6		0.6		4.1		0.0
Prob of Phs Call (p_c)		1.00		0.95		1.00		0.95
Prob of Max Out (p_x)		0.00		0.45		0.03		0.04

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		739		1518		1086		887

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	115	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	739	0	1518	0	1086	0	887
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.7	0.0	2.1	0.0	0.0	0.0	2.1
Perm LT Sat Flow (s_l), veh/h/ln	0	739	0	1440	0	1086	0	1240
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.2	0.0	7.6	0.0	0.0	0.0	7.6
Perm LT Serve Time (g_u), s	0.0	6.1	0.0	5.5	0.0	0.0	0.0	5.5
Perm LT Q Serve Time (g_ps), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	312	0	498	0	192	0	371
V/C Ratio (X)	0.00	0.12	0.00	0.23	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	676	0	646	0	727	0	498
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	12.8	0.0	0.0	0.0	13.7
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.0	0.0	13.0	0.0	0.0	0.0	13.7
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.7	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	292	0	0	0	658	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.8	0.0	0.0	0.0	11.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	0.0	0.0	11.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	856	0	0	0	856	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	1778	0	0	0	1778	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.5	0.0	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.8	0.0	0.0	0.0	10.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

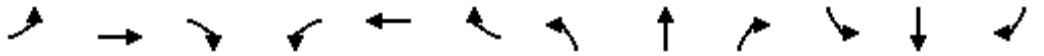
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	165	0	53	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.5	0.0	0.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.5	0.0	0.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	725	0	320	0	725	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.52	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1506	0	485	0	1506	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	13.4	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	14.7	0.0	5.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.18	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

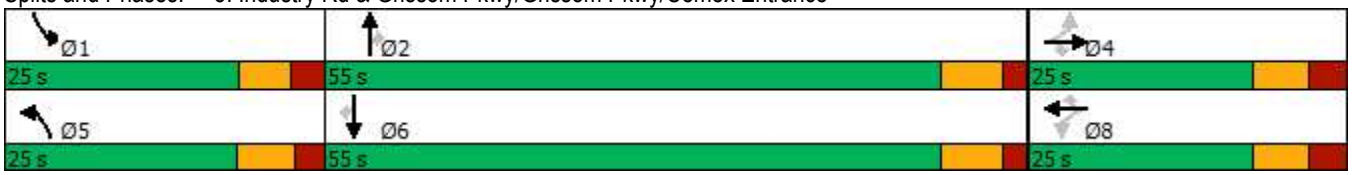


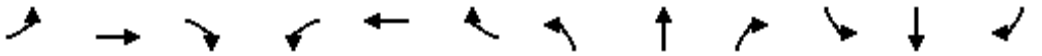
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	5	488	50	1	0	275	103	44	3	133	22
Future Volume (vph)	29	5	488	50	1	0	275	103	44	3	133	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.754			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1405	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			530						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	5	530	54	1	0	299	112	48	3	145	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	5	530	54	1	0	299	112	48	3	145	24
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.6	10.6	10.6	10.6	10.6		12.5	26.8	26.8	5.3	15.6	15.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.12	0.01	0.72	0.20	0.00		0.38	0.12	0.06	0.02	0.27	0.04
Control Delay	20.6	19.0	8.7	21.8	19.0		22.4	10.0	0.1	27.0	20.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	19.0	8.7	21.8	19.0		22.4	10.0	0.1	27.0	20.5	0.1
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.5			21.7			17.1			17.7	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	1	0	16	0		44	14	0	1	37	0
Queue Length 95th (ft)	29	9	69	43	4		89	64	0	9	97	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	471	623	882	469	623		1193	1605	1380	619	1605	1380
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.60	0.12	0.00		0.25	0.07	0.03	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 54.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	22
Future Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	299	112	48	3	145	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	219		311	219	186	483	830	703	7	572	485
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	32	5	0	54	1	0	299	112	48	3	145	24
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.1	0.0	1.7	0.0	0.0	4.0	1.7	0.8	0.1	2.8	0.5
Cycle Q Clear(g_c), s	1.0	0.1	0.0	1.8	0.0	0.0	4.0	1.7	0.8	0.1	2.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	219		311	219	186	483	830	703	7	572	485
V/C Ratio(X)	0.10	0.02		0.17	0.00	0.00	0.62	0.14	0.07	0.41	0.25	0.05
Avail Cap(c_a), veh/h	659	675		654	675	572	1297	1856	1572	672	1856	1572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	18.9	0.0	19.7	18.9	0.0	19.6	8.0	7.7	24.1	12.7	11.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.0	1.5	0.6	0.2	0.1	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	19.0	0.0	20.1	18.9	0.0	20.9	8.1	7.8	49.5	12.9	11.9
LnGrp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37	A		55			459			172	
Approach Delay, s/veh		19.4			20.0			16.4			13.4	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.4		13.2	13.6	21.7		13.2				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.0	6.0	4.8		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.8	1.2		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		16.1
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	22
Future Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	299	112	48	3	145	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	314	219		311	219	186	483	830	703	7	572	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.5	19.0	0.0	20.1	18.9	0.0	20.9	8.1	7.8	49.5	12.9	11.9
Ln Grp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37			55			459			172	
Approach Delay, s/veh		19.4			20.0			16.4			13.4	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.4		13.2	13.6	21.7		13.2
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.7		3.0	6.0	4.8		3.8
Green Ext Time (g_e), s	0.0	1.0		0.1	0.8	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.71	1.00	0.99		0.71
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	32	299	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1411
Q Serve Time (g_s), s	0.1	0.0	0.0	1.0	4.0	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.0	4.0	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	314	483	0	0	311
V/C Ratio (X)	0.41	0.00	0.00	0.10	0.62	0.00	0.00	0.17
Avail Cap (c_a), veh/h	672	0	0	659	1297	0	0	654
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.1	0.0	0.0	19.4	19.6	0.0	0.0	19.7
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.5	0.0	0.0	19.5	20.9	0.0	0.0	20.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	1.4	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.3	1.5	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.05	0.27	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	112	0	5	0	145	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	830	0	219	0	572	0	219
V/C Ratio (X)	0.00	0.14	0.00	0.02	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	1856	0	675	0	1856	0	675
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.0	0.0	18.9	0.0	12.7	0.0	18.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	19.0	0.0	12.9	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

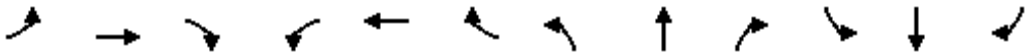
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	48	0	0	0	24	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	703	0	186	0	485	0	186
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.00
Avail Cap (c_a), veh/h	0	1572	0	572	0	1572	0	572
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	0.0	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	0.0	11.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	192	4	12	80	2	9	0	15	1	0	12
Future Volume (vph)	1	192	4	12	80	2	9	0	15	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.917			0.875	
Flt Protected					0.994			0.981			0.996	
Satd. Flow (prot)	0	1857	0	0	1846	0	0	1676	0	0	1623	0
Flt Permitted					0.994			0.981			0.996	
Satd. Flow (perm)	0	1857	0	0	1846	0	0	1676	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	209	4	13	87	2	10	0	16	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	214	0	0	102	0	0	26	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	192	4	12	80	2	9	0	15	1	0	12
Future Vol, veh/h	1	192	4	12	80	2	9	0	15	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	209	4	13	87	2	10	0	16	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	213	0	0	334	328	211	335	329	88
Stage 1	-	-	-	-	-	-	213	213	-	114	114	-
Stage 2	-	-	-	-	-	-	121	115	-	221	215	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1357	-	-	620	591	829	619	590	970
Stage 1	-	-	-	-	-	-	789	726	-	891	801	-
Stage 2	-	-	-	-	-	-	883	800	-	781	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1357	-	-	606	584	829	602	584	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	606	584	-	602	584	-
Stage 1	-	-	-	-	-	-	788	725	-	890	793	-
Stage 2	-	-	-	-	-	-	862	792	-	765	724	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	10.1	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	728	1506	-	-	1357	-	-	926
HCM Lane V/C Ratio	0.036	0.001	-	-	0.01	-	-	0.015
HCM Control Delay (s)	10.1	7.4	0	-	7.7	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	292	1	19	117	1	44
Future Volume (vph)	292	1	19	117	1	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.993	0.999	
Satd. Flow (prot)	1863	0	0	1850	1615	0
Flt Permitted				0.993	0.999	
Satd. Flow (perm)	1863	0	0	1850	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	1	21	127	1	48
Shared Lane Traffic (%)						
Lane Group Flow (vph)	318	0	0	148	49	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	1	19	117	1	44
Future Vol, veh/h	292	1	19	117	1	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	317	1	21	127	1	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	487	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	169	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1242	-	540	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1242	-	530	723
Mov Cap-2 Maneuver	-	-	-	-	530	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	717	-	-	1242	-
HCM Lane V/C Ratio	0.068	-	-	0.017	-
HCM Control Delay (s)	10.4	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	336	0	15	122	0	30
Future Volume (vph)	336	0	15	122	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	365	0	16	133	0	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	365	0	0	149	33	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

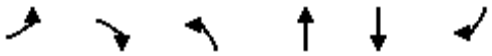
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	336	0	15	122	0	30
Future Vol, veh/h	336	0	15	122	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	365	0	16	133	0	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	365	0	530	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1194	-	510	680
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1194	-	503	680
Mov Cap-2 Maneuver	-	-	-	-	503	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	852	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	680	-	-	1194	-
HCM Lane V/C Ratio	0.048	-	-	0.014	-
HCM Control Delay (s)	10.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	15	39	13	5
Future Volume (vph)	5	5	15	39	13	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.964	
Flt Protected	0.976			0.986		
Satd. Flow (prot)	1694	0	0	1837	1796	0
Flt Permitted	0.976			0.986		
Satd. Flow (perm)	1694	0	0	1837	1796	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	5	16	42	14	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	58	19	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

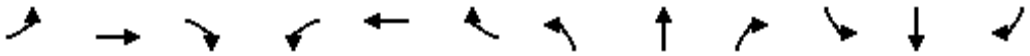
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	15	39	13	5
Future Vol, veh/h	5	5	15	39	13	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	16	42	14	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	91	17	19	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	909	1062	1597	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	900	1062	1597	-	-	-
Mov Cap-2 Maneuver	900	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1597	-	974	-	-
HCM Lane V/C Ratio	0.01	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	95	0	6	27	49	0	4	18	143	1	0
Future Volume (vph)	0	95	0	6	27	49	0	4	18	143	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.920			0.887				
Flt Protected					0.996						0.953	
Satd. Flow (prot)	0	1863	0	0	1707	0	0	1652	0	0	1775	0
Flt Permitted					0.996						0.953	
Satd. Flow (perm)	0	1863	0	0	1707	0	0	1652	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	103	0	7	29	53	0	4	20	155	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	89	0	0	24	0	0	156	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	95	0	6	27	49	0	4	18	143	1	0
Future Vol, veh/h	0	95	0	6	27	49	0	4	18	143	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	103	0	7	29	53	0	4	20	155	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	103	0	0	173	199	103	185	173	56
Stage 1	-	-	-	-	-	-	103	103	-	70	70	-
Stage 2	-	-	-	-	-	-	70	96	-	115	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1515	-	-	1489	-	-	790	697	952	776	720	1011
Stage 1	-	-	-	-	-	-	903	810	-	940	837	-
Stage 2	-	-	-	-	-	-	940	815	-	890	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1515	-	-	1489	-	-	786	694	952	753	716	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	786	694	-	753	716	-
Stage 1	-	-	-	-	-	-	903	810	-	940	833	-
Stage 2	-	-	-	-	-	-	934	811	-	867	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.1	11
HCM LOS			A	B

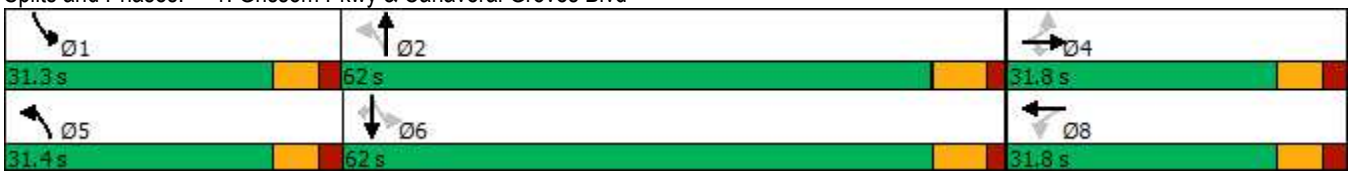
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	892	1515	-	-	1489	-	-	753
HCM Lane V/C Ratio	0.027	-	-	-	0.004	-	-	0.208
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	11
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	72	91	68	87	76	173	424	95	87	270	81
Future Volume (vph)	64	72	91	68	87	76	173	424	95	87	270	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956			0.973				0.850
Flt Protected		0.977			0.986		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1756	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.691			0.848		0.434			0.307		
Satd. Flow (perm)	0	1287	1583	0	1510	0	808	1812	0	572	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			99		18			11				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	78	99	74	95	83	188	461	103	95	293	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	99	0	252	0	188	564	0	95	293	88
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		20.8	20.8		20.8		43.0	33.5		34.9	26.5	26.5
Actuated g/C Ratio		0.26	0.26		0.26		0.54	0.42		0.44	0.33	0.33
v/c Ratio		0.44	0.20		0.62		0.33	0.73		0.26	0.47	0.15
Control Delay		31.6	7.3		33.2		10.3	27.3		10.8	24.1	5.3
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.6	7.3		33.2		10.3	27.3		10.8	24.1	5.3
LOS		C	A		C		B	C		B	C	A
Approach Delay		21.9			33.2			23.0			17.9	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		61	0		102		44	247		21	116	0
Queue Length 95th (ft)		139	39		216		78	395		43	201	29
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		419	583		505		771	1306		715	1337	1161
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.35	0.17		0.50		0.24	0.43		0.13	0.22	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 79.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 69.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	72	91	68	87	76	173	424	95	87	270	81
Future Volume (veh/h)	64	72	91	68	87	76	173	424	95	87	270	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	78	99	74	95	83	188	461	103	95	293	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	205	362	143	147	105	515	557	124	315	633	536
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.38	0.38	0.07	0.34	0.34
Sat Flow, veh/h	538	895	1585	290	642	458	1781	1480	331	1781	1870	1585
Grp Volume(v), veh/h	148	0	99	252	0	0	188	0	564	95	293	88
Grp Sat Flow(s),veh/h/ln	1433	0	1585	1390	0	0	1781	0	1811	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.1	5.9	0.0	0.0	4.0	0.0	17.2	2.0	7.5	2.4
Cycle Q Clear(g_c), s	4.9	0.0	3.1	10.8	0.0	0.0	4.0	0.0	17.2	2.0	7.5	2.4
Prop In Lane	0.47		1.00	0.29		0.33	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	414	0	362	394	0	0	515	0	681	315	633	536
V/C Ratio(X)	0.36	0.00	0.27	0.64	0.00	0.00	0.36	0.00	0.83	0.30	0.46	0.16
Avail Cap(c_a), veh/h	684	0	650	672	0	0	1065	0	1634	928	1688	1430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	0.0	19.4	22.4	0.0	0.0	11.2	0.0	17.2	13.5	15.8	14.1
Incr Delay (d2), s/veh	0.5	0.0	0.4	1.7	0.0	0.0	0.4	0.0	2.7	0.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.1	3.3	0.0	0.0	1.3	0.0	6.2	0.7	2.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	0.0	19.8	24.1	0.0	0.0	11.7	0.0	19.9	14.0	16.3	14.3
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		247			252			752			476	
Approach Delay, s/veh		20.1			24.1			17.8			15.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	29.9		20.7	12.6	27.6		20.7				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	19.2		6.9	6.0	9.5		12.8				
Green Ext Time (p_c), s	0.2	3.7		1.0	0.4	1.9		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.4	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	72	91	68	87	76	173	424	95	87	270	81
Future Volume (veh/h)	64	72	91	68	87	76	173	424	95	87	270	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	78	99	74	95	83	188	461	103	95	293	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	210	205	362	143	147	105	515	557	124	315	633	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.38	0.38	0.07	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.4	0.0	19.8	24.1	0.0	0.0	11.7	0.0	19.9	14.0	16.3	14.3
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		247			252			752			476	
Approach Delay, s/veh		20.1			24.1			17.8			15.5	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.3	29.9		20.7	12.6	27.6		20.7
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.0	19.2		6.9	6.0	9.5		12.8
Green Ext Time (g_e), s	0.2	3.7		1.0	0.4	1.9		1.1
Prob of Phs Call (p_c)	0.80	1.00		1.00	0.96	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.06

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			538	1781			290

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1480		895		1870		642

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		331		1585		1585		458

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	95	0	0	148	188	0	0	252
Grp Sat Flow (s), veh/h/ln	1781	0	0	1433	1781	0	0	1390
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	4.0	0.0	0.0	5.9
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	4.9	4.0	0.0	0.0	10.8
Perm LT Sat Flow (s_l), veh/h/ln	847	0	0	1225	1002	0	0	1227
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1303	0	0	0	0
Perm LT Eff Green (g_p), s	20.6	0.0	0.0	13.9	20.6	0.0	0.0	13.9
Perm LT Serve Time (g_u), s	5.7	0.0	0.0	3.1	13.1	0.0	0.0	9.0
Perm LT Q Serve Time (g_ps), s	1.9	0.0	0.0	0.0	1.7	0.0	0.0	5.9
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.47	1.00	0.00	0.00	0.29
Lane Grp Cap (c), veh/h	315	0	0	414	515	0	0	394
V/C Ratio (X)	0.30	0.00	0.00	0.36	0.36	0.00	0.00	0.64
Avail Cap (c_a), veh/h	928	0	0	684	1065	0	0	672
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.5	0.0	0.0	19.9	11.2	0.0	0.0	22.4
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.4	0.0	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.0	0.0	0.0	20.4	11.7	0.0	0.0	24.1
1st-Term Q (Q1), veh/ln	0.7	0.0	0.0	1.6	1.2	0.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	1.7	1.3	0.0	0.0	3.3
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.07	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	293	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	633	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1688	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	564	0	99	0	88	0	0
Grp Sat Flow (s), veh/h/ln	0	1811	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	17.2	0.0	3.1	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.2	0.0	3.1	0.0	2.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.33
Lane Grp Cap (c), veh/h	0	681	0	362	0	536	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.27	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1634	0	650	0	1430	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.2	0.0	19.4	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.9	0.0	19.8	0.0	14.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.7	0.0	1.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.2	0.0	1.1	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.15	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

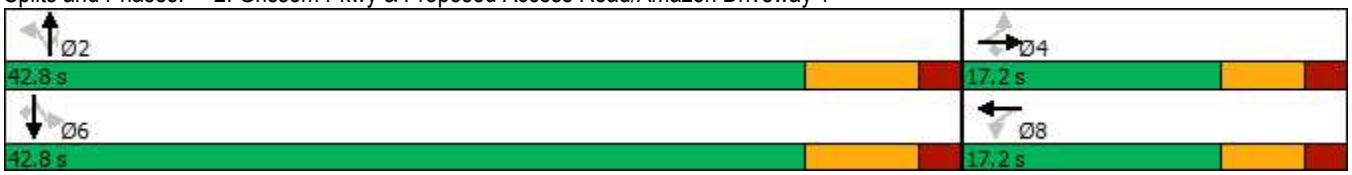
Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

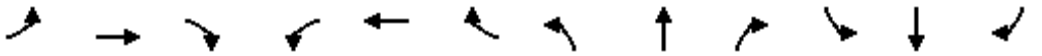
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	106	27	0	20	183	638	1	0	375	111
Future Volume (vph)	61	0	106	27	0	20	183	638	1	0	375	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.787		0.523					
Satd. Flow (perm)	0	1349	1583	0	1381	0	974	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		75				49			121
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	115	29	0	22	199	693	1	0	408	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	115	0	51	0	199	693	1	0	408	121
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.0	9.0		9.0		28.1	28.1	28.1		28.1	28.1
Actuated g/C Ratio		0.20	0.20		0.20		0.62	0.62	0.62		0.62	0.62
v/c Ratio		0.25	0.28		0.15		0.33	0.60	0.00		0.35	0.12
Control Delay		20.7	7.2		5.0		8.2	10.2	0.0		7.1	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		20.7	7.2		5.0		8.2	10.2	0.0		7.1	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		12.1			5.0			9.7			5.9	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		14	0		0		26	114	0		54	0
Queue Length 95th (ft)		51	36		16		67	234	0		113	16
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		354	500		418		794	1519	1300		1519	1313
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.19	0.23		0.12		0.25	0.46	0.00		0.27	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.2			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	106	27	0	20	183	638	1	0	375	111
Future Volume (veh/h)	61	0	106	27	0	20	183	638	1	0	375	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	115	29	0	22	199	693	1	0	408	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	438	0	288	254	35	114	497	945	801	176	945	801
Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.51	0.51	0.51	0.00	0.51	0.51
Sat Flow, veh/h	1443	0	1585	638	193	630	874	1870	1585	750	1870	1585
Grp Volume(v), veh/h	66	0	115	51	0	0	199	693	1	0	408	121
Grp Sat Flow(s),veh/h/ln	1443	0	1585	1461	0	0	874	1870	1585	750	1870	1585
Q Serve(g_s), s	0.4	0.0	2.6	0.0	0.0	0.0	7.6	11.9	0.0	0.0	5.6	1.7
Cycle Q Clear(g_c), s	1.4	0.0	2.6	1.0	0.0	0.0	13.3	11.9	0.0	0.0	5.6	1.7
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	0	288	403	0	0	497	945	801	176	945	801
V/C Ratio(X)	0.15	0.00	0.40	0.13	0.00	0.00	0.40	0.73	0.00	0.00	0.43	0.15
Avail Cap(c_a), veh/h	577	0	446	542	0	0	819	1633	1384	452	1633	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	14.8	14.1	0.0	0.0	10.6	7.9	5.0	0.0	6.4	5.4
Incr Delay (d2), s/veh	0.2	0.0	0.9	0.1	0.0	0.0	0.5	1.1	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.8	0.4	0.0	0.0	0.9	2.3	0.0	0.0	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	0.0	15.7	14.2	0.0	0.0	11.1	9.1	5.0	0.0	6.7	5.5
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		181			51			893			529	
Approach Delay, s/veh		15.2			14.2			9.5			6.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.8		13.1		27.8		13.1				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		15.3		4.6		7.6		3.0				
Green Ext Time (p_c), s		5.4		0.3		2.6		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	106	27	0	20	183	638	1	0	375	111
Future Volume (veh/h)	61	0	106	27	0	20	183	638	1	0	375	111
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	115	29	0	22	199	693	1	0	408	121
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	438	0	288	254	35	114	497	945	801	176	945	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.51	0.51	0.51	0.00	0.51	0.51
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.4	0.0	15.7	14.2	0.0	0.0	11.1	9.1	5.0	0.0	6.7	5.5
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		181			51			893			529	
Approach Delay, s/veh		15.2			14.2			9.5			6.4	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		27.8		13.1		27.8		13.1
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		15.3		4.6		7.6		3.0
Green Ext Time (g_e), s		5.4		0.3		2.6		0.1
Prob of Phs Call (p_c)		1.00		0.93		1.00		0.93
Prob of Max Out (p_x)		0.11		0.19		0.00		0.10

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		874		1443		750		638

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		193

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		630

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	199	0	66	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	874	0	1443	0	750	0	1461
Q Serve Time (g_s), s	0.0	7.6	0.0	0.4	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.3	0.0	1.4	0.0	0.0	0.0	1.0
Perm LT Sat Flow (s_l), veh/h/ln	0	874	0	1412	0	750	0	1298
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.7	0.0	7.4	0.0	0.0	0.0	7.4
Perm LT Serve Time (g_u), s	0.0	15.0	0.0	6.4	0.0	0.0	0.0	6.1
Perm LT Q Serve Time (g_ps), s	0.0	7.6	0.0	0.4	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	497	0	438	0	176	0	403
V/C Ratio (X)	0.00	0.40	0.00	0.15	0.00	0.00	0.00	0.13
Avail Cap (c_a), veh/h	0	819	0	577	0	452	0	542
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.6	0.0	14.2	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.2	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.1	0.0	14.4	0.0	0.0	0.0	14.2
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	408	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	11.9	0.0	0.0	0.0	5.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	0.0	0.0	5.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	945	0	0	0	945	0	0
V/C Ratio (X)	0.00	0.73	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1633	0	0	0	1633	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	6.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.1	0.0	0.0	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

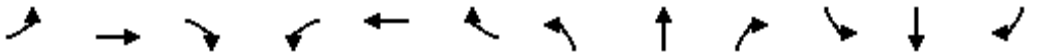
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	115	0	121	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.6	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.6	0.0	1.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	801	0	288	0	801	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.40	0.00	0.15	0.00	0.00
Avail Cap (c_a), veh/h	0	1384	0	446	0	1384	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	14.8	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.0	0.0	15.7	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

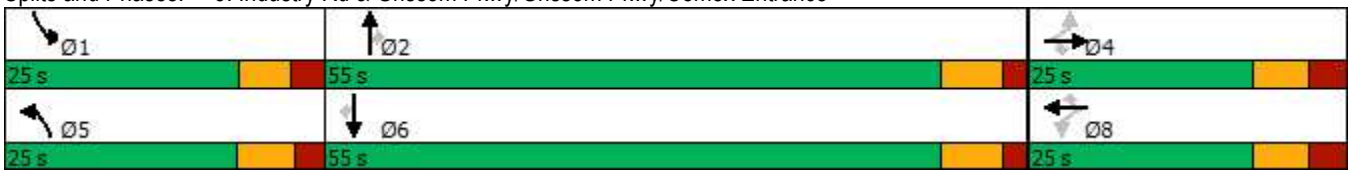


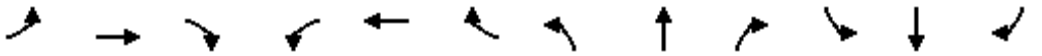
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	474	9	5	1	681	97	7	0	206	52
Future Volume (vph)	17	5	474	9	5	1	681	97	7	0	206	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.754			0.754			0.950					
Satd. Flow (perm)	1405	1863	1583	1405	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			515			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	5	515	10	5	1	740	105	8	0	224	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	515	10	5	1	740	105	8	0	224	57
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.1	16.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.08	0.02	0.75	0.05	0.02	0.00	0.78	0.09	0.01		0.50	0.12
Control Delay	24.4	23.2	10.6	23.8	23.2	0.0	30.6	6.0	0.0		26.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.4	23.2	10.6	23.8	23.2	0.0	30.6	6.0	0.0		26.6	1.0
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.2			22.1			27.3			21.4	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	6	2	0	3	2	0	129	13	0		73	0
Queue Length 95th (ft)	23	10	79	16	10	0	#279	40	0		154	4
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	495	799	374	495	502	950	1362	1189		1362	1189
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.01	0.64	0.03	0.01	0.00	0.78	0.08	0.01		0.16	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 66.8%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	474	9	5	1	681	97	7	0	206	52
Future Volume (veh/h)	17	5	474	9	5	1	681	97	7	0	206	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	740	105	8	0	224	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	123		222	123	104	916	1249	1059	3	518	439
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.27	0.67	0.67	0.00	0.28	0.28
Sat Flow, veh/h	1410	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	5	0	10	5	1	740	105	8	0	224	57
Grp Sat Flow(s),veh/h/ln	1410	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	0.4	0.1	0.0	10.8	1.1	0.1	0.0	5.3	1.5
Cycle Q Clear(g_c), s	0.8	0.1	0.0	0.5	0.1	0.0	10.8	1.1	0.1	0.0	5.3	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	123		222	123	104	916	1249	1059	3	518	439
V/C Ratio(X)	0.08	0.04		0.04	0.04	0.01	0.81	0.08	0.01	0.00	0.43	0.13
Avail Cap(c_a), veh/h	586	606		587	606	513	1164	1665	1411	603	1665	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	23.7	0.0	23.9	23.7	23.6	18.6	3.2	3.0	0.0	16.1	14.7
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	3.4	0.0	0.0	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.1	0.1	0.0	4.3	0.2	0.0	0.0	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	23.8	0.0	24.0	23.8	23.6	22.0	3.2	3.0	0.0	16.7	14.8
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23	A		16			853			281	
Approach Delay, s/veh		24.1			23.9			19.5			16.3	
Approach LOS		C			C			B			B	

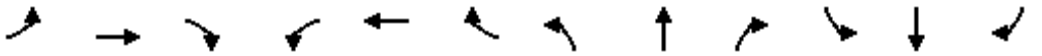
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	43.0		11.0	21.1	21.9		11.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.1		2.8	12.8	7.3		2.5				
Green Ext Time (p_c), s	0.0	0.8		0.0	1.5	2.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	474	9	5	1	681	97	7	0	206	52
Future Volume (veh/h)	17	5	474	9	5	1	681	97	7	0	206	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	740	105	8	0	224	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	222	123		222	123	104	916	1249	1059	3	518	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.27	0.67	0.67	0.00	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.2	23.8	0.0	24.0	23.8	23.6	22.0	3.2	3.0	0.0	16.7	14.8
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23			16			853			281	
Approach Delay, s/veh		24.1			23.9			19.5			16.3	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	43.0		11.0	21.1	21.9		11.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	3.1		2.8	12.8	7.3		2.5
Green Ext Time (g_e), s	0.0	0.8		0.0	1.5	2.0		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.44	1.00	1.00		0.44
Prob of Max Out (p_x)	0.00	0.00		0.00	0.59	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1410	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	18	740	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1410	1728	0	0	1411
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	10.8	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.8	10.8	0.0	0.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1410	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	222	916	0	0	222
V/C Ratio (X)	0.00	0.00	0.00	0.08	0.81	0.00	0.00	0.04
Avail Cap (c_a), veh/h	603	0	0	586	1164	0	0	587
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.0	18.6	0.0	0.0	23.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	3.4	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.2	22.0	0.0	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	3.8	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	4.3	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.78	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	105	0	5	0	224	0	5
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.1	0.0	0.1	0.0	5.3	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.1	0.0	0.1	0.0	5.3	0.0	0.1
Lane Grp Cap (c), veh/h	0	1249	0	123	0	518	0	123
V/C Ratio (X)	0.00	0.08	0.00	0.04	0.00	0.43	0.00	0.04
Avail Cap (c_a), veh/h	0	1665	0	606	0	1665	0	606
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	23.7	0.0	16.1	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	23.8	0.0	16.7	0.0	23.8
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.1	0.0	2.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

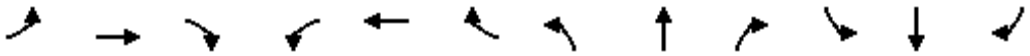
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.1	0.0	2.1	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	57	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1059	0	104	0	439	0	104
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.13	0.00	0.01
Avail Cap (c_a), veh/h	0	1411	0	513	0	1411	0	513
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	0.0	0.0	14.7	0.0	23.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	14.8	0.0	23.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	146	15	26	241	1	10	0	16	1	2	6
Future Volume (vph)	12	146	15	26	241	1	10	0	16	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.918			0.905	
Flt Protected		0.997			0.995			0.981			0.995	
Satd. Flow (prot)	0	1837	0	0	1853	0	0	1678	0	0	1677	0
Flt Permitted		0.997			0.995			0.981			0.995	
Satd. Flow (perm)	0	1837	0	0	1853	0	0	1678	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	159	16	28	262	1	11	0	17	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	188	0	0	291	0	0	28	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	146	15	26	241	1	10	0	16	1	2	6
Future Vol, veh/h	12	146	15	26	241	1	10	0	16	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	159	16	28	262	1	11	0	17	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	175	0	0	516	512	167	521	520	263
Stage 1	-	-	-	-	-	-	193	193	-	319	319	-
Stage 2	-	-	-	-	-	-	323	319	-	202	201	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1301	-	-	1401	-	-	470	465	877	466	461	776
Stage 1	-	-	-	-	-	-	809	741	-	693	653	-
Stage 2	-	-	-	-	-	-	689	653	-	800	735	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1301	-	-	1401	-	-	452	449	877	445	445	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	452	449	-	445	445	-
Stage 1	-	-	-	-	-	-	800	733	-	685	638	-
Stage 2	-	-	-	-	-	-	665	638	-	776	727	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	10.8	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	644	1301	-	-	1401	-	-	622
HCM Lane V/C Ratio	0.044	0.01	-	-	0.02	-	-	0.016
HCM Control Delay (s)	10.8	7.8	0	-	7.6	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	0	49	316	2	29
Future Volume (vph)	153	0	49	316	2	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.873	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1621	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1621	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	0	53	343	2	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	0	0	396	34	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	153	0	49	316	2	29
Future Vol, veh/h	153	0	49	316	2	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	0	53	343	2	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	166	0	615	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	449	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1412	-	455	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	643	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1412	-	434	878
Mov Cap-2 Maneuver	-	-	-	-	434	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	824	-	-	1412	-
HCM Lane V/C Ratio	0.041	-	-	0.038	-
HCM Control Delay (s)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	182	0	42	320	0	20
Future Volume (vph)	182	0	42	320	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	0	46	348	0	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	198	0	0	394	22	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

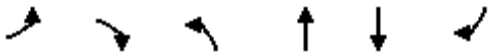
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	182	0	42	320	0	20
Future Vol, veh/h	182	0	42	320	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	198	0	46	348	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	198	0	638	198
Stage 1	-	-	-	-	198	-
Stage 2	-	-	-	-	440	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1375	-	441	843
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1375	-	423	843
Mov Cap-2 Maneuver	-	-	-	-	423	-
Stage 1	-	-	-	-	835	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	843	-	-	1375	-
HCM Lane V/C Ratio	0.026	-	-	0.033	-
HCM Control Delay (s)	9.4	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	19	11	24	43	4
Future Volume (vph)	7	19	11	24	43	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902				0.989	
Flt Protected	0.986			0.984		
Satd. Flow (prot)	1657	0	0	1833	1842	0
Flt Permitted	0.986			0.984		
Satd. Flow (perm)	1657	0	0	1833	1842	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	21	12	26	47	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	0	38	51	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			

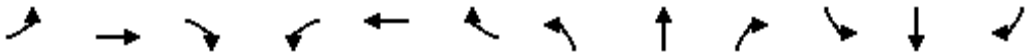
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	19	11	24	43	4
Future Vol, veh/h	7	19	11	24	43	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	21	12	26	47	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	99	49	51	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	900	1020	1555	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	893	1020	1555	-	-	-
Mov Cap-2 Maneuver	893	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1555	-	982	-	-
HCM Lane V/C Ratio	0.008	-	0.029	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	59	0	20	110	164	0	2	12	95	3	0
Future Volume (vph)	0	59	0	20	110	164	0	2	12	95	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.925			0.883				
Flt Protected					0.997						0.954	
Satd. Flow (prot)	0	1863	0	0	1718	0	0	1645	0	0	1777	0
Flt Permitted					0.997						0.954	
Satd. Flow (perm)	0	1863	0	0	1718	0	0	1645	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	64	0	22	120	178	0	2	13	103	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	320	0	0	15	0	0	106	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	59	0	20	110	164	0	2	12	95	3	0
Future Vol, veh/h	0	59	0	20	110	164	0	2	12	95	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	64	0	22	120	178	0	2	13	103	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	64	0	0	319	406	64	325	317	209
Stage 1	-	-	-	-	-	-	64	64	-	253	253	-
Stage 2	-	-	-	-	-	-	255	342	-	72	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1263	-	-	1538	-	-	634	534	1000	628	599	831
Stage 1	-	-	-	-	-	-	947	842	-	751	698	-
Stage 2	-	-	-	-	-	-	749	638	-	938	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1263	-	-	1538	-	-	623	524	1000	609	588	831
Mov Cap-2 Maneuver	-	-	-	-	-	-	623	524	-	609	588	-
Stage 1	-	-	-	-	-	-	947	842	-	751	685	-
Stage 2	-	-	-	-	-	-	732	627	-	923	842	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.5	9.1	12.2
HCM LOS			A	B

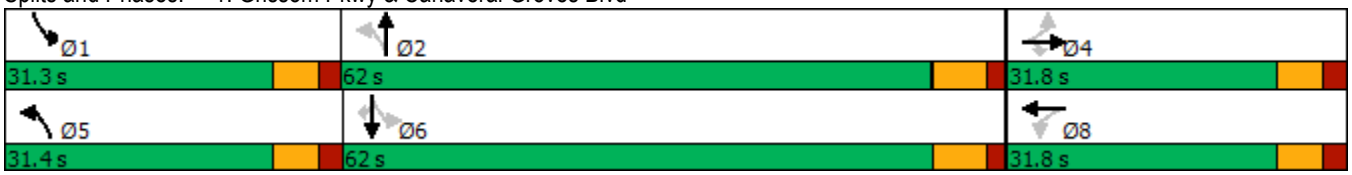
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	885	1263	-	-	1538	-	-	608
HCM Lane V/C Ratio	0.017	-	-	-	0.014	-	-	0.175
HCM Control Delay (s)	9.1	0	-	-	7.4	0	-	12.2
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	121	168	64	56	45	46	189	49	90	374	47
Future Volume (vph)	105	121	168	64	56	45	46	189	49	90	374	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.969				0.850
Flt Protected		0.977			0.981		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1760	0	1770	1805	0	1770	1863	1583
Flt Permitted		0.785			0.783		0.392			0.513		
Satd. Flow (perm)	0	1462	1583	0	1405	0	730	1805	0	956	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			183		13			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	114	132	183	70	61	49	50	205	53	98	407	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	246	183	0	180	0	50	258	0	98	407	51
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		24.5	24.5		24.5		26.1	20.1		28.6	23.3	23.3
Actuated g/C Ratio		0.35	0.35		0.35		0.38	0.29		0.41	0.33	0.33
v/c Ratio		0.48	0.27		0.36		0.13	0.49		0.20	0.65	0.09
Control Delay		24.3	4.9		20.9		10.9	23.9		11.3	26.9	1.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.3	4.9		20.9		10.9	23.9		11.3	26.9	1.8
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.0			20.9			21.8			21.8	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		86	0		55		12	92		23	166	0
Queue Length 95th (ft)		182	44		128		27	161		46	268	9
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		541	701		528		743	1437		771	1478	1274
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.45	0.26		0.34		0.07	0.18		0.13	0.28	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 69.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 20.0		Intersection LOS: C	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	121	168	64	56	45	46	189	49	90	374	47
Future Volume (veh/h)	105	121	168	64	56	45	46	189	49	90	374	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	132	183	70	61	49	50	205	53	98	407	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	227	397	151	123	67	338	414	107	460	581	492
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.29	0.29	0.07	0.31	0.31
Sat Flow, veh/h	572	906	1585	220	493	267	1781	1433	371	1781	1870	1585
Grp Volume(v), veh/h	246	0	183	180	0	0	50	0	258	98	407	51
Grp Sat Flow(s),veh/h/ln	1478	0	1585	980	0	0	1781	0	1804	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.1	2.5	0.0	0.0	1.0	0.0	6.2	1.9	9.9	1.2
Cycle Q Clear(g_c), s	7.7	0.0	5.1	10.2	0.0	0.0	1.0	0.0	6.2	1.9	9.9	1.2
Prop In Lane	0.46		1.00	0.39		0.27	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	472	0	397	342	0	0	338	0	522	460	581	492
V/C Ratio(X)	0.52	0.00	0.46	0.53	0.00	0.00	0.15	0.00	0.49	0.21	0.70	0.10
Avail Cap(c_a), veh/h	829	0	764	664	0	0	1109	0	1913	1189	1983	1681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	16.5	17.8	0.0	0.0	12.5	0.0	15.3	11.6	15.7	12.7
Incr Delay (d2), s/veh	0.9	0.0	0.8	1.3	0.0	0.0	0.2	0.0	0.7	0.2	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.7	1.9	0.0	0.0	0.3	0.0	2.1	0.6	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	17.3	19.0	0.0	0.0	12.7	0.0	16.0	11.8	17.3	12.8
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		429			180			308			556	
Approach Delay, s/veh		17.8			19.0			15.5			15.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		19.8	9.0	23.1		19.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	8.2		9.7	3.0	11.9		12.2				
Green Ext Time (p_c), s	0.2	1.5		1.8	0.1	2.6		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			16.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	121	168	64	56	45	46	189	49	90	374	47
Future Volume (veh/h)	105	121	168	64	56	45	46	189	49	90	374	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	132	183	70	61	49	50	205	53	98	407	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	245	227	397	151	123	67	338	414	107	460	581	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.29	0.29	0.07	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.2	0.0	17.3	19.0	0.0	0.0	12.7	0.0	16.0	11.8	17.3	12.8
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		429			180			308			556	
Approach Delay, s/veh		17.8			19.0			15.5			15.9	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		19.8	9.0	23.1		19.8
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.9	8.2		9.7	3.0	11.9		12.2
Green Ext Time (g_e), s	0.2	1.5		1.8	0.1	2.6		0.8
Prob of Phs Call (p_c)	0.76	1.00		1.00	0.51	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.02	0.00	0.00		0.03

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			572	1781			220

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1433		906		1870		493

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		371		1585		1585		267

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	98	0	0	246	50	0	0	180
Grp Sat Flow (s), veh/h/ln	1781	0	0	1478	1781	0	0	980
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	1.0	0.0	0.0	2.5
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	7.7	1.0	0.0	0.0	10.2
Perm LT Sat Flow (s_l), veh/h/ln	1121	0	0	1304	934	0	0	1081
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1379	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	13.0	15.0	0.0	0.0	13.0
Perm LT Serve Time (g_u), s	8.8	0.0	0.0	2.8	6.2	0.0	0.0	5.3
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	0.5	0.0	0.0	2.5
Time to First Blk (g_f), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.39
Lane Grp Cap (c), veh/h	460	0	0	472	338	0	0	342
V/C Ratio (X)	0.21	0.00	0.00	0.52	0.15	0.00	0.00	0.53
Avail Cap (c_a), veh/h	1189	0	0	829	1109	0	0	664
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.6	0.0	0.0	17.3	12.5	0.0	0.0	17.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.8	0.0	0.0	18.2	12.7	0.0	0.0	19.0
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.2	0.3	0.0	0.0	1.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.4	0.3	0.0	0.0	1.9
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	407	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	581	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1983	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	258	0	183	0	51	0	0
Grp Sat Flow (s), veh/h/ln	0	1804	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	6.2	0.0	5.1	0.0	1.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.2	0.0	5.1	0.0	1.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	522	0	397	0	492	0	0
V/C Ratio (X)	0.00	0.49	0.00	0.46	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	1913	0	764	0	1681	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.3	0.0	16.5	0.0	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.8	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.0	0.0	17.3	0.0	12.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	1.6	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	1.7	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.24	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

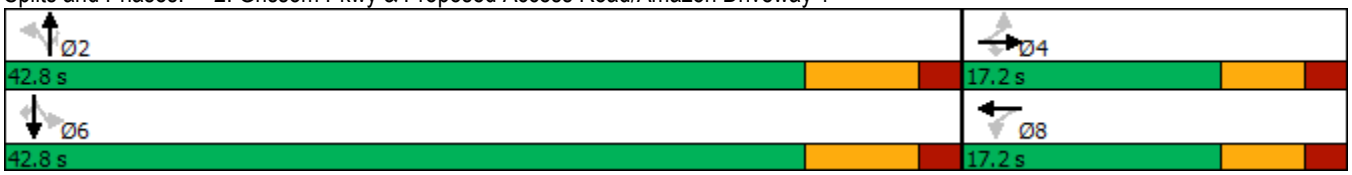
Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	0	193	1	0	0	47	270	1	0	606	57
Future Volume (vph)	136	0	193	1	0	0	47	270	1	0	606	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.663		0.309					
Satd. Flow (perm)	0	1410	1583	0	1235	0	576	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210						49			62
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	0	210	1	0	0	51	293	1	0	659	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	210	0	1	0	51	293	1	0	659	62
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.7	9.7		9.7		23.3	23.3	23.3		23.3	23.3
Actuated g/C Ratio		0.21	0.21		0.21		0.50	0.50	0.50		0.50	0.50
v/c Ratio		0.50	0.42		0.00		0.18	0.31	0.00		0.70	0.07
Control Delay		24.4	6.6		18.0		7.8	7.7	0.0		13.4	2.1
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		24.4	6.6		18.0		7.8	7.7	0.0		13.4	2.1
LOS		C	A		B		A	A	A		B	A
Approach Delay		14.0			18.0			7.7			12.4	
Approach LOS		B			B			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		32	0		0		6	40	0		117	0
Queue Length 95th (ft)		98	46		4		21	78	0		217	12
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		359	560		314		455	1474	1263		1474	1265
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.41	0.38		0.00		0.11	0.20	0.00		0.45	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.2			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 65.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	0	193	1	0	0	47	270	1	0	606	57
Future Volume (veh/h)	136	0	193	1	0	0	47	270	1	0	606	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	0	210	1	0	0	51	293	1	0	659	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	0	326	346	0	0	308	855	725	189	855	725
Arrive On Green	0.21	0.00	0.21	0.21	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Sat Flow, veh/h	1546	0	1585	762	0	0	732	1870	1585	1085	1870	1585
Grp Volume(v), veh/h	148	0	210	1	0	0	51	293	1	0	659	62
Grp Sat Flow(s),veh/h/ln	1546	0	1585	762	0	0	732	1870	1585	1085	1870	1585
Q Serve(g_s), s	0.0	0.0	4.6	0.0	0.0	0.0	2.4	3.8	0.0	0.0	11.2	0.8
Cycle Q Clear(g_c), s	2.7	0.0	4.6	2.8	0.0	0.0	13.6	3.8	0.0	0.0	11.2	0.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	508	0	326	346	0	0	308	855	725	189	855	725
V/C Ratio(X)	0.29	0.00	0.64	0.00	0.00	0.00	0.17	0.34	0.00	0.00	0.77	0.09
Avail Cap(c_a), veh/h	645	0	480	460	0	0	661	1757	1489	713	1757	1489
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	13.8	14.2	0.0	0.0	14.3	6.6	5.6	0.0	8.6	5.8
Incr Delay (d2), s/veh	0.3	0.0	2.1	0.0	0.0	0.0	0.3	0.2	0.0	0.0	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.5	0.0	0.0	0.0	0.3	0.7	0.0	0.0	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	15.9	14.2	0.0	0.0	14.6	6.9	5.6	0.0	10.1	5.9
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		358			1			345			721	
Approach Delay, s/veh		14.9			14.2			8.0			9.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.5		13.5		24.5		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		15.6		6.6		13.2		4.8				
Green Ext Time (p_c), s		1.7		0.7		4.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	0	193	1	0	0	47	270	1	0	606	57
Future Volume (veh/h)	136	0	193	1	0	0	47	270	1	0	606	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	0	210	1	0	0	51	293	1	0	659	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	508	0	326	346	0	0	308	855	725	189	855	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.00	0.21	0.21	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.4	0.0	15.9	14.2	0.0	0.0	14.6	6.9	5.6	0.0	10.1	5.9
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		358			1			345			721	
Approach Delay, s/veh		14.9			14.2			8.0			9.8	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		24.5		13.5		24.5		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		5.0		4.5		4.7		5.9
Max Q Clear (g_c+I1), s		15.6		6.6		13.2		4.8
Green Ext Time (g_e), s		1.7		0.7		4.2		0.0
Prob of Phs Call (p_c)		1.00		0.98		1.00		0.98
Prob of Max Out (p_x)		0.00		0.83		0.03		0.20

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		732		1546		1085		762

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	51	0	148	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	732	0	1546	0	1085	0	762
Q Serve Time (g_s), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.6	0.0	2.7	0.0	0.0	0.0	2.8
Perm LT Sat Flow (s_l), veh/h/ln	0	732	0	1440	0	1085	0	1190
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.4	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	6.2	0.0	5.1	0.0	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	308	0	508	0	189	0	346
V/C Ratio (X)	0.00	0.17	0.00	0.29	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	661	0	645	0	713	0	460
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	13.1	0.0	0.0	0.0	14.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.6	0.0	13.4	0.0	0.0	0.0	14.2
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	293	0	0	0	659	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.8	0.0	0.0	0.0	11.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	0.0	0.0	11.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	855	0	0	0	855	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	1757	0	0	0	1757	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.6	0.0	0.0	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.9	0.0	0.0	0.0	10.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

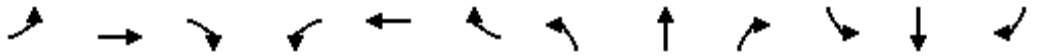
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	210	0	62	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.6	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.6	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	725	0	326	0	725	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.64	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	1489	0	480	0	1489	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.8	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	15.9	0.0	5.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.3	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.5	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.25	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

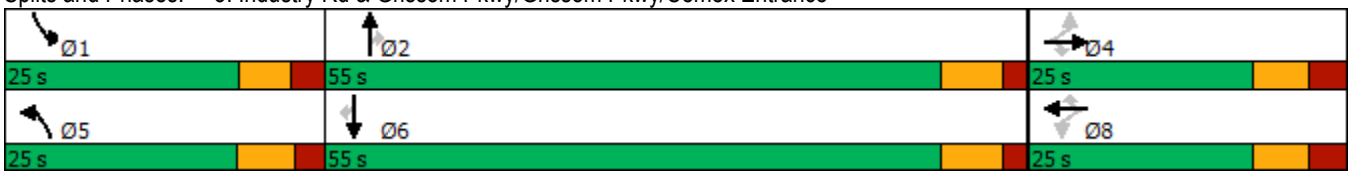


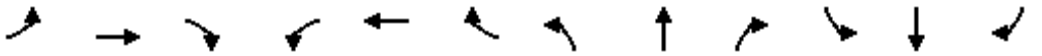
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	6	519	50	3	0	284	103	44	3	133	26
Future Volume (vph)	37	6	519	50	3	0	284	103	44	3	133	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.756			0.753			0.950			0.950		
Satd. Flow (perm)	1408	1863	1583	1403	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			564						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	7	564	54	3	0	309	112	48	3	145	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	7	564	54	3	0	309	112	48	3	145	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.1	11.1	11.1	11.1	11.1		12.7	27.0	27.0	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.28	0.28
v/c Ratio	0.14	0.02	0.73	0.19	0.01		0.39	0.12	0.06	0.02	0.28	0.05
Control Delay	20.8	19.0	8.7	21.6	18.7		22.8	10.3	0.1	27.3	21.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	19.0	8.7	21.6	18.7		22.8	10.3	0.1	27.3	21.0	0.2
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.7			21.4			17.5			17.8	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	12	2	0	16	1		48	15	0	1	38	0
Queue Length 95th (ft)	34	11	74	43	7		92	64	0	9	98	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	465	615	900	463	615		1179	1585	1364	611	1585	1364
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.63	0.12	0.00		0.26	0.07	0.04	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 55.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 69.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	519	50	3	0	284	103	44	3	133	26
Future Volume (veh/h)	37	6	519	50	3	0	284	103	44	3	133	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	3	0	309	112	48	3	145	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	231		316	231	196	492	828	702	7	566	479
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Sat Flow, veh/h	1414	1870	1585	1409	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	40	7	0	54	3	0	309	112	48	3	145	28
Grp Sat Flow(s),veh/h/ln	1414	1870	1585	1409	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	0.2	0.0	1.7	0.1	0.0	4.1	1.7	0.9	0.1	2.9	0.6
Cycle Q Clear(g_c), s	1.3	0.2	0.0	1.9	0.1	0.0	4.1	1.7	0.9	0.1	2.9	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	231		316	231	196	492	828	702	7	566	479
V/C Ratio(X)	0.13	0.03		0.17	0.01	0.00	0.63	0.14	0.07	0.41	0.26	0.06
Avail Cap(c_a), veh/h	649	667		644	667	565	1281	1832	1553	664	1832	1553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	18.9	0.0	19.8	18.9	0.0	19.8	8.1	7.9	24.4	12.9	12.2
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.5	0.0	0.0	1.6	0.6	0.2	0.1	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	19.0	0.0	20.1	18.9	0.0	21.2	8.2	7.9	49.8	13.2	12.2
LnGrp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47	A		57			469			176	
Approach Delay, s/veh		19.6			20.0			16.7			13.7	
Approach LOS		B			C			B			B	

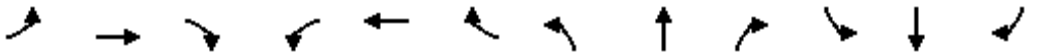
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.6		13.6	13.8	21.7		13.6				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.3	6.1	4.9		3.9				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.9	1.2		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	519	50	3	0	284	103	44	3	133	26
Future Volume (veh/h)	37	6	519	50	3	0	284	103	44	3	133	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	3	0	309	112	48	3	145	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	319	231		316	231	196	492	828	702	7	566	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.7	19.0	0.0	20.1	18.9	0.0	21.2	8.2	7.9	49.8	13.2	12.2
Ln Grp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47			57			469			176	
Approach Delay, s/veh		19.6			20.0			16.7			13.7	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.6		13.6	13.8	21.7		13.6
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.7		3.3	6.1	4.9		3.9
Green Ext Time (g_e), s	0.0	1.0		0.1	0.9	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.76	1.00	0.99		0.76
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1414	3456			1409

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	40	309	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1414	1728	0	0	1409
Q Serve Time (g_s), s	0.1	0.0	0.0	1.3	4.1	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.3	4.1	0.0	0.0	1.9
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1414	0	0	0	1409
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	6.1
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	5.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	319	492	0	0	316
V/C Ratio (X)	0.41	0.00	0.00	0.13	0.63	0.00	0.00	0.17
Avail Cap (c_a), veh/h	664	0	0	649	1281	0	0	644
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.4	0.0	0.0	19.5	19.8	0.0	0.0	19.8
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.8	0.0	0.0	19.7	21.2	0.0	0.0	20.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	1.5	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.4	1.6	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.07	0.29	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	112	0	7	0	145	0	3
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.2	0.0	2.9	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.2	0.0	2.9	0.0	0.1
Lane Grp Cap (c), veh/h	0	828	0	231	0	566	0	231
V/C Ratio (X)	0.00	0.14	0.00	0.03	0.00	0.26	0.00	0.01
Avail Cap (c_a), veh/h	0	1832	0	667	0	1832	0	667
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	18.9	0.0	12.9	0.0	18.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.2	0.0	19.0	0.0	13.2	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.1	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

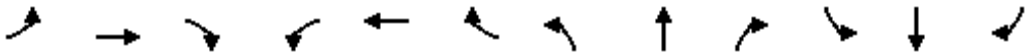
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	48	0	0	0	28	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	702	0	196	0	479	0	196
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.06	0.00	0.00
Avail Cap (c_a), veh/h	0	1553	0	565	0	1553	0	565
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	12.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	192	5	16	80	2	10	0	19	1	0	12
Future Volume (vph)	1	192	5	16	80	2	10	0	19	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.911			0.875	
Flt Protected					0.992			0.983			0.996	
Satd. Flow (prot)	0	1857	0	0	1842	0	0	1668	0	0	1623	0
Flt Permitted					0.992			0.983			0.996	
Satd. Flow (perm)	0	1857	0	0	1842	0	0	1668	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	209	5	17	87	2	11	0	21	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	106	0	0	32	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	192	5	16	80	2	10	0	19	1	0	12
Future Vol, veh/h	1	192	5	16	80	2	10	0	19	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	209	5	17	87	2	11	0	21	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	214	0	0	343	337	212	346	338	88
Stage 1	-	-	-	-	-	-	214	214	-	122	122	-
Stage 2	-	-	-	-	-	-	129	123	-	224	216	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1356	-	-	611	584	828	608	583	970
Stage 1	-	-	-	-	-	-	788	725	-	882	795	-
Stage 2	-	-	-	-	-	-	875	794	-	779	724	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1356	-	-	596	576	828	587	575	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	596	576	-	587	575	-
Stage 1	-	-	-	-	-	-	787	724	-	881	785	-
Stage 2	-	-	-	-	-	-	852	784	-	759	723	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	10.2	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	730	1506	-	-	1356	-	-	924
HCM Lane V/C Ratio	0.043	0.001	-	-	0.013	-	-	0.015
HCM Control Delay (s)	10.2	7.4	0	-	7.7	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	292	1	23	117	1	48
Future Volume (vph)	292	1	23	117	1	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.992	0.999	
Satd. Flow (prot)	1863	0	0	1848	1615	0
Flt Permitted				0.992	0.999	
Satd. Flow (perm)	1863	0	0	1848	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	1	25	127	1	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	318	0	0	152	53	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	1	23	117	1	48
Future Vol, veh/h	292	1	23	117	1	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	317	1	25	127	1	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	495	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1242	-	534	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1242	-	522	723
Mov Cap-2 Maneuver	-	-	-	-	522	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	835	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	717	-	-	1242	-
HCM Lane V/C Ratio	0.074	-	-	0.02	-
HCM Control Delay (s)	10.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	340	0	15	126	0	30
Future Volume (vph)	340	0	15	126	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	0	16	137	0	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	370	0	0	153	33	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.2%		ICU Level of Service A	
Analysis Period (min) 15			

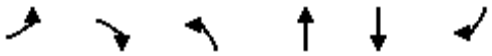
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	340	0	15	126	0	30
Future Vol, veh/h	340	0	15	126	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	370	0	16	137	0	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	370	0	539	370
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	169	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1189	-	503	676
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1189	-	495	676
Mov Cap-2 Maneuver	-	-	-	-	495	-
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	676	-	-	1189	-
HCM Lane V/C Ratio	0.048	-	-	0.014	-
HCM Control Delay (s)	10.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	5	15	39	13	9
Future Volume (vph)	9	5	15	39	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955				0.944	
Flt Protected	0.968			0.986		
Satd. Flow (prot)	1722	0	0	1837	1758	0
Flt Permitted	0.968			0.986		
Satd. Flow (perm)	1722	0	0	1837	1758	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	5	16	42	14	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	58	24	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

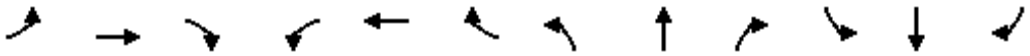
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	5	15	39	13	9
Future Vol, veh/h	9	5	15	39	13	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	5	16	42	14	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	93	19	24	0	-	0
Stage 1	19	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	907	1059	1591	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	898	1059	1591	-	-	-
Mov Cap-2 Maneuver	898	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1591	-	950	-	-
HCM Lane V/C Ratio	0.01	-	0.016	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	166	0	6	48	49	0	4	18	143	1	0
Future Volume (vph)	0	166	0	6	48	49	0	4	18	143	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.936			0.887				
Flt Protected					0.997						0.953	
Satd. Flow (prot)	0	1863	0	0	1738	0	0	1652	0	0	1775	0
Flt Permitted					0.997						0.953	
Satd. Flow (perm)	0	1863	0	0	1738	0	0	1652	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	180	0	7	52	53	0	4	20	155	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	180	0	0	112	0	0	24	0	0	156	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.1%		ICU Level of Service A	
Analysis Period (min) 15			

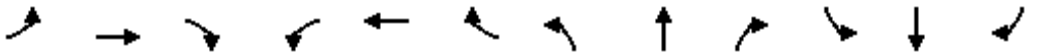
Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	166	0	6	48	49	0	4	18	143	1	0
Future Vol, veh/h	0	166	0	6	48	49	0	4	18	143	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	180	0	7	52	53	0	4	20	155	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	180	0	0	273	299	180	285	273	79
Stage 1	-	-	-	-	-	-	180	180	-	93	93	-
Stage 2	-	-	-	-	-	-	93	119	-	192	180	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1486	-	-	1396	-	-	679	613	863	667	634	981
Stage 1	-	-	-	-	-	-	822	750	-	914	818	-
Stage 2	-	-	-	-	-	-	914	797	-	810	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1396	-	-	676	610	863	646	631	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	676	610	-	646	631	-
Stage 1	-	-	-	-	-	-	822	750	-	914	814	-
Stage 2	-	-	-	-	-	-	908	793	-	787	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.6	12.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	802	1486	-	-	1396	-	-	646
HCM Lane V/C Ratio	0.03	-	-	-	0.005	-	-	0.242
HCM Control Delay (s)	9.6	0	-	-	7.6	0	-	12.3
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.9



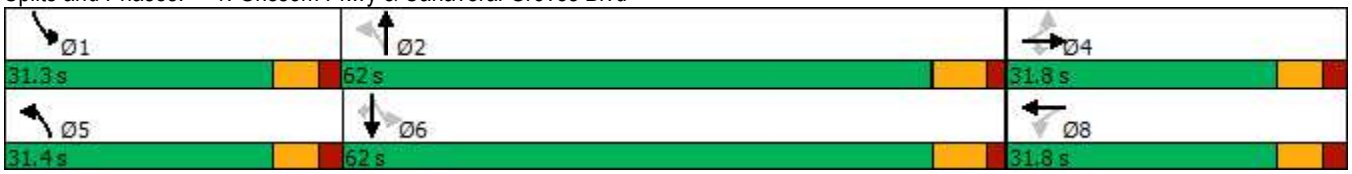
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	75	94	80	90	76	173	438	104	87	305	83
Future Volume (vph)	69	75	94	80	90	76	173	438	104	87	305	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.958			0.971				0.850
Flt Protected		0.977			0.984		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1756	0	1770	1809	0	1770	1863	1583
Flt Permitted		0.692			0.832		0.388			0.256		
Satd. Flow (perm)	0	1289	1583	0	1485	0	723	1809	0	477	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			102		16			12				90
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	82	102	87	98	83	188	476	113	95	332	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	102	0	268	0	188	589	0	95	332	90
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		24.5	24.5		24.5		44.4	34.9		36.5	28.1	28.1
Actuated g/C Ratio		0.29	0.29		0.29		0.53	0.41		0.43	0.33	0.33
v/c Ratio		0.42	0.19		0.61		0.36	0.78		0.29	0.54	0.15
Control Delay		31.7	7.3		33.9		11.2	30.2		11.6	25.9	4.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.7	7.3		33.9		11.2	30.2		11.6	25.9	4.9
LOS		C	A		C		B	C		B	C	A
Approach Delay		22.1			33.9			25.6			19.6	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		68	0		115		47	277		22	141	0
Queue Length 95th (ft)		154	41		#260		78	417		42	226	29
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		390	551		461		714	1212		654	1242	1085
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.40	0.19		0.58		0.26	0.49		0.15	0.27	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 84.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 24.6		Intersection LOS: C	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	75	94	80	90	76	173	438	104	87	305	83
Future Volume (veh/h)	69	75	94	80	90	76	173	438	104	87	305	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	82	102	87	98	83	188	476	113	95	332	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	203	397	149	147	101	484	564	134	292	650	551
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.39	0.39	0.06	0.35	0.35
Sat Flow, veh/h	519	812	1585	310	585	402	1781	1461	347	1781	1870	1585
Grp Volume(v), veh/h	157	0	102	268	0	0	188	0	589	95	332	90
Grp Sat Flow(s),veh/h/ln	1331	0	1585	1297	0	0	1781	0	1808	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.4	7.5	0.0	0.0	4.4	0.0	19.8	2.2	9.4	2.6
Cycle Q Clear(g_c), s	6.2	0.0	3.4	13.6	0.0	0.0	4.4	0.0	19.8	2.2	9.4	2.6
Prop In Lane	0.48		1.00	0.32		0.31	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	413	0	397	396	0	0	484	0	697	292	650	551
V/C Ratio(X)	0.38	0.00	0.26	0.68	0.00	0.00	0.39	0.00	0.84	0.33	0.51	0.16
Avail Cap(c_a), veh/h	598	0	595	585	0	0	976	0	1492	850	1544	1308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	20.0	24.1	0.0	0.0	12.2	0.0	18.6	14.8	17.2	15.0
Incr Delay (d2), s/veh	0.6	0.0	0.3	2.0	0.0	0.0	0.5	0.0	2.9	0.6	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.2	3.9	0.0	0.0	1.5	0.0	7.4	0.8	3.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	0.0	20.3	26.1	0.0	0.0	12.7	0.0	21.5	15.4	17.9	15.2
LnGrp LOS	C	A	C	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		259			268			777			517	
Approach Delay, s/veh		20.9			26.1			19.4			16.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	32.7		23.5	13.0	30.2		23.5				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.2	21.8		8.2	6.4	11.4		15.6				
Green Ext Time (p_c), s	0.2	3.9		1.1	0.4	2.2		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			19.9									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	75	94	80	90	76	173	438	104	87	305	83
Future Volume (veh/h)	69	75	94	80	90	76	173	438	104	87	305	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	82	102	87	98	83	188	476	113	95	332	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	210	203	397	149	147	101	484	564	134	292	650	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.39	0.39	0.06	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.3	0.0	20.3	26.1	0.0	0.0	12.7	0.0	21.5	15.4	17.9	15.2
Ln Grp LOS	C	A	C	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		259			268			777			517	
Approach Delay, s/veh		20.9			26.1			19.4			16.9	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.4	32.7		23.5	13.0	30.2		23.5
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.2	21.8		8.2	6.4	11.4		15.6
Green Ext Time (g_e), s	0.2	3.9		1.1	0.4	2.2		1.0
Prob of Phs Call (p_c)	0.83	1.00		1.00	0.97	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.21

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			519	1781			310

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1461		812		1870		585

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		347		1585		1585		402

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	95	0	0	157	188	0	0	268
Grp Sat Flow (s), veh/h/ln	1781	0	0	1331	1781	0	0	1297
Q Serve Time (g_s), s	2.2	0.0	0.0	0.0	4.4	0.0	0.0	7.5
Cycle Q Clear Time (g_c), s	2.2	0.0	0.0	6.2	4.4	0.0	0.0	13.6
Perm LT Sat Flow (s_l), veh/h/ln	827	0	0	1222	965	0	0	1219
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1189	0	0	0	0
Perm LT Eff Green (g_p), s	23.2	0.0	0.0	16.7	23.2	0.0	0.0	16.7
Perm LT Serve Time (g_u), s	5.9	0.0	0.0	3.0	13.8	0.0	0.0	10.5
Perm LT Q Serve Time (g_ps), s	2.2	0.0	0.0	0.0	2.3	0.0	0.0	7.5
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.32
Lane Grp Cap (c), veh/h	292	0	0	413	484	0	0	396
V/C Ratio (X)	0.33	0.00	0.00	0.38	0.39	0.00	0.00	0.68
Avail Cap (c_a), veh/h	850	0	0	598	976	0	0	585
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	14.8	0.0	0.0	20.7	12.2	0.0	0.0	24.1
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.6	0.5	0.0	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	15.4	0.0	0.0	21.3	12.7	0.0	0.0	26.1
1st-Term Q (Q1), veh/ln	0.7	0.0	0.0	1.9	1.4	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	2.0	1.5	0.0	0.0	3.9
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.02	0.08	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	332	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	650	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.51	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1544	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	589	0	102	0	90	0	0
Grp Sat Flow (s), veh/h/ln	0	1808	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	19.8	0.0	3.4	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	3.4	0.0	2.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	697	0	397	0	551	0	0
V/C Ratio (X)	0.00	0.84	0.00	0.26	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1492	0	595	0	1308	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.6	0.0	20.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.3	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.5	0.0	20.3	0.0	15.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.8	0.0	1.2	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.4	0.0	1.2	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.17	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

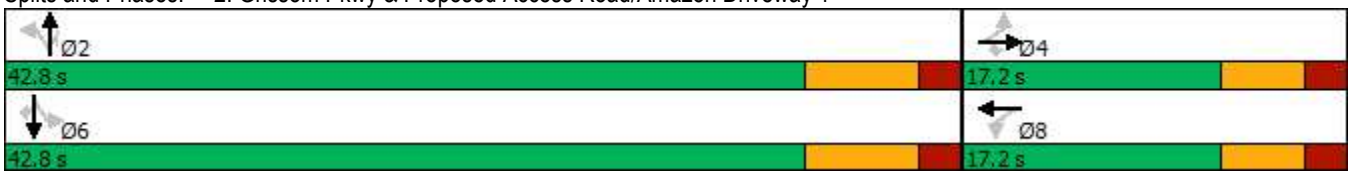
Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

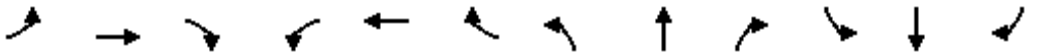
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	135	27	0	20	236	638	1	0	376	138
Future Volume (vph)	74	0	135	27	0	20	236	638	1	0	376	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.779		0.522					
Satd. Flow (perm)	0	1349	1583	0	1367	0	972	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147		75				49			150
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	0	147	29	0	22	257	693	1	0	409	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	147	0	51	0	257	693	1	0	409	150
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.1	9.1		9.1		29.0	29.0	29.0		29.0	29.0
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.30	0.34		0.16		0.42	0.59	0.00		0.35	0.14
Control Delay		21.9	7.1		5.0		9.3	10.1	0.0		7.1	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.9	7.1		5.0		9.3	10.1	0.0		7.1	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		12.3			5.0			9.9			5.6	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		17	0		0		36	114	0		54	0
Queue Length 95th (ft)		59	40		16		92	234	0		113	17
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		347	516		407		776	1488	1274		1488	1294
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.23	0.28		0.13		0.33	0.47	0.00		0.27	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





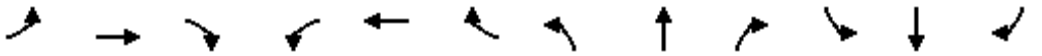
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	0	135	27	0	20	236	638	1	0	376	138
Future Volume (veh/h)	74	0	135	27	0	20	236	638	1	0	376	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	0	147	29	0	22	257	693	1	0	409	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	414	0	273	229	32	103	514	1017	862	160	1017	862
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.54	0.54	0.54	0.00	0.54	0.54
Sat Flow, veh/h	1479	0	1585	602	186	598	850	1870	1585	750	1870	1585
Grp Volume(v), veh/h	80	0	147	51	0	0	257	693	1	0	409	150
Grp Sat Flow(s),veh/h/ln	1479	0	1585	1386	0	0	850	1870	1585	750	1870	1585
Q Serve(g_s), s	0.0	0.0	3.8	0.0	0.0	0.0	11.4	12.1	0.0	0.0	5.8	2.1
Cycle Q Clear(g_c), s	1.8	0.0	3.8	1.8	0.0	0.0	17.1	12.1	0.0	0.0	5.8	2.1
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	414	0	273	364	0	0	514	1017	862	160	1017	862
V/C Ratio(X)	0.19	0.00	0.54	0.14	0.00	0.00	0.50	0.68	0.00	0.00	0.40	0.17
Avail Cap(c_a), veh/h	530	0	404	477	0	0	725	1481	1255	346	1481	1255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	0.0	17.0	15.9	0.0	0.0	11.0	7.4	4.7	0.0	6.0	5.2
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.2	0.0	0.0	0.8	0.8	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.3	0.4	0.0	0.0	1.4	2.3	0.0	0.0	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	0.0	18.7	16.1	0.0	0.0	11.8	8.3	4.7	0.0	6.3	5.3
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		227			51			951			559	
Approach Delay, s/veh		17.9			16.1			9.2			6.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.6		13.5		31.6		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		19.1		5.8		7.8		3.8				
Green Ext Time (p_c), s		5.4		0.4		2.7		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	0	135	27	0	20	236	638	1	0	376	138
Future Volume (veh/h)	74	0	135	27	0	20	236	638	1	0	376	138
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	0	147	29	0	22	257	693	1	0	409	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	414	0	273	229	32	103	514	1017	862	160	1017	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.54	0.54	0.54	0.00	0.54	0.54
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.4	0.0	18.7	16.1	0.0	0.0	11.8	8.3	4.7	0.0	6.3	5.3
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		227			51			951			559	
Approach Delay, s/veh		17.9			16.1			9.2			6.0	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		31.6		13.5		31.6		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		19.1		5.8		7.8		3.8
Green Ext Time (g_e), s		5.4		0.4		2.7		0.1
Prob of Phs Call (p_c)		1.00		0.97		1.00		0.97
Prob of Max Out (p_x)		0.22		0.47		0.00		0.19

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		850		1479		750		602

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		186

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		598

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	257	0	80	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	850	0	1479	0	750	0	1386
Q Serve Time (g_s), s	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.1	0.0	1.8	0.0	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	850	0	1412	0	750	0	1260
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	24.5	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	18.8	0.0	6.0	0.0	0.0	0.0	6.0
Perm LT Q Serve Time (g_ps), s	0.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	514	0	414	0	160	0	364
V/C Ratio (X)	0.00	0.50	0.00	0.19	0.00	0.00	0.00	0.14
Avail Cap (c_a), veh/h	0	725	0	530	0	346	0	477
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.0	0.0	16.2	0.0	0.0	0.0	15.9
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.8	0.0	16.4	0.0	0.0	0.0	16.1
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.6	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.6	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	409	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.1	0.0	0.0	0.0	5.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.1	0.0	0.0	0.0	5.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1017	0	0	0	1017	0	0
V/C Ratio (X)	0.00	0.68	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1481	0	0	0	1481	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.4	0.0	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	0.0	0.0	6.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

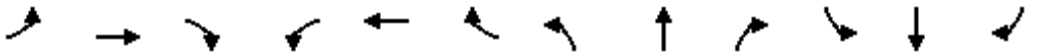
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	147	0	150	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.8	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.8	0.0	2.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	862	0	273	0	862	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.54	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1255	0	404	0	1255	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.7	0.0	17.0	0.0	5.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	18.7	0.0	5.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.3	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

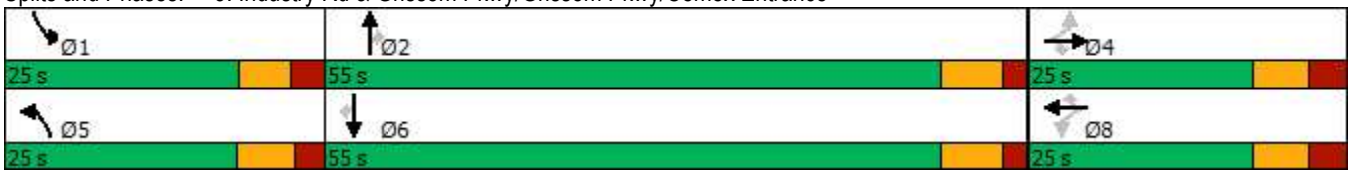


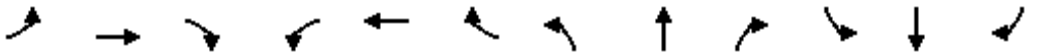
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	8	494	9	6	1	720	97	7	0	206	65
Future Volume (vph)	24	8	494	9	6	1	720	97	7	0	206	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.753			0.752			0.950					
Satd. Flow (perm)	1403	1863	1583	1401	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			537			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	9	537	10	7	1	783	105	8	0	224	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	9	537	10	7	1	783	105	8	0	224	71
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.0	16.0
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.12	0.03	0.76	0.05	0.02	0.00	0.83	0.09	0.01		0.50	0.15
Control Delay	24.9	23.4	10.7	23.8	23.3	0.0	32.9	6.0	0.0		26.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.9	23.4	10.7	23.8	23.3	0.0	32.9	6.0	0.0		26.6	2.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.6			22.3			29.5			20.8	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	3	0	3	2	0	138	13	0		73	0
Queue Length 95th (ft)	29	15	82	16	13	0	#303	40	0		154	12
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	373	495	815	372	495	502	949	1362	1188		1362	1188
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.07	0.02	0.66	0.03	0.01	0.00	0.83	0.08	0.01		0.16	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	8	494	9	6	1	720	97	7	0	206	65
Future Volume (veh/h)	24	8	494	9	6	1	720	97	7	0	206	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	9	0	10	7	1	783	105	8	0	224	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	150		235	150	127	944	1239	1050	3	501	424
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.27	0.66	0.66	0.00	0.27	0.27
Sat Flow, veh/h	1407	1870	1585	1406	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	26	9	0	10	7	1	783	105	8	0	224	71
Grp Sat Flow(s),veh/h/ln	1407	1870	1585	1406	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.2	0.0	0.4	0.2	0.0	11.9	1.1	0.1	0.0	5.6	1.9
Cycle Q Clear(g_c), s	1.2	0.2	0.0	0.6	0.2	0.0	11.9	1.1	0.1	0.0	5.6	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	150		235	150	127	944	1239	1050	3	501	424
V/C Ratio(X)	0.11	0.06		0.04	0.05	0.01	0.83	0.08	0.01	0.00	0.45	0.17
Avail Cap(c_a), veh/h	564	585		562	585	496	1124	1608	1363	583	1608	1363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	23.8	0.0	24.1	23.7	23.7	19.1	3.4	3.2	0.0	17.0	15.7
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	4.6	0.0	0.0	0.0	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.0	0.1	0.1	0.0	4.9	0.3	0.0	0.0	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	24.0	0.0	24.1	23.9	23.7	23.7	3.4	3.2	0.0	17.8	15.9
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		35	A		18			896			295	
Approach Delay, s/veh		24.4			24.0			21.1			17.3	
Approach LOS		C			C			C			B	

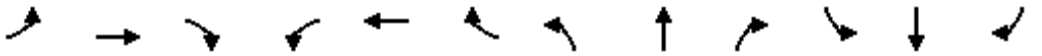
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	44.0		12.0	22.1	21.9		12.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.1		3.2	13.9	7.6		2.6				
Green Ext Time (p_c), s	0.0	0.8		0.1	1.4	2.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	8	494	9	6	1	720	97	7	0	206	65
Future Volume (veh/h)	24	8	494	9	6	1	720	97	7	0	206	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	9	0	10	7	1	783	105	8	0	224	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	237	150		235	150	127	944	1239	1050	3	501	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.27	0.66	0.66	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.5	24.0	0.0	24.1	23.9	23.7	23.7	3.4	3.2	0.0	17.8	15.9
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		35			18			896			295	
Approach Delay, s/veh		24.4			24.0			21.1			17.3	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	44.0		12.0	22.1	21.9		12.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.9
Max Q Clear (g_c+I1), s	0.0	3.1		3.2	13.9	7.6		2.6
Green Ext Time (g_e), s	0.0	0.8		0.1	1.4	2.0		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.56	1.00	1.00		0.56
Prob of Max Out (p_x)	0.00	0.00		0.00	0.86	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1407	3456			1406

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	26	783	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1407	1728	0	0	1406
Q Serve Time (g_s), s	0.0	0.0	0.0	1.0	11.9	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.2	11.9	0.0	0.0	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1407	0	0	0	1406
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	237	944	0	0	235
V/C Ratio (X)	0.00	0.00	0.00	0.11	0.83	0.00	0.00	0.04
Avail Cap (c_a), veh/h	583	0	0	564	1124	0	0	562
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.3	19.1	0.0	0.0	24.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	4.6	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.5	23.7	0.0	0.0	24.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	4.3	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.3	4.9	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.88	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	105	0	9	0	224	0	7
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.1	0.0	0.2	0.0	5.6	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	1.1	0.0	0.2	0.0	5.6	0.0	0.2
Lane Grp Cap (c), veh/h	0	1239	0	150	0	501	0	150
V/C Ratio (X)	0.00	0.08	0.00	0.06	0.00	0.45	0.00	0.05
Avail Cap (c_a), veh/h	0	1608	0	585	0	1608	0	585
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	23.8	0.0	17.0	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	24.0	0.0	17.8	0.0	23.9
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.1	0.0	2.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

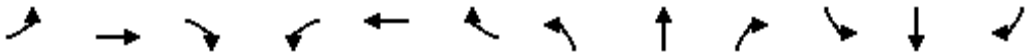
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	2.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	71	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1050	0	127	0	424	0	127
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.17	0.00	0.01
Avail Cap (c_a), veh/h	0	1363	0	496	0	1363	0	496
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	0.0	0.0	15.7	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	0.0	0.0	15.9	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	146	16	28	241	1	11	0	22	1	2	6
Future Volume (vph)	12	146	16	28	241	1	11	0	22	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.910			0.905	
Flt Protected		0.997			0.995			0.984			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Flt Permitted		0.997			0.995			0.984			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	159	17	30	262	1	12	0	24	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	293	0	0	36	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	146	16	28	241	1	11	0	22	1	2	6
Future Vol, veh/h	12	146	16	28	241	1	11	0	22	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	159	17	30	262	1	12	0	24	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	176	0	0	521	517	168	529	525	263
Stage 1	-	-	-	-	-	-	194	194	-	323	323	-
Stage 2	-	-	-	-	-	-	327	323	-	206	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1301	-	-	1400	-	-	466	462	876	460	458	776
Stage 1	-	-	-	-	-	-	808	740	-	689	650	-
Stage 2	-	-	-	-	-	-	686	650	-	796	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1301	-	-	1400	-	-	448	445	876	435	442	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	448	445	-	435	442	-
Stage 1	-	-	-	-	-	-	799	732	-	681	634	-
Stage 2	-	-	-	-	-	-	661	634	-	766	726	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.8	10.7	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	664	1301	-	-	1400	-	-	618
HCM Lane V/C Ratio	0.054	0.01	-	-	0.022	-	-	0.016
HCM Control Delay (s)	10.7	7.8	0	-	7.6	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	0	51	316	2	35
Future Volume (vph)	153	0	51	316	2	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.872	
Flt Protected				0.993	0.998	
Satd. Flow (prot)	1863	0	0	1850	1621	0
Flt Permitted				0.993	0.998	
Satd. Flow (perm)	1863	0	0	1850	1621	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	0	55	343	2	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	0	0	398	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	153	0	51	316	2	35
Future Vol, veh/h	153	0	51	316	2	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	0	55	343	2	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	166	0	619	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	453	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1412	-	452	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1412	-	430	878
Mov Cap-2 Maneuver	-	-	-	-	430	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	609	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	831	-	-	1412	-
HCM Lane V/C Ratio	0.048	-	-	0.039	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	188	0	42	322	0	20
Future Volume (vph)	188	0	42	322	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	0	46	350	0	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	204	0	0	396	22	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.5%		ICU Level of Service A	
Analysis Period (min) 15			

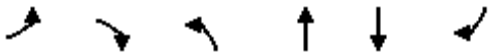
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	188	0	42	322	0	20
Future Vol, veh/h	188	0	42	322	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	204	0	46	350	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	204	0	646	204
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	442	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1368	-	436	837
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	648	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1368	-	418	837
Mov Cap-2 Maneuver	-	-	-	-	418	-
Stage 1	-	-	-	-	830	-
Stage 2	-	-	-	-	621	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	837	-	-	1368	-
HCM Lane V/C Ratio	0.026	-	-	0.033	-
HCM Control Delay (s)	9.4	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	19	11	24	43	6
Future Volume (vph)	13	19	11	24	43	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.919				0.982	
Flt Protected	0.980			0.984		
Satd. Flow (prot)	1678	0	0	1833	1829	0
Flt Permitted	0.980			0.984		
Satd. Flow (perm)	1678	0	0	1833	1829	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	21	12	26	47	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	38	54	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			

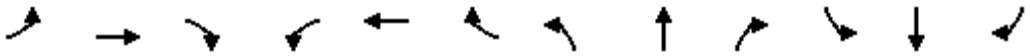
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	19	11	24	43	6
Future Vol, veh/h	13	19	11	24	43	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	21	12	26	47	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	101	51	54	0	-	0
Stage 1	51	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	898	1017	1551	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	972	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	891	1017	1551	-	-	-
Mov Cap-2 Maneuver	891	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	972	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1551	-	962	-	-
HCM Lane V/C Ratio	0.008	-	0.036	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	101	0	20	190	164	0	2	12	95	3	0
Future Volume (vph)	0	101	0	20	190	164	0	2	12	95	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.941			0.883				
Flt Protected					0.997						0.954	
Satd. Flow (prot)	0	1863	0	0	1748	0	0	1645	0	0	1777	0
Flt Permitted					0.997						0.954	
Satd. Flow (perm)	0	1863	0	0	1748	0	0	1645	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	110	0	22	207	178	0	2	13	103	3	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	407	0	0	15	0	0	106	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	101	0	20	190	164	0	2	12	95	3	0
Future Vol, veh/h	0	101	0	20	190	164	0	2	12	95	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	110	0	22	207	178	0	2	13	103	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	385	0	0	110	0	0	452	539	110	458	450	296
Stage 1	-	-	-	-	-	-	110	110	-	340	340	-
Stage 2	-	-	-	-	-	-	342	429	-	118	110	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1173	-	-	1480	-	-	518	449	943	513	504	743
Stage 1	-	-	-	-	-	-	895	804	-	675	639	-
Stage 2	-	-	-	-	-	-	673	584	-	887	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1173	-	-	1480	-	-	508	440	943	497	494	743
Mov Cap-2 Maneuver	-	-	-	-	-	-	508	440	-	497	494	-
Stage 1	-	-	-	-	-	-	895	804	-	675	627	-
Stage 2	-	-	-	-	-	-	657	573	-	872	804	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.5	14.2
HCM LOS			A	B

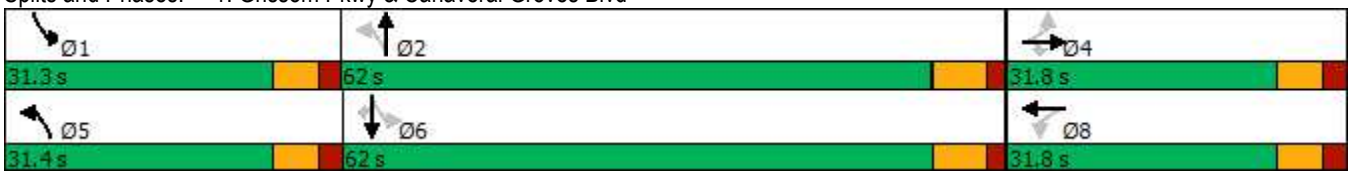
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	811	1173	-	-	1480	-	-	497
HCM Lane V/C Ratio	0.019	-	-	-	0.015	-	-	0.214
HCM Control Delay (s)	9.5	0	-	-	7.5	0	-	14.2
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	127	176	66	58	46	47	191	49	91	380	48
Future Volume (vph)	110	127	176	66	58	46	47	191	49	91	380	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964			0.970				0.850
Flt Protected		0.977			0.981		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1762	0	1770	1807	0	1770	1863	1583
Flt Permitted		0.781			0.778		0.374			0.506		
Satd. Flow (perm)	0	1455	1583	0	1397	0	697	1807	0	943	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191		13			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	138	191	72	63	50	51	208	53	99	413	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	258	191	0	185	0	51	261	0	99	413	52
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.6	25.6		25.6		26.4	20.3		28.8	23.5	23.5
Actuated g/C Ratio		0.36	0.36		0.36		0.37	0.29		0.41	0.33	0.33
v/c Ratio		0.49	0.28		0.36		0.14	0.50		0.21	0.67	0.09
Control Delay		24.6	4.8		21.1		11.0	24.1		11.4	27.7	2.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.6	4.8		21.1		11.0	24.1		11.4	27.7	2.0
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.2			21.1			22.0			22.4	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		91	0		57		12	94		23	170	0
Queue Length 95th (ft)		194	45		133		28	162		46	273	10
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		525	693		512		724	1431		755	1470	1268
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.49	0.28		0.36		0.07	0.18		0.13	0.28	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 70.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 68.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	127	176	66	58	46	47	191	49	91	380	48
Future Volume (veh/h)	110	127	176	66	58	46	47	191	49	91	380	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	138	191	72	63	50	51	208	53	99	413	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	233	421	151	124	67	323	407	104	446	568	481
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.05	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	561	876	1585	213	468	252	1781	1438	366	1781	1870	1585
Grp Volume(v), veh/h	258	0	191	185	0	0	51	0	261	99	413	52
Grp Sat Flow(s),veh/h/ln	1437	0	1585	933	0	0	1781	0	1804	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.3	2.8	0.0	0.0	1.0	0.0	6.4	2.0	10.5	1.3
Cycle Q Clear(g_c), s	8.5	0.0	5.3	11.3	0.0	0.0	1.0	0.0	6.4	2.0	10.5	1.3
Prop In Lane	0.47		1.00	0.39		0.27	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	481	0	421	342	0	0	323	0	511	446	568	481
V/C Ratio(X)	0.54	0.00	0.45	0.54	0.00	0.00	0.16	0.00	0.51	0.22	0.73	0.11
Avail Cap(c_a), veh/h	798	0	747	627	0	0	1074	0	1872	1157	1940	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	16.3	17.8	0.0	0.0	13.0	0.0	15.9	12.1	16.5	13.3
Incr Delay (d2), s/veh	0.9	0.0	0.8	1.3	0.0	0.0	0.2	0.0	0.8	0.2	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.8	2.0	0.0	0.0	0.3	0.0	2.2	0.6	3.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	0.0	17.0	19.2	0.0	0.0	13.3	0.0	16.7	12.3	18.3	13.4
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		449			185			312			564	
Approach Delay, s/veh		17.7			19.2			16.2			16.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		20.9	9.0	23.1		20.9				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	8.4		10.5	3.0	12.5		13.3				
Green Ext Time (p_c), s	0.2	1.5		1.9	0.1	2.6		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		17.2	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	127	176	66	58	46	47	191	49	91	380	48
Future Volume (veh/h)	110	127	176	66	58	46	47	191	49	91	380	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	138	191	72	63	50	51	208	53	99	413	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	249	233	421	151	124	67	323	407	104	446	568	481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.05	0.28	0.28	0.07	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.1	0.0	17.0	19.2	0.0	0.0	13.3	0.0	16.7	12.3	18.3	13.4
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		449			185			312			564	
Approach Delay, s/veh		17.7			19.2			16.2			16.8	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		20.9	9.0	23.1		20.9
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	4.0	8.4		10.5	3.0	12.5		13.3
Green Ext Time (g_e), s	0.2	1.5		1.9	0.1	2.6		0.8
Prob of Phs Call (p_c)	0.77	1.00		1.00	0.53	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.04	0.00	0.00		0.05

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			561	1781			213

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1438		876		1870		468

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		366		1585		1585		252

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	99	0	0	258	51	0	0	185
Grp Sat Flow (s), veh/h/ln	1781	0	0	1437	1781	0	0	933
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	1.0	0.0	0.0	2.8
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	8.5	1.0	0.0	0.0	11.3
Perm LT Sat Flow (s_l), veh/h/ln	1118	0	0	1300	928	0	0	1068
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1329	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	14.1	15.0	0.0	0.0	14.1
Perm LT Serve Time (g_u), s	8.6	0.0	0.0	2.8	5.6	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	0.5	0.0	0.0	2.8
Time to First Blk (g_f), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.47	1.00	0.00	0.00	0.39
Lane Grp Cap (c), veh/h	446	0	0	481	323	0	0	342
V/C Ratio (X)	0.22	0.00	0.00	0.54	0.16	0.00	0.00	0.54
Avail Cap (c_a), veh/h	1157	0	0	798	1074	0	0	627
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.1	0.0	0.0	17.2	13.0	0.0	0.0	17.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.3	0.0	0.0	18.1	13.3	0.0	0.0	19.2
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.4	0.3	0.0	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.5	0.3	0.0	0.0	2.0
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	413	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	568	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1940	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	18.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	261	0	191	0	52	0	0
Grp Sat Flow (s), veh/h/ln	0	1804	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	6.4	0.0	5.3	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.4	0.0	5.3	0.0	1.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	511	0	421	0	481	0	0
V/C Ratio (X)	0.00	0.51	0.00	0.45	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1872	0	747	0	1644	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.9	0.0	16.3	0.0	13.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.8	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.7	0.0	17.0	0.0	13.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	1.7	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	1.8	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.25	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

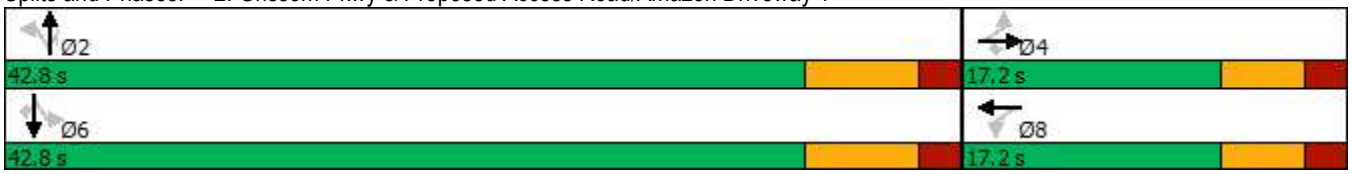
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	0	193	1	0	0	47	276	1	0	618	57
Future Volume (vph)	136	0	193	1	0	0	47	276	1	0	618	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.663		0.300					
Satd. Flow (perm)	0	1410	1583	0	1235	0	559	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210						49			62
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	0	210	1	0	0	51	300	1	0	672	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	210	0	1	0	51	300	1	0	672	62
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.8	9.8		9.8		23.8	23.8	23.8		23.8	23.8
Actuated g/C Ratio		0.21	0.21		0.21		0.51	0.51	0.51		0.51	0.51
v/c Ratio		0.50	0.42		0.00		0.18	0.32	0.00		0.71	0.07
Control Delay		24.8	6.7		18.0		7.8	7.6	0.0		13.6	2.1
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		24.8	6.7		18.0		7.8	7.6	0.0		13.6	2.1
LOS		C	A		B		A	A	A		B	A
Approach Delay		14.2			18.0			7.6			12.6	
Approach LOS		B			B			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		33	0		0		6	41	0		122	0
Queue Length 95th (ft)		#100	47		4		21	80	0		224	11
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		356	557		312		438	1462	1252		1462	1255
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.42	0.38		0.00		0.12	0.21	0.00		0.46	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 66.6%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	0	193	1	0	0	47	276	1	0	618	57
Future Volume (veh/h)	136	0	193	1	0	0	47	276	1	0	618	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	0	210	1	0	0	51	300	1	0	672	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	502	0	323	341	0	0	305	867	735	187	867	735
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Sat Flow, veh/h	1548	0	1585	756	0	0	723	1870	1585	1078	1870	1585
Grp Volume(v), veh/h	148	0	210	1	0	0	51	300	1	0	672	62
Grp Sat Flow(s),veh/h/ln	1548	0	1585	756	0	0	723	1870	1585	1078	1870	1585
Q Serve(g_s), s	0.0	0.0	4.7	0.0	0.0	0.0	2.4	3.9	0.0	0.0	11.6	0.8
Cycle Q Clear(g_c), s	2.8	0.0	4.7	2.8	0.0	0.0	14.0	3.9	0.0	0.0	11.6	0.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	502	0	323	341	0	0	305	867	735	187	867	735
V/C Ratio(X)	0.29	0.00	0.65	0.00	0.00	0.00	0.17	0.35	0.00	0.00	0.78	0.08
Avail Cap(c_a), veh/h	638	0	474	453	0	0	641	1737	1472	689	1737	1472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	14.1	14.5	0.0	0.0	14.5	6.6	5.5	0.0	8.6	5.8
Incr Delay (d2), s/veh	0.3	0.0	2.2	0.0	0.0	0.0	0.3	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.5	0.0	0.0	0.0	0.3	0.7	0.0	0.0	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	16.3	14.5	0.0	0.0	14.8	6.8	5.5	0.0	10.2	5.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		358			1			352			734	
Approach Delay, s/veh		15.2			14.5			8.0			9.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	24.9	13.5	24.9	13.5
Change Period (Y+Rc), s	7.1	* 5.7	7.1	* 5.7
Max Green Setting (Gmax), s	35.7	* 12	35.7	* 12
Max Q Clear Time (g_c+I1), s	16.0	6.7	13.6	4.8
Green Ext Time (p_c), s	1.8	0.7	4.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	0	193	1	0	0	47	276	1	0	618	57
Future Volume (veh/h)	136	0	193	1	0	0	47	276	1	0	618	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	0	210	1	0	0	51	300	1	0	672	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	502	0	323	341	0	0	305	867	735	187	867	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.6	0.0	16.3	14.5	0.0	0.0	14.8	6.8	5.5	0.0	10.2	5.8
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		358			1			352			734	
Approach Delay, s/veh		15.2			14.5			8.0			9.8	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		24.9		13.5		24.9		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		5.0		4.5		4.7		5.9
Max Q Clear (g_c+I1), s		16.0		6.7		13.6		4.8
Green Ext Time (g_e), s		1.8		0.7		4.3		0.0
Prob of Phs Call (p_c)		1.00		0.98		1.00		0.98
Prob of Max Out (p_x)		0.00		0.85		0.03		0.21

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		723		1548		1078		756

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	51	0	148	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	723	0	1548	0	1078	0	756
Q Serve Time (g_s), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.0	0.0	2.8	0.0	0.0	0.0	2.8
Perm LT Sat Flow (s_l), veh/h/ln	0	723	0	1440	0	1078	0	1190
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.8	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	6.3	0.0	5.0	0.0	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	305	0	502	0	187	0	341
V/C Ratio (X)	0.00	0.17	0.00	0.29	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	641	0	638	0	689	0	453
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.5	0.0	13.3	0.0	0.0	0.0	14.5
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.8	0.0	13.6	0.0	0.0	0.0	14.5
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	300	0	0	0	672	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.9	0.0	0.0	0.0	11.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	0.0	0.0	11.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	867	0	0	0	867	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.00	0.00	0.78	0.00	0.00
Avail Cap (c_a), veh/h	0	1737	0	0	0	1737	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.6	0.0	0.0	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.8	0.0	0.0	0.0	10.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

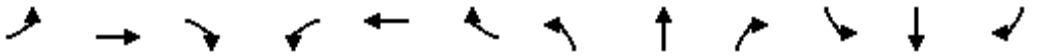
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	210	0	62	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.7	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.7	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	735	0	323	0	735	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.65	0.00	0.08	0.00	0.00
Avail Cap (c_a), veh/h	0	1472	0	474	0	1472	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	14.1	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	16.3	0.0	5.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.3	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.5	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.25	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

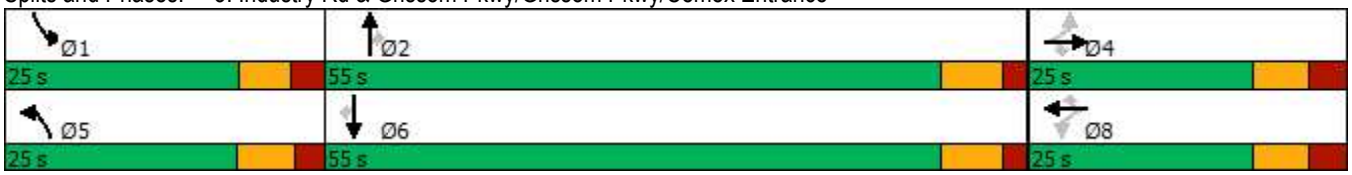


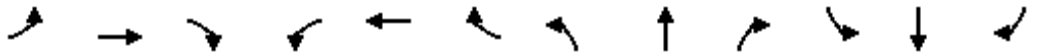
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	6	528	50	3	0	291	106	45	3	136	26
Future Volume (vph)	37	6	528	50	3	0	291	106	45	3	136	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.756			0.753			0.950			0.950		
Satd. Flow (perm)	1408	1863	1583	1403	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			574						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	7	574	54	3	0	316	115	49	3	148	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	7	574	54	3	0	316	115	49	3	148	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2		12.9	27.1	27.1	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.28	0.28
v/c Ratio	0.14	0.02	0.74	0.19	0.01		0.40	0.13	0.06	0.02	0.28	0.05
Control Delay	20.9	19.0	8.8	21.6	19.0		22.8	10.3	0.1	27.7	21.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	19.0	8.8	21.6	19.0		22.8	10.3	0.1	27.7	21.2	0.2
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.7			21.5			17.5			18.0	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	12	2	0	16	1		49	15	0	1	39	0
Queue Length 95th (ft)	34	11	75	43	7		94	66	1	9	100	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	464	614	906	462	614		1177	1581	1361	610	1581	1361
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.63	0.12	0.00		0.27	0.07	0.04	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 55.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 70.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	528	50	3	0	291	106	45	3	136	26
Future Volume (veh/h)	37	6	528	50	3	0	291	106	45	3	136	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	3	0	316	115	49	3	148	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	231		315	231	195	499	831	704	7	564	478
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Sat Flow, veh/h	1414	1870	1585	1409	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	40	7	0	54	3	0	316	115	49	3	148	28
Grp Sat Flow(s),veh/h/ln	1414	1870	1585	1409	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	0.2	0.0	1.7	0.1	0.0	4.2	1.8	0.9	0.1	3.0	0.6
Cycle Q Clear(g_c), s	1.3	0.2	0.0	1.9	0.1	0.0	4.2	1.8	0.9	0.1	3.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	231		315	231	195	499	831	704	7	564	478
V/C Ratio(X)	0.13	0.03		0.17	0.01	0.00	0.63	0.14	0.07	0.41	0.26	0.06
Avail Cap(c_a), veh/h	647	665		642	665	563	1277	1827	1548	662	1827	1548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	19.0	0.0	19.8	19.0	0.0	19.8	8.1	7.9	24.5	13.0	12.2
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.5	0.0	0.0	1.6	0.6	0.2	0.1	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	19.1	0.0	20.1	19.0	0.0	21.2	8.2	7.9	49.9	13.3	12.3
LnGrp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47	A		57			480			179	
Approach Delay, s/veh		19.6			20.1			16.7			13.8	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.8		13.6	13.9	21.8		13.6				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.8		3.3	6.2	5.0		3.9				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.9	1.2		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		16.5
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	528	50	3	0	291	106	45	3	136	26
Future Volume (veh/h)	37	6	528	50	3	0	291	106	45	3	136	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	3	0	316	115	49	3	148	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	319	231		315	231	195	499	831	704	7	564	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.8	19.1	0.0	20.1	19.0	0.0	21.2	8.2	7.9	49.9	13.3	12.3
Ln Grp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47			57			480			179	
Approach Delay, s/veh		19.6			20.1			16.7			13.8	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.8		13.6	13.9	21.8		13.6
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.8		3.3	6.2	5.0		3.9
Green Ext Time (g_e), s	0.0	1.0		0.1	0.9	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.76	1.00	0.99		0.76
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1414	3456			1409

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	40	316	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1414	1728	0	0	1409
Q Serve Time (g_s), s	0.1	0.0	0.0	1.3	4.2	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.3	4.2	0.0	0.0	1.9
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1414	0	0	0	1409
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.1	0.0	0.0	0.0	6.1
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	5.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	319	499	0	0	315
V/C Ratio (X)	0.41	0.00	0.00	0.13	0.63	0.00	0.00	0.17
Avail Cap (c_a), veh/h	662	0	0	647	1277	0	0	642
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.5	0.0	0.0	19.5	19.8	0.0	0.0	19.8
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.9	0.0	0.0	19.8	21.2	0.0	0.0	20.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	1.5	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.4	1.6	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.07	0.30	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	115	0	7	0	148	0	3
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.8	0.0	0.2	0.0	3.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	0.2	0.0	3.0	0.0	0.1
Lane Grp Cap (c), veh/h	0	831	0	231	0	564	0	231
V/C Ratio (X)	0.00	0.14	0.00	0.03	0.00	0.26	0.00	0.01
Avail Cap (c_a), veh/h	0	1827	0	665	0	1827	0	665
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	19.0	0.0	13.0	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.2	0.0	19.1	0.0	13.3	0.0	19.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

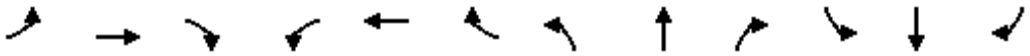
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	49	0	0	0	28	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	704	0	195	0	478	0	195
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.06	0.00	0.00
Avail Cap (c_a), veh/h	0	1548	0	563	0	1548	0	563
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	12.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	204	6	17	85	3	10	0	19	1	0	12
Future Volume (vph)	1	204	6	17	85	3	10	0	19	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.996			0.911			0.875	
Flt Protected					0.992			0.983			0.996	
Satd. Flow (prot)	0	1855	0	0	1840	0	0	1668	0	0	1623	0
Flt Permitted					0.992			0.983			0.996	
Satd. Flow (perm)	0	1855	0	0	1840	0	0	1668	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	222	7	18	92	3	11	0	21	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	113	0	0	32	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	204	6	17	85	3	10	0	19	1	0	12
Future Vol, veh/h	1	204	6	17	85	3	10	0	19	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	222	7	18	92	3	11	0	21	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	229	0	0	364	359	226	368	361	94
Stage 1	-	-	-	-	-	-	228	228	-	130	130	-
Stage 2	-	-	-	-	-	-	136	131	-	238	231	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1339	-	-	592	568	813	588	566	963
Stage 1	-	-	-	-	-	-	775	715	-	874	789	-
Stage 2	-	-	-	-	-	-	867	788	-	765	713	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1499	-	-	1339	-	-	577	559	813	566	558	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	577	559	-	566	558	-
Stage 1	-	-	-	-	-	-	774	714	-	873	778	-
Stage 2	-	-	-	-	-	-	843	777	-	745	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	10.3	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	713	1499	-	-	1339	-	-	914
HCM Lane V/C Ratio	0.044	0.001	-	-	0.014	-	-	0.015
HCM Control Delay (s)	10.3	7.4	0	-	7.7	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	300	1	23	121	1	49
Future Volume (vph)	300	1	23	121	1	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.867	
Flt Protected				0.992	0.999	
Satd. Flow (prot)	1863	0	0	1848	1613	0
Flt Permitted				0.992	0.999	
Satd. Flow (perm)	1863	0	0	1848	1613	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	326	1	25	132	1	53
Shared Lane Traffic (%)						
Lane Group Flow (vph)	327	0	0	157	54	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	300	1	23	121	1	49
Future Vol, veh/h	300	1	23	121	1	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	326	1	25	132	1	53

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	327	0	509	327
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	182	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1233	-	524	714
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1233	-	512	714
Mov Cap-2 Maneuver	-	-	-	-	512	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	708	-	-	1233	-
HCM Lane V/C Ratio	0.077	-	-	0.02	-
HCM Control Delay (s)	10.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	350	0	17	130	0	34
Future Volume (vph)	350	0	17	130	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	380	0	18	141	0	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	380	0	0	159	37	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

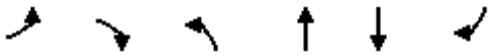
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	350	0	17	130	0	34
Future Vol, veh/h	350	0	17	130	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	380	0	18	141	0	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	380	0	557	380
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1178	-	491	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1178	-	483	667
Mov Cap-2 Maneuver	-	-	-	-	483	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	839	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	667	-	-	1178	-
HCM Lane V/C Ratio	0.055	-	-	0.016	-
HCM Control Delay (s)	10.7	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	6	16	39	14	9
Future Volume (vph)	9	6	16	39	14	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.944				0.946	
Flt Protected	0.971			0.986		
Satd. Flow (prot)	1707	0	0	1837	1762	0
Flt Permitted	0.971			0.986		
Satd. Flow (perm)	1707	0	0	1837	1762	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	7	17	42	15	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	59	25	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

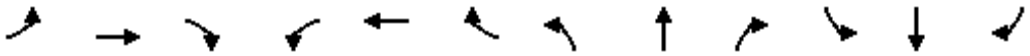
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	16	39	14	9
Future Vol, veh/h	9	6	16	39	14	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	7	17	42	15	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	96	20	25	0	-	0
Stage 1	20	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	903	1058	1589	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	893	1058	1589	-	-	-
Mov Cap-2 Maneuver	893	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	947	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1589	-	952	-	-
HCM Lane V/C Ratio	0.011	-	0.017	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	166	0	6	48	49	0	5	18	143	1	0
Future Volume (vph)	0	166	0	6	48	49	0	5	18	143	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.936			0.892				
Flt Protected					0.997						0.953	
Satd. Flow (prot)	0	1863	0	0	1738	0	0	1662	0	0	1775	0
Flt Permitted					0.997						0.953	
Satd. Flow (perm)	0	1863	0	0	1738	0	0	1662	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	180	0	7	52	53	0	5	20	155	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	180	0	0	112	0	0	25	0	0	156	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	166	0	6	48	49	0	5	18	143	1	0
Future Vol, veh/h	0	166	0	6	48	49	0	5	18	143	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	180	0	7	52	53	0	5	20	155	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	180	0	0	273	299	180	286	273	79
Stage 1	-	-	-	-	-	-	180	180	-	93	93	-
Stage 2	-	-	-	-	-	-	93	119	-	193	180	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1486	-	-	1396	-	-	679	613	863	666	634	981
Stage 1	-	-	-	-	-	-	822	750	-	914	818	-
Stage 2	-	-	-	-	-	-	914	797	-	809	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1396	-	-	676	610	863	644	631	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	676	610	-	644	631	-
Stage 1	-	-	-	-	-	-	822	750	-	914	814	-
Stage 2	-	-	-	-	-	-	908	793	-	785	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.7	12.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	792	1486	-	-	1396	-	-	644
HCM Lane V/C Ratio	0.032	-	-	-	0.005	-	-	0.243
HCM Control Delay (s)	9.7	0	-	-	7.6	0	-	12.4
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.9

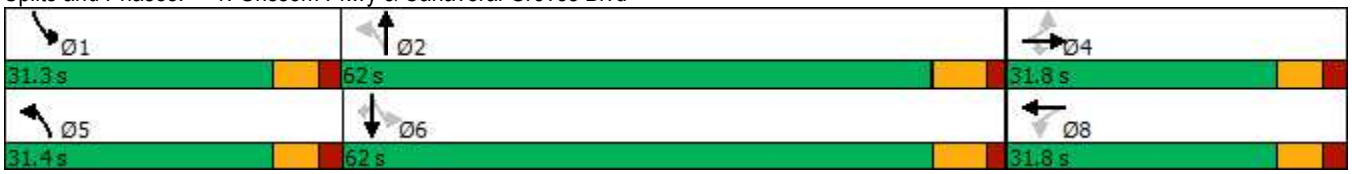
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	76	97	76	92	78	178	439	101	89	294	85
Future Volume (vph)	69	76	97	76	92	78	178	439	101	89	294	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.957			0.972				0.850
Flt Protected		0.977			0.985		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1756	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.690			0.838		0.398			0.261		
Satd. Flow (perm)	0	1285	1583	0	1494	0	741	1811	0	486	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105		17			12				92
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	83	105	83	100	85	193	477	110	97	320	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	105	0	268	0	193	587	0	97	320	92
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		24.3	24.3		24.3		44.5	34.8		36.3	27.9	27.9
Actuated g/C Ratio		0.29	0.29		0.29		0.53	0.41		0.43	0.33	0.33
v/c Ratio		0.43	0.20		0.60		0.37	0.78		0.30	0.52	0.16
Control Delay		31.8	7.2		33.6		11.2	30.0		11.7	25.6	5.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.8	7.2		33.6		11.2	30.0		11.7	25.6	5.0
LOS		C	A		C		B	C		B	C	A
Approach Delay		22.0			33.6			25.4			19.2	
Approach LOS		C			C			C			B	

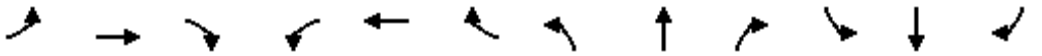
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		68	0		114		48	276		23	135	0
Queue Length 95th (ft)		155	42		#249		79	416		43	218	29
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		390	554		466		720	1217		658	1246	1089
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.41	0.19		0.58		0.27	0.48		0.15	0.26	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 84.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 24.4		Intersection LOS: C	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	76	97	76	92	78	178	439	101	89	294	85
Future Volume (veh/h)	69	76	97	76	92	78	178	439	101	89	294	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	83	105	83	100	85	193	477	110	97	320	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	204	394	144	149	103	493	566	130	295	645	546
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.38	0.38	0.06	0.34	0.34
Sat Flow, veh/h	514	819	1585	294	601	416	1781	1470	339	1781	1870	1585
Grp Volume(v), veh/h	158	0	105	268	0	0	193	0	587	97	320	92
Grp Sat Flow(s),veh/h/ln	1333	0	1585	1310	0	0	1781	0	1809	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.5	7.2	0.0	0.0	4.5	0.0	19.5	2.3	8.9	2.7
Cycle Q Clear(g_c), s	6.2	0.0	3.5	13.4	0.0	0.0	4.5	0.0	19.5	2.3	8.9	2.7
Prop In Lane	0.47		1.00	0.31		0.32	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	412	0	394	397	0	0	493	0	696	295	645	546
V/C Ratio(X)	0.38	0.00	0.27	0.68	0.00	0.00	0.39	0.00	0.84	0.33	0.50	0.17
Avail Cap(c_a), veh/h	603	0	599	593	0	0	986	0	1504	856	1555	1318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	20.0	23.9	0.0	0.0	12.1	0.0	18.5	14.7	17.1	15.1
Incr Delay (d2), s/veh	0.6	0.0	0.4	2.0	0.0	0.0	0.5	0.0	2.9	0.6	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.2	3.9	0.0	0.0	1.5	0.0	7.3	0.8	3.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	0.0	20.4	25.9	0.0	0.0	12.6	0.0	21.4	15.4	17.7	15.2
LnGrp LOS	C	A	C	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		263			268			780			509	
Approach Delay, s/veh		20.9			25.9			19.2			16.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	32.5		23.2	13.1	29.8		23.2				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.3	21.5		8.2	6.5	10.9		15.4				
Green Ext Time (p_c), s	0.2	3.9		1.1	0.5	2.1		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	76	97	76	92	78	178	439	101	89	294	85
Future Volume (veh/h)	69	76	97	76	92	78	178	439	101	89	294	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	83	105	83	100	85	193	477	110	97	320	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	208	204	394	144	149	103	493	566	130	295	645	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.10	0.38	0.38	0.06	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.3	0.0	20.4	25.9	0.0	0.0	12.6	0.0	21.4	15.4	17.7	15.2
Ln Grp LOS	C	A	C	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		263			268			780			509	
Approach Delay, s/veh		20.9			25.9			19.2			16.8	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.5	32.5		23.2	13.1	29.8		23.2
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.3	21.5		8.2	6.5	10.9		15.4
Green Ext Time (g_e), s	0.2	3.9		1.1	0.5	2.1		1.1
Prob of Phs Call (p_c)	0.83	1.00		1.00	0.97	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.19

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			514	1781			294

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1470		819		1870		601

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		339		1585		1585		416

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	97	0	0	158	193	0	0	268
Grp Sat Flow (s), veh/h/ln	1781	0	0	1333	1781	0	0	1310
Q Serve Time (g_s), s	2.3	0.0	0.0	0.0	4.5	0.0	0.0	7.2
Cycle Q Clear Time (g_c), s	2.3	0.0	0.0	6.2	4.5	0.0	0.0	13.4
Perm LT Sat Flow (s_l), veh/h/ln	829	0	0	1218	974	0	0	1214
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1188	0	0	0	0
Perm LT Eff Green (g_p), s	22.8	0.0	0.0	16.4	22.8	0.0	0.0	16.4
Perm LT Serve Time (g_u), s	5.9	0.0	0.0	3.1	13.9	0.0	0.0	10.3
Perm LT Q Serve Time (g_ps), s	2.2	0.0	0.0	0.0	2.2	0.0	0.0	7.2
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.47	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	295	0	0	412	493	0	0	397
V/C Ratio (X)	0.33	0.00	0.00	0.38	0.39	0.00	0.00	0.68
Avail Cap (c_a), veh/h	856	0	0	603	986	0	0	593
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	14.7	0.0	0.0	20.7	12.1	0.0	0.0	23.9
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.6	0.5	0.0	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	15.4	0.0	0.0	21.3	12.6	0.0	0.0	25.9
1st-Term Q (Q1), veh/ln	0.7	0.0	0.0	1.9	1.4	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	2.0	1.5	0.0	0.0	3.9
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.02	0.08	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	320	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	645	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1555	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	587	0	105	0	92	0	0
Grp Sat Flow (s), veh/h/ln	0	1809	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	19.5	0.0	3.5	0.0	2.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.5	0.0	3.5	0.0	2.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	696	0	394	0	546	0	0
V/C Ratio (X)	0.00	0.84	0.00	0.27	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1504	0	599	0	1318	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.5	0.0	20.0	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.4	0.0	20.4	0.0	15.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.7	0.0	1.2	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.3	0.0	1.2	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.18	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

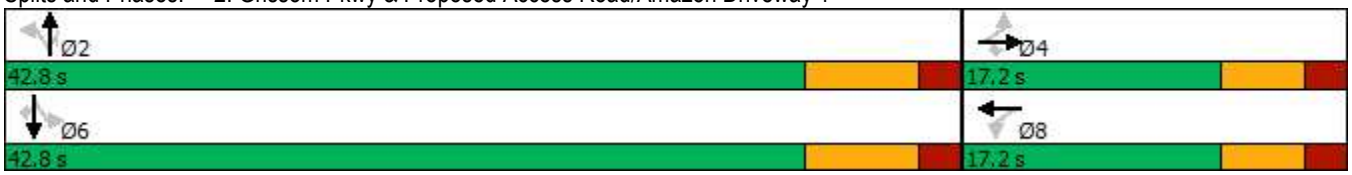
Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

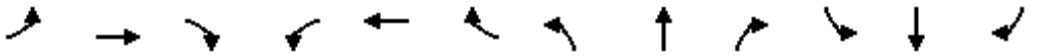
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	135	27	0	20	236	651	1	0	383	138
Future Volume (vph)	74	0	135	27	0	20	236	651	1	0	383	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.779		0.519					
Satd. Flow (perm)	0	1349	1583	0	1367	0	967	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147		75				49			150
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	0	147	29	0	22	257	708	1	0	416	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	147	0	51	0	257	708	1	0	416	150
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.1	9.1		9.1		29.3	29.3	29.3		29.3	29.3
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.30	0.34		0.16		0.42	0.60	0.00		0.35	0.14
Control Delay		22.1	7.2		5.0		9.3	10.2	0.0		7.1	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		22.1	7.2		5.0		9.3	10.2	0.0		7.1	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		12.4			5.0			9.9			5.6	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		18	0		0		36	118	0		55	0
Queue Length 95th (ft)		59	40		16		93	242	0		115	17
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		344	514		405		767	1477	1265		1477	1286
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.23	0.29		0.13		0.34	0.48	0.00		0.28	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 8.8		Intersection LOS: A	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	0	135	27	0	20	236	651	1	0	383	138
Future Volume (veh/h)	74	0	135	27	0	20	236	651	1	0	383	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	0	147	29	0	22	257	708	1	0	416	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	411	0	271	227	32	102	512	1024	868	158	1024	868
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.55	0.55	0.55	0.00	0.55	0.55
Sat Flow, veh/h	1480	0	1585	601	186	596	845	1870	1585	740	1870	1585
Grp Volume(v), veh/h	80	0	147	51	0	0	257	708	1	0	416	150
Grp Sat Flow(s),veh/h/ln	1480	0	1585	1383	0	0	845	1870	1585	740	1870	1585
Q Serve(g_s), s	0.0	0.0	3.9	0.0	0.0	0.0	11.6	12.5	0.0	0.0	5.9	2.1
Cycle Q Clear(g_c), s	1.8	0.0	3.9	1.8	0.0	0.0	17.4	12.5	0.0	0.0	5.9	2.1
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	271	360	0	0	512	1024	868	158	1024	868
V/C Ratio(X)	0.19	0.00	0.54	0.14	0.00	0.00	0.50	0.69	0.00	0.00	0.41	0.17
Avail Cap(c_a), veh/h	525	0	401	473	0	0	713	1469	1245	334	1469	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	17.2	16.1	0.0	0.0	11.1	7.5	4.7	0.0	6.0	5.1
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.2	0.0	0.0	0.8	0.8	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.3	0.4	0.0	0.0	1.4	2.4	0.0	0.0	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	0.0	18.9	16.3	0.0	0.0	11.8	8.3	4.7	0.0	6.2	5.2
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		227			51			966			566	
Approach Delay, s/veh		18.1			16.3			9.3			6.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		13.5		32.0		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		19.4		5.9		7.9		3.8				
Green Ext Time (p_c), s		5.5		0.4		2.8		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	0	135	27	0	20	236	651	1	0	383	138
Future Volume (veh/h)	74	0	135	27	0	20	236	651	1	0	383	138
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	80	0	147	29	0	22	257	708	1	0	416	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	411	0	271	227	32	102	512	1024	868	158	1024	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.55	0.55	0.55	0.00	0.55	0.55
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.6	0.0	18.9	16.3	0.0	0.0	11.8	8.3	4.7	0.0	6.2	5.2
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		227			51			966			566	
Approach Delay, s/veh		18.1			16.3			9.3			6.0	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		32.0		13.5		32.0		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		19.4		5.9		7.9		3.8
Green Ext Time (g_e), s		5.5		0.4		2.8		0.1
Prob of Phs Call (p_c)		1.00		0.97		1.00		0.97
Prob of Max Out (p_x)		0.24		0.48		0.00		0.20

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		845		1480		740		601

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		186

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		596

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	257	0	80	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	845	0	1480	0	740	0	1383
Q Serve Time (g_s), s	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.4	0.0	1.8	0.0	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	845	0	1412	0	740	0	1260
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	24.9	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	19.0	0.0	6.0	0.0	0.0	0.0	6.0
Perm LT Q Serve Time (g_ps), s	0.0	11.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	512	0	411	0	158	0	360
V/C Ratio (X)	0.00	0.50	0.00	0.19	0.00	0.00	0.00	0.14
Avail Cap (c_a), veh/h	0	713	0	525	0	334	0	473
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.1	0.0	16.4	0.0	0.0	0.0	16.1
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.8	0.0	16.6	0.0	0.0	0.0	16.3
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.6	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.6	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	708	0	0	0	416	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.5	0.0	0.0	0.0	5.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.5	0.0	0.0	0.0	5.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1024	0	0	0	1024	0	0
V/C Ratio (X)	0.00	0.69	0.00	0.00	0.00	0.41	0.00	0.00
Avail Cap (c_a), veh/h	0	1469	0	0	0	1469	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	0.0	0.0	6.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

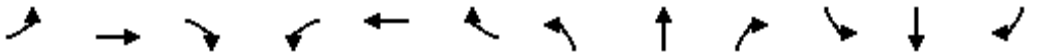
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	147	0	150	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.9	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.9	0.0	2.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	868	0	271	0	868	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.54	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1245	0	401	0	1245	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.7	0.0	17.2	0.0	5.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	18.9	0.0	5.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.3	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

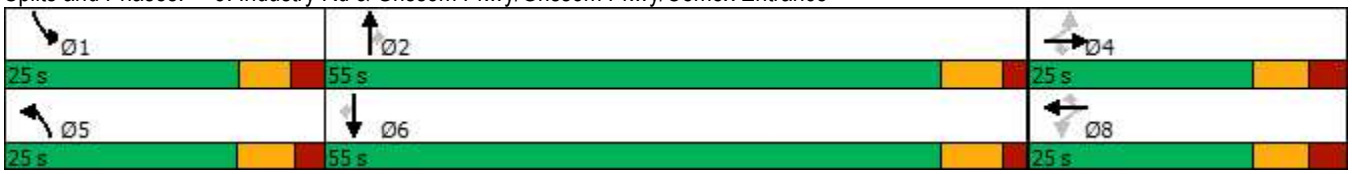


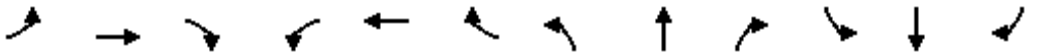
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	8	502	9	6	1	738	99	7	0	209	65
Future Volume (vph)	24	8	502	9	6	1	738	99	7	0	209	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.753			0.752			0.950					
Satd. Flow (perm)	1403	1863	1583	1401	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			546			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	9	546	10	7	1	802	108	8	0	227	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	9	546	10	7	1	802	108	8	0	227	71
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.8	10.8	10.8	10.8	10.8	10.8	18.3	41.3	41.3		16.1	16.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.27	0.62	0.62		0.24	0.24
v/c Ratio	0.12	0.03	0.77	0.04	0.02	0.00	0.85	0.09	0.01		0.50	0.15
Control Delay	24.9	23.4	10.7	23.8	23.3	0.0	34.7	6.1	0.0		26.9	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.9	23.4	10.7	23.8	23.3	0.0	34.7	6.1	0.0		26.9	2.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.5			22.3			31.0			21.0	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	3	0	3	2	0	146	14	0		76	0
Queue Length 95th (ft)	30	15	84	16	13	0	#315	41	0		156	12
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	371	493	820	370	493	500	944	1355	1183		1355	1183
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.07	0.02	0.67	0.03	0.01	0.00	0.85	0.08	0.01		0.17	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	8	502	9	6	1	738	99	7	0	209	65
Future Volume (veh/h)	24	8	502	9	6	1	738	99	7	0	209	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	9	0	10	7	1	802	108	8	0	227	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	150		234	150	127	958	1242	1053	3	498	422
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.28	0.66	0.66	0.00	0.27	0.27
Sat Flow, veh/h	1407	1870	1585	1406	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	26	9	0	10	7	1	802	108	8	0	227	71
Grp Sat Flow(s),veh/h/ln	1407	1870	1585	1406	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.3	0.0	0.4	0.2	0.0	12.3	1.2	0.1	0.0	5.7	1.9
Cycle Q Clear(g_c), s	1.2	0.3	0.0	0.6	0.2	0.0	12.3	1.2	0.1	0.0	5.7	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	150		234	150	127	958	1242	1053	3	498	422
V/C Ratio(X)	0.11	0.06		0.04	0.05	0.01	0.84	0.09	0.01	0.00	0.46	0.17
Avail Cap(c_a), veh/h	561	582		559	582	493	1117	1598	1355	579	1598	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	23.9	0.0	24.2	23.9	23.8	19.1	3.4	3.2	0.0	17.3	15.9
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	5.0	0.0	0.0	0.0	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.0	0.1	0.1	0.0	5.1	0.3	0.0	0.0	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	24.1	0.0	24.3	24.1	23.9	24.2	3.4	3.2	0.0	18.0	16.1
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		35	A		18			918			298	
Approach Delay, s/veh		24.5			24.2			21.6			17.6	
Approach LOS		C			C			C			B	

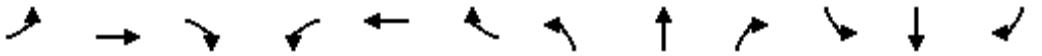
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	44.3		12.0	22.4	21.9		12.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.2		3.2	14.3	7.7		2.6				
Green Ext Time (p_c), s	0.0	0.8		0.1	1.3	2.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		20.7
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	8	502	9	6	1	738	99	7	0	209	65
Future Volume (veh/h)	24	8	502	9	6	1	738	99	7	0	209	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	9	0	10	7	1	802	108	8	0	227	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	236	150		234	150	127	958	1242	1053	3	498	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.28	0.66	0.66	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.7	24.1	0.0	24.3	24.1	23.9	24.2	3.4	3.2	0.0	18.0	16.1
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		35			18			918			298	
Approach Delay, s/veh		24.5			24.2			21.6			17.6	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	44.3		12.0	22.4	21.9		12.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.9
Max Q Clear (g_c+I1), s	0.0	3.2		3.2	14.3	7.7		2.6
Green Ext Time (g_e), s	0.0	0.8		0.1	1.3	2.0		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.56	1.00	1.00		0.56
Prob of Max Out (p_x)	0.00	0.00		0.00	0.97	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1407	3456			1406

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	26	802	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1407	1728	0	0	1406
Q Serve Time (g_s), s	0.0	0.0	0.0	1.0	12.3	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.2	12.3	0.0	0.0	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1407	0	0	0	1406
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	236	958	0	0	234
V/C Ratio (X)	0.00	0.00	0.00	0.11	0.84	0.00	0.00	0.04
Avail Cap (c_a), veh/h	579	0	0	561	1117	0	0	559
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.4	19.1	0.0	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	5.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.7	24.2	0.0	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	4.4	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.3	5.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.05	0.92	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	108	0	9	0	227	0	7
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.2	0.0	0.3	0.0	5.7	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	0.3	0.0	5.7	0.0	0.2
Lane Grp Cap (c), veh/h	0	1242	0	150	0	498	0	150
V/C Ratio (X)	0.00	0.09	0.00	0.06	0.00	0.46	0.00	0.05
Avail Cap (c_a), veh/h	0	1598	0	582	0	1598	0	582
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	23.9	0.0	17.3	0.0	23.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	24.1	0.0	18.0	0.0	24.1
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.1	0.0	2.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

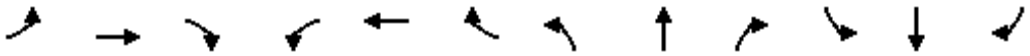
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	2.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	71	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1053	0	127	0	422	0	127
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.17	0.00	0.01
Avail Cap (c_a), veh/h	0	1355	0	493	0	1355	0	493
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	0.0	0.0	15.9	0.0	23.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	0.0	0.0	16.1	0.0	23.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	155	17	29	255	1	11	0	22	1	2	6
Future Volume (vph)	13	155	17	29	255	1	11	0	22	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.910			0.905	
Flt Protected		0.997			0.995			0.984			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Flt Permitted		0.997			0.995			0.984			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	168	18	32	277	1	12	0	24	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	0	310	0	0	36	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	155	17	29	255	1	11	0	22	1	2	6
Future Vol, veh/h	13	155	17	29	255	1	11	0	22	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	168	18	32	277	1	12	0	24	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	278	0	0	186	0	0	551	547	177	559	556	278
Stage 1	-	-	-	-	-	-	205	205	-	342	342	-
Stage 2	-	-	-	-	-	-	346	342	-	217	214	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1285	-	-	1388	-	-	445	445	866	440	439	761
Stage 1	-	-	-	-	-	-	797	732	-	673	638	-
Stage 2	-	-	-	-	-	-	670	638	-	785	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1285	-	-	1388	-	-	426	428	866	415	422	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	426	428	-	415	422	-
Stage 1	-	-	-	-	-	-	787	723	-	665	621	-
Stage 2	-	-	-	-	-	-	644	621	-	754	716	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.8	10.9	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	644	1285	-	-	1388	-	-	599
HCM Lane V/C Ratio	0.056	0.011	-	-	0.023	-	-	0.016
HCM Control Delay (s)	10.9	7.8	0	-	7.7	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	157	0	52	326	2	35
Future Volume (vph)	157	0	52	326	2	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.872	
Flt Protected				0.993	0.998	
Satd. Flow (prot)	1863	0	0	1850	1621	0
Flt Permitted				0.993	0.998	
Satd. Flow (perm)	1863	0	0	1850	1621	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	0	57	354	2	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	411	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	0	52	326	2	35
Future Vol, veh/h	157	0	52	326	2	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	0	57	354	2	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	171	0	639	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1406	-	440	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	418	873
Mov Cap-2 Maneuver	-	-	-	-	418	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	599	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	824	-	-	1406	-
HCM Lane V/C Ratio	0.049	-	-	0.04	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	194	0	49	331	0	23
Future Volume (vph)	194	0	49	331	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	211	0	53	360	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	211	0	0	413	25	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.7%		ICU Level of Service A	
Analysis Period (min) 15			

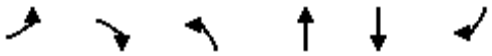
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	194	0	49	331	0	23
Future Vol, veh/h	194	0	49	331	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	0	53	360	0	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	211	0	677	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	466	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1360	-	418	829
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1360	-	398	829
Mov Cap-2 Maneuver	-	-	-	-	398	-
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	829	-	-	1360	-
HCM Lane V/C Ratio	0.03	-	-	0.039	-
HCM Control Delay (s)	9.5	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	13	20	11	25	44	6
Future Volume (vph)	13	20	11	25	44	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.917				0.983	
Flt Protected	0.981			0.985		
Satd. Flow (prot)	1676	0	0	1835	1831	0
Flt Permitted	0.981			0.985		
Satd. Flow (perm)	1676	0	0	1835	1831	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	22	12	27	48	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	39	55	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

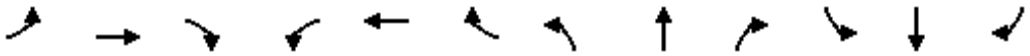
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	20	11	25	44	6
Future Vol, veh/h	13	20	11	25	44	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	22	12	27	48	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	103	52	55	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	895	1016	1550	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	888	1016	1550	-	-	-
Mov Cap-2 Maneuver	888	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1550	-	961	-	-
HCM Lane V/C Ratio	0.008	-	0.037	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	101	0	20	190	164	0	3	12	95	4	0
Future Volume (vph)	0	101	0	20	190	164	0	3	12	95	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.941			0.890				
Flt Protected					0.997						0.954	
Satd. Flow (prot)	0	1863	0	0	1748	0	0	1658	0	0	1777	0
Flt Permitted					0.997						0.954	
Satd. Flow (perm)	0	1863	0	0	1748	0	0	1658	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	110	0	22	207	178	0	3	13	103	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	0	407	0	0	16	0	0	107	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	101	0	20	190	164	0	3	12	95	4	0
Future Vol, veh/h	0	101	0	20	190	164	0	3	12	95	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	110	0	22	207	178	0	3	13	103	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	385	0	0	110	0	0	452	539	110	458	450	296
Stage 1	-	-	-	-	-	-	110	110	-	340	340	-
Stage 2	-	-	-	-	-	-	342	429	-	118	110	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1173	-	-	1480	-	-	518	449	943	513	504	743
Stage 1	-	-	-	-	-	-	895	804	-	675	639	-
Stage 2	-	-	-	-	-	-	673	584	-	887	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1173	-	-	1480	-	-	507	440	943	496	494	743
Mov Cap-2 Maneuver	-	-	-	-	-	-	507	440	-	496	494	-
Stage 1	-	-	-	-	-	-	895	804	-	675	627	-
Stage 2	-	-	-	-	-	-	656	573	-	871	804	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	9.8	14.3
HCM LOS			A	B

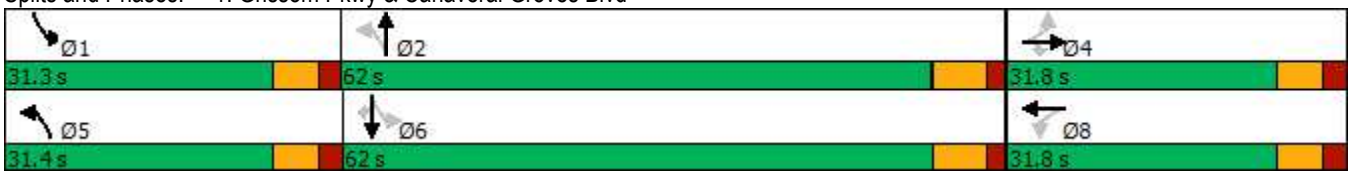
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	768	1173	-	-	1480	-	-	496
HCM Lane V/C Ratio	0.021	-	-	-	0.015	-	-	0.217
HCM Control Delay (s)	9.8	0	-	-	7.5	0	-	14.3
HCM Lane LOS	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.8

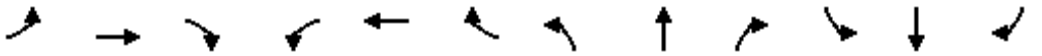
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	130	178	71	60	46	50	229	57	91	388	49
Future Volume (vph)	111	130	178	71	60	46	50	229	57	91	388	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.965			0.970				0.850
Flt Protected		0.977			0.980		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1762	0	1770	1807	0	1770	1863	1583
Flt Permitted		0.778			0.764		0.365			0.438		
Satd. Flow (perm)	0	1449	1583	0	1373	0	680	1807	0	816	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			193		13			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	141	193	77	65	50	54	249	62	99	422	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	262	193	0	192	0	54	311	0	99	422	53
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.6	25.6		25.6		27.0	20.8		29.3	24.0	24.0
Actuated g/C Ratio		0.36	0.36		0.36		0.38	0.29		0.41	0.34	0.34
v/c Ratio		0.50	0.28		0.38		0.15	0.58		0.23	0.68	0.09
Control Delay		25.4	4.8		21.9		11.0	26.0		11.5	27.6	2.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		25.4	4.8		21.9		11.0	26.0		11.5	27.6	2.0
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.7			21.9			23.8			22.5	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		95	0		61		12	117		23	175	0
Queue Length 95th (ft)		199	46		140		29	195		46	280	10
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		519	691		500		722	1421		740	1461	1260
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.50	0.28		0.38		0.07	0.22		0.13	0.29	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 71.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 70.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	130	178	71	60	46	50	229	57	91	388	49
Future Volume (veh/h)	111	130	178	71	60	46	50	229	57	91	388	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	141	193	77	65	50	54	249	62	99	422	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	242	437	156	125	66	311	403	100	399	556	471
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	552	876	1585	227	452	239	1781	1446	360	1781	1870	1585
Grp Volume(v), veh/h	262	0	193	192	0	0	54	0	311	99	422	53
Grp Sat Flow(s),veh/h/ln	1428	0	1585	919	0	0	1781	0	1806	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.4	3.3	0.0	0.0	1.1	0.0	8.1	2.1	11.0	1.3
Cycle Q Clear(g_c), s	8.7	0.0	5.4	12.0	0.0	0.0	1.1	0.0	8.1	2.1	11.0	1.3
Prop In Lane	0.46		1.00	0.40		0.26	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	492	0	437	347	0	0	311	0	504	399	556	471
V/C Ratio(X)	0.53	0.00	0.44	0.55	0.00	0.00	0.17	0.00	0.62	0.25	0.76	0.11
Avail Cap(c_a), veh/h	783	0	737	607	0	0	1047	0	1846	1099	1912	1621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	16.1	18.1	0.0	0.0	13.4	0.0	16.9	12.7	17.1	13.7
Incr Delay (d2), s/veh	0.9	0.0	0.7	1.4	0.0	0.0	0.3	0.0	1.2	0.3	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.8	2.2	0.0	0.0	0.4	0.0	2.9	0.7	4.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.9	0.0	16.8	19.5	0.0	0.0	13.7	0.0	18.1	13.0	19.3	13.8
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		455			192			365			574	
Approach Delay, s/veh		17.4			19.5			17.5			17.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	22.0		21.6	9.2	23.0		21.6				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.1	10.1		10.7	3.1	13.0		14.0				
Green Ext Time (p_c), s	0.2	1.8		1.9	0.1	2.7		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			17.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	130	178	71	60	46	50	229	57	91	388	49
Future Volume (veh/h)	111	130	178	71	60	46	50	229	57	91	388	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	141	193	77	65	50	54	249	62	99	422	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	250	242	437	156	125	66	311	403	100	399	556	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.9	0.0	16.8	19.5	0.0	0.0	13.7	0.0	18.1	13.0	19.3	13.8
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		455			192			365			574	
Approach Delay, s/veh		17.4			19.5			17.5			17.7	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.2	22.0		21.6	9.2	23.0		21.6
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.6
Max Q Clear (g_c+I1), s	4.1	10.1		10.7	3.1	13.0		14.0
Green Ext Time (g_e), s	0.2	1.8		1.9	0.1	2.7		0.8
Prob of Phs Call (p_c)	0.77	1.00		1.00	0.55	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.04	0.00	0.00		0.08

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			552	1781			227

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1446		876		1870		452

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		360		1585		1585		239

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	99	0	0	262	54	0	0	192
Grp Sat Flow (s), veh/h/ln	1781	0	0	1428	1781	0	0	919
Q Serve Time (g_s), s	2.1	0.0	0.0	0.0	1.1	0.0	0.0	3.3
Cycle Q Clear Time (g_c), s	2.1	0.0	0.0	8.7	1.1	0.0	0.0	12.0
Perm LT Sat Flow (s_l), veh/h/ln	1068	0	0	1298	919	0	0	1063
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1317	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	14.8	15.0	0.0	0.0	14.8
Perm LT Serve Time (g_u), s	6.9	0.0	0.0	2.8	5.0	0.0	0.0	6.1
Perm LT Q Serve Time (g_ps), s	0.8	0.0	0.0	0.0	0.6	0.0	0.0	3.3
Time to First Blk (g_f), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.9
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.9
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.40
Lane Grp Cap (c), veh/h	399	0	0	492	311	0	0	347
V/C Ratio (X)	0.25	0.00	0.00	0.53	0.17	0.00	0.00	0.55
Avail Cap (c_a), veh/h	1099	0	0	783	1047	0	0	607
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.7	0.0	0.0	17.0	13.4	0.0	0.0	18.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.9	0.3	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.0	0.0	0.0	17.9	13.7	0.0	0.0	19.5
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.5	0.4	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	2.6	0.4	0.0	0.0	2.2
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	422	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	556	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1912	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	19.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	311	0	193	0	53	0	0
Grp Sat Flow (s), veh/h/ln	0	1806	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	8.1	0.0	5.4	0.0	1.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.1	0.0	5.4	0.0	1.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	1.00	0.00	0.26
Lane Grp Cap (c), veh/h	0	504	0	437	0	471	0	0
V/C Ratio (X)	0.00	0.62	0.00	0.44	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1846	0	737	0	1621	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.9	0.0	16.1	0.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.1	0.0	16.8	0.0	13.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.7	0.0	1.7	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.9	0.0	1.8	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.25	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

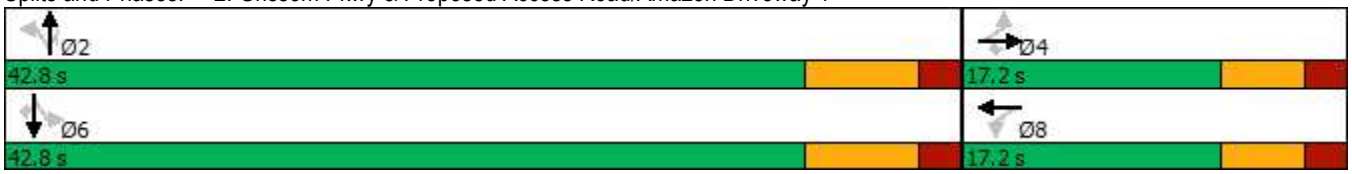
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	0	254	1	0	0	64	279	1	0	620	69
Future Volume (vph)	182	0	254	1	0	0	64	279	1	0	620	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.633		0.285					
Satd. Flow (perm)	0	1410	1583	0	1179	0	531	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			249						49			75
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	0	276	1	0	0	70	303	1	0	674	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	276	0	1	0	70	303	1	0	674	75
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		10.6	10.6		10.6		22.9	22.9	22.9		22.9	22.9
Actuated g/C Ratio		0.23	0.23		0.23		0.49	0.49	0.49		0.49	0.49
v/c Ratio		0.62	0.50		0.00		0.27	0.33	0.00		0.74	0.09
Control Delay		30.0	8.0		18.0		9.6	8.1	0.0		14.9	2.0
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		30.0	8.0		18.0		9.6	8.1	0.0		14.9	2.0
LOS		C	A		B		A	A	A		B	A
Approach Delay		17.2			18.0			8.3			13.6	
Approach LOS		B			B			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		45	5		0		10	46	0		135	0
Queue Length 95th (ft)		#158	63		4		29	81	0		224	12
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		358	588		299		418	1469	1258		1469	1264
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.55	0.47		0.00		0.17	0.21	0.00		0.46	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	0	254	1	0	0	64	279	1	0	620	69
Future Volume (veh/h)	182	0	254	1	0	0	64	279	1	0	620	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	198	0	276	1	0	0	70	303	1	0	674	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	521	0	354	308	0	0	298	890	754	169	890	754
Arrive On Green	0.22	0.00	0.22	0.22	0.00	0.00	0.48	0.48	0.48	0.00	0.48	0.48
Sat Flow, veh/h	1577	0	1585	623	0	0	713	1870	1585	1075	1870	1585
Grp Volume(v), veh/h	198	0	276	1	0	0	70	303	1	0	674	75
Grp Sat Flow(s),veh/h/ln	1577	0	1585	623	0	0	713	1870	1585	1075	1870	1585
Q Serve(g_s), s	0.0	0.0	7.0	0.0	0.0	0.0	3.8	4.3	0.0	0.0	12.6	1.1
Cycle Q Clear(g_c), s	4.1	0.0	7.0	4.2	0.0	0.0	16.3	4.3	0.0	0.0	12.6	1.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	521	0	354	308	0	0	298	890	754	169	890	754
V/C Ratio(X)	0.38	0.00	0.78	0.00	0.00	0.00	0.23	0.34	0.00	0.00	0.76	0.10
Avail Cap(c_a), veh/h	589	0	429	361	0	0	558	1571	1331	561	1571	1331
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	0.0	15.5	16.2	0.0	0.0	15.8	7.0	5.8	0.0	9.1	6.1
Incr Delay (d2), s/veh	0.5	0.0	7.4	0.0	0.0	0.0	0.4	0.2	0.0	0.0	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	2.8	0.0	0.0	0.0	0.5	0.9	0.0	0.0	2.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.9	0.0	22.9	16.2	0.0	0.0	16.2	7.2	5.8	0.0	10.5	6.2
LnGrp LOS	B	A	C	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		474			1			374			749	
Approach Delay, s/veh		19.6			16.2			8.9			10.1	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	27.3	15.2	27.3	15.2
Change Period (Y+Rc), s	7.1	* 5.7	7.1	* 5.7
Max Green Setting (Gmax), s	35.7	* 12	35.7	* 12
Max Q Clear Time (g_c+I1), s	18.3	9.0	14.6	6.2
Green Ext Time (p_c), s	1.9	0.6	4.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	0	254	1	0	0	64	279	1	0	620	69
Future Volume (veh/h)	182	0	254	1	0	0	64	279	1	0	620	69
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	198	0	276	1	0	0	70	303	1	0	674	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	521	0	354	308	0	0	298	890	754	169	890	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.22	0.00	0.22	0.22	0.00	0.00	0.48	0.48	0.48	0.00	0.48	0.48
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.9	0.0	22.9	16.2	0.0	0.0	16.2	7.2	5.8	0.0	10.5	6.2
Ln Grp LOS	B	A	C	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		474			1			374			749	
Approach Delay, s/veh		19.6			16.2			8.9			10.1	
Approach LOS		B			B			A			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		27.3		15.2		27.3		15.2
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		5.0		4.5		4.7		6.1
Max Q Clear (g_c+I1), s		18.3		9.0		14.6		6.2
Green Ext Time (g_e), s		1.9		0.6		4.3		0.0
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.01		1.00		0.04		1.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		713		1577		1075		623

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	70	0	198	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	713	0	1577	0	1075	0	623
Q Serve Time (g_s), s	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.3	0.0	4.1	0.0	0.0	0.0	4.2
Perm LT Sat Flow (s_l), veh/h/ln	0	713	0	1440	0	1075	0	1121
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.2	0.0	9.5	0.0	0.0	0.0	9.5
Perm LT Serve Time (g_u), s	0.0	7.7	0.0	5.3	0.0	0.0	0.0	5.4
Perm LT Q Serve Time (g_ps), s	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	298	0	521	0	169	0	308
V/C Ratio (X)	0.00	0.23	0.00	0.38	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	558	0	589	0	561	0	361
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.8	0.0	14.4	0.0	0.0	0.0	16.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.2	0.0	14.9	0.0	0.0	0.0	16.2
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	1.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	1.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	303	0	0	0	674	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	4.3	0.0	0.0	0.0	12.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.3	0.0	0.0	0.0	12.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	890	0	0	0	890	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	1571	0	0	0	1571	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.0	0.0	0.0	0.0	9.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.2	0.0	0.0	0.0	10.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.0	0.0	2.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

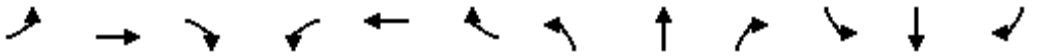
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.0	0.0	2.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	276	0	75	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	7.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	7.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	754	0	354	0	754	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.78	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	1331	0	429	0	1331	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.8	0.0	15.5	0.0	6.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.8	0.0	22.9	0.0	6.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	2.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	2.8	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.47	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

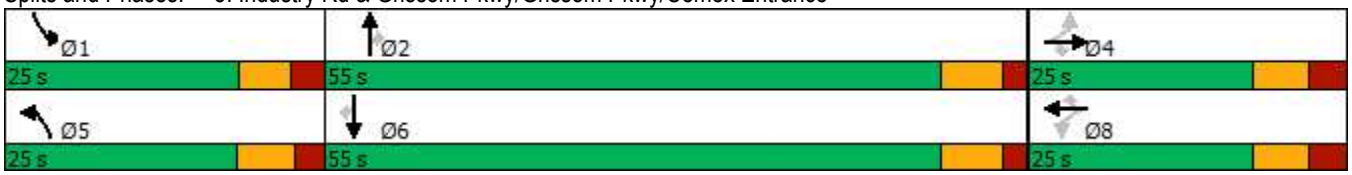


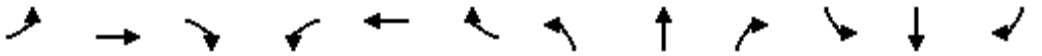
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	10	576	50	4	0	305	106	45	3	136	31
Future Volume (vph)	50	10	576	50	4	0	305	106	45	3	136	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.755			0.750			0.950			0.950		
Satd. Flow (perm)	1406	1863	1583	1397	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			626						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	11	626	54	4	0	332	115	49	3	148	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	11	626	54	4	0	332	115	49	3	148	34
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.7	11.7	11.7	11.7	11.7		13.2	27.4	27.4	5.4	15.7	15.7
Actuated g/C Ratio	0.21	0.21	0.21	0.21	0.21		0.23	0.49	0.49	0.10	0.28	0.28
v/c Ratio	0.18	0.03	0.76	0.18	0.01		0.41	0.13	0.06	0.02	0.29	0.06
Control Delay	21.6	19.3	9.0	21.6	19.0		23.1	10.4	0.1	28.0	21.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	19.3	9.0	21.6	19.0		23.1	10.4	0.1	28.0	21.8	0.2
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		10.2			21.4			17.9			17.9	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	16	3	0	16	1		53	16	0	1	40	0
Queue Length 95th (ft)	44	15	80	44	8		98	66	1	9	101	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	456	605	937	454	605		1160	1605	1379	601	1605	1379
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.02	0.67	0.12	0.01		0.29	0.07	0.04	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 56.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 14.3		Intersection LOS: B	
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	10	576	50	4	0	305	106	45	3	136	31
Future Volume (veh/h)	50	10	576	50	4	0	305	106	45	3	136	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	11	0	54	4	0	332	115	49	3	148	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	326	245		320	245	207	514	830	703	7	556	471
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.00	0.15	0.44	0.44	0.00	0.30	0.30
Sat Flow, veh/h	1412	1870	1585	1404	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	54	11	0	54	4	0	332	115	49	3	148	34
Grp Sat Flow(s),veh/h/ln	1412	1870	1585	1404	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.7	0.3	0.0	1.8	0.1	0.0	4.5	1.8	0.9	0.1	3.0	0.8
Cycle Q Clear(g_c), s	1.8	0.3	0.0	2.0	0.1	0.0	4.5	1.8	0.9	0.1	3.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	245		320	245	207	514	830	703	7	556	471
V/C Ratio(X)	0.17	0.04		0.17	0.02	0.00	0.65	0.14	0.07	0.41	0.27	0.07
Avail Cap(c_a), veh/h	635	654		627	654	554	1256	1796	1522	651	1796	1522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	19.0	0.0	19.9	19.0	0.0	20.1	8.3	8.0	24.9	13.4	12.6
Incr Delay (d2), s/veh	0.3	0.1	0.0	0.3	0.0	0.0	1.4	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.0	0.5	0.0	0.0	1.7	0.6	0.3	0.1	1.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	19.1	0.0	20.2	19.0	0.0	21.5	8.3	8.0	50.3	13.7	12.7
LnGrp LOS	C	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		65	A		58			496			185	
Approach Delay, s/veh		19.9			20.1			17.1			14.1	
Approach LOS		B			C			B			B	

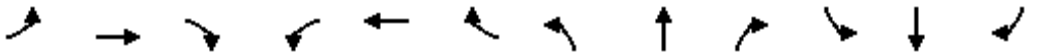
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	29.1		14.1	14.2	21.8		14.1				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.8		3.8	6.5	5.0		4.0				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.9	1.2		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	10	576	50	4	0	305	106	45	3	136	31
Future Volume (veh/h)	50	10	576	50	4	0	305	106	45	3	136	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	11	0	54	4	0	332	115	49	3	148	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	326	245		320	245	207	514	830	703	7	556	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.00	0.15	0.44	0.44	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.0	19.1	0.0	20.2	19.0	0.0	21.5	8.3	8.0	50.3	13.7	12.7
Ln Grp LOS	C	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		65			58			496			185	
Approach Delay, s/veh		19.9			20.1			17.1			14.1	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	29.1		14.1	14.2	21.8		14.1
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.5		4.4
Max Q Clear (g_c+I1), s	2.1	3.8		3.8	6.5	5.0		4.0
Green Ext Time (g_e), s	0.0	1.0		0.1	0.9	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.82	1.00	0.99		0.82
Prob of Max Out (p_x)	0.00	0.00		0.00	0.01	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1412	3456			1404

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	54	332	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1412	1728	0	0	1404
Q Serve Time (g_s), s	0.1	0.0	0.0	1.7	4.5	0.0	0.0	1.8
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.8	4.5	0.0	0.0	2.0
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1412	0	0	0	1404
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.6	0.0	0.0	0.0	6.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	6.5	0.0	0.0	0.0	6.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	326	514	0	0	320
V/C Ratio (X)	0.41	0.00	0.00	0.17	0.65	0.00	0.00	0.17
Avail Cap (c_a), veh/h	651	0	0	635	1256	0	0	627
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.9	0.0	0.0	19.8	20.1	0.0	0.0	19.9
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.3	1.4	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	50.3	0.0	0.0	20.0	21.5	0.0	0.0	20.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	1.6	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.5	1.7	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.09	0.32	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	115	0	11	0	148	0	4
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.8	0.0	0.3	0.0	3.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	0.3	0.0	3.0	0.0	0.1
Lane Grp Cap (c), veh/h	0	830	0	245	0	556	0	245
V/C Ratio (X)	0.00	0.14	0.00	0.04	0.00	0.27	0.00	0.02
Avail Cap (c_a), veh/h	0	1796	0	654	0	1796	0	654
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.3	0.0	19.0	0.0	13.4	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	19.1	0.0	13.7	0.0	19.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

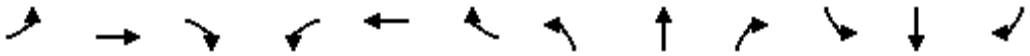
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.1	0.0	1.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	49	0	0	0	34	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	703	0	207	0	471	0	207
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1522	0	554	0	1522	0	554
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	8.0	0.0	0.0	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	0.0	0.0	12.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	204	8	23	85	3	12	0	25	1	0	12
Future Volume (vph)	1	204	8	23	85	3	12	0	25	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.997			0.909			0.875	
Flt Protected					0.990			0.984			0.996	
Satd. Flow (prot)	0	1853	0	0	1839	0	0	1666	0	0	1623	0
Flt Permitted					0.990			0.984			0.996	
Satd. Flow (perm)	0	1853	0	0	1839	0	0	1666	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	222	9	25	92	3	13	0	27	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	232	0	0	120	0	0	40	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	204	8	23	85	3	12	0	25	1	0	12
Future Vol, veh/h	1	204	8	23	85	3	12	0	25	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	222	9	25	92	3	13	0	27	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	231	0	0	379	374	227	386	377	94
Stage 1	-	-	-	-	-	-	229	229	-	144	144	-
Stage 2	-	-	-	-	-	-	150	145	-	242	233	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1337	-	-	579	557	812	573	555	963
Stage 1	-	-	-	-	-	-	774	715	-	859	778	-
Stage 2	-	-	-	-	-	-	853	777	-	762	712	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1499	-	-	1337	-	-	562	545	812	545	543	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	562	545	-	545	543	-
Stage 1	-	-	-	-	-	-	773	714	-	858	762	-
Stage 2	-	-	-	-	-	-	825	761	-	736	711	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.4	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	710	1499	-	-	1337	-	-	909
HCM Lane V/C Ratio	0.057	0.001	-	-	0.019	-	-	0.016
HCM Control Delay (s)	10.4	7.4	0	-	7.7	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	300	1	29	121	1	55
Future Volume (vph)	300	1	29	121	1	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.867	
Flt Protected				0.990	0.999	
Satd. Flow (prot)	1863	0	0	1844	1613	0
Flt Permitted				0.990	0.999	
Satd. Flow (perm)	1863	0	0	1844	1613	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	326	1	32	132	1	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	327	0	0	164	61	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	300	1	29	121	1	55
Future Vol, veh/h	300	1	29	121	1	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	326	1	32	132	1	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	327	0	523	327
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	196	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1233	-	514	714
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	837	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1233	-	500	714
Mov Cap-2 Maneuver	-	-	-	-	500	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	814	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	709	-	-	1233	-
HCM Lane V/C Ratio	0.086	-	-	0.026	-
HCM Control Delay (s)	10.6	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	356	0	17	136	0	34
Future Volume (vph)	356	0	17	136	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	387	0	18	148	0	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	387	0	0	166	37	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			

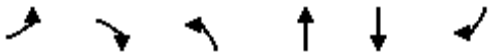
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	356	0	17	136	0	34
Future Vol, veh/h	356	0	17	136	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	387	0	18	148	0	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	387	0	571	387
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	184	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1171	-	482	661
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1171	-	474	661
Mov Cap-2 Maneuver	-	-	-	-	474	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	661	-	-	1171	-
HCM Lane V/C Ratio	0.056	-	-	0.016	-
HCM Control Delay (s)	10.8	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	15	6	16	39	14	15
Future Volume (vph)	15	6	16	39	14	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.959				0.930	
Flt Protected	0.966			0.986		
Satd. Flow (prot)	1726	0	0	1837	1732	0
Flt Permitted	0.966			0.986		
Satd. Flow (perm)	1726	0	0	1837	1732	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	7	17	42	15	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	59	31	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

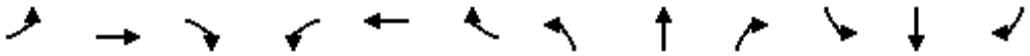
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	6	16	39	14	15
Future Vol, veh/h	15	6	16	39	14	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	7	17	42	15	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	99	23	31	0	-	0
Stage 1	23	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	900	1054	1582	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	890	1054	1582	-	-	-
Mov Cap-2 Maneuver	890	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	947	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1582	-	931	-	-
HCM Lane V/C Ratio	0.011	-	0.025	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	273	0	6	78	49	0	5	18	143	1	0
Future Volume (vph)	0	273	0	6	78	49	0	5	18	143	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.951			0.892				
Flt Protected					0.998						0.953	
Satd. Flow (prot)	0	1863	0	0	1768	0	0	1662	0	0	1775	0
Flt Permitted					0.998						0.953	
Satd. Flow (perm)	0	1863	0	0	1768	0	0	1662	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	297	0	7	85	53	0	5	20	155	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	297	0	0	145	0	0	25	0	0	156	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			

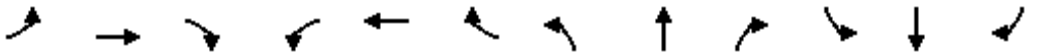
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	273	0	6	78	49	0	5	18	143	1	0
Future Vol, veh/h	0	273	0	6	78	49	0	5	18	143	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	297	0	7	85	53	0	5	20	155	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	138	0	0	297	0	0	423	449	297	436	423	112
Stage 1	-	-	-	-	-	-	297	297	-	126	126	-
Stage 2	-	-	-	-	-	-	126	152	-	310	297	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1264	-	-	541	505	742	531	522	941
Stage 1	-	-	-	-	-	-	712	668	-	878	792	-
Stage 2	-	-	-	-	-	-	878	772	-	700	668	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1264	-	-	538	502	742	510	519	941
Mov Cap-2 Maneuver	-	-	-	-	-	-	538	502	-	510	519	-
Stage 1	-	-	-	-	-	-	712	668	-	878	787	-
Stage 2	-	-	-	-	-	-	872	767	-	676	668	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	10.6	15.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	672	1446	-	-	1264	-	-	510
HCM Lane V/C Ratio	0.037	-	-	-	0.005	-	-	0.307
HCM Control Delay (s)	10.6	0	-	-	7.9	0	-	15.2
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	1.3



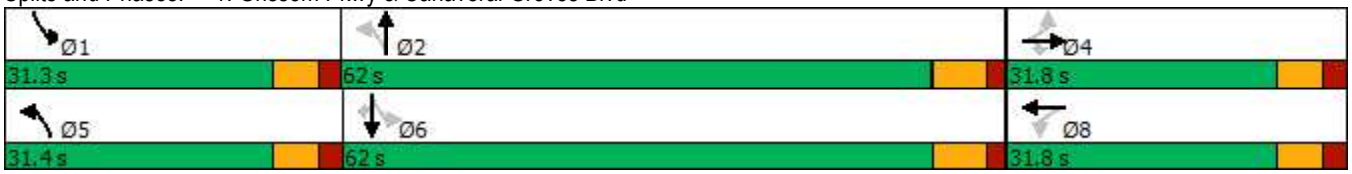
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	79	101	93	95	78	178	459	115	89	345	89
Future Volume (vph)	76	79	101	93	95	78	178	459	115	89	345	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.960			0.970				0.850
Flt Protected		0.976			0.983		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1758	0	1770	1807	0	1770	1863	1583
Flt Permitted		0.665			0.816		0.348			0.224		
Satd. Flow (perm)	0	1239	1583	0	1459	0	648	1807	0	417	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			110		15			13				97
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	86	110	101	103	85	193	499	125	97	375	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	169	110	0	289	0	193	624	0	97	375	97
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.5	25.5		25.5		46.8	37.2		38.9	30.5	30.5
Actuated g/C Ratio		0.29	0.29		0.29		0.53	0.42		0.44	0.35	0.35
v/c Ratio		0.47	0.20		0.67		0.40	0.81		0.32	0.58	0.16
Control Delay		34.6	7.4		38.1		11.5	31.4		11.9	26.6	4.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		34.6	7.4		38.1		11.5	31.4		11.9	26.6	4.5
LOS		C	A		D		B	C		B	C	A
Approach Delay		23.9			38.1			26.7			20.3	
Approach LOS		C			D			C			C	

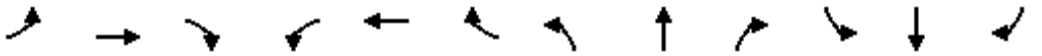
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		77	0		134		48	303		23	164	0
Queue Length 95th (ft)		176	43		#318		78	451		43	254	29
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		360	538		434		686	1162		625	1191	1047
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.47	0.20		0.67		0.28	0.54		0.16	0.31	0.09

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 87.8			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 26.1		Intersection LOS: C	
Intersection Capacity Utilization 74.4%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	79	101	93	95	78	178	459	115	89	345	89
Future Volume (veh/h)	76	79	101	93	95	78	178	459	115	89	345	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	86	110	101	103	85	193	499	125	97	375	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	197	443	153	145	97	449	576	144	262	669	567
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.40	0.40	0.06	0.36	0.36
Sat Flow, veh/h	506	706	1585	317	520	349	1781	1444	362	1781	1870	1585
Grp Volume(v), veh/h	169	0	110	289	0	0	193	0	624	97	375	97
Grp Sat Flow(s),veh/h/ln	1212	0	1585	1185	0	0	1781	0	1805	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.1	10.3	0.0	0.0	5.0	0.0	24.1	2.6	12.2	3.2
Cycle Q Clear(g_c), s	8.3	0.0	4.1	18.6	0.0	0.0	5.0	0.0	24.1	2.6	12.2	3.2
Prop In Lane	0.49		1.00	0.35		0.29	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	443	395	0	0	449	0	720	262	669	567
V/C Ratio(X)	0.41	0.00	0.25	0.73	0.00	0.00	0.43	0.00	0.87	0.37	0.56	0.17
Avail Cap(c_a), veh/h	482	0	522	469	0	0	862	0	1307	746	1354	1147
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	21.2	27.3	0.0	0.0	13.9	0.0	21.0	17.0	19.6	16.7
Incr Delay (d2), s/veh	0.7	0.0	0.3	4.7	0.0	0.0	0.7	0.0	3.3	0.9	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.5	5.3	0.0	0.0	1.8	0.0	9.4	1.0	4.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	0.0	21.5	32.0	0.0	0.0	14.6	0.0	24.3	17.9	20.3	16.8
LnGrp LOS	C	A	C	C	A	A	B	A	C	B	C	B
Approach Vol, veh/h		279			289			817			569	
Approach Delay, s/veh		22.4			32.0			22.0			19.3	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	37.3		28.0	13.8	34.2		28.0				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.6	26.1		10.3	7.0	14.2		20.6				
Green Ext Time (p_c), s	0.2	4.2		1.1	0.5	2.5		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			22.8									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	79	101	93	95	78	178	459	115	89	345	89
Future Volume (veh/h)	76	79	101	93	95	78	178	459	115	89	345	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	86	110	101	103	85	193	499	125	97	375	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	212	197	443	153	145	97	449	576	144	262	669	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.10	0.40	0.40	0.06	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.0	0.0	21.5	32.0	0.0	0.0	14.6	0.0	24.3	17.9	20.3	16.8
Ln Grp LOS	C	A	C	C	A	A	B	A	C	B	C	B
Approach Vol, veh/h		279			289			817			569	
Approach Delay, s/veh		22.4			32.0			22.0			19.3	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.7	37.3		28.0	13.8	34.2		28.0
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.6	26.1		10.3	7.0	14.2		20.6
Green Ext Time (g_e), s	0.2	4.2		1.1	0.5	2.5		0.7
Prob of Phs Call (p_c)	0.87	1.00		1.00	0.98	1.00		1.00
Prob of Max Out (p_x)	0.00	0.01		0.01	0.00	0.00		1.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			506	1781			317

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1444		706		1870		520

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		362		1585		1585		349

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

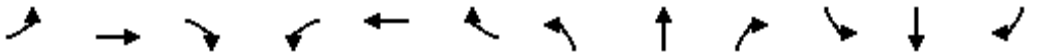
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	97	0	0	169	193	0	0	289
Grp Sat Flow (s), veh/h/ln	1781	0	0	1212	1781	0	0	1185
Q Serve Time (g_s), s	2.6	0.0	0.0	0.0	5.0	0.0	0.0	10.3
Cycle Q Clear Time (g_c), s	2.6	0.0	0.0	8.3	5.0	0.0	0.0	18.6
Perm LT Sat Flow (s_l), veh/h/ln	801	0	0	1214	922	0	0	1206
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1089	0	0	0	0
Perm LT Eff Green (g_p), s	27.2	0.0	0.0	21.2	27.2	0.0	0.0	21.2
Perm LT Serve Time (g_u), s	6.2	0.0	0.0	2.7	15.0	0.0	0.0	12.9
Perm LT Q Serve Time (g_ps), s	2.9	0.0	0.0	0.0	3.2	0.0	0.0	10.3
Time to First Blk (g_f), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.3
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.49	1.00	0.00	0.00	0.35
Lane Grp Cap (c), veh/h	262	0	0	409	449	0	0	395
V/C Ratio (X)	0.37	0.00	0.00	0.41	0.43	0.00	0.00	0.73
Avail Cap (c_a), veh/h	746	0	0	482	862	0	0	469
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	17.0	0.0	0.0	22.3	13.9	0.0	0.0	27.3
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.7	0.7	0.0	0.0	4.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	17.9	0.0	0.0	23.0	14.6	0.0	0.0	32.0
1st-Term Q (Q1), veh/ln	0.9	0.0	0.0	2.3	1.7	0.0	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	1.0	0.0	0.0	2.4	1.8	0.0	0.0	5.3
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.02	0.10	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	375	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	12.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	12.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	669	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1354	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	19.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	20.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	624	0	110	0	97	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	24.1	0.0	4.1	0.0	3.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	24.1	0.0	4.1	0.0	3.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	1.00	0.00	0.29
Lane Grp Cap (c), veh/h	0	720	0	443	0	567	0	0
V/C Ratio (X)	0.00	0.87	0.00	0.25	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1307	0	522	0	1147	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	21.0	0.0	21.2	0.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.3	0.0	0.3	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	24.3	0.0	21.5	0.0	16.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.7	0.0	1.4	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.4	0.0	1.5	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.21	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

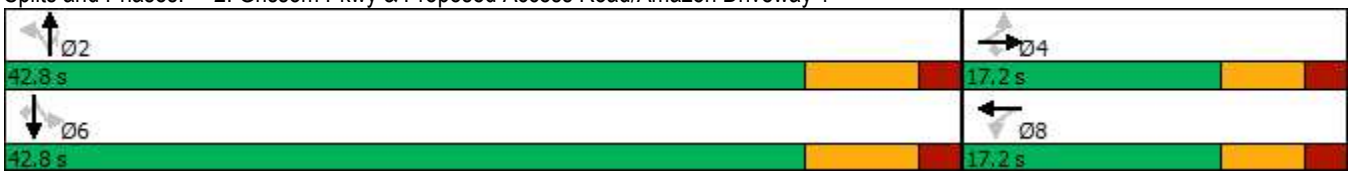


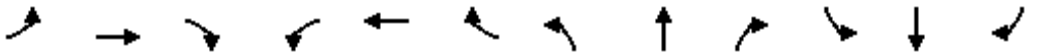
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	0	151	27	0	20	266	638	1	0	378	152
Future Volume (vph)	82	0	151	27	0	20	266	638	1	0	378	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.774		0.521					
Satd. Flow (perm)	0	1349	1583	0	1358	0	970	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164		75				49			165
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	0	164	29	0	22	289	693	1	0	411	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	164	0	51	0	289	693	1	0	411	165
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.2	9.2		9.2		29.2	29.2	29.2		29.2	29.2
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.33	0.37		0.16		0.47	0.59	0.00		0.35	0.16
Control Delay		22.4	7.1		5.0		10.3	10.1	0.0		7.2	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		22.4	7.1		5.0		10.3	10.1	0.0		7.2	1.6
LOS		C	A		A		B	B	A		A	A
Approach Delay		12.5			5.0			10.2			5.6	
Approach LOS		B			A			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		20	0		0		43	115	0		55	0
Queue Length 95th (ft)		64	42		16		109	234	0		114	18
Internal Link Dist (ft)		3021			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		345	527		403		771	1481	1268		1481	1292
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.26	0.31		0.13		0.37	0.47	0.00		0.28	0.13

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.4			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	0	151	27	0	20	266	638	1	0	378	152
Future Volume (veh/h)	82	0	151	27	0	20	266	638	1	0	378	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	0	164	29	0	22	289	693	1	0	411	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	0	262	212	30	94	523	1059	897	151	1059	897
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.57	0.57	0.57	0.00	0.57	0.57
Sat Flow, veh/h	1495	0	1585	566	184	569	837	1870	1585	750	1870	1585
Grp Volume(v), veh/h	89	0	164	51	0	0	289	693	1	0	411	165
Grp Sat Flow(s),veh/h/ln	1495	0	1585	1318	0	0	837	1870	1585	750	1870	1585
Q Serve(g_s), s	0.0	0.0	4.6	0.0	0.0	0.0	14.0	12.2	0.0	0.0	5.8	2.4
Cycle Q Clear(g_c), s	2.1	0.0	4.6	2.1	0.0	0.0	19.8	12.2	0.0	0.0	5.8	2.4
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	398	0	262	336	0	0	523	1059	897	151	1059	897
V/C Ratio(X)	0.22	0.00	0.63	0.15	0.00	0.00	0.55	0.65	0.00	0.00	0.39	0.18
Avail Cap(c_a), veh/h	505	0	383	440	0	0	677	1403	1189	290	1403	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	18.5	17.1	0.0	0.0	11.2	7.1	4.5	0.0	5.7	5.0
Incr Delay (d2), s/veh	0.3	0.0	2.5	0.2	0.0	0.0	0.9	0.7	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.6	0.5	0.0	0.0	1.7	2.4	0.0	0.0	1.1	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	0.0	21.0	17.3	0.0	0.0	12.2	7.8	4.5	0.0	6.0	5.1
LnGrp LOS	B	A	C	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		253			51			983			576	
Approach Delay, s/veh		19.8			17.3			9.1			5.7	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		13.6		34.0		13.6				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		21.8		6.6		7.8		4.1				
Green Ext Time (p_c), s		5.2		0.4		2.8		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.7									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	0	151	27	0	20	266	638	1	0	378	152
Future Volume (veh/h)	82	0	151	27	0	20	266	638	1	0	378	152
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	0	164	29	0	22	289	693	1	0	411	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	398	0	262	212	30	94	523	1059	897	151	1059	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.57	0.57	0.57	0.00	0.57	0.57
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.7	0.0	21.0	17.3	0.0	0.0	12.2	7.8	4.5	0.0	6.0	5.1
Ln Grp LOS	B	A	C	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		253			51			983			576	
Approach Delay, s/veh		19.8			17.3			9.1			5.7	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		34.0		13.6		34.0		13.6
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		5.0		4.4		4.6		5.8
Max Q Clear (g_c+I1), s		21.8		6.6		7.8		4.1
Green Ext Time (g_e), s		5.2		0.4		2.8		0.1
Prob of Phs Call (p_c)		1.00		0.98		1.00		0.98
Prob of Max Out (p_x)		0.33		0.76		0.00		0.26

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		837		1495		750		566

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		184

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		569

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	289	0	89	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	837	0	1495	0	750	0	1318
Q Serve Time (g_s), s	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.8	0.0	2.1	0.0	0.0	0.0	2.1
Perm LT Sat Flow (s_l), veh/h/ln	0	837	0	1412	0	750	0	1241
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	26.9	0.0	7.9	0.0	0.0	0.0	7.9
Perm LT Serve Time (g_u), s	0.0	21.1	0.0	5.7	0.0	0.0	0.0	5.8
Perm LT Q Serve Time (g_ps), s	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	523	0	398	0	151	0	336
V/C Ratio (X)	0.00	0.55	0.00	0.22	0.00	0.00	0.00	0.15
Avail Cap (c_a), veh/h	0	677	0	505	0	290	0	440
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.2	0.0	17.5	0.0	0.0	0.0	17.1
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.3	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.2	0.0	17.7	0.0	0.0	0.0	17.3
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	0.7	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.8	0.0	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.15	0.00	0.01	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	411	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.2	0.0	0.0	0.0	5.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.2	0.0	0.0	0.0	5.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1059	0	0	0	1059	0	0
V/C Ratio (X)	0.00	0.65	0.00	0.00	0.00	0.39	0.00	0.00
Avail Cap (c_a), veh/h	0	1403	0	0	0	1403	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.1	0.0	0.0	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	0.0	6.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

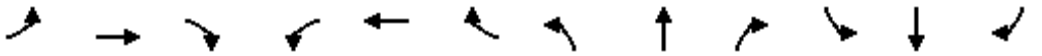
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	164	0	165	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.6	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.6	0.0	2.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	897	0	262	0	897	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.63	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	1189	0	383	0	1189	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.5	0.0	18.5	0.0	5.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.5	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.5	0.0	21.0	0.0	5.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.5	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.28	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

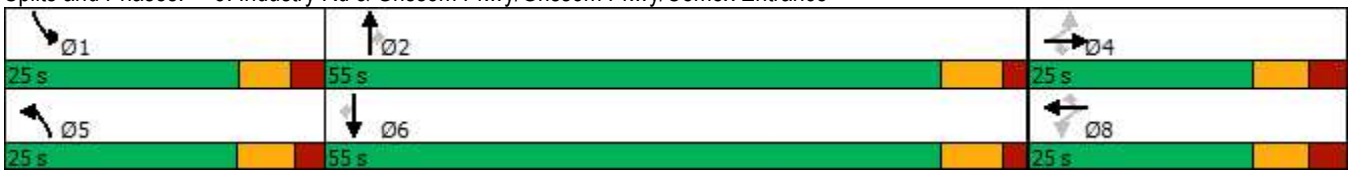


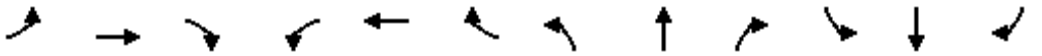
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	12	536	9	8	1	801	99	7	0	209	83
Future Volume (vph)	34	12	536	9	8	1	801	99	7	0	209	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.752			0.749			0.950					
Satd. Flow (perm)	1401	1863	1583	1395	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			583			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	13	583	10	9	1	871	108	8	0	227	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	13	583	10	9	1	871	108	8	0	227	90
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2	11.2	18.3	41.3	41.3		16.2	16.2
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.17	0.17	0.27	0.62	0.62		0.24	0.24
v/c Ratio	0.16	0.04	0.78	0.04	0.03	0.00	0.93	0.09	0.01		0.50	0.19
Control Delay	25.4	23.4	10.7	23.6	23.2	0.0	43.4	6.3	0.0		27.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	25.4	23.4	10.7	23.6	23.2	0.0	43.4	6.3	0.0		27.1	4.1
LOS	C	C	B	C	C	A	D	A	A		C	A
Approach Delay		11.8			22.2			39.0			20.6	
Approach LOS		B			C			D			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	13	4	0	3	3	0	165	14	0		77	0
Queue Length 95th (ft)	38	19	88	16	15	0	#355	41	0		156	22
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	367	489	845	366	489	497	938	1345	1176		1345	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.10	0.03	0.69	0.03	0.02	0.00	0.93	0.08	0.01		0.17	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 67			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 70.6%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	12	536	9	8	1	801	99	7	0	209	83
Future Volume (veh/h)	34	12	536	9	8	1	801	99	7	0	209	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	174		244	174	147	998	1236	1048	3	479	406
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.29	0.66	0.66	0.00	0.26	0.26
Sat Flow, veh/h	1405	1870	1585	1401	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Grp Sat Flow(s),veh/h/ln	1405	1870	1585	1401	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.4	0.4	0.0	0.4	0.3	0.0	14.0	1.2	0.1	0.0	6.0	2.6
Cycle Q Clear(g_c), s	1.7	0.4	0.0	0.8	0.3	0.0	14.0	1.2	0.1	0.0	6.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	174		244	174	147	998	1236	1048	3	479	406
V/C Ratio(X)	0.15	0.07		0.04	0.05	0.01	0.87	0.09	0.01	0.00	0.47	0.22
Avail Cap(c_a), veh/h	537	559		533	559	474	1075	1537	1303	557	1537	1303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	24.2	0.0	24.6	24.2	24.1	19.8	3.6	3.4	0.0	18.4	17.2
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.1	0.1	0.0	7.7	0.0	0.0	0.0	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	0.1	0.1	0.0	6.1	0.3	0.0	0.0	2.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	24.5	0.0	24.7	24.3	24.1	27.5	3.6	3.4	0.0	19.3	17.5
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		50	A		20			987			317	
Approach Delay, s/veh		25.1			24.5			24.6			18.8	
Approach LOS		C			C			C			B	

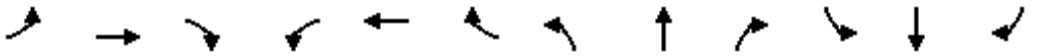
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	45.6		12.9	23.7	21.9		12.9				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.2		3.7	16.0	8.0		2.8				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.9	2.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	12	536	9	8	1	801	99	7	0	209	83
Future Volume (veh/h)	34	12	536	9	8	1	801	99	7	0	209	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	247	174		244	174	147	998	1236	1048	3	479	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.29	0.66	0.66	0.00	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.3	24.5	0.0	24.7	24.3	24.1	27.5	3.6	3.4	0.0	19.3	17.5
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		50			20			987			317	
Approach Delay, s/veh		25.1			24.5			24.6			18.8	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	45.6		12.9	23.7	21.9		12.9
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.7	3.8	5.4		5.0
Max Q Clear (g_c+I1), s	0.0	3.2		3.7	16.0	8.0		2.8
Green Ext Time (g_e), s	0.0	0.8		0.1	0.9	2.1		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.68	1.00	1.00		0.68
Prob of Max Out (p_x)	0.00	0.00		0.00	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1405	3456			1401

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	37	871	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1405	1728	0	0	1401
Q Serve Time (g_s), s	0.0	0.0	0.0	1.4	14.0	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	14.0	0.0	0.0	0.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1405	0	0	0	1401
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.4	0.0	0.0	0.0	5.4
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.2	0.0	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	247	998	0	0	244
V/C Ratio (X)	0.00	0.00	0.00	0.15	0.87	0.00	0.00	0.04
Avail Cap (c_a), veh/h	557	0	0	537	1075	0	0	533
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.0	19.8	0.0	0.0	24.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	7.7	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.3	27.5	0.0	0.0	24.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	5.1	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	6.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.08	1.11	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	108	0	13	0	227	0	9
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.2	0.0	0.4	0.0	6.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	0.4	0.0	6.0	0.0	0.3
Lane Grp Cap (c), veh/h	0	1236	0	174	0	479	0	174
V/C Ratio (X)	0.00	0.09	0.00	0.07	0.00	0.47	0.00	0.05
Avail Cap (c_a), veh/h	0	1537	0	559	0	1537	0	559
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	0.0	24.2	0.0	18.4	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.9	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.6	0.0	24.5	0.0	19.3	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.2	0.0	2.4	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

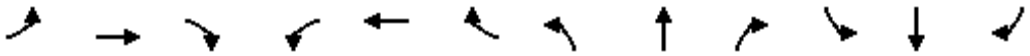
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.2	0.0	2.5	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	90	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	2.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1048	0	147	0	406	0	147
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.22	0.00	0.01
Avail Cap (c_a), veh/h	0	1303	0	474	0	1303	0	474
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	0.0	0.0	17.2	0.0	24.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	0.0	0.0	17.5	0.0	24.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	155	19	34	255	1	13	0	30	1	2	6
Future Volume (vph)	13	155	19	34	255	1	13	0	30	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986						0.905			0.905	
Flt Protected		0.997			0.994			0.985			0.995	
Satd. Flow (prot)	0	1831	0	0	1852	0	0	1660	0	0	1677	0
Flt Permitted		0.997			0.994			0.985			0.995	
Satd. Flow (perm)	0	1831	0	0	1852	0	0	1660	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	168	21	37	277	1	14	0	33	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	315	0	0	47	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	155	19	34	255	1	13	0	30	1	2	6
Future Vol, veh/h	13	155	19	34	255	1	13	0	30	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	168	21	37	277	1	14	0	33	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	278	0	0	189	0	0	563	559	179	575	569	278
Stage 1	-	-	-	-	-	-	207	207	-	352	352	-
Stage 2	-	-	-	-	-	-	356	352	-	223	217	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1285	-	-	1385	-	-	437	438	864	429	432	761
Stage 1	-	-	-	-	-	-	795	731	-	665	632	-
Stage 2	-	-	-	-	-	-	661	632	-	780	723	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1285	-	-	1385	-	-	417	419	864	399	413	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	419	-	399	413	-
Stage 1	-	-	-	-	-	-	785	722	-	657	612	-
Stage 2	-	-	-	-	-	-	632	612	-	742	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.9	10.9	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	653	1285	-	-	1385	-	-	591
HCM Lane V/C Ratio	0.072	0.011	-	-	0.027	-	-	0.017
HCM Control Delay (s)	10.9	7.8	0	-	7.7	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	157	0	57	326	2	43
Future Volume (vph)	157	0	57	326	2	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.871	
Flt Protected				0.993	0.998	
Satd. Flow (prot)	1863	0	0	1850	1619	0
Flt Permitted				0.993	0.998	
Satd. Flow (perm)	1863	0	0	1850	1619	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	0	62	354	2	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	416	49	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	0	57	326	2	43
Future Vol, veh/h	157	0	57	326	2	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	0	62	354	2	47

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	171	0	649	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	478	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1406	-	434	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	624	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	410	873
Mov Cap-2 Maneuver	-	-	-	-	410	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	590	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	831	-	-	1406	-
HCM Lane V/C Ratio	0.059	-	-	0.044	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	202	0	49	336	0	23
Future Volume (vph)	202	0	49	336	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	220	0	53	365	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	220	0	0	418	25	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

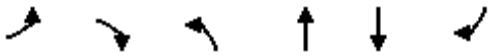
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	202	0	49	336	0	23
Future Vol, veh/h	202	0	49	336	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	220	0	53	365	0	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	220	0	691	220
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	471	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1349	-	410	820
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1349	-	390	820
Mov Cap-2 Maneuver	-	-	-	-	390	-
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	597	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	820	-	-	1349	-
HCM Lane V/C Ratio	0.03	-	-	0.039	-
HCM Control Delay (s)	9.5	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	20	11	25	44	11
Future Volume (vph)	21	20	11	25	44	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.934				0.973	
Flt Protected	0.975			0.985		
Satd. Flow (prot)	1696	0	0	1835	1812	0
Flt Permitted	0.975			0.985		
Satd. Flow (perm)	1696	0	0	1835	1812	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	22	12	27	48	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	39	60	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

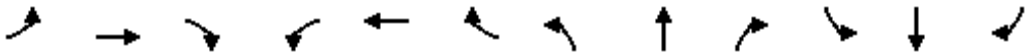
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	20	11	25	44	11
Future Vol, veh/h	21	20	11	25	44	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	22	12	27	48	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	105	54	60	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	51	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	893	1013	1544	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	886	1013	1544	-	-	-
Mov Cap-2 Maneuver	886	-	-	-	-	-
Stage 1	961	-	-	-	-	-
Stage 2	971	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1544	-	944	-	-
HCM Lane V/C Ratio	0.008	-	0.047	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	167	0	20	314	164	0	3	12	95	4	0
Future Volume (vph)	0	167	0	20	314	164	0	3	12	95	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.956			0.890				
Flt Protected					0.998						0.954	
Satd. Flow (prot)	0	1863	0	0	1777	0	0	1658	0	0	1777	0
Flt Permitted					0.998						0.954	
Satd. Flow (perm)	0	1863	0	0	1777	0	0	1658	0	0	1777	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2529			3101			1392			2025	
Travel Time (s)		49.3			60.4			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	182	0	22	341	178	0	3	13	103	4	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	182	0	0	541	0	0	16	0	0	107	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.6%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	167	0	20	314	164	0	3	12	95	4	0
Future Vol, veh/h	0	167	0	20	314	164	0	3	12	95	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	182	0	22	341	178	0	3	13	103	4	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	519	0	0	182	0	0	658	745	182	664	656	430
Stage 1	-	-	-	-	-	-	182	182	-	474	474	-
Stage 2	-	-	-	-	-	-	476	563	-	190	182	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1047	-	-	1393	-	-	378	342	861	374	385	625
Stage 1	-	-	-	-	-	-	820	749	-	571	558	-
Stage 2	-	-	-	-	-	-	570	509	-	812	749	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1047	-	-	1393	-	-	368	334	861	359	376	625
Mov Cap-2 Maneuver	-	-	-	-	-	-	368	334	-	359	376	-
Stage 1	-	-	-	-	-	-	820	749	-	571	545	-
Stage 2	-	-	-	-	-	-	552	497	-	796	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	10.6	19.2
HCM LOS			B	C

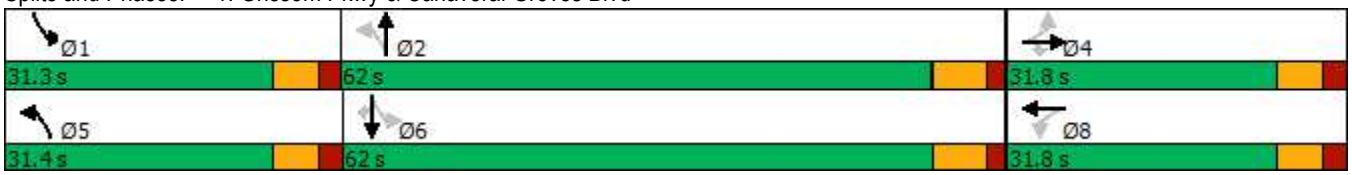
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	654	1047	-	-	1393	-	-	360
HCM Lane V/C Ratio	0.025	-	-	-	0.016	-	-	0.299
HCM Control Delay (s)	10.6	0	-	-	7.6	0	-	19.2
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	1.2

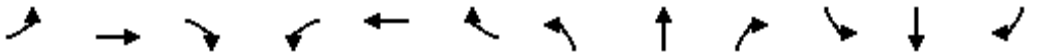
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	148	203	43	61	38	51	73	19	81	301	61
Future Volume (vph)	123	148	203	43	61	38	51	73	19	81	301	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964			0.968				0.850
Flt Protected		0.978			0.985		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1769	0	1770	1803	0	1770	1863	1583
Flt Permitted		0.791			0.826		0.487			0.642		
Satd. Flow (perm)	0	1473	1583	0	1483	0	907	1803	0	1196	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221		13			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	161	221	47	66	41	55	79	21	88	327	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	295	221	0	154	0	55	100	0	88	327	66
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		24.0	17.8		26.0	20.7	20.7
Actuated g/C Ratio		0.37	0.37		0.37		0.35	0.26		0.38	0.30	0.30
v/c Ratio		0.54	0.30		0.27		0.13	0.21		0.17	0.58	0.12
Control Delay		23.5	4.3		17.7		11.5	19.4		11.6	26.1	3.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		23.5	4.3		17.7		11.5	19.4		11.6	26.1	3.8
LOS		C	A		B		B	B		B	C	A
Approach Delay		15.3			17.7			16.6			20.4	
Approach LOS		B			B			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		97	0		41		13	29		21	127	0
Queue Length 95th (ft)		205	45		99		30	66		43	213	18
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		549	729		561		743	1477		771	1522	1309
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.54	0.30		0.27		0.07	0.07		0.11	0.21	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 68			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Future Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	161	221	47	66	41	55	79	21	88	327	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	233	445	119	149	66	368	396	105	560	547	463
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	533	831	1585	115	530	234	1781	1424	378	1781	1870	1585
Grp Volume(v), veh/h	295	0	221	154	0	0	55	0	100	88	327	66
Grp Sat Flow(s),veh/h/ln	1365	0	1585	879	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	6.3	0.8	0.0	0.0	1.1	0.0	2.3	1.8	8.1	1.7
Cycle Q Clear(g_c), s	11.1	0.0	6.3	12.0	0.0	0.0	1.1	0.0	2.3	1.8	8.1	1.7
Prop In Lane	0.45		1.00	0.31		0.27	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	445	334	0	0	368	0	502	560	547	463
V/C Ratio(X)	0.61	0.00	0.50	0.46	0.00	0.00	0.15	0.00	0.20	0.16	0.60	0.14
Avail Cap(c_a), veh/h	764	0	735	595	0	0	1101	0	1839	1266	1909	1618
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	16.2	15.7	0.0	0.0	13.0	0.0	14.9	12.2	16.4	14.1
Incr Delay (d2), s/veh	1.3	0.0	0.9	1.0	0.0	0.0	0.2	0.0	0.2	0.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	2.1	1.4	0.0	0.0	0.4	0.0	0.8	0.6	2.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	0.0	17.1	16.7	0.0	0.0	13.2	0.0	15.0	12.3	17.4	14.2
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		516			154			155			481	
Approach Delay, s/veh		18.1			16.7			14.4			16.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		21.9	9.2	22.8		21.9				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	4.3		13.1	3.1	10.1		14.0				
Green Ext Time (p_c), s	0.2	0.5		2.0	0.1	2.1		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Future Volume (veh/h)	123	148	203	43	61	38	51	73	19	81	301	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	161	221	47	66	41	55	79	21	88	327	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	247	233	445	119	149	66	368	396	105	560	547	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.9	0.0	17.1	16.7	0.0	0.0	13.2	0.0	15.0	12.3	17.4	14.2
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		516			154			155			481	
Approach Delay, s/veh		18.1			16.7			14.4			16.0	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	22.0		21.9	9.2	22.8		21.9
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.7		5.5
Max Q Clear (g_c+I1), s	3.8	4.3		13.1	3.1	10.1		14.0
Green Ext Time (g_e), s	0.2	0.5		2.0	0.1	2.1		0.6
Prob of Phs Call (p_c)	0.73	1.00		1.00	0.56	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.12	0.00	0.00		0.05

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			533	1781			115

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1424		831		1870		530

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		378		1585		1585		234

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	88	0	0	295	55	0	0	154
Grp Sat Flow (s), veh/h/ln	1781	0	0	1365	1781	0	0	879
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	1.1	0.0	0.0	0.8
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	11.1	1.1	0.0	0.0	12.0
Perm LT Sat Flow (s_l), veh/h/ln	1295	0	0	1307	991	0	0	1017
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1234	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	15.1	15.0	0.0	0.0	15.1
Perm LT Serve Time (g_u), s	12.7	0.0	0.0	3.2	7.7	0.0	0.0	4.0
Perm LT Q Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.8
Time to First Blk (g_f), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	4.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.7
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.45	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	560	0	0	480	368	0	0	334
V/C Ratio (X)	0.16	0.00	0.00	0.61	0.15	0.00	0.00	0.46
Avail Cap (c_a), veh/h	1266	0	0	764	1101	0	0	595
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.2	0.0	0.0	17.6	13.0	0.0	0.0	15.7
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.3	0.2	0.0	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.3	0.0	0.0	18.9	13.2	0.0	0.0	16.7
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.9	0.4	0.0	0.0	1.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	3.1	0.4	0.0	0.0	1.4
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	327	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	547	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1909	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	100	0	221	0	66	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	2.3	0.0	6.3	0.0	1.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.3	0.0	6.3	0.0	1.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	502	0	445	0	463	0	0
V/C Ratio (X)	0.00	0.20	0.00	0.50	0.00	0.14	0.00	0.00
Avail Cap (c_a), veh/h	0	1839	0	735	0	1618	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.9	0.0	16.2	0.0	14.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.0	0.0	17.1	0.0	14.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	2.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	2.1	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.29	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	268	0	0	525
Future Volume (vph)	0	0	268	0	0	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	1863	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	1863	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	291	0	0	571
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	291	0	0	571
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.0%		ICU Level of Service A	
Analysis Period (min) 15			

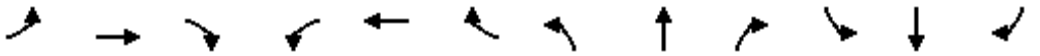
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	268	0	0	525
Future Vol, veh/h	0	0	268	0	0	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	291	0	0	571

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	862	291	0	0	291	0
Stage 1	291	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	325	748	-	-	1271	-
Stage 1	759	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	325	748	-	-	1271	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1271	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

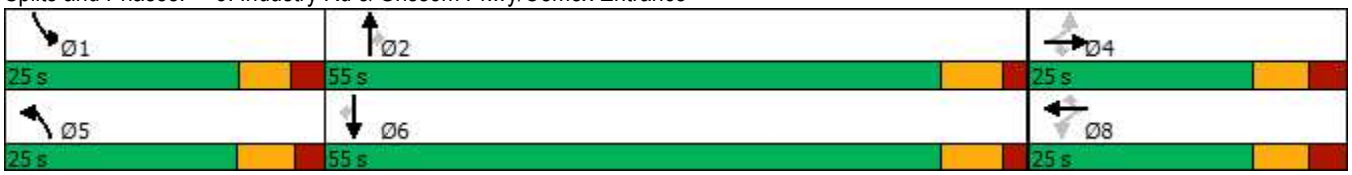


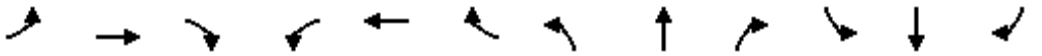
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	2	403	50	0	0	227	89	38	3	121	14
Future Volume (vph)	16	2	403	50	0	0	227	89	38	3	121	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.757			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1410	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			438						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	2	438	54	0	0	247	97	41	3	132	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	2	438	54	0	0	247	97	41	3	132	15
Turn Type	Perm	NA	Perm	Perm		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.1	10.1	10.1	10.1			11.7	26.0	26.0	5.3	15.5	15.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19			0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.06	0.01	0.67	0.20			0.33	0.11	0.05	0.02	0.24	0.03
Control Delay	19.5	18.5	8.2	21.6			22.1	9.8	0.1	26.0	19.1	0.1
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	18.5	8.2	21.6			22.1	9.8	0.1	26.0	19.1	0.1
LOS	B	B	A	C			C	A	A	C	B	A
Approach Delay		8.7			21.6			16.7			17.3	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	5	1	0	15			36	12	0	1	32	0
Queue Length 95th (ft)	18	5	62	42			74	57	0	8	87	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	481	636	829	481			1219	1642	1409	632	1642	1409
Starvation Cap Reductn	0	0	0	0			0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0			0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0			0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.00	0.53	0.11			0.20	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Future Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	2	0	54	0	0	247	97	41	3	132	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	196		302	196	166	431	818	693	7	588	499
Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.12	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1418	1870	1585	1415	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	17	2	0	54	0	0	247	97	41	3	132	15
Grp Sat Flow(s),veh/h/ln	1418	1870	1585	1415	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.0	0.0	1.7	0.0	0.0	3.1	1.4	0.7	0.1	2.4	0.3
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.7	0.0	0.0	3.1	1.4	0.7	0.1	2.4	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	196		302	196	166	431	818	693	7	588	499
V/C Ratio(X)	0.06	0.01		0.18	0.00	0.00	0.57	0.12	0.06	0.41	0.22	0.03
Avail Cap(c_a), veh/h	688	703		686	703	596	1352	1934	1639	701	1934	1639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	18.7	0.0	19.4	0.0	0.0	19.2	7.8	7.6	23.1	11.8	11.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.2	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	18.7	0.0	19.8	0.0	0.0	20.4	7.8	7.6	48.5	12.0	11.1
LnGrp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		19	A		54			385			150	
Approach Delay, s/veh		18.9			19.8			15.9			12.6	
Approach LOS		B			B			B			B	

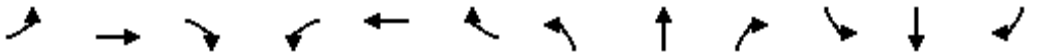
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.3		12.4	12.6	21.5		12.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.4		2.5	5.1	4.4		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.0		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		15.5
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Future Volume (veh/h)	16	2	403	50	0	0	227	89	38	3	121	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	2	0	54	0	0	247	97	41	3	132	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	304	196		302	196	166	431	818	693	7	588	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.12	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.0	18.7	0.0	19.8	0.0	0.0	20.4	7.8	7.6	48.5	12.0	11.1
Ln Grp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		19			54			385			150	
Approach Delay, s/veh		18.9			19.8			15.9			12.6	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.3		12.4	12.6	21.5		12.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.4		2.5	5.1	4.4		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.0		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.61	1.00	0.98		0.61
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1418	3456			1415

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	17	247	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1418	1728	0	0	1415
Q Serve Time (g_s), s	0.1	0.0	0.0	0.5	3.1	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.5	3.1	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1418	0	0	0	1415
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.9	0.0	0.0	0.0	4.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	304	431	0	0	302
V/C Ratio (X)	0.41	0.00	0.00	0.06	0.57	0.00	0.00	0.18
Avail Cap (c_a), veh/h	701	0	0	688	1352	0	0	686
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.1	0.0	0.0	18.9	19.2	0.0	0.0	19.4
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.5	0.0	0.0	19.0	20.4	0.0	0.0	19.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	1.1	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.2	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.03	0.22	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	2	0	132	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.4	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.4	0.0	0.0	0.0	2.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	818	0	196	0	588	0	196
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.22	0.00	0.00
Avail Cap (c_a), veh/h	0	1934	0	703	0	1934	0	703
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	18.7	0.0	11.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	18.7	0.0	12.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.4	0.0	0.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

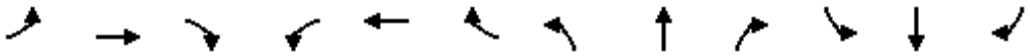
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	41	0	0	0	15	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	693	0	166	0	499	0	166
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	1639	0	596	0	1639	0	596
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	0.0	0.0	11.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.6	0.0	0.0	0.0	11.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	143	2	5	59	2	6	0	9	1	0	11
Future Volume (vph)	1	143	2	5	59	2	6	0	9	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.996			0.921			0.875	
Flt Protected					0.996			0.980			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1681	0	0	1623	0
Flt Permitted					0.996			0.980			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1681	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	155	2	5	64	2	7	0	10	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	71	0	0	17	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	143	2	5	59	2	6	0	9	1	0	11
Future Vol, veh/h	1	143	2	5	59	2	6	0	9	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	155	2	5	64	2	7	0	10	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	66	0	0	157	0	0	239	234	156	238	234	65
Stage 1	-	-	-	-	-	-	158	158	-	75	75	-
Stage 2	-	-	-	-	-	-	81	76	-	163	159	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1536	-	-	1423	-	-	715	666	890	716	666	999
Stage 1	-	-	-	-	-	-	844	767	-	934	833	-
Stage 2	-	-	-	-	-	-	927	832	-	839	766	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1536	-	-	1423	-	-	704	663	890	705	663	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	704	663	-	705	663	-
Stage 1	-	-	-	-	-	-	843	766	-	933	830	-
Stage 2	-	-	-	-	-	-	912	829	-	829	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.6	9.6	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	805	1536	-	-	1423	-	-	965
HCM Lane V/C Ratio	0.02	0.001	-	-	0.004	-	-	0.014
HCM Control Delay (s)	9.6	7.3	0	-	7.5	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	251	1	12	101	1	35
Future Volume (vph)	251	1	12	101	1	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.995	0.999	
Satd. Flow (prot)	1863	0	0	1853	1615	0
Flt Permitted				0.995	0.999	
Satd. Flow (perm)	1863	0	0	1853	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	273	1	13	110	1	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	274	0	0	123	39	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	251	1	12	101	1	35
Future Vol, veh/h	251	1	12	101	1	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	273	1	13	110	1	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	274	0	410	274
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	136	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1289	-	598	765
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1289	-	591	765
Mov Cap-2 Maneuver	-	-	-	-	591	-
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	759	-	-	1289	-
HCM Lane V/C Ratio	0.052	-	-	0.01	-
HCM Control Delay (s)	10	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	285	0	60	101	0	175
Future Volume (vph)	285	0	60	101	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.982		
Satd. Flow (prot)	1863	0	0	1829	1611	0
Flt Permitted				0.982		
Satd. Flow (perm)	1863	0	0	1829	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	310	0	65	110	0	190
Shared Lane Traffic (%)						
Lane Group Flow (vph)	310	0	0	175	190	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			

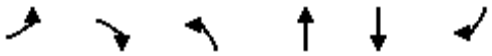
Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	285	0	60	101	0	175
Future Vol, veh/h	285	0	60	101	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	310	0	65	110	0	190

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	550	310
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	240	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1250	-	496	730
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	800	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1250	-	469	730
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	756	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	730	-	-	1250	-
HCM Lane V/C Ratio	0.261	-	-	0.052	-
HCM Control Delay (s)	11.7	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	4	14	35	12	0
Future Volume (vph)	0	4	14	35	12	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.986		
Satd. Flow (prot)	1611	0	0	1837	1863	0
Flt Permitted				0.986		
Satd. Flow (perm)	1611	0	0	1837	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	4	15	38	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	53	13	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			

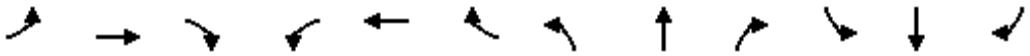
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	14	35	12	0
Future Vol, veh/h	0	4	14	35	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	15	38	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	81	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	921	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	912	1067	1606	-	-	-
Mov Cap-2 Maneuver	912	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	955	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	1067	-	-
HCM Lane V/C Ratio	0.009	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	0	0	0	5	0	20	0	2	6	2
Future Volume (vph)	7	0	0	0	0	5	0	20	0	2	6	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865						0.975	
Flt Protected		0.950									0.991	
Satd. Flow (prot)	0	1770	0	0	1611	0	0	1863	0	0	1800	0
Flt Permitted		0.950									0.991	
Satd. Flow (perm)	0	1770	0	0	1611	0	0	1863	0	0	1800	0
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		1028			2417			561			2170	
Travel Time (s)		35.0			82.4			19.1			74.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	0	0	0	0	5	0	22	0	2	7	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	5	0	0	22	0	0	11	0
Sign Control		Stop			Stop			Stop			Stop	

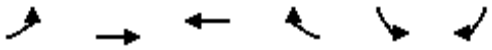
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	0	0	0	0	5	0	20	0	2	6	2
Future Vol, veh/h	7	0	0	0	0	5	0	20	0	2	6	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	0	0	0	0	5	0	22	0	2	7	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	6.4	7.1	6.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	20%
Vol Thru, %	100%	0%	0%	60%
Vol Right, %	0%	0%	100%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	7	5	10
LT Vol	0	7	0	2
Through Vol	20	0	0	6
RT Vol	0	0	5	2
Lane Flow Rate	22	8	5	11
Geometry Grp	1	1	1	1
Degree of Util (X)	0.024	0.009	0.005	0.012
Departure Headway (Hd)	3.966	4.195	3.396	3.893
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	907	855	1055	923
Service Time	1.971	2.209	1.412	1.902
HCM Lane V/C Ratio	0.024	0.009	0.005	0.012
HCM Control Delay	7.1	7.2	6.4	6.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	7	2	0
Future Volume (vph)	0	0	0	7	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		439	1063		2008	
Travel Time (s)		15.0	36.2		68.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	8	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	8	0	2	0
Sign Control		Free	Stop		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

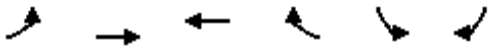
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	7	2	0
Future Vol, veh/h	0	0	0	7	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	2	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	0	0
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Critical Hdwy	4.12	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.52	-
Follow-up Hdwy	2.218	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	0	-
Mov Cap-2 Maneuver	-	-	0	-
Stage 1	-	-	0	-
Stage 2	-	-	0	-

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBL	EBTWBLn1	
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	0	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	-	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	0	0	0	0	3
Future Volume (vph)	8	0	0	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.950				
Satd. Flow (prot)	0	1770	1863	0	1611	0
Flt Permitted		0.950				
Satd. Flow (perm)	0	1770	1863	0	1611	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		2417	322		2012	
Travel Time (s)		82.4	11.0		68.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	0	0	0	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	9	0	0	3	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

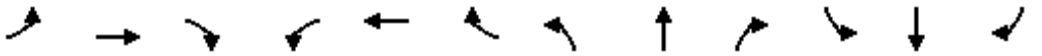
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	0	0	0	0	3
Future Vol, veh/h	8	0	0	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	0	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	19	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	998	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	992	1084
Mov Cap-2 Maneuver	-	-	-	-	992	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	1084
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Control Delay (s)	7.2	0	-	-	8.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

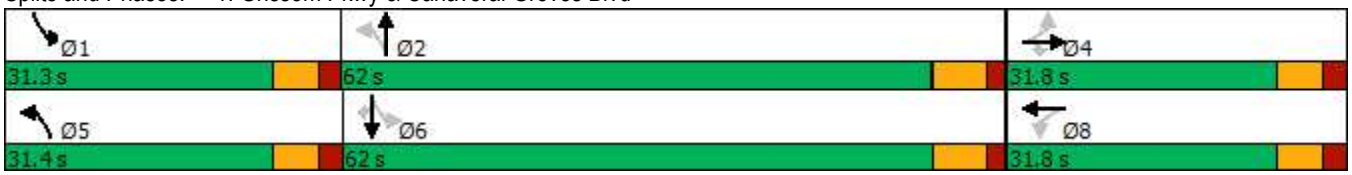


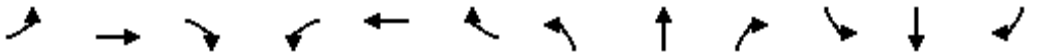
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	92	113	27	111	66	236	319	63	79	177	113
Future Volume (vph)	78	92	113	27	111	66	236	319	63	79	177	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956			0.975				0.850
Flt Protected		0.978			0.994		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1770	0	1770	1816	0	1770	1863	1583
Flt Permitted		0.737			0.935		0.475			0.519		
Satd. Flow (perm)	0	1373	1583	0	1665	0	885	1816	0	967	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123		17			10				123
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	100	123	29	121	72	257	347	68	86	192	123
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	185	123	0	222	0	257	415	0	86	192	123
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		19.3	19.3		19.3		36.7	25.9		25.4	17.2	17.2
Actuated g/C Ratio		0.28	0.28		0.28		0.52	0.37		0.36	0.25	0.25
v/c Ratio		0.49	0.23		0.47		0.41	0.61		0.20	0.42	0.26
Control Delay		27.1	5.9		23.8		11.7	24.7		11.2	27.0	6.7
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		27.1	5.9		23.8		11.7	24.7		11.2	27.0	6.7
LOS		C	A		C		B	C		B	C	A
Approach Delay		18.6			23.8			19.7			17.4	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		64	0		70		57	151		17	70	0
Queue Length 95th (ft)		143	38		154		110	272		41	144	40
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		499	653		616		793	1457		808	1490	1290
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.37	0.19		0.36		0.32	0.28		0.11	0.13	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 70.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Future Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	100	123	29	121	72	257	347	68	86	192	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	195	316	96	184	98	600	544	107	417	524	444
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.14	0.36	0.36	0.07	0.28	0.28
Sat Flow, veh/h	570	979	1585	103	924	493	1781	1519	298	1781	1870	1585
Grp Volume(v), veh/h	185	0	123	222	0	0	257	0	415	86	192	123
Grp Sat Flow(s),veh/h/ln	1549	0	1585	1519	0	0	1781	0	1817	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.6	2.1	0.0	0.0	5.2	0.0	10.2	1.8	4.4	3.2
Cycle Q Clear(g_c), s	5.6	0.0	3.6	7.6	0.0	0.0	5.2	0.0	10.2	1.8	4.4	3.2
Prop In Lane	0.46		1.00	0.13		0.32	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	407	0	316	379	0	0	600	0	650	417	524	444
V/C Ratio(X)	0.45	0.00	0.39	0.59	0.00	0.00	0.43	0.00	0.64	0.21	0.37	0.28
Avail Cap(c_a), veh/h	803	0	740	818	0	0	1176	0	1866	1129	1921	1628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	18.6	20.0	0.0	0.0	10.6	0.0	14.3	12.4	15.5	15.0
Incr Delay (d2), s/veh	0.8	0.0	0.8	1.4	0.0	0.0	0.5	0.0	1.0	0.2	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.2	2.5	0.0	0.0	1.6	0.0	3.4	0.6	1.6	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	0.0	19.4	21.4	0.0	0.0	11.1	0.0	15.4	12.6	15.9	15.4
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		308			222			672			401	
Approach Delay, s/veh		19.8			21.4			13.7			15.0	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	26.2		17.5	14.1	22.0		17.5				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	12.2		7.6	7.2	6.4		9.6				
Green Ext Time (p_c), s	0.2	2.5		1.3	0.6	1.4		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Future Volume (veh/h)	78	92	113	27	111	66	236	319	63	79	177	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	100	123	29	121	72	257	347	68	86	192	123
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	212	195	316	96	184	98	600	544	107	417	524	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.14	0.36	0.36	0.07	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.1	0.0	19.4	21.4	0.0	0.0	11.1	0.0	15.4	12.6	15.9	15.4
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		308			222			672			401	
Approach Delay, s/veh		19.8			21.4			13.7			15.0	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	9.9	26.2		17.5	14.1	22.0		17.5
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.5		5.3
Max Q Clear (g_c+I1), s	3.8	12.2		7.6	7.2	6.4		9.6
Green Ext Time (g_e), s	0.2	2.5		1.3	0.6	1.4		1.1
Prob of Phs Call (p_c)	0.72	1.00		1.00	0.98	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			570	1781			103

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1519		979		1870		924

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		298		1585		1585		493

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	86	0	0	185	257	0	0	222
Grp Sat Flow (s), veh/h/ln	1781	0	0	1549	1781	0	0	1519
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	5.2	0.0	0.0	2.1
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	5.6	5.2	0.0	0.0	7.6
Perm LT Sat Flow (s_l), veh/h/ln	971	0	0	1209	1065	0	0	1176
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1487	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	10.7	15.0	0.0	0.0	10.7
Perm LT Serve Time (g_u), s	9.0	0.0	0.0	3.1	10.6	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	1.4	0.0	0.0	2.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	4.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	4.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.13
Lane Grp Cap (c), veh/h	417	0	0	407	600	0	0	379
V/C Ratio (X)	0.21	0.00	0.00	0.45	0.43	0.00	0.00	0.59
Avail Cap (c_a), veh/h	1129	0	0	803	1176	0	0	818
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.4	0.0	0.0	19.3	10.6	0.0	0.0	20.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.8	0.5	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.6	0.0	0.0	20.1	11.1	0.0	0.0	21.4
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	1.8	1.5	0.0	0.0	2.3
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	1.9	1.6	0.0	0.0	2.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.08	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	192	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	524	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1921	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	415	0	123	0	123	0	0
Grp Sat Flow (s), veh/h/ln	0	1817	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	10.2	0.0	3.6	0.0	3.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	10.2	0.0	3.6	0.0	3.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.16	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	650	0	316	0	444	0	0
V/C Ratio (X)	0.00	0.64	0.00	0.39	0.00	0.28	0.00	0.00
Avail Cap (c_a), veh/h	0	1866	0	740	0	1628	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	18.6	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.8	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.4	0.0	19.4	0.0	15.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	3.2	0.0	1.2	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	3.4	0.0	1.2	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.18	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	578	0	0	317
Future Volume (vph)	0	0	578	0	0	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	1863	1863	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	1863	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	628	0	0	345
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	628	0	0	345
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.8%		ICU Level of Service A	
Analysis Period (min) 15			

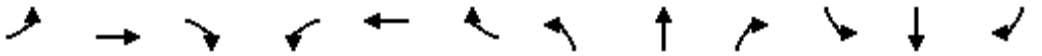
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	578	0	0	317
Future Vol, veh/h	0	0	578	0	0	317
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	628	0	0	345

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	973	628	0	0	628	0
Stage 1	628	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	280	483	-	-	954	-
Stage 1	532	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	280	483	-	-	954	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	717	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	954	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

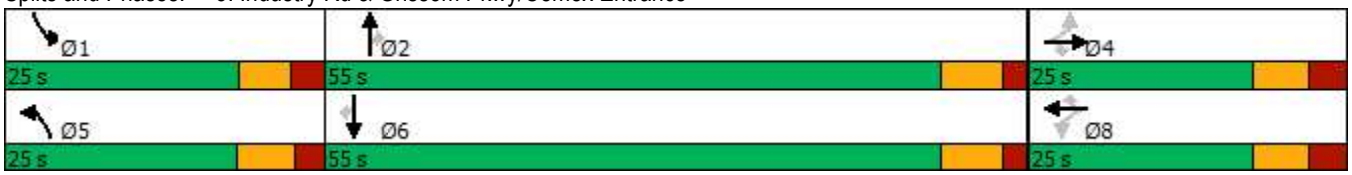


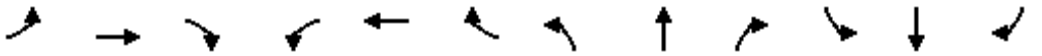
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1	360	9	3	1	542	84	6	0	193	33
Future Volume (vph)	5	1	360	9	3	1	542	84	6	0	193	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.756			0.757			0.950					
Satd. Flow (perm)	1408	1863	1583	1410	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			391			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1	391	10	3	1	589	91	7	0	210	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	1	391	10	3	1	589	91	7	0	210	36
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	9.8	9.8	9.8	9.8	9.8	9.8	18.0	40.5	40.5		15.6	15.6
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15	0.15	0.28	0.63	0.63		0.24	0.24
v/c Ratio	0.02	0.00	0.68	0.05	0.01	0.00	0.62	0.08	0.01		0.47	0.08
Control Delay	23.4	23.0	10.0	23.8	23.0	0.0	24.3	5.5	0.0		25.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.4	23.0	10.0	23.8	23.0	0.0	24.3	5.5	0.0		25.5	0.3
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.2			21.9			21.5			21.9	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	2	0	0	3	1	0	97	11	0		68	0
Queue Length 95th (ft)	10	4	67	16	8	0	177	33	0		141	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	382	506	714	383	506	511	969	1391	1211		1391	1211
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.01	0.00	0.55	0.03	0.01	0.00	0.61	0.07	0.01		0.15	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 64.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 59.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Future Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1	0	10	3	1	589	91	7	0	210	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	73		200	73	62	794	1252	1061	4	564	478
Arrive On Green	0.04	0.04	0.00	0.04	0.04	0.04	0.23	0.67	0.67	0.00	0.30	0.30
Sat Flow, veh/h	1412	1870	1585	1416	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	5	1	0	10	3	1	589	91	7	0	210	36
Grp Sat Flow(s),veh/h/ln	1412	1870	1585	1416	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.2	0.0	0.0	0.3	0.1	0.0	7.8	0.8	0.1	0.0	4.4	0.8
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.4	0.1	0.0	7.8	0.8	0.1	0.0	4.4	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	73		200	73	62	794	1252	1061	4	564	478
V/C Ratio(X)	0.03	0.01		0.05	0.04	0.02	0.74	0.07	0.01	0.00	0.37	0.08
Avail Cap(c_a), veh/h	645	664		648	664	562	1275	1824	1546	661	1824	1546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	22.8	0.0	23.0	22.8	22.8	17.6	2.8	2.7	0.0	13.6	12.3
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.3	0.1	1.4	0.0	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	2.9	0.2	0.0	0.0	1.7	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	22.9	0.0	23.1	23.1	22.9	19.0	2.9	2.7	0.0	14.1	12.4
LnGrp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		6	A		14			687			246	
Approach Delay, s/veh		23.0			23.1			16.7			13.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	39.9		9.4	18.1	21.8		9.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.8		2.2	9.8	6.4		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.5	1.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Future Volume (veh/h)	5	1	360	9	3	1	542	84	6	0	193	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1	0	10	3	1	589	91	7	0	210	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	199	73		200	73	62	794	1252	1061	4	564	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.04	0.00	0.04	0.04	0.04	0.23	0.67	0.67	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.0	22.9	0.0	23.1	23.1	22.9	19.0	2.9	2.7	0.0	14.1	12.4
Ln Grp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		6			14			687			246	
Approach Delay, s/veh		23.0			23.1			16.7			13.8	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	39.9		9.4	18.1	21.8		9.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.6		4.6
Max Q Clear (g_c+I1), s	0.0	2.8		2.2	9.8	6.4		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.5	1.7		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.24	1.00	0.99		0.24
Prob of Max Out (p_x)	0.00	0.00		0.00	0.14	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1412	3456			1416

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	5	589	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1412	1728	0	0	1416
Q Serve Time (g_s), s	0.0	0.0	0.0	0.2	7.8	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.2	7.8	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1412	0	0	0	1416
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	4	0	0	199	794	0	0	200
V/C Ratio (X)	0.00	0.00	0.00	0.03	0.74	0.00	0.00	0.05
Avail Cap (c_a), veh/h	661	0	0	645	1275	0	0	648
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	22.9	17.6	0.0	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.4	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.0	19.0	0.0	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	2.7	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	2.9	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.01	0.52	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	91	0	1	0	210	0	3
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	4.4	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	4.4	0.0	0.1
Lane Grp Cap (c), veh/h	0	1252	0	73	0	564	0	73
V/C Ratio (X)	0.00	0.07	0.00	0.01	0.00	0.37	0.00	0.04
Avail Cap (c_a), veh/h	0	1824	0	664	0	1824	0	664
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	22.8	0.0	13.6	0.0	22.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	22.9	0.0	14.1	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

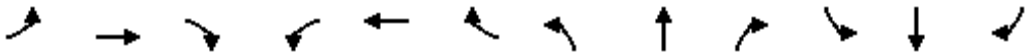
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	7	0	0	0	36	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1061	0	62	0	478	0	62
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.02
Avail Cap (c_a), veh/h	0	1546	0	562	0	1546	0	562
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.7	0.0	0.0	0.0	12.3	0.0	22.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.7	0.0	0.0	0.0	12.4	0.0	22.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	109	10	16	175	1	7	0	8	1	2	5
Future Volume (vph)	9	109	10	16	175	1	7	0	8	1	2	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.999			0.929			0.916	
Flt Protected		0.996			0.996			0.977			0.994	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1691	0	0	1696	0
Flt Permitted		0.996			0.996			0.977			0.994	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1691	0	0	1696	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	118	11	17	190	1	8	0	9	1	2	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	208	0	0	17	0	0	8	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	9	109	10	16	175	1	7	0	8	1	2	5
Future Vol, veh/h	9	109	10	16	175	1	7	0	8	1	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	118	11	17	190	1	8	0	9	1	2	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	129	0	0	372	369	124	373	374	191
Stage 1	-	-	-	-	-	-	144	144	-	225	225	-
Stage 2	-	-	-	-	-	-	228	225	-	148	149	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1383	-	-	1457	-	-	585	560	927	584	557	851
Stage 1	-	-	-	-	-	-	859	778	-	778	718	-
Stage 2	-	-	-	-	-	-	775	718	-	855	774	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1383	-	-	1457	-	-	570	548	927	569	545	851
Mov Cap-2 Maneuver	-	-	-	-	-	-	570	548	-	569	545	-
Stage 1	-	-	-	-	-	-	852	772	-	772	709	-
Stage 2	-	-	-	-	-	-	758	709	-	840	768	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	10.1	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	717	1383	-	-	1457	-	-	708
HCM Lane V/C Ratio	0.023	0.007	-	-	0.012	-	-	0.012
HCM Control Delay (s)	10.1	7.6	0	-	7.5	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	131	0	39	267	2	20
Future Volume (vph)	131	0	39	267	2	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1625	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1625	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	142	0	42	290	2	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	142	0	0	332	24	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	131	0	39	267	2	20
Future Vol, veh/h	131	0	39	267	2	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	142	0	42	290	2	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	142	0	516	142
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	374	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1441	-	519	906
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1441	-	501	906
Mov Cap-2 Maneuver	-	-	-	-	501	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	672	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	1441	-
HCM Lane V/C Ratio	0.028	-	-	0.029	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	151	0	195	267	0	116
Future Volume (vph)	151	0	195	267	0	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.979		
Satd. Flow (prot)	1863	0	0	1824	1611	0
Flt Permitted				0.979		
Satd. Flow (perm)	1863	0	0	1824	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	164	0	212	290	0	126
Shared Lane Traffic (%)						
Lane Group Flow (vph)	164	0	0	502	126	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.0%		ICU Level of Service A	
Analysis Period (min) 15			

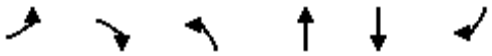
Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	151	0	195	267	0	116
Future Vol, veh/h	151	0	195	267	0	116
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	164	0	212	290	0	126

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	164	0	878	164
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	714	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1414	-	318	881
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1414	-	261	881
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	865	-
Stage 2	-	-	-	-	398	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	881	-	-	1414	-
HCM Lane V/C Ratio	0.143	-	-	0.15	-
HCM Control Delay (s)	9.8	-	-	8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.5	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	14	10	22	39	0
Future Volume (vph)	0	14	10	22	39	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.985		
Satd. Flow (prot)	1611	0	0	1835	1863	0
Flt Permitted				0.985		
Satd. Flow (perm)	1611	0	0	1835	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	15	11	24	42	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	35	42	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			

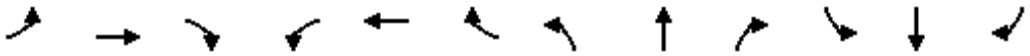
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	10	22	39	0
Future Vol, veh/h	0	14	10	22	39	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	11	24	42	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	88	42	42	0	-	0
Stage 1	42	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	913	1029	1567	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	1029	1567	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	976	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1567	-	1029	-	-
HCM Lane V/C Ratio	0.007	-	0.015	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	0	0	3	0	13	0	5	21	7
Future Volume (vph)	4	0	0	0	0	3	0	13	0	5	21	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865						0.970	
Flt Protected		0.950									0.993	
Satd. Flow (prot)	0	1770	0	0	1611	0	0	1863	0	0	1794	0
Flt Permitted		0.950									0.993	
Satd. Flow (perm)	0	1770	0	0	1611	0	0	1863	0	0	1794	0
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		1028			2417			561			2170	
Travel Time (s)		35.0			82.4			19.1			74.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	0	0	0	0	3	0	14	0	5	23	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	3	0	0	14	0	0	36	0
Sign Control		Stop			Stop			Stop			Stop	

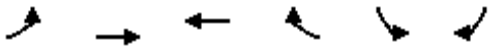
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	0	0	0	0	3	0	13	0	5	21	7
Future Vol, veh/h	4	0	0	0	0	3	0	13	0	5	21	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	0	0	0	3	0	14	0	5	23	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.3	6.5	7	7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	15%
Vol Thru, %	100%	0%	0%	64%
Vol Right, %	0%	0%	100%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	4	3	33
LT Vol	0	4	0	5
Through Vol	13	0	0	21
RT Vol	0	0	3	7
Lane Flow Rate	14	4	3	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.016	0.005	0.003	0.038
Departure Headway (Hd)	3.974	4.225	3.425	3.862
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	904	849	1046	932
Service Time	1.981	2.242	1.443	1.866
HCM Lane V/C Ratio	0.015	0.005	0.003	0.039
HCM Control Delay	7	7.3	6.5	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0	0	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	4	7	0
Future Volume (vph)	0	0	0	4	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1611	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1611	0	1770	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		439	1063		2008	
Travel Time (s)		15.0	36.2		68.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	4	8	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	4	0	8	0
Sign Control		Free	Stop		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

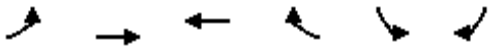
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	4	7	0
Future Vol, veh/h	0	0	0	4	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	4	8	0

Major/Minor	Major1		Minor2	
Conflicting Flow All	0	0	0	0
Stage 1	-	-	0	-
Stage 2	-	-	0	-
Critical Hdwy	4.12	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	5.52	-
Follow-up Hdwy	2.218	-	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %		-		
Mov Cap-1 Maneuver	-	-	0	-
Mov Cap-2 Maneuver	-	-	0	-
Stage 1	-	-	0	-
Stage 2	-	-	0	-

Approach	EB	WB
HCM Control Delay, s	0	
HCM LOS		-

Minor Lane/Major Mvmt	EBL	EBTWBLn1
Capacity (veh/h)	-	- -
HCM Lane V/C Ratio	-	- -
HCM Control Delay (s)	0	- -
HCM Lane LOS	A	- -
HCM 95th %tile Q(veh)	-	- -



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	0	0	9
Future Volume (vph)	5	0	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.950				
Satd. Flow (prot)	0	1770	1863	0	1611	0
Flt Permitted		0.950				
Satd. Flow (perm)	0	1770	1863	0	1611	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		2417	322		2012	
Travel Time (s)		82.4	11.0		68.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	0	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	0	0	10	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	0	0	9
Future Vol, veh/h	5	0	0	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	0	0	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	11	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1009	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1006	1084
Mov Cap-2 Maneuver	-	-	-	-	1006	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1013	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.4
HCM LOS			A

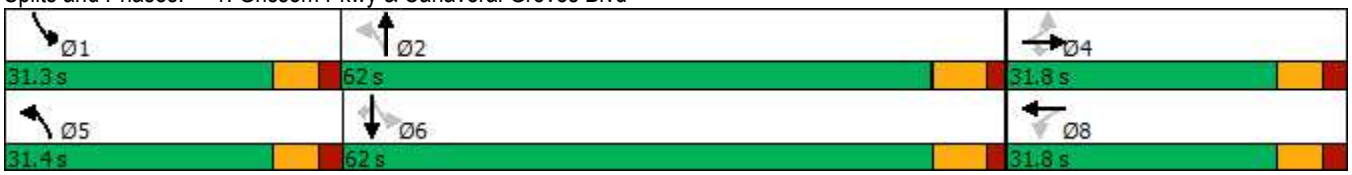
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	1084
HCM Lane V/C Ratio	0.003	-	-	-	0.009
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

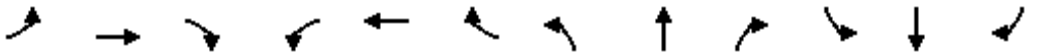
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	157	215	45	65	41	53	77	19	84	313	64
Future Volume (vph)	130	157	215	45	65	41	53	77	19	84	313	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.970				0.850
Flt Protected		0.978			0.985		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1767	0	1770	1807	0	1770	1863	1583
Flt Permitted		0.794			0.823		0.468			0.640		
Satd. Flow (perm)	0	1479	1583	0	1476	0	872	1807	0	1192	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			221		13			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	171	234	49	71	45	58	84	21	91	340	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	234	0	165	0	58	105	0	91	340	70
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		24.6	18.3		26.5	21.2	21.2
Actuated g/C Ratio		0.37	0.37		0.37		0.36	0.27		0.39	0.31	0.31
v/c Ratio		0.57	0.32		0.30		0.14	0.21		0.17	0.59	0.13
Control Delay		24.7	5.0		18.4		11.4	19.7		11.5	26.4	4.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.7	5.0		18.4		11.4	19.7		11.5	26.4	4.1
LOS		C	A		B		B	B		B	C	A
Approach Delay		16.2			18.4			16.7			20.6	
Approach LOS		B			B			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		106	4		46		13	31		21	133	0
Queue Length 95th (ft)		222	53		108		31	69		44	223	21
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		548	726		555		741	1470		773	1511	1301
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.57	0.32		0.30		0.08	0.07		0.12	0.23	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 68.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

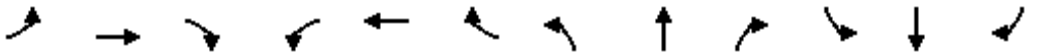




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Future Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	171	234	49	71	45	58	84	21	91	340	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	239	483	113	147	66	342	388	97	537	526	446
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.05	0.27	0.27	0.07	0.28	0.28
Sat Flow, veh/h	500	785	1585	98	484	218	1781	1444	361	1781	1870	1585
Grp Volume(v), veh/h	312	0	234	165	0	0	58	0	105	91	340	70
Grp Sat Flow(s),veh/h/ln	1284	0	1585	800	0	0	1781	0	1805	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	6.7	1.1	0.0	0.0	1.3	0.0	2.5	2.0	8.9	1.9
Cycle Q Clear(g_c), s	13.1	0.0	6.7	14.2	0.0	0.0	1.3	0.0	2.5	2.0	8.9	1.9
Prop In Lane	0.45		1.00	0.30		0.27	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	485	0	483	327	0	0	342	0	484	537	526	446
V/C Ratio(X)	0.64	0.00	0.48	0.50	0.00	0.00	0.17	0.00	0.22	0.17	0.65	0.16
Avail Cap(c_a), veh/h	705	0	709	530	0	0	1044	0	1776	1213	1840	1559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	15.9	15.6	0.0	0.0	13.9	0.0	15.9	13.0	17.7	15.1
Incr Delay (d2), s/veh	1.4	0.0	0.8	1.2	0.0	0.0	0.2	0.0	0.2	0.1	1.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	2.2	1.5	0.0	0.0	0.4	0.0	0.9	0.7	3.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	0.0	16.6	16.9	0.0	0.0	14.2	0.0	16.1	13.2	19.0	15.3
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		546			165			163			501	
Approach Delay, s/veh		18.1			16.9			15.4			17.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		23.8	9.4	22.7		23.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	4.5		15.1	3.3	10.9		16.2				
Green Ext Time (p_c), s	0.2	0.5		1.9	0.1	2.2		0.6				

Intersection Summary			
HCM 6th Ctrl Delay		17.4	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Future Volume (veh/h)	130	157	215	45	65	41	53	77	19	84	313	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	171	234	49	71	45	58	84	21	91	340	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	246	239	483	113	147	66	342	388	97	537	526	446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.05	0.27	0.27	0.07	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.1	0.0	16.6	16.9	0.0	0.0	14.2	0.0	16.1	13.2	19.0	15.3
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		546			165			163			501	
Approach Delay, s/veh		18.1			16.9			15.4			17.4	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		23.8	9.4	22.7		23.8
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.7		5.5
Max Q Clear (g_c+I1), s	4.0	4.5		15.1	3.3	10.9		16.2
Green Ext Time (g_e), s	0.2	0.5		1.9	0.1	2.2		0.6
Prob of Phs Call (p_c)	0.76	1.00		1.00	0.59	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.23	0.00	0.00		0.19

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			500	1781			98

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1444		785		1870		484

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		361		1585		1585		218

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	91	0	0	312	58	0	0	165
Grp Sat Flow (s), veh/h/ln	1781	0	0	1284	1781	0	0	800
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	1.3	0.0	0.0	1.1
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	13.1	1.3	0.0	0.0	14.2
Perm LT Sat Flow (s_l), veh/h/ln	1289	0	0	1296	976	0	0	996
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1150	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	17.0	15.0	0.0	0.0	17.0
Perm LT Serve Time (g_u), s	12.5	0.0	0.0	2.8	6.8	0.0	0.0	3.9
Perm LT Q Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.5	0.0	0.0	1.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	4.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	4.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.45	1.00	0.00	0.00	0.30
Lane Grp Cap (c), veh/h	537	0	0	485	342	0	0	327
V/C Ratio (X)	0.17	0.00	0.00	0.64	0.17	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1213	0	0	705	1044	0	0	530
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.0	0.0	0.0	17.7	13.9	0.0	0.0	15.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.4	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.2	0.0	0.0	19.1	14.2	0.0	0.0	16.9
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	3.2	0.4	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	3.4	0.4	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	340	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	526	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.65	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1840	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	105	0	234	0	70	0	0
Grp Sat Flow (s), veh/h/ln	0	1805	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	2.5	0.0	6.7	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	6.7	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	484	0	483	0	446	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.48	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1776	0	709	0	1559	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.9	0.0	15.9	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.8	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.1	0.0	16.6	0.0	15.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	2.1	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	2.2	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.31	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	1	0	251	1	0	568
Future Volume (vph)	1	0	251	1	0	568
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		
Flt Protected	0.950					
Satd. Flow (prot)	1770	0	1863	1583	1863	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1770	0	1863	1583	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	0	273	1	0	617
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	0	273	1	0	617
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			

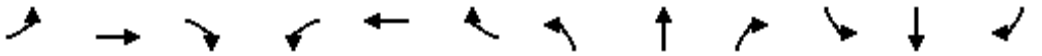
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	251	1	0	568
Future Vol, veh/h	1	0	251	1	0	568
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	273	1	0	617

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	890	273	0	0	274	0
Stage 1	273	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	313	766	-	-	1289	-
Stage 1	773	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	313	766	-	-	1289	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	773	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	313	1289	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	-	-	16.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

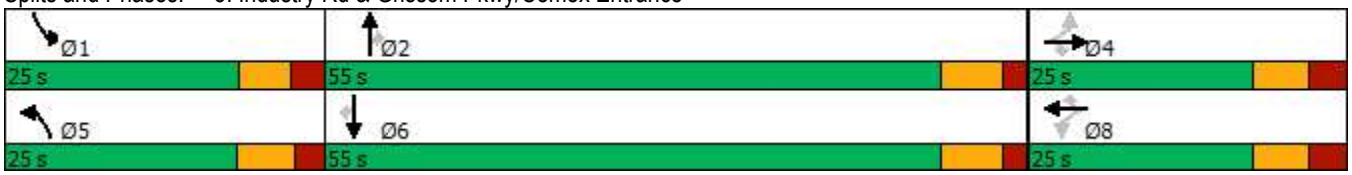


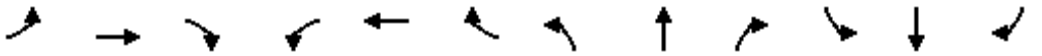
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	2	420	50	0	0	241	94	40	3	125	15
Future Volume (vph)	17	2	420	50	0	0	241	94	40	3	125	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.757			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1410	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			457						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	2	457	54	0	0	262	102	43	3	136	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	2	457	54	0	0	262	102	43	3	136	16
Turn Type	Perm	NA	Perm	Perm		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2			11.9	26.2	26.2	5.3	15.5	15.5
Actuated g/C Ratio	0.19	0.19	0.19	0.19			0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.07	0.01	0.68	0.20			0.34	0.11	0.05	0.02	0.25	0.03
Control Delay	19.6	18.5	8.3	21.7			22.2	9.9	0.1	26.0	19.5	0.1
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	18.5	8.3	21.7			22.2	9.9	0.1	26.0	19.5	0.1
LOS	B	B	A	C			C	A	A	C	B	A
Approach Delay		8.8			21.7			16.8			17.6	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	5	1	0	15			38	12	0	1	33	0
Queue Length 95th (ft)	20	5	63	42			79	60	0	8	90	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	479	632	839	479			1213	1633	1402	629	1633	1402
Starvation Cap Reductn	0	0	0	0			0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0			0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0			0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.00	0.54	0.11			0.22	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53.3			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 63.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Future Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	2	0	54	0	0	262	102	43	3	136	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	197		301	197	167	447	824	698	7	586	497
Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1418	1870	1585	1415	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	2	0	54	0	0	262	102	43	3	136	16
Grp Sat Flow(s),veh/h/ln	1418	1870	1585	1415	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.0	0.0	1.7	0.0	0.0	3.4	1.5	0.7	0.1	2.5	0.3
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.7	0.0	0.0	3.4	1.5	0.7	0.1	2.5	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	197		301	197	167	447	824	698	7	586	497
V/C Ratio(X)	0.06	0.01		0.18	0.00	0.00	0.59	0.12	0.06	0.41	0.23	0.03
Avail Cap(c_a), veh/h	682	698		680	698	591	1341	1918	1625	695	1918	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	18.8	0.0	19.6	0.0	0.0	19.2	7.8	7.5	23.3	11.9	11.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.3	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	18.8	0.0	19.9	0.0	0.0	20.5	7.8	7.6	48.7	12.2	11.2
LnGrp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		20	A		54			407			155	
Approach Delay, s/veh		19.1			19.9			15.9			12.8	
Approach LOS		B			B			B			B	

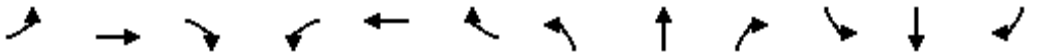
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.6		12.5	12.9	21.6		12.5				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.5		2.5	5.4	4.5		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Future Volume (veh/h)	17	2	420	50	0	0	241	94	40	3	125	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	2	0	54	0	0	262	102	43	3	136	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	303	197		301	197	167	447	824	698	7	586	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.1	18.8	0.0	19.9	0.0	0.0	20.5	7.8	7.6	48.7	12.2	11.2
Ln Grp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		20			54			407			155	
Approach Delay, s/veh		19.1			19.9			15.9			12.8	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.6		12.5	12.9	21.6		12.5
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.5		2.5	5.4	4.5		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.62	1.00	0.98		0.62
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1418	3456			1415

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	18	262	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1418	1728	0	0	1415
Q Serve Time (g_s), s	0.1	0.0	0.0	0.5	3.4	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.5	3.4	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1418	0	0	0	1415
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	4.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	303	447	0	0	301
V/C Ratio (X)	0.41	0.00	0.00	0.06	0.59	0.00	0.00	0.18
Avail Cap (c_a), veh/h	695	0	0	682	1341	0	0	680
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.3	0.0	0.0	19.0	19.2	0.0	0.0	19.6
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.7	0.0	0.0	19.1	20.5	0.0	0.0	19.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.3	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.03	0.23	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	2	0	136	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.5	0.0	0.0	0.0	2.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.0	0.0	2.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	824	0	197	0	586	0	197
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	1918	0	698	0	1918	0	698
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	18.8	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	18.8	0.0	12.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

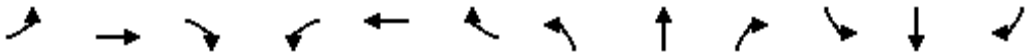
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	0	0	16	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	698	0	167	0	497	0	167
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	1625	0	591	0	1625	0	591
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	11.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.6	0.0	0.0	0.0	11.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	161	2	6	67	2	7	0	9	1	0	11
Future Volume (vph)	1	161	2	6	67	2	7	0	9	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.925			0.875	
Flt Protected					0.996			0.978			0.996	
Satd. Flow (prot)	0	1859	0	0	1850	0	0	1685	0	0	1623	0
Flt Permitted					0.996			0.978			0.996	
Satd. Flow (perm)	0	1859	0	0	1850	0	0	1685	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	175	2	7	73	2	8	0	10	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	82	0	0	18	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	161	2	6	67	2	7	0	9	1	0	11
Future Vol, veh/h	1	161	2	6	67	2	7	0	9	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	175	2	7	73	2	8	0	10	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	177	0	0	272	267	176	271	267	74
Stage 1	-	-	-	-	-	-	178	178	-	88	88	-
Stage 2	-	-	-	-	-	-	94	89	-	183	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1399	-	-	680	639	867	682	639	988
Stage 1	-	-	-	-	-	-	824	752	-	920	822	-
Stage 2	-	-	-	-	-	-	913	821	-	819	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1399	-	-	668	635	867	671	635	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	668	635	-	671	635	-
Stage 1	-	-	-	-	-	-	823	751	-	919	818	-
Stage 2	-	-	-	-	-	-	897	817	-	809	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.6	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1524	-	-	1399	-	-	951
HCM Lane V/C Ratio	0.023	0.001	-	-	0.005	-	-	0.014
HCM Control Delay (s)	9.8	7.4	0	-	7.6	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	267	1	12	107	1	37
Future Volume (vph)	267	1	12	107	1	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.995	0.999	
Satd. Flow (prot)	1863	0	0	1853	1615	0
Flt Permitted				0.995	0.999	
Satd. Flow (perm)	1863	0	0	1853	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1	13	116	1	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	0	0	129	41	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	267	1	12	107	1	37
Future Vol, veh/h	267	1	12	107	1	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	1	13	116	1	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	291	0	433	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1271	-	580	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1271	-	574	748
Mov Cap-2 Maneuver	-	-	-	-	574	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	875	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	742	-	-	1271	-
HCM Lane V/C Ratio	0.056	-	-	0.01	-
HCM Control Delay (s)	10.1	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	303	0	64	107	0	182
Future Volume (vph)	303	0	64	107	0	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.982		
Satd. Flow (prot)	1863	0	0	1829	1611	0
Flt Permitted				0.982		
Satd. Flow (perm)	1863	0	0	1829	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	329	0	70	116	0	198
Shared Lane Traffic (%)						
Lane Group Flow (vph)	329	0	0	186	198	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.4%		ICU Level of Service A	
Analysis Period (min) 15			

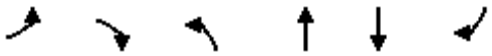
Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	303	0	64	107	0	182
Future Vol, veh/h	303	0	64	107	0	182
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	329	0	70	116	0	198

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	329	0	585	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1231	-	473	712
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1231	-	444	712
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	739	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3	12
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	712	-	-	1231	-
HCM Lane V/C Ratio	0.278	-	-	0.057	-
HCM Control Delay (s)	12	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	5	15	36	12	0
Future Volume (vph)	0	5	15	36	12	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.986		
Satd. Flow (prot)	1611	0	0	1837	1863	0
Flt Permitted				0.986		
Satd. Flow (perm)	1611	0	0	1837	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	5	16	39	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	0	55	13	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

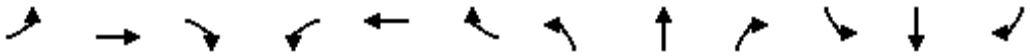
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	15	36	12	0
Future Vol, veh/h	0	5	15	36	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	5	16	39	13	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	84	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	71	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	918	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	952	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	909	1067	1606	-	-	-
Mov Cap-2 Maneuver	909	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	952	-	-	-	-	-

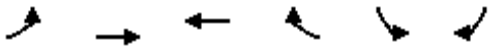
Approach	EB	NB	SB
HCM Control Delay, s	8.4	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	1067	-	-
HCM Lane V/C Ratio	0.01	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



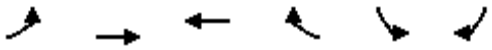
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	0	0	0	5	0	21	0	2	6	2
Future Volume (vph)	7	0	0	0	0	5	0	21	0	2	6	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865						0.975	
Flt Protected		0.950									0.991	
Satd. Flow (prot)	0	1770	0	0	1611	0	0	1863	0	0	1800	0
Flt Permitted		0.950									0.991	
Satd. Flow (perm)	0	1770	0	0	1611	0	0	1863	0	0	1800	0
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		1032			2417			544			2014	
Travel Time (s)		35.2			82.4			18.5			68.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	0	0	0	0	5	0	23	0	2	7	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	8	0	0	5	0	0	23	0	0	11	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	7	2	0
Future Volume (vph)	0	0	0	7	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	1611	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	1611	0	1770	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		284	1074		1978	
Travel Time (s)		9.7	36.6		67.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	8	2	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	8	0	2	0
Sign Control		Free	Stop		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	8	0	0	0	0	3
Future Volume (vph)	8	0	0	0	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.950				
Satd. Flow (prot)	0	1770	1863	0	1611	0
Flt Permitted		0.950				
Satd. Flow (perm)	0	1770	1863	0	1611	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		2417	192		1949	
Travel Time (s)		82.4	6.5		66.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	0	0	0	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	9	0	0	3	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	0	0	0	0	3
Future Vol, veh/h	8	0	0	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	0	0	0	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	19	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	998	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	992	1084
Mov Cap-2 Maneuver	-	-	-	-	992	-
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1005	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.3
HCM LOS			A

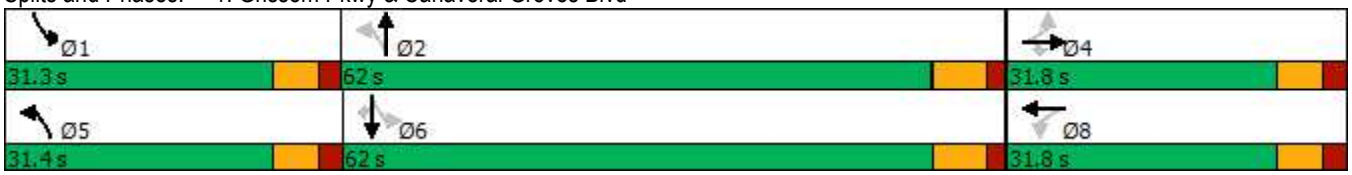
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	1084
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Control Delay (s)	7.2	0	-	-	8.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

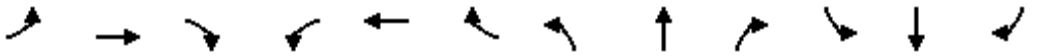
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	97	120	29	118	69	252	360	73	82	185	118
Future Volume (vph)	83	97	120	29	118	69	252	360	73	82	185	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.957			0.975				0.850
Flt Protected		0.977			0.993		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1770	0	1770	1816	0	1770	1863	1583
Flt Permitted		0.718			0.932		0.479			0.440		
Satd. Flow (perm)	0	1337	1583	0	1661	0	892	1816	0	820	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			130		17			10				128
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2574			4210			7336			1486	
Travel Time (s)		50.1			82.0			111.2			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	90	105	130	32	128	75	274	391	79	89	201	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	130	0	235	0	274	470	0	89	201	128
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		22.4	22.4		22.4		39.5	28.4		27.1	18.9	18.9
Actuated g/C Ratio		0.30	0.30		0.30		0.52	0.38		0.36	0.25	0.25
v/c Ratio		0.49	0.23		0.47		0.44	0.69		0.23	0.43	0.26
Control Delay		28.4	5.9		24.9		12.6	27.4		12.1	28.0	6.4
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		28.4	5.9		24.9		12.6	27.4		12.1	28.0	6.4
LOS		C	A		C		B	C		B	C	A
Approach Delay		19.4			24.9			22.0			18.0	
Approach LOS		B			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		73	0		80		71	198		21	82	0
Queue Length 95th (ft)		162	41		175		117	314		41	151	40
Internal Link Dist (ft)		2494			4130			7256			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		448	617		568		764	1386		751	1375	1202
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.44	0.21		0.41		0.36	0.34		0.12	0.15	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 75.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 69.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

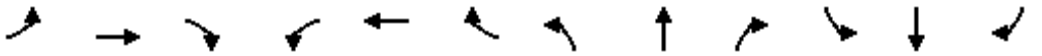




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Future Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	105	130	32	128	75	274	391	79	89	201	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	199	338	96	192	100	591	538	109	371	507	430
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.36	0.36	0.07	0.27	0.27
Sat Flow, veh/h	545	934	1585	102	898	469	1781	1510	305	1781	1870	1585
Grp Volume(v), veh/h	195	0	130	235	0	0	274	0	470	89	201	128
Grp Sat Flow(s),veh/h/ln	1479	0	1585	1469	0	0	1781	0	1815	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.9	2.3	0.0	0.0	5.8	0.0	12.4	1.9	4.9	3.5
Cycle Q Clear(g_c), s	6.4	0.0	3.9	8.7	0.0	0.0	5.8	0.0	12.4	1.9	4.9	3.5
Prop In Lane	0.46		1.00	0.14		0.32	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	338	387	0	0	591	0	646	371	507	430
V/C Ratio(X)	0.47	0.00	0.38	0.61	0.00	0.00	0.46	0.00	0.73	0.24	0.40	0.30
Avail Cap(c_a), veh/h	762	0	716	777	0	0	1128	0	1805	1056	1859	1576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	0.0	18.6	20.2	0.0	0.0	11.1	0.0	15.5	13.3	16.5	16.0
Incr Delay (d2), s/veh	0.9	0.0	0.7	1.5	0.0	0.0	0.6	0.0	1.6	0.3	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.3	2.7	0.0	0.0	1.8	0.0	4.3	0.7	1.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	19.4	21.7	0.0	0.0	11.6	0.0	17.1	13.7	17.0	16.4
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		325			235			744			418	
Approach Delay, s/veh		19.9			21.7			15.1			16.1	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.7		18.6	14.7	22.0		18.6				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	14.4		8.4	7.8	6.9		10.7				
Green Ext Time (p_c), s	0.2	3.0		1.4	0.7	1.5		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		17.1	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Future Volume (veh/h)	83	97	120	29	118	69	252	360	73	82	185	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	105	130	32	128	75	274	391	79	89	201	128
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	211	199	338	96	192	100	591	538	109	371	507	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.15	0.36	0.36	0.07	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	0.0	19.4	21.7	0.0	0.0	11.6	0.0	17.1	13.7	17.0	16.4
Ln Grp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		325			235			744			418	
Approach Delay, s/veh		19.9			21.7			15.1			16.1	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	26.7		18.6	14.7	22.0		18.6
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.5		5.3
Max Q Clear (g_c+I1), s	3.9	14.4		8.4	7.8	6.9		10.7
Green Ext Time (g_e), s	0.2	3.0		1.4	0.7	1.5		1.1
Prob of Phs Call (p_c)	0.75	1.00		1.00	0.99	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.02

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			545	1781			102

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1510		934		1870		898

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		305		1585		1585		469

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	89	0	0	195	274	0	0	235
Grp Sat Flow (s), veh/h/ln	1781	0	0	1479	1781	0	0	1469
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	5.8	0.0	0.0	2.3
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	6.4	5.8	0.0	0.0	8.7
Perm LT Sat Flow (s_l), veh/h/ln	923	0	0	1198	1051	0	0	1163
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1375	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	11.8	15.3	0.0	0.0	11.8
Perm LT Serve Time (g_u), s	7.3	0.0	0.0	3.1	10.1	0.0	0.0	5.4
Perm LT Q Serve Time (g_ps), s	0.8	0.0	0.0	0.0	1.8	0.0	0.0	2.3
Time to First Blk (g_f), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.8
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.8
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.14
Lane Grp Cap (c), veh/h	371	0	0	411	591	0	0	387
V/C Ratio (X)	0.24	0.00	0.00	0.47	0.46	0.00	0.00	0.61
Avail Cap (c_a), veh/h	1056	0	0	762	1128	0	0	777
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.3	0.0	0.0	19.4	11.1	0.0	0.0	20.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.9	0.6	0.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.7	0.0	0.0	20.3	11.6	0.0	0.0	21.7
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.0	1.7	0.0	0.0	2.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	2.1	1.8	0.0	0.0	2.7
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.09	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	201	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	507	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1859	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	470	0	130	0	128	0	0
Grp Sat Flow (s), veh/h/ln	0	1815	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	12.4	0.0	3.9	0.0	3.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.4	0.0	3.9	0.0	3.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.17	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	646	0	338	0	430	0	0
V/C Ratio (X)	0.00	0.73	0.00	0.38	0.00	0.30	0.00	0.00
Avail Cap (c_a), veh/h	0	1805	0	716	0	1576	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.5	0.0	18.6	0.0	16.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.7	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.1	0.0	19.4	0.0	16.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.0	0.0	1.3	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.3	0.0	1.3	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.19	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	27	20	601	1	0	353
Future Volume (vph)	27	20	601	1	0	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		450	350	
Storage Lanes	1	0		1	1	
Taper Length (ft)	0				50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942			0.850		
Flt Protected	0.972					
Satd. Flow (prot)	1706	0	1863	1583	1863	1863
Flt Permitted	0.972					
Satd. Flow (perm)	1706	0	1863	1583	1863	1863
Link Speed (mph)	25		50			50
Link Distance (ft)	181		1323			7336
Travel Time (s)	4.9		18.0			100.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	29	22	653	1	0	384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	0	653	1	0	384
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.6%		ICU Level of Service A	
Analysis Period (min) 15			

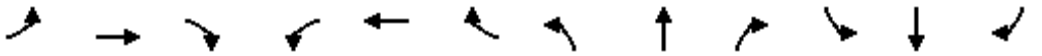
Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	20	601	1	0	353
Future Vol, veh/h	27	20	601	1	0	353
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	450	350	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	22	653	1	0	384

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1037	653	0	0	654	0
Stage 1	653	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	256	467	-	-	933	-
Stage 1	518	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	256	467	-	-	933	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	518	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	317	933	-
HCM Lane V/C Ratio	-	-	0.161	-	-
HCM Control Delay (s)	-	-	18.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0	-

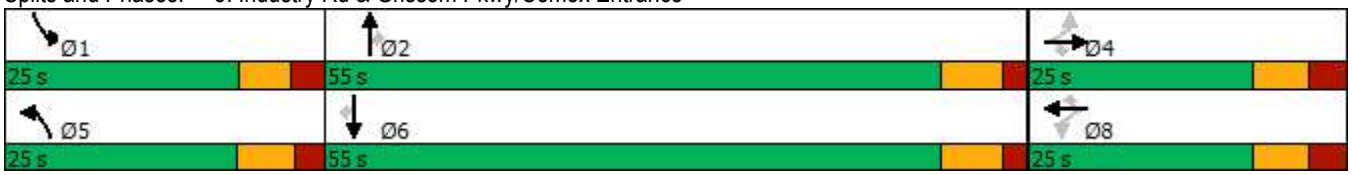


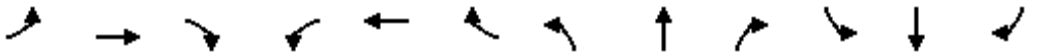
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1	422	9	3	1	575	89	7	0	198	34
Future Volume (vph)	8	1	422	9	3	1	575	89	7	0	198	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.756			0.757			0.950					
Satd. Flow (perm)	1408	1863	1583	1410	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			459			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2285			600			1892			602	
Travel Time (s)		51.9			13.6			43.0			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	1	459	10	3	1	625	97	8	0	215	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	1	459	10	3	1	625	97	8	0	215	37
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2	10.2	10.2	18.3	40.8	40.8		15.7	15.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.04	0.00	0.72	0.05	0.01	0.00	0.65	0.08	0.01		0.48	0.08
Control Delay	23.4	23.0	10.2	23.4	22.7	0.0	25.5	5.9	0.0		26.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.4	23.0	10.2	23.4	22.7	0.0	25.5	5.9	0.0		26.3	0.3
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.5			21.6			22.6			22.5	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	3	0	0	3	1	0	104	12	0		70	0
Queue Length 95th (ft)	15	4	73	15	8	0	196	38	0		149	0
Internal Link Dist (ft)		2205			520			1812			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	377	500	761	378	500	506	959	1375	1199		1375	1199
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.02	0.00	0.60	0.03	0.01	0.00	0.65	0.07	0.01		0.16	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 65.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 18.7		Intersection LOS: B	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Future Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	0	10	3	1	625	97	8	0	215	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	85		206	85	72	825	1252	1061	4	553	468
Arrive On Green	0.05	0.05	0.00	0.05	0.05	0.05	0.24	0.67	0.67	0.00	0.30	0.30
Sat Flow, veh/h	1412	1870	1585	1416	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	9	1	0	10	3	1	625	97	8	0	215	37
Grp Sat Flow(s),veh/h/ln	1412	1870	1585	1416	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.3	0.0	0.0	0.3	0.1	0.0	8.5	0.9	0.1	0.0	4.6	0.8
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.4	0.1	0.0	8.5	0.9	0.1	0.0	4.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	85		206	85	72	825	1252	1061	4	553	468
V/C Ratio(X)	0.04	0.01		0.05	0.04	0.01	0.76	0.08	0.01	0.00	0.39	0.08
Avail Cap(c_a), veh/h	631	649		634	649	550	1247	1784	1512	646	1784	1512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	23.0	0.0	23.2	23.0	23.0	17.8	2.9	2.8	0.0	14.1	12.8
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.2	0.1	1.5	0.0	0.0	0.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	3.1	0.2	0.0	0.0	1.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	23.1	0.0	23.3	23.2	23.1	19.3	2.9	2.8	0.0	14.7	12.9
LnGrp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		10	A		14			730			252	
Approach Delay, s/veh		23.3			23.3			16.9			14.4	
Approach LOS		C			C			B			B	

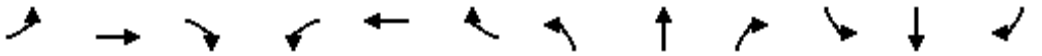
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	40.6		9.8	18.8	21.8		9.8				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.9		2.4	10.5	6.6		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Future Volume (veh/h)	8	1	422	9	3	1	575	89	7	0	198	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	1	0	10	3	1	625	97	8	0	215	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	205	85		206	85	72	825	1252	1061	4	553	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.05	0.00	0.05	0.05	0.05	0.24	0.67	0.67	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.3	23.1	0.0	23.3	23.2	23.1	19.3	2.9	2.8	0.0	14.7	12.9
Ln Grp LOS	C	C		C	C	C	B	A	A	A	B	B
Approach Vol, veh/h		10			14			730			252	
Approach Delay, s/veh		23.3			23.3			16.9			14.4	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	40.6		9.8	18.8	21.8		9.8
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.4	3.8	5.6		4.6
Max Q Clear (g_c+I1), s	0.0	2.9		2.4	10.5	6.6		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.8		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.29	1.00	0.99		0.29
Prob of Max Out (p_x)	0.00	0.00		0.00	0.21	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1412	3456			1416

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	9	625	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1412	1728	0	0	1416
Q Serve Time (g_s), s	0.0	0.0	0.0	0.3	8.5	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.4	8.5	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1412	0	0	0	1416
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	2.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	2.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	4	0	0	205	825	0	0	206
V/C Ratio (X)	0.00	0.00	0.00	0.04	0.76	0.00	0.00	0.05
Avail Cap (c_a), veh/h	646	0	0	631	1247	0	0	634
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.2	17.8	0.0	0.0	23.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.5	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.3	19.3	0.0	0.0	23.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.1	3.0	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	3.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.57	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	1	0	215	0	3
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	4.6	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	4.6	0.0	0.1
Lane Grp Cap (c), veh/h	0	1252	0	85	0	553	0	85
V/C Ratio (X)	0.00	0.08	0.00	0.01	0.00	0.39	0.00	0.04
Avail Cap (c_a), veh/h	0	1784	0	649	0	1784	0	649
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	23.0	0.0	14.1	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.5	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	23.1	0.0	14.7	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

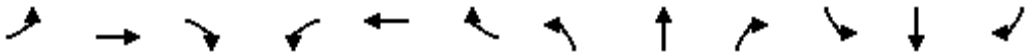
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	37	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	0.8	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1061	0	72	0	468	0	72
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.01
Avail Cap (c_a), veh/h	0	1512	0	550	0	1512	0	550
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.8	0.0	0.0	0.0	12.8	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.8	0.0	0.0	0.0	12.9	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	123	11	18	203	1	7	0	8	1	2	6
Future Volume (vph)	10	123	11	18	203	1	7	0	8	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.999			0.929			0.905	
Flt Protected		0.997			0.996			0.977			0.995	
Satd. Flow (prot)	0	1839	0	0	1853	0	0	1691	0	0	1677	0
Flt Permitted		0.997			0.996			0.977			0.995	
Satd. Flow (perm)	0	1839	0	0	1853	0	0	1691	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2994			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	134	12	20	221	1	8	0	9	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	157	0	0	242	0	0	17	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	123	11	18	203	1	7	0	8	1	2	6
Future Vol, veh/h	10	123	11	18	203	1	7	0	8	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	134	12	20	221	1	8	0	9	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	146	0	0	428	424	140	429	430	222
Stage 1	-	-	-	-	-	-	162	162	-	262	262	-
Stage 2	-	-	-	-	-	-	266	262	-	167	168	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1436	-	-	537	522	908	536	518	818
Stage 1	-	-	-	-	-	-	840	764	-	743	691	-
Stage 2	-	-	-	-	-	-	739	691	-	835	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1436	-	-	521	509	908	521	505	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	521	509	-	521	505	-
Stage 1	-	-	-	-	-	-	832	757	-	736	680	-
Stage 2	-	-	-	-	-	-	719	680	-	820	752	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	10.5	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	1347	-	-	1436	-	-	681
HCM Lane V/C Ratio	0.024	0.008	-	-	0.014	-	-	0.014
HCM Control Delay (s)	10.5	7.7	0	-	7.5	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	139	0	41	290	2	21
Future Volume (vph)	139	0	41	290	2	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.876	
Flt Protected				0.994	0.996	
Satd. Flow (prot)	1863	0	0	1852	1625	0
Flt Permitted				0.994	0.996	
Satd. Flow (perm)	1863	0	0	1852	1625	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1595			2301	2161	
Travel Time (s)	31.1			44.8	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	0	45	315	2	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	360	25	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	0	41	290	2	21
Future Vol, veh/h	139	0	41	290	2	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	0	45	315	2	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	556	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	405	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1430	-	492	895
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1430	-	473	895
Mov Cap-2 Maneuver	-	-	-	-	473	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	831	-	-	1430	-
HCM Lane V/C Ratio	0.03	-	-	0.031	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	160	0	207	289	0	121
Future Volume (vph)	160	0	207	289	0	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.980		
Satd. Flow (prot)	1863	0	0	1825	1611	0
Flt Permitted				0.980		
Satd. Flow (perm)	1863	0	0	1825	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2301			2574	2415	
Travel Time (s)	44.8			50.1	65.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	0	225	314	0	132
Shared Lane Traffic (%)						
Lane Group Flow (vph)	174	0	0	539	132	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.6%		ICU Level of Service A	
Analysis Period (min) 15			

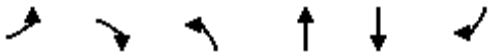
Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	160	0	207	289	0	121
Future Vol, veh/h	160	0	207	289	0	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	0	225	314	0	132

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	174	0	938	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	764	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1403	-	293	869
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	460	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1403	-	236	869
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	869	-	-	1403	-
HCM Lane V/C Ratio	0.151	-	-	0.16	-
HCM Control Delay (s)	9.9	-	-	8.1	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.6	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	16	10	23	41	0
Future Volume (vph)	0	16	10	23	41	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected				0.985		
Satd. Flow (prot)	1611	0	0	1835	1863	0
Flt Permitted				0.985		
Satd. Flow (perm)	1611	0	0	1835	1863	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2994			2151	2161	
Travel Time (s)	81.7			58.7	58.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	17	11	25	45	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	36	45	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		

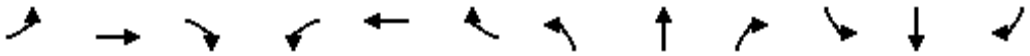
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	10	23	41	0
Future Vol, veh/h	0	16	10	23	41	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	11	25	45	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	92	45	45	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	47	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	908	1025	1563	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	975	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	902	1025	1563	-	-	-
Mov Cap-2 Maneuver	902	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	975	-	-	-	-	-

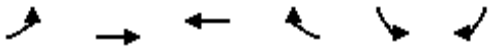
Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1563	-	1025	-	-
HCM Lane V/C Ratio	0.007	-	0.017	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



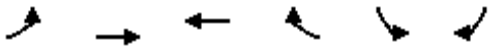
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	0	0	0	3	0	14	0	5	22	7
Future Volume (vph)	4	0	0	0	0	3	0	14	0	5	22	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865						0.971	
Flt Protected		0.950									0.993	
Satd. Flow (prot)	0	1770	0	0	1611	0	0	1863	0	0	1796	0
Flt Permitted		0.950									0.993	
Satd. Flow (perm)	0	1770	0	0	1611	0	0	1863	0	0	1796	0
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		1032			2417			544			2014	
Travel Time (s)		35.2			82.4			18.5			68.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	0	0	0	0	3	0	15	0	5	24	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	3	0	0	15	0	0	37	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	4	7	0
Future Volume (vph)	0	0	0	4	7	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.865			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	1611	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	1611	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		284	1074		1978	
Travel Time (s)		6.5	24.4		45.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	4	8	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	4	0	8	0
Sign Control		Free	Stop		Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	0	0	9
Future Volume (vph)	5	0	0	0	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.950				
Satd. Flow (prot)	0	1770	1863	0	1611	0
Flt Permitted		0.950				
Satd. Flow (perm)	0	1770	1863	0	1611	0
Link Speed (mph)		20	20		20	
Link Distance (ft)		2417	192		1949	
Travel Time (s)		82.4	6.5		66.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	0	0	0	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	0	0	10	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	0	0	9
Future Vol, veh/h	5	0	0	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	0	0	0	0	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1	0	-	0	11	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	10	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	1009	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1013	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1622	-	-	-	1006	1084
Mov Cap-2 Maneuver	-	-	-	-	1006	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1013	-

Approach	EB	WB	SB
HCM Control Delay, s	7.2	0	8.4
HCM LOS			A

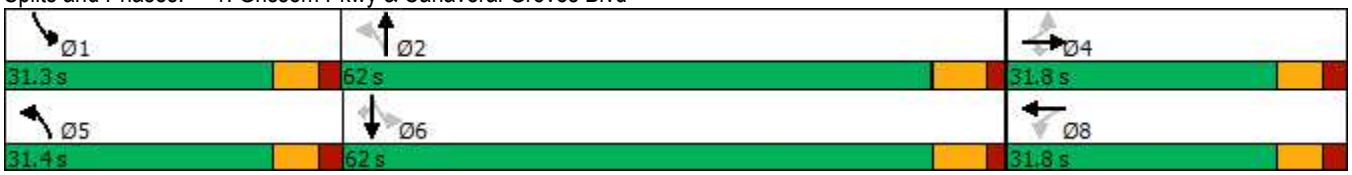
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1622	-	-	-	1084
HCM Lane V/C Ratio	0.003	-	-	-	0.009
HCM Control Delay (s)	7.2	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

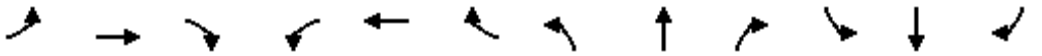
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	159	117	47	65	41	21	91	21	84	314	45
Future Volume (vph)	67	159	117	47	65	41	21	91	21	84	314	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964			0.972				0.850
Flt Protected		0.985			0.985		0.950			0.950		
Satd. Flow (prot)	0	1835	1583	0	1769	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.859			0.820		0.556			0.578		
Satd. Flow (perm)	0	1600	1583	0	1472	0	1036	1811	0	1077	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			127		13			12				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	73	173	127	51	71	45	23	99	23	91	341	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	246	127	0	167	0	23	122	0	91	341	49
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		17.8	17.8		17.8		22.8	17.5		27.3	23.7	23.7
Actuated g/C Ratio		0.30	0.30		0.30		0.38	0.29		0.45	0.39	0.39
v/c Ratio		0.52	0.23		0.38		0.05	0.23		0.16	0.47	0.07
Control Delay		23.7	5.2		19.9		9.9	19.0		10.0	19.1	1.8
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		23.7	5.2		19.9		9.9	19.0		10.0	19.1	1.8
LOS		C	A		B		A	B		A	B	A
Approach Delay		17.4			19.9			17.6			15.6	
Approach LOS		B			B			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		74	0		44		4	32		16	73	0
Queue Length 95th (ft)		159	35		105		16	79		44	216	9
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		694	758		646		859	1603		864	1645	1408
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.35	0.17		0.26		0.03	0.08		0.11	0.21	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 60.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	159	117	47	65	41	21	91	21	84	314	45
Future Volume (veh/h)	67	159	117	47	65	41	21	91	21	84	314	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	173	127	51	71	45	23	99	23	91	341	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	282	336	133	138	65	398	449	104	600	652	553
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.31	0.31	0.07	0.35	0.35
Sat Flow, veh/h	386	1332	1585	177	653	306	1781	1468	341	1781	1870	1585
Grp Volume(v), veh/h	246	0	127	167	0	0	23	0	122	91	341	49
Grp Sat Flow(s),veh/h/ln	1718	0	1585	1136	0	0	1781	0	1809	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.4	1.3	0.0	0.0	0.4	0.0	2.5	1.6	7.1	1.0
Cycle Q Clear(g_c), s	6.3	0.0	3.4	7.6	0.0	0.0	0.4	0.0	2.5	1.6	7.1	1.0
Prop In Lane	0.30		1.00	0.31		0.27	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	459	0	336	336	0	0	398	0	553	600	652	553
V/C Ratio(X)	0.54	0.00	0.38	0.50	0.00	0.00	0.06	0.00	0.22	0.15	0.52	0.09
Avail Cap(c_a), veh/h	949	0	808	774	0	0	1257	0	2029	1379	2098	1778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	16.6	17.4	0.0	0.0	11.3	0.0	12.7	10.1	12.7	10.7
Incr Delay (d2), s/veh	1.0	0.0	0.7	1.1	0.0	0.0	0.1	0.0	0.2	0.1	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.1	1.5	0.0	0.0	0.1	0.0	0.8	0.5	2.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	17.3	18.6	0.0	0.0	11.4	0.0	12.9	10.2	13.4	10.8
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		373			167			145			481	
Approach Delay, s/veh		18.2			18.6			12.6			12.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	22.0		17.2	7.7	24.1		17.2				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.6	4.5		8.3	2.4	9.1		9.6				
Green Ext Time (p_c), s	0.2	0.6		1.6	0.0	2.1		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		15.2	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	159	117	47	65	41	21	91	21	84	314	45
Future Volume (veh/h)	67	159	117	47	65	41	21	91	21	84	314	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	73	173	127	51	71	45	23	99	23	91	341	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	177	282	336	133	138	65	398	449	104	600	652	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.03	0.31	0.31	0.07	0.35	0.35
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.6	0.0	17.3	18.6	0.0	0.0	11.4	0.0	12.9	10.2	13.4	10.8
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		373			167			145			481	
Approach Delay, s/veh		18.2			18.6			12.6			12.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	9.9	22.0		17.2	7.7	24.1		17.2
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.8		5.4
Max Q Clear (g_c+I1), s	3.6	4.5		8.3	2.4	9.1		9.6
Green Ext Time (g_e), s	0.2	0.6		1.6	0.0	2.1		0.8
Prob of Phs Call (p_c)	0.71	1.00		1.00	0.27	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			386	1781			177

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1468		1332		1870		653

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		341		1585		1585		306

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	91	0	0	246	23	0	0	167
Grp Sat Flow (s), veh/h/ln	1781	0	0	1718	1781	0	0	1136
Q Serve Time (g_s), s	1.6	0.0	0.0	0.0	0.4	0.0	0.0	1.3
Cycle Q Clear Time (g_c), s	1.6	0.0	0.0	6.3	0.4	0.0	0.0	7.6
Perm LT Sat Flow (s_l), veh/h/ln	1269	0	0	1296	994	0	0	1096
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1690	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	10.4	15.0	0.0	0.0	10.4
Perm LT Serve Time (g_u), s	12.5	0.0	0.0	2.8	10.0	0.0	0.0	4.1
Perm LT Q Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.1	0.0	0.0	1.3
Time to First Blk (g_f), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	3.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.3	0.0	0.0	0.0	3.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.30	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	600	0	0	459	398	0	0	336
V/C Ratio (X)	0.15	0.00	0.00	0.54	0.06	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1379	0	0	949	1257	0	0	774
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.1	0.0	0.0	17.6	11.3	0.0	0.0	17.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	1.0	0.1	0.0	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.2	0.0	0.0	18.6	11.4	0.0	0.0	18.6
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	2.2	0.1	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	2.3	0.1	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.01	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	341	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	652	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2098	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	13.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	122	0	127	0	49	0	0
Grp Sat Flow (s), veh/h/ln	0	1809	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	2.5	0.0	3.4	0.0	1.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	3.4	0.0	1.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	553	0	336	0	553	0	0
V/C Ratio (X)	0.00	0.22	0.00	0.38	0.00	0.09	0.00	0.00
Avail Cap (c_a), veh/h	0	2029	0	808	0	1778	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.7	0.0	16.6	0.0	10.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.9	0.0	17.3	0.0	10.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.8	0.0	1.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.8	0.0	1.1	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.16	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	0	142	1	0	0	47	252	1	0	568	19
Future Volume (vph)	54	0	142	1	0	0	47	252	1	0	568	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		450	350		300
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.902							0.850			0.850
Flt Protected		0.986			0.950		0.950					
Satd. Flow (prot)	0	1657	0	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.986			0.950		0.950					
Satd. Flow (perm)	0	1657	0	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	0	154	1	0	0	51	274	1	0	617	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	213	0	0	1	0	51	274	1	0	617	21
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.9%		ICU Level of Service A	
Analysis Period (min) 15			

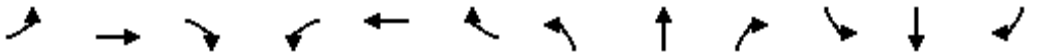
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	0	142	1	0	0	47	252	1	0	568	19
Future Vol, veh/h	54	0	142	1	0	0	47	252	1	0	568	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	0	154	1	0	0	51	274	1	0	617	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	994	994	617	1081	1014	274	638	0	0	275	0	0
Stage 1	617	617	-	376	376	-	-	-	-	-	-	-
Stage 2	377	377	-	705	638	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	224	245	490	195	239	765	946	-	-	1288	-	-
Stage 1	477	481	-	645	616	-	-	-	-	-	-	-
Stage 2	644	616	-	427	471	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	215	232	490	128	226	765	946	-	-	1288	-	-
Mov Cap-2 Maneuver	215	232	-	128	226	-	-	-	-	-	-	-
Stage 1	451	481	-	610	583	-	-	-	-	-	-	-
Stage 2	609	583	-	292	471	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	28.2	33.4	1.4	0
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	946	-	-	362	128	1288	-	-
HCM Lane V/C Ratio	0.054	-	-	0.589	0.008	-	-	-
HCM Control Delay (s)	9	-	-	28.2	33.4	0	-	-
HCM Lane LOS	A	-	-	D	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.6	0	0	-	-

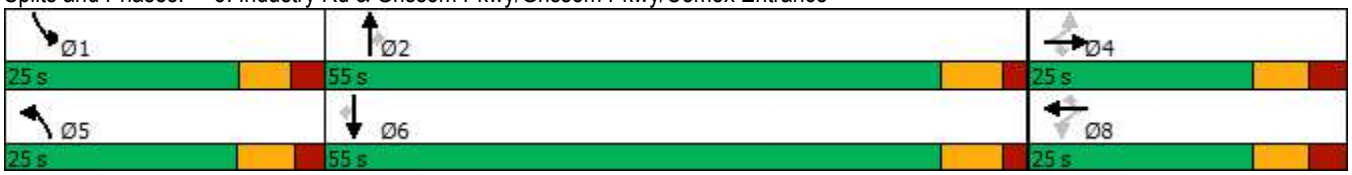


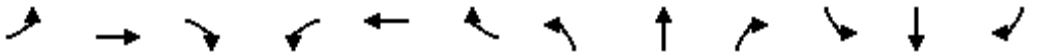
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	3	439	50	0	0	247	94	40	3	125	18
Future Volume (vph)	22	3	439	50	0	0	247	94	40	3	125	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.756			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1408	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			477						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	3	477	54	0	0	268	102	43	3	136	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	24	3	477	54	0	0	268	102	43	3	136	20
Turn Type	Perm	NA	Perm	Perm		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5			12.0	26.3	26.3	5.3	15.5	15.5
Actuated g/C Ratio	0.20	0.20	0.20	0.20			0.22	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.09	0.01	0.69	0.20			0.35	0.11	0.05	0.02	0.25	0.04
Control Delay	19.9	18.7	8.3	21.5			22.4	10.1	0.1	26.7	19.8	0.1
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	18.7	8.3	21.5			22.4	10.1	0.1	26.7	19.8	0.1
LOS	B	B	A	C			C	B	A	C	B	A
Approach Delay		8.9			21.5			17.0			17.5	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	7	1	0	16			39	12	0	1	33	0
Queue Length 95th (ft)	24	7	65	42			81	60	0	8	91	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	476	629	850	475			1205	1622	1393	625	1622	1393
Starvation Cap Reductn	0	0	0	0			0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0			0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0			0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.56	0.11			0.22	0.06	0.03	0.00	0.08	0.01

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 53.7			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	439	50	0	0	247	94	40	3	125	18
Future Volume (veh/h)	22	3	439	50	0	0	247	94	40	3	125	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	3	0	54	0	0	268	102	43	3	136	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	207		307	207	175	452	822	697	7	581	493
Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1418	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	24	3	0	54	0	0	268	102	43	3	136	20
Grp Sat Flow(s),veh/h/ln	1418	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	1.7	0.0	0.0	3.5	1.5	0.7	0.1	2.6	0.4
Cycle Q Clear(g_c), s	0.7	0.1	0.0	1.7	0.0	0.0	3.5	1.5	0.7	0.1	2.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	207		307	207	175	452	822	697	7	581	493
V/C Ratio(X)	0.08	0.01		0.18	0.00	0.00	0.59	0.12	0.06	0.41	0.23	0.04
Avail Cap(c_a), veh/h	676	691		672	691	586	1328	1899	1610	688	1899	1610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	18.8	0.0	19.5	0.0	0.0	19.4	7.9	7.6	23.5	12.1	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.2	0.1	0.0	25.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.3	0.5	0.2	0.1	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	18.8	0.0	19.9	0.0	0.0	20.6	7.9	7.7	48.9	12.4	11.4
LnGrp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		27	A		54			413			159	
Approach Delay, s/veh		19.1			19.9			16.2			12.9	
Approach LOS		B			B			B			B	

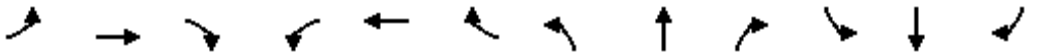
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	27.7		12.7	13.0	21.6		12.7				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.5		2.7	5.5	4.6		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.0	0.7	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	439	50	0	0	247	94	40	3	125	18
Future Volume (veh/h)	22	3	439	50	0	0	247	94	40	3	125	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	3	0	54	0	0	268	102	43	3	136	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	309	207		307	207	175	452	822	697	7	581	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.13	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.2	18.8	0.0	19.9	0.0	0.0	20.6	7.9	7.7	48.9	12.4	11.4
Ln Grp LOS	B	B		B	A	A	C	A	A	D	B	B
Approach Vol, veh/h		27			54			413			159	
Approach Delay, s/veh		19.1			19.9			16.2			12.9	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	27.7		12.7	13.0	21.6		12.7
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.5		2.7	5.5	4.6		3.7
Green Ext Time (g_e), s	0.0	0.9		0.0	0.7	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.66	1.00	0.98		0.66
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1418	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	24	268	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1418	1728	0	0	1414
Q Serve Time (g_s), s	0.1	0.0	0.0	0.7	3.5	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.7	3.5	0.0	0.0	1.7
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1418	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.2	0.0	0.0	0.0	5.2
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.2	0.0	0.0	0.0	5.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	309	452	0	0	307
V/C Ratio (X)	0.41	0.00	0.00	0.08	0.59	0.00	0.00	0.18
Avail Cap (c_a), veh/h	688	0	0	676	1328	0	0	672
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.5	0.0	0.0	19.1	19.4	0.0	0.0	19.5
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.2	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	48.9	0.0	0.0	19.2	20.6	0.0	0.0	19.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.2	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.3	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.04	0.24	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	3	0	136	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.5	0.0	0.1	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.5	0.0	0.1	0.0	2.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	822	0	207	0	581	0	207
V/C Ratio (X)	0.00	0.12	0.00	0.01	0.00	0.23	0.00	0.00
Avail Cap (c_a), veh/h	0	1899	0	691	0	1899	0	691
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	18.8	0.0	12.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	18.8	0.0	12.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

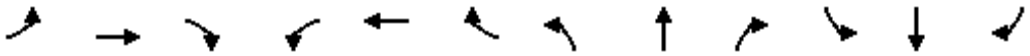
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	43	0	0	0	20	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	697	0	175	0	493	0	175
V/C Ratio (X)	0.00	0.06	0.00	0.00	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	1610	0	586	0	1610	0	586
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.7	0.0	0.0	0.0	11.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	161	3	8	67	2	8	0	11	1	0	11
Future Volume (vph)	1	161	3	8	67	2	8	0	11	1	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.923			0.875	
Flt Protected					0.995			0.979			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1683	0	0	1623	0
Flt Permitted					0.995			0.979			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1683	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	175	3	9	73	2	9	0	12	1	0	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	84	0	0	21	0	0	13	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	161	3	8	67	2	8	0	11	1	0	11
Future Vol, veh/h	1	161	3	8	67	2	8	0	11	1	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	175	3	9	73	2	9	0	12	1	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	75	0	0	178	0	0	277	272	177	277	272	74
Stage 1	-	-	-	-	-	-	179	179	-	92	92	-
Stage 2	-	-	-	-	-	-	98	93	-	185	180	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1524	-	-	1398	-	-	675	635	866	675	635	988
Stage 1	-	-	-	-	-	-	823	751	-	915	819	-
Stage 2	-	-	-	-	-	-	908	818	-	817	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1398	-	-	663	630	866	662	630	988
Mov Cap-2 Maneuver	-	-	-	-	-	-	663	630	-	662	630	-
Stage 1	-	-	-	-	-	-	822	750	-	914	813	-
Stage 2	-	-	-	-	-	-	891	812	-	805	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	9.8	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	767	1524	-	-	1398	-	-	949
HCM Lane V/C Ratio	0.027	0.001	-	-	0.006	-	-	0.014
HCM Control Delay (s)	9.8	7.4	0	-	7.6	0	-	8.8
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	267	1	14	107	1	40
Future Volume (vph)	267	1	14	107	1	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.994	0.999	
Satd. Flow (prot)	1863	0	0	1852	1615	0
Flt Permitted				0.994	0.999	
Satd. Flow (perm)	1863	0	0	1852	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1	15	116	1	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	0	0	131	44	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	267	1	14	107	1	40
Future Vol, veh/h	267	1	14	107	1	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	1	15	116	1	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	291	0	437	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1271	-	577	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	881	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1271	-	569	748
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	870	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	742	-	-	1271	-
HCM Lane V/C Ratio	0.06	-	-	0.012	-
HCM Control Delay (s)	10.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	306	0	10	110	0	21
Future Volume (vph)	306	0	10	110	0	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1863	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1863	0	0	1855	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	333	0	11	120	0	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	333	0	0	131	23	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

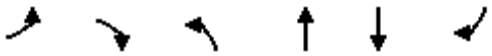
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	306	0	10	110	0	21
Future Vol, veh/h	306	0	10	110	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	333	0	11	120	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	333	0	475	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1226	-	548	709
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	885	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1226	-	543	709
Mov Cap-2 Maneuver	-	-	-	-	543	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	876	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	709	-	-	1226	-
HCM Lane V/C Ratio	0.032	-	-	0.009	-
HCM Control Delay (s)	10.2	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	15	37	12	2
Future Volume (vph)	2	5	15	37	12	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.982	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1660	0	0	1837	1829	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1660	0	0	1837	1829	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	16	40	13	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	56	15	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

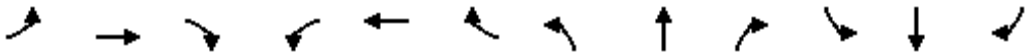
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	15	37	12	2
Future Vol, veh/h	2	5	15	37	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	16	40	13	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	86	14	15	0	-	0
Stage 1	14	-	-	-	-	-
Stage 2	72	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	915	1066	1603	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	906	1066	1603	-	-	-
Mov Cap-2 Maneuver	906	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1603	-	1015	-	-
HCM Lane V/C Ratio	0.01	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	90	0	0	24	27	0	1	20	65	0	0
Future Volume (vph)	2	90	0	0	24	27	0	1	20	65	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.929			0.871				
Flt Protected		0.999									0.950	
Satd. Flow (prot)	0	1861	0	0	1730	0	0	1622	0	0	1770	0
Flt Permitted		0.999									0.950	
Satd. Flow (perm)	0	1861	0	0	1730	0	0	1622	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	98	0	0	26	29	0	1	22	71	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	55	0	0	23	0	0	71	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.3%		ICU Level of Service A	
Analysis Period (min) 15			

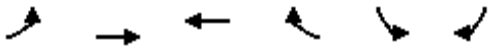
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	90	0	0	24	27	0	1	20	65	0	0
Future Vol, veh/h	2	90	0	0	24	27	0	1	20	65	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	98	0	0	26	29	0	1	22	71	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	55	0	0	98	0	0	143	157	98	155	143	41
Stage 1	-	-	-	-	-	-	102	102	-	41	41	-
Stage 2	-	-	-	-	-	-	41	55	-	114	102	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1550	-	-	1495	-	-	826	735	958	812	748	1030
Stage 1	-	-	-	-	-	-	904	811	-	974	861	-
Stage 2	-	-	-	-	-	-	974	849	-	891	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1550	-	-	1495	-	-	825	734	958	792	747	1030
Mov Cap-2 Maneuver	-	-	-	-	-	-	825	734	-	792	747	-
Stage 1	-	-	-	-	-	-	903	810	-	973	861	-
Stage 2	-	-	-	-	-	-	974	849	-	869	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	8.9	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	944	1550	-	-	1495	-	-	792
HCM Lane V/C Ratio	0.024	0.001	-	-	-	-	-	0.089
HCM Control Delay (s)	8.9	7.3	0	-	0	-	-	10
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	43	13	12	35	0
Future Volume (vph)	1	43	13	12	35	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.935			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1742	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1742	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		44.7	42.8		61.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	47	14	13	38	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	48	27	0	38	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

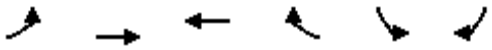
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	43	13	12	35	0
Future Vol, veh/h	1	43	13	12	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	47	14	13	38	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	27	0	-	0	70	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1587	-	-	-	934	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	933	1056
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	973	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	933
HCM Lane V/C Ratio	0.001	-	-	-	0.041
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	187	61	6	17	0
Future Volume (vph)	0	187	61	6	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1839	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1839	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		47.2	13.2		60.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	203	66	7	18	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	203	73	0	18	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	187	61	6	17	0
Future Vol, veh/h	0	187	61	6	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	203	66	7	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	73	0	-	0	273	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	203	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1527	-	-	-	716	993
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	831	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1527	-	-	-	716	993
Mov Cap-2 Maneuver	-	-	-	-	716	-
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	831	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

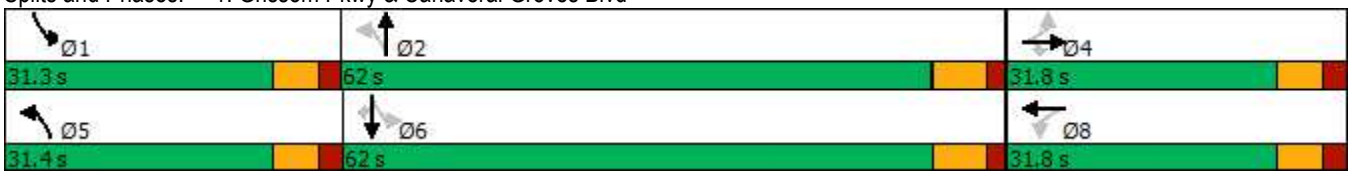
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1527	-	-	-	716
HCM Lane V/C Ratio	-	-	-	-	0.026
HCM Control Delay (s)	0	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

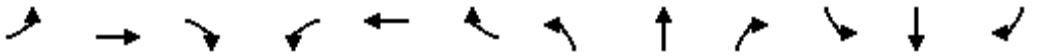
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	63	78	60	76	69	158	395	86	82	240	76
Future Volume (vph)	58	63	78	60	76	69	158	395	86	82	240	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.955			0.973				0.850
Flt Protected		0.977			0.986		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1754	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.719			0.855		0.489			0.362		
Satd. Flow (perm)	0	1339	1583	0	1521	0	911	1812	0	674	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			90		18			11				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	68	85	65	83	75	172	429	93	89	261	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	131	85	0	223	0	172	522	0	89	261	83
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		16.7	16.7		16.7		39.2	30.2		32.2	23.9	23.9
Actuated g/C Ratio		0.23	0.23		0.23		0.54	0.42		0.45	0.33	0.33
v/c Ratio		0.42	0.20		0.61		0.28	0.68		0.21	0.42	0.14
Control Delay		30.2	7.0		32.0		9.0	24.2		9.5	21.8	4.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		30.2	7.0		32.0		9.0	24.2		9.5	21.8	4.9
LOS		C	A		C		A	C		A	C	A
Approach Delay		21.0			32.0			20.4			16.0	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		48	0		79		32	190		16	87	0
Queue Length 95th (ft)		117	33		179		73	357		41	177	27
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		485	630		562		837	1427		787	1463	1262
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.27	0.13		0.40		0.21	0.37		0.11	0.18	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 72			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 65.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

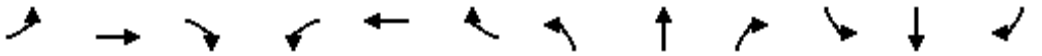




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	63	78	60	76	69	158	395	86	82	240	76
Future Volume (veh/h)	58	63	78	60	76	69	158	395	86	82	240	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	68	85	65	83	75	172	429	93	89	261	83
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	201	319	147	136	100	534	535	116	342	612	519
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.36	0.36	0.07	0.33	0.33
Sat Flow, veh/h	591	998	1585	305	676	497	1781	1489	323	1781	1870	1585
Grp Volume(v), veh/h	131	0	85	223	0	0	172	0	522	89	261	83
Grp Sat Flow(s),veh/h/ln	1589	0	1585	1477	0	0	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	2.4	4.3	0.0	0.0	3.3	0.0	14.0	1.7	5.9	2.0
Cycle Q Clear(g_c), s	3.5	0.0	2.4	7.8	0.0	0.0	3.3	0.0	14.0	1.7	5.9	2.0
Prop In Lane	0.48		1.00	0.29		0.34	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	419	0	319	384	0	0	534	0	650	342	612	519
V/C Ratio(X)	0.31	0.00	0.27	0.58	0.00	0.00	0.32	0.00	0.80	0.26	0.43	0.16
Avail Cap(c_a), veh/h	808	0	732	786	0	0	1182	0	1842	1044	1901	1611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	18.2	20.3	0.0	0.0	10.3	0.0	15.6	12.0	14.2	12.9
Incr Delay (d2), s/veh	0.4	0.0	0.4	1.4	0.0	0.0	0.3	0.0	2.4	0.4	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.8	2.5	0.0	0.0	1.0	0.0	4.9	0.6	2.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	0.0	18.7	21.7	0.0	0.0	10.6	0.0	18.0	12.4	14.7	13.1
LnGrp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		216			223			694			433	
Approach Delay, s/veh		18.9			21.7			16.2			13.9	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	26.4		17.7	11.7	24.7		17.7				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.7	16.0		5.5	5.3	7.9		9.8				
Green Ext Time (p_c), s	0.2	3.4		0.9	0.4	1.7		1.1				

Intersection Summary												
HCM 6th Ctrl Delay			16.7									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	63	78	60	76	69	158	395	86	82	240	76
Future Volume (veh/h)	58	63	78	60	76	69	158	395	86	82	240	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	68	85	65	83	75	172	429	93	89	261	83
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	218	201	319	147	136	100	534	535	116	342	612	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.10	0.36	0.36	0.07	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.0	0.0	18.7	21.7	0.0	0.0	10.6	0.0	18.0	12.4	14.7	13.1
Ln Grp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		216			223			694			433	
Approach Delay, s/veh		18.9			21.7			16.2			13.9	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	26.4		17.7	11.7	24.7		17.7
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.3
Max Q Clear (g_c+I1), s	3.7	16.0		5.5	5.3	7.9		9.8
Green Ext Time (g_e), s	0.2	3.4		0.9	0.4	1.7		1.1
Prob of Phs Call (p_c)	0.74	1.00		1.00	0.92	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			591	1781			305

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1489		998		1870		676

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		323		1585		1585		497

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

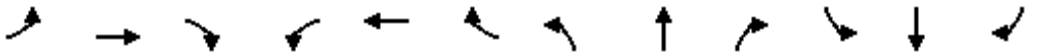
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	89	0	0	131	172	0	0	223
Grp Sat Flow (s), veh/h/ln	1781	0	0	1589	1781	0	0	1477
Q Serve Time (g_s), s	1.7	0.0	0.0	0.0	3.3	0.0	0.0	4.3
Cycle Q Clear Time (g_c), s	1.7	0.0	0.0	3.5	3.3	0.0	0.0	7.8
Perm LT Sat Flow (s_l), veh/h/ln	880	0	0	1248	1037	0	0	1254
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1536	0	0	0	0
Perm LT Eff Green (g_p), s	17.7	0.0	0.0	10.9	17.7	0.0	0.0	10.9
Perm LT Serve Time (g_u), s	5.4	0.0	0.0	3.1	11.8	0.0	0.0	7.4
Perm LT Q Serve Time (g_ps), s	1.4	0.0	0.0	0.0	1.2	0.0	0.0	4.3
Time to First Blk (g_f), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.7
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.29
Lane Grp Cap (c), veh/h	342	0	0	419	534	0	0	384
V/C Ratio (X)	0.26	0.00	0.00	0.31	0.32	0.00	0.00	0.58
Avail Cap (c_a), veh/h	1044	0	0	808	1182	0	0	786
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.0	0.0	0.0	18.6	10.3	0.0	0.0	20.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.4	0.3	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.4	0.0	0.0	19.0	10.6	0.0	0.0	21.7
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	1.3	1.0	0.0	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	1.3	1.0	0.0	0.0	2.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.01	0.05	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	261	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	612	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1901	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	14.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	522	0	85	0	83	0	0
Grp Sat Flow (s), veh/h/ln	0	1812	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	14.0	0.0	2.4	0.0	2.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	14.0	0.0	2.4	0.0	2.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	650	0	319	0	519	0	0
V/C Ratio (X)	0.00	0.80	0.00	0.27	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1842	0	732	0	1611	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.6	0.0	18.2	0.0	12.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.4	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.0	0.0	18.7	0.0	13.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	4.4	0.0	0.8	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	4.9	0.0	0.8	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.12	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	0	84	27	0	20	144	601	1	0	354	86
Future Volume (vph)	48	0	84	27	0	20	144	601	1	0	354	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	300		450	350		300
Storage Lanes	0		0	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.914			0.942				0.850			0.850
Flt Protected		0.982			0.972		0.950					
Satd. Flow (prot)	0	1672	0	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.982			0.972		0.950					
Satd. Flow (perm)	0	1672	0	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	0	91	29	0	22	157	653	1	0	385	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	0	0	51	0	157	653	1	0	385	93
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			

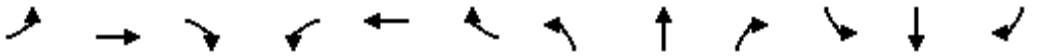
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	0	84	27	0	20	144	601	1	0	354	86
Future Vol, veh/h	48	0	84	27	0	20	144	601	1	0	354	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	91	29	0	22	157	653	1	0	385	93

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1364	1353	385	1444	1445	653	478	0	0	654	0	0
Stage 1	385	385	-	967	967	-	-	-	-	-	-	-
Stage 2	979	968	-	477	478	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	125	150	663	110	132	467	1084	-	-	933	-	-
Stage 1	638	611	-	306	333	-	-	-	-	-	-	-
Stage 2	301	332	-	569	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	128	663	84	113	467	1084	-	-	933	-	-
Mov Cap-2 Maneuver	106	128	-	84	113	-	-	-	-	-	-	-
Stage 1	545	611	-	262	285	-	-	-	-	-	-	-
Stage 2	245	284	-	491	556	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	44.3	50.1	1.7	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1084	-	-	228	129	933	-	-
HCM Lane V/C Ratio	0.144	-	-	0.629	0.396	-	-	-
HCM Control Delay (s)	8.9	-	-	44.3	50.1	0	-	-
HCM Lane LOS	A	-	-	E	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	3.8	1.7	0	-	-

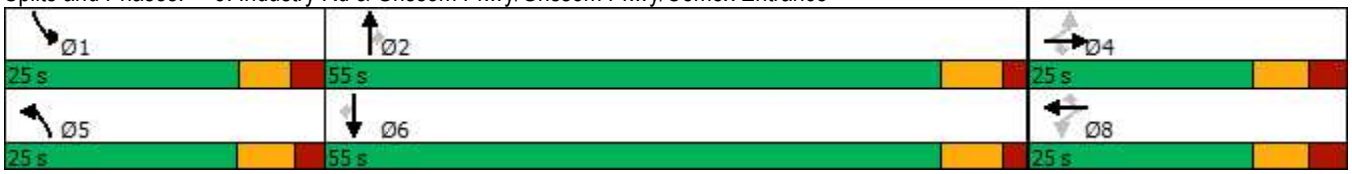


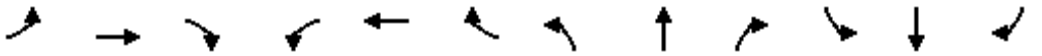
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	3	435	9	4	1	600	89	7	0	198	42
Future Volume (vph)	13	3	435	9	4	1	600	89	7	0	198	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.755			0.756			0.950					
Satd. Flow (perm)	1406	1863	1583	1408	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			473			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	3	473	10	4	1	652	97	8	0	215	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	3	473	10	4	1	652	97	8	0	215	46
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.2	10.2	10.2	10.2	10.2	10.2	18.3	40.8	40.8		15.7	15.7
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.06	0.01	0.73	0.05	0.01	0.00	0.68	0.08	0.01		0.48	0.10
Control Delay	23.8	22.7	10.3	23.4	22.8	0.0	26.4	5.9	0.0		26.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	23.8	22.7	10.3	23.4	22.8	0.0	26.4	5.9	0.0		26.3	0.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.8			21.7			23.5			21.8	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	5	1	0	3	1	0	109	12	0		70	0
Queue Length 95th (ft)	19	8	74	15	9	0	#212	38	0		149	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	377	500	771	377	500	506	958	1375	1199		1375	1199
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.04	0.01	0.61	0.03	0.01	0.00	0.68	0.07	0.01		0.16	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 65.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	3	435	9	4	1	600	89	7	0	198	42
Future Volume (veh/h)	13	3	435	9	4	1	600	89	7	0	198	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	3	0	10	4	1	652	97	8	0	215	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	107		218	107	90	845	1243	1053	3	540	457
Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.24	0.66	0.66	0.00	0.29	0.29
Sat Flow, veh/h	1411	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	14	3	0	10	4	1	652	97	8	0	215	46
Grp Sat Flow(s),veh/h/ln	1411	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.1	0.0	0.3	0.1	0.0	9.1	0.9	0.1	0.0	4.8	1.1
Cycle Q Clear(g_c), s	0.6	0.1	0.0	0.4	0.1	0.0	9.1	0.9	0.1	0.0	4.8	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	107		218	107	90	845	1243	1053	3	540	457
V/C Ratio(X)	0.06	0.03		0.05	0.04	0.01	0.77	0.08	0.01	0.00	0.40	0.10
Avail Cap(c_a), veh/h	614	633		615	633	536	1216	1739	1474	630	1739	1474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	23.0	0.0	23.2	23.0	23.0	18.2	3.1	2.9	0.0	14.8	13.5
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.1	0.2	0.1	1.9	0.0	0.0	0.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.0	3.4	0.2	0.0	0.0	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	23.2	0.0	23.3	23.2	23.1	20.1	3.1	2.9	0.0	15.4	13.6
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		17	A		15			757			261	
Approach Delay, s/veh		23.4			23.3			17.7			15.1	
Approach LOS		C			C			B			B	

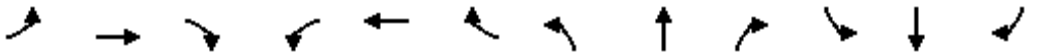
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	41.3		10.4	19.5	21.8		10.4				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	2.9		2.6	11.1	6.8		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.8		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	3	435	9	4	1	600	89	7	0	198	42
Future Volume (veh/h)	13	3	435	9	4	1	600	89	7	0	198	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	3	0	10	4	1	652	97	8	0	215	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	217	107		218	107	90	845	1243	1053	3	540	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.24	0.66	0.66	0.00	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.5	23.2	0.0	23.3	23.2	23.1	20.1	3.1	2.9	0.0	15.4	13.6
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		17			15			757			261	
Approach Delay, s/veh		23.4			23.3			17.7			15.1	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	41.3		10.4	19.5	21.8		10.4
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	2.9		2.6	11.1	6.8		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.8		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.37	1.00	0.99		0.37
Prob of Max Out (p_x)	0.00	0.00		0.00	0.28	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1411	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	14	652	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1411	1728	0	0	1414
Q Serve Time (g_s), s	0.0	0.0	0.0	0.5	9.1	0.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.6	9.1	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1411	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	2.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	217	845	0	0	218
V/C Ratio (X)	0.00	0.00	0.00	0.06	0.77	0.00	0.00	0.05
Avail Cap (c_a), veh/h	630	0	0	614	1216	0	0	615
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.3	18.2	0.0	0.0	23.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	1.9	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.5	20.1	0.0	0.0	23.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	3.2	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	3.4	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.62	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	97	0	3	0	215	0	4
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	0.9	0.0	0.1	0.0	4.8	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.1	0.0	4.8	0.0	0.1
Lane Grp Cap (c), veh/h	0	1243	0	107	0	540	0	107
V/C Ratio (X)	0.00	0.08	0.00	0.03	0.00	0.40	0.00	0.04
Avail Cap (c_a), veh/h	0	1739	0	633	0	1739	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.1	0.0	23.0	0.0	14.8	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	23.2	0.0	15.4	0.0	23.2
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

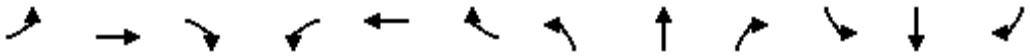
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	1.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	46	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1053	0	90	0	457	0	90
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.10	0.00	0.01
Avail Cap (c_a), veh/h	0	1474	0	536	0	1474	0	536
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	13.5	0.0	23.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	13.6	0.0	23.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	123	12	20	203	1	8	0	11	1	2	6
Future Volume (vph)	10	123	12	20	203	1	8	0	11	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.999			0.923			0.905	
Flt Protected		0.997			0.996			0.979			0.995	
Satd. Flow (prot)	0	1837	0	0	1853	0	0	1683	0	0	1677	0
Flt Permitted		0.997			0.996			0.979			0.995	
Satd. Flow (perm)	0	1837	0	0	1853	0	0	1683	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	134	13	22	221	1	9	0	12	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	244	0	0	21	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	123	12	20	203	1	8	0	11	1	2	6
Future Vol, veh/h	10	123	12	20	203	1	8	0	11	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	134	13	22	221	1	9	0	12	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	222	0	0	147	0	0	433	429	141	435	435	222
Stage 1	-	-	-	-	-	-	163	163	-	266	266	-
Stage 2	-	-	-	-	-	-	270	266	-	169	169	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1347	-	-	1435	-	-	533	518	907	531	514	818
Stage 1	-	-	-	-	-	-	839	763	-	739	689	-
Stage 2	-	-	-	-	-	-	736	689	-	833	759	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1347	-	-	1435	-	-	516	505	907	513	501	818
Mov Cap-2 Maneuver	-	-	-	-	-	-	516	505	-	513	501	-
Stage 1	-	-	-	-	-	-	831	756	-	732	677	-
Stage 2	-	-	-	-	-	-	715	677	-	815	752	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	10.4	10.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	688	1347	-	-	1435	-	-	678
HCM Lane V/C Ratio	0.03	0.008	-	-	0.015	-	-	0.014
HCM Control Delay (s)	10.4	7.7	0	-	7.5	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	139	0	45	290	2	26
Future Volume (vph)	139	0	45	290	2	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.874	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1623	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1623	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	0	49	315	2	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	364	30	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	0	45	290	2	26
Future Vol, veh/h	139	0	45	290	2	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	0	49	315	2	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	151	0	564	151
Stage 1	-	-	-	-	151	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1430	-	487	895
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1430	-	467	895
Mov Cap-2 Maneuver	-	-	-	-	467	-
Stage 1	-	-	-	-	877	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	840	-	-	1430	-
HCM Lane V/C Ratio	0.036	-	-	0.034	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	165	0	25	293	0	15
Future Volume (vph)	165	0	25	293	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1863	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1863	0	0	1855	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	0	27	318	0	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	179	0	0	345	16	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.8%		ICU Level of Service A	
Analysis Period (min) 15			

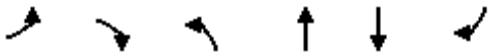
Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	0	25	293	0	15
Future Vol, veh/h	165	0	25	293	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	0	27	318	0	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	179	0	551	179
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1397	-	495	864
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	697	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1397	-	484	864
Mov Cap-2 Maneuver	-	-	-	-	484	-
Stage 1	-	-	-	-	852	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	864	-	-	1397	-
HCM Lane V/C Ratio	0.019	-	-	0.019	-
HCM Control Delay (s)	9.2	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	16	10	25	43	2
Future Volume (vph)	3	16	10	25	43	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.885				0.994	
Flt Protected	0.993			0.986		
Satd. Flow (prot)	1637	0	0	1837	1852	0
Flt Permitted	0.993			0.986		
Satd. Flow (perm)	1637	0	0	1837	1852	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	17	11	27	47	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	0	38	49	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.5%		ICU Level of Service A	
Analysis Period (min) 15			

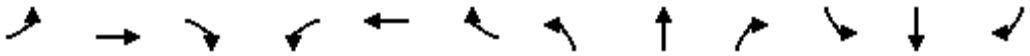
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	10	25	43	2
Future Vol, veh/h	3	16	10	25	43	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	17	11	27	47	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	97	48	49	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	902	1021	1558	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	896	1021	1558	-	-	-
Mov Cap-2 Maneuver	896	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	973	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1558	-	999	-	-
HCM Lane V/C Ratio	0.007	-	0.021	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	55	0	21	103	79	0	1	13	43	1	2
Future Volume (vph)	2	55	0	21	103	79	0	1	13	43	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.947			0.874			0.995	
Flt Protected		0.998			0.995						0.955	
Satd. Flow (prot)	0	1859	0	0	1755	0	0	1628	0	0	1770	0
Flt Permitted		0.998			0.995						0.955	
Satd. Flow (perm)	0	1859	0	0	1755	0	0	1628	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	60	0	23	112	86	0	1	14	47	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	221	0	0	15	0	0	50	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.0%		ICU Level of Service A	
Analysis Period (min) 15			

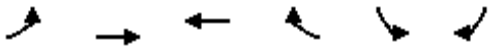
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	55	0	21	103	79	0	1	13	43	1	2
Future Vol, veh/h	2	55	0	21	103	79	0	1	13	43	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	60	0	23	112	86	0	1	14	47	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	60	0	0	267	308	60	273	265	155
Stage 1	-	-	-	-	-	-	64	64	-	201	201	-
Stage 2	-	-	-	-	-	-	203	244	-	72	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1375	-	-	1544	-	-	686	606	1005	679	640	891
Stage 1	-	-	-	-	-	-	947	842	-	801	735	-
Stage 2	-	-	-	-	-	-	799	704	-	938	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1375	-	-	1544	-	-	674	594	1005	659	628	891
Mov Cap-2 Maneuver	-	-	-	-	-	-	674	594	-	659	628	-
Stage 1	-	-	-	-	-	-	945	840	-	799	723	-
Stage 2	-	-	-	-	-	-	782	692	-	922	840	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.8	8.8	10.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	958	1375	-	-	1544	-	-	666
HCM Lane V/C Ratio	0.016	0.002	-	-	0.015	-	-	0.075
HCM Control Delay (s)	8.8	7.6	0	-	7.4	0	-	10.8
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	25	48	43	24	2
Future Volume (vph)	2	25	48	43	24	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.936		0.990	
Flt Protected		0.997			0.956	
Satd. Flow (prot)	0	1857	1744	0	1763	0
Flt Permitted		0.997			0.956	
Satd. Flow (perm)	0	1857	1744	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	27	52	47	26	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	99	0	28	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.2%		ICU Level of Service A	
Analysis Period (min) 15			

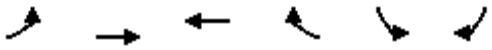
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	25	48	43	24	2
Future Vol, veh/h	2	25	48	43	24	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	27	52	47	26	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	107	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1494	-	-	-	891	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	992	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1494	-	-	-	890	985
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	897
HCM Lane V/C Ratio	0.001	-	-	-	0.032
HCM Control Delay (s)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	119	209	21	12	0
Future Volume (vph)	0	119	209	21	12	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1840	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1840	0	1770	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	129	227	23	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	129	250	0	13	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.3%		ICU Level of Service A	
Analysis Period (min) 15			

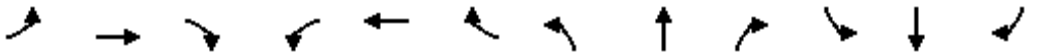
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	119	209	21	12	0
Future Vol, veh/h	0	119	209	21	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	129	227	23	13	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	250	0	-	0	368	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1316	-	-	-	632	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	897	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1316	-	-	-	632	800
Mov Cap-2 Maneuver	-	-	-	-	632	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	897	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	-	632
HCM Lane V/C Ratio	-	-	-	-	0.021
HCM Control Delay (s)	0	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	0	142	1	0	0	47	252	1	0	568	19
Future Volume (vph)	54	0	142	1	0	0	47	252	1	0	568	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	0	154	1	0	0	51	274	1	0	617	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	59	154	0	1	0	51	274	1	0	617	21
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

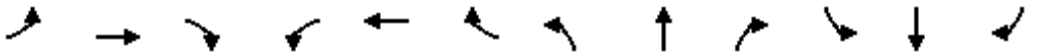
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	0	142	1	0	0	47	252	1	0	568	19
Future Vol, veh/h	54	0	142	1	0	0	47	252	1	0	568	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	0	154	1	0	0	51	274	1	0	617	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	994	994	617	1081	1014	274	638	0	0	275	0	0
Stage 1	617	617	-	376	376	-	-	-	-	-	-	-
Stage 2	377	377	-	705	638	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	224	245	490	195	239	765	946	-	-	1288	-	-
Stage 1	477	481	-	645	616	-	-	-	-	-	-	-
Stage 2	644	616	-	427	471	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	215	232	490	128	226	765	946	-	-	1288	-	-
Mov Cap-2 Maneuver	215	232	-	128	226	-	-	-	-	-	-	-
Stage 1	451	481	-	610	583	-	-	-	-	-	-	-
Stage 2	609	583	-	292	471	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.1	33.4	1.4	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	946	-	-	215	490	128	1288	-	-
HCM Lane V/C Ratio	0.054	-	-	0.273	0.315	0.008	-	-	-
HCM Control Delay (s)	9	-	-	27.9	15.7	33.4	0	-	-
HCM Lane LOS	A	-	-	D	C	D	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	1.3	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	0	84	27	0	20	144	601	1	0	354	86
Future Volume (vph)	48	0	84	27	0	20	144	601	1	0	354	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	0	91	29	0	22	157	653	1	0	385	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	91	0	51	0	157	653	1	0	385	93
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	0	84	27	0	20	144	601	1	0	354	86
Future Vol, veh/h	48	0	84	27	0	20	144	601	1	0	354	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	91	29	0	22	157	653	1	0	385	93

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1364	1353	385	1444	1445	653	478	0	0	654	0	0
Stage 1	385	385	-	967	967	-	-	-	-	-	-	-
Stage 2	979	968	-	477	478	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	125	150	663	110	132	467	1084	-	-	933	-	-
Stage 1	638	611	-	306	333	-	-	-	-	-	-	-
Stage 2	301	332	-	569	556	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	128	663	84	113	467	1084	-	-	933	-	-
Mov Cap-2 Maneuver	106	128	-	84	113	-	-	-	-	-	-	-
Stage 1	545	611	-	262	285	-	-	-	-	-	-	-
Stage 2	245	284	-	491	556	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	32	50.1	1.7	0
HCM LOS	D	F		

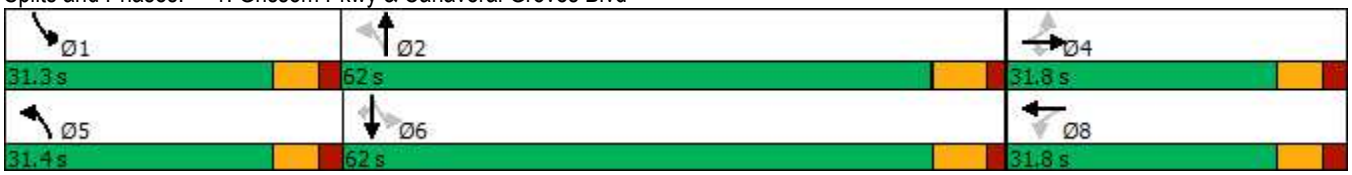
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1084	-	-	106	663	129	933	-	-
HCM Lane V/C Ratio	0.144	-	-	0.492	0.138	0.396	-	-	-
HCM Control Delay (s)	8.9	-	-	68.2	11.3	50.1	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.2	0.5	1.7	0	-	-

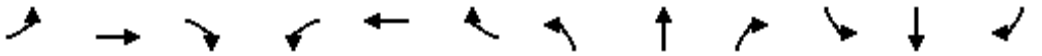
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	117	159	58	52	43	42	143	38	88	356	45
Future Volume (vph)	98	117	159	58	52	43	42	143	38	88	356	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.962			0.969				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1758	0	1770	1805	0	1770	1863	1583
Flt Permitted		0.799			0.785		0.458			0.582		
Satd. Flow (perm)	0	1488	1583	0	1407	0	853	1805	0	1084	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		14			14				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	127	173	63	57	47	46	155	41	96	387	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	173	0	167	0	46	196	0	96	387	49
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		19.2	19.2		19.2		25.6	19.7		28.1	23.0	23.0
Actuated g/C Ratio		0.30	0.30		0.30		0.40	0.31		0.44	0.36	0.36
v/c Ratio		0.52	0.29		0.39		0.10	0.35		0.17	0.58	0.08
Control Delay		25.7	5.2		21.5		9.9	20.1		10.1	23.4	1.7
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		25.7	5.2		21.5		9.9	20.1		10.1	23.4	1.7
LOS		C	A		C		A	C		B	C	A
Approach Delay		17.0			21.5			18.2			19.0	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		78	0		48		9	58		19	137	0
Queue Length 95th (ft)		168	42		115		26	122		45	254	8
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		612	753		587		828	1520		856	1565	1344
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.38	0.23		0.28		0.06	0.13		0.11	0.25	0.04

Intersection Summary	
Area Type:	Other
Cycle Length: 125.2	
Actuated Cycle Length: 64.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 55.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	117	159	58	52	43	42	143	38	88	356	45
Future Volume (veh/h)	98	117	159	58	52	43	42	143	38	88	356	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	127	173	63	57	47	46	155	41	96	387	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	215	359	146	122	66	367	426	113	528	605	513
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.30	0.30	0.07	0.32	0.32
Sat Flow, veh/h	590	949	1585	210	536	292	1781	1425	377	1781	1870	1585
Grp Volume(v), veh/h	234	0	173	167	0	0	46	0	196	96	387	49
Grp Sat Flow(s),veh/h/ln	1539	0	1585	1038	0	0	1781	0	1802	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.8	1.7	0.0	0.0	0.9	0.0	4.3	1.8	8.9	1.1
Cycle Q Clear(g_c), s	6.9	0.0	4.8	8.6	0.0	0.0	0.9	0.0	4.3	1.8	8.9	1.1
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	453	0	359	334	0	0	367	0	539	528	605	513
V/C Ratio(X)	0.52	0.00	0.48	0.50	0.00	0.00	0.13	0.00	0.36	0.18	0.64	0.10
Avail Cap(c_a), veh/h	875	0	790	717	0	0	1171	0	1976	1285	2051	1738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	16.8	17.5	0.0	0.0	11.6	0.0	13.8	10.6	14.5	11.8
Incr Delay (d2), s/veh	0.9	0.0	1.0	1.2	0.0	0.0	0.2	0.0	0.4	0.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.6	1.5	0.0	0.0	0.3	0.0	1.4	0.5	3.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	17.8	18.7	0.0	0.0	11.8	0.0	14.2	10.8	15.6	11.9
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		407			167			242			532	
Approach Delay, s/veh		18.2			18.7			13.8			14.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		18.2	8.8	23.2		18.2				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	6.3		8.9	2.9	10.9		10.6				
Green Ext Time (p_c), s	0.2	1.1		1.7	0.1	2.4		0.8				

Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	117	159	58	52	43	42	143	38	88	356	45
Future Volume (veh/h)	98	117	159	58	52	43	42	143	38	88	356	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	127	173	63	57	47	46	155	41	96	387	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	238	215	359	146	122	66	367	426	113	528	605	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.05	0.30	0.30	0.07	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.4	0.0	17.8	18.7	0.0	0.0	11.8	0.0	14.2	10.8	15.6	11.9
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		407			167			242			532	
Approach Delay, s/veh		18.2			18.7			13.8			14.4	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.0	22.0		18.2	8.8	23.2		18.2
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.8	6.3		8.9	2.9	10.9		10.6
Green Ext Time (g_e), s	0.2	1.1		1.7	0.1	2.4		0.8
Prob of Phs Call (p_c)	0.74	1.00		1.00	0.47	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.02	0.00	0.00		0.01

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			590	1781			210

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1425		949		1870		536

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		377		1585		1585		292

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

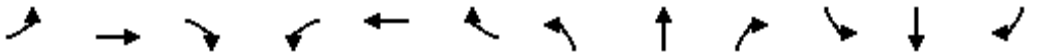
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	96	0	0	234	46	0	0	167
Grp Sat Flow (s), veh/h/ln	1781	0	0	1539	1781	0	0	1038
Q Serve Time (g_s), s	1.8	0.0	0.0	0.0	0.9	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	1.8	0.0	0.0	6.9	0.9	0.0	0.0	8.6
Perm LT Sat Flow (s_l), veh/h/ln	1187	0	0	1311	953	0	0	1096
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1463	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	11.4	15.0	0.0	0.0	11.4
Perm LT Serve Time (g_u), s	10.7	0.0	0.0	2.8	7.4	0.0	0.0	4.5
Perm LT Q Serve Time (g_ps), s	0.4	0.0	0.0	0.0	0.4	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	3.1
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	528	0	0	453	367	0	0	334
V/C Ratio (X)	0.18	0.00	0.00	0.52	0.13	0.00	0.00	0.50
Avail Cap (c_a), veh/h	1285	0	0	875	1171	0	0	717
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	10.6	0.0	0.0	17.5	11.6	0.0	0.0	17.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.9	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.8	0.0	0.0	18.4	11.8	0.0	0.0	18.7
1st-Term Q (Q1), veh/ln	0.5	0.0	0.0	2.1	0.3	0.0	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.5	0.0	0.0	2.2	0.3	0.0	0.0	1.5
%ile Storage Ratio (RQ%)	0.03	0.00	0.00	0.02	0.01	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	387	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	605	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.64	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	2051	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	196	0	173	0	49	0	0
Grp Sat Flow (s), veh/h/ln	0	1802	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	4.3	0.0	4.8	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	4.3	0.0	4.8	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	539	0	359	0	513	0	0
V/C Ratio (X)	0.00	0.36	0.00	0.48	0.00	0.10	0.00	0.00
Avail Cap (c_a), veh/h	0	1976	0	790	0	1738	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	16.8	0.0	11.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	1.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.2	0.0	17.8	0.0	11.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.4	0.0	1.5	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	1.6	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	0	123	1	0	0	25	262	1	0	591	41
Future Volume (vph)	81	0	123	1	0	0	25	262	1	0	591	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	0	134	1	0	0	27	285	1	0	642	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	88	134	0	1	0	27	285	1	0	642	45
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.1%		ICU Level of Service A	
Analysis Period (min) 15			

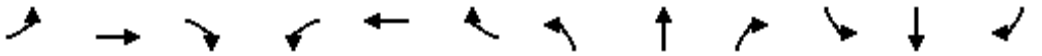
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	0	123	1	0	0	25	262	1	0	591	41
Future Vol, veh/h	81	0	123	1	0	0	25	262	1	0	591	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	0	134	1	0	0	27	285	1	0	642	45

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	982	982	642	1071	1026	285	687	0	0	286	0	0
Stage 1	642	642	-	339	339	-	-	-	-	-	-	-
Stage 2	340	340	-	732	687	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	228	249	474	198	235	754	907	-	-	1276	-	-
Stage 1	463	469	-	676	640	-	-	-	-	-	-	-
Stage 2	675	639	-	413	447	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	223	242	474	139	228	754	907	-	-	1276	-	-
Mov Cap-2 Maneuver	223	242	-	139	228	-	-	-	-	-	-	-
Stage 1	449	469	-	656	621	-	-	-	-	-	-	-
Stage 2	655	620	-	297	447	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.8	31.1	0.8	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	907	-	-	223	474	139	1276	-	-
HCM Lane V/C Ratio	0.03	-	-	0.395	0.282	0.008	-	-	-
HCM Control Delay (s)	9.1	-	-	31.3	15.6	31.1	0	-	-
HCM Lane LOS	A	-	-	D	C	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.8	1.1	0	0	-	-

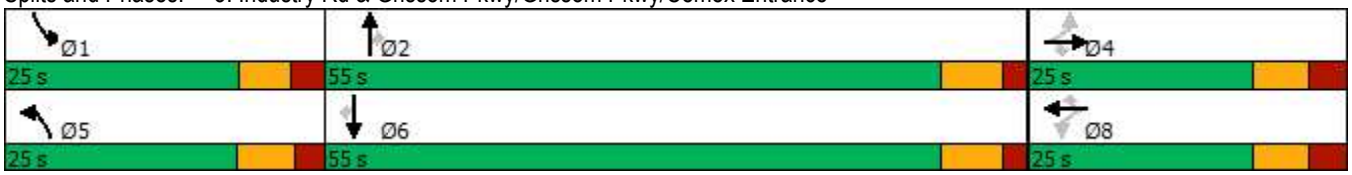


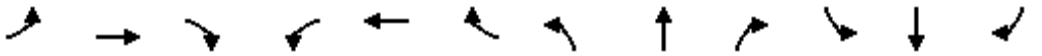
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	3	456	50	0	0	261	100	42	3	131	19
Future Volume (vph)	23	3	456	50	0	0	261	100	42	3	131	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.756			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1408	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			496						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	3	496	54	0	0	284	109	46	3	142	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	3	496	54	0	0	284	109	46	3	142	21
Turn Type	Perm	NA	Perm	Perm		Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5			12.3	26.6	26.6	5.3	15.6	15.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19			0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.09	0.01	0.70	0.20			0.36	0.12	0.05	0.02	0.26	0.04
Control Delay	20.1	18.7	8.5	21.7			22.3	10.0	0.1	26.7	20.2	0.2
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	18.7	8.5	21.7			22.3	10.0	0.1	26.7	20.2	0.2
LOS	C	B	A	C			C	B	A	C	C	A
Approach Delay		9.1			21.7			17.0			17.7	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	7	1	0	16			42	13	0	1	35	0
Queue Length 95th (ft)	25	7	67	43			86	64	0	9	95	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	473	626	861	473			1200	1615	1388	622	1615	1388
Starvation Cap Reductn	0	0	0	0			0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0			0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0			0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.00	0.58	0.11			0.24	0.07	0.03	0.00	0.09	0.02

Intersection Summary	
Area Type:	Other
Cycle Length: 105	
Actuated Cycle Length: 54	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	3	456	50	0	0	261	100	42	3	131	19
Future Volume (veh/h)	23	3	456	50	0	0	261	100	42	3	131	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	3	0	54	0	0	284	109	46	3	142	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	208		306	208	176	469	829	702	7	579	491
Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1418	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	25	3	0	54	0	0	284	109	46	3	142	21
Grp Sat Flow(s),veh/h/ln	1418	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.8	0.1	0.0	1.7	0.0	0.0	3.7	1.6	0.8	0.1	2.7	0.4
Cycle Q Clear(g_c), s	0.8	0.1	0.0	1.8	0.0	0.0	3.7	1.6	0.8	0.1	2.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	208		306	208	176	469	829	702	7	579	491
V/C Ratio(X)	0.08	0.01		0.18	0.00	0.00	0.61	0.13	0.07	0.41	0.25	0.04
Avail Cap(c_a), veh/h	670	685		667	685	581	1317	1883	1596	682	1883	1596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	18.9	0.0	19.7	0.0	0.0	19.4	7.9	7.6	23.7	12.3	11.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.5	0.0	0.0	1.4	0.5	0.2	0.1	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	18.9	0.0	20.0	0.0	0.0	20.7	8.0	7.7	49.1	12.6	11.6
LnGrp LOS	B	B		C	A	A	C	A	A	D	B	B
Approach Vol, veh/h		28	A		54			439			166	
Approach Delay, s/veh		19.3			20.0			16.2			13.1	
Approach LOS		B			C			B			B	

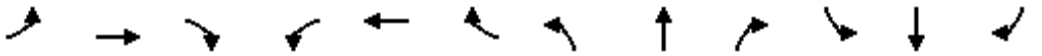
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.1		12.8	13.3	21.7		12.8				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.6		2.8	5.7	4.7		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.8	1.1		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	3	456	50	0	0	261	100	42	3	131	19
Future Volume (veh/h)	23	3	456	50	0	0	261	100	42	3	131	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	3	0	54	0	0	284	109	46	3	142	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	308	208		306	208	176	469	829	702	7	579	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.11	0.11	0.00	0.11	0.00	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.3	18.9	0.0	20.0	0.0	0.0	20.7	8.0	7.7	49.1	12.6	11.6
Ln Grp LOS	B	B		C	A	A	C	A	A	D	B	B
Approach Vol, veh/h		28			54			439			166	
Approach Delay, s/veh		19.3			20.0			16.2			13.1	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.1		12.8	13.3	21.7		12.8
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.4	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.6		2.8	5.7	4.7		3.8
Green Ext Time (g_e), s	0.0	1.0		0.0	0.8	1.1		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.66	1.00	0.99		0.66
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1418	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	25	284	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1418	1728	0	0	1414
Q Serve Time (g_s), s	0.1	0.0	0.0	0.8	3.7	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	0.8	3.7	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1418	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.2
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.8	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	308	469	0	0	306
V/C Ratio (X)	0.41	0.00	0.00	0.08	0.61	0.00	0.00	0.18
Avail Cap (c_a), veh/h	682	0	0	670	1317	0	0	667
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	23.7	0.0	0.0	19.2	19.4	0.0	0.0	19.7
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.1	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.1	0.0	0.0	19.3	20.7	0.0	0.0	20.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	1.3	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.2	1.4	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.04	0.26	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	109	0	3	0	142	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.6	0.0	0.1	0.0	2.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.6	0.0	0.1	0.0	2.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	829	0	208	0	579	0	208
V/C Ratio (X)	0.00	0.13	0.00	0.01	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	1883	0	685	0	1883	0	685
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	18.9	0.0	12.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.0	0.0	18.9	0.0	12.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

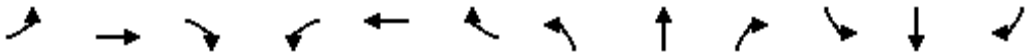
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	46	0	0	0	21	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	702	0	176	0	491	0	176
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	1596	0	581	0	1596	0	581
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.6	0.0	0.0	0.0	11.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.7	0.0	0.0	0.0	11.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	181	3	9	75	2	8	0	12	1	0	12
Future Volume (vph)	1	181	3	9	75	2	8	0	12	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.997			0.920			0.875	
Flt Protected					0.995			0.980			0.996	
Satd. Flow (prot)	0	1859	0	0	1848	0	0	1679	0	0	1623	0
Flt Permitted					0.995			0.980			0.996	
Satd. Flow (perm)	0	1859	0	0	1848	0	0	1679	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	197	3	10	82	2	9	0	13	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	201	0	0	94	0	0	22	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	181	3	9	75	2	8	0	12	1	0	12
Future Vol, veh/h	1	181	3	9	75	2	8	0	12	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	197	3	10	82	2	9	0	13	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	200	0	0	311	305	199	310	305	83
Stage 1	-	-	-	-	-	-	201	201	-	103	103	-
Stage 2	-	-	-	-	-	-	110	104	-	207	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1513	-	-	1372	-	-	642	608	842	642	608	976
Stage 1	-	-	-	-	-	-	801	735	-	903	810	-
Stage 2	-	-	-	-	-	-	895	809	-	795	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1513	-	-	1372	-	-	629	603	842	628	603	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	629	603	-	628	603	-
Stage 1	-	-	-	-	-	-	800	734	-	902	804	-
Stage 2	-	-	-	-	-	-	876	803	-	782	733	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.8	10	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	742	1513	-	-	1372	-	-	936
HCM Lane V/C Ratio	0.029	0.001	-	-	0.007	-	-	0.015
HCM Control Delay (s)	10	7.4	0	-	7.6	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	283	1	15	114	1	41
Future Volume (vph)	283	1	15	114	1	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.994	0.999	
Satd. Flow (prot)	1863	0	0	1852	1615	0
Flt Permitted				0.994	0.999	
Satd. Flow (perm)	1863	0	0	1852	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	1	16	124	1	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	309	0	0	140	46	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	1	15	114	1	41
Future Vol, veh/h	283	1	15	114	1	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	1	16	124	1	45

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	465	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	156	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1252	-	556	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	872	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	548	731
Mov Cap-2 Maneuver	-	-	-	-	548	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	725	-	-	1252	-
HCM Lane V/C Ratio	0.063	-	-	0.013	-
HCM Control Delay (s)	10.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	324	0	14	117	0	28
Future Volume (vph)	324	0	14	117	0	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	352	0	15	127	0	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	0	0	142	30	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.9%		ICU Level of Service A	
Analysis Period (min) 15			

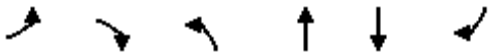
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	324	0	14	117	0	28
Future Vol, veh/h	324	0	14	117	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	352	0	15	127	0	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	509	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	157	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1207	-	524	692
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1207	-	517	692
Mov Cap-2 Maneuver	-	-	-	-	517	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	692	-	-	1207	-
HCM Lane V/C Ratio	0.044	-	-	0.013	-
HCM Control Delay (s)	10.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	5	15	39	13	2
Future Volume (vph)	2	5	15	39	13	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.983	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1660	0	0	1837	1831	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1660	0	0	1837	1831	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	5	16	42	14	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	58	16	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

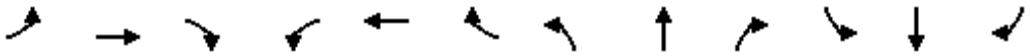
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	5	15	39	13	2
Future Vol, veh/h	2	5	15	39	13	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	5	16	42	14	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	89	15	16	0	-	0
Stage 1	15	-	-	-	-	-
Stage 2	74	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	912	1065	1602	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	903	1065	1602	-	-	-
Mov Cap-2 Maneuver	903	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1013	-	-
HCM Lane V/C Ratio	0.01	-	0.008	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	90	0	6	28	32	0	2	20	65	0	0
Future Volume (vph)	3	90	0	6	28	32	0	2	20	65	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.934			0.876				
Flt Protected		0.999			0.995						0.950	
Satd. Flow (prot)	0	1861	0	0	1731	0	0	1632	0	0	1770	0
Flt Permitted		0.999			0.995						0.950	
Satd. Flow (perm)	0	1861	0	0	1731	0	0	1632	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	98	0	7	30	35	0	2	22	71	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	72	0	0	24	0	0	71	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.2%		ICU Level of Service A	
Analysis Period (min) 15			

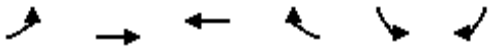
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	90	0	6	28	32	0	2	20	65	0	0
Future Vol, veh/h	3	90	0	6	28	32	0	2	20	65	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	98	0	7	30	35	0	2	22	71	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	98	0	0	166	183	98	178	166	48
Stage 1	-	-	-	-	-	-	104	104	-	62	62	-
Stage 2	-	-	-	-	-	-	62	79	-	116	104	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1537	-	-	1495	-	-	798	711	958	784	727	1021
Stage 1	-	-	-	-	-	-	902	809	-	949	843	-
Stage 2	-	-	-	-	-	-	949	829	-	889	809	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1537	-	-	1495	-	-	794	706	958	760	722	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	794	706	-	760	722	-
Stage 1	-	-	-	-	-	-	900	807	-	947	839	-
Stage 2	-	-	-	-	-	-	944	825	-	865	807	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	9	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	928	1537	-	-	1495	-	-	760
HCM Lane V/C Ratio	0.026	0.002	-	-	0.004	-	-	0.093
HCM Control Delay (s)	9	7.3	0	-	7.4	0	-	10.2
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	43	13	13	35	0
Future Volume (vph)	1	43	13	13	35	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.932			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1736	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1736	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		44.7	42.8		61.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	47	14	14	38	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	48	28	0	38	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

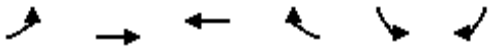
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	43	13	13	35	0
Future Vol, veh/h	1	43	13	13	35	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	47	14	14	38	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	28	0	-	0	70	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1585	-	-	-	934	1056
Stage 1	-	-	-	-	1002	-
Stage 2	-	-	-	-	973	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	933	1056
Mov Cap-2 Maneuver	-	-	-	-	933	-
Stage 1	-	-	-	-	1001	-
Stage 2	-	-	-	-	973	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	933
HCM Lane V/C Ratio	0.001	-	-	-	0.041
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	187	61	6	17	0
Future Volume (vph)	1	187	61	6	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1839	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1839	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		47.2	13.2		60.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	203	66	7	18	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	204	73	0	18	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.6%		ICU Level of Service A	
Analysis Period (min) 15			

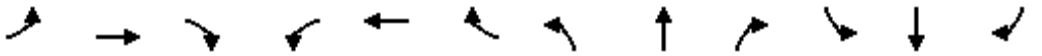
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	187	61	6	17	0
Future Vol, veh/h	1	187	61	6	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	203	66	7	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	73	0	-	0	275	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1527	-	-	-	715	993
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	829	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1527	-	-	-	714	993
Mov Cap-2 Maneuver	-	-	-	-	714	-
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	829	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1527	-	-	-	714
HCM Lane V/C Ratio	0.001	-	-	-	0.026
HCM Control Delay (s)	7.4	0	-	-	10.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

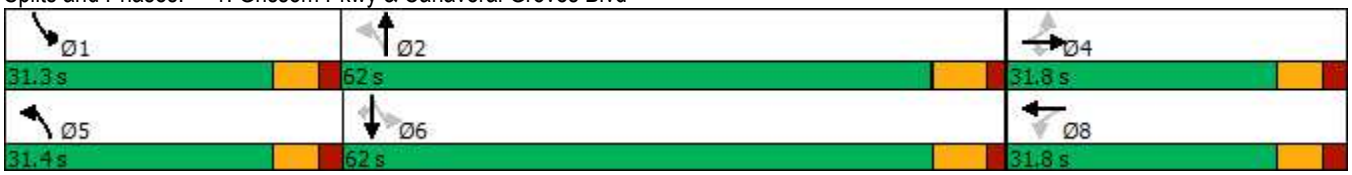


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	69	86	61	83	74	168	409	89	86	247	81
Future Volume (vph)	63	69	86	61	83	74	168	409	89	86	247	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.954			0.973				0.850
Flt Protected		0.977			0.986		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1752	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.704			0.856		0.469			0.338		
Satd. Flow (perm)	0	1311	1583	0	1521	0	874	1812	0	630	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			93		18			11				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	75	93	66	90	80	183	445	97	93	268	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	143	93	0	236	0	183	542	0	93	268	88
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		18.5	18.5		18.5		41.0	31.7		33.4	25.0	25.0
Actuated g/C Ratio		0.25	0.25		0.25		0.54	0.42		0.44	0.33	0.33
v/c Ratio		0.45	0.20		0.61		0.30	0.70		0.24	0.43	0.15
Control Delay		31.1	7.5		32.4		9.6	25.6		10.1	22.8	5.4
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.1	7.5		32.4		9.6	25.6		10.1	22.8	5.4
LOS		C	A		C		A	C		B	C	A
Approach Delay		21.8			32.4			21.6			16.7	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		56	0		89		37	214		18	95	0
Queue Length 95th (ft)		131	37		196		77	374		42	183	30
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		452	606		536		809	1375		754	1409	1219
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.32	0.15		0.44		0.23	0.39		0.12	0.19	0.07

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 75.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 67.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	69	86	61	83	74	168	409	89	86	247	81
Future Volume (veh/h)	63	69	86	61	83	74	168	409	89	86	247	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	75	93	66	90	80	183	445	97	93	268	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	203	338	140	143	104	532	546	119	330	620	525
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.10	0.37	0.37	0.07	0.33	0.33
Sat Flow, veh/h	563	953	1585	280	672	488	1781	1488	324	1781	1870	1585
Grp Volume(v), veh/h	143	0	93	236	0	0	183	0	542	93	268	88
Grp Sat Flow(s),veh/h/ln	1517	0	1585	1440	0	0	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	2.8	4.8	0.0	0.0	3.7	0.0	15.4	1.9	6.4	2.2
Cycle Q Clear(g_c), s	4.3	0.0	2.8	9.1	0.0	0.0	3.7	0.0	15.4	1.9	6.4	2.2
Prop In Lane	0.48		1.00	0.28		0.34	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	416	0	338	388	0	0	532	0	665	330	620	525
V/C Ratio(X)	0.34	0.00	0.28	0.61	0.00	0.00	0.34	0.00	0.81	0.28	0.43	0.17
Avail Cap(c_a), veh/h	751	0	694	735	0	0	1131	0	1746	990	1802	1527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	18.8	21.2	0.0	0.0	10.7	0.0	16.3	12.6	14.9	13.5
Incr Delay (d2), s/veh	0.5	0.0	0.4	1.5	0.0	0.0	0.4	0.0	2.5	0.5	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.0	2.8	0.0	0.0	1.2	0.0	5.5	0.6	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	0.0	19.2	22.8	0.0	0.0	11.0	0.0	18.8	13.1	15.4	13.7
LnGrp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		236			236			725			449	
Approach Delay, s/veh		19.5			22.8			16.8			14.6	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	28.0		19.0	12.2	25.9		19.0				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	17.4		6.3	5.7	8.4		11.1				
Green Ext Time (p_c), s	0.2	3.5		1.0	0.4	1.8		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		17.5	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	69	86	61	83	74	168	409	89	86	247	81
Future Volume (veh/h)	63	69	86	61	83	74	168	409	89	86	247	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	75	93	66	90	80	183	445	97	93	268	88
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	213	203	338	140	143	104	532	546	119	330	620	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.10	0.37	0.37	0.07	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.7	0.0	19.2	22.8	0.0	0.0	11.0	0.0	18.8	13.1	15.4	13.7
Ln Grp LOS	B	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		236			236			725			449	
Approach Delay, s/veh		19.5			22.8			16.8			14.6	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.2	28.0		19.0	12.2	25.9		19.0
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.3
Max Q Clear (g_c+I1), s	3.9	17.4		6.3	5.7	8.4		11.1
Green Ext Time (g_e), s	0.2	3.5		1.0	0.4	1.8		1.1
Prob of Phs Call (p_c)	0.77	1.00		1.00	0.95	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.02

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			563	1781			280

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1488		953		1870		672

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		324		1585		1585		488

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

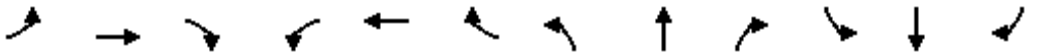
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	93	0	0	143	183	0	0	236
Grp Sat Flow (s), veh/h/ln	1781	0	0	1517	1781	0	0	1440
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	3.7	0.0	0.0	4.8
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	4.3	3.7	0.0	0.0	9.1
Perm LT Sat Flow (s_l), veh/h/ln	864	0	0	1234	1025	0	0	1237
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1418	0	0	0	0
Perm LT Eff Green (g_p), s	18.9	0.0	0.0	12.2	18.9	0.0	0.0	12.2
Perm LT Serve Time (g_u), s	5.5	0.0	0.0	3.1	12.5	0.0	0.0	7.9
Perm LT Q Serve Time (g_ps), s	1.6	0.0	0.0	0.0	1.4	0.0	0.0	4.8
Time to First Blk (g_f), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.28
Lane Grp Cap (c), veh/h	330	0	0	416	532	0	0	388
V/C Ratio (X)	0.28	0.00	0.00	0.34	0.34	0.00	0.00	0.61
Avail Cap (c_a), veh/h	990	0	0	751	1131	0	0	735
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.6	0.0	0.0	19.2	10.7	0.0	0.0	21.2
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.5	0.4	0.0	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.1	0.0	0.0	19.7	11.0	0.0	0.0	22.8
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	1.5	1.1	0.0	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	1.5	1.2	0.0	0.0	2.8
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.06	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	268	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	6.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	620	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1802	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	14.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	542	0	93	0	88	0	0
Grp Sat Flow (s), veh/h/ln	0	1812	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	15.4	0.0	2.8	0.0	2.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	15.4	0.0	2.8	0.0	2.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.34
Lane Grp Cap (c), veh/h	0	665	0	338	0	525	0	0
V/C Ratio (X)	0.00	0.81	0.00	0.28	0.00	0.17	0.00	0.00
Avail Cap (c_a), veh/h	0	1746	0	694	0	1527	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.3	0.0	18.8	0.0	13.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.0	0.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.8	0.0	19.2	0.0	13.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.0	0.0	0.9	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	5.5	0.0	1.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.14	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	0	84	27	0	20	144	625	1	0	367	86
Future Volume (vph)	48	0	84	27	0	20	144	625	1	0	367	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	0	91	29	0	22	157	679	1	0	399	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	52	91	0	51	0	157	679	1	0	399	93
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

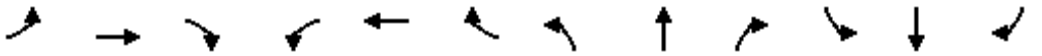
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	0	84	27	0	20	144	625	1	0	367	86
Future Vol, veh/h	48	0	84	27	0	20	144	625	1	0	367	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	91	29	0	22	157	679	1	0	399	93

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1404	1393	399	1484	1485	679	492	0	0	680	0	0
Stage 1	399	399	-	993	993	-	-	-	-	-	-	-
Stage 2	1005	994	-	491	492	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	117	142	651	103	125	452	1071	-	-	912	-	-
Stage 1	627	602	-	296	323	-	-	-	-	-	-	-
Stage 2	291	323	-	559	548	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	99	121	651	79	107	452	1071	-	-	912	-	-
Mov Cap-2 Maneuver	99	121	-	79	107	-	-	-	-	-	-	-
Stage 1	535	602	-	252	276	-	-	-	-	-	-	-
Stage 2	236	276	-	481	548	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35	54.3	1.7	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1071	-	-	99	651	122	912	-	-
HCM Lane V/C Ratio	0.146	-	-	0.527	0.14	0.419	-	-	-
HCM Control Delay (s)	8.9	-	-	76.2	11.4	54.3	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.4	0.5	1.8	0	-	-

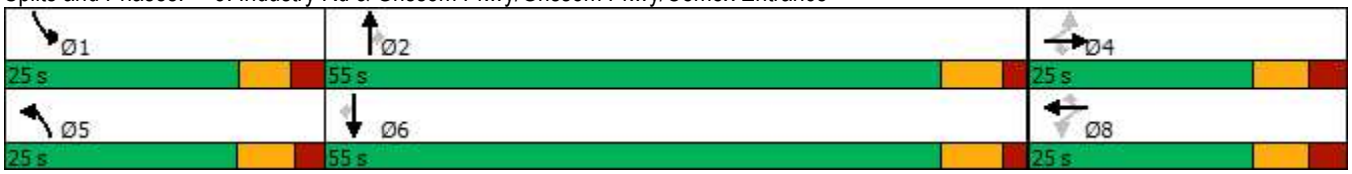


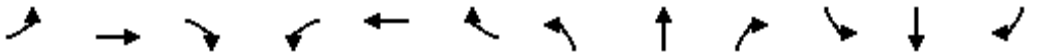
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	3	450	9	4	1	633	94	7	0	204	43
Future Volume (vph)	13	3	450	9	4	1	633	94	7	0	204	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.755			0.756			0.950					
Satd. Flow (perm)	1406	1863	1583	1408	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			489			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	3	489	10	4	1	688	102	8	0	222	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	3	489	10	4	1	688	102	8	0	222	47
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.4	10.4	10.4	10.4	10.4	10.4	18.3	41.2	41.2		16.0	16.0
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.06	0.01	0.74	0.05	0.01	0.00	0.72	0.09	0.01		0.49	0.10
Control Delay	24.0	23.0	10.3	23.7	23.2	0.0	28.3	5.9	0.0		26.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.0	23.0	10.3	23.7	23.2	0.0	28.3	5.9	0.0		26.5	0.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		10.8			22.0			25.2			22.0	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	5	1	0	3	1	0	117	12	0		73	0
Queue Length 95th (ft)	19	8	76	16	9	0	#249	39	0		153	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	496	780	374	496	503	951	1364	1191		1364	1191
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.04	0.01	0.63	0.03	0.01	0.00	0.72	0.07	0.01		0.16	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 20.0		Intersection LOS: C	
Intersection Capacity Utilization 65.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	3	450	9	4	1	633	94	7	0	204	43
Future Volume (veh/h)	13	3	450	9	4	1	633	94	7	0	204	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	3	0	10	4	1	688	102	8	0	222	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	106		216	106	90	877	1250	1060	3	533	452
Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.25	0.67	0.67	0.00	0.29	0.29
Sat Flow, veh/h	1411	1870	1585	1414	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	14	3	0	10	4	1	688	102	8	0	222	47
Grp Sat Flow(s),veh/h/ln	1411	1870	1585	1414	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.1	0.0	0.4	0.1	0.0	9.7	1.0	0.1	0.0	5.0	1.1
Cycle Q Clear(g_c), s	0.6	0.1	0.0	0.4	0.1	0.0	9.7	1.0	0.1	0.0	5.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	106		216	106	90	877	1250	1060	3	533	452
V/C Ratio(X)	0.07	0.03		0.05	0.04	0.01	0.78	0.08	0.01	0.00	0.42	0.10
Avail Cap(c_a), veh/h	606	624		607	624	529	1200	1716	1455	622	1716	1455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	23.4	0.0	23.6	23.4	23.3	18.2	3.0	2.9	0.0	15.2	13.8
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.1	0.2	0.1	2.4	0.0	0.0	0.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.0	3.7	0.2	0.0	0.0	2.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	23.5	0.0	23.7	23.5	23.4	20.6	3.1	2.9	0.0	15.8	13.9
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		17	A		15			798			269	
Approach Delay, s/veh		23.7			23.6			18.2			15.5	
Approach LOS		C			C			B			B	

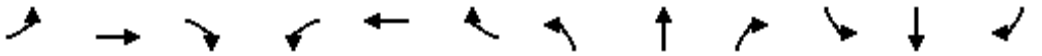
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	41.9		10.5	20.1	21.8		10.5				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.0		2.6	11.7	7.0		2.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.6	1.9		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	3	450	9	4	1	633	94	7	0	204	43
Future Volume (veh/h)	13	3	450	9	4	1	633	94	7	0	204	43
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	3	0	10	4	1	688	102	8	0	222	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	106		216	106	90	877	1250	1060	3	533	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.06	0.00	0.06	0.06	0.06	0.25	0.67	0.67	0.00	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.8	23.5	0.0	23.7	23.5	23.4	20.6	3.1	2.9	0.0	15.8	13.9
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		17			15			798			269	
Approach Delay, s/veh		23.7			23.6			18.2			15.5	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	41.9		10.5	20.1	21.8		10.5
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.5	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	3.0		2.6	11.7	7.0		2.4
Green Ext Time (g_e), s	0.0	0.7		0.0	1.6	1.9		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.37	1.00	1.00		0.37
Prob of Max Out (p_x)	0.00	0.00		0.00	0.38	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1411	3456			1414

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	14	688	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1411	1728	0	0	1414
Q Serve Time (g_s), s	0.0	0.0	0.0	0.5	9.7	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.6	9.7	0.0	0.0	0.4
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1411	0	0	0	1414
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	215	877	0	0	216
V/C Ratio (X)	0.00	0.00	0.00	0.07	0.78	0.00	0.00	0.05
Avail Cap (c_a), veh/h	622	0	0	606	1200	0	0	607
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	23.6	18.2	0.0	0.0	23.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	2.4	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	23.8	20.6	0.0	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	3.4	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	3.7	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.03	0.68	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	102	0	3	0	222	0	4
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.0	0.0	0.1	0.0	5.0	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.0	0.0	0.1	0.0	5.0	0.0	0.1
Lane Grp Cap (c), veh/h	0	1250	0	106	0	533	0	106
V/C Ratio (X)	0.00	0.08	0.00	0.03	0.00	0.42	0.00	0.04
Avail Cap (c_a), veh/h	0	1716	0	624	0	1716	0	624
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	23.4	0.0	15.2	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.6	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.1	0.0	23.5	0.0	15.8	0.0	23.5
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

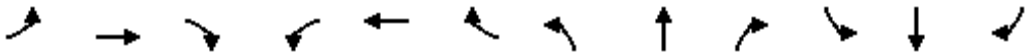
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	2.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	47	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1060	0	90	0	452	0	90
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.10	0.00	0.01
Avail Cap (c_a), veh/h	0	1455	0	529	0	1455	0	529
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	2.9	0.0	0.0	0.0	13.8	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	2.9	0.0	0.0	0.0	13.9	0.0	23.4
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	138	14	23	227	1	9	0	12	1	2	6
Future Volume (vph)	11	138	14	23	227	1	9	0	12	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.924			0.905	
Flt Protected		0.997			0.995			0.979			0.995	
Satd. Flow (prot)	0	1837	0	0	1853	0	0	1685	0	0	1677	0
Flt Permitted		0.997			0.995			0.979			0.995	
Satd. Flow (perm)	0	1837	0	0	1853	0	0	1685	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	150	15	25	247	1	10	0	13	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	177	0	0	273	0	0	23	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	138	14	23	227	1	9	0	12	1	2	6
Future Vol, veh/h	11	138	14	23	227	1	9	0	12	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	150	15	25	247	1	10	0	13	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	248	0	0	165	0	0	484	480	158	486	487	248
Stage 1	-	-	-	-	-	-	182	182	-	298	298	-
Stage 2	-	-	-	-	-	-	302	298	-	188	189	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1318	-	-	1413	-	-	493	485	887	492	481	791
Stage 1	-	-	-	-	-	-	820	749	-	711	667	-
Stage 2	-	-	-	-	-	-	707	667	-	814	744	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1318	-	-	1413	-	-	476	470	887	473	466	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	476	470	-	473	466	-
Stage 1	-	-	-	-	-	-	812	742	-	704	653	-
Stage 2	-	-	-	-	-	-	684	653	-	794	737	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	10.8	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	647	1318	-	-	1413	-	-	643
HCM Lane V/C Ratio	0.035	0.009	-	-	0.018	-	-	0.015
HCM Control Delay (s)	10.8	7.8	0	-	7.6	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	148	0	48	307	2	26
Future Volume (vph)	148	0	48	307	2	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.874	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1623	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1623	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	52	334	2	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	386	30	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	48	307	2	26
Future Vol, veh/h	148	0	48	307	2	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	0	52	334	2	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	599	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	465	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	444	884
Mov Cap-2 Maneuver	-	-	-	-	444	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	826	-	-	1418	-
HCM Lane V/C Ratio	0.037	-	-	0.037	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	175	0	38	311	0	20
Future Volume (vph)	175	0	38	311	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.995		
Satd. Flow (prot)	1863	0	0	1853	1611	0
Flt Permitted				0.995		
Satd. Flow (perm)	1863	0	0	1853	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	0	41	338	0	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	190	0	0	379	22	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

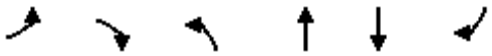
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	175	0	38	311	0	20
Future Vol, veh/h	175	0	38	311	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	190	0	41	338	0	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	190	0	610	190
Stage 1	-	-	-	-	190	-
Stage 2	-	-	-	-	420	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1384	-	458	852
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1384	-	442	852
Mov Cap-2 Maneuver	-	-	-	-	442	-
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	852	-	-	1384	-
HCM Lane V/C Ratio	0.026	-	-	0.03	-
HCM Control Delay (s)	9.3	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	18	11	26	44	2
Future Volume (vph)	3	18	11	26	44	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.883				0.995	
Flt Protected	0.994			0.985		
Satd. Flow (prot)	1635	0	0	1835	1853	0
Flt Permitted	0.994			0.985		
Satd. Flow (perm)	1635	0	0	1835	1853	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	20	12	28	48	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	40	50	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.6%		ICU Level of Service A	
Analysis Period (min) 15			

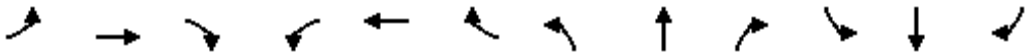
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	18	11	26	44	2
Future Vol, veh/h	3	18	11	26	44	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	20	12	28	48	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	101	49	50	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	52	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	898	1020	1557	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	891	1020	1557	-	-	-
Mov Cap-2 Maneuver	891	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	970	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1557	-	999	-	-
HCM Lane V/C Ratio	0.008	-	0.023	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	55	0	21	103	79	0	1	13	43	2	3
Future Volume (vph)	2	55	0	21	103	79	0	1	13	43	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.947			0.874			0.992	
Flt Protected		0.998			0.995						0.957	
Satd. Flow (prot)	0	1859	0	0	1755	0	0	1628	0	0	1768	0
Flt Permitted		0.998			0.995						0.957	
Satd. Flow (perm)	0	1859	0	0	1755	0	0	1628	0	0	1768	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	60	0	23	112	86	0	1	14	47	2	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	62	0	0	221	0	0	15	0	0	52	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.1%		ICU Level of Service A	
Analysis Period (min) 15			

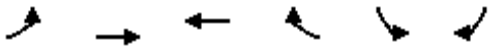
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	55	0	21	103	79	0	1	13	43	2	3
Future Vol, veh/h	2	55	0	21	103	79	0	1	13	43	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	60	0	23	112	86	0	1	14	47	2	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	60	0	0	268	308	60	273	265	155
Stage 1	-	-	-	-	-	-	64	64	-	201	201	-
Stage 2	-	-	-	-	-	-	204	244	-	72	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1375	-	-	1544	-	-	685	606	1005	679	640	891
Stage 1	-	-	-	-	-	-	947	842	-	801	735	-
Stage 2	-	-	-	-	-	-	798	704	-	938	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1375	-	-	1544	-	-	671	594	1005	659	628	891
Mov Cap-2 Maneuver	-	-	-	-	-	-	671	594	-	659	628	-
Stage 1	-	-	-	-	-	-	945	840	-	799	723	-
Stage 2	-	-	-	-	-	-	779	692	-	922	840	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.8	8.8	10.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	958	1375	-	-	1544	-	-	669
HCM Lane V/C Ratio	0.016	0.002	-	-	0.015	-	-	0.078
HCM Control Delay (s)	8.8	7.6	0	-	7.4	0	-	10.8
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	25	48	43	25	2
Future Volume (vph)	2	25	48	43	25	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.936		0.991	
Flt Protected		0.997			0.956	
Satd. Flow (prot)	0	1857	1744	0	1765	0
Flt Permitted		0.997			0.956	
Satd. Flow (perm)	0	1857	1744	0	1765	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	27	52	47	27	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	29	99	0	29	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.2%		ICU Level of Service A	
Analysis Period (min) 15			

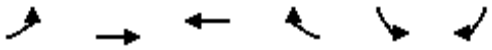
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	25	48	43	25	2
Future Vol, veh/h	2	25	48	43	25	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	27	52	47	27	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	99	0	-	0	107	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	31	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1494	-	-	-	891	985
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	992	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1494	-	-	-	890	985
Mov Cap-2 Maneuver	-	-	-	-	890	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1494	-	-	-	896
HCM Lane V/C Ratio	0.001	-	-	-	0.033
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	119	209	21	12	1
Future Volume (vph)	0	119	209	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1840	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1840	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	129	227	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	129	250	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	119	209	21	12	1
Future Vol, veh/h	0	119	209	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	129	227	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	250	0	-	0	368	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1316	-	-	-	632	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	897	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1316	-	-	-	632	800
Mov Cap-2 Maneuver	-	-	-	-	632	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	897	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

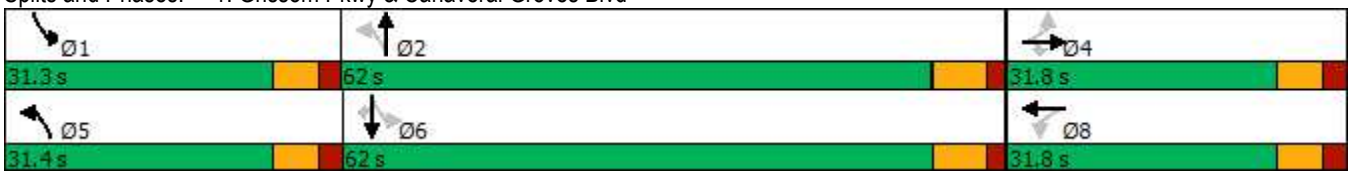
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	-	642
HCM Lane V/C Ratio	-	-	-	-	0.022
HCM Control Delay (s)	0	-	-	-	10.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	119	161	60	53	43	44	159	40	88	358	47
Future Volume (vph)	102	119	161	60	53	43	44	159	40	88	358	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.970				0.850
Flt Protected		0.977			0.981		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1760	0	1770	1807	0	1770	1863	1583
Flt Permitted		0.795			0.783		0.444			0.574		
Satd. Flow (perm)	0	1481	1583	0	1405	0	827	1807	0	1069	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			175		14			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	129	175	65	58	47	48	173	43	96	389	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	240	175	0	170	0	48	216	0	96	389	51
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		20.5	20.5		20.5		25.8	19.8		28.2	23.1	23.1
Actuated g/C Ratio		0.31	0.31		0.31		0.39	0.30		0.43	0.35	0.35
v/c Ratio		0.52	0.28		0.38		0.11	0.39		0.18	0.59	0.08
Control Delay		25.3	5.1		21.2		10.3	21.4		10.6	24.4	1.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		25.3	5.1		21.2		10.3	21.4		10.6	24.4	1.9
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.8			21.2			19.4			19.8	
Approach LOS		B			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		81	0		50		10	69		20	145	0
Queue Length 95th (ft)		173	43		117		27	134		45	255	9
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		596	741		573		808	1495		837	1537	1321
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.40	0.24		0.30		0.06	0.14		0.11	0.25	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 65.5			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 56.5%		ICU Level of Service B	
Analysis Period (min) 15			

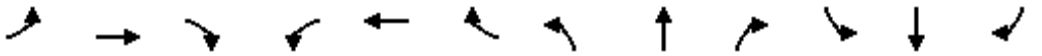
Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	119	161	60	53	43	44	159	40	88	358	47
Future Volume (veh/h)	102	119	161	60	53	43	44	159	40	88	358	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	129	175	65	58	47	48	173	43	96	389	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	218	374	148	122	66	360	427	106	504	595	504
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.05	0.30	0.30	0.07	0.32	0.32
Sat Flow, veh/h	586	923	1585	211	516	278	1781	1446	359	1781	1870	1585
Grp Volume(v), veh/h	240	0	175	170	0	0	48	0	216	96	389	51
Grp Sat Flow(s),veh/h/ln	1510	0	1585	1004	0	0	1781	0	1806	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	4.8	1.9	0.0	0.0	0.9	0.0	4.9	1.8	9.1	1.2
Cycle Q Clear(g_c), s	7.3	0.0	4.8	9.2	0.0	0.0	0.9	0.0	4.9	1.8	9.1	1.2
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	460	0	374	335	0	0	360	0	533	504	595	504
V/C Ratio(X)	0.52	0.00	0.47	0.51	0.00	0.00	0.13	0.00	0.41	0.19	0.65	0.10
Avail Cap(c_a), veh/h	856	0	780	694	0	0	1150	0	1955	1251	2025	1716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	16.7	17.6	0.0	0.0	11.9	0.0	14.3	11.0	14.9	12.2
Incr Delay (d2), s/veh	0.9	0.0	0.9	1.2	0.0	0.0	0.2	0.0	0.5	0.2	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.6	1.6	0.0	0.0	0.3	0.0	1.6	0.6	3.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	17.6	18.7	0.0	0.0	12.1	0.0	14.8	11.1	16.2	12.3
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		415			170			264			536	
Approach Delay, s/veh		18.0			18.7			14.3			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	22.0		18.8	8.9	23.1		18.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.8	6.9		9.3	2.9	11.1		11.2				
Green Ext Time (p_c), s	0.2	1.2		1.7	0.1	2.4		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		16.2	
HCM 6th LOS		B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Future Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	0	165	1	0	0	36	287	1	0	645	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	165	0	1	0	36	287	1	0	645	49
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

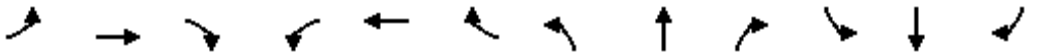
Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	0	152	1	0	0	33	264	1	0	593	45
Future Vol, veh/h	99	0	152	1	0	0	33	264	1	0	593	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	0	165	1	0	0	36	287	1	0	645	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1005	1005	645	1111	1053	287	694	0	0	288	0	0
Stage 1	645	645	-	359	359	-	-	-	-	-	-	-
Stage 2	360	360	-	752	694	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	220	241	472	186	226	752	901	-	-	1274	-	-
Stage 1	461	467	-	659	627	-	-	-	-	-	-	-
Stage 2	658	626	-	402	444	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	213	231	472	117	217	752	901	-	-	1274	-	-
Mov Cap-2 Maneuver	213	231	-	117	217	-	-	-	-	-	-	-
Stage 1	443	467	-	633	602	-	-	-	-	-	-	-
Stage 2	632	601	-	261	444	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.1	36.1	1	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	213	472	117	1274	-	-
HCM Lane V/C Ratio	0.04	-	-	0.505	0.35	0.009	-	-	-
HCM Control Delay (s)	9.2	-	-	38	16.7	36.1	0	-	-
HCM Lane LOS	A	-	-	E	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	1.6	0	0	-	-

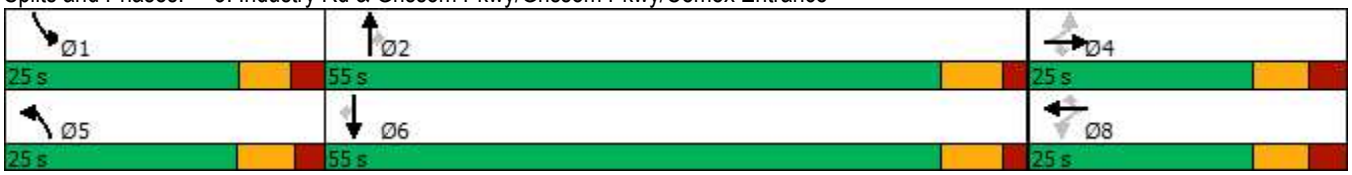


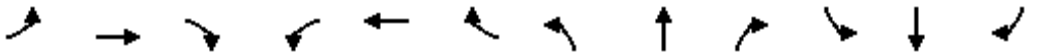
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	5	479	50	1	0	267	100	42	3	131	21
Future Volume (vph)	29	5	479	50	1	0	267	100	42	3	131	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.754			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1405	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			521						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	5	521	54	1	0	290	109	46	3	142	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	5	521	54	1	0	290	109	46	3	142	23
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.6	10.6	10.6	10.6	10.6		12.4	26.7	26.7	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.12	0.01	0.72	0.20	0.00		0.37	0.12	0.05	0.02	0.27	0.04
Control Delay	20.5	18.8	8.6	21.7	19.0		22.4	10.1	0.1	27.0	20.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	18.8	8.6	21.7	19.0		22.4	10.1	0.1	27.0	20.3	0.1
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.4			21.6			17.1			17.6	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	1	0	16	0		43	13	0	1	36	0
Queue Length 95th (ft)	29	9	68	43	4		87	64	0	9	95	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	472	624	877	471	624		1196	1610	1384	620	1610	1384
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.59	0.11	0.00		0.24	0.07	0.03	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 54.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	21
Future Volume (veh/h)	29	5	479	50	1	0	267	100	42	3	131	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	290	109	46	3	142	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	220		311	220	186	473	826	700	7	573	486
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	32	5	0	54	1	0	290	109	46	3	142	23
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.1	0.0	1.7	0.0	0.0	3.8	1.7	0.8	0.1	2.8	0.5
Cycle Q Clear(g_c), s	1.0	0.1	0.0	1.8	0.0	0.0	3.8	1.7	0.8	0.1	2.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	220		311	220	186	473	826	700	7	573	486
V/C Ratio(X)	0.10	0.02		0.17	0.00	0.00	0.61	0.13	0.07	0.41	0.25	0.05
Avail Cap(c_a), veh/h	662	678		657	678	574	1302	1863	1579	675	1863	1579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	18.9	0.0	19.7	18.8	0.0	19.6	8.0	7.8	24.0	12.6	11.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.0	1.5	0.6	0.2	0.1	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	18.9	0.0	20.0	18.8	0.0	20.9	8.1	7.8	49.4	12.8	11.8
LnGrp LOS	B	B		B	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37			55			445			168	
Approach Delay, s/veh		19.4			20.0			16.4			13.3	
Approach LOS		B			B			B			B	

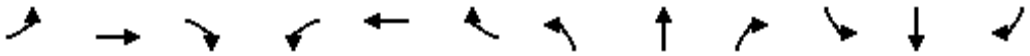
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.2		13.2	13.4	21.7		13.2				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.0	5.8	4.8		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.8	1.1		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		16.1
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	181	4	12	75	2	9	0	15	1	0	12
Future Volume (vph)	1	181	4	12	75	2	9	0	15	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.917			0.875	
Flt Protected					0.993			0.981			0.996	
Satd. Flow (prot)	0	1857	0	0	1844	0	0	1676	0	0	1623	0
Flt Permitted					0.993			0.981			0.996	
Satd. Flow (perm)	0	1857	0	0	1844	0	0	1676	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	197	4	13	82	2	10	0	16	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	0	0	97	0	0	26	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	181	4	12	75	2	9	0	15	1	0	12
Future Vol, veh/h	1	181	4	12	75	2	9	0	15	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	197	4	13	82	2	10	0	16	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	201	0	0	317	311	199	318	312	83
Stage 1	-	-	-	-	-	-	201	201	-	109	109	-
Stage 2	-	-	-	-	-	-	116	110	-	209	203	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1513	-	-	1371	-	-	636	604	842	635	603	976
Stage 1	-	-	-	-	-	-	801	735	-	896	805	-
Stage 2	-	-	-	-	-	-	889	804	-	793	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1513	-	-	1371	-	-	622	597	842	617	596	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	622	597	-	617	596	-
Stage 1	-	-	-	-	-	-	800	734	-	895	797	-
Stage 2	-	-	-	-	-	-	868	796	-	777	732	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	10	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	743	1513	-	-	1371	-	-	934
HCM Lane V/C Ratio	0.035	0.001	-	-	0.01	-	-	0.015
HCM Control Delay (s)	10	7.4	0	-	7.7	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	283	1	20	114	1	46
Future Volume (vph)	283	1	20	114	1	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.993	0.999	
Satd. Flow (prot)	1863	0	0	1850	1615	0
Flt Permitted				0.993	0.999	
Satd. Flow (perm)	1863	0	0	1850	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	1	22	124	1	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	309	0	0	146	51	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	1	20	114	1	46
Future Vol, veh/h	283	1	20	114	1	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	1	22	124	1	50

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	309	0	477	309
Stage 1	-	-	-	-	309	-
Stage 2	-	-	-	-	168	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1252	-	547	731
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	862	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1252	-	537	731
Mov Cap-2 Maneuver	-	-	-	-	537	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	846	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	725	-	-	1252	-
HCM Lane V/C Ratio	0.07	-	-	0.017	-
HCM Control Delay (s)	10.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	329	0	16	121	0	30
Future Volume (vph)	329	0	16	121	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	358	0	17	132	0	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	358	0	0	149	33	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.8%		ICU Level of Service A	
Analysis Period (min) 15			

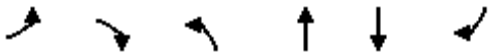
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	329	0	16	121	0	30
Future Vol, veh/h	329	0	16	121	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	358	0	17	132	0	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	358	0	524	358
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	166	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1201	-	514	686
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1201	-	506	686
Mov Cap-2 Maneuver	-	-	-	-	506	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	850	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	686	-	-	1201	-
HCM Lane V/C Ratio	0.048	-	-	0.014	-
HCM Control Delay (s)	10.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	15	41	15	5
Future Volume (vph)	5	5	15	41	15	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.968	
Flt Protected	0.976			0.987		
Satd. Flow (prot)	1694	0	0	1839	1803	0
Flt Permitted	0.976			0.987		
Satd. Flow (perm)	1694	0	0	1839	1803	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	5	16	45	16	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	61	21	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.7%		ICU Level of Service A	
Analysis Period (min) 15			

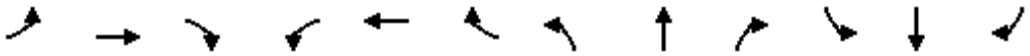
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	15	41	15	5
Future Vol, veh/h	5	5	15	41	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	16	45	16	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	96	19	21	0	-	0
Stage 1	19	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	903	1059	1595	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	946	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	894	1059	1595	-	-	-
Mov Cap-2 Maneuver	894	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	946	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1595	-	970	-	-
HCM Lane V/C Ratio	0.01	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	137	0	6	39	32	0	2	20	67	0	0
Future Volume (vph)	5	137	0	6	39	32	0	2	20	67	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.944			0.876				
Flt Protected		0.998			0.996						0.950	
Satd. Flow (prot)	0	1859	0	0	1751	0	0	1632	0	0	1770	0
Flt Permitted		0.998			0.996						0.950	
Satd. Flow (perm)	0	1859	0	0	1751	0	0	1632	0	0	1770	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	149	0	7	42	35	0	2	22	73	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	84	0	0	24	0	0	73	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.5%		ICU Level of Service A	
Analysis Period (min) 15			

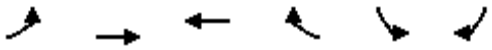
Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	137	0	6	39	32	0	2	20	67	0	0
Future Vol, veh/h	5	137	0	6	39	32	0	2	20	67	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	149	0	7	42	35	0	2	22	73	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	77	0	0	149	0	0	233	250	149	245	233	60
Stage 1	-	-	-	-	-	-	159	159	-	74	74	-
Stage 2	-	-	-	-	-	-	74	91	-	171	159	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1522	-	-	1432	-	-	722	653	898	709	667	1005
Stage 1	-	-	-	-	-	-	843	766	-	935	833	-
Stage 2	-	-	-	-	-	-	935	820	-	831	766	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1432	-	-	717	647	898	686	661	1005
Mov Cap-2 Maneuver	-	-	-	-	-	-	717	647	-	686	661	-
Stage 1	-	-	-	-	-	-	840	763	-	931	829	-
Stage 2	-	-	-	-	-	-	930	816	-	805	763	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.6	9.3	10.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1522	-	-	1432	-	-	686
HCM Lane V/C Ratio	0.028	0.004	-	-	0.005	-	-	0.106
HCM Control Delay (s)	9.3	7.4	0	-	7.5	0	-	10.9
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	92	26	13	37	0
Future Volume (vph)	3	92	26	13	37	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.955			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1779	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1779	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		44.7	42.8		61.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	100	28	14	40	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	103	42	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.3%		ICU Level of Service A	
Analysis Period (min) 15			

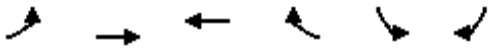
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	92	26	13	37	0
Future Vol, veh/h	3	92	26	13	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	100	28	14	40	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	42	0	-	0	141	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1567	-	-	-	852	1038
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1567	-	-	-	850	1038
Mov Cap-2 Maneuver	-	-	-	-	850	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	850
HCM Lane V/C Ratio	0.002	-	-	-	0.047
HCM Control Delay (s)	7.3	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	234	72	6	17	0
Future Volume (vph)	1	234	72	6	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.989			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1842	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1842	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		47.2	13.2		60.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	254	78	7	18	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	255	85	0	18	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	234	72	6	17	0
Future Vol, veh/h	1	234	72	6	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	254	78	7	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	338	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1512	-	-	-	658	978
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	657	978
Mov Cap-2 Maneuver	-	-	-	-	657	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

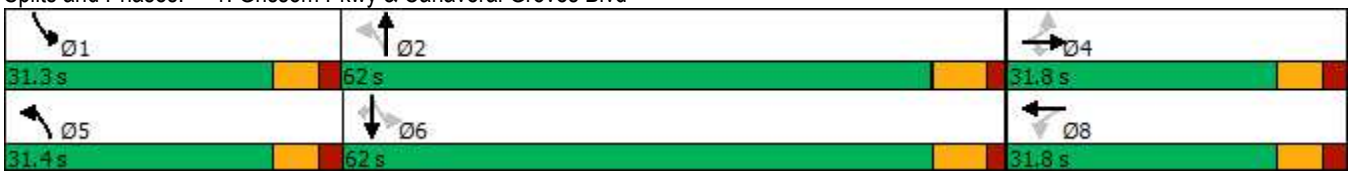
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	657
HCM Lane V/C Ratio	0.001	-	-	-	0.028
HCM Control Delay (s)	7.4	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

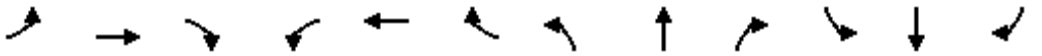
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	74	88	68	87	74	168	414	93	86	268	90
Future Volume (vph)	72	74	88	68	87	74	168	414	93	86	268	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.957			0.973				0.850
Flt Protected		0.976			0.985		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1756	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.690			0.843		0.436			0.309		
Satd. Flow (perm)	0	1285	1583	0	1503	0	812	1812	0	576	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			96		17			12				98
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	80	96	74	95	80	183	450	101	93	291	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	96	0	249	0	183	551	0	93	291	98
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		21.3	21.3		21.3		41.7	32.4		34.0	25.7	25.7
Actuated g/C Ratio		0.27	0.27		0.27		0.53	0.41		0.43	0.33	0.33
v/c Ratio		0.46	0.19		0.60		0.33	0.73		0.26	0.48	0.17
Control Delay		31.1	7.3		31.8		10.5	27.6		10.9	24.5	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.1	7.3		31.8		10.5	27.6		10.9	24.5	5.2
LOS		C	A		C		B	C		B	C	A
Approach Delay		22.1			31.8			23.3			17.9	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		64	0		97		43	241		21	116	0
Queue Length 95th (ft)		146	38		210		77	382		42	199	31
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		421	583		504		766	1313		713	1344	1169
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.38	0.16		0.49		0.24	0.42		0.13	0.22	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 78.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 68.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

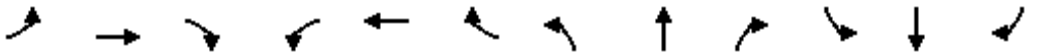




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	74	88	68	87	74	168	414	93	86	268	90
Future Volume (veh/h)	72	74	88	68	87	74	168	414	93	86	268	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	80	96	74	95	80	183	450	101	93	291	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	196	371	142	148	101	506	545	122	315	621	527
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.37	0.37	0.07	0.33	0.33
Sat Flow, veh/h	556	839	1585	278	635	432	1781	1479	332	1781	1870	1585
Grp Volume(v), veh/h	158	0	96	249	0	0	183	0	551	93	291	98
Grp Sat Flow(s),veh/h/ln	1395	0	1585	1345	0	0	1781	0	1811	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.0	5.6	0.0	0.0	3.9	0.0	16.7	2.0	7.5	2.7
Cycle Q Clear(g_c), s	5.5	0.0	3.0	11.1	0.0	0.0	3.9	0.0	16.7	2.0	7.5	2.7
Prop In Lane	0.49		1.00	0.30		0.32	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	371	392	0	0	506	0	668	315	621	527
V/C Ratio(X)	0.38	0.00	0.26	0.64	0.00	0.00	0.36	0.00	0.83	0.30	0.47	0.19
Avail Cap(c_a), veh/h	679	0	654	666	0	0	1062	0	1645	934	1699	1440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	18.9	22.1	0.0	0.0	11.4	0.0	17.3	13.5	16.0	14.4
Incr Delay (d2), s/veh	0.6	0.0	0.4	1.7	0.0	0.0	0.4	0.0	2.7	0.5	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.0	3.2	0.0	0.0	1.3	0.0	6.1	0.7	2.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	19.3	23.8	0.0	0.0	11.9	0.0	20.0	14.1	16.5	14.6
LnGrp LOS	C	A	B	C	A	A	B	A	B	B	B	B
Approach Vol, veh/h		254			249			734			482	
Approach Delay, s/veh		19.9			23.8			18.0			15.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	29.3		21.0	12.5	27.1		21.0				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	18.7		7.5	5.9	9.5		13.1				
Green Ext Time (p_c), s	0.2	3.6		1.1	0.4	1.9		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.4	
HCM 6th LOS		B	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	0	105	27	0	20	183	625	1	0	368	102
Future Volume (vph)	52	0	105	27	0	20	183	625	1	0	368	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	0	114	29	0	22	199	679	1	0	400	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	114	0	51	0	199	679	1	0	400	111
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

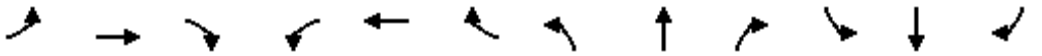
Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	105	27	0	20	183	625	1	0	368	102
Future Vol, veh/h	52	0	105	27	0	20	183	625	1	0	368	102
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	0	114	29	0	22	199	679	1	0	400	111

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1489	1478	400	1590	1588	679	511	0	0	680	0	0
Stage 1	400	400	-	1077	1077	-	-	-	-	-	-	-
Stage 2	1089	1078	-	513	511	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	126	650	87	108	452	1054	-	-	912	-	-
Stage 1	626	602	-	265	295	-	-	-	-	-	-	-
Stage 2	261	295	-	544	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	102	650	61	88	452	1054	-	-	912	-	-
Mov Cap-2 Maneuver	83	102	-	61	88	-	-	-	-	-	-	-
Stage 1	508	602	-	215	239	-	-	-	-	-	-	-
Stage 2	202	239	-	448	537	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.1	77.5	2.1	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1054	-	-	83	650	97	912	-	-
HCM Lane V/C Ratio	0.189	-	-	0.681	0.176	0.527	-	-	-
HCM Control Delay (s)	9.2	-	-	112.4	11.7	77.5	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	3.2	0.6	2.4	0	-	-

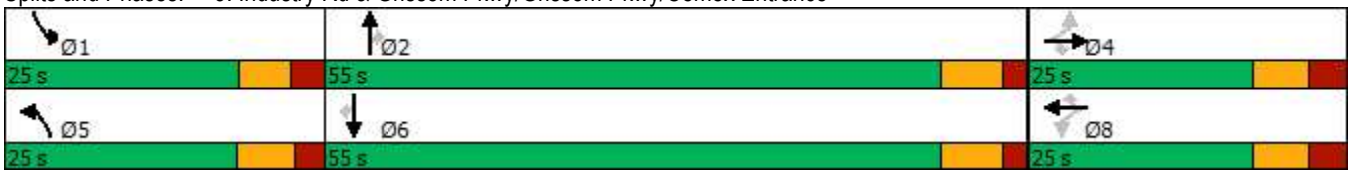


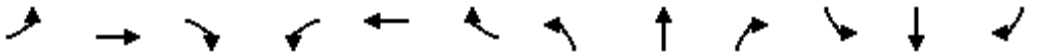
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	466	9	5	1	663	94	7	0	204	51
Future Volume (vph)	17	5	466	9	5	1	663	94	7	0	204	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.754			0.754			0.950					
Satd. Flow (perm)	1405	1863	1583	1405	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			507			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	5	507	10	5	1	721	102	8	0	222	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	507	10	5	1	721	102	8	0	222	55
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.0	16.0
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.08	0.02	0.75	0.05	0.02	0.00	0.76	0.09	0.01		0.49	0.12
Control Delay	24.4	23.2	10.5	23.7	23.2	0.0	29.7	6.0	0.0		26.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.4	23.2	10.5	23.7	23.2	0.0	29.7	6.0	0.0		26.5	0.7
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.1			22.0			26.5			21.4	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	6	2	0	3	2	0	124	12	0		73	0
Queue Length 95th (ft)	23	10	79	16	10	0	#268	39	0		153	3
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	496	793	374	496	502	950	1363	1190		1363	1190
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.01	0.64	0.03	0.01	0.00	0.76	0.07	0.01		0.16	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	466	9	5	1	663	94	7	0	204	51
Future Volume (veh/h)	17	5	466	9	5	1	663	94	7	0	204	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	123		223	123	104	901	1246	1056	3	521	442
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.26	0.67	0.67	0.00	0.28	0.28
Sat Flow, veh/h	1410	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	5	0	10	5	1	721	102	8	0	222	55
Grp Sat Flow(s),veh/h/ln	1410	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	0.4	0.1	0.0	10.5	1.0	0.1	0.0	5.2	1.4
Cycle Q Clear(g_c), s	0.8	0.1	0.0	0.5	0.1	0.0	10.5	1.0	0.1	0.0	5.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	123		223	123	104	901	1246	1056	3	521	442
V/C Ratio(X)	0.08	0.04		0.04	0.04	0.01	0.80	0.08	0.01	0.00	0.43	0.12
Avail Cap(c_a), veh/h	590	610		591	610	517	1172	1676	1420	607	1676	1420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	23.5	0.0	23.7	23.5	23.4	18.5	3.2	3.0	0.0	15.8	14.5
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	3.1	0.0	0.0	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.1	0.1	0.0	4.1	0.2	0.0	0.0	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	23.7	0.0	23.8	23.7	23.5	21.6	3.2	3.0	0.0	16.5	14.6
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23			16			831			277	
Approach Delay, s/veh		24.0			23.7			19.2			16.1	
Approach LOS		C			C			B			B	

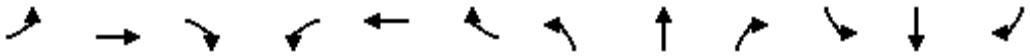
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	42.6		11.0	20.8	21.9		11.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.0		2.8	12.5	7.2		2.5				
Green Ext Time (p_c), s	0.0	0.7		0.0	1.5	1.9		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	138	15	25	227	1	10	0	16	1	2	6
Future Volume (vph)	11	138	15	25	227	1	10	0	16	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.918			0.905	
Flt Protected		0.997			0.995			0.981			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1678	0	0	1677	0
Flt Permitted		0.997			0.995			0.981			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1678	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	150	16	27	247	1	11	0	17	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	275	0	0	28	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	11	138	15	25	227	1	10	0	16	1	2	6
Future Vol, veh/h	11	138	15	25	227	1	10	0	16	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	150	16	27	247	1	11	0	17	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	248	0	0	166	0	0	488	484	158	493	492	248
Stage 1	-	-	-	-	-	-	182	182	-	302	302	-
Stage 2	-	-	-	-	-	-	306	302	-	191	190	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1318	-	-	1412	-	-	490	483	887	486	478	791
Stage 1	-	-	-	-	-	-	820	749	-	707	664	-
Stage 2	-	-	-	-	-	-	704	664	-	811	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1318	-	-	1412	-	-	472	468	887	465	463	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	472	468	-	465	463	-
Stage 1	-	-	-	-	-	-	812	742	-	700	649	-
Stage 2	-	-	-	-	-	-	681	649	-	787	736	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.8	10.7	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	663	1318	-	-	1412	-	-	640
HCM Lane V/C Ratio	0.043	0.009	-	-	0.019	-	-	0.015
HCM Control Delay (s)	10.7	7.8	0	-	7.6	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	148	0	52	307	2	32
Future Volume (vph)	148	0	52	307	2	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.872	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1619	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1619	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	0	57	334	2	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	391	37	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	148	0	52	307	2	32
Future Vol, veh/h	148	0	52	307	2	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	161	0	57	334	2	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	161	0	609	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	448	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1418	-	458	884
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	436	884
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	868	-
Stage 2	-	-	-	-	612	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	834	-	-	1418	-
HCM Lane V/C Ratio	0.044	-	-	0.04	-
HCM Control Delay (s)	9.5	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	181	0	41	315	0	23
Future Volume (vph)	181	0	41	315	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	197	0	45	342	0	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	197	0	0	387	25	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

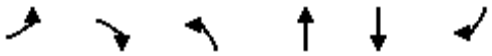
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	181	0	41	315	0	23
Future Vol, veh/h	181	0	41	315	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	197	0	45	342	0	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	197	0	629	197
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1376	-	446	844
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1376	-	428	844
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	629	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	844	-	-	1376	-
HCM Lane V/C Ratio	0.03	-	-	0.032	-
HCM Control Delay (s)	9.4	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	18	11	28	46	4
Future Volume (vph)	7	18	11	28	46	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904				0.990	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1660	0	0	1837	1844	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1660	0	0	1837	1844	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	20	12	30	50	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	42	54	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.7%		ICU Level of Service A	
Analysis Period (min) 15			

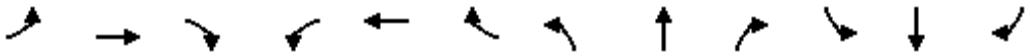
Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	18	11	28	46	4
Future Vol, veh/h	7	18	11	28	46	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	20	12	30	50	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	106	52	54	0	-	0
Stage 1	52	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	892	1016	1551	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	885	1016	1551	-	-	-
Mov Cap-2 Maneuver	885	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	969	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1551	-	976	-	-
HCM Lane V/C Ratio	0.008	-	0.028	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	81	0	21	158	79	0	1	13	43	2	6
Future Volume (vph)	5	81	0	21	158	79	0	1	13	43	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.959			0.874			0.983	
Flt Protected		0.997			0.996						0.960	
Satd. Flow (prot)	0	1857	0	0	1779	0	0	1628	0	0	1758	0
Flt Permitted		0.997			0.996						0.960	
Satd. Flow (perm)	0	1857	0	0	1779	0	0	1628	0	0	1758	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	88	0	23	172	86	0	1	14	47	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	281	0	0	15	0	0	56	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			

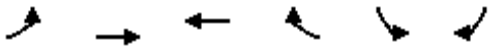
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	81	0	21	158	79	0	1	13	43	2	6
Future Vol, veh/h	5	81	0	21	158	79	0	1	13	43	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	88	0	23	172	86	0	1	14	47	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	258	0	0	88	0	0	364	402	88	367	359	215
Stage 1	-	-	-	-	-	-	98	98	-	261	261	-
Stage 2	-	-	-	-	-	-	266	304	-	106	98	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1307	-	-	1508	-	-	592	537	970	589	568	825
Stage 1	-	-	-	-	-	-	908	814	-	744	692	-
Stage 2	-	-	-	-	-	-	739	663	-	900	814	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1307	-	-	1508	-	-	576	525	970	570	556	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	576	525	-	570	556	-
Stage 1	-	-	-	-	-	-	904	811	-	741	680	-
Stage 2	-	-	-	-	-	-	718	651	-	882	811	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	9	11.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	915	1307	-	-	1508	-	-	591
HCM Lane V/C Ratio	0.017	0.004	-	-	0.015	-	-	0.094
HCM Control Delay (s)	9	7.8	0	-	7.4	0	-	11.7
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	54	106	43	25	4
Future Volume (vph)	4	54	106	43	25	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.961		0.983	
Flt Protected		0.997			0.958	
Satd. Flow (prot)	0	1857	1790	0	1754	0
Flt Permitted		0.997			0.958	
Satd. Flow (perm)	0	1857	1790	0	1754	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	59	115	47	27	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	63	162	0	31	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.2%		ICU Level of Service A	
Analysis Period (min) 15			

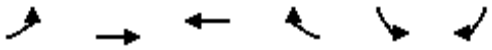
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	54	106	43	25	4
Future Vol, veh/h	4	54	106	43	25	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	59	115	47	27	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	206	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1417	-	-	-	782	909
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1417	-	-	-	780	909
Mov Cap-2 Maneuver	-	-	-	-	780	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1417	-	-	-	796
HCM Lane V/C Ratio	0.003	-	-	-	0.04
HCM Control Delay (s)	7.5	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	145	209	21	12	1
Future Volume (vph)	0	145	209	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.988		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1840	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1840	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	158	227	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	158	250	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.3%		ICU Level of Service A	
Analysis Period (min) 15			

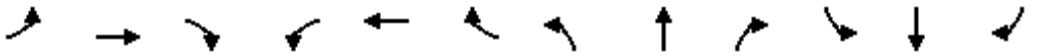
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	145	209	21	12	1
Future Vol, veh/h	0	145	209	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	158	227	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	250	0	-	0	397	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1316	-	-	-	608	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1316	-	-	-	608	800
Mov Cap-2 Maneuver	-	-	-	-	608	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1316	-	-	-	619
HCM Lane V/C Ratio	-	-	-	-	0.023
HCM Control Delay (s)	0	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

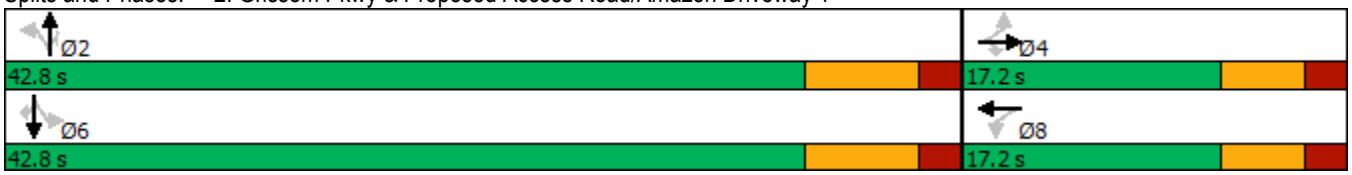


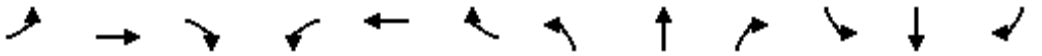
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Future Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.687		0.349					
Satd. Flow (perm)	0	1410	1583	0	1280	0	650	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165						49			49
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	0	165	1	0	0	36	287	1	0	645	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	165	0	1	0	36	287	1	0	645	49
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.3	9.3		9.3		26.4	26.4	26.4		26.4	26.4
Actuated g/C Ratio		0.21	0.21		0.21		0.60	0.60	0.60		0.60	0.60
v/c Ratio		0.36	0.36		0.00		0.09	0.26	0.00		0.58	0.05
Control Delay		21.0	6.6		17.0		6.5	6.9	0.0		10.3	2.2
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.0	6.6		17.0		6.5	6.9	0.0		10.3	2.2
LOS		C	A		B		A	A	A		B	A
Approach Delay		12.3			17.0			6.8			9.7	
Approach LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		22	0		0		4	36	0		105	0
Queue Length 95th (ft)		72	41		4		16	77	0		211	10
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		380	547		345		544	1560	1333		1560	1333
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.28	0.30		0.00		0.07	0.18	0.00		0.41	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1

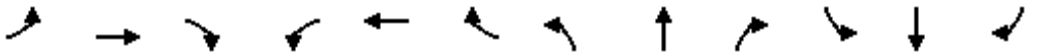




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Future Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7	5.7		5.7		7.1	7.1	7.1		7.1	7.1
Lane Util. Factor		1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
Frt		1.00	0.85		1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected		0.95	1.00		0.95		0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)		1770	1583		1770		1770	1863	1583		1863	1583
Flt Permitted		0.76	1.00		0.69		0.35	1.00	1.00		1.00	1.00
Satd. Flow (perm)		1410	1583		1280		650	1863	1583		1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	0	165	1	0	0	36	287	1	0	645	49
RTOR Reduction (vph)	0	0	138	0	0	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	108	27	0	1	0	36	287	1	0	645	27
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)		7.4	7.4		7.4		24.7	24.7	24.7		24.7	24.7
Effective Green, g (s)		7.4	7.4		7.4		24.7	24.7	24.7		24.7	24.7
Actuated g/C Ratio		0.16	0.16		0.16		0.55	0.55	0.55		0.55	0.55
Clearance Time (s)		5.7	5.7		5.7		7.1	7.1	7.1		7.1	7.1
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		232	260		210		357	1024	870		1024	870
v/s Ratio Prot								0.15			c0.35	
v/s Ratio Perm		c0.08	0.02		0.00		0.06		0.00			0.02
v/c Ratio		0.47	0.10		0.00		0.10	0.28	0.00		0.63	0.03
Uniform Delay, d1		17.0	15.9		15.7		4.8	5.4	4.5		7.0	4.6
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2		1.5	0.2		0.0		0.1	0.2	0.0		1.2	0.0
Delay (s)		18.4	16.1		15.7		4.9	5.5	4.5		8.2	4.6
Level of Service		B	B		B		A	A	A		A	A
Approach Delay (s)		17.0			15.7			5.5			7.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.8
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	152	1	0	0	33	264	1	0	593	45
Future Volume (veh/h)	99	0	152	1	0	0	33	264	1	0	593	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	0	165	1	0	0	36	287	1	0	645	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	0	322	379	0	0	316	844	716	194	844	716
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.45	0.45	0.45	0.00	0.45	0.45
Sat Flow, veh/h	1511	0	1585	911	0	0	750	1870	1585	1091	1870	1585
Grp Volume(v), veh/h	108	0	165	1	0	0	36	287	1	0	645	49
Grp Sat Flow(s),veh/h/ln	1511	0	1585	912	0	0	750	1870	1585	1091	1870	1585
Q Serve(g_s), s	0.0	0.0	3.4	0.0	0.0	0.0	1.6	3.7	0.0	0.0	10.7	0.6
Cycle Q Clear(g_c), s	1.9	0.0	3.4	1.9	0.0	0.0	12.3	3.7	0.0	0.0	10.7	0.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	501	0	322	379	0	0	316	844	716	194	844	716
V/C Ratio(X)	0.22	0.00	0.51	0.00	0.00	0.00	0.11	0.34	0.00	0.00	0.76	0.07
Avail Cap(c_a), veh/h	653	0	492	511	0	0	701	1802	1527	753	1802	1527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	13.1	13.3	0.0	0.0	13.6	6.6	5.6	0.0	8.5	5.8
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.0	0.0	0.0	0.2	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.1	0.0	0.0	0.0	0.2	0.7	0.0	0.0	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	0.0	14.4	13.3	0.0	0.0	13.8	6.8	5.6	0.0	10.0	5.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		273			1			324			694	
Approach Delay, s/veh		13.7			13.3			7.6			9.7	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.8		13.2		23.8		13.2				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		14.3		5.4		12.7		3.9				
Green Ext Time (p_c), s		1.6		0.5		4.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	152	1	0	0	33	264	1	0	593	45
Future Volume (veh/h)	99	0	152	1	0	0	33	264	1	0	593	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	0	165	1	0	0	36	287	1	0	645	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	501	0	322	379	0	0	316	844	716	194	844	716
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.45	0.45	0.45	0.00	0.45	0.45
Unsig. Movement Delay												
Ln Grp Delay, s/veh	12.7	0.0	14.4	13.3	0.0	0.0	13.8	6.8	5.6	0.0	10.0	5.8
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		273			1			324			694	
Approach Delay, s/veh		13.7			13.3			7.6			9.7	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		23.8		13.2		23.8		13.2
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.8		5.8
Max Q Clear (g_c+I1), s		14.3		5.4		12.7		3.9
Green Ext Time (g_e), s		1.6		0.5		4.0		0.0
Prob of Phs Call (p_c)		1.00		0.94		1.00		0.94
Prob of Max Out (p_x)		0.00		0.42		0.02		0.03

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		750		1511		1091		911

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	108	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	750	0	1511	0	1091	0	912
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.3	0.0	1.9	0.0	0.0	0.0	1.9
Perm LT Sat Flow (s_l), veh/h/ln	0	750	0	1440	0	1091	0	1240
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	16.7	0.0	7.5	0.0	0.0	0.0	7.5
Perm LT Serve Time (g_u), s	0.0	6.0	0.0	5.6	0.0	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	316	0	501	0	194	0	379
V/C Ratio (X)	0.00	0.11	0.00	0.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	701	0	653	0	753	0	511
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.6	0.0	12.5	0.0	0.0	0.0	13.3
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.8	0.0	12.7	0.0	0.0	0.0	13.3
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	287	0	0	0	645	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.7	0.0	0.0	0.0	10.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.7	0.0	0.0	0.0	10.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	844	0	0	0	844	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.76	0.00	0.00
Avail Cap (c_a), veh/h	0	1802	0	0	0	1802	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.6	0.0	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.8	0.0	0.0	0.0	10.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.0	0.0	1.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

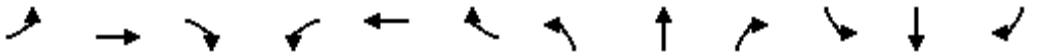
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	165	0	49	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.4	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.4	0.0	0.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	716	0	322	0	716	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.51	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1527	0	492	0	1527	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.1	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	14.4	0.0	5.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.18	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

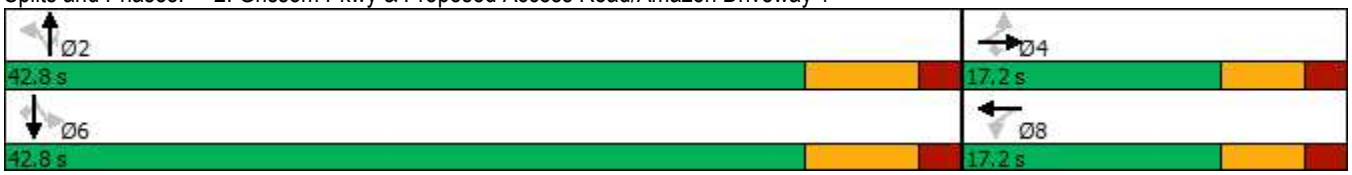


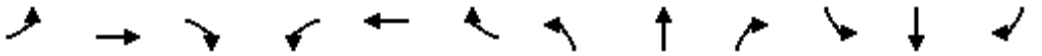
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	0	105	27	0	20	183	625	1	0	368	102
Future Volume (vph)	52	0	105	27	0	20	183	625	1	0	368	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.792		0.526					
Satd. Flow (perm)	0	1349	1583	0	1390	0	980	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114		75				49			111
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	0	114	29	0	22	199	679	1	0	400	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	114	0	51	0	199	679	1	0	400	111
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		8.8	8.8		8.8		27.6	27.6	27.6		27.6	27.6
Actuated g/C Ratio		0.20	0.20		0.20		0.62	0.62	0.62		0.62	0.62
v/c Ratio		0.22	0.28		0.15		0.33	0.59	0.00		0.35	0.11
Control Delay		20.2	7.2		5.0		8.1	9.9	0.0		7.0	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		20.2	7.2		5.0		8.1	9.9	0.0		7.0	1.6
LOS		C	A		A		A	A	A		A	A
Approach Delay		11.5			5.0			9.5			5.9	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		11	0		0		26	110	0		52	0
Queue Length 95th (ft)		46	36		16		65	220	0		107	15
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		358	504		424		808	1536	1314		1536	1324
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.16	0.23		0.12		0.25	0.44	0.00		0.26	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.6			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 71.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	0	105	27	0	20	183	625	1	0	368	102
Future Volume (veh/h)	52	0	105	27	0	20	183	625	1	0	368	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	0	114	29	0	22	199	679	1	0	400	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	0	289	256	35	115	502	935	793	179	935	793
Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.50	0.50	0.50	0.00	0.50	0.50
Sat Flow, veh/h	1443	0	1585	637	195	631	889	1870	1585	760	1870	1585
Grp Volume(v), veh/h	57	0	114	51	0	0	199	679	1	0	400	111
Grp Sat Flow(s),veh/h/ln	1443	0	1585	1462	0	0	889	1870	1585	760	1870	1585
Q Serve(g_s), s	0.1	0.0	2.6	0.0	0.0	0.0	7.4	11.5	0.0	0.0	5.5	1.5
Cycle Q Clear(g_c), s	1.1	0.0	2.6	1.0	0.0	0.0	12.9	11.5	0.0	0.0	5.5	1.5
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	0	289	406	0	0	502	935	793	179	935	793
V/C Ratio(X)	0.13	0.00	0.40	0.13	0.00	0.00	0.40	0.73	0.00	0.00	0.43	0.14
Avail Cap(c_a), veh/h	585	0	453	551	0	0	846	1658	1405	473	1658	1405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	14.5	13.9	0.0	0.0	10.5	7.9	5.0	0.0	6.4	5.4
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.1	0.0	0.0	0.5	1.1	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.8	0.4	0.0	0.0	0.9	2.2	0.0	0.0	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	15.4	14.0	0.0	0.0	11.0	9.0	5.0	0.0	6.7	5.5
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		171			51			879			511	
Approach Delay, s/veh		14.9			14.0			9.4			6.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.2		13.0		27.2		13.0				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		14.9		4.6		7.5		3.0				
Green Ext Time (p_c), s		5.3		0.3		2.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.2									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	0	105	27	0	20	183	625	1	0	368	102
Future Volume (veh/h)	52	0	105	27	0	20	183	625	1	0	368	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	0	114	29	0	22	199	679	1	0	400	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	442	0	289	256	35	115	502	935	793	179	935	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.50	0.50	0.50	0.00	0.50	0.50
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.0	0.0	15.4	14.0	0.0	0.0	11.0	9.0	5.0	0.0	6.7	5.5
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		171			51			879			511	
Approach Delay, s/veh		14.9			14.0			9.4			6.4	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		27.2		13.0		27.2		13.0
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		14.9		4.6		7.5		3.0
Green Ext Time (g_e), s		5.3		0.3		2.5		0.1
Prob of Phs Call (p_c)		1.00		0.92		1.00		0.92
Prob of Max Out (p_x)		0.09		0.17		0.00		0.10

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		889		1443		760		637

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		195

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		631

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	199	0	57	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	889	0	1443	0	760	0	1462
Q Serve Time (g_s), s	0.0	7.4	0.0	0.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.9	0.0	1.1	0.0	0.0	0.0	1.0
Perm LT Sat Flow (s_l), veh/h/ln	0	889	0	1412	0	760	0	1299
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.1	0.0	7.3	0.0	0.0	0.0	7.3
Perm LT Serve Time (g_u), s	0.0	14.7	0.0	6.3	0.0	0.0	0.0	6.2
Perm LT Q Serve Time (g_ps), s	0.0	7.4	0.0	0.1	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	502	0	442	0	179	0	406
V/C Ratio (X)	0.00	0.40	0.00	0.13	0.00	0.00	0.00	0.13
Avail Cap (c_a), veh/h	0	846	0	585	0	473	0	551
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.5	0.0	13.9	0.0	0.0	0.0	13.9
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.0	0.0	14.0	0.0	0.0	0.0	14.0
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	679	0	0	0	400	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	11.5	0.0	0.0	0.0	5.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.5	0.0	0.0	0.0	5.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	935	0	0	0	935	0	0
V/C Ratio (X)	0.00	0.73	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1658	0	0	0	1658	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	6.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.0	0.0	0.0	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	114	0	111	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.6	0.0	1.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.6	0.0	1.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	793	0	289	0	793	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.40	0.00	0.14	0.00	0.00
Avail Cap (c_a), veh/h	0	1405	0	453	0	1405	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	14.5	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.0	0.0	15.4	0.0	5.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

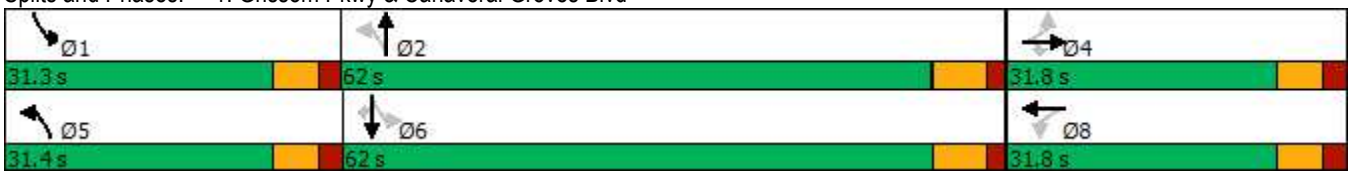
* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	124	167	61	55	45	45	160	41	90	365	49
Future Volume (vph)	106	124	167	61	55	45	45	160	41	90	365	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.962			0.969				0.850
Flt Protected		0.978			0.981		0.950			0.950		
Satd. Flow (prot)	0	1822	1583	0	1758	0	1770	1805	0	1770	1863	1583
Flt Permitted		0.790			0.788		0.409			0.573		
Satd. Flow (perm)	0	1472	1583	0	1412	0	762	1805	0	1067	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			182		14			13				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	135	182	66	60	49	49	174	45	98	397	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	182	0	175	0	49	219	0	98	397	53
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		23.7	23.7		23.7		25.9	19.8		28.3	23.1	23.1
Actuated g/C Ratio		0.35	0.35		0.35		0.38	0.29		0.41	0.34	0.34
v/c Ratio		0.49	0.27		0.35		0.13	0.41		0.19	0.63	0.09
Control Delay		24.3	4.9		20.5		10.9	22.4		11.2	26.3	2.1
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.3	4.9		20.5		10.9	22.4		11.2	26.3	2.1
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.1			20.5			20.3			21.3	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		86	0		52		11	76		23	161	0
Queue Length 95th (ft)		183	44		122		27	136		46	261	11
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		556	711		542		757	1449		794	1491	1284
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.45	0.26		0.32		0.06	0.15		0.12	0.27	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 68.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 19.4		Intersection LOS: B	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	124	167	61	55	45	45	160	41	90	365	49
Future Volume (veh/h)	106	124	167	61	55	45	45	160	41	90	365	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	135	182	66	60	49	49	174	45	98	397	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	224	392	146	123	67	346	416	108	493	585	496
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.29	0.29	0.07	0.31	0.31
Sat Flow, veh/h	571	907	1585	201	498	272	1781	1433	371	1781	1870	1585
Grp Volume(v), veh/h	250	0	182	175	0	0	49	0	219	98	397	53
Grp Sat Flow(s),veh/h/ln	1478	0	1585	972	0	0	1781	0	1804	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.0	2.1	0.0	0.0	1.0	0.0	5.1	1.9	9.6	1.2
Cycle Q Clear(g_c), s	7.9	0.0	5.0	10.0	0.0	0.0	1.0	0.0	5.1	1.9	9.6	1.2
Prop In Lane	0.46		1.00	0.38		0.28	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	467	0	392	337	0	0	346	0	524	493	585	496
V/C Ratio(X)	0.53	0.00	0.46	0.52	0.00	0.00	0.14	0.00	0.42	0.20	0.68	0.11
Avail Cap(c_a), veh/h	833	0	767	667	0	0	1121	0	1920	1225	1991	1688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	16.5	17.6	0.0	0.0	12.3	0.0	14.8	11.3	15.5	12.6
Incr Delay (d2), s/veh	1.0	0.0	0.9	1.2	0.0	0.0	0.2	0.0	0.5	0.2	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	1.7	1.6	0.0	0.0	0.3	0.0	1.7	0.6	3.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	17.4	18.8	0.0	0.0	12.5	0.0	15.3	11.5	16.9	12.7
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		432			175			268			548	
Approach Delay, s/veh		17.9			18.8			14.8			15.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		19.6	8.9	23.1		19.6				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	3.9	7.1		9.9	3.0	11.6		12.0				
Green Ext Time (p_c), s	0.2	1.2		1.8	0.1	2.5		0.8				

Intersection Summary		
HCM 6th Ctrl Delay		16.5
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	124	167	61	55	45	45	160	41	90	365	49
Future Volume (veh/h)	106	124	167	61	55	45	45	160	41	90	365	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	135	182	66	60	49	49	174	45	98	397	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	243	224	392	146	123	67	346	416	108	493	585	496
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.05	0.29	0.29	0.07	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.4	0.0	17.4	18.8	0.0	0.0	12.5	0.0	15.3	11.5	16.9	12.7
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		432			175			268			548	
Approach Delay, s/veh		17.9			18.8			14.8			15.5	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		19.6	8.9	23.1		19.6
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	3.9	7.1		9.9	3.0	11.6		12.0
Green Ext Time (g_e), s	0.2	1.2		1.8	0.1	2.5		0.8
Prob of Phs Call (p_c)	0.75	1.00		1.00	0.50	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.03	0.00	0.00		0.02

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			571	1781			201

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1433		907		1870		498

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		371		1585		1585		272

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	98	0	0	250	49	0	0	175
Grp Sat Flow (s), veh/h/ln	1781	0	0	1478	1781	0	0	972
Q Serve Time (g_s), s	1.9	0.0	0.0	0.0	1.0	0.0	0.0	2.1
Cycle Q Clear Time (g_c), s	1.9	0.0	0.0	7.9	1.0	0.0	0.0	10.0
Perm LT Sat Flow (s_l), veh/h/ln	1162	0	0	1305	940	0	0	1079
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1380	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	12.8	15.0	0.0	0.0	12.8
Perm LT Serve Time (g_u), s	9.9	0.0	0.0	2.8	6.6	0.0	0.0	4.9
Perm LT Q Serve Time (g_ps), s	0.5	0.0	0.0	0.0	0.5	0.0	0.0	2.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.6	0.0	0.0	0.0	3.1
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.38
Lane Grp Cap (c), veh/h	493	0	0	467	346	0	0	337
V/C Ratio (X)	0.20	0.00	0.00	0.53	0.14	0.00	0.00	0.52
Avail Cap (c_a), veh/h	1225	0	0	833	1121	0	0	667
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.3	0.0	0.0	17.4	12.3	0.0	0.0	17.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.0	0.2	0.0	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.5	0.0	0.0	18.4	12.5	0.0	0.0	18.8
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.3	0.3	0.0	0.0	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.4	0.3	0.0	0.0	1.6
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	397	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	585	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1991	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	16.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	219	0	182	0	53	0	0
Grp Sat Flow (s), veh/h/ln	0	1804	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	5.1	0.0	5.0	0.0	1.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.1	0.0	5.0	0.0	1.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	0.28
Lane Grp Cap (c), veh/h	0	524	0	392	0	496	0	0
V/C Ratio (X)	0.00	0.42	0.00	0.46	0.00	0.11	0.00	0.00
Avail Cap (c_a), veh/h	0	1920	0	767	0	1688	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.8	0.0	16.5	0.0	12.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.3	0.0	17.4	0.0	12.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	1.6	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	1.7	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.24	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

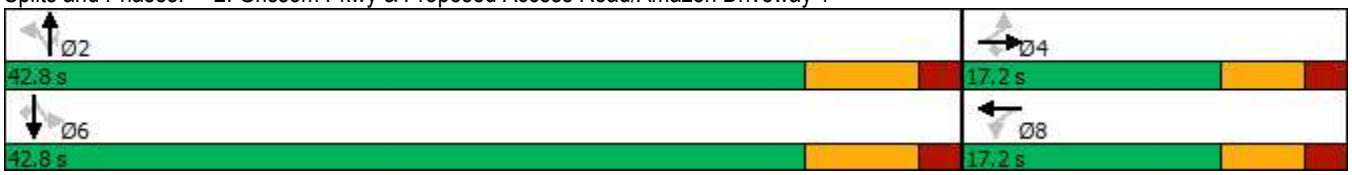
Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

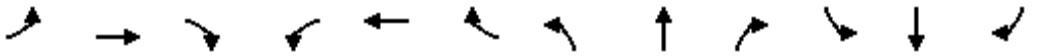
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	0	152	1	0	0	33	269	1	0	605	45
Future Volume (vph)	99	0	152	1	0	0	33	269	1	0	605	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.687		0.341					
Satd. Flow (perm)	0	1410	1583	0	1280	0	635	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			165						49			49
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	0	165	1	0	0	36	292	1	0	658	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	165	0	1	0	36	292	1	0	658	49
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.3	9.3		9.3		27.2	27.2	27.2		27.2	27.2
Actuated g/C Ratio		0.21	0.21		0.21		0.61	0.61	0.61		0.61	0.61
v/c Ratio		0.37	0.36		0.00		0.09	0.26	0.00		0.58	0.05
Control Delay		21.5	6.7		18.0		6.4	6.8	0.0		10.3	2.2
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.5	6.7		18.0		6.4	6.8	0.0		10.3	2.2
LOS		C	A		B		A	A	A		B	A
Approach Delay		12.6			18.0			6.8			9.7	
Approach LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		22	0		0		4	37	0		109	0
Queue Length 95th (ft)		73	41		4		16	78	0		217	10
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		374	541		339		523	1535	1314		1535	1314
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.29	0.30		0.00		0.07	0.19	0.00		0.43	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.7			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





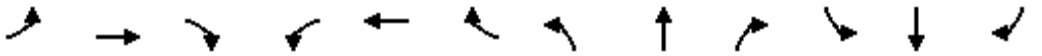
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	152	1	0	0	33	269	1	0	605	45
Future Volume (veh/h)	99	0	152	1	0	0	33	269	1	0	605	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	0	165	1	0	0	36	292	1	0	658	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	496	0	319	374	0	0	313	856	725	192	856	725
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Sat Flow, veh/h	1512	0	1585	908	0	0	741	1870	1585	1086	1870	1585
Grp Volume(v), veh/h	108	0	165	1	0	0	36	292	1	0	658	49
Grp Sat Flow(s),veh/h/ln	1512	0	1585	908	0	0	741	1870	1585	1086	1870	1585
Q Serve(g_s), s	0.0	0.0	3.5	0.0	0.0	0.0	1.6	3.8	0.0	0.0	11.0	0.6
Cycle Q Clear(g_c), s	1.9	0.0	3.5	2.0	0.0	0.0	12.6	3.8	0.0	0.0	11.0	0.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	0	319	375	0	0	313	856	725	192	856	725
V/C Ratio(X)	0.22	0.00	0.52	0.00	0.00	0.00	0.12	0.34	0.00	0.00	0.77	0.07
Avail Cap(c_a), veh/h	646	0	486	503	0	0	680	1781	1509	729	1781	1509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	13.4	13.6	0.0	0.0	13.8	6.5	5.5	0.0	8.5	5.7
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.0	0.0	0.0	0.2	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.1	0.0	0.0	0.0	0.2	0.7	0.0	0.0	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	0.0	14.7	13.6	0.0	0.0	14.0	6.8	5.5	0.0	10.0	5.7
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		273			1			329			707	
Approach Delay, s/veh		14.0			13.6			7.6			9.7	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.3		13.2		24.3		13.2				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		14.6		5.5		13.0		4.0				
Green Ext Time (p_c), s		1.6		0.5		4.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		10.1
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	152	1	0	0	33	269	1	0	605	45
Future Volume (veh/h)	99	0	152	1	0	0	33	269	1	0	605	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	0	165	1	0	0	36	292	1	0	658	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	496	0	319	374	0	0	313	856	725	192	856	725
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.0	0.0	14.7	13.6	0.0	0.0	14.0	6.8	5.5	0.0	10.0	5.7
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		273			1			329			707	
Approach Delay, s/veh		14.0			13.6			7.6			9.7	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		24.3		13.2		24.3		13.2
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.8		5.8
Max Q Clear (g_c+I1), s		14.6		5.5		13.0		4.0
Green Ext Time (g_e), s		1.6		0.5		4.1		0.0
Prob of Phs Call (p_c)		1.00		0.94		1.00		0.94
Prob of Max Out (p_x)		0.00		0.43		0.03		0.03

Left-Turn Movement Data				
Assigned Mvmt	5		7		1		3	
Mvmt Sat Flow, veh/h	741		1512		1086		908	

Through Movement Data				
Assigned Mvmt	2		4		6		8	
Mvmt Sat Flow, veh/h	1870		0		1870		0	

Right-Turn Movement Data				
Assigned Mvmt	12		14		16		18	
Mvmt Sat Flow, veh/h	1585		1585		1585		0	

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	108	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	741	0	1512	0	1086	0	908
Q Serve Time (g_s), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.6	0.0	1.9	0.0	0.0	0.0	2.0
Perm LT Sat Flow (s_l), veh/h/ln	0	741	0	1440	0	1086	0	1240
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.2	0.0	7.5	0.0	0.0	0.0	7.5
Perm LT Serve Time (g_u), s	0.0	6.1	0.0	5.6	0.0	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	313	0	496	0	192	0	375
V/C Ratio (X)	0.00	0.12	0.00	0.22	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	680	0	646	0	729	0	503
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.8	0.0	12.7	0.0	0.0	0.0	13.6
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.0	0.0	13.0	0.0	0.0	0.0	13.6
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	292	0	0	0	658	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.8	0.0	0.0	0.0	11.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	0.0	0.0	11.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	856	0	0	0	856	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	1781	0	0	0	1781	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.5	0.0	0.0	0.0	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.8	0.0	0.0	0.0	10.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

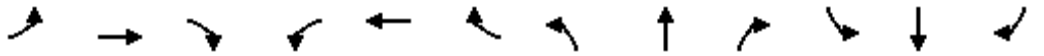
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	165	0	49	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.5	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.5	0.0	0.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	725	0	319	0	725	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.52	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1509	0	486	0	1509	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	13.4	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	14.7	0.0	5.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.0	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.1	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.18	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

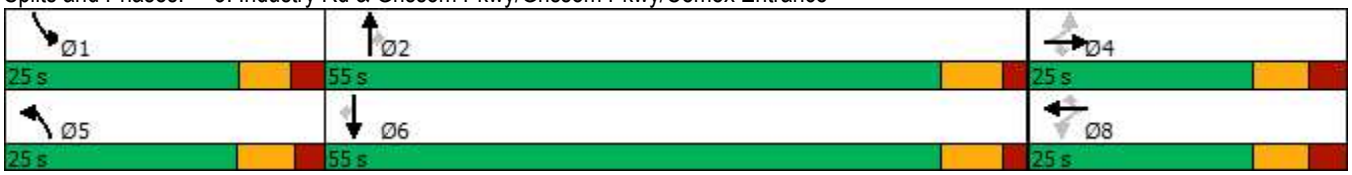


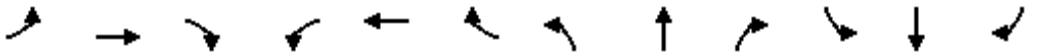
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	5	488	50	1	0	275	103	44	3	133	21
Future Volume (vph)	29	5	488	50	1	0	275	103	44	3	133	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.754			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1405	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			530						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	5	530	54	1	0	299	112	48	3	145	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	5	530	54	1	0	299	112	48	3	145	23
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.6	10.6	10.6	10.6	10.6		12.5	26.8	26.8	5.3	15.6	15.6
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.23	0.49	0.49	0.10	0.29	0.29
v/c Ratio	0.12	0.01	0.72	0.20	0.00		0.38	0.12	0.06	0.02	0.27	0.04
Control Delay	20.6	19.0	8.7	21.8	19.0		22.4	10.0	0.1	27.0	20.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	19.0	8.7	21.8	19.0		22.4	10.0	0.1	27.0	20.5	0.1
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.5			21.7			17.1			17.9	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	1	0	16	0		44	14	0	1	37	0
Queue Length 95th (ft)	29	9	69	43	4		89	64	0	9	97	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	471	623	882	469	623		1193	1605	1380	619	1605	1380
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.01	0.60	0.12	0.00		0.25	0.07	0.03	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 54.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 14.0		Intersection LOS: B	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	21
Future Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	299	112	48	3	145	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	219		311	219	186	483	829	703	7	572	485
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1416	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	32	5	0	54	1	0	299	112	48	3	145	23
Grp Sat Flow(s),veh/h/ln	1416	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.1	0.0	1.7	0.0	0.0	4.0	1.7	0.8	0.1	2.8	0.5
Cycle Q Clear(g_c), s	1.0	0.1	0.0	1.8	0.0	0.0	4.0	1.7	0.8	0.1	2.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	219		311	219	186	483	829	703	7	572	485
V/C Ratio(X)	0.10	0.02		0.17	0.00	0.00	0.62	0.14	0.07	0.41	0.25	0.05
Avail Cap(c_a), veh/h	659	675		655	675	572	1297	1856	1573	672	1856	1573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	18.9	0.0	19.7	18.9	0.0	19.6	8.0	7.7	24.1	12.7	11.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.0	1.5	0.6	0.2	0.1	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	19.0	0.0	20.1	18.9	0.0	20.9	8.1	7.8	49.5	12.9	11.9
LnGrp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37	A		55			459			171	
Approach Delay, s/veh		19.4			20.0			16.4			13.4	
Approach LOS		B			C			B			B	

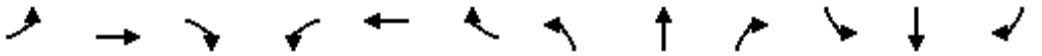
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.4		13.2	13.6	21.7		13.2				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.0	6.0	4.8		3.8				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.8	1.2		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		16.2
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	21
Future Volume (veh/h)	29	5	488	50	1	0	275	103	44	3	133	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	0	54	1	0	299	112	48	3	145	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	314	219		311	219	186	483	829	703	7	572	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.5	19.0	0.0	20.1	18.9	0.0	20.9	8.1	7.8	49.5	12.9	11.9
Ln Grp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		37			55			459			171	
Approach Delay, s/veh		19.4			20.0			16.4			13.4	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.4		13.2	13.6	21.7		13.2
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.7		3.0	6.0	4.8		3.8
Green Ext Time (g_e), s	0.0	1.0		0.1	0.8	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.71	1.00	0.99		0.71
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1416	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	32	299	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1416	1728	0	0	1411
Q Serve Time (g_s), s	0.1	0.0	0.0	1.0	4.0	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.0	4.0	0.0	0.0	1.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1416	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	314	483	0	0	311
V/C Ratio (X)	0.41	0.00	0.00	0.10	0.62	0.00	0.00	0.17
Avail Cap (c_a), veh/h	672	0	0	659	1297	0	0	655
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.1	0.0	0.0	19.3	19.6	0.0	0.0	19.7
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.5	0.0	0.0	19.5	20.9	0.0	0.0	20.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	1.4	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.3	1.5	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.05	0.27	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	112	0	5	0	145	0	1
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.1	0.0	2.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	829	0	219	0	572	0	219
V/C Ratio (X)	0.00	0.14	0.00	0.02	0.00	0.25	0.00	0.00
Avail Cap (c_a), veh/h	0	1856	0	675	0	1856	0	675
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.0	0.0	18.9	0.0	12.7	0.0	18.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.1	0.0	19.0	0.0	12.9	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

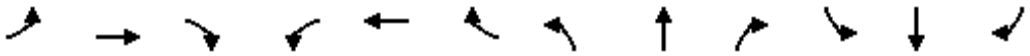
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	48	0	0	0	23	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.8	0.0	0.0	0.0	0.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	703	0	186	0	485	0	186
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.00
Avail Cap (c_a), veh/h	0	1573	0	572	0	1573	0	572
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.7	0.0	0.0	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	0.0	11.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	192	4	12	80	2	9	0	15	1	0	12
Future Volume (vph)	1	192	4	12	80	2	9	0	15	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.917			0.875	
Flt Protected					0.994			0.981			0.996	
Satd. Flow (prot)	0	1857	0	0	1846	0	0	1676	0	0	1623	0
Flt Permitted					0.994			0.981			0.996	
Satd. Flow (perm)	0	1857	0	0	1846	0	0	1676	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	209	4	13	87	2	10	0	16	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	214	0	0	102	0	0	26	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	192	4	12	80	2	9	0	15	1	0	12
Future Vol, veh/h	1	192	4	12	80	2	9	0	15	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	209	4	13	87	2	10	0	16	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	213	0	0	334	328	211	335	329	88
Stage 1	-	-	-	-	-	-	213	213	-	114	114	-
Stage 2	-	-	-	-	-	-	121	115	-	221	215	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1357	-	-	620	591	829	619	590	970
Stage 1	-	-	-	-	-	-	789	726	-	891	801	-
Stage 2	-	-	-	-	-	-	883	800	-	781	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1357	-	-	606	584	829	602	584	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	606	584	-	602	584	-
Stage 1	-	-	-	-	-	-	788	725	-	890	793	-
Stage 2	-	-	-	-	-	-	862	792	-	765	724	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	10.1	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	728	1506	-	-	1357	-	-	926
HCM Lane V/C Ratio	0.036	0.001	-	-	0.01	-	-	0.015
HCM Control Delay (s)	10.1	7.4	0	-	7.7	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	292	1	21	117	1	47
Future Volume (vph)	292	1	21	117	1	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.868	
Flt Protected				0.992	0.999	
Satd. Flow (prot)	1863	0	0	1848	1615	0
Flt Permitted				0.992	0.999	
Satd. Flow (perm)	1863	0	0	1848	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	1	23	127	1	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	318	0	0	150	52	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	1	21	117	1	47
Future Vol, veh/h	292	1	21	117	1	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	317	1	23	127	1	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	491	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	173	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1242	-	537	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1242	-	526	723
Mov Cap-2 Maneuver	-	-	-	-	526	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	840	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	717	-	-	1242	-
HCM Lane V/C Ratio	0.073	-	-	0.018	-
HCM Control Delay (s)	10.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	339	0	18	124	0	34
Future Volume (vph)	339	0	18	124	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	368	0	20	135	0	37
Shared Lane Traffic (%)						
Lane Group Flow (vph)	368	0	0	155	37	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.7%		ICU Level of Service A	
Analysis Period (min) 15			

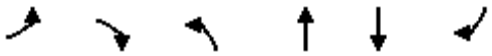
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	339	0	18	124	0	34
Future Vol, veh/h	339	0	18	124	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	368	0	20	135	0	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	368	0	543	368
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	175	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1191	-	501	677
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	855	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1191	-	492	677
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	840	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	677	-	-	1191	-
HCM Lane V/C Ratio	0.055	-	-	0.016	-
HCM Control Delay (s)	10.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	5	15	42	15	5
Future Volume (vph)	5	5	15	42	15	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932				0.968	
Flt Protected	0.976			0.987		
Satd. Flow (prot)	1694	0	0	1839	1803	0
Flt Permitted	0.976			0.987		
Satd. Flow (perm)	1694	0	0	1839	1803	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	5	16	46	16	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	0	0	62	21	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.7%		ICU Level of Service A	
Analysis Period (min) 15			

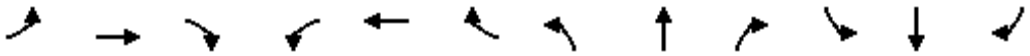
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	5	15	42	15	5
Future Vol, veh/h	5	5	15	42	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	5	16	46	16	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	97	19	21	0	-	0
Stage 1	19	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	902	1059	1595	-	-	-
Stage 1	1004	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	893	1059	1595	-	-	-
Mov Cap-2 Maneuver	893	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	1.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1595	-	969	-	-
HCM Lane V/C Ratio	0.01	-	0.011	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	137	0	6	39	33	0	2	20	67	1	0
Future Volume (vph)	5	137	0	6	39	33	0	2	20	67	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.943			0.876				
Flt Protected		0.998			0.996						0.953	
Satd. Flow (prot)	0	1859	0	0	1750	0	0	1632	0	0	1775	0
Flt Permitted		0.998			0.996						0.953	
Satd. Flow (perm)	0	1859	0	0	1750	0	0	1632	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	149	0	7	42	36	0	2	22	73	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	85	0	0	24	0	0	74	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.6%		ICU Level of Service A	
Analysis Period (min) 15			

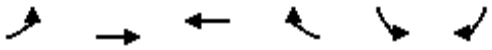
Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	137	0	6	39	33	0	2	20	67	1	0
Future Vol, veh/h	5	137	0	6	39	33	0	2	20	67	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	149	0	7	42	36	0	2	22	73	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	149	0	0	234	251	149	245	233	60
Stage 1	-	-	-	-	-	-	159	159	-	74	74	-
Stage 2	-	-	-	-	-	-	75	92	-	171	159	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1520	-	-	1432	-	-	721	652	898	709	667	1005
Stage 1	-	-	-	-	-	-	843	766	-	935	833	-
Stage 2	-	-	-	-	-	-	934	819	-	831	766	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1520	-	-	1432	-	-	715	646	898	686	661	1005
Mov Cap-2 Maneuver	-	-	-	-	-	-	715	646	-	686	661	-
Stage 1	-	-	-	-	-	-	840	763	-	931	829	-
Stage 2	-	-	-	-	-	-	928	815	-	805	763	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.6	9.3	10.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1520	-	-	1432	-	-	686
HCM Lane V/C Ratio	0.028	0.004	-	-	0.005	-	-	0.108
HCM Control Delay (s)	9.3	7.4	0	-	7.5	0	-	10.9
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	92	26	13	37	0
Future Volume (vph)	3	92	26	13	37	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.955			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1779	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1779	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		44.7	42.8		61.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	100	28	14	40	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	103	42	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.3%		ICU Level of Service A	
Analysis Period (min) 15			

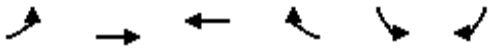
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	92	26	13	37	0
Future Vol, veh/h	3	92	26	13	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	100	28	14	40	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	42	0	-	0	141	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1567	-	-	-	852	1038
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1567	-	-	-	850	1038
Mov Cap-2 Maneuver	-	-	-	-	850	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	850
HCM Lane V/C Ratio	0.002	-	-	-	0.047
HCM Control Delay (s)	7.3	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	234	72	6	17	0
Future Volume (vph)	1	234	72	6	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.989			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1842	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1842	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		47.2	13.2		60.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	254	78	7	18	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	255	85	0	18	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	234	72	6	17	0
Future Vol, veh/h	1	234	72	6	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	254	78	7	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	85	0	-	0	338	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	256	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1512	-	-	-	658	978
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	657	978
Mov Cap-2 Maneuver	-	-	-	-	657	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

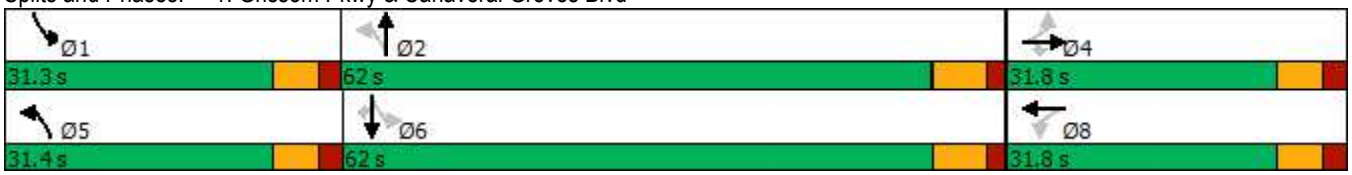
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	-	657
HCM Lane V/C Ratio	0.001	-	-	-	0.028
HCM Control Delay (s)	7.4	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

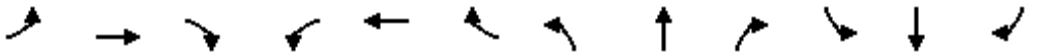
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	75	91	66	89	76	173	418	92	87	263	88
Future Volume (vph)	71	75	91	66	89	76	173	418	92	87	263	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.956			0.973				0.850
Flt Protected		0.976			0.986		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1756	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.689			0.848		0.439			0.308		
Satd. Flow (perm)	0	1283	1583	0	1510	0	818	1812	0	574	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			99		18			11				96
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	82	99	72	97	83	188	454	100	95	286	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	99	0	252	0	188	554	0	95	286	96
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		21.6	21.6		21.6		42.4	32.9		34.4	26.0	26.0
Actuated g/C Ratio		0.27	0.27		0.27		0.53	0.41		0.43	0.33	0.33
v/c Ratio		0.46	0.20		0.60		0.33	0.73		0.26	0.47	0.17
Control Delay		31.4	7.2		31.9		10.6	27.7		11.0	24.4	5.2
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.4	7.2		31.9		10.6	27.7		11.0	24.4	5.2
LOS		C	A		C		B	C		B	C	A
Approach Delay		22.1			31.9			23.4			17.9	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		66	0		100		45	247		22	115	0
Queue Length 95th (ft)		148	38		214		78	386		43	196	31
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		415	579		501		764	1297		708	1328	1156
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.38	0.17		0.50		0.25	0.43		0.13	0.22	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 79.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 68.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	75	91	66	89	76	173	418	92	87	263	88
Future Volume (veh/h)	71	75	91	66	89	76	173	418	92	87	263	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	82	99	72	97	83	188	454	100	95	286	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	200	371	139	150	105	512	549	121	314	620	526
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.37	0.37	0.07	0.33	0.33
Sat Flow, veh/h	543	855	1585	268	642	447	1781	1485	327	1781	1870	1585
Grp Volume(v), veh/h	159	0	99	252	0	0	188	0	554	95	286	96
Grp Sat Flow(s),veh/h/ln	1398	0	1585	1356	0	0	1781	0	1812	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.1	5.6	0.0	0.0	4.1	0.0	16.9	2.1	7.3	2.6
Cycle Q Clear(g_c), s	5.6	0.0	3.1	11.1	0.0	0.0	4.1	0.0	16.9	2.1	7.3	2.6
Prop In Lane	0.48		1.00	0.29		0.33	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	415	0	371	393	0	0	512	0	671	314	620	526
V/C Ratio(X)	0.38	0.00	0.27	0.64	0.00	0.00	0.37	0.00	0.83	0.30	0.46	0.18
Avail Cap(c_a), veh/h	675	0	651	665	0	0	1061	0	1636	929	1690	1432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	19.0	22.2	0.0	0.0	11.4	0.0	17.4	13.6	16.1	14.5
Incr Delay (d2), s/veh	0.6	0.0	0.4	1.7	0.0	0.0	0.4	0.0	2.7	0.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.1	3.3	0.0	0.0	1.3	0.0	6.2	0.7	2.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	0.0	19.4	23.9	0.0	0.0	11.9	0.0	20.1	14.2	16.6	14.6
LnGrp LOS	C	A	B	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		258			252			742			477	
Approach Delay, s/veh		20.0			23.9			18.0			15.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	29.5		21.1	12.6	27.2		21.1				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.1	18.9		7.6	6.1	9.3		13.1				
Green Ext Time (p_c), s	0.2	3.6		1.1	0.4	1.9		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.5	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	75	91	66	89	76	173	418	92	87	263	88
Future Volume (veh/h)	71	75	91	66	89	76	173	418	92	87	263	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	82	99	72	97	83	188	454	100	95	286	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	200	371	139	150	105	512	549	121	314	620	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.10	0.37	0.37	0.07	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.3	0.0	19.4	23.9	0.0	0.0	11.9	0.0	20.1	14.2	16.6	14.6
Ln Grp LOS	C	A	B	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		258			252			742			477	
Approach Delay, s/veh		20.0			23.9			18.0			15.7	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.3	29.5		21.1	12.6	27.2		21.1
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.8	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.1	18.9		7.6	6.1	9.3		13.1
Green Ext Time (g_e), s	0.2	3.6		1.1	0.4	1.9		1.1
Prob of Phs Call (p_c)	0.80	1.00		1.00	0.96	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.07

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			543	1781			268

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1485		855		1870		642

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		327		1585		1585		447

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	95	0	0	159	188	0	0	252
Grp Sat Flow (s), veh/h/ln	1781	0	0	1398	1781	0	0	1356
Q Serve Time (g_s), s	2.1	0.0	0.0	0.0	4.1	0.0	0.0	5.6
Cycle Q Clear Time (g_c), s	2.1	0.0	0.0	5.6	4.1	0.0	0.0	11.1
Perm LT Sat Flow (s_l), veh/h/ln	854	0	0	1223	1001	0	0	1222
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1262	0	0	0	0
Perm LT Eff Green (g_p), s	20.2	0.0	0.0	14.3	20.2	0.0	0.0	14.3
Perm LT Serve Time (g_u), s	5.6	0.0	0.0	3.1	12.8	0.0	0.0	8.7
Perm LT Q Serve Time (g_ps), s	1.8	0.0	0.0	0.0	1.7	0.0	0.0	5.6
Time to First Blk (g_f), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.4
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.48	1.00	0.00	0.00	0.29
Lane Grp Cap (c), veh/h	314	0	0	415	512	0	0	393
V/C Ratio (X)	0.30	0.00	0.00	0.38	0.37	0.00	0.00	0.64
Avail Cap (c_a), veh/h	929	0	0	675	1061	0	0	665
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	13.6	0.0	0.0	19.8	11.4	0.0	0.0	22.2
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.6	0.4	0.0	0.0	1.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.2	0.0	0.0	20.3	11.9	0.0	0.0	23.9
1st-Term Q (Q1), veh/ln	0.7	0.0	0.0	1.7	1.3	0.0	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	1.8	1.3	0.0	0.0	3.3
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.02	0.07	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	286	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	620	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1690	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	16.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	554	0	99	0	96	0	0
Grp Sat Flow (s), veh/h/ln	0	1812	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	16.9	0.0	3.1	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.9	0.0	3.1	0.0	2.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.33
Lane Grp Cap (c), veh/h	0	671	0	371	0	526	0	0
V/C Ratio (X)	0.00	0.83	0.00	0.27	0.00	0.18	0.00	0.00
Avail Cap (c_a), veh/h	0	1636	0	651	0	1432	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.4	0.0	19.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.4	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.1	0.0	19.4	0.0	14.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	5.7	0.0	1.0	0.0	0.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	6.2	0.0	1.1	0.0	0.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.15	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

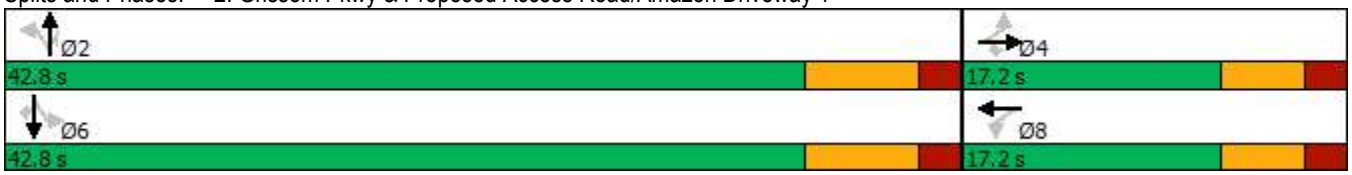
Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

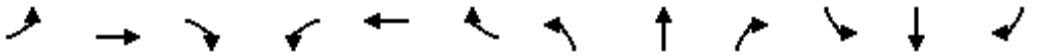
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	0	105	27	0	20	183	638	1	0	375	102
Future Volume (vph)	52	0	105	27	0	20	183	638	1	0	375	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.792		0.523					
Satd. Flow (perm)	0	1349	1583	0	1390	0	974	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114		75				49			111
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	0	114	29	0	22	199	693	1	0	408	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	114	0	51	0	199	693	1	0	408	111
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		8.8	8.8		8.8		28.0	28.0	28.0		28.0	28.0
Actuated g/C Ratio		0.20	0.20		0.20		0.62	0.62	0.62		0.62	0.62
v/c Ratio		0.22	0.28		0.15		0.33	0.60	0.00		0.35	0.11
Control Delay		20.3	7.3		5.0		8.0	10.0	0.0		7.0	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		20.3	7.3		5.0		8.0	10.0	0.0		7.0	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		11.6			5.0			9.6			5.9	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		12	0		0		26	114	0		54	0
Queue Length 95th (ft)		46	36		16		65	229	0		109	15
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		356	501		422		797	1525	1305		1525	1316
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.16	0.23		0.12		0.25	0.45	0.00		0.27	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 44.9			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 8.5		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





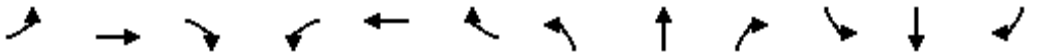
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	0	105	27	0	20	183	638	1	0	375	102
Future Volume (veh/h)	52	0	105	27	0	20	183	638	1	0	375	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	0	114	29	0	22	199	693	1	0	408	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	438	0	286	254	35	114	500	944	800	177	944	800
Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.50	0.50	0.50	0.00	0.50	0.50
Sat Flow, veh/h	1443	0	1585	637	195	631	882	1870	1585	750	1870	1585
Grp Volume(v), veh/h	57	0	114	51	0	0	199	693	1	0	408	111
Grp Sat Flow(s),veh/h/ln	1443	0	1585	1462	0	0	882	1870	1585	750	1870	1585
Q Serve(g_s), s	0.1	0.0	2.6	0.0	0.0	0.0	7.5	11.9	0.0	0.0	5.6	1.5
Cycle Q Clear(g_c), s	1.1	0.0	2.6	1.0	0.0	0.0	13.1	11.9	0.0	0.0	5.6	1.5
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	0	286	403	0	0	500	944	800	177	944	800
V/C Ratio(X)	0.13	0.00	0.40	0.13	0.00	0.00	0.40	0.73	0.00	0.00	0.43	0.14
Avail Cap(c_a), veh/h	580	0	448	546	0	0	830	1642	1392	457	1642	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	14.7	14.1	0.0	0.0	10.5	7.9	5.0	0.0	6.4	5.4
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.1	0.0	0.0	0.5	1.1	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.8	0.4	0.0	0.0	0.9	2.3	0.0	0.0	1.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	0.0	15.6	14.2	0.0	0.0	11.1	9.1	5.0	0.0	6.7	5.4
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		171			51			893			519	
Approach Delay, s/veh		15.1			14.2			9.5			6.4	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	27.6	13.0	27.6	13.0
Change Period (Y+Rc), s	7.1	* 5.7	7.1	* 5.7
Max Green Setting (Gmax), s	35.7	* 12	35.7	* 12
Max Q Clear Time (g_c+I1), s	15.1	4.6	7.6	3.0
Green Ext Time (p_c), s	5.4	0.3	2.6	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	0	105	27	0	20	183	638	1	0	375	102
Future Volume (veh/h)	52	0	105	27	0	20	183	638	1	0	375	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	0	114	29	0	22	199	693	1	0	408	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	438	0	286	254	35	114	500	944	800	177	944	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.50	0.50	0.50	0.00	0.50	0.50
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.2	0.0	15.6	14.2	0.0	0.0	11.1	9.1	5.0	0.0	6.7	5.4
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		171			51			893			519	
Approach Delay, s/veh		15.1			14.2			9.5			6.4	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		27.6		13.0		27.6		13.0
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		15.1		4.6		7.6		3.0
Green Ext Time (g_e), s		5.4		0.3		2.6		0.1
Prob of Phs Call (p_c)		1.00		0.92		1.00		0.92
Prob of Max Out (p_x)		0.10		0.17		0.00		0.10

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		882		1443		750		637

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		195

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		631

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	199	0	57	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	882	0	1443	0	750	0	1462
Q Serve Time (g_s), s	0.0	7.5	0.0	0.1	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.1	0.0	1.1	0.0	0.0	0.0	1.0
Perm LT Sat Flow (s_l), veh/h/ln	0	882	0	1412	0	750	0	1299
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	20.5	0.0	7.3	0.0	0.0	0.0	7.3
Perm LT Serve Time (g_u), s	0.0	14.9	0.0	6.3	0.0	0.0	0.0	6.2
Perm LT Q Serve Time (g_ps), s	0.0	7.5	0.0	0.1	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	500	0	438	0	177	0	403
V/C Ratio (X)	0.00	0.40	0.00	0.13	0.00	0.00	0.00	0.13
Avail Cap (c_a), veh/h	0	830	0	580	0	457	0	546
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.5	0.0	14.1	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.1	0.0	14.2	0.0	0.0	0.0	14.2
1st-Term Q (Q1), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.3
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.4	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.08	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	408	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	11.9	0.0	0.0	0.0	5.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	11.9	0.0	0.0	0.0	5.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	944	0	0	0	944	0	0
V/C Ratio (X)	0.00	0.73	0.00	0.00	0.00	0.43	0.00	0.00
Avail Cap (c_a), veh/h	0	1642	0	0	0	1642	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	6.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	9.1	0.0	0.0	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.0

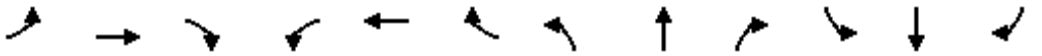
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	114	0	111	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	2.6	0.0	1.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.6	0.0	1.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	800	0	286	0	800	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.40	0.00	0.14	0.00	0.00
Avail Cap (c_a), veh/h	0	1392	0	448	0	1392	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	14.7	0.0	5.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.0	0.0	15.6	0.0	5.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

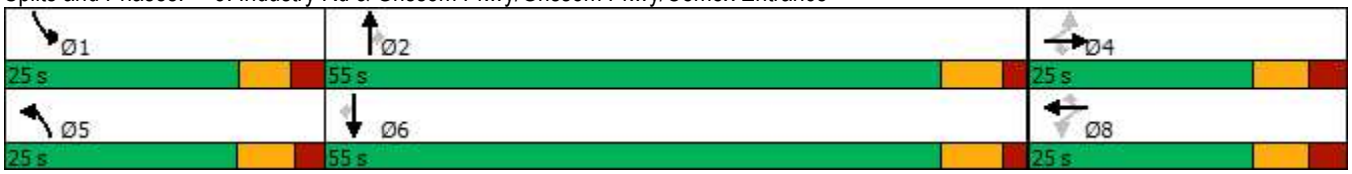


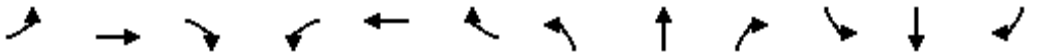
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	5	473	9	5	1	681	97	7	0	206	52
Future Volume (vph)	17	5	473	9	5	1	681	97	7	0	206	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.754			0.754			0.950					
Satd. Flow (perm)	1405	1863	1583	1405	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			514			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	5	514	10	5	1	740	105	8	0	224	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	5	514	10	5	1	740	105	8	0	224	57
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.1	16.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.08	0.02	0.75	0.05	0.02	0.00	0.78	0.09	0.01		0.50	0.12
Control Delay	24.4	23.2	10.5	23.8	23.2	0.0	30.6	6.0	0.0		26.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.4	23.2	10.5	23.8	23.2	0.0	30.6	6.0	0.0		26.6	1.0
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.1			22.1			27.3			21.4	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	6	2	0	3	2	0	129	13	0		73	0
Queue Length 95th (ft)	23	10	79	16	10	0	#279	40	0		154	4
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	374	495	798	374	495	502	950	1362	1189		1362	1189
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.01	0.64	0.03	0.01	0.00	0.78	0.08	0.01		0.16	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	473	9	5	1	681	97	7	0	206	52
Future Volume (veh/h)	17	5	473	9	5	1	681	97	7	0	206	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	740	105	8	0	224	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	123		222	123	104	916	1249	1059	3	518	439
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.27	0.67	0.67	0.00	0.28	0.28
Sat Flow, veh/h	1410	1870	1585	1411	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	18	5	0	10	5	1	740	105	8	0	224	57
Grp Sat Flow(s),veh/h/ln	1410	1870	1585	1411	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.7	0.1	0.0	0.4	0.1	0.0	10.8	1.1	0.1	0.0	5.3	1.5
Cycle Q Clear(g_c), s	0.8	0.1	0.0	0.5	0.1	0.0	10.8	1.1	0.1	0.0	5.3	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	123		222	123	104	916	1249	1059	3	518	439
V/C Ratio(X)	0.08	0.04		0.04	0.04	0.01	0.81	0.08	0.01	0.00	0.43	0.13
Avail Cap(c_a), veh/h	586	606		587	606	513	1164	1665	1411	603	1665	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	23.7	0.0	23.9	23.7	23.6	18.6	3.2	3.0	0.0	16.1	14.7
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.1	0.2	0.0	3.4	0.0	0.0	0.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	0.1	0.1	0.0	4.3	0.2	0.0	0.0	2.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	23.8	0.0	24.0	23.8	23.6	22.0	3.2	3.0	0.0	16.7	14.8
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23	A		16			853			281	
Approach Delay, s/veh		24.1			23.9			19.5			16.3	
Approach LOS		C			C			B			B	

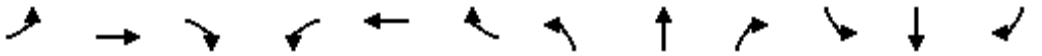
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	43.0		11.0	21.1	21.9		11.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.1		2.8	12.8	7.3		2.5				
Green Ext Time (p_c), s	0.0	0.8		0.0	1.5	2.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	5	473	9	5	1	681	97	7	0	206	52
Future Volume (veh/h)	17	5	473	9	5	1	681	97	7	0	206	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	5	0	10	5	1	740	105	8	0	224	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	222	123		222	123	104	916	1249	1059	3	518	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.27	0.67	0.67	0.00	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.2	23.8	0.0	24.0	23.8	23.6	22.0	3.2	3.0	0.0	16.7	14.8
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		23			16			853			281	
Approach Delay, s/veh		24.1			23.9			19.5			16.3	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	43.0		11.0	21.1	21.9		11.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.7
Max Q Clear (g_c+I1), s	0.0	3.1		2.8	12.8	7.3		2.5
Green Ext Time (g_e), s	0.0	0.8		0.0	1.5	2.0		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.44	1.00	1.00		0.44
Prob of Max Out (p_x)	0.00	0.00		0.00	0.59	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1410	3456			1411

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	18	740	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1410	1728	0	0	1411
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	10.8	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.8	10.8	0.0	0.0	0.5
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1410	0	0	0	1411
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.4
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	222	916	0	0	222
V/C Ratio (X)	0.00	0.00	0.00	0.08	0.81	0.00	0.00	0.04
Avail Cap (c_a), veh/h	603	0	0	586	1164	0	0	587
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.0	18.6	0.0	0.0	23.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	3.4	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.2	22.0	0.0	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.2	3.8	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	4.3	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.04	0.78	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	105	0	5	0	224	0	5
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.1	0.0	0.1	0.0	5.3	0.0	0.1
Cycle Q Clear Time (g_c), s	0.0	1.1	0.0	0.1	0.0	5.3	0.0	0.1
Lane Grp Cap (c), veh/h	0	1249	0	123	0	518	0	123
V/C Ratio (X)	0.00	0.08	0.00	0.04	0.00	0.43	0.00	0.04
Avail Cap (c_a), veh/h	0	1665	0	606	0	1665	0	606
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	23.7	0.0	16.1	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.7	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	23.8	0.0	16.7	0.0	23.8
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.1	0.0	2.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

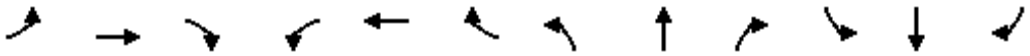
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.1	0.0	2.1	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	57	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1059	0	104	0	439	0	104
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.13	0.00	0.01
Avail Cap (c_a), veh/h	0	1411	0	513	0	1411	0	513
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.0	0.0	0.0	0.0	14.7	0.0	23.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.0	0.0	0.0	0.0	14.8	0.0	23.6
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	146	15	26	241	1	10	0	16	1	2	6
Future Volume (vph)	12	146	15	26	241	1	10	0	16	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.918			0.905	
Flt Protected		0.997			0.995			0.981			0.995	
Satd. Flow (prot)	0	1837	0	0	1853	0	0	1678	0	0	1677	0
Flt Permitted		0.997			0.995			0.981			0.995	
Satd. Flow (perm)	0	1837	0	0	1853	0	0	1678	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	159	16	28	262	1	11	0	17	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	188	0	0	291	0	0	28	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	146	15	26	241	1	10	0	16	1	2	6
Future Vol, veh/h	12	146	15	26	241	1	10	0	16	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	159	16	28	262	1	11	0	17	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	175	0	0	516	512	167	521	520	263
Stage 1	-	-	-	-	-	-	193	193	-	319	319	-
Stage 2	-	-	-	-	-	-	323	319	-	202	201	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1301	-	-	1401	-	-	470	465	877	466	461	776
Stage 1	-	-	-	-	-	-	809	741	-	693	653	-
Stage 2	-	-	-	-	-	-	689	653	-	800	735	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1301	-	-	1401	-	-	452	449	877	445	445	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	452	449	-	445	445	-
Stage 1	-	-	-	-	-	-	800	733	-	685	638	-
Stage 2	-	-	-	-	-	-	665	638	-	776	727	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.7	10.8	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	644	1301	-	-	1401	-	-	622
HCM Lane V/C Ratio	0.044	0.01	-	-	0.02	-	-	0.016
HCM Control Delay (s)	10.8	7.8	0	-	7.6	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	0	53	316	2	33
Future Volume (vph)	153	0	53	316	2	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.872	
Flt Protected				0.993	0.997	
Satd. Flow (prot)	1863	0	0	1850	1619	0
Flt Permitted				0.993	0.997	
Satd. Flow (perm)	1863	0	0	1850	1619	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	0	58	343	2	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	0	0	401	38	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	153	0	53	316	2	33
Future Vol, veh/h	153	0	53	316	2	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	0	58	343	2	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	166	0	625	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	459	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1412	-	449	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	636	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1412	-	426	878
Mov Cap-2 Maneuver	-	-	-	-	426	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	604	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	828	-	-	1412	-
HCM Lane V/C Ratio	0.046	-	-	0.041	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	186	0	47	324	0	25
Future Volume (vph)	186	0	47	324	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	202	0	51	352	0	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	202	0	0	403	27	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.8%		ICU Level of Service A	
Analysis Period (min) 15			

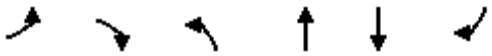
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	0	47	324	0	25
Future Vol, veh/h	186	0	47	324	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	202	0	51	352	0	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	202	0	656	202
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	454	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1370	-	430	839
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1370	-	410	839
Mov Cap-2 Maneuver	-	-	-	-	410	-
Stage 1	-	-	-	-	832	-
Stage 2	-	-	-	-	611	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	839	-	-	1370	-
HCM Lane V/C Ratio	0.032	-	-	0.037	-
HCM Control Delay (s)	9.4	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	7	19	11	28	47	4
Future Volume (vph)	7	19	11	28	47	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902				0.990	
Flt Protected	0.986			0.986		
Satd. Flow (prot)	1657	0	0	1837	1844	0
Flt Permitted	0.986			0.986		
Satd. Flow (perm)	1657	0	0	1837	1844	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	21	12	30	51	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	29	0	0	42	55	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.7%		ICU Level of Service A	
Analysis Period (min) 15			

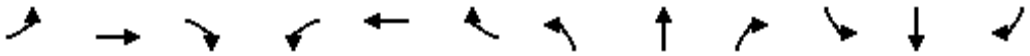
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	19	11	28	47	4
Future Vol, veh/h	7	19	11	28	47	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	21	12	30	51	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	107	53	55	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	891	1014	1550	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	884	1014	1550	-	-	-
Mov Cap-2 Maneuver	884	-	-	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	969	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	2.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1550	-	975	-	-
HCM Lane V/C Ratio	0.008	-	0.029	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	81	0	21	158	79	0	1	13	44	2	6
Future Volume (vph)	5	81	0	21	158	79	0	1	13	44	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.959			0.874			0.983	
Flt Protected		0.997			0.996						0.960	
Satd. Flow (prot)	0	1857	0	0	1779	0	0	1628	0	0	1758	0
Flt Permitted		0.997			0.996						0.960	
Satd. Flow (perm)	0	1857	0	0	1779	0	0	1628	0	0	1758	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	88	0	23	172	86	0	1	14	48	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	93	0	0	281	0	0	15	0	0	57	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			

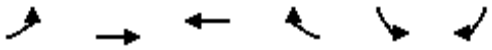
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	81	0	21	158	79	0	1	13	44	2	6
Future Vol, veh/h	5	81	0	21	158	79	0	1	13	44	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	88	0	23	172	86	0	1	14	48	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	258	0	0	88	0	0	364	402	88	367	359	215
Stage 1	-	-	-	-	-	-	98	98	-	261	261	-
Stage 2	-	-	-	-	-	-	266	304	-	106	98	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1307	-	-	1508	-	-	592	537	970	589	568	825
Stage 1	-	-	-	-	-	-	908	814	-	744	692	-
Stage 2	-	-	-	-	-	-	739	663	-	900	814	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1307	-	-	1508	-	-	576	525	970	570	556	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	576	525	-	570	556	-
Stage 1	-	-	-	-	-	-	904	811	-	741	680	-
Stage 2	-	-	-	-	-	-	718	651	-	882	811	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.6	9	11.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	915	1307	-	-	1508	-	-	590
HCM Lane V/C Ratio	0.017	0.004	-	-	0.015	-	-	0.096
HCM Control Delay (s)	9	7.8	0	-	7.4	0	-	11.7
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	54	106	43	25	4
Future Volume (vph)	4	54	106	43	25	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.961		0.983	
Flt Protected		0.997			0.958	
Satd. Flow (prot)	0	1857	1790	0	1754	0
Flt Permitted		0.997			0.958	
Satd. Flow (perm)	0	1857	1790	0	1754	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	59	115	47	27	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	63	162	0	31	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.2%		ICU Level of Service A	
Analysis Period (min) 15			

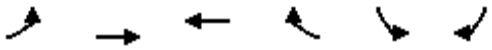
Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	54	106	43	25	4
Future Vol, veh/h	4	54	106	43	25	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	59	115	47	27	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	206	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1417	-	-	-	782	909
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1417	-	-	-	780	909
Mov Cap-2 Maneuver	-	-	-	-	780	-
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1417	-	-	-	796
HCM Lane V/C Ratio	0.003	-	-	-	0.04
HCM Control Delay (s)	7.5	0	-	-	9.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	145	264	21	12	1
Future Volume (vph)	1	145	264	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1844	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1844	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	158	287	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	159	310	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	145	264	21	12	1
Future Vol, veh/h	1	145	264	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	158	287	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	310	0	-	0	459	299
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	160	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1250	-	-	-	560	741
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	869	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1250	-	-	-	559	741
Mov Cap-2 Maneuver	-	-	-	-	559	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	869	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.5
HCM LOS			B

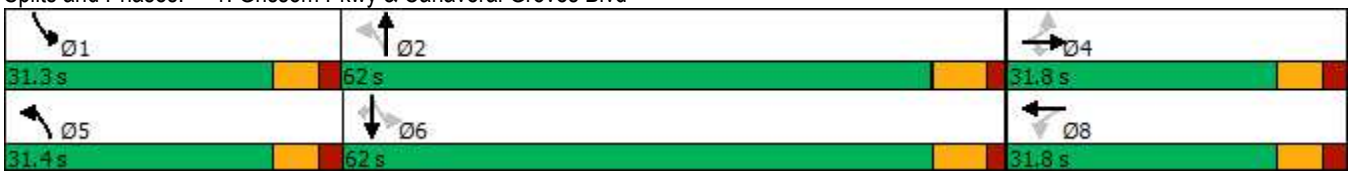
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1250	-	-	-	570
HCM Lane V/C Ratio	0.001	-	-	-	0.025
HCM Control Delay (s)	7.9	0	-	-	11.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	127	166	64	56	45	46	182	44	90	366	54
Future Volume (vph)	111	127	166	64	56	45	46	182	44	90	366	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.963			0.971				0.850
Flt Protected		0.977			0.981		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1760	0	1770	1809	0	1770	1863	1583
Flt Permitted		0.783			0.780		0.394			0.528		
Satd. Flow (perm)	0	1459	1583	0	1399	0	734	1809	0	984	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			180		13			12				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	138	180	70	61	49	50	198	48	98	398	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	259	180	0	180	0	50	246	0	98	398	59
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.5	25.5		25.5		25.9	19.8		28.3	23.0	23.0
Actuated g/C Ratio		0.36	0.36		0.36		0.37	0.28		0.40	0.33	0.33
v/c Ratio		0.49	0.26		0.35		0.13	0.48		0.20	0.65	0.10
Control Delay		24.2	4.8		20.5		11.0	24.0		11.4	27.3	2.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.2	4.8		20.5		11.0	24.0		11.4	27.3	2.5
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.2			20.5			21.8			21.9	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		90	0		54		12	88		23	162	0
Queue Length 95th (ft)		191	44		126		27	153		46	262	14
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		529	689		516		728	1441		758	1480	1275
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.49	0.26		0.35		0.07	0.17		0.13	0.27	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 70.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 20.0		Intersection LOS: B	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	127	166	64	56	45	46	182	44	90	366	54
Future Volume (veh/h)	111	127	166	64	56	45	46	182	44	90	366	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	138	180	70	61	49	50	198	48	98	398	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	229	417	149	122	66	334	413	100	459	571	484
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.05	0.28	0.28	0.07	0.31	0.31
Sat Flow, veh/h	566	871	1585	208	465	252	1781	1454	353	1781	1870	1585
Grp Volume(v), veh/h	259	0	180	180	0	0	50	0	246	98	398	59
Grp Sat Flow(s),veh/h/ln	1438	0	1585	924	0	0	1781	0	1807	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.0	2.6	0.0	0.0	1.0	0.0	6.0	2.0	9.9	1.4
Cycle Q Clear(g_c), s	8.6	0.0	5.0	11.1	0.0	0.0	1.0	0.0	6.0	2.0	9.9	1.4
Prop In Lane	0.47		1.00	0.39		0.27	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	478	0	417	338	0	0	334	0	513	459	571	484
V/C Ratio(X)	0.54	0.00	0.43	0.53	0.00	0.00	0.15	0.00	0.48	0.21	0.70	0.12
Avail Cap(c_a), veh/h	802	0	750	630	0	0	1089	0	1882	1174	1948	1651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	16.2	17.7	0.0	0.0	12.9	0.0	15.7	11.9	16.2	13.2
Incr Delay (d2), s/veh	1.0	0.0	0.7	1.3	0.0	0.0	0.2	0.0	0.7	0.2	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.6	2.0	0.0	0.0	0.3	0.0	2.1	0.6	3.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	16.9	19.1	0.0	0.0	13.1	0.0	16.4	12.2	17.7	13.4
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		439			180			296			555	
Approach Delay, s/veh		17.7			19.1			15.8			16.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	22.0		20.7	9.0	23.1		20.7				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.0	8.0		10.6	3.0	11.9		13.1				
Green Ext Time (p_c), s	0.2	1.4		1.8	0.1	2.5		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		16.9	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	127	166	64	56	45	46	182	44	90	366	54
Future Volume (veh/h)	111	127	166	64	56	45	46	182	44	90	366	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	121	138	180	70	61	49	50	198	48	98	398	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	249	229	417	149	122	66	334	413	100	459	571	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.05	0.28	0.28	0.07	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.2	0.0	16.9	19.1	0.0	0.0	13.1	0.0	16.4	12.2	17.7	13.4
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		439			180			296			555	
Approach Delay, s/veh		17.7			19.1			15.8			16.3	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.1	22.0		20.7	9.0	23.1		20.7
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.5
Max Q Clear (g_c+I1), s	4.0	8.0		10.6	3.0	11.9		13.1
Green Ext Time (g_e), s	0.2	1.4		1.8	0.1	2.5		0.8
Prob of Phs Call (p_c)	0.76	1.00		1.00	0.52	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.04	0.00	0.00		0.05

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			566	1781			208

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1454		871		1870		465

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		353		1585		1585		252

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	98	0	0	259	50	0	0	180
Grp Sat Flow (s), veh/h/ln	1781	0	0	1438	1781	0	0	924
Q Serve Time (g_s), s	2.0	0.0	0.0	0.0	1.0	0.0	0.0	2.6
Cycle Q Clear Time (g_c), s	2.0	0.0	0.0	8.6	1.0	0.0	0.0	11.1
Perm LT Sat Flow (s_l), veh/h/ln	1134	0	0	1304	934	0	0	1078
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1331	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	13.9	15.0	0.0	0.0	13.9
Perm LT Serve Time (g_u), s	9.0	0.0	0.0	2.8	6.2	0.0	0.0	5.3
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	0.5	0.0	0.0	2.6
Time to First Blk (g_f), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.47	1.00	0.00	0.00	0.39
Lane Grp Cap (c), veh/h	459	0	0	478	334	0	0	338
V/C Ratio (X)	0.21	0.00	0.00	0.54	0.15	0.00	0.00	0.53
Avail Cap (c_a), veh/h	1174	0	0	802	1089	0	0	630
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	11.9	0.0	0.0	17.3	12.9	0.0	0.0	17.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.0	0.2	0.0	0.0	1.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.2	0.0	0.0	18.2	13.1	0.0	0.0	19.1
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.4	0.3	0.0	0.0	1.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	2.6	0.3	0.0	0.0	2.0
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	398	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	9.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	571	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1948	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	16.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	17.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	246	0	180	0	59	0	0
Grp Sat Flow (s), veh/h/ln	0	1807	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	6.0	0.0	5.0	0.0	1.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.0	0.0	5.0	0.0	1.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	513	0	417	0	484	0	0
V/C Ratio (X)	0.00	0.48	0.00	0.43	0.00	0.12	0.00	0.00
Avail Cap (c_a), veh/h	0	1882	0	750	0	1651	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.7	0.0	16.2	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.4	0.0	16.9	0.0	13.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	1.6	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	1.6	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.23	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

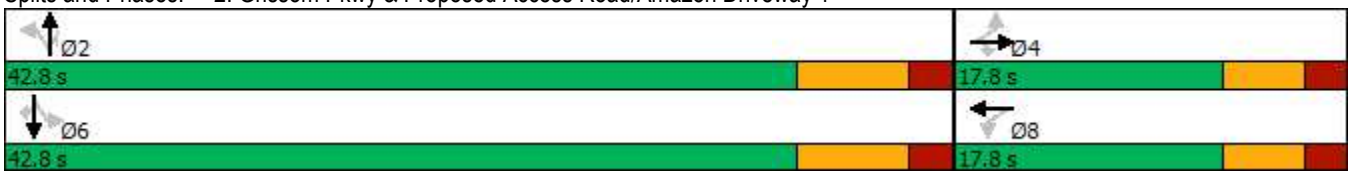
Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

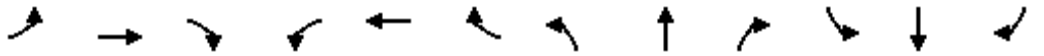
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	0	193	1	0	0	47	270	1	0	604	49
Future Volume (vph)	124	0	193	1	0	0	47	270	1	0	604	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.671		0.312					
Satd. Flow (perm)	0	1410	1583	0	1250	0	581	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210						49			53
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	0	210	1	0	0	51	293	1	0	657	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	210	0	1	0	51	293	1	0	657	53
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.8	17.8	17.8	17.8	17.8		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	29.4%	29.4%	29.4%	29.4%	29.4%		70.6%	70.6%	70.6%	70.6%	70.6%	70.6%
Maximum Green (s)	12.1	12.1	12.1	12.1	12.1		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.8	9.8		9.8		23.8	23.8	23.8		23.8	23.8
Actuated g/C Ratio		0.21	0.21		0.21		0.51	0.51	0.51		0.51	0.51
v/c Ratio		0.46	0.42		0.00		0.17	0.31	0.00		0.69	0.06
Control Delay		23.4	6.6		18.0		7.8	7.7	0.0		13.2	2.2
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		23.4	6.6		18.0		7.8	7.7	0.0		13.2	2.2
LOS		C	A		B		A	A	A		B	A
Approach Delay		13.2			18.0			7.7			12.4	
Approach LOS		B			B			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		29	0		0		6	39	0		114	0
Queue Length 95th (ft)		90	46		4		22	81	0		223	11
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		374	575		332		475	1523	1303		1523	1304
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.36	0.37		0.00		0.11	0.19	0.00		0.43	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 60.6			
Actuated Cycle Length: 46.7			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	0	193	1	0	0	47	270	1	0	604	49
Future Volume (veh/h)	124	0	193	1	0	0	47	270	1	0	604	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	0	210	1	0	0	51	293	1	0	657	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	506	0	326	355	0	0	310	853	723	190	853	723
Arrive On Green	0.21	0.00	0.21	0.21	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Sat Flow, veh/h	1534	0	1585	801	0	0	739	1870	1585	1085	1870	1585
Grp Volume(v), veh/h	135	0	210	1	0	0	51	293	1	0	657	53
Grp Sat Flow(s),veh/h/ln	1534	0	1585	801	0	0	739	1870	1585	1085	1870	1585
Q Serve(g_s), s	0.0	0.0	4.6	0.0	0.0	0.0	2.4	3.8	0.0	0.0	11.1	0.7
Cycle Q Clear(g_c), s	2.5	0.0	4.6	2.5	0.0	0.0	13.5	3.8	0.0	0.0	11.1	0.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	506	0	326	355	0	0	310	853	723	190	853	723
V/C Ratio(X)	0.27	0.00	0.64	0.00	0.00	0.00	0.16	0.34	0.00	0.00	0.77	0.07
Avail Cap(c_a), veh/h	667	0	507	488	0	0	670	1764	1495	719	1764	1495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	13.8	14.0	0.0	0.0	14.3	6.6	5.6	0.0	8.6	5.8
Incr Delay (d2), s/veh	0.3	0.0	2.1	0.0	0.0	0.0	0.2	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.5	0.0	0.0	0.0	0.3	0.7	0.0	0.0	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	0.0	15.9	14.0	0.0	0.0	14.5	6.9	5.6	0.0	10.1	5.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		345			1			345			710	
Approach Delay, s/veh		14.8			14.0			8.0			9.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.4		13.5		24.4		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		15.5		6.6		13.1		4.5				
Green Ext Time (p_c), s		1.7		0.7		4.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.6									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	0	193	1	0	0	47	270	1	0	604	49
Future Volume (veh/h)	124	0	193	1	0	0	47	270	1	0	604	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	0	210	1	0	0	51	293	1	0	657	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	506	0	326	355	0	0	310	853	723	190	853	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.00	0.21	0.21	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.2	0.0	15.9	14.0	0.0	0.0	14.5	6.9	5.6	0.0	10.1	5.8
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		345			1			345			710	
Approach Delay, s/veh		14.8			14.0			8.0			9.8	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		24.4		13.5		24.4		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		5.0		4.4		4.8		5.9
Max Q Clear (g_c+I1), s		15.5		6.6		13.1		4.5
Green Ext Time (g_e), s		1.7		0.7		4.1		0.0
Prob of Phs Call (p_c)		1.00		0.97		1.00		0.97
Prob of Max Out (p_x)		0.00		0.61		0.03		0.04

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		739		1534		1085		801

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	51	0	135	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	739	0	1534	0	1085	0	801
Q Serve Time (g_s), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.5	0.0	2.5	0.0	0.0	0.0	2.5
Perm LT Sat Flow (s_l), veh/h/ln	0	739	0	1440	0	1085	0	1190
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.3	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	6.1	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Q Serve Time (g_ps), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	310	0	506	0	190	0	355
V/C Ratio (X)	0.00	0.16	0.00	0.27	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	670	0	667	0	719	0	488
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	12.9	0.0	0.0	0.0	14.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.5	0.0	13.2	0.0	0.0	0.0	14.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	293	0	0	0	657	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.8	0.0	0.0	0.0	11.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	0.0	0.0	11.1	0.0	0.0
Lane Grp Cap (c), veh/h	0	853	0	0	0	853	0	0
V/C Ratio (X)	0.00	0.34	0.00	0.00	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	1764	0	0	0	1764	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.6	0.0	0.0	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.9	0.0	0.0	0.0	10.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	1.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

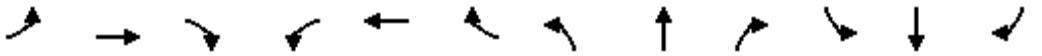
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	210	0	53	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.6	0.0	0.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.6	0.0	0.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	723	0	326	0	723	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.64	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1495	0	507	0	1495	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.6	0.0	13.8	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.6	0.0	15.9	0.0	5.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.3	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.5	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.25	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

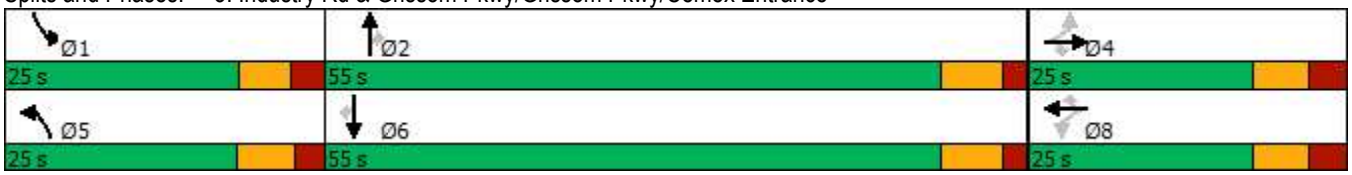


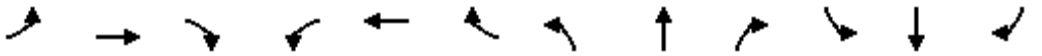
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	6	519	50	2	0	285	103	44	3	133	26
Future Volume (vph)	37	6	519	50	2	0	285	103	44	3	133	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.753			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1403	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			564						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	7	564	54	2	0	310	112	48	3	145	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	7	564	54	2	0	310	112	48	3	145	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2		12.8	27.0	27.0	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.28	0.28
v/c Ratio	0.14	0.02	0.73	0.19	0.01		0.39	0.12	0.06	0.02	0.28	0.05
Control Delay	20.8	19.0	8.7	21.6	19.0		22.8	10.3	0.1	27.3	21.0	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.8	19.0	8.7	21.6	19.0		22.8	10.3	0.1	27.3	21.0	0.2
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.7			21.5			17.5			17.8	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	12	2	0	16	1		48	15	0	1	38	0
Queue Length 95th (ft)	34	11	73	43	5		93	64	0	9	98	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	465	615	900	463	615		1179	1585	1364	611	1585	1364
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.63	0.12	0.00		0.26	0.07	0.04	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 55.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 69.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	519	50	2	0	285	103	44	3	133	26
Future Volume (veh/h)	37	6	519	50	2	0	285	103	44	3	133	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	2	0	310	112	48	3	145	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	230		315	230	195	493	829	702	7	566	479
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Sat Flow, veh/h	1415	1870	1585	1409	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	40	7	0	54	2	0	310	112	48	3	145	28
Grp Sat Flow(s),veh/h/ln	1415	1870	1585	1409	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	0.2	0.0	1.7	0.0	0.0	4.1	1.7	0.9	0.1	2.9	0.6
Cycle Q Clear(g_c), s	1.3	0.2	0.0	1.9	0.0	0.0	4.1	1.7	0.9	0.1	2.9	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	230		315	230	195	493	829	702	7	566	479
V/C Ratio(X)	0.13	0.03		0.17	0.01	0.00	0.63	0.14	0.07	0.41	0.26	0.06
Avail Cap(c_a), veh/h	650	667		644	667	565	1281	1833	1553	664	1833	1553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	18.9	0.0	19.8	18.9	0.0	19.8	8.1	7.9	24.4	12.9	12.2
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.5	0.0	0.0	1.6	0.6	0.2	0.1	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	19.0	0.0	20.1	18.9	0.0	21.1	8.2	7.9	49.8	13.2	12.2
LnGrp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47	A		56			470			176	
Approach Delay, s/veh		19.6			20.0			16.7			13.7	
Approach LOS		B			C			B			B	

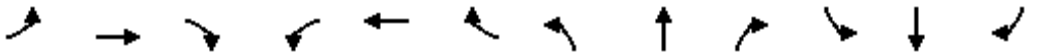
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.6		13.5	13.8	21.7		13.5				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.7		3.3	6.1	4.9		3.9				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.9	1.2		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	519	50	2	0	285	103	44	3	133	26
Future Volume (veh/h)	37	6	519	50	2	0	285	103	44	3	133	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	2	0	310	112	48	3	145	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	319	230		315	230	195	493	829	702	7	566	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.7	19.0	0.0	20.1	18.9	0.0	21.1	8.2	7.9	49.8	13.2	12.2
Ln Grp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47			56			470			176	
Approach Delay, s/veh		19.6			20.0			16.7			13.7	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.6		13.5	13.8	21.7		13.5
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.7		3.3	6.1	4.9		3.9
Green Ext Time (g_e), s	0.0	1.0		0.1	0.9	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.75	1.00	0.99		0.75
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1415	3456			1409

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	40	310	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1415	1728	0	0	1409
Q Serve Time (g_s), s	0.1	0.0	0.0	1.3	4.1	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.3	4.1	0.0	0.0	1.9
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1415	0	0	0	1409
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	5.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	319	493	0	0	315
V/C Ratio (X)	0.41	0.00	0.00	0.13	0.63	0.00	0.00	0.17
Avail Cap (c_a), veh/h	664	0	0	650	1281	0	0	644
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.4	0.0	0.0	19.5	19.8	0.0	0.0	19.8
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.8	0.0	0.0	19.7	21.1	0.0	0.0	20.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	1.5	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.4	1.6	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.07	0.29	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	112	0	7	0	145	0	2
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.7	0.0	0.2	0.0	2.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	0.2	0.0	2.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	829	0	230	0	566	0	230
V/C Ratio (X)	0.00	0.14	0.00	0.03	0.00	0.26	0.00	0.01
Avail Cap (c_a), veh/h	0	1833	0	667	0	1833	0	667
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	18.9	0.0	12.9	0.0	18.9
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.2	0.0	19.0	0.0	13.2	0.0	18.9
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.1	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

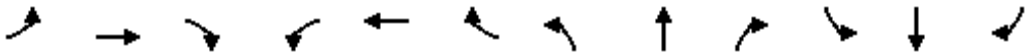
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	48	0	0	0	28	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	702	0	195	0	479	0	195
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.06	0.00	0.00
Avail Cap (c_a), veh/h	0	1553	0	565	0	1553	0	565
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.9	0.0	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	12.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	192	5	16	80	2	10	0	19	1	0	12
Future Volume (vph)	1	192	5	16	80	2	10	0	19	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.997			0.911			0.875	
Flt Protected					0.992			0.983			0.996	
Satd. Flow (prot)	0	1857	0	0	1842	0	0	1668	0	0	1623	0
Flt Permitted					0.992			0.983			0.996	
Satd. Flow (perm)	0	1857	0	0	1842	0	0	1668	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	209	5	17	87	2	11	0	21	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	106	0	0	32	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	192	5	16	80	2	10	0	19	1	0	12
Future Vol, veh/h	1	192	5	16	80	2	10	0	19	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	209	5	17	87	2	11	0	21	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	89	0	0	214	0	0	343	337	212	346	338	88
Stage 1	-	-	-	-	-	-	214	214	-	122	122	-
Stage 2	-	-	-	-	-	-	129	123	-	224	216	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1506	-	-	1356	-	-	611	584	828	608	583	970
Stage 1	-	-	-	-	-	-	788	725	-	882	795	-
Stage 2	-	-	-	-	-	-	875	794	-	779	724	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1506	-	-	1356	-	-	596	576	828	587	575	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	596	576	-	587	575	-
Stage 1	-	-	-	-	-	-	787	724	-	881	785	-
Stage 2	-	-	-	-	-	-	852	784	-	759	723	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	10.2	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	730	1506	-	-	1356	-	-	924
HCM Lane V/C Ratio	0.043	0.001	-	-	0.013	-	-	0.015
HCM Control Delay (s)	10.2	7.4	0	-	7.7	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	292	1	25	117	1	52
Future Volume (vph)	292	1	25	117	1	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.867	
Flt Protected				0.991	0.999	
Satd. Flow (prot)	1863	0	0	1846	1613	0
Flt Permitted				0.991	0.999	
Satd. Flow (perm)	1863	0	0	1846	1613	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	317	1	27	127	1	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	318	0	0	154	58	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	292	1	25	117	1	52
Future Vol, veh/h	292	1	25	117	1	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	317	1	27	127	1	57

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	499	318
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	181	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1242	-	531	723
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1242	-	519	723
Mov Cap-2 Maneuver	-	-	-	-	519	-
Stage 1	-	-	-	-	738	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	718	-	-	1242	-
HCM Lane V/C Ratio	0.08	-	-	0.022	-
HCM Control Delay (s)	10.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	344	0	19	129	0	37
Future Volume (vph)	344	0	19	129	0	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.994		
Satd. Flow (prot)	1863	0	0	1852	1611	0
Flt Permitted				0.994		
Satd. Flow (perm)	1863	0	0	1852	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	374	0	21	140	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	374	0	0	161	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.8%		ICU Level of Service A	
Analysis Period (min) 15			

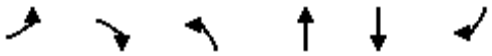
Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	344	0	19	129	0	37
Future Vol, veh/h	344	0	19	129	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	374	0	21	140	0	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	374	0	556	374
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	182	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1184	-	492	672
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1184	-	483	672
Mov Cap-2 Maneuver	-	-	-	-	483	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	833	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	672	-	-	1184	-
HCM Lane V/C Ratio	0.06	-	-	0.017	-
HCM Control Delay (s)	10.7	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	5	15	43	15	9
Future Volume (vph)	9	5	15	43	15	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955				0.948	
Flt Protected	0.968			0.987		
Satd. Flow (prot)	1722	0	0	1839	1766	0
Flt Permitted	0.968			0.987		
Satd. Flow (perm)	1722	0	0	1839	1766	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	5	16	47	16	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	0	63	26	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.8%		ICU Level of Service A	
Analysis Period (min) 15			

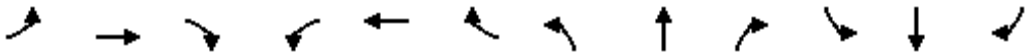
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	5	15	43	15	9
Future Vol, veh/h	9	5	15	43	15	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	5	16	47	16	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	100	21	26	0	-	0
Stage 1	21	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	899	1056	1588	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	890	1056	1588	-	-	-
Mov Cap-2 Maneuver	890	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	944	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	1.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1588	-	943	-	-
HCM Lane V/C Ratio	0.01	-	0.016	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	203	0	6	58	33	0	2	20	68	1	0
Future Volume (vph)	8	203	0	6	58	33	0	2	20	68	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.954			0.876				
Flt Protected		0.998			0.997						0.953	
Satd. Flow (prot)	0	1859	0	0	1772	0	0	1632	0	0	1775	0
Flt Permitted		0.998			0.997						0.953	
Satd. Flow (perm)	0	1859	0	0	1772	0	0	1632	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	221	0	7	63	36	0	2	22	74	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	106	0	0	24	0	0	75	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

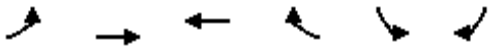
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	203	0	6	58	33	0	2	20	68	1	0
Future Vol, veh/h	8	203	0	6	58	33	0	2	20	68	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	221	0	7	63	36	0	2	22	74	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	99	0	0	221	0	0	335	352	221	346	334	81
Stage 1	-	-	-	-	-	-	239	239	-	95	95	-
Stage 2	-	-	-	-	-	-	96	113	-	251	239	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1494	-	-	1348	-	-	619	573	819	608	586	979
Stage 1	-	-	-	-	-	-	764	708	-	912	816	-
Stage 2	-	-	-	-	-	-	911	802	-	753	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1348	-	-	612	566	819	584	578	979
Mov Cap-2 Maneuver	-	-	-	-	-	-	612	566	-	584	578	-
Stage 1	-	-	-	-	-	-	759	703	-	906	811	-
Stage 2	-	-	-	-	-	-	904	797	-	726	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.5	9.7	12.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	787	1494	-	-	1348	-	-	584
HCM Lane V/C Ratio	0.03	0.006	-	-	0.005	-	-	0.128
HCM Control Delay (s)	9.7	7.4	0	-	7.7	0	-	12.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	161	46	13	37	0
Future Volume (vph)	4	161	46	13	37	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1807	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1807	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		44.7	42.8		61.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	175	50	14	40	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	179	64	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.7%		ICU Level of Service A	
Analysis Period (min) 15			

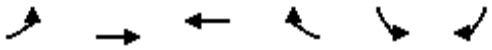
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	161	46	13	37	0
Future Vol, veh/h	4	161	46	13	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	175	50	14	40	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	64	0	-	0	240	57
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1538	-	-	-	748	1009
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1538	-	-	-	746	1009
Mov Cap-2 Maneuver	-	-	-	-	746	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1538	-	-	-	746
HCM Lane V/C Ratio	0.003	-	-	-	0.054
HCM Control Delay (s)	7.3	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	300	91	6	17	0
Future Volume (vph)	1	300	91	6	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1846	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1846	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		47.2	13.2		60.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	326	99	7	18	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	327	106	0	18	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	300	91	6	17	0
Future Vol, veh/h	1	300	91	6	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	326	99	7	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	106	0	-	0	431	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	328	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1485	-	-	-	581	952
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1485	-	-	-	580	952
Mov Cap-2 Maneuver	-	-	-	-	580	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

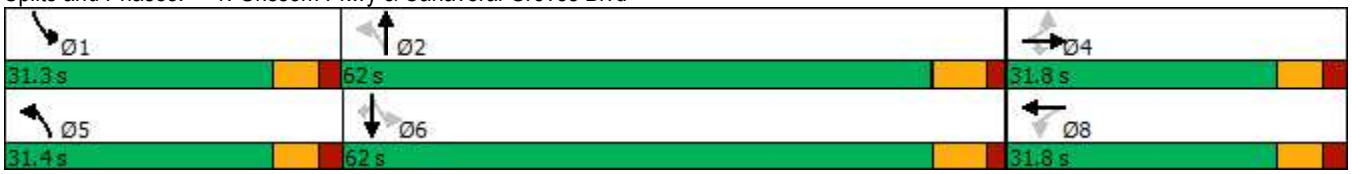
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1485	-	-	-	580
HCM Lane V/C Ratio	0.001	-	-	-	0.032
HCM Control Delay (s)	7.4	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

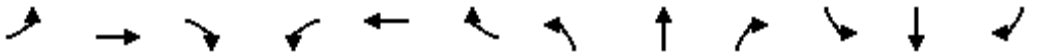
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	82	93	76	94	76	173	425	97	87	288	100
Future Volume (vph)	82	82	93	76	94	76	173	425	97	87	288	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.958			0.972				0.850
Flt Protected		0.976			0.985		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1758	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.678			0.831		0.398			0.264		
Satd. Flow (perm)	0	1263	1583	0	1483	0	741	1811	0	492	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101		16			12				109
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	89	101	83	102	83	188	462	105	95	313	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	101	0	268	0	188	567	0	95	313	109
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		43.0	33.3		35.0	26.7	26.7
Actuated g/C Ratio		0.30	0.30		0.30		0.51	0.40		0.42	0.32	0.32
v/c Ratio		0.47	0.18		0.58		0.36	0.78		0.30	0.53	0.19
Control Delay		31.6	7.0		31.9		11.5	30.7		11.9	26.4	4.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.6	7.0		31.9		11.5	30.7		11.9	26.4	4.9
LOS		C	A		C		B	C		B	C	A
Approach Delay		22.7			31.9			26.0			19.2	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		76	0		112		47	262		22	131	0
Queue Length 95th (ft)		169	40		#237		78	398		43	216	33
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		382	550		460		709	1213		651	1242	1091
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.47	0.18		0.58		0.27	0.47		0.15	0.25	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 83.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 24.4		Intersection LOS: C	
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

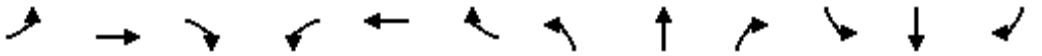




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	82	93	76	94	76	173	425	97	87	288	100
Future Volume (veh/h)	82	82	93	76	94	76	173	425	97	87	288	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	89	101	83	102	83	188	462	105	95	313	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	194	418	141	154	100	478	549	125	291	622	527
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.37	0.37	0.06	0.33	0.33
Sat Flow, veh/h	524	736	1585	264	582	380	1781	1475	335	1781	1870	1585
Grp Volume(v), veh/h	178	0	101	268	0	0	188	0	567	95	313	109
Grp Sat Flow(s),veh/h/ln	1261	0	1585	1227	0	0	1781	0	1810	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.3	6.9	0.0	0.0	4.5	0.0	19.1	2.3	8.9	3.3
Cycle Q Clear(g_c), s	7.7	0.0	3.3	14.6	0.0	0.0	4.5	0.0	19.1	2.3	8.9	3.3
Prop In Lane	0.50		1.00	0.31		0.31	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	414	0	418	394	0	0	478	0	674	291	622	527
V/C Ratio(X)	0.43	0.00	0.24	0.68	0.00	0.00	0.39	0.00	0.84	0.33	0.50	0.21
Avail Cap(c_a), veh/h	576	0	595	564	0	0	968	0	1494	849	1544	1308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	19.3	23.7	0.0	0.0	12.7	0.0	19.1	15.2	17.8	15.9
Incr Delay (d2), s/veh	0.7	0.0	0.3	2.1	0.0	0.0	0.5	0.0	2.9	0.6	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.2	4.0	0.0	0.0	1.5	0.0	7.2	0.8	3.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	0.0	19.6	25.8	0.0	0.0	13.2	0.0	22.0	15.8	18.5	16.1
LnGrp LOS	C	A	B	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		279			268			755			517	
Approach Delay, s/veh		20.6			25.8			19.9			17.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	31.8		24.4	13.1	29.2		24.4				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.3	21.1		9.7	6.5	10.9		16.6				
Green Ext Time (p_c), s	0.2	3.7		1.1	0.4	2.1		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		20.2	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	82	93	76	94	76	173	425	97	87	288	100
Future Volume (veh/h)	82	82	93	76	94	76	173	425	97	87	288	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	89	101	83	102	83	188	462	105	95	313	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	219	194	418	141	154	100	478	549	125	291	622	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.37	0.37	0.06	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.2	0.0	19.6	25.8	0.0	0.0	13.2	0.0	22.0	15.8	18.5	16.1
Ln Grp LOS	C	A	B	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		279			268			755			517	
Approach Delay, s/veh		20.6			25.8			19.9			17.5	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.4	31.8		24.4	13.1	29.2		24.4
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.9	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.3	21.1		9.7	6.5	10.9		16.6
Green Ext Time (g_e), s	0.2	3.7		1.1	0.4	2.1		1.0
Prob of Phs Call (p_c)	0.83	1.00		1.00	0.97	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.30

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			524	1781			264

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1475		736		1870		582

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		335		1585		1585		380

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

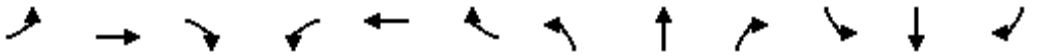
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	95	0	0	178	188	0	0	268
Grp Sat Flow (s), veh/h/ln	1781	0	0	1261	1781	0	0	1227
Q Serve Time (g_s), s	2.3	0.0	0.0	0.0	4.5	0.0	0.0	6.9
Cycle Q Clear Time (g_c), s	2.3	0.0	0.0	7.7	4.5	0.0	0.0	14.6
Perm LT Sat Flow (s_l), veh/h/ln	844	0	0	1218	965	0	0	1212
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1117	0	0	0	0
Perm LT Eff Green (g_p), s	22.2	0.0	0.0	17.6	22.2	0.0	0.0	17.6
Perm LT Serve Time (g_u), s	5.7	0.0	0.0	3.0	13.2	0.0	0.0	9.9
Perm LT Q Serve Time (g_ps), s	2.1	0.0	0.0	0.0	2.2	0.0	0.0	6.9
Time to First Blk (g_f), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.7
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.0	0.0	0.0	0.0	3.7
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.50	1.00	0.00	0.00	0.31
Lane Grp Cap (c), veh/h	291	0	0	414	478	0	0	394
V/C Ratio (X)	0.33	0.00	0.00	0.43	0.39	0.00	0.00	0.68
Avail Cap (c_a), veh/h	849	0	0	576	968	0	0	564
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	15.2	0.0	0.0	20.5	12.7	0.0	0.0	23.7
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.7	0.5	0.0	0.0	2.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	15.8	0.0	0.0	21.2	13.2	0.0	0.0	25.8
1st-Term Q (Q1), veh/ln	0.8	0.0	0.0	2.1	1.5	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	2.2	1.5	0.0	0.0	4.0
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.02	0.08	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	313	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	622	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1544	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	18.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	567	0	101	0	109	0	0
Grp Sat Flow (s), veh/h/ln	0	1810	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	19.1	0.0	3.3	0.0	3.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.1	0.0	3.3	0.0	3.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.31
Lane Grp Cap (c), veh/h	0	674	0	418	0	527	0	0
V/C Ratio (X)	0.00	0.84	0.00	0.24	0.00	0.21	0.00	0.00
Avail Cap (c_a), veh/h	0	1494	0	595	0	1308	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	19.1	0.0	19.3	0.0	15.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.3	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.0	0.0	19.6	0.0	16.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.6	0.0	1.1	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.2	0.0	1.2	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.16	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

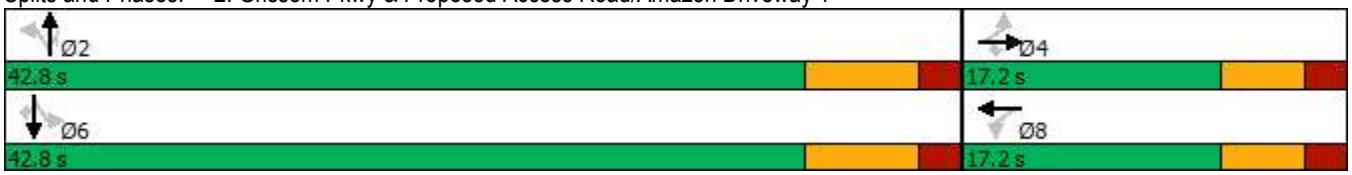


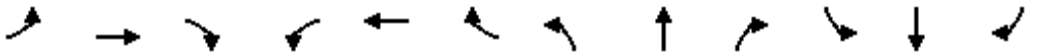
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	0	135	27	0	20	237	638	1	0	376	121
Future Volume (vph)	60	0	135	27	0	20	237	638	1	0	376	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.788		0.522					
Satd. Flow (perm)	0	1349	1583	0	1383	0	972	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147		75				49			132
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	0	147	29	0	22	258	693	1	0	409	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	147	0	51	0	258	693	1	0	409	132
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.0	9.0		9.0		28.8	28.8	28.8		28.8	28.8
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.25	0.34		0.15		0.42	0.59	0.00		0.35	0.13
Control Delay		20.9	7.2		5.0		9.3	10.0	0.0		7.0	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		20.9	7.2		5.0		9.3	10.0	0.0		7.0	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		11.4			5.0			9.8			5.7	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		14	0		0		36	114	0		54	0
Queue Length 95th (ft)		50	40		16		93	234	0		113	16
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		349	519		413		781	1497	1282		1497	1298
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.19	0.28		0.12		0.33	0.46	0.00		0.27	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.8			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	135	27	0	20	237	638	1	0	376	121
Future Volume (veh/h)	60	0	135	27	0	20	237	638	1	0	376	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	0	147	29	0	22	258	693	1	0	409	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	410	0	272	235	32	107	519	1014	859	161	1014	859
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.54	0.54	0.54	0.00	0.54	0.54
Sat Flow, veh/h	1448	0	1585	631	187	621	865	1870	1585	750	1870	1585
Grp Volume(v), veh/h	65	0	147	51	0	0	258	693	1	0	409	132
Grp Sat Flow(s),veh/h/ln	1448	0	1585	1438	0	0	865	1870	1585	750	1870	1585
Q Serve(g_s), s	0.3	0.0	3.8	0.0	0.0	0.0	11.2	12.1	0.0	0.0	5.7	1.9
Cycle Q Clear(g_c), s	1.5	0.0	3.8	1.1	0.0	0.0	16.9	12.1	0.0	0.0	5.7	1.9
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	410	0	272	373	0	0	519	1014	859	161	1014	859
V/C Ratio(X)	0.16	0.00	0.54	0.14	0.00	0.00	0.50	0.68	0.00	0.00	0.40	0.15
Avail Cap(c_a), veh/h	528	0	407	490	0	0	740	1491	1264	352	1491	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	16.9	15.8	0.0	0.0	11.0	7.5	4.7	0.0	6.0	5.1
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.2	0.0	0.0	0.7	0.8	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.3	0.4	0.0	0.0	1.4	2.3	0.0	0.0	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	0.0	18.6	16.0	0.0	0.0	11.7	8.3	4.7	0.0	6.3	5.2
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		212			51			952			541	
Approach Delay, s/veh		17.8			16.0			9.2			6.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	31.4	13.4	31.4	13.4
Change Period (Y+Rc), s	7.1	* 5.7	7.1	* 5.7
Max Green Setting (Gmax), s	35.7	* 12	35.7	* 12
Max Q Clear Time (g_c+I1), s	18.9	5.8	7.7	3.1
Green Ext Time (p_c), s	5.4	0.4	2.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	135	27	0	20	237	638	1	0	376	121
Future Volume (veh/h)	60	0	135	27	0	20	237	638	1	0	376	121
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	0	147	29	0	22	258	693	1	0	409	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	410	0	272	235	32	107	519	1014	859	161	1014	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.54	0.54	0.54	0.00	0.54	0.54
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.1	0.0	18.6	16.0	0.0	0.0	11.7	8.3	4.7	0.0	6.3	5.2
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		212			51			952			541	
Approach Delay, s/veh		17.8			16.0			9.2			6.0	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		31.4		13.4		31.4		13.4
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		18.9		5.8		7.7		3.1
Green Ext Time (g_e), s		5.4		0.4		2.7		0.1
Prob of Phs Call (p_c)		1.00		0.96		1.00		0.96
Prob of Max Out (p_x)		0.21		0.43		0.00		0.11

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		865		1448		750		631

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		187

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		621

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	258	0	65	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	865	0	1448	0	750	0	1438
Q Serve Time (g_s), s	0.0	11.2	0.0	0.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	16.9	0.0	1.5	0.0	0.0	0.0	1.1
Perm LT Sat Flow (s_l), veh/h/ln	0	865	0	1412	0	750	0	1260
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	24.3	0.0	7.7	0.0	0.0	0.0	7.7
Perm LT Serve Time (g_u), s	0.0	18.5	0.0	6.5	0.0	0.0	0.0	6.2
Perm LT Q Serve Time (g_ps), s	0.0	11.2	0.0	0.3	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	519	0	410	0	161	0	373
V/C Ratio (X)	0.00	0.50	0.00	0.16	0.00	0.00	0.00	0.14
Avail Cap (c_a), veh/h	0	740	0	528	0	352	0	490
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.0	0.0	15.9	0.0	0.0	0.0	15.8
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.2	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.7	0.0	16.1	0.0	0.0	0.0	16.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.5	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.5	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	409	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.1	0.0	0.0	0.0	5.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.1	0.0	0.0	0.0	5.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1014	0	0	0	1014	0	0
V/C Ratio (X)	0.00	0.68	0.00	0.00	0.00	0.40	0.00	0.00
Avail Cap (c_a), veh/h	0	1491	0	0	0	1491	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	0.0	0.0	6.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

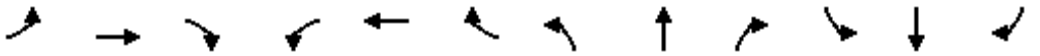
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	147	0	132	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.8	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.8	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	859	0	272	0	859	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.54	0.00	0.15	0.00	0.00
Avail Cap (c_a), veh/h	0	1264	0	407	0	1264	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.7	0.0	16.9	0.0	5.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	18.6	0.0	5.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.3	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

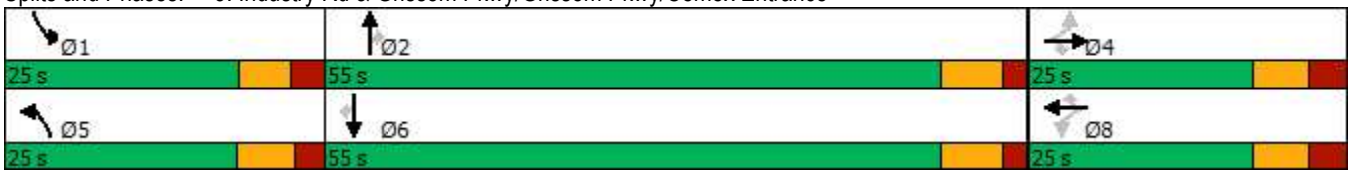


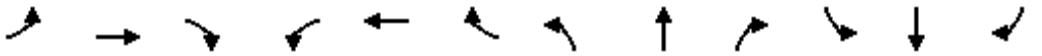
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	8	493	9	6	1	721	97	7	0	206	65
Future Volume (vph)	25	8	493	9	6	1	721	97	7	0	206	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.753			0.752			0.950					
Satd. Flow (perm)	1403	1863	1583	1401	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			536			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	9	536	10	7	1	784	105	8	0	224	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	9	536	10	7	1	784	105	8	0	224	71
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.5	10.5	10.5	10.5	10.5	10.5	18.3	41.2	41.2		16.1	16.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.28	0.62	0.62		0.24	0.24
v/c Ratio	0.12	0.03	0.76	0.05	0.02	0.00	0.83	0.09	0.01		0.50	0.15
Control Delay	25.0	23.4	10.7	23.8	23.3	0.0	33.0	6.0	0.0		26.6	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	25.0	23.4	10.7	23.8	23.3	0.0	33.0	6.0	0.0		26.6	2.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.6			22.3			29.6			20.8	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	3	0	3	2	0	139	13	0		73	0
Queue Length 95th (ft)	30	15	82	16	13	0	#304	40	0		154	12
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	372	495	814	372	495	502	949	1361	1188		1361	1188
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.07	0.02	0.66	0.03	0.01	0.00	0.83	0.08	0.01		0.16	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	8	493	9	6	1	721	97	7	0	206	65
Future Volume (veh/h)	25	8	493	9	6	1	721	97	7	0	206	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	9	0	10	7	1	784	105	8	0	224	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	152		236	152	129	944	1238	1049	3	500	424
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.27	0.66	0.66	0.00	0.27	0.27
Sat Flow, veh/h	1407	1870	1585	1406	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	27	9	0	10	7	1	784	105	8	0	224	71
Grp Sat Flow(s),veh/h/ln	1407	1870	1585	1406	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.2	0.0	0.4	0.2	0.0	11.9	1.1	0.1	0.0	5.6	1.9
Cycle Q Clear(g_c), s	1.2	0.2	0.0	0.6	0.2	0.0	11.9	1.1	0.1	0.0	5.6	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	152		236	152	129	944	1238	1049	3	500	424
V/C Ratio(X)	0.11	0.06		0.04	0.05	0.01	0.83	0.08	0.01	0.00	0.45	0.17
Avail Cap(c_a), veh/h	563	584		561	584	495	1123	1606	1361	582	1606	1361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	23.8	0.0	24.1	23.7	23.7	19.1	3.4	3.2	0.0	17.1	15.7
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.1	0.1	0.0	4.6	0.0	0.0	0.0	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.0	0.1	0.1	0.0	4.9	0.3	0.0	0.0	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	24.0	0.0	24.1	23.9	23.7	23.8	3.4	3.2	0.0	17.8	16.0
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		36	A		18			897			295	
Approach Delay, s/veh		24.4			24.0			21.2			17.4	
Approach LOS		C			C			C			B	

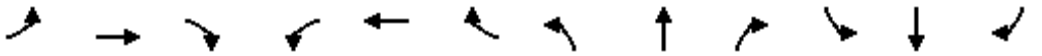
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	44.0		12.0	22.1	21.9		12.0				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.1		3.2	13.9	7.6		2.6				
Green Ext Time (p_c), s	0.0	0.8		0.1	1.4	2.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	8	493	9	6	1	721	97	7	0	206	65
Future Volume (veh/h)	25	8	493	9	6	1	721	97	7	0	206	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	9	0	10	7	1	784	105	8	0	224	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	238	152		236	152	129	944	1238	1049	3	500	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.27	0.66	0.66	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.5	24.0	0.0	24.1	23.9	23.7	23.8	3.4	3.2	0.0	17.8	16.0
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		36			18			897			295	
Approach Delay, s/veh		24.4			24.0			21.2			17.4	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	44.0		12.0	22.1	21.9		12.0
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.9
Max Q Clear (g_c+I1), s	0.0	3.1		3.2	13.9	7.6		2.6
Green Ext Time (g_e), s	0.0	0.8		0.1	1.4	2.0		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.57	1.00	1.00		0.57
Prob of Max Out (p_x)	0.00	0.00		0.00	0.87	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1407	3456			1406

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	27	784	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1407	1728	0	0	1406
Q Serve Time (g_s), s	0.0	0.0	0.0	1.0	11.9	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.2	11.9	0.0	0.0	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1407	0	0	0	1406
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.4	0.0	0.0	0.0	4.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	238	944	0	0	236
V/C Ratio (X)	0.00	0.00	0.00	0.11	0.83	0.00	0.00	0.04
Avail Cap (c_a), veh/h	582	0	0	563	1123	0	0	561
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.3	19.1	0.0	0.0	24.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	4.6	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.5	23.8	0.0	0.0	24.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	4.3	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.3	4.9	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.06	0.89	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	105	0	9	0	224	0	7
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.1	0.0	0.2	0.0	5.6	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	1.1	0.0	0.2	0.0	5.6	0.0	0.2
Lane Grp Cap (c), veh/h	0	1238	0	152	0	500	0	152
V/C Ratio (X)	0.00	0.08	0.00	0.06	0.00	0.45	0.00	0.05
Avail Cap (c_a), veh/h	0	1606	0	584	0	1606	0	584
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	23.8	0.0	17.1	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	24.0	0.0	17.8	0.0	23.9
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.1	0.0	2.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

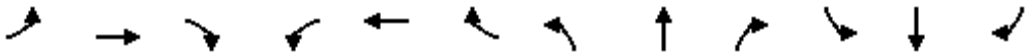
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	2.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	71	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1049	0	129	0	424	0	129
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.17	0.00	0.01
Avail Cap (c_a), veh/h	0	1361	0	495	0	1361	0	495
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	0.0	0.0	15.7	0.0	23.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	0.0	0.0	16.0	0.0	23.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	146	16	29	241	1	11	0	21	1	2	6
Future Volume (vph)	12	146	16	29	241	1	11	0	21	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.911			0.905	
Flt Protected		0.997			0.995			0.983			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Flt Permitted		0.997			0.995			0.983			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	159	17	32	262	1	12	0	23	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	295	0	0	35	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	12	146	16	29	241	1	11	0	21	1	2	6
Future Vol, veh/h	12	146	16	29	241	1	11	0	21	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	159	17	32	262	1	12	0	23	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	176	0	0	525	521	168	532	529	263
Stage 1	-	-	-	-	-	-	194	194	-	327	327	-
Stage 2	-	-	-	-	-	-	331	327	-	205	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1301	-	-	1400	-	-	463	460	876	458	455	776
Stage 1	-	-	-	-	-	-	808	740	-	686	648	-
Stage 2	-	-	-	-	-	-	682	648	-	797	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1301	-	-	1400	-	-	444	443	876	433	438	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	444	443	-	433	438	-
Stage 1	-	-	-	-	-	-	799	732	-	678	631	-
Stage 2	-	-	-	-	-	-	656	631	-	768	726	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.8	10.8	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	656	1301	-	-	1400	-	-	616
HCM Lane V/C Ratio	0.053	0.01	-	-	0.023	-	-	0.016
HCM Control Delay (s)	10.8	7.8	0	-	7.6	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	153	0	58	316	2	40
Future Volume (vph)	153	0	58	316	2	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.871	
Flt Protected				0.992	0.998	
Satd. Flow (prot)	1863	0	0	1848	1619	0
Flt Permitted				0.992	0.998	
Satd. Flow (perm)	1863	0	0	1848	1619	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	166	0	63	343	2	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	166	0	0	406	45	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	153	0	58	316	2	40
Future Vol, veh/h	153	0	58	316	2	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	166	0	63	343	2	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	166	0	635	166
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	469	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1412	-	443	878
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1412	-	419	878
Mov Cap-2 Maneuver	-	-	-	-	419	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	595	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	834	-	-	1412	-
HCM Lane V/C Ratio	0.055	-	-	0.045	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	193	0	51	329	0	29
Future Volume (vph)	193	0	51	329	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1863	0	0	1850	1611	0
Flt Permitted				0.993		
Satd. Flow (perm)	1863	0	0	1850	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	0	55	358	0	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	210	0	0	413	32	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.6%		ICU Level of Service A	
Analysis Period (min) 15			

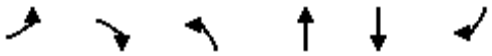
Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	193	0	51	329	0	29
Future Vol, veh/h	193	0	51	329	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	210	0	55	358	0	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	210	0	678	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1361	-	418	830
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1361	-	397	830
Mov Cap-2 Maneuver	-	-	-	-	397	-
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	599	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	830	-	-	1361	-
HCM Lane V/C Ratio	0.038	-	-	0.041	-
HCM Control Delay (s)	9.5	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	19	11	30	50	7
Future Volume (vph)	12	19	11	30	50	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.917				0.983	
Flt Protected	0.981			0.987		
Satd. Flow (prot)	1676	0	0	1839	1831	0
Flt Permitted	0.981			0.987		
Satd. Flow (perm)	1676	0	0	1839	1831	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	21	12	33	54	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	45	62	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.9%		ICU Level of Service A	
Analysis Period (min) 15			

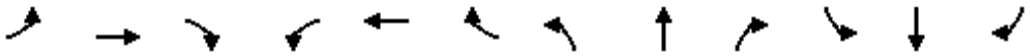
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	19	11	30	50	7
Future Vol, veh/h	12	19	11	30	50	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	21	12	33	54	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	115	58	62	0	-	0
Stage 1	58	-	-	-	-	-
Stage 2	57	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	881	1008	1541	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	966	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	874	1008	1541	-	-	-
Mov Cap-2 Maneuver	874	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	966	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1541	-	952	-	-
HCM Lane V/C Ratio	0.008	-	0.035	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	118	0	21	231	79	0	1	13	44	2	10
Future Volume (vph)	9	118	0	21	231	79	0	1	13	44	2	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.968			0.874			0.976	
Flt Protected		0.996			0.997						0.962	
Satd. Flow (prot)	0	1855	0	0	1798	0	0	1628	0	0	1749	0
Flt Permitted		0.996			0.997						0.962	
Satd. Flow (perm)	0	1855	0	0	1798	0	0	1628	0	0	1749	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	128	0	23	251	86	0	1	14	48	2	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	138	0	0	360	0	0	15	0	0	61	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			

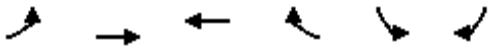
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	9	118	0	21	231	79	0	1	13	44	2	10
Future Vol, veh/h	9	118	0	21	231	79	0	1	13	44	2	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	128	0	23	251	86	0	1	14	48	2	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	337	0	0	128	0	0	495	531	128	496	488	294
Stage 1	-	-	-	-	-	-	148	148	-	340	340	-
Stage 2	-	-	-	-	-	-	347	383	-	156	148	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1222	-	-	1458	-	-	485	454	922	484	480	745
Stage 1	-	-	-	-	-	-	855	775	-	675	639	-
Stage 2	-	-	-	-	-	-	669	612	-	846	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1222	-	-	1458	-	-	466	441	922	465	466	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	466	441	-	465	466	-
Stage 1	-	-	-	-	-	-	847	768	-	669	626	-
Stage 2	-	-	-	-	-	-	644	600	-	824	768	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.5	9.3	13.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	855	1222	-	-	1458	-	-	498
HCM Lane V/C Ratio	0.018	0.008	-	-	0.016	-	-	0.122
HCM Control Delay (s)	9.3	8	0	-	7.5	0	-	13.2
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	95	183	43	25	7
Future Volume (vph)	6	95	183	43	25	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.974		0.969	
Flt Protected		0.997			0.963	
Satd. Flow (prot)	0	1857	1814	0	1738	0
Flt Permitted		0.997			0.963	
Satd. Flow (perm)	0	1857	1814	0	1738	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	103	199	47	27	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	246	0	35	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.2%		ICU Level of Service A	
Analysis Period (min) 15			

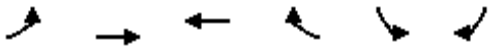
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	95	183	43	25	7
Future Vol, veh/h	6	95	183	43	25	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	103	199	47	27	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	246	0	-	0	340	223
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1320	-	-	-	656	817
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1320	-	-	-	652	817
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1320	-	-	-	682
HCM Lane V/C Ratio	0.005	-	-	-	0.051
HCM Control Delay (s)	7.7	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	182	337	21	12	1
Future Volume (vph)	1	182	337	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.992		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1848	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1848	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	198	366	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	199	389	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	182	337	21	12	1
Future Vol, veh/h	1	182	337	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	198	366	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	389	0	-	0	578	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	200	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1170	-	-	-	478	669
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	834	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	478	669
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

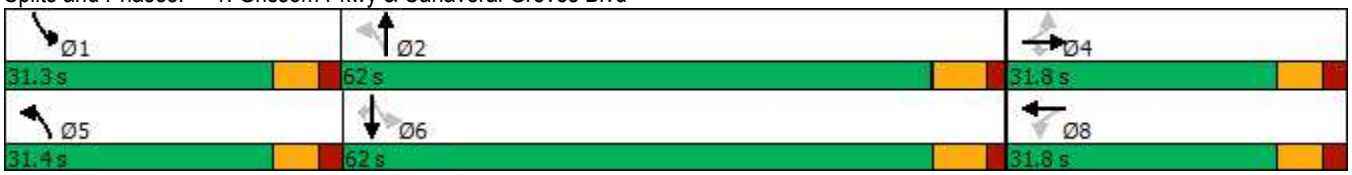
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1170	-	-	-	489
HCM Lane V/C Ratio	0.001	-	-	-	0.029
HCM Control Delay (s)	8.1	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

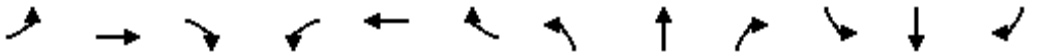
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	133	174	66	58	46	47	184	44	91	372	55
Future Volume (vph)	116	133	174	66	58	46	47	184	44	91	372	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.964			0.971				0.850
Flt Protected		0.977			0.981		0.950			0.950		
Satd. Flow (prot)	0	1820	1583	0	1762	0	1770	1809	0	1770	1863	1583
Flt Permitted		0.781			0.773		0.386			0.525		
Satd. Flow (perm)	0	1455	1583	0	1388	0	719	1809	0	978	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189		13			12				88
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	145	189	72	63	50	51	200	48	99	404	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	189	0	185	0	51	248	0	99	404	60
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.6	25.6		25.6		26.2	20.0		28.5	23.2	23.2
Actuated g/C Ratio		0.36	0.36		0.36		0.37	0.28		0.40	0.33	0.33
v/c Ratio		0.51	0.27		0.36		0.14	0.48		0.21	0.66	0.10
Control Delay		24.9	4.8		20.9		11.0	23.9		11.4	27.5	2.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		24.9	4.8		20.9		11.0	23.9		11.4	27.5	2.5
LOS		C	A		C		B	C		B	C	A
Approach Delay		16.6			20.9			21.7			22.0	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		96	0		57		12	88		23	165	0
Queue Length 95th (ft)		202	45		131		28	155		46	267	14
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		527	693		510		726	1437		758	1476	1272
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.51	0.27		0.36		0.07	0.17		0.13	0.27	0.05

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 70.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 20.2		Intersection LOS: C	
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	133	174	66	58	46	47	184	44	91	372	55
Future Volume (veh/h)	116	133	174	66	58	46	47	184	44	91	372	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	145	189	72	63	50	51	200	48	99	404	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	237	441	149	123	66	319	405	97	446	558	473
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	552	852	1585	202	442	239	1781	1458	350	1781	1870	1585
Grp Volume(v), veh/h	271	0	189	185	0	0	51	0	248	99	404	60
Grp Sat Flow(s),veh/h/ln	1404	0	1585	883	0	0	1781	0	1807	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	5.3	2.9	0.0	0.0	1.1	0.0	6.2	2.1	10.4	1.5
Cycle Q Clear(g_c), s	9.4	0.0	5.3	12.3	0.0	0.0	1.1	0.0	6.2	2.1	10.4	1.5
Prop In Lane	0.46		1.00	0.39		0.27	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	488	0	441	338	0	0	319	0	502	446	558	473
V/C Ratio(X)	0.56	0.00	0.43	0.55	0.00	0.00	0.16	0.00	0.49	0.22	0.72	0.13
Avail Cap(c_a), veh/h	773	0	734	594	0	0	1056	0	1842	1143	1906	1615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	16.0	17.9	0.0	0.0	13.4	0.0	16.3	12.5	17.0	13.8
Incr Delay (d2), s/veh	1.0	0.0	0.7	1.4	0.0	0.0	0.2	0.0	0.8	0.2	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	1.7	2.1	0.0	0.0	0.4	0.0	2.2	0.7	3.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	0.0	16.6	19.2	0.0	0.0	13.7	0.0	17.1	12.7	18.8	13.9
LnGrp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		460			185			299			563	
Approach Delay, s/veh		17.5			19.2			16.5			17.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	22.0		21.8	9.1	23.1		21.8				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.1	8.2		11.4	3.1	12.4		14.3				
Green Ext Time (p_c), s	0.2	1.4		1.9	0.1	2.6		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			17.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	133	174	66	58	46	47	184	44	91	372	55
Future Volume (veh/h)	116	133	174	66	58	46	47	184	44	91	372	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	145	189	72	63	50	51	200	48	99	404	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	251	237	441	149	123	66	319	405	97	446	558	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.28	0.28	0.07	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	18.2	0.0	16.6	19.2	0.0	0.0	13.7	0.0	17.1	12.7	18.8	13.9
Ln Grp LOS	B	A	B	B	A	A	B	A	B	B	B	B
Approach Vol, veh/h		460			185			299			563	
Approach Delay, s/veh		17.5			19.2			16.5			17.2	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.2	22.0		21.8	9.1	23.1		21.8
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.7	3.7	4.8		5.6
Max Q Clear (g_c+I1), s	4.1	8.2		11.4	3.1	12.4		14.3
Green Ext Time (g_e), s	0.2	1.4		1.9	0.1	2.6		0.7
Prob of Phs Call (p_c)	0.77	1.00		1.00	0.53	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.05	0.00	0.00		0.08

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			552	1781			202

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1458		852		1870		442

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		350		1585		1585		239

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	99	0	0	271	51	0	0	185
Grp Sat Flow (s), veh/h/ln	1781	0	0	1404	1781	0	0	883
Q Serve Time (g_s), s	2.1	0.0	0.0	0.0	1.1	0.0	0.0	2.9
Cycle Q Clear Time (g_c), s	2.1	0.0	0.0	9.4	1.1	0.0	0.0	12.3
Perm LT Sat Flow (s_l), veh/h/ln	1132	0	0	1300	928	0	0	1063
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1292	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	0.0	15.0	15.0	0.0	0.0	15.0
Perm LT Serve Time (g_u), s	8.8	0.0	0.0	2.7	5.7	0.0	0.0	5.7
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	0.5	0.0	0.0	2.9
Time to First Blk (g_f), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.1
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.1
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.46	1.00	0.00	0.00	0.39
Lane Grp Cap (c), veh/h	446	0	0	488	319	0	0	338
V/C Ratio (X)	0.22	0.00	0.00	0.56	0.16	0.00	0.00	0.55
Avail Cap (c_a), veh/h	1143	0	0	773	1056	0	0	594
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	12.5	0.0	0.0	17.2	13.4	0.0	0.0	17.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.0	0.2	0.0	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.7	0.0	0.0	18.2	13.7	0.0	0.0	19.2
1st-Term Q (Q1), veh/ln	0.6	0.0	0.0	2.6	0.3	0.0	0.0	2.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	2.7	0.4	0.0	0.0	2.1
%ile Storage Ratio (RQ%)	0.04	0.00	0.00	0.03	0.02	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	404	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	10.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	10.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	558	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1906	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	18.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	248	0	189	0	60	0	0
Grp Sat Flow (s), veh/h/ln	0	1807	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	6.2	0.0	5.3	0.0	1.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.2	0.0	5.3	0.0	1.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.27
Lane Grp Cap (c), veh/h	0	502	0	441	0	473	0	0
V/C Ratio (X)	0.00	0.49	0.00	0.43	0.00	0.13	0.00	0.00
Avail Cap (c_a), veh/h	0	1842	0	734	0	1615	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.3	0.0	16.0	0.0	13.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.1	0.0	16.6	0.0	13.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	1.6	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	1.7	0.0	0.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.24	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

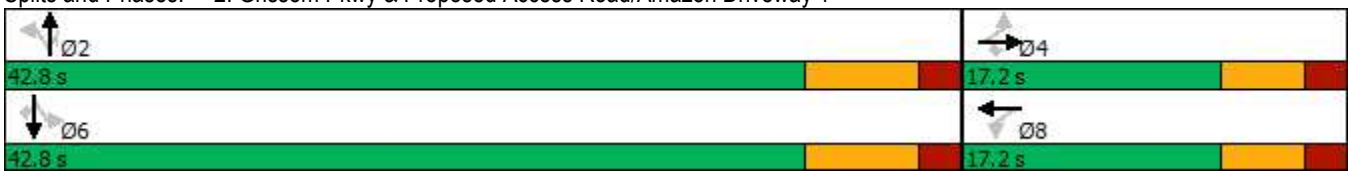
Intersection Summary	
HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

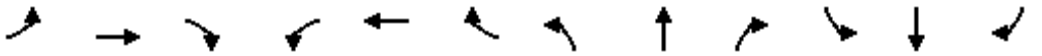
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	0	193	1	0	0	47	276	1	0	616	49
Future Volume (vph)	124	0	193	1	0	0	47	276	1	0	616	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.757			0.671		0.304					
Satd. Flow (perm)	0	1410	1583	0	1250	0	566	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210						49			53
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	0	210	1	0	0	51	300	1	0	670	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	210	0	1	0	51	300	1	0	670	53
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.7	9.7		9.7		24.1	24.1	24.1		24.1	24.1
Actuated g/C Ratio		0.21	0.21		0.21		0.51	0.51	0.51		0.51	0.51
v/c Ratio		0.46	0.43		0.00		0.18	0.31	0.00		0.70	0.06
Control Delay		23.9	6.8		18.0		7.7	7.6	0.0		13.3	2.2
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		23.9	6.8		18.0		7.7	7.6	0.0		13.3	2.2
LOS		C	A		B		A	A	A		B	A
Approach Delay		13.4			18.0			7.6			12.5	
Approach LOS		B			B			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		29	0		0		6	40	0		118	0
Queue Length 95th (ft)		91	47		4		21	80	0		223	10
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		354	555		314		441	1454	1246		1454	1247
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.38	0.38		0.00		0.12	0.21	0.00		0.46	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.9			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	0	193	1	0	0	47	276	1	0	616	49
Future Volume (veh/h)	124	0	193	1	0	0	47	276	1	0	616	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	0	210	1	0	0	51	300	1	0	670	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	0	323	350	0	0	306	865	733	188	865	733
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Sat Flow, veh/h	1536	0	1585	796	0	0	730	1870	1585	1078	1870	1585
Grp Volume(v), veh/h	135	0	210	1	0	0	51	300	1	0	670	53
Grp Sat Flow(s),veh/h/ln	1536	0	1585	796	0	0	730	1870	1585	1078	1870	1585
Q Serve(g_s), s	0.0	0.0	4.7	0.0	0.0	0.0	2.4	3.9	0.0	0.0	11.5	0.7
Cycle Q Clear(g_c), s	2.5	0.0	4.7	2.5	0.0	0.0	13.9	3.9	0.0	0.0	11.5	0.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	501	0	323	350	0	0	306	865	733	188	865	733
V/C Ratio(X)	0.27	0.00	0.65	0.00	0.00	0.00	0.17	0.35	0.00	0.00	0.77	0.07
Avail Cap(c_a), veh/h	638	0	476	463	0	0	649	1743	1477	694	1743	1477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	0.0	14.0	14.2	0.0	0.0	14.5	6.6	5.5	0.0	8.6	5.7
Incr Delay (d2), s/veh	0.3	0.0	2.2	0.0	0.0	0.0	0.3	0.2	0.0	0.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.5	0.0	0.0	0.0	0.3	0.7	0.0	0.0	2.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	16.2	14.2	0.0	0.0	14.7	6.8	5.5	0.0	10.2	5.8
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		345			1			352			723	
Approach Delay, s/veh		15.1			14.2			8.0			9.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.8		13.5		24.8		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		15.9		6.7		13.5		4.5				
Green Ext Time (p_c), s		1.8		0.6		4.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			10.7									
HCM 6th LOS			B									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	0	193	1	0	0	47	276	1	0	616	49
Future Volume (veh/h)	124	0	193	1	0	0	47	276	1	0	616	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	0	210	1	0	0	51	300	1	0	670	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	501	0	323	350	0	0	306	865	733	188	865	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.00	0.46	0.46	0.46	0.00	0.46	0.46
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.4	0.0	16.2	14.2	0.0	0.0	14.7	6.8	5.5	0.0	10.2	5.8
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	B	A
Approach Vol, veh/h		345			1			352			723	
Approach Delay, s/veh		15.1			14.2			8.0			9.8	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		24.8		13.5		24.8		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		5.0		4.4		4.8		5.9
Max Q Clear (g_c+I1), s		15.9		6.7		13.5		4.5
Green Ext Time (g_e), s		1.8		0.6		4.2		0.0
Prob of Phs Call (p_c)		1.00		0.97		1.00		0.97
Prob of Max Out (p_x)		0.00		0.83		0.03		0.13

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		730		1536		1078		796

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		0

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		0

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	51	0	135	0	0	0	1
Grp Sat Flow (s), veh/h/ln	0	730	0	1536	0	1078	0	796
Q Serve Time (g_s), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	13.9	0.0	2.5	0.0	0.0	0.0	2.5
Perm LT Sat Flow (s_l), veh/h/ln	0	730	0	1440	0	1078	0	1190
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.7	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	6.2	0.0	5.3	0.0	0.0	0.0	5.3
Perm LT Q Serve Time (g_ps), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	306	0	501	0	188	0	350
V/C Ratio (X)	0.00	0.17	0.00	0.27	0.00	0.00	0.00	0.00
Avail Cap (c_a), veh/h	0	649	0	638	0	694	0	463
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.5	0.0	13.1	0.0	0.0	0.0	14.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.7	0.0	13.4	0.0	0.0	0.0	14.2
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.8	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	300	0	0	0	670	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	3.9	0.0	0.0	0.0	11.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	0.0	0.0	11.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	865	0	0	0	865	0	0
V/C Ratio (X)	0.00	0.35	0.00	0.00	0.00	0.77	0.00	0.00
Avail Cap (c_a), veh/h	0	1743	0	0	0	1743	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.6	0.0	0.0	0.0	8.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.8	0.0	0.0	0.0	10.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	2.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0

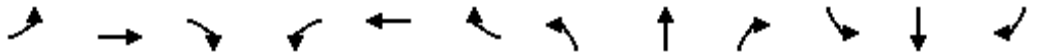
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	0.0	0.0	2.4	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	210	0	53	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.7	0.0	0.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.7	0.0	0.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Lane Grp Cap (c), veh/h	0	733	0	323	0	733	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.65	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	1477	0	476	0	1477	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.5	0.0	14.0	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.5	0.0	16.2	0.0	5.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.3	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.5	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.25	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

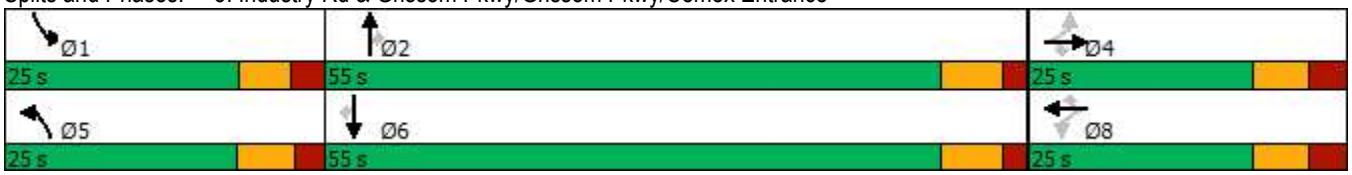


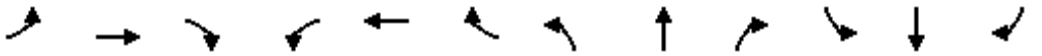
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	6	528	50	2	0	292	106	45	3	136	26
Future Volume (vph)	37	6	528	50	2	0	292	106	45	3	136	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1863	3433	1863	1583	1770	1863	1583
Flt Permitted	0.757			0.753			0.950			0.950		
Satd. Flow (perm)	1410	1863	1583	1403	1863	1863	3433	1863	1583	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			574						117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	7	574	54	2	0	317	115	49	3	148	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	7	574	54	2	0	317	115	49	3	148	28
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2		12.9	27.1	27.1	5.3	15.6	15.6
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.23	0.49	0.49	0.10	0.28	0.28
v/c Ratio	0.14	0.02	0.74	0.19	0.01		0.40	0.13	0.06	0.02	0.28	0.05
Control Delay	20.9	19.0	8.8	21.6	19.0		22.8	10.3	0.1	27.7	21.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	19.0	8.8	21.6	19.0		22.8	10.3	0.1	27.7	21.2	0.2
LOS	C	B	A	C	B		C	B	A	C	C	A
Approach Delay		9.7			21.5			17.5			18.0	
Approach LOS		A			C			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	12	2	0	16	1		49	15	0	1	39	0
Queue Length 95th (ft)	34	11	75	43	5		94	66	1	9	100	0
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140			260		260
Base Capacity (vph)	464	614	906	462	614		1176	1581	1361	610	1581	1361
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.01	0.63	0.12	0.00		0.27	0.07	0.04	0.00	0.09	0.02

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 55.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 70.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	528	50	2	0	292	106	45	3	136	26
Future Volume (veh/h)	37	6	528	50	2	0	292	106	45	3	136	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	2	0	317	115	49	3	148	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	319	230		315	230	195	500	832	705	7	565	478
Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Sat Flow, veh/h	1415	1870	1585	1409	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	40	7	0	54	2	0	317	115	49	3	148	28
Grp Sat Flow(s),veh/h/ln	1415	1870	1585	1409	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	0.2	0.0	1.7	0.0	0.0	4.3	1.8	0.9	0.1	3.0	0.6
Cycle Q Clear(g_c), s	1.3	0.2	0.0	1.9	0.0	0.0	4.3	1.8	0.9	0.1	3.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	230		315	230	195	500	832	705	7	565	478
V/C Ratio(X)	0.13	0.03		0.17	0.01	0.00	0.63	0.14	0.07	0.41	0.26	0.06
Avail Cap(c_a), veh/h	648	665		642	665	563	1277	1827	1549	662	1827	1549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	19.0	0.0	19.8	19.0	0.0	19.8	8.1	7.8	24.5	13.0	12.2
Incr Delay (d2), s/veh	0.2	0.1	0.0	0.3	0.0	0.0	1.3	0.1	0.0	25.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.0	0.5	0.0	0.0	1.6	0.6	0.2	0.1	1.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	19.1	0.0	20.2	19.0	0.0	21.2	8.2	7.9	49.9	13.3	12.3
LnGrp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47	A		56			481			179	
Approach Delay, s/veh		19.6			20.1			16.7			13.8	
Approach LOS		B			C			B			B	

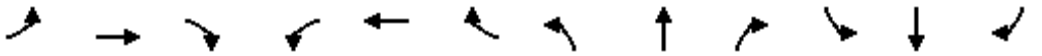
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	28.8		13.5	13.9	21.8		13.5				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	2.1	3.8		3.3	6.3	5.0		3.9				
Green Ext Time (p_c), s	0.0	1.0		0.1	0.9	1.2		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	6	528	50	2	0	292	106	45	3	136	26
Future Volume (veh/h)	37	6	528	50	2	0	292	106	45	3	136	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	7	0	54	2	0	317	115	49	3	148	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	319	230		315	230	195	500	832	705	7	565	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.12	0.12	0.00	0.12	0.12	0.00	0.14	0.44	0.44	0.00	0.30	0.30
Unsig. Movement Delay												
Ln Grp Delay, s/veh	19.7	19.1	0.0	20.2	19.0	0.0	21.2	8.2	7.9	49.9	13.3	12.3
Ln Grp LOS	B	B		C	B	A	C	A	A	D	B	B
Approach Vol, veh/h		47			56			481			179	
Approach Delay, s/veh		19.6			20.1			16.7			13.8	
Approach LOS		B			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	6.9	28.8		13.5	13.9	21.8		13.5
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	3.3	5.4		4.5	3.8	5.6		4.3
Max Q Clear (g_c+I1), s	2.1	3.8		3.3	6.3	5.0		3.9
Green Ext Time (g_e), s	0.0	1.0		0.1	0.9	1.2		0.1
Prob of Phs Call (p_c)	0.04	1.00		0.76	1.00	0.99		0.76
Prob of Max Out (p_x)	0.00	0.00		0.00	0.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1415	3456			1409

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	3	0	0	40	317	0	0	54
Grp Sat Flow (s), veh/h/ln	1781	0	0	1415	1728	0	0	1409
Q Serve Time (g_s), s	0.1	0.0	0.0	1.3	4.3	0.0	0.0	1.7
Cycle Q Clear Time (g_c), s	0.1	0.0	0.0	1.3	4.3	0.0	0.0	1.9
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1415	0	0	0	1409
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	6.0	0.0	0.0	0.0	5.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	7	0	0	319	500	0	0	315
V/C Ratio (X)	0.41	0.00	0.00	0.13	0.63	0.00	0.00	0.17
Avail Cap (c_a), veh/h	662	0	0	648	1277	0	0	642
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	24.5	0.0	0.0	19.5	19.8	0.0	0.0	19.8
Incr Delay (d2), s/veh	25.4	0.0	0.0	0.2	1.3	0.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	49.9	0.0	0.0	19.7	21.2	0.0	0.0	20.2
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.4	1.5	0.0	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.1	0.0	0.0	0.4	1.6	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.01	0.00	0.00	0.07	0.30	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	115	0	7	0	148	0	2
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.8	0.0	0.2	0.0	3.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.8	0.0	0.2	0.0	3.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	832	0	230	0	565	0	230
V/C Ratio (X)	0.00	0.14	0.00	0.03	0.00	0.26	0.00	0.01
Avail Cap (c_a), veh/h	0	1827	0	665	0	1827	0	665
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.1	0.0	19.0	0.0	13.0	0.0	19.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.1	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.2	0.0	19.1	0.0	13.3	0.0	19.0
1st-Term Q (Q1), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.1	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

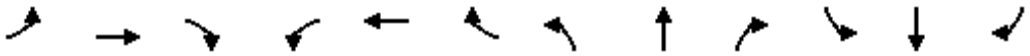
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	49	0	0	0	28	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	705	0	195	0	478	0	195
V/C Ratio (X)	0.00	0.07	0.00	0.00	0.00	0.06	0.00	0.00
Avail Cap (c_a), veh/h	0	1549	0	563	0	1549	0	563
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.8	0.0	0.0	0.0	12.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	12.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	204	6	17	85	3	10	0	19	1	0	12
Future Volume (vph)	1	204	6	17	85	3	10	0	19	1	0	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.996			0.996			0.911			0.875	
Flt Protected					0.992			0.983			0.996	
Satd. Flow (prot)	0	1855	0	0	1840	0	0	1668	0	0	1623	0
Flt Permitted					0.992			0.983			0.996	
Satd. Flow (perm)	0	1855	0	0	1840	0	0	1668	0	0	1623	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	222	7	18	92	3	11	0	21	1	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	113	0	0	32	0	0	14	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	204	6	17	85	3	10	0	19	1	0	12
Future Vol, veh/h	1	204	6	17	85	3	10	0	19	1	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	222	7	18	92	3	11	0	21	1	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	229	0	0	364	359	226	368	361	94
Stage 1	-	-	-	-	-	-	228	228	-	130	130	-
Stage 2	-	-	-	-	-	-	136	131	-	238	231	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1339	-	-	592	568	813	588	566	963
Stage 1	-	-	-	-	-	-	775	715	-	874	789	-
Stage 2	-	-	-	-	-	-	867	788	-	765	713	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1499	-	-	1339	-	-	577	559	813	566	558	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	577	559	-	566	558	-
Stage 1	-	-	-	-	-	-	774	714	-	873	778	-
Stage 2	-	-	-	-	-	-	843	777	-	745	712	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	10.3	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	713	1499	-	-	1339	-	-	914
HCM Lane V/C Ratio	0.044	0.001	-	-	0.014	-	-	0.015
HCM Control Delay (s)	10.3	7.4	0	-	7.7	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	300	1	25	121	1	53
Future Volume (vph)	300	1	25	121	1	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.867	
Flt Protected				0.992	0.999	
Satd. Flow (prot)	1863	0	0	1848	1613	0
Flt Permitted				0.992	0.999	
Satd. Flow (perm)	1863	0	0	1848	1613	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	326	1	27	132	1	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	327	0	0	159	59	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	300	1	25	121	1	53
Future Vol, veh/h	300	1	25	121	1	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	326	1	27	132	1	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	327	0	513	327
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	186	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1233	-	521	714
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1233	-	508	714
Mov Cap-2 Maneuver	-	-	-	-	508	-
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	826	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	709	-	-	1233	-
HCM Lane V/C Ratio	0.083	-	-	0.022	-
HCM Control Delay (s)	10.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	354	0	21	133	0	41
Future Volume (vph)	354	0	21	133	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1863	0	0	1850	1611	0
Flt Permitted				0.993		
Satd. Flow (perm)	1863	0	0	1850	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	385	0	23	145	0	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	385	0	0	168	45	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.8%		ICU Level of Service A	
Analysis Period (min) 15			

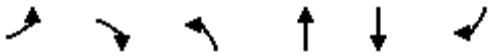
Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	354	0	21	133	0	41
Future Vol, veh/h	354	0	21	133	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	385	0	23	145	0	45

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	385	0	576	385
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	191	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1173	-	479	663
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1173	-	469	663
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	823	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	663	-	-	1173	-
HCM Lane V/C Ratio	0.067	-	-	0.019	-
HCM Control Delay (s)	10.8	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	6	16	43	16	9
Future Volume (vph)	9	6	16	43	16	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.944				0.950	
Flt Protected	0.971			0.987		
Satd. Flow (prot)	1707	0	0	1839	1770	0
Flt Permitted	0.971			0.987		
Satd. Flow (perm)	1707	0	0	1839	1770	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	7	17	47	17	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	64	27	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.8%		ICU Level of Service A	
Analysis Period (min) 15			

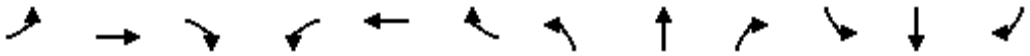
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	6	16	43	16	9
Future Vol, veh/h	9	6	16	43	16	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	7	17	47	17	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	103	22	27	0	-	0
Stage 1	22	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	895	1055	1587	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	942	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	885	1055	1587	-	-	-
Mov Cap-2 Maneuver	885	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1587	-	946	-	-
HCM Lane V/C Ratio	0.011	-	0.017	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	203	0	6	58	33	0	3	20	68	1	0
Future Volume (vph)	8	203	0	6	58	33	0	3	20	68	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.954			0.881				
Flt Protected		0.998			0.997						0.953	
Satd. Flow (prot)	0	1859	0	0	1772	0	0	1641	0	0	1775	0
Flt Permitted		0.998			0.997						0.953	
Satd. Flow (perm)	0	1859	0	0	1772	0	0	1641	0	0	1775	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	221	0	7	63	36	0	3	22	74	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	106	0	0	25	0	0	75	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

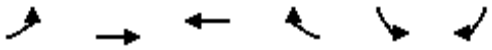
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	8	203	0	6	58	33	0	3	20	68	1	0
Future Vol, veh/h	8	203	0	6	58	33	0	3	20	68	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	221	0	7	63	36	0	3	22	74	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	99	0	0	221	0	0	335	352	221	347	334	81
Stage 1	-	-	-	-	-	-	239	239	-	95	95	-
Stage 2	-	-	-	-	-	-	96	113	-	252	239	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1494	-	-	1348	-	-	619	573	819	607	586	979
Stage 1	-	-	-	-	-	-	764	708	-	912	816	-
Stage 2	-	-	-	-	-	-	911	802	-	752	708	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1348	-	-	612	566	819	583	578	979
Mov Cap-2 Maneuver	-	-	-	-	-	-	612	566	-	583	578	-
Stage 1	-	-	-	-	-	-	759	703	-	906	811	-
Stage 2	-	-	-	-	-	-	904	797	-	724	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.5	9.8	12.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	774	1494	-	-	1348	-	-	583
HCM Lane V/C Ratio	0.032	0.006	-	-	0.005	-	-	0.129
HCM Control Delay (s)	9.8	7.4	0	-	7.7	0	-	12.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	4	161	46	13	37	0
Future Volume (vph)	4	161	46	13	37	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970			
Flt Protected		0.999			0.950	
Satd. Flow (prot)	0	1861	1807	0	1770	0
Flt Permitted		0.999			0.950	
Satd. Flow (perm)	0	1861	1807	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		44.7	42.8		61.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	175	50	14	40	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	179	64	0	40	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.7%		ICU Level of Service A	
Analysis Period (min) 15			

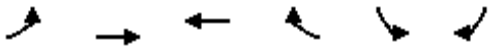
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	161	46	13	37	0
Future Vol, veh/h	4	161	46	13	37	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	175	50	14	40	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	64	0	-	0	240	57
Stage 1	-	-	-	-	57	-
Stage 2	-	-	-	-	183	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1538	-	-	-	748	1009
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1538	-	-	-	746	1009
Mov Cap-2 Maneuver	-	-	-	-	746	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1538	-	-	-	746
HCM Lane V/C Ratio	0.003	-	-	-	0.054
HCM Control Delay (s)	7.3	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	300	91	6	17	0
Future Volume (vph)	1	300	91	6	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.991			
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1846	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1846	0	1770	0
Link Speed (mph)		35	35		25	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		47.2	13.2		60.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	326	99	7	18	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	327	106	0	18	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.6%		ICU Level of Service A	
Analysis Period (min) 15			

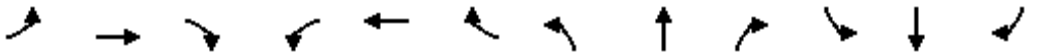
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	300	91	6	17	0
Future Vol, veh/h	1	300	91	6	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	326	99	7	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	106	0	-	0	431	103
Stage 1	-	-	-	-	103	-
Stage 2	-	-	-	-	328	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1485	-	-	-	581	952
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	730	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1485	-	-	-	580	952
Mov Cap-2 Maneuver	-	-	-	-	580	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1485	-	-	-	580
HCM Lane V/C Ratio	0.001	-	-	-	0.032
HCM Control Delay (s)	7.4	0	-	-	11.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

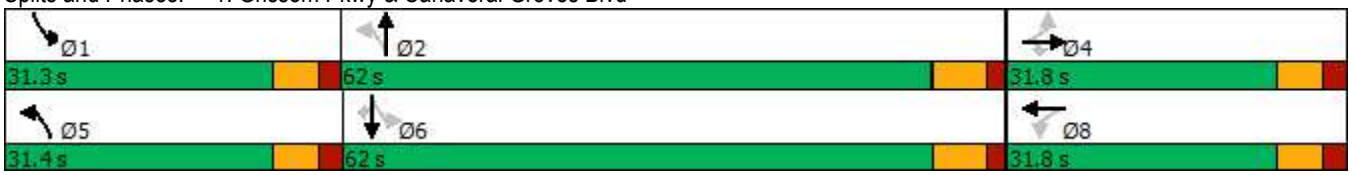


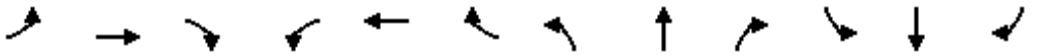
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	82	96	73	96	78	178	430	96	89	280	98
Future Volume (vph)	79	82	96	73	96	78	178	430	96	89	280	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.957			0.973				0.850
Flt Protected		0.976			0.985		0.950			0.950		
Satd. Flow (prot)	0	1818	1583	0	1756	0	1770	1812	0	1770	1863	1583
Flt Permitted		0.678			0.840		0.408			0.263		
Satd. Flow (perm)	0	1263	1583	0	1497	0	760	1812	0	490	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		17			11				107
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	86	89	104	79	104	85	193	467	104	97	304	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	175	104	0	268	0	193	571	0	97	304	107
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		43.4	33.6		35.2	26.8	26.8
Actuated g/C Ratio		0.30	0.30		0.30		0.52	0.40		0.42	0.32	0.32
v/c Ratio		0.46	0.19		0.58		0.37	0.78		0.30	0.51	0.19
Control Delay		31.7	7.0		31.8		11.5	30.9		12.0	26.1	4.9
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		31.7	7.0		31.8		11.5	30.9		12.0	26.1	4.9
LOS		C	A		C		B	C		B	C	A
Approach Delay		22.5			31.8			26.0			19.0	
Approach LOS		C			C			C			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		75	0		112		48	265		23	127	0
Queue Length 95th (ft)		167	41		236		80	402		44	209	32
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		381	550		464		714	1210		651	1237	1088
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.46	0.19		0.58		0.27	0.47		0.15	0.25	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 84			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 70.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	82	96	73	96	78	178	430	96	89	280	98
Future Volume (veh/h)	79	82	96	73	96	78	178	430	96	89	280	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	89	104	79	104	85	193	467	104	97	304	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	197	410	136	156	103	491	555	124	294	624	529
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.37	0.37	0.06	0.33	0.33
Sat Flow, veh/h	516	759	1585	255	602	398	1781	1481	330	1781	1870	1585
Grp Volume(v), veh/h	175	0	104	268	0	0	193	0	571	97	304	107
Grp Sat Flow(s),veh/h/ln	1276	0	1585	1256	0	0	1781	0	1811	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.4	6.7	0.0	0.0	4.5	0.0	19.1	2.3	8.6	3.2
Cycle Q Clear(g_c), s	7.4	0.0	3.4	14.1	0.0	0.0	4.5	0.0	19.1	2.3	8.6	3.2
Prop In Lane	0.49		1.00	0.29		0.32	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	410	395	0	0	491	0	679	294	624	529
V/C Ratio(X)	0.43	0.00	0.25	0.68	0.00	0.00	0.39	0.00	0.84	0.33	0.49	0.20
Avail Cap(c_a), veh/h	585	0	598	576	0	0	980	0	1504	854	1553	1316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	0.0	19.5	23.6	0.0	0.0	12.5	0.0	18.9	15.0	17.6	15.8
Incr Delay (d2), s/veh	0.7	0.0	0.3	2.0	0.0	0.0	0.5	0.0	2.9	0.7	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.2	3.9	0.0	0.0	1.5	0.0	7.2	0.8	3.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	0.0	19.8	25.7	0.0	0.0	13.0	0.0	21.8	15.7	18.1	16.0
LnGrp LOS	C	A	B	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		279			268			764			508	
Approach Delay, s/veh		20.7			25.7			19.6			17.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	31.8		23.9	13.2	29.1		23.9				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.3	21.1		9.4	6.5	10.6		16.1				
Green Ext Time (p_c), s	0.2	3.8		1.2	0.5	2.1		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	82	96	73	96	78	178	430	96	89	280	98
Future Volume (veh/h)	79	82	96	73	96	78	178	430	96	89	280	98
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	89	104	79	104	85	193	467	104	97	304	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	215	197	410	136	156	103	491	555	124	294	624	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.37	0.37	0.06	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	21.3	0.0	19.8	25.7	0.0	0.0	13.0	0.0	21.8	15.7	18.1	16.0
Ln Grp LOS	C	A	B	C	A	A	B	A	C	B	B	B
Approach Vol, veh/h		279			268			764			508	
Approach Delay, s/veh		20.7			25.7			19.6			17.2	
Approach LOS		C			C			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.5	31.8		23.9	13.2	29.1		23.9
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.9	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.3	21.1		9.4	6.5	10.6		16.1
Green Ext Time (g_e), s	0.2	3.8		1.2	0.5	2.1		1.0
Prob of Phs Call (p_c)	0.83	1.00		1.00	0.97	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.01	0.00	0.00		0.25

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			516	1781			255

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1481		759		1870		602

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		330		1585		1585		398

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	97	0	0	175	193	0	0	268
Grp Sat Flow (s), veh/h/ln	1781	0	0	1276	1781	0	0	1256
Q Serve Time (g_s), s	2.3	0.0	0.0	0.0	4.5	0.0	0.0	6.7
Cycle Q Clear Time (g_c), s	2.3	0.0	0.0	7.4	4.5	0.0	0.0	14.1
Perm LT Sat Flow (s_l), veh/h/ln	841	0	0	1213	975	0	0	1209
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1127	0	0	0	0
Perm LT Eff Green (g_p), s	22.1	0.0	0.0	17.1	22.1	0.0	0.0	17.1
Perm LT Serve Time (g_u), s	5.8	0.0	0.0	3.0	13.5	0.0	0.0	9.7
Perm LT Q Serve Time (g_ps), s	2.1	0.0	0.0	0.0	2.1	0.0	0.0	6.7
Time to First Blk (g_f), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.8
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	2.1	0.0	0.0	0.0	3.8
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.49	1.00	0.00	0.00	0.29
Lane Grp Cap (c), veh/h	294	0	0	411	491	0	0	395
V/C Ratio (X)	0.33	0.00	0.00	0.43	0.39	0.00	0.00	0.68
Avail Cap (c_a), veh/h	854	0	0	585	980	0	0	576
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	15.0	0.0	0.0	20.6	12.5	0.0	0.0	23.6
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.7	0.5	0.0	0.0	2.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	15.7	0.0	0.0	21.3	13.0	0.0	0.0	25.7
1st-Term Q (Q1), veh/ln	0.8	0.0	0.0	2.1	1.5	0.0	0.0	3.7
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	2.2	1.5	0.0	0.0	3.9
%ile Storage Ratio (RQ%)	0.05	0.00	0.00	0.02	0.08	0.00	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	304	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	624	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1553	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	17.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	18.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	571	0	104	0	107	0	0
Grp Sat Flow (s), veh/h/ln	0	1811	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	19.1	0.0	3.4	0.0	3.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.1	0.0	3.4	0.0	3.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.18	0.00	1.00	0.00	1.00	0.00	0.32
Lane Grp Cap (c), veh/h	0	679	0	410	0	529	0	0
V/C Ratio (X)	0.00	0.84	0.00	0.25	0.00	0.20	0.00	0.00
Avail Cap (c_a), veh/h	0	1504	0	598	0	1316	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.9	0.0	19.5	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.9	0.0	0.3	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.8	0.0	19.8	0.0	16.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	6.6	0.0	1.2	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	7.2	0.0	1.2	0.0	1.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.17	0.00	0.06	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

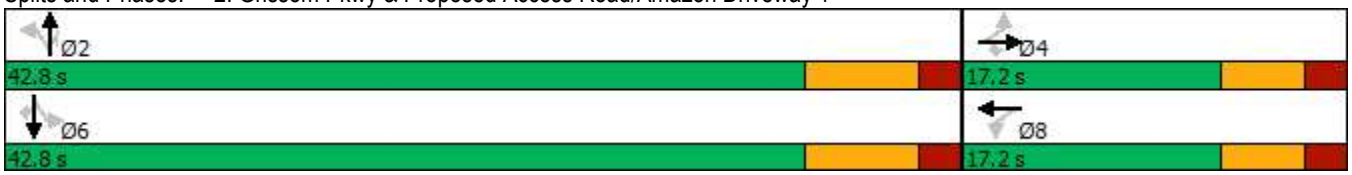
Intersection Summary	
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

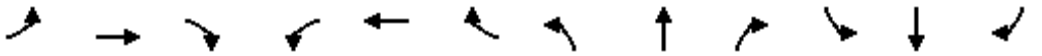
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	0	135	27	0	20	237	651	1	0	383	121
Future Volume (vph)	60	0	135	27	0	20	237	651	1	0	383	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.788		0.519					
Satd. Flow (perm)	0	1349	1583	0	1383	0	967	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			147		75				49			132
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	0	147	29	0	22	258	708	1	0	416	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	147	0	51	0	258	708	1	0	416	132
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.0	9.0		9.0		29.1	29.1	29.1		29.1	29.1
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.25	0.35		0.16		0.42	0.60	0.00		0.35	0.13
Control Delay		21.1	7.2		5.0		9.3	10.1	0.0		7.0	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.1	7.2		5.0		9.3	10.1	0.0		7.0	1.6
LOS		C	A		A		A	B	A		A	A
Approach Delay		11.5			5.0			9.9			5.7	
Approach LOS		B			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		14	0		0		36	118	0		55	0
Queue Length 95th (ft)		50	40		16		93	242	0		115	16
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		347	516		411		772	1487	1274		1487	1290
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.19	0.28		0.12		0.33	0.48	0.00		0.28	0.10

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.1			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





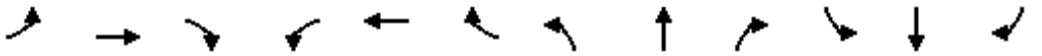
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	135	27	0	20	237	651	1	0	383	121
Future Volume (veh/h)	60	0	135	27	0	20	237	651	1	0	383	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	0	147	29	0	22	258	708	1	0	416	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	0	270	233	32	106	517	1021	865	159	1021	865
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.55	0.55	0.55	0.00	0.55	0.55
Sat Flow, veh/h	1449	0	1585	631	187	620	859	1870	1585	740	1870	1585
Grp Volume(v), veh/h	65	0	147	51	0	0	258	708	1	0	416	132
Grp Sat Flow(s),veh/h/ln	1449	0	1585	1438	0	0	859	1870	1585	740	1870	1585
Q Serve(g_s), s	0.3	0.0	3.8	0.0	0.0	0.0	11.3	12.5	0.0	0.0	5.9	1.9
Cycle Q Clear(g_c), s	1.5	0.0	3.8	1.5	0.0	0.0	17.2	12.5	0.0	0.0	5.9	1.9
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	0	270	370	0	0	517	1021	865	159	1021	865
V/C Ratio(X)	0.16	0.00	0.54	0.14	0.00	0.00	0.50	0.69	0.00	0.00	0.41	0.15
Avail Cap(c_a), veh/h	524	0	404	485	0	0	727	1479	1253	341	1479	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	17.1	16.0	0.0	0.0	11.0	7.5	4.7	0.0	6.0	5.1
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.2	0.0	0.0	0.7	0.9	0.0	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.3	0.4	0.0	0.0	1.4	2.4	0.0	0.0	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.3	0.0	18.8	16.2	0.0	0.0	11.8	8.3	4.7	0.0	6.2	5.2
LnGrp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		212			51			967			548	
Approach Delay, s/veh		18.0			16.2			9.3			6.0	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.7		13.4		31.7		13.4				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		19.2		5.8		7.9		3.5				
Green Ext Time (p_c), s		5.5		0.4		2.7		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	0	135	27	0	20	237	651	1	0	383	121
Future Volume (veh/h)	60	0	135	27	0	20	237	651	1	0	383	121
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	0	147	29	0	22	258	708	1	0	416	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	407	0	270	233	32	106	517	1021	865	159	1021	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.55	0.55	0.55	0.00	0.55	0.55
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.3	0.0	18.8	16.2	0.0	0.0	11.8	8.3	4.7	0.0	6.2	5.2
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		212			51			967			548	
Approach Delay, s/veh		18.0			16.2			9.3			6.0	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		31.7		13.4		31.7		13.4
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.4		4.6		5.7
Max Q Clear (g_c+I1), s		19.2		5.8		7.9		3.5
Green Ext Time (g_e), s		5.5		0.4		2.7		0.1
Prob of Phs Call (p_c)		1.00		0.96		1.00		0.96
Prob of Max Out (p_x)		0.23		0.44		0.00		0.15

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		859		1449		740		631

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		187

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		620

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	258	0	65	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	859	0	1449	0	740	0	1438
Q Serve Time (g_s), s	0.0	11.3	0.0	0.3	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	17.2	0.0	1.5	0.0	0.0	0.0	1.5
Perm LT Sat Flow (s_l), veh/h/ln	0	859	0	1412	0	740	0	1260
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	24.6	0.0	7.7	0.0	0.0	0.0	7.7
Perm LT Serve Time (g_u), s	0.0	18.8	0.0	6.5	0.0	0.0	0.0	6.2
Perm LT Q Serve Time (g_ps), s	0.0	11.3	0.0	0.3	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	517	0	407	0	159	0	370
V/C Ratio (X)	0.00	0.50	0.00	0.16	0.00	0.00	0.00	0.14
Avail Cap (c_a), veh/h	0	727	0	524	0	341	0	485
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.0	0.0	16.1	0.0	0.0	0.0	16.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.2	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.8	0.0	16.3	0.0	0.0	0.0	16.2
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.5	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.4	0.0	0.5	0.0	0.0	0.0	0.4
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	708	0	0	0	416	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.5	0.0	0.0	0.0	5.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.5	0.0	0.0	0.0	5.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1021	0	0	0	1021	0	0
V/C Ratio (X)	0.00	0.69	0.00	0.00	0.00	0.41	0.00	0.00
Avail Cap (c_a), veh/h	0	1479	0	0	0	1479	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	0.0	0.0	6.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.2	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

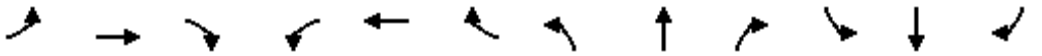
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	147	0	132	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	3.8	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.8	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	865	0	270	0	865	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.54	0.00	0.15	0.00	0.00
Avail Cap (c_a), veh/h	0	1253	0	404	0	1253	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.7	0.0	17.1	0.0	5.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	18.8	0.0	5.2	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.3	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.22	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

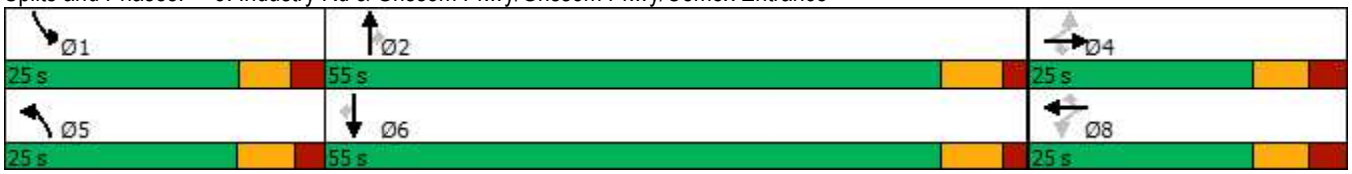


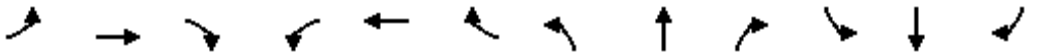
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	8	501	9	6	1	739	99	7	0	209	65
Future Volume (vph)	25	8	501	9	6	1	739	99	7	0	209	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.753			0.752			0.950					
Satd. Flow (perm)	1403	1863	1583	1401	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			545			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	9	545	10	7	1	803	108	8	0	227	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	9	545	10	7	1	803	108	8	0	227	71
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	10.8	10.8	10.8	10.8	10.8	10.8	18.3	41.3	41.3		16.1	16.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.27	0.62	0.62		0.24	0.24
v/c Ratio	0.12	0.03	0.76	0.04	0.02	0.00	0.85	0.09	0.01		0.50	0.15
Control Delay	24.9	23.4	10.7	23.8	23.3	0.0	34.8	6.1	0.0		26.9	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	24.9	23.4	10.7	23.8	23.3	0.0	34.8	6.1	0.0		26.9	2.4
LOS	C	C	B	C	C	A	C	A	A		C	A
Approach Delay		11.5			22.3			31.1			21.0	
Approach LOS		B			C			C			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	9	3	0	3	2	0	147	14	0		76	0
Queue Length 95th (ft)	30	15	83	16	13	0	#317	41	0		156	12
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	371	492	819	370	492	500	944	1355	1183		1355	1183
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.07	0.02	0.67	0.03	0.01	0.00	0.85	0.08	0.01		0.17	0.06

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 66.6			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 68.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	8	501	9	6	1	739	99	7	0	209	65
Future Volume (veh/h)	25	8	501	9	6	1	739	99	7	0	209	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	9	0	10	7	1	803	108	8	0	227	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	151		235	151	128	958	1241	1052	3	497	421
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.28	0.66	0.66	0.00	0.27	0.27
Sat Flow, veh/h	1407	1870	1585	1406	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	27	9	0	10	7	1	803	108	8	0	227	71
Grp Sat Flow(s),veh/h/ln	1407	1870	1585	1406	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	0.3	0.0	0.4	0.2	0.0	12.3	1.2	0.1	0.0	5.7	1.9
Cycle Q Clear(g_c), s	1.2	0.3	0.0	0.6	0.2	0.0	12.3	1.2	0.1	0.0	5.7	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	237	151		235	151	128	958	1241	1052	3	497	421
V/C Ratio(X)	0.11	0.06		0.04	0.05	0.01	0.84	0.09	0.01	0.00	0.46	0.17
Avail Cap(c_a), veh/h	560	581		558	581	492	1116	1596	1352	578	1596	1352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	23.9	0.0	24.2	23.9	23.8	19.2	3.4	3.2	0.0	17.3	15.9
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.1	0.2	0.0	5.1	0.0	0.0	0.0	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.0	0.1	0.1	0.0	5.1	0.3	0.0	0.0	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	24.1	0.0	24.3	24.0	23.8	24.3	3.4	3.2	0.0	18.1	16.1
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		36	A		18			919			298	
Approach Delay, s/veh		24.6			24.2			21.6			17.6	
Approach LOS		C			C			C			B	

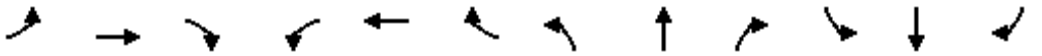
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	44.3		12.1	22.4	21.9		12.1				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.2		3.2	14.3	7.7		2.6				
Green Ext Time (p_c), s	0.0	0.8		0.1	1.3	2.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		20.8
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	8	501	9	6	1	739	99	7	0	209	65
Future Volume (veh/h)	25	8	501	9	6	1	739	99	7	0	209	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	9	0	10	7	1	803	108	8	0	227	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	237	151		235	151	128	958	1241	1052	3	497	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.28	0.66	0.66	0.00	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	24.7	24.1	0.0	24.3	24.0	23.8	24.3	3.4	3.2	0.0	18.1	16.1
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		36			18			919			298	
Approach Delay, s/veh		24.6			24.2			21.6			17.6	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	44.3		12.1	22.4	21.9		12.1
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.6	3.8	5.5		4.9
Max Q Clear (g_c+I1), s	0.0	3.2		3.2	14.3	7.7		2.6
Green Ext Time (g_e), s	0.0	0.8		0.1	1.3	2.0		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.57	1.00	1.00		0.57
Prob of Max Out (p_x)	0.00	0.00		0.00	0.98	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1407	3456			1406

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	27	803	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1407	1728	0	0	1406
Q Serve Time (g_s), s	0.0	0.0	0.0	1.0	12.3	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.2	12.3	0.0	0.0	0.6
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1407	0	0	0	1406
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	4.6	0.0	0.0	0.0	4.6
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	4.4	0.0	0.0	0.0	4.3
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	237	958	0	0	235
V/C Ratio (X)	0.00	0.00	0.00	0.11	0.84	0.00	0.00	0.04
Avail Cap (c_a), veh/h	578	0	0	560	1116	0	0	558
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	24.5	19.2	0.0	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	5.1	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	24.7	24.3	0.0	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	4.4	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.3	5.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.06	0.92	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	108	0	9	0	227	0	7
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.2	0.0	0.3	0.0	5.7	0.0	0.2
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	0.3	0.0	5.7	0.0	0.2
Lane Grp Cap (c), veh/h	0	1241	0	151	0	497	0	151
V/C Ratio (X)	0.00	0.09	0.00	0.06	0.00	0.46	0.00	0.05
Avail Cap (c_a), veh/h	0	1596	0	581	0	1596	0	581
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	23.9	0.0	17.3	0.0	23.9
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.8	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	24.1	0.0	18.1	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.1	0.0	2.2	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

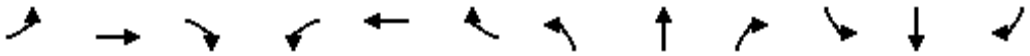
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.1	0.0	2.3	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	71	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	1.9	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1052	0	128	0	421	0	128
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.17	0.00	0.01
Avail Cap (c_a), veh/h	0	1352	0	492	0	1352	0	492
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.2	0.0	0.0	0.0	15.9	0.0	23.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.2	0.0	0.0	0.0	16.1	0.0	23.8
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	155	17	30	255	1	11	0	21	1	2	6
Future Volume (vph)	13	155	17	30	255	1	11	0	21	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988						0.911			0.905	
Flt Protected		0.997			0.995			0.983			0.995	
Satd. Flow (prot)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Flt Permitted		0.997			0.995			0.983			0.995	
Satd. Flow (perm)	0	1835	0	0	1853	0	0	1668	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	168	18	33	277	1	12	0	23	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	0	311	0	0	35	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	155	17	30	255	1	11	0	21	1	2	6
Future Vol, veh/h	13	155	17	30	255	1	11	0	21	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	168	18	33	277	1	12	0	23	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	278	0	0	186	0	0	553	549	177	561	558	278
Stage 1	-	-	-	-	-	-	205	205	-	344	344	-
Stage 2	-	-	-	-	-	-	348	344	-	217	214	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1285	-	-	1388	-	-	444	443	866	438	438	761
Stage 1	-	-	-	-	-	-	797	732	-	671	637	-
Stage 2	-	-	-	-	-	-	668	637	-	785	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1285	-	-	1388	-	-	425	425	866	413	420	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	425	425	-	413	420	-
Stage 1	-	-	-	-	-	-	787	723	-	663	619	-
Stage 2	-	-	-	-	-	-	641	619	-	755	716	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.8	11	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	638	1285	-	-	1388	-	-	597
HCM Lane V/C Ratio	0.055	0.011	-	-	0.023	-	-	0.016
HCM Control Delay (s)	11	7.8	0	-	7.7	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	157	0	59	326	2	40
Future Volume (vph)	157	0	59	326	2	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.871	
Flt Protected				0.992	0.998	
Satd. Flow (prot)	1863	0	0	1848	1619	0
Flt Permitted				0.992	0.998	
Satd. Flow (perm)	1863	0	0	1848	1619	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	0	64	354	2	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	418	45	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	0	59	326	2	40
Future Vol, veh/h	157	0	59	326	2	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	0	64	354	2	43

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	171	0	653	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	482	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1406	-	432	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	621	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	407	873
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	586	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	828	-	-	1406	-
HCM Lane V/C Ratio	0.055	-	-	0.046	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	199	0	58	338	0	32
Future Volume (vph)	199	0	58	338	0	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.993		
Satd. Flow (prot)	1863	0	0	1850	1611	0
Flt Permitted				0.993		
Satd. Flow (perm)	1863	0	0	1850	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	216	0	63	367	0	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	216	0	0	430	35	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

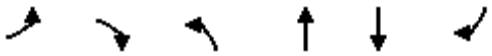
Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	199	0	58	338	0	32
Future Vol, veh/h	199	0	58	338	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	216	0	63	367	0	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	216	0	709	216
Stage 1	-	-	-	-	216	-
Stage 2	-	-	-	-	493	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1354	-	401	824
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1354	-	378	824
Mov Cap-2 Maneuver	-	-	-	-	378	-
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	578	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	824	-	-	1354	-
HCM Lane V/C Ratio	0.042	-	-	0.047	-
HCM Control Delay (s)	9.6	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	12	20	11	31	51	7
Future Volume (vph)	12	20	11	31	51	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.915				0.983	
Flt Protected	0.982			0.987		
Satd. Flow (prot)	1674	0	0	1839	1831	0
Flt Permitted	0.982			0.987		
Satd. Flow (perm)	1674	0	0	1839	1831	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	13	22	12	34	55	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	35	0	0	46	63	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.9%		ICU Level of Service A	
Analysis Period (min) 15			

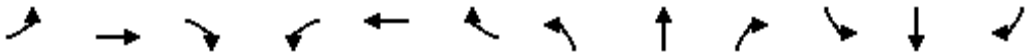
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	20	11	31	51	7
Future Vol, veh/h	12	20	11	31	51	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	22	12	34	55	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	117	59	63	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	58	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	879	1007	1540	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	872	1007	1540	-	-	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	1.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1540	-	952	-	-
HCM Lane V/C Ratio	0.008	-	0.037	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	118	0	21	231	79	0	2	13	44	3	10
Future Volume (vph)	10	118	0	21	231	79	0	2	13	44	3	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.968			0.882			0.976	
Flt Protected		0.996			0.997						0.963	
Satd. Flow (prot)	0	1855	0	0	1798	0	0	1643	0	0	1751	0
Flt Permitted		0.996			0.997						0.963	
Satd. Flow (perm)	0	1855	0	0	1798	0	0	1643	0	0	1751	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	128	0	23	251	86	0	2	14	48	3	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	360	0	0	16	0	0	62	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.1%		ICU Level of Service A	
Analysis Period (min) 15			

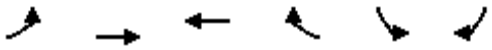
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	118	0	21	231	79	0	2	13	44	3	10
Future Vol, veh/h	10	118	0	21	231	79	0	2	13	44	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	128	0	23	251	86	0	2	14	48	3	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	337	0	0	128	0	0	497	533	128	498	490	294
Stage 1	-	-	-	-	-	-	150	150	-	340	340	-
Stage 2	-	-	-	-	-	-	347	383	-	158	150	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1222	-	-	1458	-	-	483	453	922	483	479	745
Stage 1	-	-	-	-	-	-	853	773	-	675	639	-
Stage 2	-	-	-	-	-	-	669	612	-	844	773	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1222	-	-	1458	-	-	463	439	922	463	465	745
Mov Cap-2 Maneuver	-	-	-	-	-	-	463	439	-	463	465	-
Stage 1	-	-	-	-	-	-	844	765	-	668	626	-
Stage 2	-	-	-	-	-	-	643	600	-	820	765	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.5	9.6	13.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	804	1222	-	-	1458	-	-	496
HCM Lane V/C Ratio	0.02	0.009	-	-	0.016	-	-	0.125
HCM Control Delay (s)	9.6	8	0	-	7.5	0	-	13.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	95	183	44	25	7
Future Volume (vph)	6	95	183	44	25	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.974		0.969	
Flt Protected		0.997			0.963	
Satd. Flow (prot)	0	1857	1814	0	1738	0
Flt Permitted		0.997			0.963	
Satd. Flow (perm)	0	1857	1814	0	1738	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	7	103	199	48	27	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	247	0	35	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.3%		ICU Level of Service A	
Analysis Period (min) 15			

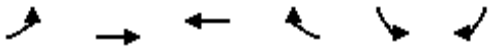
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	95	183	44	25	7
Future Vol, veh/h	6	95	183	44	25	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	103	199	48	27	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	247	0	-	0	340	223
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1319	-	-	-	656	817
Stage 1	-	-	-	-	814	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1319	-	-	-	652	817
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1319	-	-	-	682
HCM Lane V/C Ratio	0.005	-	-	-	0.051
HCM Control Delay (s)	7.7	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	182	337	21	12	1
Future Volume (vph)	1	182	337	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.992		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1848	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1848	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	198	366	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	199	389	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	182	337	21	12	1
Future Vol, veh/h	1	182	337	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	198	366	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	389	0	-	0	578	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	200	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1170	-	-	-	478	669
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	834	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1170	-	-	-	478	669
Mov Cap-2 Maneuver	-	-	-	-	478	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1170	-	-	-	489
HCM Lane V/C Ratio	0.001	-	-	-	0.029
HCM Control Delay (s)	8.1	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

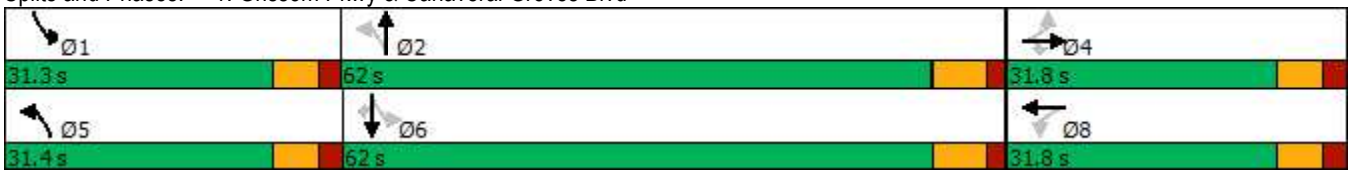
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	92	99	86	103	78	178	440	103	89	318	115
Future Volume (vph)	96	92	99	86	103	78	178	440	103	89	318	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.960			0.972				0.850
Flt Protected		0.975			0.984		0.950			0.950		
Satd. Flow (prot)	0	1816	1583	0	1760	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.654			0.783		0.369			0.247		
Satd. Flow (perm)	0	1218	1583	0	1400	0	687	1811	0	460	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			108		15			12				125
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	100	108	93	112	85	193	478	112	97	346	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	204	108	0	290	0	193	590	0	97	346	125
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		44.6	34.9		36.5	28.1	28.1
Actuated g/C Ratio		0.30	0.30		0.30		0.52	0.41		0.43	0.33	0.33
v/c Ratio		0.56	0.20		0.68		0.39	0.79		0.31	0.56	0.21
Control Delay		36.0	7.1		37.6		11.6	31.0		11.9	26.8	4.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		36.0	7.1		37.6		11.6	31.0		11.9	26.8	4.5
LOS		D	A		D		B	C		B	C	A
Approach Delay		26.0			37.6			26.2			19.4	
Approach LOS		C			D			C			B	

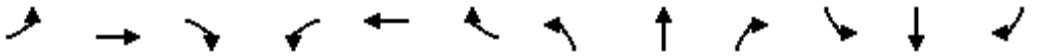
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		93	0		130		48	278		23	149	0
Queue Length 95th (ft)		#218	42		#312		79	418		43	237	34
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		362	547		427		697	1193		641	1221	1080
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.56	0.20		0.68		0.28	0.49		0.15	0.28	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 85.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 25.9		Intersection LOS: C	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

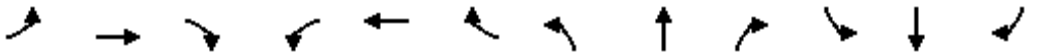




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Future Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	100	108	93	112	85	193	478	112	97	346	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	190	482	136	157	96	439	553	130	258	625	530
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.38	0.38	0.06	0.33	0.33
Sat Flow, veh/h	489	624	1585	242	516	315	1781	1465	343	1781	1870	1585
Grp Volume(v), veh/h	204	0	108	290	0	0	193	0	590	97	346	125
Grp Sat Flow(s),veh/h/ln	1113	0	1585	1073	0	0	1781	0	1809	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.9	9.4	0.0	0.0	5.3	0.0	23.2	2.7	11.6	4.4
Cycle Q Clear(g_c), s	11.7	0.0	3.9	21.1	0.0	0.0	5.3	0.0	23.2	2.7	11.6	4.4
Prop In Lane	0.51		1.00	0.32		0.29	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	482	388	0	0	439	0	683	258	625	530
V/C Ratio(X)	0.50	0.00	0.22	0.75	0.00	0.00	0.44	0.00	0.86	0.38	0.55	0.24
Avail Cap(c_a), veh/h	439	0	515	419	0	0	841	0	1293	735	1337	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	20.0	26.8	0.0	0.0	15.0	0.0	22.1	18.0	20.9	18.5
Incr Delay (d2), s/veh	0.9	0.0	0.2	6.7	0.0	0.0	0.7	0.0	3.4	0.9	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.4	5.6	0.0	0.0	1.9	0.0	9.2	1.0	4.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	20.2	33.5	0.0	0.0	15.7	0.0	25.5	18.9	21.7	18.7
LnGrp LOS	C	A	C	C	A	A	B	A	C	B	C	B
Approach Vol, veh/h		312			290			783			568	
Approach Delay, s/veh		22.1			33.5			23.1			20.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	36.1		30.2	14.0	32.7		30.2				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.7	25.2		13.7	7.3	13.6		23.1				
Green Ext Time (p_c), s	0.2	3.9		1.2	0.4	2.4		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Future Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	100	108	93	112	85	193	478	112	97	346	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	219	190	482	136	157	96	439	553	130	258	625	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.38	0.38	0.06	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.1	0.0	20.2	33.5	0.0	0.0	15.7	0.0	25.5	18.9	21.7	18.7
Ln Grp LOS	C	A	C	C	A	A	B	A	C	B	C	B
Approach Vol, veh/h		312			290			783			568	
Approach Delay, s/veh		22.1			33.5			23.1			20.6	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.7	36.1		30.2	14.0	32.7		30.2
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.9	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.7	25.2		13.7	7.3	13.6		23.1
Green Ext Time (g_e), s	0.2	3.9		1.2	0.4	2.4		0.3
Prob of Phs Call (p_c)	0.87	1.00		1.00	0.98	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.07	0.00	0.00		1.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			489	1781			242

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1465		624		1870		516

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		343		1585		1585		315

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

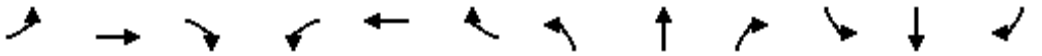
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	97	0	0	204	193	0	0	290
Grp Sat Flow (s), veh/h/ln	1781	0	0	1113	1781	0	0	1073
Q Serve Time (g_s), s	2.7	0.0	0.0	0.0	5.3	0.0	0.0	9.4
Cycle Q Clear Time (g_c), s	2.7	0.0	0.0	11.7	5.3	0.0	0.0	21.1
Perm LT Sat Flow (s_l), veh/h/ln	826	0	0	1204	922	0	0	1192
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	996	0	0	0	0
Perm LT Eff Green (g_p), s	25.7	0.0	0.0	23.4	25.7	0.0	0.0	23.4
Perm LT Serve Time (g_u), s	5.9	0.0	0.0	2.3	14.1	0.0	0.0	11.8
Perm LT Q Serve Time (g_ps), s	2.6	0.0	0.0	0.0	3.1	0.0	0.0	9.4
Time to First Blk (g_f), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.51	1.00	0.00	0.00	0.32
Lane Grp Cap (c), veh/h	258	0	0	409	439	0	0	388
V/C Ratio (X)	0.38	0.00	0.00	0.50	0.44	0.00	0.00	0.75
Avail Cap (c_a), veh/h	735	0	0	439	841	0	0	419
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	18.0	0.0	0.0	22.2	15.0	0.0	0.0	26.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.7	0.0	0.0	6.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	18.9	0.0	0.0	23.1	15.7	0.0	0.0	33.5
1st-Term Q (Q1), veh/ln	1.0	0.0	0.0	2.9	1.8	0.0	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	1.0	0.0	0.0	3.0	1.9	0.0	0.0	5.6
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.03	0.10	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	346	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	625	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1337	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	21.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	590	0	108	0	125	0	0
Grp Sat Flow (s), veh/h/ln	0	1809	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	23.2	0.0	3.9	0.0	4.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.2	0.0	3.9	0.0	4.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.29
Lane Grp Cap (c), veh/h	0	683	0	482	0	530	0	0
V/C Ratio (X)	0.00	0.86	0.00	0.22	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	0	1293	0	515	0	1133	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	22.1	0.0	20.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.5	0.0	20.2	0.0	18.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	1.4	0.0	1.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.2	0.0	1.4	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.20	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

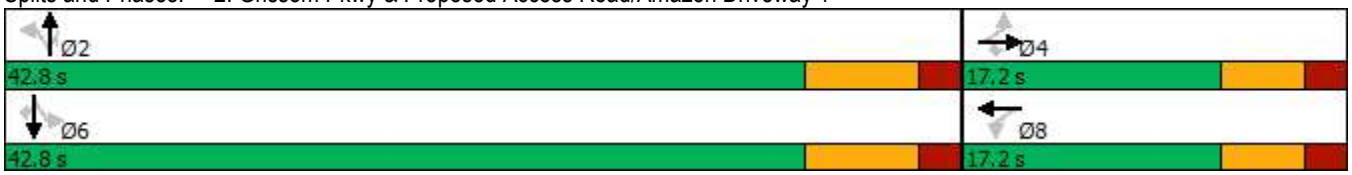


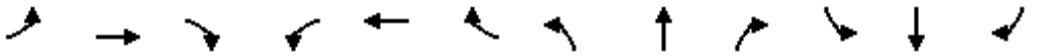
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	150	27	0	20	265	638	1	0	377	134
Future Volume (vph)	61	0	150	27	0	20	265	638	1	0	377	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.787		0.522					
Satd. Flow (perm)	0	1349	1583	0	1381	0	972	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163		75				49			146
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	163	29	0	22	288	693	1	0	410	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	163	0	51	0	288	693	1	0	410	146
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.0	9.0		9.0		28.8	28.8	28.8		28.8	28.8
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.25	0.37		0.15		0.47	0.59	0.00		0.35	0.14
Control Delay		21.0	7.2		5.0		10.1	10.0	0.0		7.0	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.0	7.2		5.0		10.1	10.0	0.0		7.0	1.6
LOS		C	A		A		B	B	A		A	A
Approach Delay		11.2			5.0			10.0			5.6	
Approach LOS		B			A			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		14	0		0		42	114	0		54	0
Queue Length 95th (ft)		51	42		16		108	234	0		113	17
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		349	530		413		781	1497	1281		1497	1301
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.19	0.31		0.12		0.37	0.46	0.00		0.27	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.8			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Future Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	163	29	0	22	288	693	1	0	410	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	0	263	223	31	101	528	1052	891	153	1052	891
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.56	0.56	0.56	0.00	0.56	0.56
Sat Flow, veh/h	1466	0	1585	622	185	612	853	1870	1585	750	1870	1585
Grp Volume(v), veh/h	66	0	163	51	0	0	288	693	1	0	410	146
Grp Sat Flow(s),veh/h/ln	1466	0	1585	1419	0	0	853	1870	1585	750	1870	1585
Q Serve(g_s), s	0.0	0.0	4.5	0.0	0.0	0.0	13.4	12.1	0.0	0.0	5.8	2.1
Cycle Q Clear(g_c), s	1.5	0.0	4.5	1.5	0.0	0.0	19.2	12.1	0.0	0.0	5.8	2.1
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	0	263	355	0	0	528	1052	891	153	1052	891
V/C Ratio(X)	0.17	0.00	0.62	0.14	0.00	0.00	0.55	0.66	0.00	0.00	0.39	0.16
Avail Cap(c_a), veh/h	505	0	387	462	0	0	695	1419	1203	301	1419	1203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	18.2	16.9	0.0	0.0	11.2	7.2	4.5	0.0	5.8	5.0
Incr Delay (d2), s/veh	0.2	0.0	2.4	0.2	0.0	0.0	0.9	0.7	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.6	0.5	0.0	0.0	1.7	2.3	0.0	0.0	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	20.6	17.1	0.0	0.0	12.0	7.9	4.5	0.0	6.0	5.1
LnGrp LOS	B	A	C	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		229			51			982			556	
Approach Delay, s/veh		19.6			17.1			9.1			5.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.5		13.5		33.5		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		21.2		6.5		7.8		3.5				
Green Ext Time (p_c), s		5.2		0.4		2.7		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Future Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	163	29	0	22	288	693	1	0	410	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	396	0	263	223	31	101	528	1052	891	153	1052	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.56	0.56	0.56	0.00	0.56	0.56
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.2	0.0	20.6	17.1	0.0	0.0	12.0	7.9	4.5	0.0	6.0	5.1
Ln Grp LOS	B	A	C	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		229			51			982			556	
Approach Delay, s/veh		19.6			17.1			9.1			5.8	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		33.5		13.5		33.5		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.3		4.6		5.8
Max Q Clear (g_c+I1), s		21.2		6.5		7.8		3.5
Green Ext Time (g_e), s		5.2		0.4		2.7		0.1
Prob of Phs Call (p_c)		1.00		0.97		1.00		0.97
Prob of Max Out (p_x)		0.31		0.67		0.00		0.16

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		853		1466		750		622

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		185

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		612

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	288	0	66	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	853	0	1466	0	750	0	1419
Q Serve Time (g_s), s	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.2	0.0	1.5	0.0	0.0	0.0	1.5
Perm LT Sat Flow (s_l), veh/h/ln	0	853	0	1412	0	750	0	1242
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	26.4	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	20.7	0.0	6.3	0.0	0.0	0.0	6.3
Perm LT Q Serve Time (g_ps), s	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	528	0	396	0	153	0	355
V/C Ratio (X)	0.00	0.55	0.00	0.17	0.00	0.00	0.00	0.14
Avail Cap (c_a), veh/h	0	695	0	505	0	301	0	462
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.2	0.0	17.0	0.0	0.0	0.0	16.9
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.2	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.0	0.0	17.2	0.0	0.0	0.0	17.1
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.5	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.6	0.0	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	410	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.1	0.0	0.0	0.0	5.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.1	0.0	0.0	0.0	5.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1052	0	0	0	1052	0	0
V/C Ratio (X)	0.00	0.66	0.00	0.00	0.00	0.39	0.00	0.00
Avail Cap (c_a), veh/h	0	1419	0	0	0	1419	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.2	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	6.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

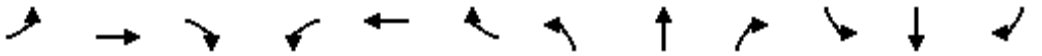
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	163	0	146	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.5	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.5	0.0	2.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	891	0	263	0	891	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.62	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1203	0	387	0	1203	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.5	0.0	18.2	0.0	5.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.5	0.0	20.6	0.0	5.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.4	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.27	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

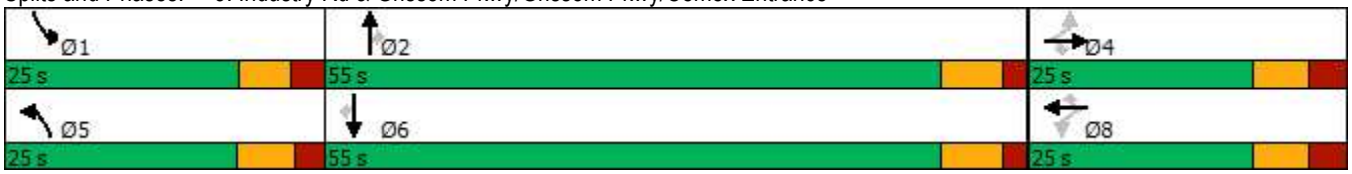


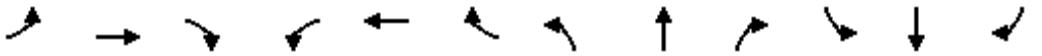
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	12	535	9	8	1	801	99	7	0	209	83
Future Volume (vph)	34	12	535	9	8	1	801	99	7	0	209	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.752			0.749			0.950					
Satd. Flow (perm)	1401	1863	1583	1395	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			582			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	13	582	10	9	1	871	108	8	0	227	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	13	582	10	9	1	871	108	8	0	227	90
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2	11.2	18.3	41.3	41.3		16.2	16.2
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.17	0.17	0.27	0.62	0.62		0.24	0.24
v/c Ratio	0.16	0.04	0.78	0.04	0.03	0.00	0.93	0.09	0.01		0.50	0.19
Control Delay	25.4	23.4	10.7	23.6	23.2	0.0	43.4	6.3	0.0		27.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	25.4	23.4	10.7	23.6	23.2	0.0	43.4	6.3	0.0		27.1	4.1
LOS	C	C	B	C	C	A	D	A	A		C	A
Approach Delay		11.8			22.2			39.0			20.6	
Approach LOS		B			C			D			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	13	4	0	3	3	0	165	14	0		77	0
Queue Length 95th (ft)	38	19	88	16	15	0	#355	41	0		156	22
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	367	489	845	366	489	497	938	1345	1176		1345	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.10	0.03	0.69	0.03	0.02	0.00	0.93	0.08	0.01		0.17	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 67			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 70.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Future Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	174		244	174	147	998	1236	1048	3	479	406
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.29	0.66	0.66	0.00	0.26	0.26
Sat Flow, veh/h	1405	1870	1585	1401	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Grp Sat Flow(s),veh/h/ln	1405	1870	1585	1401	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.4	0.4	0.0	0.4	0.3	0.0	14.0	1.2	0.1	0.0	6.0	2.6
Cycle Q Clear(g_c), s	1.7	0.4	0.0	0.8	0.3	0.0	14.0	1.2	0.1	0.0	6.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	174		244	174	147	998	1236	1048	3	479	406
V/C Ratio(X)	0.15	0.07		0.04	0.05	0.01	0.87	0.09	0.01	0.00	0.47	0.22
Avail Cap(c_a), veh/h	537	559		533	559	474	1075	1537	1303	557	1537	1303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	24.2	0.0	24.6	24.2	24.1	19.8	3.6	3.4	0.0	18.4	17.2
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.1	0.1	0.0	7.7	0.0	0.0	0.0	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	0.1	0.1	0.0	6.1	0.3	0.0	0.0	2.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	24.5	0.0	24.7	24.3	24.1	27.5	3.6	3.4	0.0	19.3	17.5
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		50	A		20			987			317	
Approach Delay, s/veh		25.1			24.5			24.6			18.8	
Approach LOS		C			C			C			B	

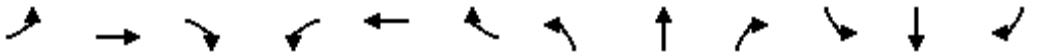
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	45.6		12.9	23.7	21.9		12.9				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.2		3.7	16.0	8.0		2.8				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.9	2.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		23.3
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Future Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	247	174		244	174	147	998	1236	1048	3	479	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.29	0.66	0.66	0.00	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.3	24.5	0.0	24.7	24.3	24.1	27.5	3.6	3.4	0.0	19.3	17.5
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		50			20			987			317	
Approach Delay, s/veh		25.1			24.5			24.6			18.8	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	45.6		12.9	23.7	21.9		12.9
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.7	3.8	5.4		5.0
Max Q Clear (g_c+I1), s	0.0	3.2		3.7	16.0	8.0		2.8
Green Ext Time (g_e), s	0.0	0.8		0.1	0.9	2.1		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.68	1.00	1.00		0.68
Prob of Max Out (p_x)	0.00	0.00		0.00	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1405	3456			1401

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	37	871	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1405	1728	0	0	1401
Q Serve Time (g_s), s	0.0	0.0	0.0	1.4	14.0	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	14.0	0.0	0.0	0.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1405	0	0	0	1401
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.4	0.0	0.0	0.0	5.4
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.2	0.0	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	247	998	0	0	244
V/C Ratio (X)	0.00	0.00	0.00	0.15	0.87	0.00	0.00	0.04
Avail Cap (c_a), veh/h	557	0	0	537	1075	0	0	533
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.0	19.8	0.0	0.0	24.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	7.7	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.3	27.5	0.0	0.0	24.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	5.1	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	6.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.08	1.11	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	108	0	13	0	227	0	9
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.2	0.0	0.4	0.0	6.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	0.4	0.0	6.0	0.0	0.3
Lane Grp Cap (c), veh/h	0	1236	0	174	0	479	0	174
V/C Ratio (X)	0.00	0.09	0.00	0.07	0.00	0.47	0.00	0.05
Avail Cap (c_a), veh/h	0	1537	0	559	0	1537	0	559
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	0.0	24.2	0.0	18.4	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.9	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.6	0.0	24.5	0.0	19.3	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.2	0.0	2.4	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

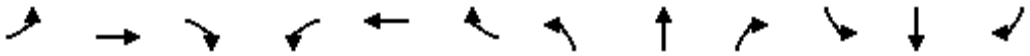
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.2	0.0	2.5	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	90	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	2.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1048	0	147	0	406	0	147
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.22	0.00	0.01
Avail Cap (c_a), veh/h	0	1303	0	474	0	1303	0	474
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	0.0	0.0	17.2	0.0	24.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	0.0	0.0	17.5	0.0	24.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	155	19	34	255	1	13	0	30	1	2	6
Future Volume (vph)	13	155	19	34	255	1	13	0	30	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986						0.905			0.905	
Flt Protected		0.997			0.994			0.985			0.995	
Satd. Flow (prot)	0	1831	0	0	1852	0	0	1660	0	0	1677	0
Flt Permitted		0.997			0.994			0.985			0.995	
Satd. Flow (perm)	0	1831	0	0	1852	0	0	1660	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	168	21	37	277	1	14	0	33	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	315	0	0	47	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	155	19	34	255	1	13	0	30	1	2	6
Future Vol, veh/h	13	155	19	34	255	1	13	0	30	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	168	21	37	277	1	14	0	33	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	278	0	0	189	0	0	563	559	179	575	569	278
Stage 1	-	-	-	-	-	-	207	207	-	352	352	-
Stage 2	-	-	-	-	-	-	356	352	-	223	217	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1285	-	-	1385	-	-	437	438	864	429	432	761
Stage 1	-	-	-	-	-	-	795	731	-	665	632	-
Stage 2	-	-	-	-	-	-	661	632	-	780	723	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1285	-	-	1385	-	-	417	419	864	399	413	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	419	-	399	413	-
Stage 1	-	-	-	-	-	-	785	722	-	657	612	-
Stage 2	-	-	-	-	-	-	632	612	-	742	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.9	10.9	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	653	1285	-	-	1385	-	-	591
HCM Lane V/C Ratio	0.072	0.011	-	-	0.027	-	-	0.017
HCM Control Delay (s)	10.9	7.8	0	-	7.7	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	157	0	68	326	2	53
Future Volume (vph)	157	0	68	326	2	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.869	
Flt Protected				0.991	0.998	
Satd. Flow (prot)	1863	0	0	1846	1615	0
Flt Permitted				0.991	0.998	
Satd. Flow (perm)	1863	0	0	1846	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	0	74	354	2	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	428	60	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	0	68	326	2	53
Future Vol, veh/h	157	0	68	326	2	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	0	74	354	2	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	171	0	673	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1406	-	421	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	393	873
Mov Cap-2 Maneuver	-	-	-	-	393	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	568	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	836	-	-	1406	-
HCM Lane V/C Ratio	0.072	-	-	0.053	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	212	0	64	347	0	38
Future Volume (vph)	212	0	64	347	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.992		
Satd. Flow (prot)	1863	0	0	1848	1611	0
Flt Permitted				0.992		
Satd. Flow (perm)	1863	0	0	1848	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	230	0	70	377	0	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	230	0	0	447	41	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

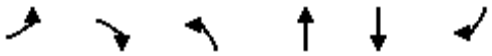
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	0	64	347	0	38
Future Vol, veh/h	212	0	64	347	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	230	0	70	377	0	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	230	0	747	230
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	517	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1338	-	381	809
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1338	-	356	809
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	809	-	-	1338	-
HCM Lane V/C Ratio	0.051	-	-	0.052	-
HCM Control Delay (s)	9.7	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	20	11	35	55	11
Future Volume (vph)	21	20	11	35	55	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.934				0.977	
Flt Protected	0.975			0.988		
Satd. Flow (prot)	1696	0	0	1840	1820	0
Flt Permitted	0.975			0.988		
Satd. Flow (perm)	1696	0	0	1840	1820	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	22	12	38	60	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	50	72	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

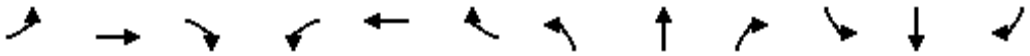
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	20	11	35	55	11
Future Vol, veh/h	21	20	11	35	55	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	22	12	38	60	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	128	66	72	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	866	998	1528	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	859	998	1528	-	-	-
Mov Cap-2 Maneuver	859	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1528	-	922	-	-
HCM Lane V/C Ratio	0.008	-	0.048	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	173	0	21	345	79	0	2	13	44	3	16
Future Volume (vph)	16	173	0	21	345	79	0	2	13	44	3	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.976			0.882			0.966	
Flt Protected		0.996			0.998						0.966	
Satd. Flow (prot)	0	1855	0	0	1814	0	0	1643	0	0	1738	0
Flt Permitted		0.996			0.998						0.966	
Satd. Flow (perm)	0	1855	0	0	1814	0	0	1643	0	0	1738	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	188	0	23	375	86	0	2	14	48	3	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	205	0	0	484	0	0	16	0	0	68	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			

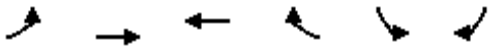
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	16	173	0	21	345	79	0	2	13	44	3	16
Future Vol, veh/h	16	173	0	21	345	79	0	2	13	44	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	188	0	23	375	86	0	2	14	48	3	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	461	0	0	188	0	0	696	729	188	694	686	418
Stage 1	-	-	-	-	-	-	222	222	-	464	464	-
Stage 2	-	-	-	-	-	-	474	507	-	230	222	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1100	-	-	1386	-	-	356	350	854	357	370	635
Stage 1	-	-	-	-	-	-	780	720	-	578	564	-
Stage 2	-	-	-	-	-	-	571	539	-	773	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1100	-	-	1386	-	-	334	336	854	339	355	635
Mov Cap-2 Maneuver	-	-	-	-	-	-	334	336	-	339	355	-
Stage 1	-	-	-	-	-	-	767	708	-	568	551	-
Stage 2	-	-	-	-	-	-	539	527	-	745	708	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.4	10.2	16.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	708	1100	-	-	1386	-	-	385
HCM Lane V/C Ratio	0.023	0.016	-	-	0.016	-	-	0.178
HCM Control Delay (s)	10.2	8.3	0	-	7.6	0	-	16.4
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.6



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	156	303	44	25	11
Future Volume (vph)	10	156	303	44	25	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983		0.958	
Flt Protected		0.997			0.967	
Satd. Flow (prot)	0	1857	1831	0	1726	0
Flt Permitted		0.997			0.967	
Satd. Flow (perm)	0	1857	1831	0	1726	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	170	329	48	27	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	181	377	0	39	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

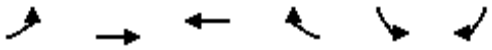
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	156	303	44	25	11
Future Vol, veh/h	10	156	303	44	25	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	170	329	48	27	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	377	0	-	0	545	353
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	192	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1181	-	-	-	499	691
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1181	-	-	-	494	691
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1181	-	-	-	541
HCM Lane V/C Ratio	0.009	-	-	-	0.072
HCM Control Delay (s)	8.1	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	237	451	21	12	1
Future Volume (vph)	1	237	451	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1852	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1852	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	258	490	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	259	513	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	237	451	21	12	1
Future Vol, veh/h	1	237	451	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	258	490	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	513	0	-	0	762	502
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1052	-	-	-	373	569
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1052	-	-	-	373	569
Mov Cap-2 Maneuver	-	-	-	-	373	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	783	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1052	-	-	-	383
HCM Lane V/C Ratio	0.001	-	-	-	0.037
HCM Control Delay (s)	8.4	0	-	-	14.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

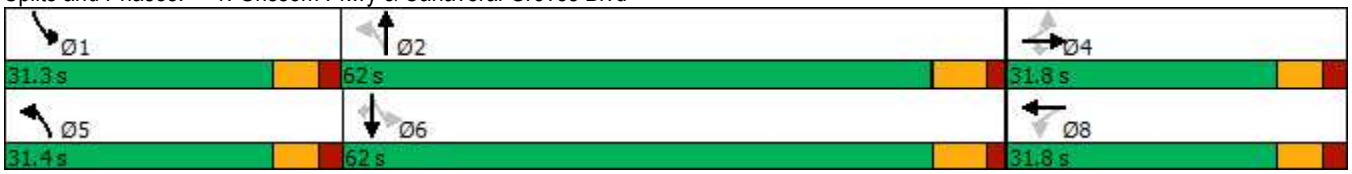
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	92	99	86	103	78	178	440	103	89	318	115
Future Volume (vph)	96	92	99	86	103	78	178	440	103	89	318	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		180	0		0	480		0	430		430
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.960			0.972				0.850
Flt Protected		0.975			0.984		0.950			0.950		
Satd. Flow (prot)	0	1816	1583	0	1760	0	1770	1811	0	1770	1863	1583
Flt Permitted		0.654			0.783		0.369			0.247		
Satd. Flow (perm)	0	1218	1583	0	1400	0	687	1811	0	460	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			108		15			12				125
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2577			4208			7358			1486	
Travel Time (s)		50.2			82.0			111.5			22.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	100	108	93	112	85	193	478	112	97	346	125
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	204	108	0	290	0	193	590	0	97	346	125
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		6
Detector Phase	4	4	4	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		5.0	15.0		5.0	15.0	15.0
Minimum Split (s)	12.8	12.8	12.8	12.8	12.8		11.4	22.0		11.3	22.0	22.0
Total Split (s)	31.8	31.8	31.8	31.8	31.8		31.4	62.0		31.3	62.0	62.0
Total Split (%)	25.4%	25.4%	25.4%	25.4%	25.4%		25.1%	49.5%		25.0%	49.5%	49.5%
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0		25.0	55.0		25.0	55.0	55.0
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	5.0		4.3	5.0	5.0
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5		2.1	2.0		2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		6.8	6.8		6.8		6.4	7.0		6.3	7.0	7.0
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min		None	Min	Min
Act Effct Green (s)		25.4	25.4		25.4		44.6	34.9		36.5	28.1	28.1
Actuated g/C Ratio		0.30	0.30		0.30		0.52	0.41		0.43	0.33	0.33
v/c Ratio		0.56	0.20		0.68		0.39	0.79		0.31	0.56	0.21
Control Delay		36.0	7.1		37.6		11.6	31.0		11.9	26.8	4.5
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		36.0	7.1		37.6		11.6	31.0		11.9	26.8	4.5
LOS		D	A		D		B	C		B	C	A
Approach Delay		26.0			37.6			26.2			19.4	
Approach LOS		C			D			C			B	

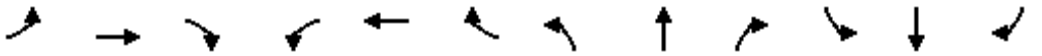
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		93	0		130		48	278		23	149	0
Queue Length 95th (ft)		#218	42		#312		79	418		43	237	34
Internal Link Dist (ft)		2497			4128			7278			1406	
Turn Bay Length (ft)			180				480			430		430
Base Capacity (vph)		362	547		427		697	1193		641	1221	1080
Starvation Cap Reductn		0	0		0		0	0		0	0	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.56	0.20		0.68		0.28	0.49		0.15	0.28	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 125.2			
Actuated Cycle Length: 85.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 25.9		Intersection LOS: C	
Intersection Capacity Utilization 72.7%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Grissom Pkwy & Canaveral Groves Blvd

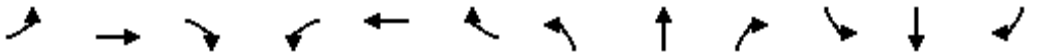




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Future Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	100	108	93	112	85	193	478	112	97	346	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	190	482	136	157	96	439	553	130	258	625	530
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.38	0.38	0.06	0.33	0.33
Sat Flow, veh/h	489	624	1585	242	516	315	1781	1465	343	1781	1870	1585
Grp Volume(v), veh/h	204	0	108	290	0	0	193	0	590	97	346	125
Grp Sat Flow(s),veh/h/ln	1113	0	1585	1073	0	0	1781	0	1809	1781	1870	1585
Q Serve(g_s), s	0.0	0.0	3.9	9.4	0.0	0.0	5.3	0.0	23.2	2.7	11.6	4.4
Cycle Q Clear(g_c), s	11.7	0.0	3.9	21.1	0.0	0.0	5.3	0.0	23.2	2.7	11.6	4.4
Prop In Lane	0.51		1.00	0.32		0.29	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	482	388	0	0	439	0	683	258	625	530
V/C Ratio(X)	0.50	0.00	0.22	0.75	0.00	0.00	0.44	0.00	0.86	0.38	0.55	0.24
Avail Cap(c_a), veh/h	439	0	515	419	0	0	841	0	1293	735	1337	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	0.0	20.0	26.8	0.0	0.0	15.0	0.0	22.1	18.0	20.9	18.5
Incr Delay (d2), s/veh	0.9	0.0	0.2	6.7	0.0	0.0	0.7	0.0	3.4	0.9	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	1.4	5.6	0.0	0.0	1.9	0.0	9.2	1.0	4.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	20.2	33.5	0.0	0.0	15.7	0.0	25.5	18.9	21.7	18.7
LnGrp LOS	C	A	C	C	A	A	B	A	C	B	C	B
Approach Vol, veh/h		312			290			783			568	
Approach Delay, s/veh		22.1			33.5			23.1			20.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	36.1		30.2	14.0	32.7		30.2				
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8				
Max Green Setting (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0				
Max Q Clear Time (g_c+I1), s	4.7	25.2		13.7	7.3	13.6		23.1				
Green Ext Time (p_c), s	0.2	3.9		1.2	0.4	2.4		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Future Volume (veh/h)	96	92	99	86	103	78	178	440	103	89	318	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	104	100	108	93	112	85	193	478	112	97	346	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	219	190	482	136	157	96	439	553	130	258	625	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.38	0.38	0.06	0.33	0.33
Unsig. Movement Delay												
Ln Grp Delay, s/veh	23.1	0.0	20.2	33.5	0.0	0.0	15.7	0.0	25.5	18.9	21.7	18.7
Ln Grp LOS	C	A	C	C	A	A	B	A	C	B	C	B
Approach Vol, veh/h		312			290			783			568	
Approach Delay, s/veh		22.1			33.5			23.1			20.6	
Approach LOS		C			C			C			C	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	1.1	4.0		7.0	1.1	3.0		8.0
Phs Duration (G+Y+Rc), s	10.7	36.1		30.2	14.0	32.7		30.2
Change Period (Y+Rc), s	6.3	7.0		6.8	6.4	7.0		6.8
Max Green (Gmax), s	25.0	55.0		25.0	25.0	55.0		25.0
Max Allow Headway (MAH), s	3.7	5.0		4.9	3.7	4.7		5.4
Max Q Clear (g_c+I1), s	4.7	25.2		13.7	7.3	13.6		23.1
Green Ext Time (g_e), s	0.2	3.9		1.2	0.4	2.4		0.3
Prob of Phs Call (p_c)	0.87	1.00		1.00	0.98	1.00		1.00
Prob of Max Out (p_x)	0.00	0.00		0.07	0.00	0.00		1.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			489	1781			242

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1465		624		1870		516

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		343		1585		1585		315

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Pr/Pm)			L+TL (Pr/Pm)				L+T+R

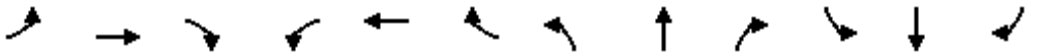
Lanes in Grp	1	0	0	1	1	0	0	1
Grp Vol (v), veh/h	97	0	0	204	193	0	0	290
Grp Sat Flow (s), veh/h/ln	1781	0	0	1113	1781	0	0	1073
Q Serve Time (g_s), s	2.7	0.0	0.0	0.0	5.3	0.0	0.0	9.4
Cycle Q Clear Time (g_c), s	2.7	0.0	0.0	11.7	5.3	0.0	0.0	21.1
Perm LT Sat Flow (s_l), veh/h/ln	826	0	0	1204	922	0	0	1192
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	996	0	0	0	0
Perm LT Eff Green (g_p), s	25.7	0.0	0.0	23.4	25.7	0.0	0.0	23.4
Perm LT Serve Time (g_u), s	5.9	0.0	0.0	2.3	14.1	0.0	0.0	11.8
Perm LT Q Serve Time (g_ps), s	2.6	0.0	0.0	0.0	3.1	0.0	0.0	9.4
Time to First Blk (g_f), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.2
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.51	1.00	0.00	0.00	0.32
Lane Grp Cap (c), veh/h	258	0	0	409	439	0	0	388
V/C Ratio (X)	0.38	0.00	0.00	0.50	0.44	0.00	0.00	0.75
Avail Cap (c_a), veh/h	735	0	0	439	841	0	0	419
Upstream Filter (I)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	18.0	0.0	0.0	22.2	15.0	0.0	0.0	26.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.7	0.0	0.0	6.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	18.9	0.0	0.0	23.1	15.7	0.0	0.0	33.5
1st-Term Q (Q1), veh/ln	1.0	0.0	0.0	2.9	1.8	0.0	0.0	4.9
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.7
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	1.0	0.0	0.0	3.0	1.9	0.0	0.0	5.6
%ile Storage Ratio (RQ%)	0.06	0.00	0.00	0.03	0.10	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment						T		
Lanes in Grp	0	0	0	0	0	1	0	0
Grp Vol (v), veh/h	0	0	0	0	0	346	0	0
Grp Sat Flow (s), veh/h/ln	0	0	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	0	0	0	0	625	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	0	0	0	0	1337	0	0
Upstream Filter (I)	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	21.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	590	0	108	0	125	0	0
Grp Sat Flow (s), veh/h/ln	0	1809	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	23.2	0.0	3.9	0.0	4.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	23.2	0.0	3.9	0.0	4.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.19	0.00	1.00	0.00	1.00	0.00	0.29
Lane Grp Cap (c), veh/h	0	683	0	482	0	530	0	0
V/C Ratio (X)	0.00	0.86	0.00	0.22	0.00	0.24	0.00	0.00
Avail Cap (c_a), veh/h	0	1293	0	515	0	1133	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	22.1	0.0	20.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.4	0.0	0.2	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	25.5	0.0	20.2	0.0	18.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	1.4	0.0	1.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	9.2	0.0	1.4	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.20	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

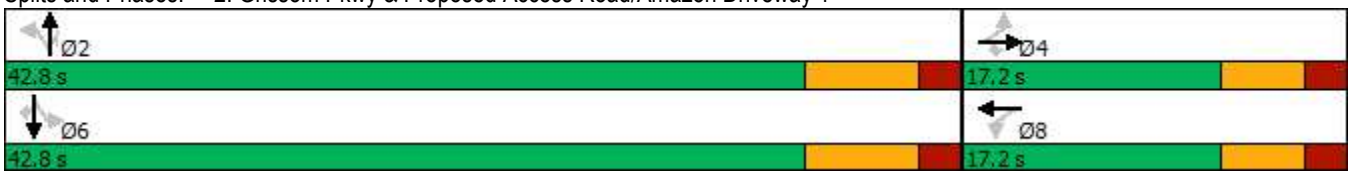


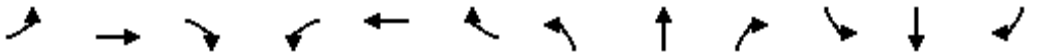
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	150	27	0	20	265	638	1	0	377	134
Future Volume (vph)	61	0	150	27	0	20	265	638	1	0	377	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.724			0.787		0.522					
Satd. Flow (perm)	0	1349	1583	0	1381	0	972	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163		75				49			146
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	163	29	0	22	288	693	1	0	410	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	163	0	51	0	288	693	1	0	410	146
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		6
Detector Phase	4	4	4	8	8		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	13.7	13.7	13.7	15.1	15.1		22.1	22.1	22.1	22.1	22.1	22.1
Total Split (s)	17.2	17.2	17.2	17.2	17.2		42.8	42.8	42.8	42.8	42.8	42.8
Total Split (%)	28.7%	28.7%	28.7%	28.7%	28.7%		71.3%	71.3%	71.3%	71.3%	71.3%	71.3%
Maximum Green (s)	11.5	11.5	11.5	11.5	11.5		35.7	35.7	35.7	35.7	35.7	35.7
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		5.1	5.1	5.1	5.1	5.1	5.1
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7		5.7		7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	Min
Act Effct Green (s)		9.0	9.0		9.0		28.8	28.8	28.8		28.8	28.8
Actuated g/C Ratio		0.20	0.20		0.20		0.63	0.63	0.63		0.63	0.63
v/c Ratio		0.25	0.37		0.15		0.47	0.59	0.00		0.35	0.14
Control Delay		21.0	7.2		5.0		10.1	10.0	0.0		7.0	1.6
Queue Delay		0.0	0.0		0.0		0.0	0.0	0.0		0.0	0.0
Total Delay		21.0	7.2		5.0		10.1	10.0	0.0		7.0	1.6
LOS		C	A		A		B	B	A		A	A
Approach Delay		11.2			5.0			10.0			5.6	
Approach LOS		B			A			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		14	0		0		42	114	0		54	0
Queue Length 95th (ft)		51	42		16		108	234	0		113	17
Internal Link Dist (ft)		597			2456			1445			7278	
Turn Bay Length (ft)			150				300		450			300
Base Capacity (vph)		349	530		413		781	1497	1281		1497	1301
Starvation Cap Reductn		0	0		0		0	0	0		0	0
Spillback Cap Reductn		0	0		0		0	0	0		0	0
Storage Cap Reductn		0	0		0		0	0	0		0	0
Reduced v/c Ratio		0.19	0.31		0.12		0.37	0.46	0.00		0.27	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 45.8			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 72.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Grissom Pkwy & Proposed Access Road/Amazon Driveway 1





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Future Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	163	29	0	22	288	693	1	0	410	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	0	263	223	31	101	528	1052	891	153	1052	891
Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.56	0.56	0.56	0.00	0.56	0.56
Sat Flow, veh/h	1466	0	1585	622	185	612	853	1870	1585	750	1870	1585
Grp Volume(v), veh/h	66	0	163	51	0	0	288	693	1	0	410	146
Grp Sat Flow(s),veh/h/ln	1466	0	1585	1419	0	0	853	1870	1585	750	1870	1585
Q Serve(g_s), s	0.0	0.0	4.5	0.0	0.0	0.0	13.4	12.1	0.0	0.0	5.8	2.1
Cycle Q Clear(g_c), s	1.5	0.0	4.5	1.5	0.0	0.0	19.2	12.1	0.0	0.0	5.8	2.1
Prop In Lane	1.00		1.00	0.57		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	0	263	355	0	0	528	1052	891	153	1052	891
V/C Ratio(X)	0.17	0.00	0.62	0.14	0.00	0.00	0.55	0.66	0.00	0.00	0.39	0.16
Avail Cap(c_a), veh/h	505	0	387	462	0	0	695	1419	1203	301	1419	1203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	18.2	16.9	0.0	0.0	11.2	7.2	4.5	0.0	5.8	5.0
Incr Delay (d2), s/veh	0.2	0.0	2.4	0.2	0.0	0.0	0.9	0.7	0.0	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.6	0.5	0.0	0.0	1.7	2.3	0.0	0.0	1.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	20.6	17.1	0.0	0.0	12.0	7.9	4.5	0.0	6.0	5.1
LnGrp LOS	B	A	C	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		229			51			982			556	
Approach Delay, s/veh		19.6			17.1			9.1			5.8	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.5		13.5		33.5		13.5				
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7				
Max Green Setting (Gmax), s		35.7		* 12		35.7		* 12				
Max Q Clear Time (g_c+I1), s		21.2		6.5		7.8		3.5				
Green Ext Time (p_c), s		5.2		0.4		2.7		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Future Volume (veh/h)	61	0	150	27	0	20	265	638	1	0	377	134
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	0	163	29	0	22	288	693	1	0	410	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	396	0	263	223	31	101	528	1052	891	153	1052	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.00	0.17	0.17	0.00	0.17	0.56	0.56	0.56	0.00	0.56	0.56
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.2	0.0	20.6	17.1	0.0	0.0	12.0	7.9	4.5	0.0	6.0	5.1
Ln Grp LOS	B	A	C	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		229			51			982			556	
Approach Delay, s/veh		19.6			17.1			9.1			5.8	
Approach LOS		B			B			A			A	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		5.0		7.0		5.0		8.0
Phs Duration (G+Y+Rc), s		33.5		13.5		33.5		13.5
Change Period (Y+Rc), s		7.1		* 5.7		7.1		* 5.7
Max Green (Gmax), s		35.7		* 12		35.7		* 12
Max Allow Headway (MAH), s		4.9		4.3		4.6		5.8
Max Q Clear (g_c+I1), s		21.2		6.5		7.8		3.5
Green Ext Time (g_e), s		5.2		0.4		2.7		0.1
Prob of Phs Call (p_c)		1.00		0.97		1.00		0.97
Prob of Max Out (p_x)		0.31		0.67		0.00		0.16

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		853		1466		750		622

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		0		1870		185

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		612

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment		L		L+T		L		L+T+R

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	288	0	66	0	0	0	51
Grp Sat Flow (s), veh/h/ln	0	853	0	1466	0	750	0	1419
Q Serve Time (g_s), s	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	19.2	0.0	1.5	0.0	0.0	0.0	1.5
Perm LT Sat Flow (s_l), veh/h/ln	0	853	0	1412	0	750	0	1242
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1781	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	26.4	0.0	7.8	0.0	0.0	0.0	7.8
Perm LT Serve Time (g_u), s	0.0	20.7	0.0	6.3	0.0	0.0	0.0	6.3
Perm LT Q Serve Time (g_ps), s	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.57
Lane Grp Cap (c), veh/h	0	528	0	396	0	153	0	355
V/C Ratio (X)	0.00	0.55	0.00	0.17	0.00	0.00	0.00	0.14
Avail Cap (c_a), veh/h	0	695	0	505	0	301	0	462
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.2	0.0	17.0	0.0	0.0	0.0	16.9
Incr Delay (d2), s/veh	0.0	0.9	0.0	0.2	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	12.0	0.0	17.2	0.0	0.0	0.0	17.1
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.5	0.0	0.0	0.0	0.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.7	0.0	0.6	0.0	0.0	0.0	0.5
%ile Storage Ratio (RQ%)	0.00	0.14	0.00	0.02	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	693	0	0	0	410	0	0
Grp Sat Flow (s), veh/h/ln	0	1870	0	0	0	1870	0	0
Q Serve Time (g_s), s	0.0	12.1	0.0	0.0	0.0	5.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	12.1	0.0	0.0	0.0	5.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1052	0	0	0	1052	0	0
V/C Ratio (X)	0.00	0.66	0.00	0.00	0.00	0.39	0.00	0.00
Avail Cap (c_a), veh/h	0	1419	0	0	0	1419	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.2	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.9	0.0	0.0	0.0	6.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

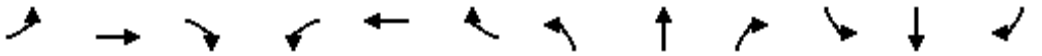
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.3	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	1	0	163	0	146	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	0
Q Serve Time (g_s), s	0.0	0.0	0.0	4.5	0.0	2.1	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	4.5	0.0	2.1	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	891	0	263	0	891	0	0
V/C Ratio (X)	0.00	0.00	0.00	0.62	0.00	0.16	0.00	0.00
Avail Cap (c_a), veh/h	0	1203	0	387	0	1203	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.5	0.0	18.2	0.0	5.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	2.4	0.0	0.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.5	0.0	20.6	0.0	5.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.4	0.0	0.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	1.6	0.0	0.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.27	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.

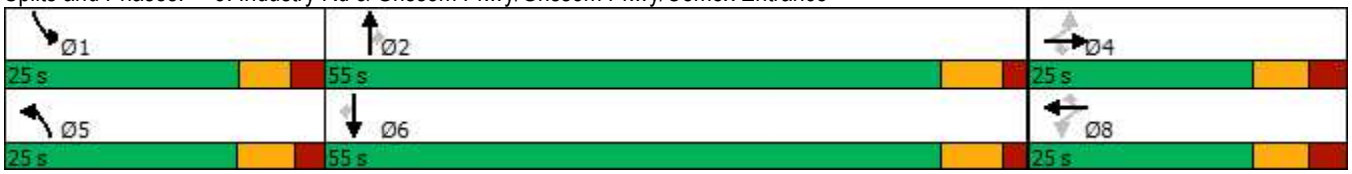


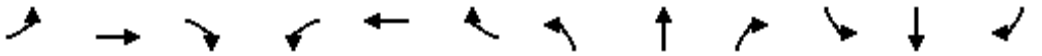
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	12	535	9	8	1	801	99	7	0	209	83
Future Volume (vph)	34	12	535	9	8	1	801	99	7	0	209	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	140		0	260		260
Storage Lanes	1		1	1		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1863	1863	1583
Flt Permitted	0.752			0.749			0.950					
Satd. Flow (perm)	1401	1863	1583	1395	1863	1583	3433	1863	1583	1863	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			582			111			117			117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2261			600			1897			602	
Travel Time (s)		51.4			13.6			43.1			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	37	13	582	10	9	1	871	108	8	0	227	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	37	13	582	10	9	1	871	108	8	0	227	90
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	4	4	4	8	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	15.5	15.5	15.5	15.5	15.5	15.5	11.8	21.9	21.9	11.7	21.9	21.9
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	25.0	55.0	55.0	25.0	55.0	55.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	23.8%	52.4%	52.4%	23.8%	52.4%	52.4%
Maximum Green (s)	17.5	17.5	17.5	17.5	17.5	17.5	18.2	48.1	48.1	18.3	48.1	48.1
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.5	4.8	4.8	4.0	4.8	4.8
All-Red Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	2.3	2.1	2.1	2.7	2.1	2.1
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.5	7.5	7.5	7.5	7.5	7.5	6.8	6.9	6.9	6.7	6.9	6.9
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.5	3.5	2.5	3.5	3.5
Recall Mode	None	None	None	None	None	None	Min	Min	Min	None	None	None
Act Effct Green (s)	11.2	11.2	11.2	11.2	11.2	11.2	18.3	41.3	41.3		16.2	16.2
Actuated g/C Ratio	0.17	0.17	0.17	0.17	0.17	0.17	0.27	0.62	0.62		0.24	0.24
v/c Ratio	0.16	0.04	0.78	0.04	0.03	0.00	0.93	0.09	0.01		0.50	0.19
Control Delay	25.4	23.4	10.7	23.6	23.2	0.0	43.4	6.3	0.0		27.1	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	25.4	23.4	10.7	23.6	23.2	0.0	43.4	6.3	0.0		27.1	4.1
LOS	C	C	B	C	C	A	D	A	A		C	A
Approach Delay		11.8			22.2			39.0			20.6	
Approach LOS		B			C			D			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	13	4	0	3	3	0	165	14	0		77	0
Queue Length 95th (ft)	38	19	88	16	15	0	#355	41	0		156	22
Internal Link Dist (ft)		2181			520			1817			522	
Turn Bay Length (ft)	150						140					260
Base Capacity (vph)	367	489	845	366	489	497	938	1345	1176		1345	1176
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.10	0.03	0.69	0.03	0.02	0.00	0.93	0.08	0.01		0.17	0.08

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 67			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 27.1		Intersection LOS: C	
Intersection Capacity Utilization 70.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Industry Rd & Grissom Pkwy/Grissom Pkwy/Cemex Entrance





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Future Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	174		244	174	147	998	1236	1048	3	479	406
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.29	0.66	0.66	0.00	0.26	0.26
Sat Flow, veh/h	1405	1870	1585	1401	1870	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Grp Sat Flow(s),veh/h/ln	1405	1870	1585	1401	1870	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.4	0.4	0.0	0.4	0.3	0.0	14.0	1.2	0.1	0.0	6.0	2.6
Cycle Q Clear(g_c), s	1.7	0.4	0.0	0.8	0.3	0.0	14.0	1.2	0.1	0.0	6.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	174		244	174	147	998	1236	1048	3	479	406
V/C Ratio(X)	0.15	0.07		0.04	0.05	0.01	0.87	0.09	0.01	0.00	0.47	0.22
Avail Cap(c_a), veh/h	537	559		533	559	474	1075	1537	1303	557	1537	1303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	24.2	0.0	24.6	24.2	24.1	19.8	3.6	3.4	0.0	18.4	17.2
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.1	0.1	0.0	7.7	0.0	0.0	0.0	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.0	0.1	0.1	0.0	6.1	0.3	0.0	0.0	2.5	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	24.5	0.0	24.7	24.3	24.1	27.5	3.6	3.4	0.0	19.3	17.5
LnGrp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		50	A		20			987			317	
Approach Delay, s/veh		25.1			24.5			24.6			18.8	
Approach LOS		C			C			C			B	

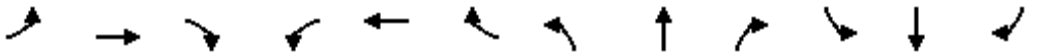
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	45.6		12.9	23.7	21.9		12.9				
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5				
Max Green Setting (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18				
Max Q Clear Time (g_c+I1), s	0.0	3.2		3.7	16.0	8.0		2.8				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.9	2.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		23.3
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Future Volume (veh/h)	34	12	535	9	8	1	801	99	7	0	209	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	13	0	10	9	1	871	108	8	0	227	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	247	174		244	174	147	998	1236	1048	3	479	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.29	0.66	0.66	0.00	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.3	24.5	0.0	24.7	24.3	24.1	27.5	3.6	3.4	0.0	19.3	17.5
Ln Grp LOS	C	C		C	C	C	C	A	A	A	B	B
Approach Vol, veh/h		50			20			987			317	
Approach Delay, s/veh		25.1			24.5			24.6			18.8	
Approach LOS		C			C			C			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Case No	2.0	3.0		5.0	2.0	3.0		5.0
Phs Duration (G+Y+Rc), s	0.0	45.6		12.9	23.7	21.9		12.9
Change Period (Y+Rc), s	* 6.7	6.9		* 7.5	* 6.8	6.9		* 7.5
Max Green (Gmax), s	* 18	48.1		* 18	* 18	48.1		* 18
Max Allow Headway (MAH), s	0.0	5.7		4.7	3.8	5.4		5.0
Max Q Clear (g_c+I1), s	0.0	3.2		3.7	16.0	8.0		2.8
Green Ext Time (g_e), s	0.0	0.8		0.1	0.9	2.1		0.0
Prob of Phs Call (p_c)	0.00	1.00		0.68	1.00	1.00		0.68
Prob of Max Out (p_x)	0.00	0.00		0.00	1.00	0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt	1			7	5			3
Mvmt Sat Flow, veh/h	1781			1405	3456			1401

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		1870		1870		1870		1870

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		1585		1585		1585		1585

Left Lane Group Data								
Assigned Mvmt	1	0	0	7	5	0	0	3
Lane Assignment	L (Prot)			L	L (Prot)			L

Lanes in Grp	1	0	0	1	2	0	0	1
Grp Vol (v), veh/h	0	0	0	37	871	0	0	10
Grp Sat Flow (s), veh/h/ln	1781	0	0	1405	1728	0	0	1401
Q Serve Time (g_s), s	0.0	0.0	0.0	1.4	14.0	0.0	0.0	0.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	1.7	14.0	0.0	0.0	0.8
Perm LT Sat Flow (s_l), veh/h/ln	0	0	0	1405	0	0	0	1401
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	0.0	0.0	5.4	0.0	0.0	0.0	5.4
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	5.2	0.0	0.0	0.0	5.1
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap (c), veh/h	3	0	0	247	998	0	0	244
V/C Ratio (X)	0.00	0.00	0.00	0.15	0.87	0.00	0.00	0.04
Avail Cap (c_a), veh/h	557	0	0	537	1075	0	0	533
Upstream Filter (I)	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	25.0	19.8	0.0	0.0	24.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	7.7	0.0	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	25.3	27.5	0.0	0.0	24.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	5.1	0.0	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.5	6.1	0.0	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.08	1.11	0.00	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	108	0	13	0	227	0	9
Grp Sat Flow (s), veh/h/ln	0	1870	0	1870	0	1870	0	1870
Q Serve Time (g_s), s	0.0	1.2	0.0	0.4	0.0	6.0	0.0	0.3
Cycle Q Clear Time (g_c), s	0.0	1.2	0.0	0.4	0.0	6.0	0.0	0.3
Lane Grp Cap (c), veh/h	0	1236	0	174	0	479	0	174
V/C Ratio (X)	0.00	0.09	0.00	0.07	0.00	0.47	0.00	0.05
Avail Cap (c_a), veh/h	0	1537	0	559	0	1537	0	559
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.6	0.0	24.2	0.0	18.4	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.9	0.0	0.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.6	0.0	24.5	0.0	19.3	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.2	0.0	2.4	0.0	0.1
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

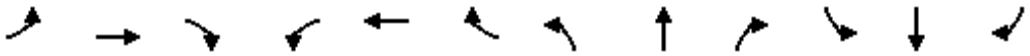
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.2	0.0	2.5	0.0	0.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.01
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	8	0	0	0	90	0	1
Grp Sat Flow (s), veh/h/ln	0	1585	0	1585	0	1585	0	1585
Q Serve Time (g_s), s	0.0	0.1	0.0	0.0	0.0	2.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.1	0.0	0.0	0.0	2.6	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	1048	0	147	0	406	0	147
V/C Ratio (X)	0.00	0.01	0.00	0.00	0.00	0.22	0.00	0.01
Avail Cap (c_a), veh/h	0	1303	0	474	0	1303	0	474
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	3.4	0.0	0.0	0.0	17.2	0.0	24.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	3.4	0.0	0.0	0.0	17.5	0.0	24.1
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

* HCM 6th Edition computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	155	19	34	255	1	13	0	30	1	2	6
Future Volume (vph)	13	155	19	34	255	1	13	0	30	1	2	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.986						0.905			0.905	
Flt Protected		0.997			0.994			0.985			0.995	
Satd. Flow (prot)	0	1831	0	0	1852	0	0	1660	0	0	1677	0
Flt Permitted		0.997			0.994			0.985			0.995	
Satd. Flow (perm)	0	1831	0	0	1852	0	0	1660	0	0	1677	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2512			2992			2341			1286	
Travel Time (s)		48.9			58.3			63.8			35.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	168	21	37	277	1	14	0	33	1	2	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	203	0	0	315	0	0	47	0	0	10	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	13	155	19	34	255	1	13	0	30	1	2	6
Future Vol, veh/h	13	155	19	34	255	1	13	0	30	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	168	21	37	277	1	14	0	33	1	2	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	278	0	0	189	0	0	563	559	179	575	569	278
Stage 1	-	-	-	-	-	-	207	207	-	352	352	-
Stage 2	-	-	-	-	-	-	356	352	-	223	217	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1285	-	-	1385	-	-	437	438	864	429	432	761
Stage 1	-	-	-	-	-	-	795	731	-	665	632	-
Stage 2	-	-	-	-	-	-	661	632	-	780	723	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1285	-	-	1385	-	-	417	419	864	399	413	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	417	419	-	399	413	-
Stage 1	-	-	-	-	-	-	785	722	-	657	612	-
Stage 2	-	-	-	-	-	-	632	612	-	742	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.9	10.9	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	653	1285	-	-	1385	-	-	591
HCM Lane V/C Ratio	0.072	0.011	-	-	0.027	-	-	0.017
HCM Control Delay (s)	10.9	7.8	0	-	7.7	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	157	0	68	326	2	53
Future Volume (vph)	157	0	68	326	2	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.869	
Flt Protected				0.991	0.998	
Satd. Flow (prot)	1863	0	0	1846	1615	0
Flt Permitted				0.991	0.998	
Satd. Flow (perm)	1863	0	0	1846	1615	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	1447			2306	2109	
Travel Time (s)	28.2			44.9	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	0	74	354	2	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	428	60	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	0	68	326	2	53
Future Vol, veh/h	157	0	68	326	2	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	0	74	354	2	58

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	171	0	673	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1406	-	421	873
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1406	-	393	873
Mov Cap-2 Maneuver	-	-	-	-	393	-
Stage 1	-	-	-	-	859	-
Stage 2	-	-	-	-	568	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	836	-	-	1406	-
HCM Lane V/C Ratio	0.072	-	-	0.053	-
HCM Control Delay (s)	9.6	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	212	0	64	347	0	38
Future Volume (vph)	212	0	64	347	0	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected				0.992		
Satd. Flow (prot)	1863	0	0	1848	1611	0
Flt Permitted				0.992		
Satd. Flow (perm)	1863	0	0	1848	1611	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	2306			2577	2056	
Travel Time (s)	44.9			50.2	56.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	230	0	70	377	0	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	230	0	0	447	41	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.3%		ICU Level of Service A	
Analysis Period (min) 15			

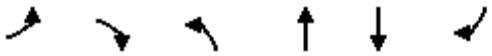
Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	0	64	347	0	38
Future Vol, veh/h	212	0	64	347	0	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	230	0	70	377	0	41

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	230	0	747	230
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	517	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1338	-	381	809
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	598	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1338	-	356	809
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	809	-	-	1338	-
HCM Lane V/C Ratio	0.051	-	-	0.052	-
HCM Control Delay (s)	9.7	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	20	11	35	55	11
Future Volume (vph)	21	20	11	35	55	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.934				0.977	
Flt Protected	0.975			0.988		
Satd. Flow (prot)	1696	0	0	1840	1820	0
Flt Permitted	0.975			0.988		
Satd. Flow (perm)	1696	0	0	1840	1820	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	2992			2126	2109	
Travel Time (s)	81.6			58.0	57.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	22	12	38	60	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	45	0	0	50	72	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.1%		ICU Level of Service A	
Analysis Period (min) 15			

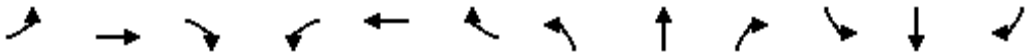
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	20	11	35	55	11
Future Vol, veh/h	21	20	11	35	55	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	22	12	38	60	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	128	66	72	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	62	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	866	998	1528	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	961	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	859	998	1528	-	-	-
Mov Cap-2 Maneuver	859	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	961	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1528	-	922	-	-
HCM Lane V/C Ratio	0.008	-	0.048	-	-
HCM Control Delay (s)	7.4	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	173	0	21	345	79	0	2	13	44	3	16
Future Volume (vph)	16	173	0	21	345	79	0	2	13	44	3	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.976			0.882			0.966	
Flt Protected		0.996			0.998						0.966	
Satd. Flow (prot)	0	1855	0	0	1814	0	0	1643	0	0	1738	0
Flt Permitted		0.996			0.998						0.966	
Satd. Flow (perm)	0	1855	0	0	1814	0	0	1643	0	0	1738	0
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		2196			2424			1392			2025	
Travel Time (s)		42.8			47.2			38.0			55.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	188	0	23	375	86	0	2	14	48	3	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	205	0	0	484	0	0	16	0	0	68	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			

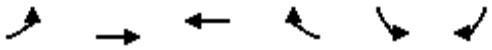
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	16	173	0	21	345	79	0	2	13	44	3	16
Future Vol, veh/h	16	173	0	21	345	79	0	2	13	44	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	188	0	23	375	86	0	2	14	48	3	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	461	0	0	188	0	0	696	729	188	694	686	418
Stage 1	-	-	-	-	-	-	222	222	-	464	464	-
Stage 2	-	-	-	-	-	-	474	507	-	230	222	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1100	-	-	1386	-	-	356	350	854	357	370	635
Stage 1	-	-	-	-	-	-	780	720	-	578	564	-
Stage 2	-	-	-	-	-	-	571	539	-	773	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1100	-	-	1386	-	-	334	336	854	339	355	635
Mov Cap-2 Maneuver	-	-	-	-	-	-	334	336	-	339	355	-
Stage 1	-	-	-	-	-	-	767	708	-	568	551	-
Stage 2	-	-	-	-	-	-	539	527	-	745	708	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.4	10.2	16.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	708	1100	-	-	1386	-	-	385
HCM Lane V/C Ratio	0.023	0.016	-	-	0.016	-	-	0.178
HCM Control Delay (s)	10.2	8.3	0	-	7.6	0	-	16.4
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.6



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	156	303	44	25	11
Future Volume (vph)	10	156	303	44	25	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983		0.958	
Flt Protected		0.997			0.967	
Satd. Flow (prot)	0	1857	1831	0	1726	0
Flt Permitted		0.997			0.967	
Satd. Flow (perm)	0	1857	1831	0	1726	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2296	2196		2271	
Travel Time (s)		52.2	49.9		51.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	170	329	48	27	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	181	377	0	39	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

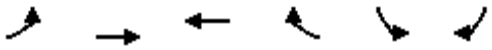
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	156	303	44	25	11
Future Vol, veh/h	10	156	303	44	25	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	170	329	48	27	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	377	0	-	0	545	353
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	192	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1181	-	-	-	499	691
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	841	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1181	-	-	-	494	691
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1181	-	-	-	541
HCM Lane V/C Ratio	0.009	-	-	-	0.072
HCM Control Delay (s)	8.1	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	237	451	21	12	1
Future Volume (vph)	1	237	451	21	12	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994		0.990	
Flt Protected					0.956	
Satd. Flow (prot)	0	1863	1852	0	1763	0
Flt Permitted					0.956	
Satd. Flow (perm)	0	1863	1852	0	1763	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		2424	677		2232	
Travel Time (s)		55.1	15.4		50.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	258	490	23	13	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	259	513	0	14	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	237	451	21	12	1
Future Vol, veh/h	1	237	451	21	12	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	258	490	23	13	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	513	0	-	0	762	502
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1052	-	-	-	373	569
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1052	-	-	-	373	569
Mov Cap-2 Maneuver	-	-	-	-	373	-
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	783	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1052	-	-	-	383
HCM Lane V/C Ratio	0.001	-	-	-	0.037
HCM Control Delay (s)	8.4	0	-	-	14.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

APPENDIX F

Left Turn Lane Warrant Workbook

Turn Lane Warrant and Length Analysis Workbook

Introduction

The purpose of this workbook is to aid in the determination of whether or not a left or right turn lane is warranted for an existing or proposed unsignalized or signalized intersection. If warranted, this workbook also calculates the required storage length. The logic, calculations, and warrant graphs contained within this workbook stem from Section 11.16 and the Chapter 11 Appendix of PennDOT Publication 46. All users shall reference Section 11.16 of PennDOT Publication 46 while completing this workbook to verify the accuracy of workbook calculations and findings. This workbook is a tool to make a traffic engineering decision. This workbook is not a substitute for engineering judgment.

In addition to the findings of this workbook, users shall comply with the guidance of Section 11.16 of PennDOT Publication 46 as it relates to use of operational analyses and other warranting factors to determine whether a turn lane is warranted or not. Attach all supplemental documentation.

Assumptions

1. The references cited in Section 11.16 of PennDOT Publication 46 are the basis from which the warrant graphs were derived. Certain lane configurations, speeds, and volume distributions should not be evaluated using this workbook.
2. This workbook allows the user to decide whether or not to include certain turning movement volumes in the overall calculations. Include the turning movement volume and if indicated to be excluded, provide justification.
3. Figure 7 or 8: When the actual left turn percentage (LT%) is between curves, the warranting curve is the lower percentage curve. For example, for a LT% of 8%, the curve that is used to determine if the warrant is met is the 5% curve. If the LT% is less than 1%, a left-turn lane is not considered warranted for the purposes of this workbook.
4. Users shall ensure that the vehicle volumes are adjusted/grown using acceptable engineering practices to reflect the appropriate scenario for which the study is being done.

Instructions

1. This workbook accounts for a single left or right turn lane warrant analysis. Duplicate this file to account for each additional analysis.
2. All pale yellow cells are available for the user to either input information or to provide a decision. Some of these input cells, when selected, provide additional information/drop-down lists for the user to input the correct information. Green cells are self calculating.
3. Begin by filling out the top section of the "Input&Findings" tab. Include all study area information and make sure to indicate which type of turn lane warrant analysis is to be conducted. Next fill out the appropriate information in the "Volume Calculations" section. Follow the imbedded instructions for the remaining entries.
4. The applicable warrant figure and an indication of whether or not the type of turn lane is warranted will be provided in the "Input&Findings" tab. Additionally, if a turn lane is warranted, this tab will also include the required storage length rounded to the next highest 25' increment, if applicable. Refer to the figure tabs to locate and review the warrant findings.
5. Print Output: Users may print one or more tabs using conventional Excel printing procedures. Macro enabled buttons are not provided in this workbook due to its simplicity to print.

Version #	Revision Date	Revision Description
1.0	9/27/2012	Original
2.0	10/1/2012	Included Imbedded Figure 7 and 8 Warrant Comparisons
3.0	11/2/2012	Per Clearance Transmittal T-12-016 Comments

Turn Lane Warrant and Length Analysis
Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

AR Number:		**Analysis Date:**	7/20/2022
County:	Brevard	**Conducted By:**	Darren White
FDOT District:	5	**Checked By:**	John Alaghemand
		Agency/Company Name:	Walton County/DRMP, Inc.

Intersection & Approach Description: Grissom Parkway and Proposed Connector Road/Amazon Access Point 2
Northbound left approach on Grissom Parkway

Analysis Scenario:	2023 Build Traffic Conditions	**Number of Approach Lanes:**	1
Design Hour:	AM Build Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	50		
Type of Terrain:	Level		

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	41	0.0%	41
	Through	-	252	2.0%	255
	Right	Yes	1	0.0%	1
Opposing	Left	Yes	0	0.0%	0
	Through	-	569	2.0%	575
	Right	Yes	27	0.0%	27

Advancing Volume:	297
Opposing Volume:	602
Left Turn Volume:	41
% Left Turns in Advancing Volume:	13.80%

TURN LANE WARRANT FINDINGS

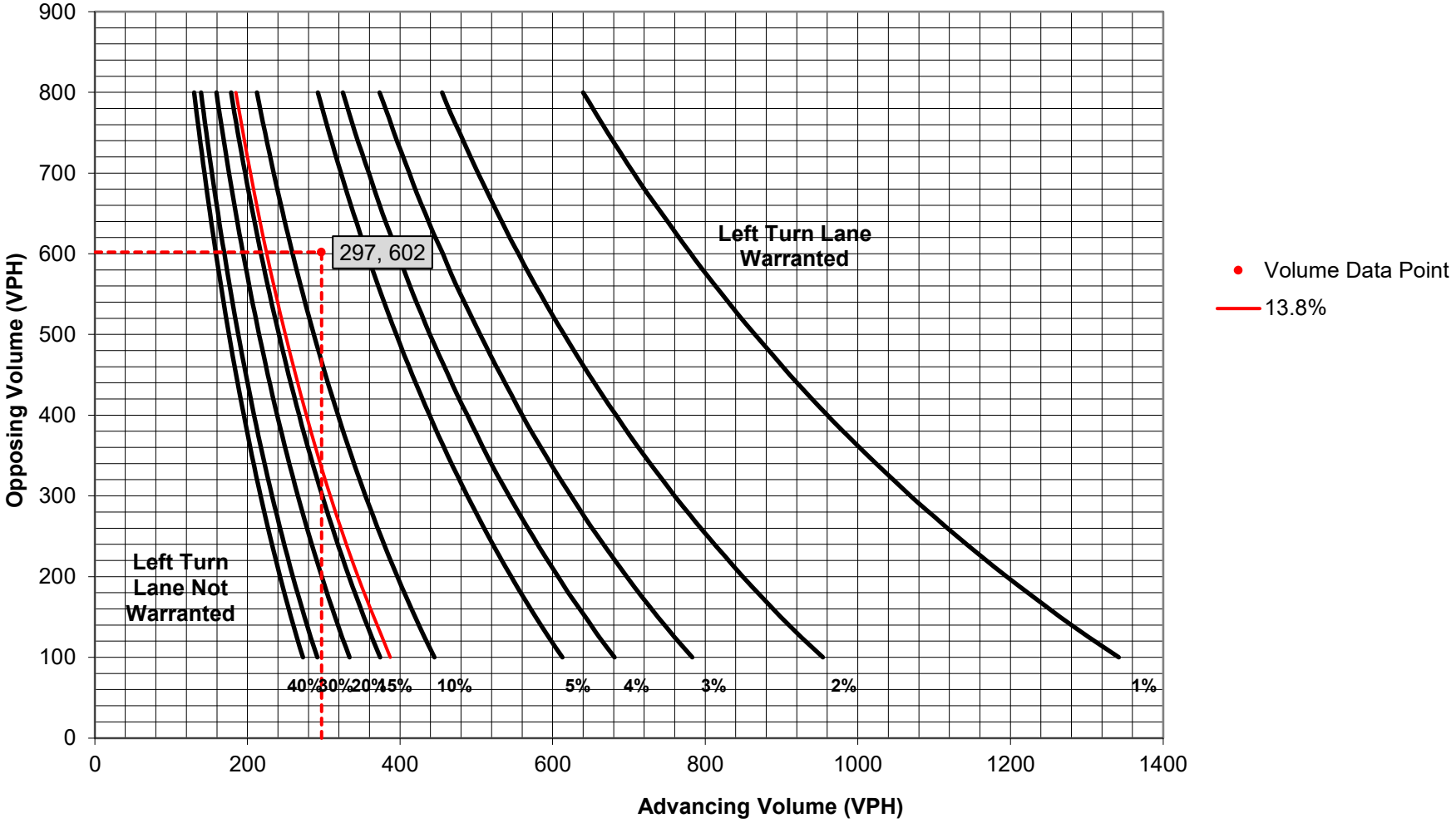
Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 4**

Warrant Met?: **Yes**

Additional Comments / Justifications:

Figure 4. Warrant for left turn storage lanes on two-lane highways (50 mph speed, unsignalized and signalized intersections)
(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis
Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

AR Number:		**Analysis Date:**	7/27/2022
County:	Brevard	**Conducted By:**	Darren White
FDOT District:	5	**Checked By:**	John Alaghemand
		Agency/Company Name:	Walton County/DRMP, Inc.

Intersection & Approach Description: Grissom Parkway and Proposed Connector Road/Amazon Access Point 1
Northbound left approach on Grissom Parkway

Analysis Scenario:	2023 Alt Build Traffic Conditions	**Number of Approach Lanes:**	1
Design Hour:	AM Build Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	50		
Type of Terrain:	Level		

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	41	0.0%	41
	Through	-	252	2.0%	255
	Right	Yes	1	0.0%	1
Opposing	Left	Yes	0	0.0%	0
	Through	-	569	2.0%	575
	Right	Yes	25	0.0%	25

Advancing Volume:	297
Opposing Volume:	600
Left Turn Volume:	41
% Left Turns in Advancing Volume:	13.80%

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

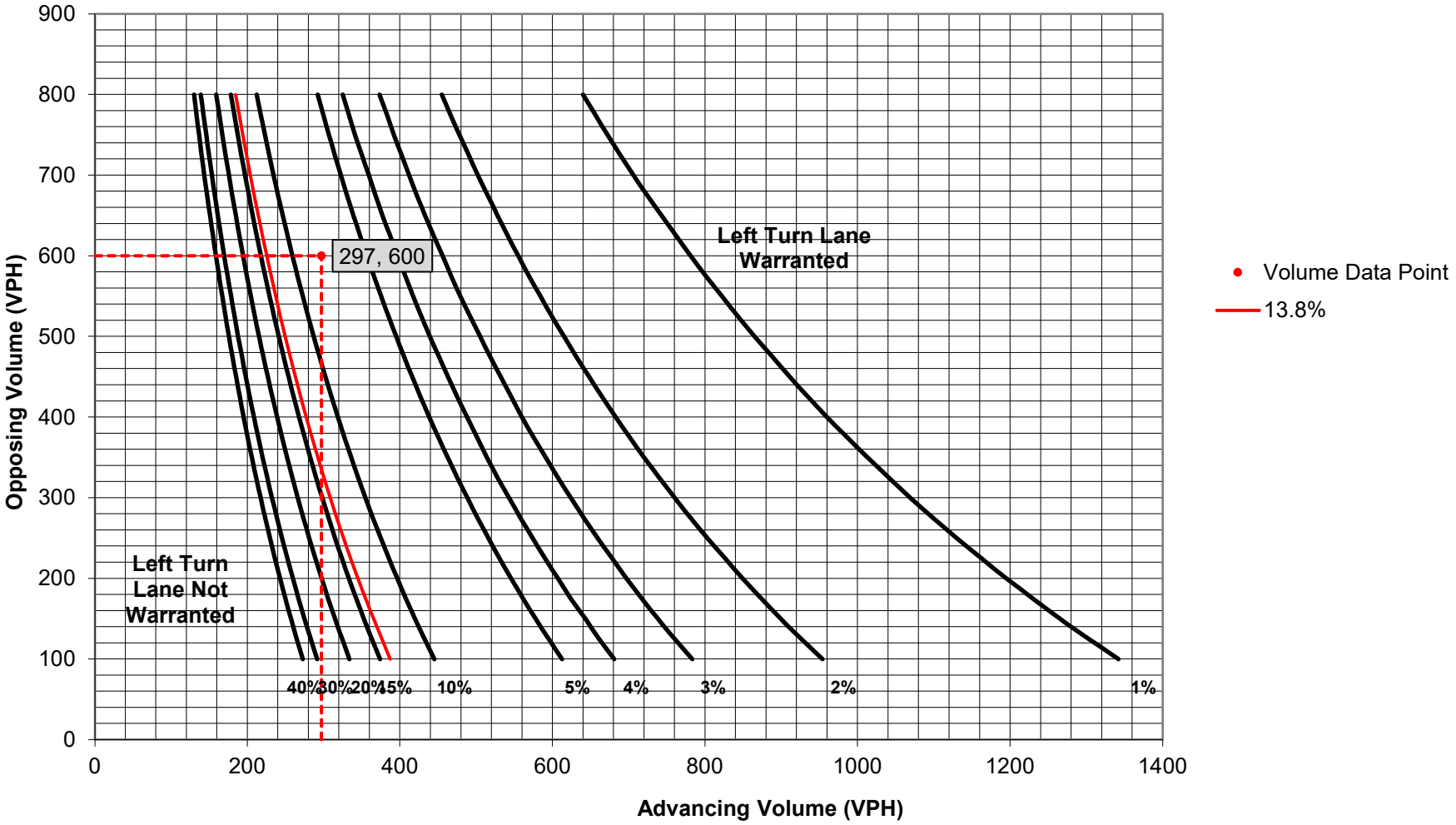
Applicable Warrant Figure: **Figure 4**

Warrant Met?: **Yes**

Additional Comments / Justifications:

Figure 4. Warrant for left turn storage lanes on two-lane highways (50 mph speed, unsignalized and signalized intersections)

(L = % Left Turns in Advancing Volume)



Turn Lane Warrant and Length Analysis
Workbook

STUDY LOCATION AND ANALYSIS INFORMATION

AR Number:		**Analysis Date:**	2/28/2021
County:	Brevard	**Conducted By:**	Amabelle Marchi
FDOT District:	5	**Checked By:**	John Alaghemand
		Agency/Company Name:	Walton County/DRMP, Inc.

Intersection & Approach Description: Bahia St and Citrus Blvd
Eastbound left approach on Citrus Blvd

Analysis Scenario:	2027 Total Traffic Conditions	**Number of Approach Lanes:**	1
Design Hour:	PM Peak Hour	**Undivided or Divided Highway:**	Undivided
Intersection Control:	Unsignalized		
Posted Speed Limit (MPH):	35		
Type of Terrain:	Level		

VOLUME CALCULATIONS

Left Turn Lane Volume Calculations

Movement		Include?	Volume	% Trucks	PCEV
Advancing	Left	Yes	89	0.0%	89
	Through	-	222	2.0%	225
	Right	Yes	1	0.0%	1
Opposing	Left	Yes	13	0.0%	13
	Through	-	138	2.0%	140
	Right	Yes	19	0.0%	19

Advancing Volume:	315
Opposing Volume:	172
Left Turn Volume:	89
% Left Turns in Advancing Volume:	28.25%

TURN LANE WARRANT FINDINGS

Left Turn Lane Warrant Findings

Applicable Warrant Figure: **Figure 1**

Warrant Met?: **No**

Additional Comments / Justifications:

APPENDIX G

Crash Data

Grissom Parkway & Proposed Connector Road/Amazon Access Point 2 Intersection																	
HSMV Report Number	Crash Date	Crash Time	Street Name	Intersecting Street	Offset Distance	Offset Direction	Crash Type	Vehicles	Injuries	Distracted Driving	Estimated Damages	Weather Condition	Light Condition	Crash Type Detailed	Crash Type Dir	Crash Severity	Road Surface Cond
88289268	1/30/2020	6:09 PM	GRISSOM PARKWAY	CANAVERAL GROVES BOULEVARD	1320	South	Rear End	2	0	Y	$21,000	Cloudy	Dusk	Rear End	S	Property Damage Only	Dry
88263089	3/25/2020	12:30 PM	GRISSOM PKWY	CANAVERAL GROVES BV	2640	South	Head On	2	2	Y	$40,000	Clear	Daylight	Head On	NS	Injury	Dry
89830577	9/5/2020	7:50 PM	3200 BLOCK OF GRISSOM PKWY		0		Other	1	1	N	$8,000	Clear	Dark - Not Lighted	Single Vehicle	E	Injury	Dry
89830279	5/1/2020	7:10 PM	3370 GRISSOM PKWY		0		Rollover	1	1	N	$500	Clear	Dusk	Rollover	E	Injury	Other
89830911	1/22/2021	9:07 AM	GRISSOM PKWY	MESA RIDGE DR	0		Other	2	0	N	$1	Clear	Daylight	Other	S	Property Damage Only	Dry

Grissom Parkway & Canaveral Groves Boulevard Intersection

HSMV Report Number	Crash Date	Crash Time	Street Name	Intersecting Street	Offset Distance	Offset Direction	Crash Type	Vehicles	Injuries	Estimated Damages	Weather Condition	Light Condition	Crash Type Detailed	Crash Type Dir	Crash Severity	Road Surface Cond
88434202	3/12/2021	11:42 AM	GRISSOM PARKWAY	CANAVERAL GROVES BOULEVARD	0		Angle	2	4	$9,000	Clear	Daylight	Right Angle	NW	Injury	Dry
88026912	11/26/2018	3:18 PM	GRISSOM PKWY	CANAVERAL GROVES BLVD	100	North	Angle	2	0	$2,000	Clear	Daylight	Right Angle	NE	Property Damage Only	Dry
88500443	5/3/2021	5:15 AM	CANAVERAL GROVES BLVD	HARTVILLE AVE	300	East	Head On	2	3	$13,000	Cloudy	Dark - Not Lighted	Head On	EW	Injury	Dry
88147932	6/27/2019	7:38 PM	GRISSOM PKWY	CANAVERAL GROVES BLVD	0		Head On	2	0	$300	Clear	Dawn	Head On	N	Property Damage Only	Dry
88500495	8/2/2021	11:10 AM	GRISSOM PARKWAY	CANAVERAL GROVES BLVD	0		Left Turn	2	2	$9,000	Cloudy	Daylight	Left Entering	N	Injury	Dry
88506469	7/29/2021	3:22 PM	CANAVERAL GROVES BOULEVARD	GRISSOM PKWY	0		Left Turn	2	0	$9,000	Cloudy	Daylight	Left Entering	E	Property Damage Only	Wet
88458712	2/5/2021	7:25 PM	GRISSOM PARKWAY	CANAVERAL GROVES BOULEVARD	0		Left Turn	2	3	$18,000	Clear	Dusk	Left Entering	S	Injury	Dry
88263123	9/14/2020	8:16 AM	CANAVERAL GROVES BV	GRISSOM PKWY	30	West	Left Turn	2	0	$10,000	Clear	Daylight	Left Rear	S	Property Damage Only	Dry
88199059	7/25/2020	10:42 PM	GRISSOM PARKWAY	CANAVERAL GROVES BLVD	0		Left Turn	2	0	$12,000	Clear	Dark - Lighted	Left Entering	S	Property Damage Only	Dry
88368441	7/22/2020	5:36 PM	CANAVERAL GROVES BOULEVARD	GRISSOM PARKWAY	0		Left Turn	2	0	$500	Cloudy	Daylight	Left Rear	N	Property Damage Only	Wet
88327528	4/27/2020	4:11 PM	GRISSOM PARKWAY	CANAVERAL GROVES BOULEVARD	10	South	Left Turn	2	0	$6,000	Clear	Daylight	Left Entering	N	Property Damage Only	Dry
88259996	12/3/2019	6:35 PM	GRISSOM PARKWAY	CANAVERAL GROVES BLVD	0		Left Turn	2	4	$4,000	Clear	Dark - Lighted	Left Entering	S	Injury	Dry
88248998	11/27/2019	4:49 PM	CANAVERAL GROVES BLVD	SHARPES LAKES AVE	0		Left Turn	2	3	$1,500	Clear	Dusk	Left Entering	N	Injury	Dry
88214663	10/23/2019	6:54 PM	ALAN SHEPARD AVE	CANAVERAL GROVES BLVD	30	North	Left Turn	2	1	$7,500	Clear	Dusk	Left Leaving	W	Injury	Dry
88188787	9/28/2019	8:21 PM	GRISSOM PARKWAY	CANAVERAL GROVES BLVD	0		Left Turn	2	1	$25,000	Clear	Dark - Not Lighted	Left Rear	W	Injury	Dry
88041538	3/7/2019	9:25 PM	CANAVERAL GROVES BLVD	HEMP WAY	0		Left Turn	2	2	$5,000	Clear	Dark - Not Lighted	Left Entering	W	Injury	Dry
88048031	1/7/2019	7:00 AM	CANAVERAL GROVES BLVD	GRISSOM PARKWAY	0		Left Turn	2	2	$8,000	Cloudy	Daylight	Left Entering	W	Injury	Dry
88534989	8/18/2021	12:50 PM	CANAVERAL GROVES BLVD	GRISSOM PKWY	50	East	Off Road	1	0	$500	Clear	Daylight	Off Road		Property Damage Only	Dry
88264512	10/17/2020	11:21 PM	YARD OF 4750 LAKE MICHIGAN AVENUE	LAKE MICHIGAN AVENUE	100	West	Off Road	1	0	$1,500	Cloudy	Dark - Not Lighted	Off Road	W	Property Damage Only	Wet
88957044	6/21/2020	2:08 AM	CANAVERAL GROVES BLVD	HARTVILLE AVE	609	East	Off Road	1	0	$100	Cloudy	Dark - Lighted	Off Road	W	Property Damage Only	Dry
88956852	1/23/2020	8:04 AM	CANAVERAL GROVES BLVD		0		Off Road	1	0	$100	Rain	Daylight	Off Road	E	Property Damage Only	Wet
88256686	12/7/2019	3:01 AM	SHAWNEE PLACE	BRYCE STREET	30	South	Off Road	1	0	$1,200	Clear	Dark - Not Lighted	Off Road	S	Property Damage Only	Dry
88124183	5/9/2019	3:45 PM	4580 GRISSOM PKWY	CANAVERAL GROVES BLVD	40	North	Off Road	1	0	$200	Clear	Daylight	Off Road	S	Property Damage Only	Dry
88956335	3/29/2019	10:46 AM	CANAVERAL GROVES BLVD	HEMP WAY	184	West	Off Road	1	0	$4,375	Clear	Daylight	Off Road	W	Property Damage Only	Dry
88082359	3/13/2019	4:01 PM	LAKE TAHOE CIRCLE	SHARPES LAKE AVE	0		Off Road	1	0	$200	Clear	Daylight	Off Road	W	Property Damage Only	Dry
88435256	1/31/2021	6:40 PM	CANAVERAL GROVES BOULEVARD	GRISSOM PARKWAY	0		Other	2	6	$20,000	Clear	Dark - Not Lighted	Other	E	Injury	Dry
88387447	9/27/2020	12:40 PM	CANAVERAL GROVES BLVD	GRISSOM PKWY	50	West	Other	2	1	$6,000	Cloudy	Daylight	Other	W	Injury	Dry
88268058	3/3/2020	10:25 AM	CANAVERAL GROVES BLVD	ALAN SHEPARD AVE	300	East	Other	2	0	$1,000	Cloudy	Daylight	Other	W	Property Damage Only	Dry
88270462	1/8/2020	6:35 PM	GRISSOM PKWY	CANAVERAL GROVES BLVD	100	North	Other	2	0	$4,000	Clear	Dark - Not Lighted	Other	N	Property Damage Only	Dry
88161245	8/24/2019	8:00 PM	CANAVERAL GROVES BLVD	HEMP WAY	154	West	Other	2	0	$8,450	Clear	Dark - Lighted	Other	E	Property Damage Only	Dry
88188734	8/20/2019	3:28 PM	CANAVERAL GROVES BLVD	HARTVILLE AVENUE	500	East	Other	2	0	$1,000	Clear	Daylight	Other	W	Property Damage Only	Dry
88069096	1/10/2019	11:49 AM	VICKIE DRIVE	SHERRY LANE	10	South	Other	1	0	$6,500	Clear	Daylight	Single Vehicle	S	Property Damage Only	Dry
88033312	1/8/2019	5:00 PM	LAKE MICHIGAN AVE	LAKE ERIE PL	272	North	Other	2	1	$3,500	Clear	Dusk	Parked Vehicle	S	Injury	Dry
88015448	11/13/2018	9:00 AM	HARTVILLE AVE AT BRYCE ST	BRYCE ST	0		Other	1	1	$5,200	Cloudy	Daylight	Single Vehicle	N	Injury	Dry
88503000	7/18/2021	2:45 PM	CANAVERAL GROVES BLVD	GRISSOM PARKWAY	50	West	Rear End	2	0	$2,100	Clear	Daylight	Rear End	W	Property Damage Only	Dry
88500658	7/3/2021	5:40 PM	CANAVERAL GROVES BOULEVARD	GRISSOM PARKWAY	20	West	Rear End	2	0	$150	Rain	Daylight	Rear End	E	Property Damage Only	Wet
88398182	10/25/2020	1:43 PM	CANAVERAL GROVES BOULEVARD	GRISSOM PARKWAY	10	West	Rear End	3	0	$500	Clear	Daylight	Rear End	E	Property Damage Only	Dry
88387416	9/15/2020	3:45 PM	CANAVERAL GROVES BLVD	KNOXVILLE AVE	0		Rear End	2	0	$1,000	Clear	Daylight	Rear End	W	Property Damage Only	Dry
88957054	6/17/2020	5:45 PM	CANAVERAL GROVES BLVD	GRISSOM PKWY	143	East	Rear End	2	3	$3,500	Clear	Daylight	Rear End	W	Injury	Dry
88182857	6/7/2020	8:50 PM	CANAVERAL GROVES BOULEVARD	GRISSOM PARKWAY	0		Rear End	3	0	$4,000	Cloudy	Dark - Not Lighted	Rear End	W	Property Damage Only	Wet
88303854	4/29/2020	6:26 PM	CANAVERAL GROVES BOULEVARD	LEE STREET	1320	East	Rear End	2	0	$100	Clear	Daylight	Rear End	W	Property Damage Only	Dry
88303848	4/24/2020	6:23 PM	CANAVERAL GROVES BOULEVARD	ALAN SHEPARD AVENUE	20	East	Rear End	2	0	$10,000	Rain	Daylight	Rear End	W	Property Damage Only	Wet
88289268	1/30/2020	6:09 PM	GRISSOM PARKWAY	CANAVERAL GROVES BOULEVARD	1320	South	Rear End	2	0	$21,000	Cloudy	Dusk	Rear End	S	Property Damage Only	Dry
88131282	6/11/2019	5:35 PM	GRISSOM PKWY	CANAVERAL GROVE BLVD	0		Rear End	2	0	$1,000	Cloudy	Daylight	Rear End	N	Property Damage Only	Dry
88131271	6/5/2019	6:05 PM	KNOXVILLE AVE	CANAVERAL GROVES BLVD	0		Rear End	2	0	$1,000	Clear	Daylight	Rear End	W	Property Damage Only	Dry
88125869	5/28/2019	11:10 AM	CANAVERAL GROVES BLVD	GRISSOM PRKY	0		Rear End	2	0	$1,500	Clear	Daylight	Rear End	N	Property Damage Only	Dry
88080702	2/24/2019	12:00 PM	4580 GRISSOM PKWY	CANAVERAL GROVES BLVD	15	North	Rear End	2	0	$1,000	Clear	Daylight	Rear End	S	Property Damage Only	Dry
88048094	2/21/2019	8:45 AM	CANAVERAL GROVES BLVD	GRISSOM PARKWAY	30	East	Rear End	2	0	$4,100	Cloudy	Daylight	Rear End	W	Property Damage Only	Dry
88024947	1/2/2019	12:00 PM	GRISSOMPARKWAY	CANAVERAL GROVES BOULEVARD	12	North	Rear End	2	0	$800	Clear	Daylight	Rear End	S	Property Damage Only	Dry
87785789	10/22/2018	8:25 PM	GRISSOM PKWY	CANAVERAL GROVES BLVD	0	North	Rear End	2	0	$700	Clear	Dark - Lighted	Rear End	N	Property Damage Only	Dry
88006895	10/2/2018	6:33 PM	4580 GRISSOM PKWY	CANAVERAL GROVES BLVD	50	West	Rear End	2	0	$100	Clear	Dusk	Rear End	S	Property Damage Only	Dry
88099897	9/21/2019	10:04 PM	GRISSOM PARKWAY	CANAVERAL GROVES BLVD	0		Right Turn	2	0	$4,000	Clear	Dark - Lighted	Right/Through	S	Property Damage Only	Dry
87293223	10/16/2018	5:30 PM	CANAVERAL GROVES BLVD	KNOXVILLE AVE	10	East	Right Turn	2	0	$700	Clear	Daylight	Right/Through	S	Property Damage Only	Dry
88524437	8/13/2021	10:10 PM	780 CANAVERAL GROVES BOULEVARD	HESS AVENUE	200	West	Sideswipe	2	0	$500	Cloudy	Dark - Not Lighted	Same Direction Sideswipe	E	Property Damage Only	Wet
88368785	8/29/2020	7:51 PM	GRISSOM PARKWAY	CANAVERAL GROVES BOULEVARD	100	South	Sideswipe	2	0	$5,000	Clear	Dark - Not Lighted	Same Direction Sideswipe	N	Property Damage Only	Dry
88158530	8/8/2019	7:40 PM	GRISSOM PKWY	CANAVERAL GROVES BLVD	50	South	Sideswipe	2	0	$1,600	Rain	Daylight	Same Direction Sideswipe	N	Property Damage Only	Wet
88147121	7/1/2019	9:25 AM	CANAVERAL GROVES BLVD W/O HESS AVE	HESS AVE	528	West	Sideswipe	2	1	$25,000	Clear	Daylight	Opposing Sideswipe	EW	Injury	Dry
88499070	5/22/2021	8:22 AM	ALAN SHEPARD AVE	ATLANTA ST	0		Unknown	2	1	$2,500	Clear	Daylight	Unknown		Injury	Dry
88500444	5/3/2021	5:25 AM	CANAVERAL GROVES BLVD	HARTVILLE AVE	528	East	Unknown	2	1	$7,000	Cloudy	Dark - Not Lighted	Unknown		Injury	Dry
88441176	1/10/2021	2:15 PM	LAKE SUPERIOR DRIVE	SHARPES LAKE AVENUE	500	East	Unknown	2	0	$1,200	Clear	Daylight	Unknown		Property Damage Only	Dry
88050234	12/11/2018	2:50 PM	GRISSOM PKWY	CANAVERAL GROVES BLVS	300	North	Unknown	2	0	$3,000	Clear	Daylight	Unknown		Property Damage Only	Dry

APPENDIX H

Amazon Distribution Center 24-Hour Traffic Distribution

DMO8 in City of Cocoa, FL - 2W6F DS

	Autos			Trucks			Vans			Total		
Time	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
00:00	0	0	0	2	2	4	0	0	0	2	2	4
01:00	148	0	148	2	2	4	0	0	0	150	2	152
02:00	0	0	0	2	2	4	0	0	0	2	2	4
03:00	0	0	0	1	2	3	0	0	0	1	2	3
04:00	0	0	0	2	1	3	0	0	0	2	1	3
05:00	47	0	47	2	2	4	0	0	0	49	2	51
06:00	0	0	0	2	2	4	0	0	0	2	2	4
07:00	0	0	0	1	1	2	0	0	0	1	1	2
07:30	0	0	0	0	1	1	0	0	0	0	1	1
08:00	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	1	0	1	0	0	0	1	0	1
09:00	266	0	266	2	2	4	0	0	0	268	2	270
10:00	78	0	78	0	1	1	0	344	344	78	345	423
11:00	8	0	8	1	1	2	0	0	0	9	1	10
12:00	0	148	148	0	0	0	0	0	0	0	148	148
13:00	85	0	85	0	0	0	0	0	0	85	0	85
14:00	0	47	47	0	0	0	0	0	0	0	47	47
15:00	0	0	0	0	0	0	0	0	0	0	0	0
16:00	90	0	90	0	0	0	0	0	0	90	0	90
16:30	0	45	45	1	0	1	0	0	0	1	45	46
17:00	0	45	45	1	1	2	0	0	0	1	46	47
17:30	0	0	0	0	1	1	0	0	0	0	1	1
18:00	0	38	38	2	1	3	0	0	0	2	39	41
19:00	0	120	120	2	2	4	206	0	206	208	122	330
20:00	0	218	218	2	2	4	138	0	138	140	220	360
21:00	0	6	6	2	2	4	0	0	0	2	8	10
22:00	0	55	55	2	2	4	0	0	0	2	57	59
23:00	0	0	0	2	2	4	0	0	0	2	2	4
Total	722	722	1,444	32	32	64	344	344	688	1,098	1,098	2,196

APPENDIX I

Signal Warrant Analysis Volumes and Worksheets

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 1

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 1 Full-Build Out Year:	2023
Project Total Daily Trips & Re-routed Trips:	3,714
7AM -8 AM Peak Project Trip Total Entering:	16
7AM -8 AM Peak Project Trip Total Exiting:	47
5PM - 6PM Peak Project Trip Total Entering:	53
5PM - 6PM Peak Project Trip Total Exiting:	30

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2023 Projected Existing Traffic				2023 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	147	531	678	0	1	1	-31	146
12PM - 1PM	333	291	624	0	37	77	0	80
1PM - 2PM	324	311	634	0	65	0	1	84
2PM - 3PM	383	285	668	0	12	24	4	89
3PM - 4PM	519	298	817	0	0	0	14	86
4PM - 5PM	598	327	925	0	81	23	17	107
5PM - 6PM	636	262	898	0	13	24	16	106
6PM - 7 PM	413	273	686	0	11	20	16	84

Hours	Prev. Phase of Development Traffic		Phase 1 Development Traffic				2023 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	0	0	3.20%	10.20%	13	34	**662**	**180**
12PM - 1PM	0	0	5.50%	5.60%	21	18	**682**	**98**
1PM - 2PM	0	0	6.00%	5.90%	22	19	**722**	**103**
2PM - 3PM	0	0	7.00%	6.20%	26	20	**710**	**109**
3PM - 4PM	0	0	8.50%	6.00%	31	20	**862**	**106**
4PM - 5PM	0	0	10.50%	7.50%	39	25	**1062**	**132**
5PM - 6PM	0	0	10.30%	7.40%	38	24	**965**	**130**
6PM - 7 PM	0	0	8.60%	5.90%	32	19	**745**	**103**

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 2

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 2 Full-Build Out Year:	2025
Project Total Daily Trips & Re-routed Trips:	4,680
7AM -8 AM Peak Project Trip Total Entering:	34
7AM -8 AM Peak Project Trip Total Exiting:	102
5PM - 6PM Peak Project Trip Total Entering:	116
5PM - 6PM Peak Project Trip Total Exiting:	67

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2025 Projected Existing Traffic				2025 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	153	553	706	0	1	1	-31	146
12PM - 1PM	347	303	650	0	37	77	0	80
1PM - 2PM	337	323	660	0	65	0	1	84
2PM - 3PM	399	296	695	0	12	24	4	89
3PM - 4PM	540	310	850	0	0	0	14	86
4PM - 5PM	623	340	962	0	81	23	17	107
5PM - 6PM	662	272	934	0	13	24	16	106
6PM - 7 PM	430	284	714	0	11	20	16	84

Hours	Prev. Phase(s) of Development Traffic		Phase 2 Development Traffic				2025 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	13	34	3.20%	10.20%	17	42	**706**	**222**
12PM - 1PM	21	18	5.50%	5.60%	26	23	**733**	**122**
1PM - 2PM	22	19	6.00%	5.90%	28	24	**776**	**128**
2PM - 3PM	26	20	7.00%	6.20%	32	26	**769**	**135**
3PM - 4PM	31	20	8.50%	6.00%	39	25	**934**	**131**
4PM - 5PM	39	25	10.50%	7.50%	48	31	**1147**	**163**
5PM - 6PM	38	24	10.30%	7.40%	47	30	**1048**	**161**
6PM - 7 PM	32	19	8.60%	5.90%	39	24	**812**	**128**

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 3

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 2 Full-Build Out Year:	2026
Project Total Daily Trips & Re-routed Trips:	5,157
7AM -8 AM Peak Project Trip Total Entering:	44
7AM -8 AM Peak Project Trip Total Exiting:	130
5PM - 6PM Peak Project Trip Total Entering:	147
5PM - 6PM Peak Project Trip Total Exiting:	86

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2026 Projected Existing Traffic				2026 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	156	564	720	0	1	1	-31	146
12PM - 1PM	354	309	663	0	37	77	0	80
1PM - 2PM	343	330	673	0	65	0	1	84
2PM - 3PM	406	302	708	0	12	24	4	89
3PM - 4PM	551	316	867	0	0	0	14	86
4PM - 5PM	635	347	982	0	81	23	17	107
5PM - 6PM	675	278	953	0	13	24	16	106
6PM - 7 PM	439	289	728	0	11	20	16	84

Hours	Prev. Phase(s) of Development Traffic		Phase 3 Development Traffic				2026 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	30	76	3.20%	10.20%	9	23	**729**	**244**
12PM - 1PM	46	42	5.50%	5.60%	14	13	**760**	**134**
1PM - 2PM	50	44	6.00%	5.90%	15	13	**804**	**141**
2PM - 3PM	58	46	7.00%	6.20%	18	14	**800**	**149**
3PM - 4PM	70	45	8.50%	6.00%	21	13	**972**	**144**
4PM - 5PM	87	56	10.50%	7.50%	26	17	**1192**	**179**
5PM - 6PM	85	55	10.30%	7.40%	26	17	**1093**	**177**
6PM - 7 PM	71	44	8.60%	5.90%	21	13	**847**	**141**

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 4

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 2 Full-Build Out Year:	2027
Project Total Daily Trips & Re-routed Trips:	6,150
7AM -8 AM Peak Project Trip Total Entering:	64
7AM -8 AM Peak Project Trip Total Exiting:	190
5PM - 6PM Peak Project Trip Total Entering:	147
5PM - 6PM Peak Project Trip Total Exiting:	86

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2027 Projected Existing Traffic				2027 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	159	575	734	0	1	1	-31	146
12PM - 1PM	361	315	676	0	37	77	0	80
1PM - 2PM	350	336	686	0	65	0	1	84
2PM - 3PM	415	308	723	0	12	24	4	89
3PM - 4PM	562	322	884	0	0	0	14	86
4PM - 5PM	648	354	1001	0	81	23	17	107
5PM - 6PM	689	283	972	0	13	24	16	106
6PM - 7 PM	447	295	743	0	11	20	16	84

Hours	Prev. Phase(s) of Development Traffic		Phase 4 Development Traffic				2027 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	39	98	3.20%	10.20%	18	46	**762**	**290**
12PM - 1PM	60	54	5.50%	5.60%	28	25	**801**	**159**
1PM - 2PM	65	57	6.00%	5.90%	30	26	**848**	**167**
2PM - 3PM	76	60	7.00%	6.20%	35	28	**850**	**177**
3PM - 4PM	91	58	8.50%	6.00%	42	27	**1032**	**171**
4PM - 5PM	113	72	10.50%	7.50%	52	34	**1264**	**213**
5PM - 6PM	111	71	10.30%	7.40%	51	33	**1163**	**211**
6PM - 7 PM	92	57	8.60%	5.90%	43	26	**904**	**167**

Input Data

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Darren White**
Date: **July 20, 2022**

Major Street: **Grissom Pkwy**
Minor Street: **Prop. Access Rd**
Major Street # Lanes: **1**
Minor Street # Lanes: **1**
Major Approach Speed: **50**
Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	662	180	0
12PM - 1PM	682	98	0
1PM - 2PM	722	103	0
2PM - 3PM	710	109	0
3PM - 4PM	862	106	0
4PM - 5PM	1062	132	0
5PM - 6PM	965	130	0
6PM - 7PM	745	103	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	662	180
12PM - 1PM	682	98
1PM - 2PM	722	103
2PM - 3PM	710	109
3PM - 4PM	862	106
4PM - 5PM	1062	132
5PM - 6PM	965	130
6PM - 7PM	745	103

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	862	106
4PM - 5PM	1062	132
5PM - 6PM	965	130
6PM - 7PM	745	103

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	862	0
4PM - 5PM	1062	0
5PM - 6PM	965	0
6PM - 7PM	745	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1062	132	1217

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	1062	0

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☐ Yes ☑ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☐ Yes ☑ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☐ Yes	☑ No
70% Satisfied:	☐ Yes	☑ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	662	682	722	710	862	1,062	965	745
Minor	180	98	103	109	106	132	130	103

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	662	682	722	710	862	1,062	965	745
Minor	180	98	103	109	106	132	130	103

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

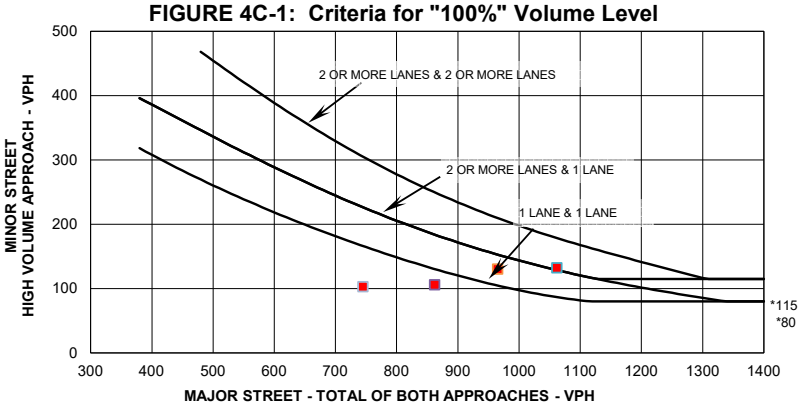
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	862	106
4PM - 5PM	1062	132
5PM - 6PM	965	130
6PM - 7PM	745	103

FIGURE 4C-1: Criteria for "100%" Volume Level



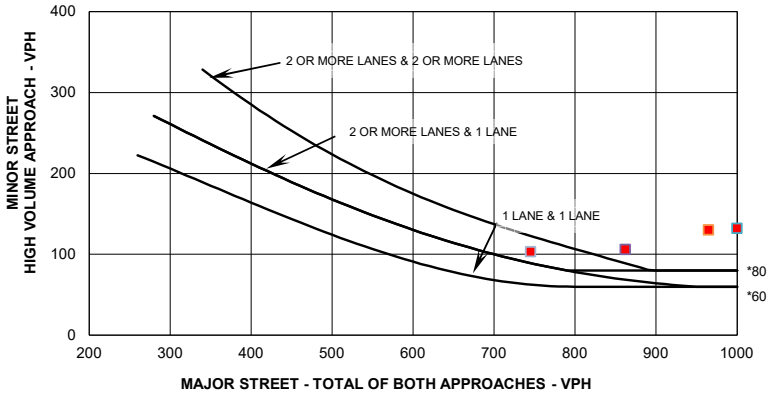
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	862	106
4PM - 5PM	1062	132
5PM - 6PM	965	130
6PM - 7PM	745	103

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

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October 2020

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TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1062	132

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1062	132

Criteria

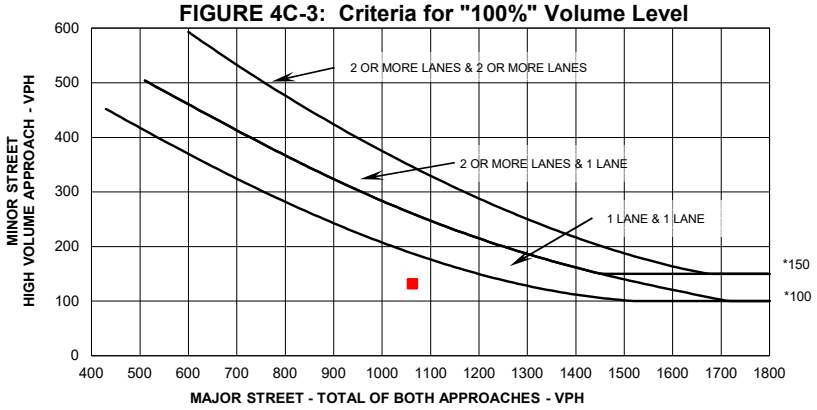
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.0	
Fulfilled?:	☐ Yes ☑ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	132	
Fulfilled?:	☑ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*	1,194	1,301
Fulfilled?:	☑ Yes ☐ No	

Plot volume combination on the applicable figure below.

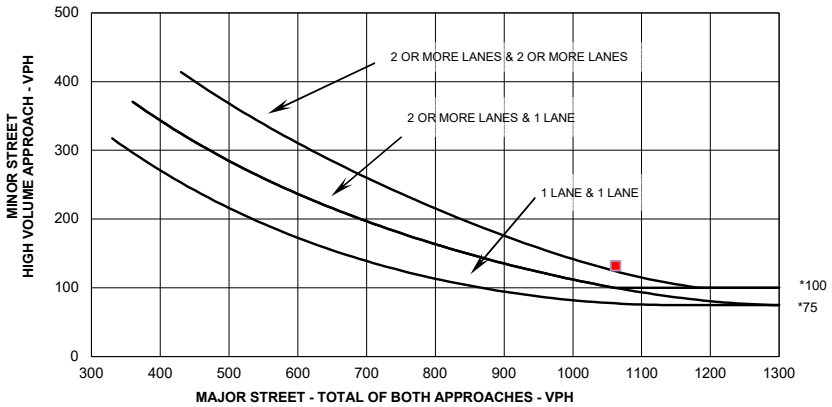
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

WARRANT 8 - ROADWAY NETWORK

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Criteria							Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.		Entering Volume:				Yes		Yes	
			1,062							
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.	Warrant:	1	2	3		Yes			
		Satisfied?:	Y	Y	Y					
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	N/A	N/A	N/A	N/A	N/A	← Hour				No
	N/A	N/A	N/A	N/A	N/A	←Volume				

Characteristics of Major Routes		Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:		No		No
	Minor Street:		No		
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:		No		
	Minor Street:		No		
3. Appears as a major route on an official plan.	Major Street:		No		
	Minor Street:		No		

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

Input Data

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Darren White**
Date: **July 20, 2022**

Major Street: **Grissom Pkwy**
Minor Street: **Prop. Access Rd**
Major Street # Lanes: **1**
Minor Street # Lanes: **1**
Major Approach Speed: **50**
Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	706	222	0
12PM - 1PM	733	122	0
1PM - 2PM	776	128	0
2PM - 3PM	769	135	0
3PM - 4PM	934	131	0
4PM - 5PM	1147	163	0
5PM - 6PM	1048	161	0
6PM - 7PM	812	128	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	706	222
12PM - 1PM	733	122
1PM - 2PM	776	128
2PM - 3PM	769	135
3PM - 4PM	934	131
4PM - 5PM	1147	163
5PM - 6PM	1048	161
6PM - 7PM	812	128

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	934	131
4PM - 5PM	1147	163
5PM - 6PM	1048	161
6PM - 7PM	812	128

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	934	0
4PM - 5PM	1147	0
5PM - 6PM	1048	0
6PM - 7PM	812	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1147	163	1333

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	1147	0

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☐ Yes ☑ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☑ Yes ☐ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	706	733	776	769	934	1,147	1,048	812
Minor	222	122	128	135	131	163	161	128

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	706	733	776	769	934	1,147	1,048	812
Minor	222	122	128	135	131	163	161	128

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

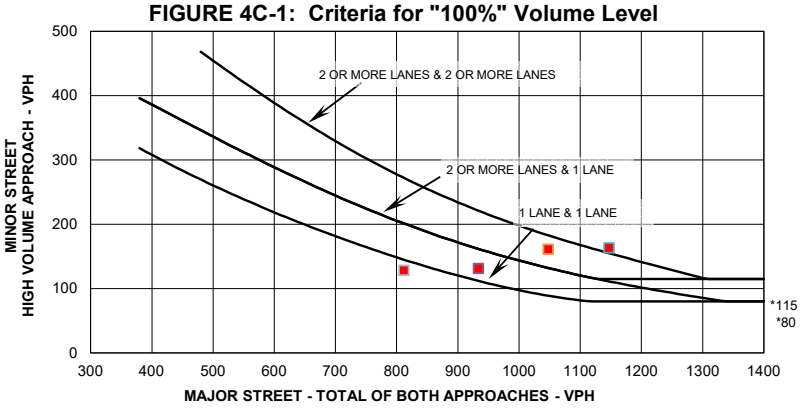
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	934	131
4PM - 5PM	1147	163
5PM - 6PM	1048	161
6PM - 7PM	812	128

FIGURE 4C-1: Criteria for "100%" Volume Level



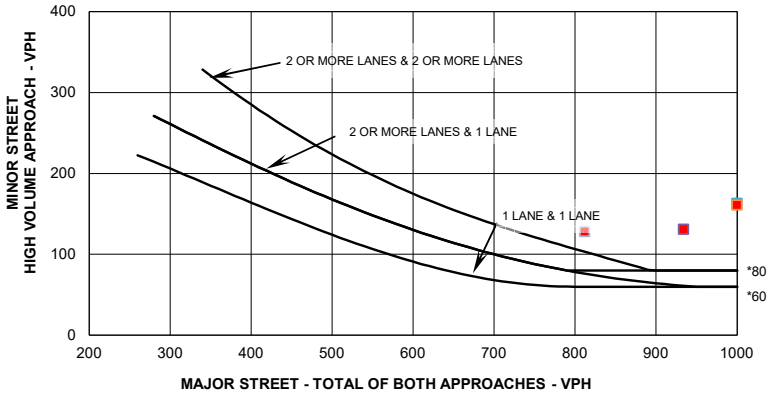
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	934	131
4PM - 5PM	1147	163
5PM - 6PM	1048	161
6PM - 7PM	812	128

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

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TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1147	163

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1147	163

Criteria

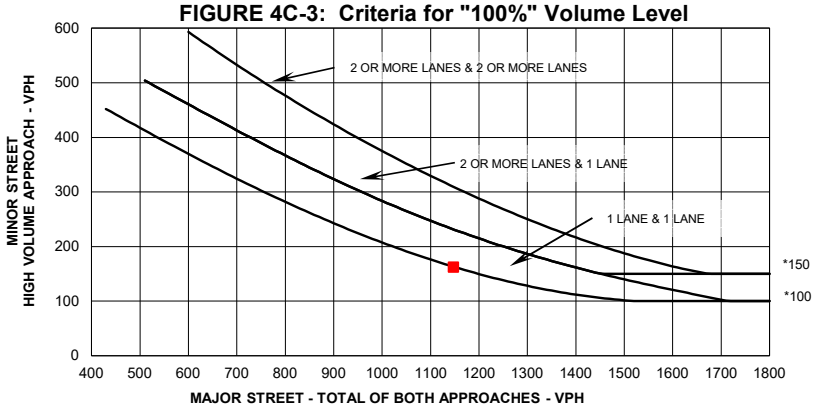
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.0	
Fulfilled?:	☐ Yes ☑ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	163	
Fulfilled?:	☑ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		1,147
Fulfilled?:	☑ Yes ☐ No	

Plot volume combination on the applicable figure below.

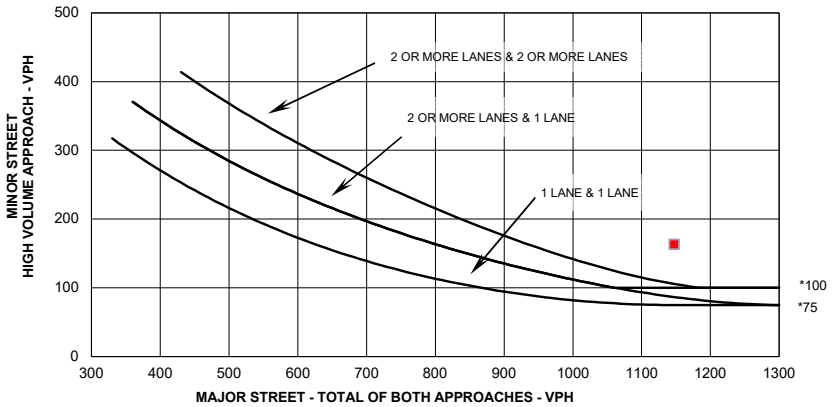
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

WARRANT 8 - ROADWAY NETWORK

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Criteria							Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.			Entering Volume: 1,147			Yes		Yes	
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.		Warrant:	1	2	3	Yes			
			Satisfied?:	Y	Y	Y				
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	N/A	N/A	N/A	N/A	N/A	← Hour				No
	N/A	N/A	N/A	N/A	N/A	←Volume				

Characteristics of Major Routes		Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:		No		No
	Minor Street:		No		
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:		No		
	Minor Street:		No		
3. Appears as a major route on an official plan.	Major Street:		No		
	Minor Street:		No		

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

Input Data

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Darren White**
Date: **July 20, 2022**

Major Street: **Grissom Pkwy**
Minor Street: **Prop. Access Rd**
Major Street # Lanes: **1**
Minor Street # Lanes: **1**
Major Approach Speed: **50**
Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	729	244	0
12PM - 1PM	760	134	0
1PM - 2PM	804	141	0
2PM - 3PM	800	149	0
3PM - 4PM	972	144	0
4PM - 5PM	1192	179	0
5PM - 6PM	1093	177	0
6PM - 7PM	847	141	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	729	244
12PM - 1PM	760	134
1PM - 2PM	804	141
2PM - 3PM	800	149
3PM - 4PM	972	144
4PM - 5PM	1192	179
5PM - 6PM	1093	177
6PM - 7PM	847	141

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	972	144
4PM - 5PM	1192	179
5PM - 6PM	1093	177
6PM - 7PM	847	141

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	972	0
4PM - 5PM	1192	0
5PM - 6PM	1093	0
6PM - 7PM	847	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1192	179	1394

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	1192	0

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☐ Yes ☑ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☑ Yes ☐ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	729	760	804	800	972	1,192	1,093	847
Minor	244	134	141	149	144	179	177	141

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	729	760	804	800	972	1,192	1,093	847
Minor	244	134	141	149	144	179	177	141

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

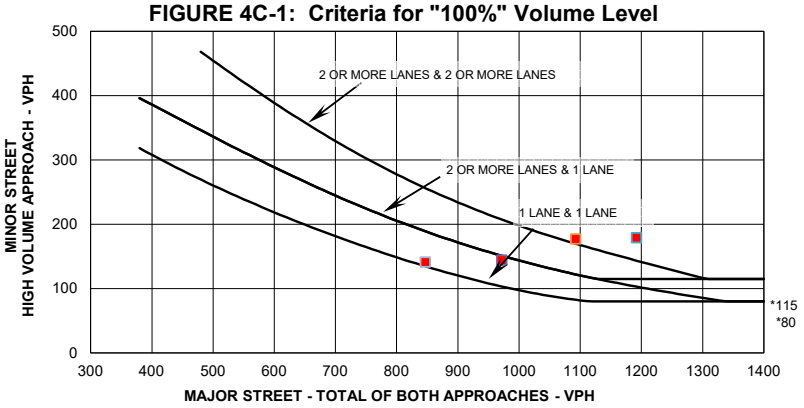
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	972	144
4PM - 5PM	1192	179
5PM - 6PM	1093	177
6PM - 7PM	847	141

FIGURE 4C-1: Criteria for "100%" Volume Level



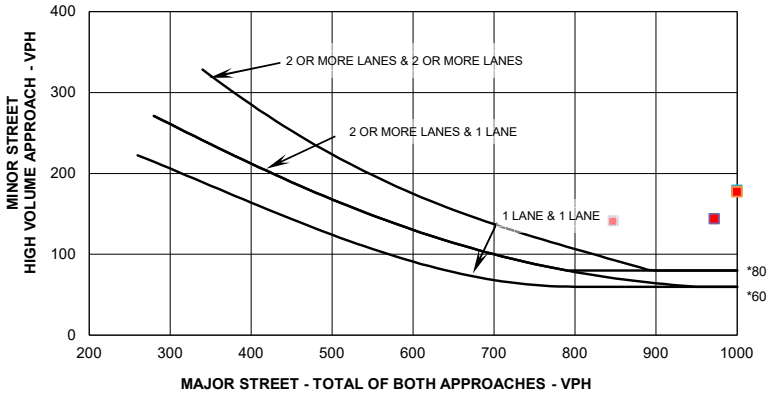
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	972	144
4PM - 5PM	1192	179
5PM - 6PM	1093	177
6PM - 7PM	847	141

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1192	179

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1192	179

Criteria

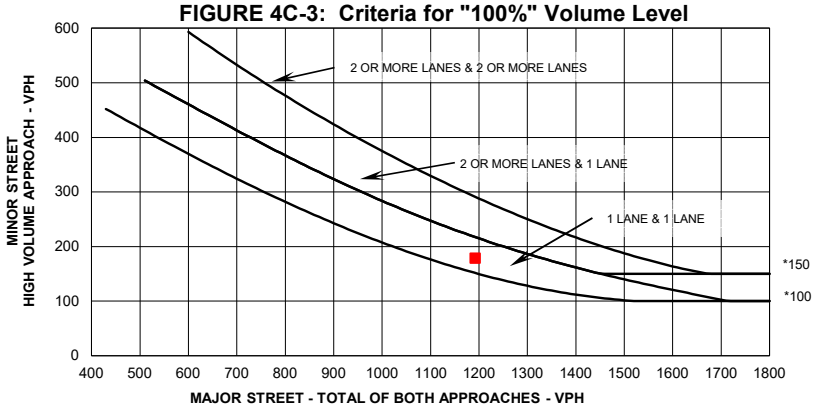
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.0	
Fulfilled?:	☐ Yes ☑ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	179	
Fulfilled?:	☑ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		1,192
Fulfilled?:	☑ Yes ☐ No	

Plot volume combination on the applicable figure below.

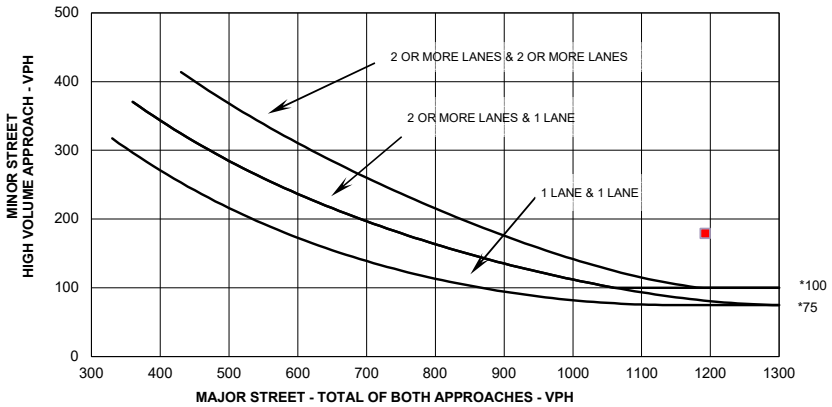
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

WARRANT 8 - ROADWAY NETWORK

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Criteria							Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.		Entering Volume:	1,192			Yes		Yes	
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.		Warrant:	1	2	3	Yes			
			Satisfied?:	Y	Y	Y				
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	N/A	N/A	N/A	N/A	N/A	← Hour				No
	N/A	N/A	N/A	N/A	N/A	←Volume				

Characteristics of Major Routes		Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:		No		No
	Minor Street:		No		
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:		No		
	Minor Street:		No		
3. Appears as a major route on an official plan.	Major Street:		No		
	Minor Street:		No		

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

Input Data

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Darren White**
Date: **July 20, 2022**

Major Street: **Grissom Pkwy**
Minor Street: **Prop. Access Rd**
Major Street # Lanes: **1**
Minor Street # Lanes: **1**
Major Approach Speed: **50**
Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	762	290	0
12PM - 1PM	801	159	0
1PM - 2PM	848	167	0
2PM - 3PM	850	177	0
3PM - 4PM	1032	171	0
4PM - 5PM	1264	213	0
5PM - 6PM	1163	211	0
6PM - 7PM	904	167	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	762	290
12PM - 1PM	801	159
1PM - 2PM	848	167
2PM - 3PM	850	177
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	1032	0
4PM - 5PM	1264	0
5PM - 6PM	1163	0
6PM - 7PM	904	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1264	213	1500

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	1243	0

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TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☑ Yes ☐ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☑ Yes ☐ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable: ☑ Yes ☐ No
100% Satisfied: ☑ Yes ☐ No
80% Satisfied: ☑ Yes ☐ No
70% Satisfied: ☑ Yes ☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	762	801	848	850	1,032	1,264	1,163	904
Minor	290	159	167	177	171	213	211	167

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☑ Yes	☐ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	762	801	848	850	1,032	1,264	1,163	904
Minor	290	159	167	177	171	213	211	167

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

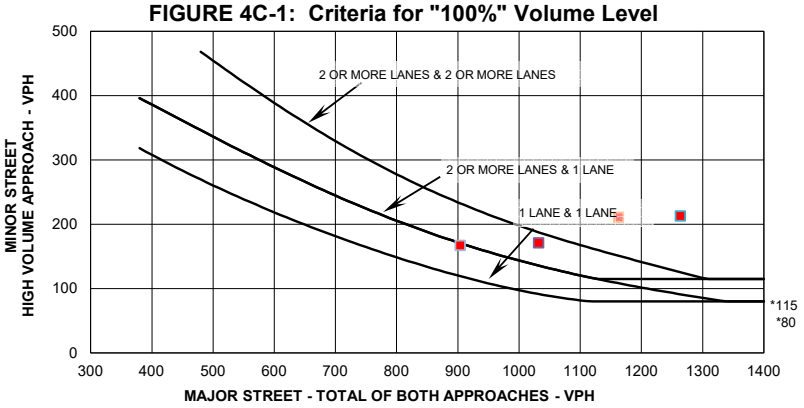
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

FIGURE 4C-1: Criteria for "100%" Volume Level



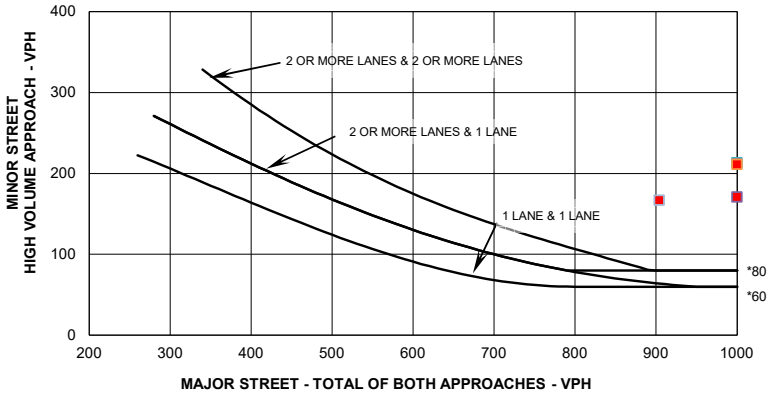
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

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TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Darren White
County:	70 – Brevard	Date:	July 20, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1264	213

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1264	213

Criteria

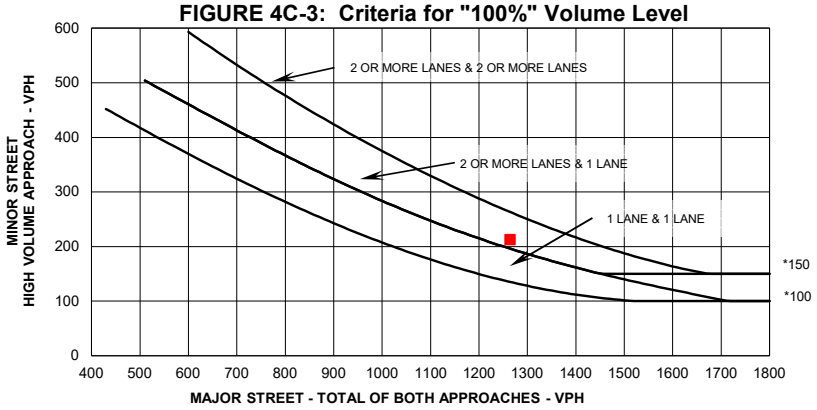
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.0	
Fulfilled?:	☐ Yes ☑ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	213	
Fulfilled?:	☑ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		1,264
Fulfilled?:	☑ Yes ☐ No	

Plot volume combination on the applicable figure below.

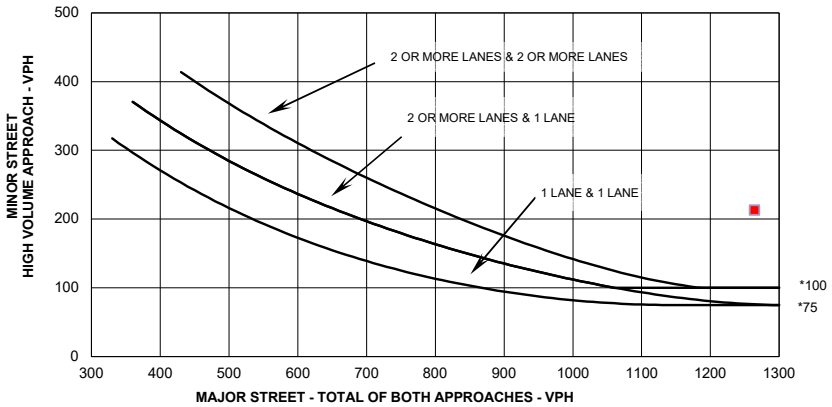
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

WARRANT 8 - ROADWAY NETWORK

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Criteria							Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.		Entering Volume:	1,041			Yes		Yes	
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.		Warrant:	1	2	3	Yes			
			Satisfied?:	Y	Y	Y				
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	N/A	N/A	N/A	N/A	N/A	← Hour				No
	N/A	N/A	N/A	N/A	N/A	←Volume				

Characteristics of Major Routes		Met? Yes	Met? No	Fulfilled? Yes	Fulfilled? No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:		No		No
	Minor Street:		No		
2. Rural or suburban highway outside of, entering, or traversing a city.	Major Street:		No		
	Minor Street:		No		
3. Appears as a major route on an official plan.	Major Street:		No		
	Minor Street:		No		

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Darren White**
County:	**70 – Brevard**	Date:	**July 20, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 1

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 1 Full-Build Out Year:	2023
Project Total Daily Trips & Re-routed Trips:	3,714
7AM -8 AM Peak Project Trip Total Entering:	16
7AM -8 AM Peak Project Trip Total Exiting:	47
5PM - 6PM Peak Project Trip Total Entering:	53
5PM - 6PM Peak Project Trip Total Exiting:	30

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2023 Projected Existing Traffic				2023 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	147	531	678	0	1	1	-31	146
12PM - 1PM	333	291	624	0	37	77	0	80
1PM - 2PM	324	311	634	0	65	0	1	84
2PM - 3PM	383	285	668	0	12	24	4	89
3PM - 4PM	519	298	817	0	0	0	14	86
4PM - 5PM	598	327	925	0	81	23	17	107
5PM - 6PM	636	262	898	0	13	24	16	106
6PM - 7 PM	413	273	686	0	11	20	16	84

Hours	Prev. Phase of Development Traffic		Phase 1 Development Traffic				2023 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	0	0	3.20%	10.20%	13	32	**661**	**178**
12PM - 1PM	0	0	5.50%	5.60%	19	17	**681**	**97**
1PM - 2PM	0	0	6.00%	5.90%	21	18	**721**	**102**
2PM - 3PM	0	0	7.00%	6.20%	24	19	**708**	**108**
3PM - 4PM	0	0	8.50%	6.00%	29	19	**860**	**105**
4PM - 5PM	0	0	10.50%	7.50%	36	23	**1059**	**130**
5PM - 6PM	0	0	10.30%	7.40%	36	23	**963**	**129**
6PM - 7 PM	0	0	8.60%	5.90%	30	18	**743**	**102**

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 2

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 2 Full-Build Out Year:	2025
Project Total Daily Trips & Re-routed Trips:	4,680
7AM -8 AM Peak Project Trip Total Entering:	34
7AM -8 AM Peak Project Trip Total Exiting:	102
5PM - 6PM Peak Project Trip Total Entering:	116
5PM - 6PM Peak Project Trip Total Exiting:	67

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2025 Projected Existing Traffic				2025 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	153	553	706	0	1	1	-31	146
12PM - 1PM	347	303	650	0	37	77	0	80
1PM - 2PM	337	323	660	0	65	0	1	84
2PM - 3PM	399	296	695	0	12	24	4	89
3PM - 4PM	540	310	850	0	0	0	14	86
4PM - 5PM	623	340	962	0	81	23	17	107
5PM - 6PM	662	272	934	0	13	24	16	106
6PM - 7 PM	430	284	714	0	11	20	16	84

Hours	Prev. Phase(s) of Development Traffic		Phase 2 Development Traffic				2025 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	13	32	3.20%	10.20%	16	39	**705**	**217**
12PM - 1PM	19	17	5.50%	5.60%	24	22	**730**	**119**
1PM - 2PM	21	18	6.00%	5.90%	26	23	**773**	**125**
2PM - 3PM	24	19	7.00%	6.20%	30	24	**766**	**132**
3PM - 4PM	29	19	8.50%	6.00%	37	23	**930**	**128**
4PM - 5PM	36	23	10.50%	7.50%	45	29	**1142**	**159**
5PM - 6PM	36	23	10.30%	7.40%	44	29	**1043**	**157**
6PM - 7 PM	30	18	8.60%	5.90%	37	23	**807**	**125**

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 3

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 2 Full-Build Out Year:	2026
Project Total Daily Trips & Re-routed Trips:	5,157
7AM -8 AM Peak Project Trip Total Entering:	44
7AM -8 AM Peak Project Trip Total Exiting:	130
5PM - 6PM Peak Project Trip Total Entering:	147
5PM - 6PM Peak Project Trip Total Exiting:	86

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2026 Projected Existing Traffic				2026 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	156	564	720	0	1	1	-31	146
12PM - 1PM	354	309	663	0	37	77	0	80
1PM - 2PM	343	330	673	0	65	0	1	84
2PM - 3PM	406	302	708	0	12	24	4	89
3PM - 4PM	551	316	867	0	0	0	14	86
4PM - 5PM	635	347	982	0	81	23	17	107
5PM - 6PM	675	278	953	0	13	24	16	106
6PM - 7 PM	439	289	728	0	11	20	16	84

Hours	Prev. Phase(s) of Development Traffic		Phase 3 Development Traffic				2026 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	29	71	3.20%	10.20%	9	21	**727**	**238**
12PM - 1PM	44	39	5.50%	5.60%	13	12	**756**	**131**
1PM - 2PM	47	41	6.00%	5.90%	14	12	**801**	**137**
2PM - 3PM	55	43	7.00%	6.20%	17	13	**796**	**145**
3PM - 4PM	66	42	8.50%	6.00%	20	13	**967**	**140**
4PM - 5PM	82	52	10.50%	7.50%	25	16	**1186**	**175**
5PM - 6PM	80	51	10.30%	7.40%	24	15	**1086**	**173**
6PM - 7 PM	67	41	8.60%	5.90%	20	12	**842**	**137**

TRAFFIC VOLUME FOR SIGNAL WARRANT ANALYSIS
Grissom Pkwy and Proposed Access Road/Amazon Driveway 1
Phase 4

Existing Traffic Count Date:	8/12/2021
Growth Rate (Northbound Major Street):	2.0%
Growth Rate (Southbound Major Street):	2.0%
Peak-Season Factor:	1.04
Phase 2 Full-Build Out Year:	2027
Project Total Daily Trips & Re-routed Trips:	6,150
7AM -8 AM Peak Project Trip Total Entering:	64
7AM -8 AM Peak Project Trip Total Exiting:	190
5PM - 6PM Peak Project Trip Total Entering:	147
5PM - 6PM Peak Project Trip Total Exiting:	86

Hours	2021 Existing Traffic			2021 Existing Traffic (Adjusted)		
	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)	Major Street (Northbound)	Major Street (Southbound)	Minor Street (EB Direction only)
7AM - 8AM	136	491	0	141	511	0
12PM - 1PM	308	269	0	320	280	0
1PM - 2PM	299	287	0	311	298	0
2PM - 3PM	354	263	0	368	274	0
3PM - 4PM	480	275	0	499	286	0
4PM - 5PM	553	302	0	575	314	0
5PM - 6PM	588	242	0	612	252	0
6PM - 7 PM	382	252	0	397	262	0

Hours	2027 Projected Existing Traffic				2027 Amazon Site Traffic		Rerouted Traffic	
	Major Street (Northbound)	Major Street (Southbound)	Major Street (Both Directions)	Minor Street (EB direction only)	Major Street (Both Approaches)	Minor Street (WB Direction Only)	Major Street (total of both approaches)	Minor Street (EB direction only)
7AM - 8AM	159	575	734	0	1	1	-31	146
12PM - 1PM	361	315	676	0	37	77	0	80
1PM - 2PM	350	336	686	0	65	0	1	84
2PM - 3PM	415	308	723	0	12	24	4	89
3PM - 4PM	562	322	884	0	0	0	14	86
4PM - 5PM	648	354	1001	0	81	23	17	107
5PM - 6PM	689	283	972	0	13	24	16	106
6PM - 7 PM	447	295	743	0	11	20	16	84

Hours	Prev. Phase(s) of Development Traffic		Phase 4 Development Traffic				2027 Total Traffic	
	Major Street (total of both approaches)	Minor Street (EB direction only)	Entering	Exiting	Major Street (Both Approaches)	Minor Street (EB direction only)	Major Street (total of both approaches)	Minor Street (One direction only)
7AM - 8AM	37	92	3.20%	10.20%	17	43	**759**	**281**
12PM - 1PM	57	51	5.50%	5.60%	26	23	**796**	**154**
1PM - 2PM	62	53	6.00%	5.90%	29	25	**843**	**162**
2PM - 3PM	71	56	7.00%	6.20%	33	26	**843**	**171**
3PM - 4PM	86	54	8.50%	6.00%	40	25	**1024**	**165**
4PM - 5PM	106	68	10.50%	7.50%	49	31	**1255**	**206**
5PM - 6PM	104	67	10.30%	7.40%	48	31	**1154**	**204**
6PM - 7 PM	87	53	8.60%	5.90%	40	25	**897**	**162**

TRAFFIC SIGNAL WARRANT SUMMARY

Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
- The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation

Note: This templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

Instructions

Fill in "Orange" areas only	
Automated cells based on in Input Data in "orange" cells	
General Information	Fill in below the general information including: District, County (drop-down menu) City, Engineer, Date Major and Minor Street with corresponding number of lanes and speed limits
Enter Eight Hour Volumes	Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only.** On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.
Enter Four Hour Volumes	Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)
Enter Pedestrian Volumes (4-h	Pedestrians per hour crossing the major street (total of all crossings)
Enter Peak Hour Volumes	Vehicular: Any four consecutive 15-minute periods of an average day Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

Input Data

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Chris Silver**
Date: **December 5, 2022**

Major Street: **Grissom Pkwy** Major Street # Lanes: **1** Major Approach Speed: **50**
Minor Street: **Prop. Access Rd** Minor Street # Lanes: **1** Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	661	178	0
12PM - 1PM	681	97	0
1PM - 2PM	721	102	0
2PM - 3PM	708	108	0
3PM - 4PM	860	105	0
4PM - 5PM	1059	130	0
5PM - 6PM	963	129	0
6PM - 7PM	743	102	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	661	178
12PM - 1PM	681	97
1PM - 2PM	721	102
2PM - 3PM	708	108
3PM - 4PM	860	105
4PM - 5PM	1059	130
5PM - 6PM	963	129
6PM - 7PM	743	102

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	860	105
4PM - 5PM	1059	130
5PM - 6PM	963	129
6PM - 7PM	743	102

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	860	0
4PM - 5PM	1059	0
5PM - 6PM	963	0
6PM - 7PM	743	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1059	130	1212

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	0	0

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☐ Yes ☑ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☐ Yes ☑ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☐ Yes	☑ No
70% Satisfied:	☐ Yes	☑ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	661	681	721	708	860	1,059	963	743
Minor	178	97	102	108	105	130	129	102

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	661	681	721	708	860	1,059	963	743
Minor	178	97	102	108	105	130	129	102

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

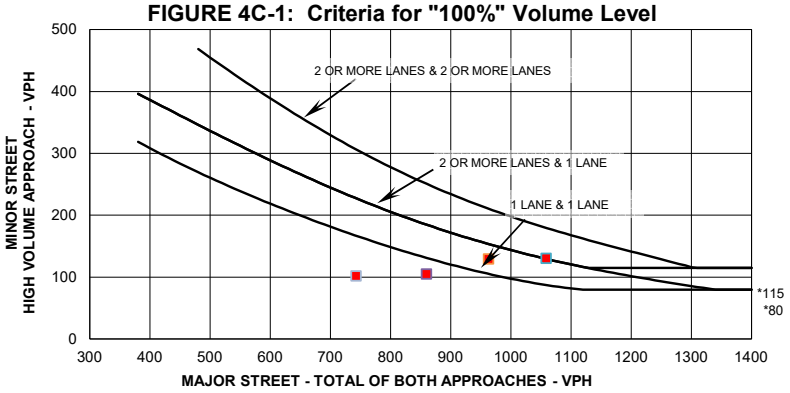
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	860	105
4PM - 5PM	1059	130
5PM - 6PM	963	129
6PM - 7PM	743	102

FIGURE 4C-1: Criteria for "100%" Volume Level



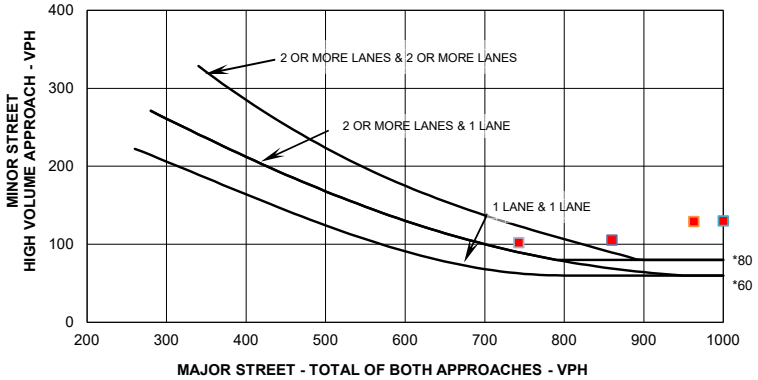
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	860	105
4PM - 5PM	1059	130
5PM - 6PM	963	129
6PM - 7PM	743	102

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1059	130

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1059	130

Criteria

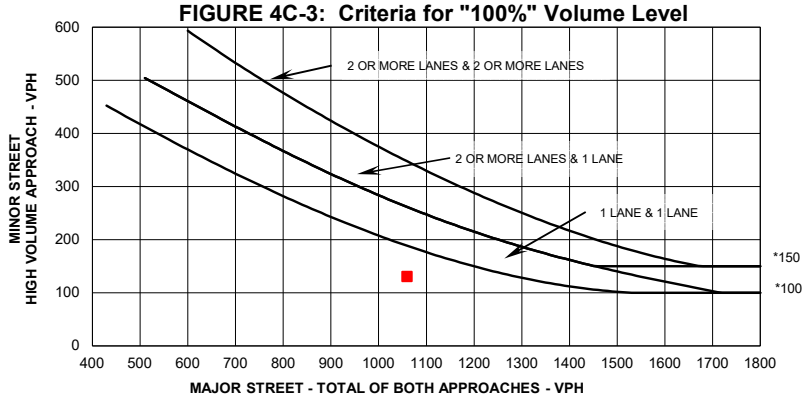
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	☐ Yes ☐ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	☐ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	☐ Yes ☐ No	

Plot volume combination on the applicable figure below.

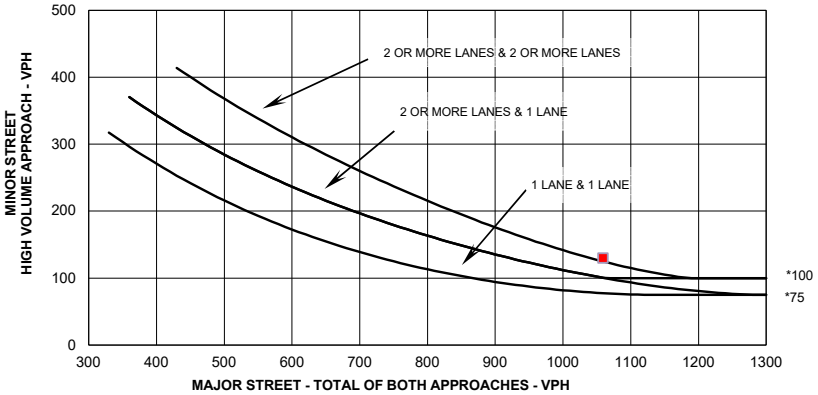
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

TRAFFIC SIGNAL WARRANT SUMMARY

Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
- The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation

Note: This templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

Instructions

Fill in "Orange" areas only	
Automated cells based on in Input Data in "orange" cells	
General Information	Fill in below the general information including: District, County (drop-down menu) City, Engineer, Date Major and Minor Street with corresponding number of lanes and speed limits
Enter Eight Hour Volumes	Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only.** On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.
Enter Four Hour Volumes	Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)
Enter Pedestrian Volumes (4-h	Pedestrians per hour crossing the major street (total of all crossings)
Enter Peak Hour Volumes	Vehicular: Any four consecutive 15-minute periods of an average day Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

Input Data

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Chris Silver**
Date: **December 5, 2022**

Major Street: **Grissom Pkwy** Major Street # Lanes: **1** Major Approach Speed: **50**
Minor Street: **Prop. Access Rd** Minor Street # Lanes: **1** Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	705	217	0
12PM - 1PM	730	119	0
1PM - 2PM	773	125	0
2PM - 3PM	766	132	0
3PM - 4PM	930	128	0
4PM - 5PM	1142	159	0
5PM - 6PM	1043	157	0
6PM - 7PM	807	125	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	705	217
12PM - 1PM	730	119
1PM - 2PM	773	125
2PM - 3PM	766	132
3PM - 4PM	930	128
4PM - 5PM	1142	159
5PM - 6PM	1043	157
6PM - 7PM	807	125

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	930	128
4PM - 5PM	1142	159
5PM - 6PM	1043	157
6PM - 7PM	807	125

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	930	0
4PM - 5PM	1142	0
5PM - 6PM	1043	0
6PM - 7PM	807	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1142	159	1324

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	0	0

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☐ Yes ☑ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☐ Yes ☑ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☐ Yes	☑ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	705	730	773	766	930	1,142	1,043	807
Minor	217	119	125	132	128	159	157	125

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	705	730	773	766	930	1,142	1,043	807
Minor	217	119	125	132	128	159	157	125

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

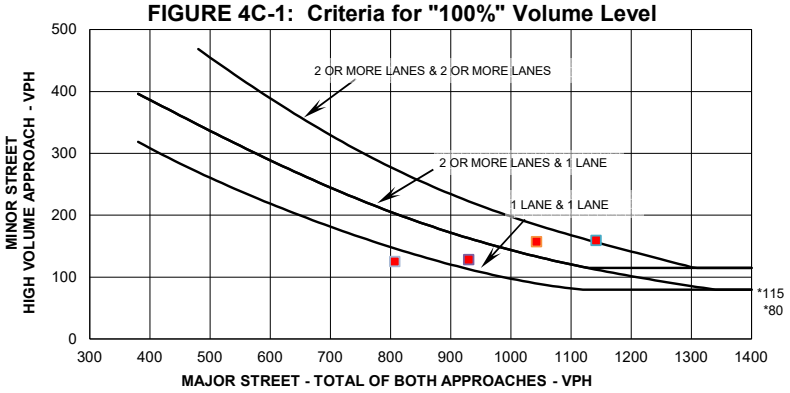
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	930	128
4PM - 5PM	1142	159
5PM - 6PM	1043	157
6PM - 7PM	807	125

FIGURE 4C-1: Criteria for "100%" Volume Level



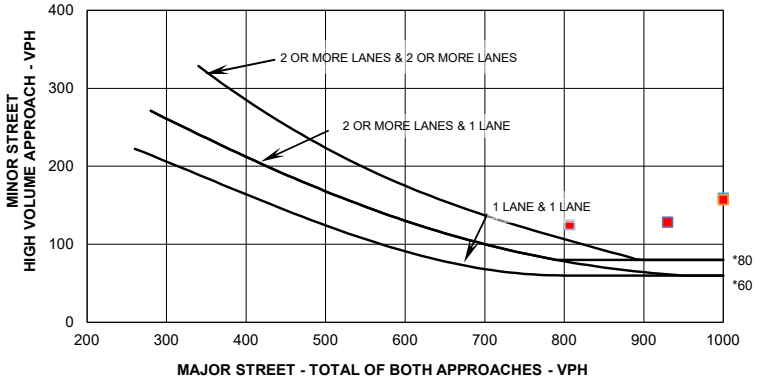
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	930	128
4PM - 5PM	1142	159
5PM - 6PM	1043	157
6PM - 7PM	807	125

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1142	159

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1142	159

Criteria

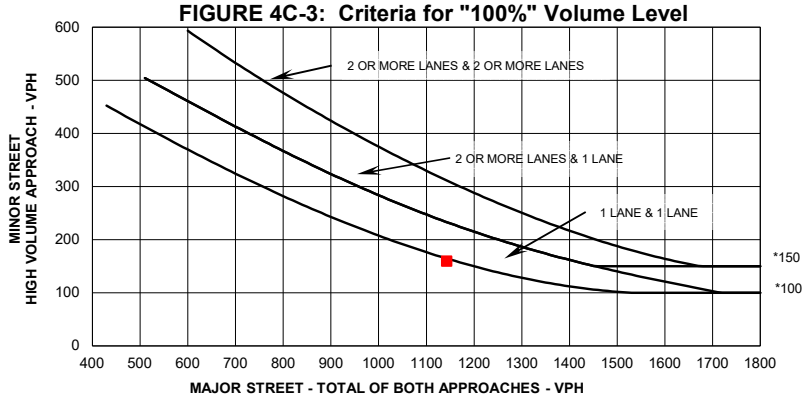
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	☑ Yes ☐ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	159	
Fulfilled?:	☑ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		1,303
Fulfilled?:	☑ Yes ☐ No	

Plot volume combination on the applicable figure below.

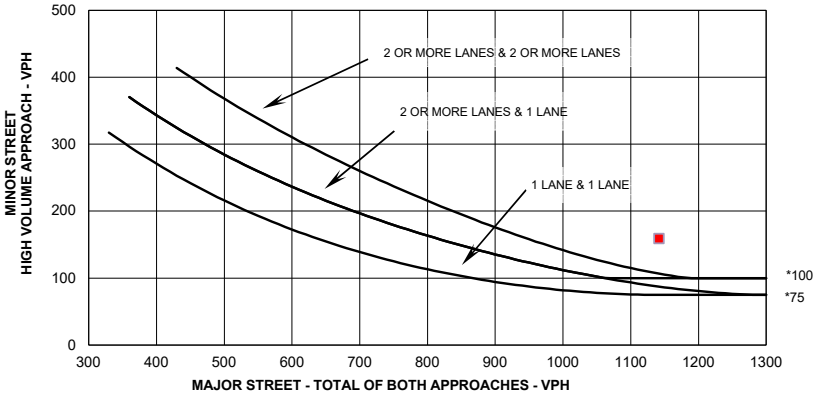
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Chris Silver**
County:	**70 – Brevard**	Date:	**December 5, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

TRAFFIC SIGNAL WARRANT SUMMARY

Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
- The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation

Note: This templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

Instructions

Fill in "Orange" areas only	
Automated cells based on in Input Data in "orange" cells	
General Information	Fill in below the general information including: District, County (drop-down menu) City, Engineer, Date Major and Minor Street with corresponding number of lanes and speed limits
Enter Eight Hour Volumes	Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only.** On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.
Enter Four Hour Volumes	Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)
Enter Pedestrian Volumes (4-h	Pedestrians per hour crossing the major street (total of all crossings)
Enter Peak Hour Volumes	Vehicular: Any four consecutive 15-minute periods of an average day Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

Input Data

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Chris Silver**
Date: **December 5, 2022**

Major Street: **Grissom Pkwy** Major Street # Lanes: **1** Major Approach Speed: **50**
Minor Street: **Prop. Access Rd** Minor Street # Lanes: **1** Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	727	238	0
12PM - 1PM	756	131	0
1PM - 2PM	801	137	0
2PM - 3PM	796	145	0
3PM - 4PM	967	140	0
4PM - 5PM	1186	175	0
5PM - 6PM	1086	173	0
6PM - 7PM	842	137	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	727	238
12PM - 1PM	756	131
1PM - 2PM	801	137
2PM - 3PM	796	145
3PM - 4PM	967	140
4PM - 5PM	1186	175
5PM - 6PM	1086	173
6PM - 7PM	842	137

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	967	140
4PM - 5PM	1186	175
5PM - 6PM	1086	173
6PM - 7PM	842	137

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	967	0
4PM - 5PM	1186	0
5PM - 6PM	1086	0
6PM - 7PM	842	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1186	175	1384

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	0	0

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TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☐ Yes ☑ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☑ Yes ☐ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	727	756	801	796	967	1,186	1,086	842
Minor	238	131	137	145	140	175	173	137

Existing Volumes

I-54

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	727	756	801	796	967	1,186	1,086	842
Minor	238	131	137	145	140	175	173	137

Existing Volumes

I-55

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

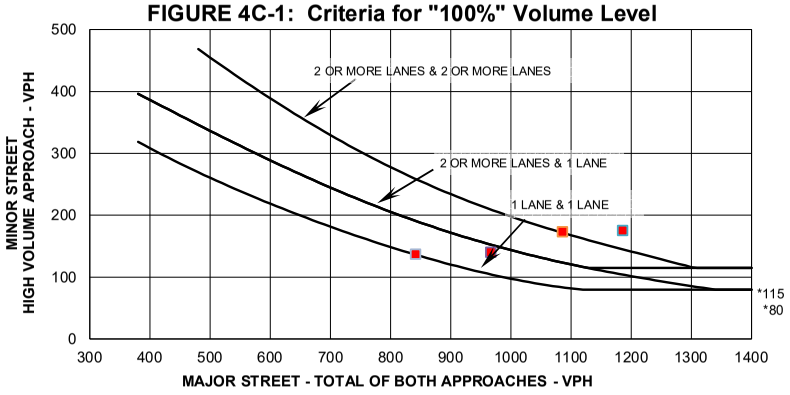
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	967	140
4PM - 5PM	1186	175
5PM - 6PM	1086	173
6PM - 7PM	842	137

FIGURE 4C-1: Criteria for "100%" Volume Level



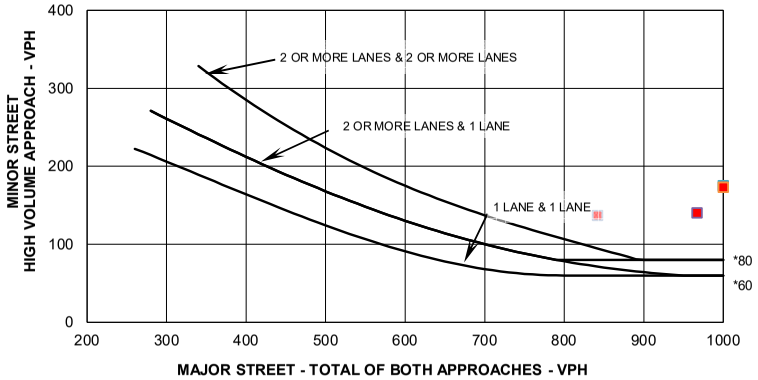
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	967	140
4PM - 5PM	1186	175
5PM - 6PM	1086	173
6PM - 7PM	842	137

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1186	175

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1186	175

Criteria

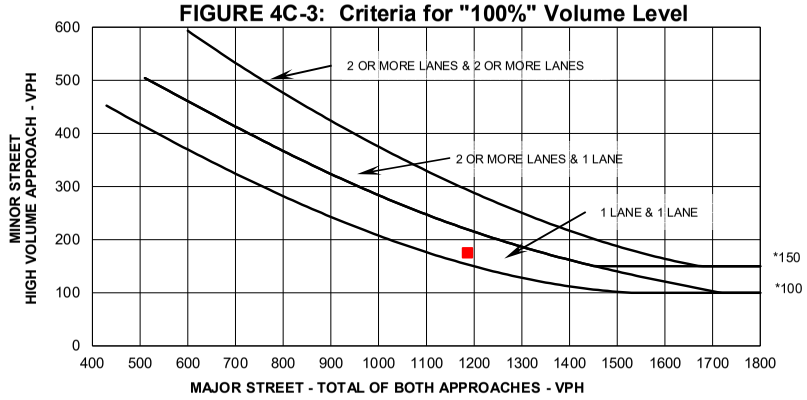
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	☐ Yes ☐ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	☐ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	☐ Yes ☐ No	

Plot volume combination on the applicable figure below.

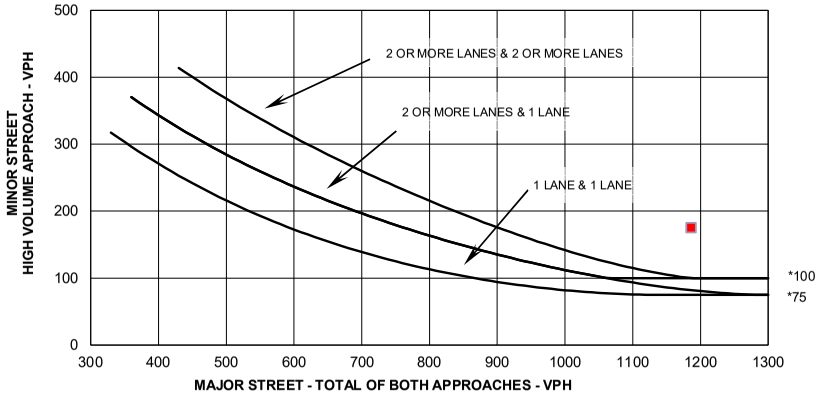
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

TRAFFIC SIGNAL WARRANT SUMMARY

Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
- The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation

Note: This templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

Instructions

Fill in "Orange" areas only	
Automated cells based on in Input Data in "orange" cells	
General Information	Fill in below the general information including: District, County (drop-down menu) City, Engineer, Date Major and Minor Street with corresponding number of lanes and speed limits
Enter Eight Hour Volumes	Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only.** On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.
Enter Four Hour Volumes	Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)
Enter Pedestrian Volumes (4-h	Pedestrians per hour crossing the major street (total of all crossings)
Enter Peak Hour Volumes	Vehicular: Any four consecutive 15-minute periods of an average day Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

Input Data

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Chris Silver**
Date: **December 5, 2022**

Major Street: **Grissom Pkwy** Major Street # Lanes: **1** Major Approach Speed: **50**
Minor Street: **Prop. Access Rd** Minor Street # Lanes: **1** Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	759	281	0
12PM - 1PM	796	154	0
1PM - 2PM	843	162	0
2PM - 3PM	843	171	0
3PM - 4PM	1024	165	0
4PM - 5PM	1255	206	0
5PM - 6PM	1154	204	0
6PM - 7PM	897	162	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	759	281
12PM - 1PM	796	154
1PM - 2PM	843	162
2PM - 3PM	843	171
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	1024	0
4PM - 5PM	1255	0
5PM - 6PM	1154	0
6PM - 7PM	897	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1255	206	1484

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	0	0

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☑ Yes ☐ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☑ Yes ☐ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable: ☑ Yes ☐ No
100% Satisfied: ☑ Yes ☐ No
80% Satisfied: ☑ Yes ☐ No
70% Satisfied: ☑ Yes ☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	759	796	843	843	1,024	1,255	1,154	897
Minor	281	154	162	171	165	206	204	162

Existing Volumes

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State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☑ Yes	☐ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	759	796	843	843	1,024	1,255	1,154	897
Minor	281	154	162	171	165	206	204	162

Existing Volumes

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State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

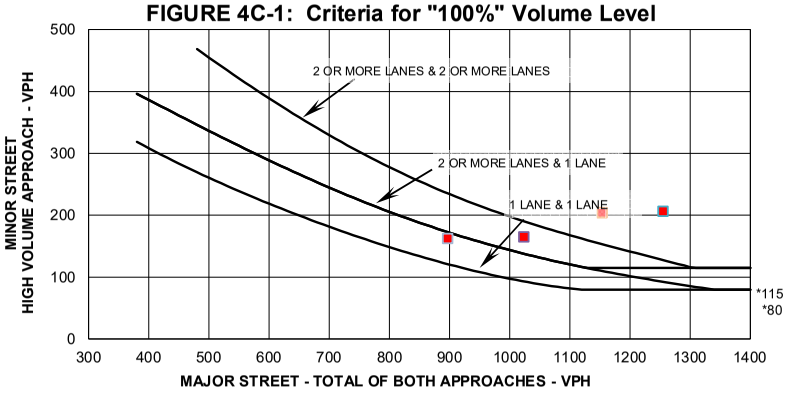
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

FIGURE 4C-1: Criteria for "100%" Volume Level



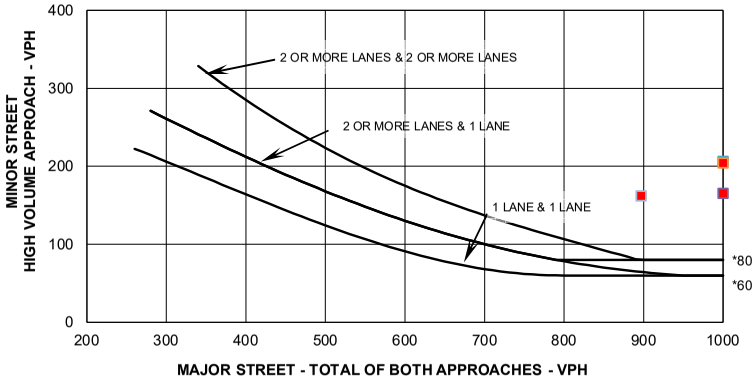
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	1	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1255	206

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1255	206

Criteria

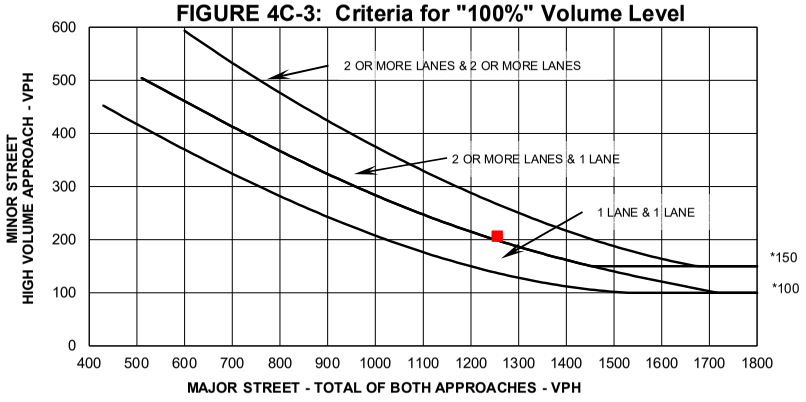
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	☐ Yes ☐ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	☐ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	☐ Yes ☐ No	

Plot volume combination on the applicable figure below.

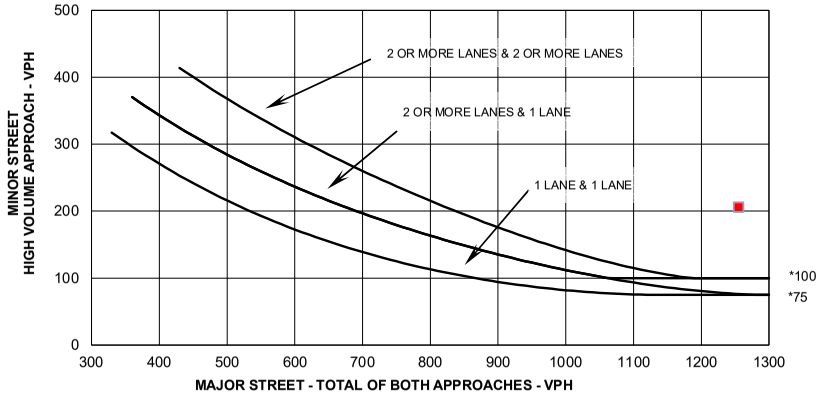
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

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State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	**Cocoa**	Engineer:	**Chris Silver**
County:	**70 – Brevard**	Date:	**December 5, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**1**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

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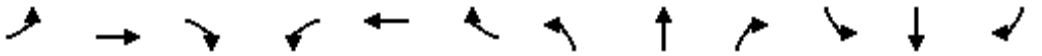
APPENDIX J

Unsignalized Alternative Analysis and Signal Warrants



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Future Volume (vph)	99	0	152	1	0	0	33	264	1	0	593	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	0	165	1	0	0	36	287	1	0	645	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	165	0	1	0	36	287	1	0	645	49
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

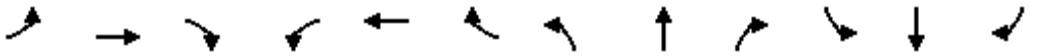
Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	0	152	1	0	0	33	264	1	0	593	45
Future Vol, veh/h	99	0	152	1	0	0	33	264	1	0	593	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	0	165	1	0	0	36	287	1	0	645	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1005	1005	645	1111	1053	287	694	0	0	288	0	0
Stage 1	645	645	-	359	359	-	-	-	-	-	-	-
Stage 2	360	360	-	752	694	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	220	241	472	186	226	752	901	-	-	1274	-	-
Stage 1	461	467	-	659	627	-	-	-	-	-	-	-
Stage 2	658	626	-	402	444	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	213	231	472	117	217	752	901	-	-	1274	-	-
Mov Cap-2 Maneuver	213	231	-	117	217	-	-	-	-	-	-	-
Stage 1	443	467	-	633	602	-	-	-	-	-	-	-
Stage 2	632	601	-	261	444	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.1	36.1	1	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	213	472	117	1274	-	-
HCM Lane V/C Ratio	0.04	-	-	0.505	0.35	0.009	-	-	-
HCM Control Delay (s)	9.2	-	-	38	16.7	36.1	0	-	-
HCM Lane LOS	A	-	-	E	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	1.6	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	0	152	1	0	0	33	264	1	0	593	49
Future Volume (vph)	106	0	152	1	0	0	33	264	1	0	593	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	0	165	1	0	0	36	287	1	0	645	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	165	0	1	0	36	287	1	0	645	53
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

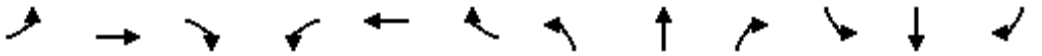
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	0	152	1	0	0	33	264	1	0	593	49
Future Vol, veh/h	106	0	152	1	0	0	33	264	1	0	593	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	0	165	1	0	0	36	287	1	0	645	53

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1005	1005	645	1113	1057	287	698	0	0	288	0	0
Stage 1	645	645	-	359	359	-	-	-	-	-	-	-
Stage 2	360	360	-	754	698	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	220	241	472	186	225	752	898	-	-	1274	-	-
Stage 1	461	467	-	659	627	-	-	-	-	-	-	-
Stage 2	658	626	-	401	442	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	213	231	472	117	216	752	898	-	-	1274	-	-
Mov Cap-2 Maneuver	213	231	-	117	216	-	-	-	-	-	-	-
Stage 1	443	467	-	633	602	-	-	-	-	-	-	-
Stage 2	632	601	-	261	442	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.4	36.1	1	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	898	-	-	213	472	117	1274	-	-
HCM Lane V/C Ratio	0.04	-	-	0.541	0.35	0.009	-	-	-
HCM Control Delay (s)	9.2	-	-	40.2	16.7	36.1	0	-	-
HCM Lane LOS	A	-	-	E	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.9	1.6	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	106	27	0	20	183	625	1	0	368	111
Future Volume (vph)	61	0	106	27	0	20	183	625	1	0	368	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	115	29	0	22	199	679	1	0	400	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	115	0	51	0	199	679	1	0	400	121
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

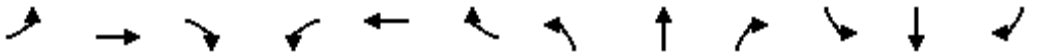
Intersection	
Int Delay, s/veh	10

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	106	27	0	20	183	625	1	0	368	111
Future Vol, veh/h	61	0	106	27	0	20	183	625	1	0	368	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	0	115	29	0	22	199	679	1	0	400	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1489	1478	400	1595	1598	679	521	0	0	680	0	0
Stage 1	400	400	-	1077	1077	-	-	-	-	-	-	-
Stage 2	1089	1078	-	518	521	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	126	650	86	106	452	1045	-	-	912	-	-
Stage 1	626	602	-	265	295	-	-	-	-	-	-	-
Stage 2	261	295	-	541	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	102	650	60	86	452	1045	-	-	912	-	-
Mov Cap-2 Maneuver	83	102	-	60	86	-	-	-	-	-	-	-
Stage 1	507	602	-	215	239	-	-	-	-	-	-	-
Stage 2	201	239	-	445	532	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.1	80.3	2.1	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1045	-	-	83	650	95	912	-	-
HCM Lane V/C Ratio	0.19	-	-	0.799	0.177	0.538	-	-	-
HCM Control Delay (s)	9.3	-	-	135.9	11.7	80.3	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	4.1	0.6	2.4	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	0	152	1	0	0	33	269	1	0	605	49
Future Volume (vph)	106	0	152	1	0	0	33	269	1	0	605	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	0	165	1	0	0	36	292	1	0	658	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	165	0	1	0	36	292	1	0	658	53
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.6%		ICU Level of Service A	
Analysis Period (min) 15			

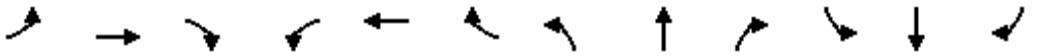
Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	0	152	1	0	0	33	269	1	0	605	49
Future Vol, veh/h	106	0	152	1	0	0	33	269	1	0	605	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	0	165	1	0	0	36	292	1	0	658	53

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1023	1023	658	1131	1075	292	711	0	0	293	0	0
Stage 1	658	658	-	364	364	-	-	-	-	-	-	-
Stage 2	365	365	-	767	711	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	214	236	464	181	220	747	888	-	-	1269	-	-
Stage 1	453	461	-	655	624	-	-	-	-	-	-	-
Stage 2	654	623	-	395	436	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	207	226	464	113	211	747	888	-	-	1269	-	-
Mov Cap-2 Maneuver	207	226	-	113	211	-	-	-	-	-	-	-
Stage 1	434	461	-	628	598	-	-	-	-	-	-	-
Stage 2	627	597	-	254	436	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	27.4	37.2	1	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	888	-	-	207	464	113	1269	-	-
HCM Lane V/C Ratio	0.04	-	-	0.557	0.356	0.01	-	-	-
HCM Control Delay (s)	9.2	-	-	42.2	17	37.2	0	-	-
HCM Lane LOS	A	-	-	E	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3	1.6	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	0	106	27	0	20	183	638	1	0	375	111
Future Volume (vph)	61	0	106	27	0	20	183	638	1	0	375	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	0	115	29	0	22	199	693	1	0	408	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	115	0	51	0	199	693	1	0	408	121
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

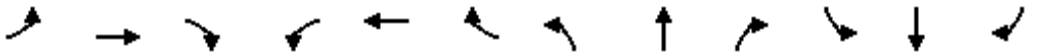
Intersection	
Int Delay, s/veh	10.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	0	106	27	0	20	183	638	1	0	375	111
Future Vol, veh/h	61	0	106	27	0	20	183	638	1	0	375	111
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	0	115	29	0	22	199	693	1	0	408	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1511	1500	408	1617	1620	693	529	0	0	694	0	0
Stage 1	408	408	-	1091	1091	-	-	-	-	-	-	-
Stage 2	1103	1092	-	526	529	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	99	122	643	83	103	443	1038	-	-	901	-	-
Stage 1	620	597	-	260	291	-	-	-	-	-	-	-
Stage 2	256	291	-	535	527	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	80	99	643	58	83	443	1038	-	-	901	-	-
Mov Cap-2 Maneuver	80	99	-	58	83	-	-	-	-	-	-	-
Stage 1	501	597	-	210	235	-	-	-	-	-	-	-
Stage 2	197	235	-	439	527	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	61	84.7	2.1	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1038	-	-	80	643	92	901	-	-
HCM Lane V/C Ratio	0.192	-	-	0.829	0.179	0.555	-	-	-
HCM Control Delay (s)	9.3	-	-	146.6	11.8	84.7	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	4.2	0.6	2.5	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	0	193	1	0	0	47	270	1	0	606	57
Future Volume (vph)	136	0	193	1	0	0	47	270	1	0	606	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	0	210	1	0	0	51	293	1	0	659	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	210	0	1	0	51	293	1	0	659	62
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.2%		ICU Level of Service B	
Analysis Period (min) 15			

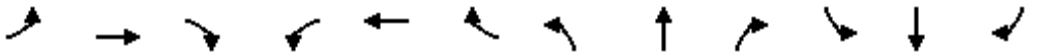
Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	136	0	193	1	0	0	47	270	1	0	606	57
Future Vol, veh/h	136	0	193	1	0	0	47	270	1	0	606	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	148	0	210	1	0	0	51	293	1	0	659	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1055	1055	659	1190	1116	293	721	0	0	294	0	0
Stage 1	659	659	-	395	395	-	-	-	-	-	-	-
Stage 2	396	396	-	795	721	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	204	226	464	165	208	746	881	-	-	1268	-	-
Stage 1	453	461	-	630	605	-	-	-	-	-	-	-
Stage 2	629	604	-	381	432	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	195	213	464	86	196	746	881	-	-	1268	-	-
Mov Cap-2 Maneuver	195	213	-	86	196	-	-	-	-	-	-	-
Stage 1	427	461	-	593	570	-	-	-	-	-	-	-
Stage 2	593	569	-	209	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.1	47.4	1.4	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	881	-	-	195	464	86	1268	-	-
HCM Lane V/C Ratio	0.058	-	-	0.758	0.452	0.013	-	-	-
HCM Control Delay (s)	9.3	-	-	65.3	19	47.4	0	-	-
HCM Lane LOS	A	-	-	F	C	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5.1	2.3	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	135	27	0	20	236	638	1	0	376	138
Future Volume (vph)	74	0	135	27	0	20	236	638	1	0	376	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	0	147	29	0	22	257	693	1	0	409	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	147	0	51	0	257	693	1	0	409	150
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	21.2

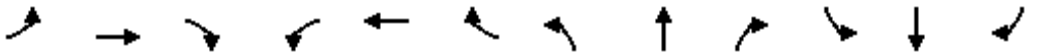
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	0	135	27	0	20	236	638	1	0	376	138
Future Vol, veh/h	74	0	135	27	0	20	236	638	1	0	376	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	0	147	29	0	22	257	693	1	0	409	150

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1628	1617	409	1765	1766	693	559	0	0	694	0	0
Stage 1	409	409	-	1207	1207	-	-	-	-	-	-	-
Stage 2	1219	1208	-	558	559	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	82	103	642	65	84	443	1012	-	-	901	-	-
Stage 1	619	596	-	224	256	-	-	-	-	-	-	-
Stage 2	220	256	-	514	511	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 63	77	642	40	63	443	1012	-	-	901	-	-
Mov Cap-2 Maneuver	~ 63	77	-	40	63	-	-	-	-	-	-	-
Stage 1	462	596	-	167	191	-	-	-	-	-	-	-
Stage 2	156	191	-	397	511	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	119.8	160.2	2.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1012	-	-	63	642	65	901	-	-
HCM Lane V/C Ratio	0.253	-	-	1.277	0.229	0.786	-	-	-
HCM Control Delay (s)	9.8	-	-	$ 316	12.3	160.2	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	1	-	-	6.7	0.9	3.6	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	0	193	1	0	0	47	276	1	0	618	57
Future Volume (vph)	136	0	193	1	0	0	47	276	1	0	618	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	148	0	210	1	0	0	51	300	1	0	672	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	148	210	0	1	0	51	300	1	0	672	62
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

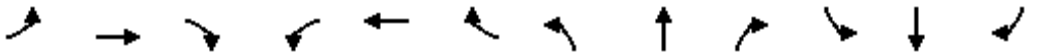
Intersection	
Int Delay, s/veh	10.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	136	0	193	1	0	0	47	276	1	0	618	57
Future Vol, veh/h	136	0	193	1	0	0	47	276	1	0	618	57
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	148	0	210	1	0	0	51	300	1	0	672	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1075	1075	672	1210	1136	300	734	0	0	301	0	0
Stage 1	672	672	-	402	402	-	-	-	-	-	-	-
Stage 2	403	403	-	808	734	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	197	220	456	159	202	740	871	-	-	1260	-	-
Stage 1	445	454	-	625	600	-	-	-	-	-	-	-
Stage 2	624	600	-	375	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	188	207	456	82	190	740	871	-	-	1260	-	-
Mov Cap-2 Maneuver	188	207	-	82	190	-	-	-	-	-	-	-
Stage 1	419	454	-	588	565	-	-	-	-	-	-	-
Stage 2	587	565	-	202	426	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.9	49.5	1.4	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	871	-	-	188	456	82	1260	-	-
HCM Lane V/C Ratio	0.059	-	-	0.786	0.46	0.013	-	-	-
HCM Control Delay (s)	9.4	-	-	71.4	19.4	49.5	0	-	-
HCM Lane LOS	A	-	-	F	C	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	5.3	2.4	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	0	135	27	0	20	236	651	1	0	383	138
Future Volume (vph)	74	0	135	27	0	20	236	651	1	0	383	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	0	147	29	0	22	257	708	1	0	416	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	147	0	51	0	257	708	1	0	416	150
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	22.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	74	0	135	27	0	20	236	651	1	0	383	138
Future Vol, veh/h	74	0	135	27	0	20	236	651	1	0	383	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	0	147	29	0	22	257	708	1	0	416	150

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1650	1639	416	1787	1788	708	566	0	0	709	0	0
Stage 1	416	416	-	1222	1222	-	-	-	-	-	-	-
Stage 2	1234	1223	-	565	566	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 79	100	637	63	81	435	1006	-	-	890	-	-
Stage 1	614	592	-	220	252	-	-	-	-	-	-	-
Stage 2	216	252	-	510	507	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 60	75	637	39	60	435	1006	-	-	890	-	-
Mov Cap-2 Maneuver	~ 60	75	-	39	60	-	-	-	-	-	-	-
Stage 1	457	592	-	164	188	-	-	-	-	-	-	-
Stage 2	153	188	-	393	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	130.7	165.1	2.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1006	-	-	60	637	64	890	-	-
HCM Lane V/C Ratio	0.255	-	-	1.341	0.23	0.798	-	-	-
HCM Control Delay (s)	9.8	-	-	$ 346.7	12.3	165.1	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	1	-	-	6.9	0.9	3.6	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	182	0	254	1	0	0	64	279	1	0	620	69
Future Volume (vph)	182	0	254	1	0	0	64	279	1	0	620	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	0	276	1	0	0	70	303	1	0	674	75
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	276	0	1	0	70	303	1	0	674	75
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	25.3

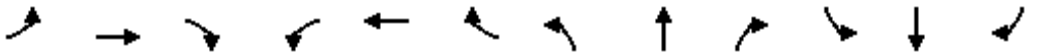
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	182	0	254	1	0	0	64	279	1	0	620	69
Future Vol, veh/h	182	0	254	1	0	0	64	279	1	0	620	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	198	0	276	1	0	0	70	303	1	0	674	75

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1118	1118	674	1293	1192	303	749	0	0	304	0	0
Stage 1	674	674	-	443	443	-	-	-	-	-	-	-
Stage 2	444	444	-	850	749	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 184	207	455	140	187	737	860	-	-	1257	-	-
Stage 1	444	454	-	594	576	-	-	-	-	-	-	-
Stage 2	593	575	-	355	419	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 173	190	455	52	172	737	860	-	-	1257	-	-
Mov Cap-2 Maneuver	~ 173	190	-	52	172	-	-	-	-	-	-	-
Stage 1	408	454	-	546	529	-	-	-	-	-	-	-
Stage 2	545	528	-	140	419	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	83.7	75.7	1.8	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	860	-	-	173	455	52	1257	-	-
HCM Lane V/C Ratio	0.081	-	-	1.144	0.607	0.021	-	-	-
HCM Control Delay (s)	9.6	-	-	166.5	24.4	75.7	0	-	-
HCM Lane LOS	A	-	-	F	C	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	10.3	3.9	0.1	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	0	151	27	0	20	266	638	1	0	378	152
Future Volume (vph)	82	0	151	27	0	20	266	638	1	0	378	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		3101			2536			1525			7358	
Travel Time (s)		60.4			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	0	164	29	0	22	289	693	1	0	411	165
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	164	0	51	0	289	693	1	0	411	165
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	32.1

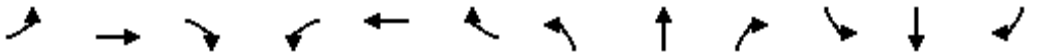
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	82	0	151	27	0	20	266	638	1	0	378	152
Future Vol, veh/h	82	0	151	27	0	20	266	638	1	0	378	152
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	89	0	164	29	0	22	289	693	1	0	411	165

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1694	1683	411	1847	1847	693	576	0	0	694	0	0
Stage 1	411	411	-	1271	1271	-	-	-	-	-	-	-
Stage 2	1283	1272	-	576	576	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 73	94	641	57	75	443	997	-	-	901	-	-
Stage 1	618	595	-	206	239	-	-	-	-	-	-	-
Stage 2	203	239	-	503	502	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 54	67	641	33	53	443	997	-	-	901	-	-
Mov Cap-2 Maneuver	~ 54	67	-	33	53	-	-	-	-	-	-	-
Stage 1	439	595	-	146	170	-	-	-	-	-	-	-
Stage 2	137	170	-	374	502	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	178.6	228.4	3	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	997	-	-	54	641	54	901	-	-
HCM Lane V/C Ratio	0.29	-	-	1.651	0.256	0.946	-	-	-
HCM Control Delay (s)	10.1	-	-	$ 484.4	12.5	228.4	0	-	-
HCM Lane LOS	B	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	1.2	-	-	8.4	1	4.2	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	0	105	27	0	20	183	625	1	0	368	102
Future Volume (vph)	52	0	105	27	0	20	183	625	1	0	368	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	0	114	29	0	22	199	679	1	0	400	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	114	0	51	0	199	679	1	0	400	111
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

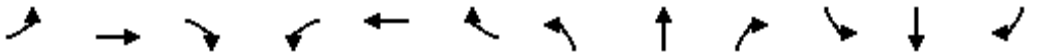
Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	105	27	0	20	183	625	1	0	368	102
Future Vol, veh/h	52	0	105	27	0	20	183	625	1	0	368	102
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	0	114	29	0	22	199	679	1	0	400	111

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1489	1478	400	1590	1588	679	511	0	0	680	0	0
Stage 1	400	400	-	1077	1077	-	-	-	-	-	-	-
Stage 2	1089	1078	-	513	511	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	102	126	650	87	108	452	1054	-	-	912	-	-
Stage 1	626	602	-	265	295	-	-	-	-	-	-	-
Stage 2	261	295	-	544	537	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	102	650	61	88	452	1054	-	-	912	-	-
Mov Cap-2 Maneuver	83	102	-	61	88	-	-	-	-	-	-	-
Stage 1	508	602	-	215	239	-	-	-	-	-	-	-
Stage 2	202	239	-	448	537	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.1	77.5	2.1	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1054	-	-	83	650	97	912	-	-
HCM Lane V/C Ratio	0.189	-	-	0.681	0.176	0.527	-	-	-
HCM Control Delay (s)	9.2	-	-	112.4	11.7	77.5	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	3.2	0.6	2.4	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	0	152	1	0	0	33	269	1	0	605	45
Future Volume (vph)	99	0	152	1	0	0	33	269	1	0	605	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	0	165	1	0	0	36	292	1	0	658	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	165	0	1	0	36	292	1	0	658	49
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.6%		ICU Level of Service A	
Analysis Period (min) 15			

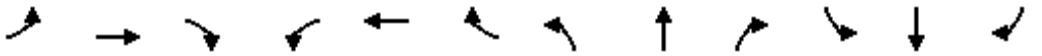
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	99	0	152	1	0	0	33	269	1	0	605	45
Future Vol, veh/h	99	0	152	1	0	0	33	269	1	0	605	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	108	0	165	1	0	0	36	292	1	0	658	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1023	1023	658	1129	1071	292	707	0	0	293	0	0
Stage 1	658	658	-	364	364	-	-	-	-	-	-	-
Stage 2	365	365	-	765	707	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	214	236	464	181	221	747	891	-	-	1269	-	-
Stage 1	453	461	-	655	624	-	-	-	-	-	-	-
Stage 2	654	623	-	396	438	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	207	227	464	113	212	747	891	-	-	1269	-	-
Mov Cap-2 Maneuver	207	227	-	113	212	-	-	-	-	-	-	-
Stage 1	435	461	-	629	599	-	-	-	-	-	-	-
Stage 2	628	598	-	255	438	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26	37.2	1	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	891	-	-	207	464	113	1269	-	-
HCM Lane V/C Ratio	0.04	-	-	0.52	0.356	0.01	-	-	-
HCM Control Delay (s)	9.2	-	-	39.8	17	37.2	0	-	-
HCM Lane LOS	A	-	-	E	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.7	1.6	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	0	105	27	0	20	183	638	1	0	375	102
Future Volume (vph)	52	0	105	27	0	20	183	638	1	0	375	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	0	114	29	0	22	199	693	1	0	408	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	114	0	51	0	199	693	1	0	408	111
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	0	105	27	0	20	183	638	1	0	375	102
Future Vol, veh/h	52	0	105	27	0	20	183	638	1	0	375	102
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	0	114	29	0	22	199	693	1	0	408	111

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1511	1500	408	1612	1610	693	519	0	0	694	0	0
Stage 1	408	408	-	1091	1091	-	-	-	-	-	-	-
Stage 2	1103	1092	-	521	519	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	99	122	643	84	105	443	1047	-	-	901	-	-
Stage 1	620	597	-	260	291	-	-	-	-	-	-	-
Stage 2	256	291	-	539	533	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	80	99	643	59	85	443	1047	-	-	901	-	-
Mov Cap-2 Maneuver	80	99	-	59	85	-	-	-	-	-	-	-
Stage 1	502	597	-	211	236	-	-	-	-	-	-	-
Stage 2	197	236	-	443	533	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	47.8	83.2	2.1	0
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1047	-	-	80	643	93	901	-	-
HCM Lane V/C Ratio	0.19	-	-	0.707	0.177	0.549	-	-	-
HCM Control Delay (s)	9.2	-	-	120.6	11.8	83.2	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	3.4	0.6	2.5	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	0	193	1	0	0	47	270	1	0	604	49
Future Volume (vph)	124	0	193	1	0	0	47	270	1	0	604	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	0	210	1	0	0	51	293	1	0	657	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	210	0	1	0	51	293	1	0	657	53
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	124	0	193	1	0	0	47	270	1	0	604	49
Future Vol, veh/h	124	0	193	1	0	0	47	270	1	0	604	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	0	210	1	0	0	51	293	1	0	657	53

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1053	1053	657	1184	1105	293	710	0	0	294	0	0
Stage 1	657	657	-	395	395	-	-	-	-	-	-	-
Stage 2	396	396	-	789	710	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	204	226	465	166	211	746	889	-	-	1268	-	-
Stage 1	454	462	-	630	605	-	-	-	-	-	-	-
Stage 2	629	604	-	384	437	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	195	213	465	87	199	746	889	-	-	1268	-	-
Mov Cap-2 Maneuver	195	213	-	87	199	-	-	-	-	-	-	-
Stage 1	428	462	-	594	571	-	-	-	-	-	-	-
Stage 2	593	570	-	211	437	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.8	46.9	1.4	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	889	-	-	195	465	87	1268	-	-
HCM Lane V/C Ratio	0.057	-	-	0.691	0.451	0.012	-	-	-
HCM Control Delay (s)	9.3	-	-	56.8	19	46.9	0	-	-
HCM Lane LOS	A	-	-	F	C	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	4.3	2.3	0	0	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	0	135	27	0	20	237	638	1	0	376	121
Future Volume (vph)	60	0	135	27	0	20	237	638	1	0	376	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	0	147	29	0	22	258	693	1	0	409	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	147	0	51	0	258	693	1	0	409	132
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	15.8

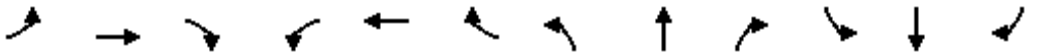
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	0	135	27	0	20	237	638	1	0	376	121
Future Vol, veh/h	60	0	135	27	0	20	237	638	1	0	376	121
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	0	147	29	0	22	258	693	1	0	409	132

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1630	1619	409	1758	1750	693	541	0	0	694	0	0
Stage 1	409	409	-	1209	1209	-	-	-	-	-	-	-
Stage 2	1221	1210	-	549	541	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	81	103	642	66	86	443	1028	-	-	901	-	-
Stage 1	619	596	-	223	256	-	-	-	-	-	-	-
Stage 2	220	255	-	520	521	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 62	77	642	41	64	443	1028	-	-	901	-	-
Mov Cap-2 Maneuver	~ 62	77	-	41	64	-	-	-	-	-	-	-
Stage 1	464	596	-	167	192	-	-	-	-	-	-	-
Stage 2	157	191	-	401	521	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	82.6	151.2	2.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1028	-	-	62	642	67	901	-	-
HCM Lane V/C Ratio	0.251	-	-	1.052	0.229	0.762	-	-	-
HCM Control Delay (s)	9.7	-	-	240.9	12.3	151.2	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	1	-	-	5.2	0.9	3.5	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	0	193	1	0	0	47	276	1	0	616	49
Future Volume (vph)	124	0	193	1	0	0	47	276	1	0	616	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	0	210	1	0	0	51	300	1	0	670	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	210	0	1	0	51	300	1	0	670	53
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.7%		ICU Level of Service B	
Analysis Period (min) 15			

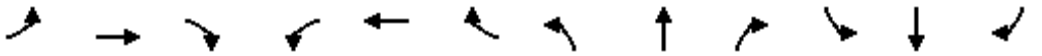
Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	124	0	193	1	0	0	47	276	1	0	616	49
Future Vol, veh/h	124	0	193	1	0	0	47	276	1	0	616	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	0	210	1	0	0	51	300	1	0	670	53

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1073	1073	670	1204	1125	300	723	0	0	301	0	0
Stage 1	670	670	-	402	402	-	-	-	-	-	-	-
Stage 2	403	403	-	802	723	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	198	220	457	161	205	740	879	-	-	1260	-	-
Stage 1	446	455	-	625	600	-	-	-	-	-	-	-
Stage 2	624	600	-	378	431	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	189	207	457	83	193	740	879	-	-	1260	-	-
Mov Cap-2 Maneuver	189	207	-	83	193	-	-	-	-	-	-	-
Stage 1	420	455	-	589	565	-	-	-	-	-	-	-
Stage 2	588	565	-	204	431	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.6	48.9	1.4	0
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	879	-	-	189	457	83	1260	-	-
HCM Lane V/C Ratio	0.058	-	-	0.713	0.459	0.013	-	-	-
HCM Control Delay (s)	9.3	-	-	60.9	19.4	48.9	0	-	-
HCM Lane LOS	A	-	-	F	C	E	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	4.5	2.4	0	0	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	0	135	27	0	20	237	651	1	0	383	121
Future Volume (vph)	60	0	135	27	0	20	237	651	1	0	383	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	0	147	29	0	22	258	708	1	0	416	132
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	147	0	51	0	258	708	1	0	416	132
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	16.5

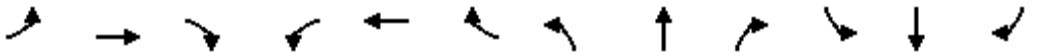
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	0	135	27	0	20	237	651	1	0	383	121
Future Vol, veh/h	60	0	135	27	0	20	237	651	1	0	383	121
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	0	147	29	0	22	258	708	1	0	416	132

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1652	1641	416	1780	1772	708	548	0	0	709	0	0
Stage 1	416	416	-	1224	1224	-	-	-	-	-	-	-
Stage 2	1236	1225	-	556	548	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	79	100	637	64	83	435	1021	-	-	890	-	-
Stage 1	614	592	-	219	252	-	-	-	-	-	-	-
Stage 2	216	251	-	515	517	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 60	75	637	40	62	435	1021	-	-	890	-	-
Mov Cap-2 Maneuver	~ 60	75	-	40	62	-	-	-	-	-	-	-
Stage 1	459	592	-	164	188	-	-	-	-	-	-	-
Stage 2	153	187	-	396	517	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	87.6	160.2	2.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1021	-	-	60	637	65	890	-	-
HCM Lane V/C Ratio	0.252	-	-	1.087	0.23	0.786	-	-	-
HCM Control Delay (s)	9.7	-	-	257	12.3	160.2	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	1	-	-	5.3	0.9	3.6	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	163	0	254	1	0	0	63	280	1	0	620	58
Future Volume (vph)	163	0	254	1	0	0	63	280	1	0	620	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850						0.850			0.850
Flt Protected		0.950			0.950		0.950					
Satd. Flow (prot)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.950		0.950					
Satd. Flow (perm)	0	1770	1583	0	1770	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	177	0	276	1	0	0	68	304	1	0	674	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	177	276	0	1	0	68	304	1	0	674	63
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.7%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	19.2

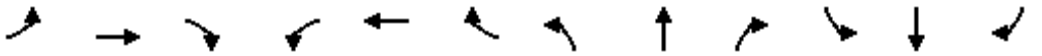
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	0	254	1	0	0	63	280	1	0	620	58
Future Vol, veh/h	163	0	254	1	0	0	63	280	1	0	620	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	177	0	276	1	0	0	68	304	1	0	674	63

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1115	1115	674	1284	1177	304	737	0	0	305	0	0
Stage 1	674	674	-	440	440	-	-	-	-	-	-	-
Stage 2	441	441	-	844	737	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	185	208	455	142	191	736	869	-	-	1256	-	-
Stage 1	444	454	-	596	578	-	-	-	-	-	-	-
Stage 2	595	577	-	358	425	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 174	192	455	53	176	736	869	-	-	1256	-	-
Mov Cap-2 Maneuver	~ 174	192	-	53	176	-	-	-	-	-	-	-
Stage 1	409	454	-	550	533	-	-	-	-	-	-	-
Stage 2	548	532	-	141	425	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	64.6	74.3	1.7	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	869	-	-	174	455	53	1256	-	-
HCM Lane V/C Ratio	0.079	-	-	1.018	0.607	0.021	-	-	-
HCM Control Delay (s)	9.5	-	-	127.2	24.4	74.3	0	-	-
HCM Lane LOS	A	-	-	F	C	F	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	8.4	3.9	0.1	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	0	125	27	0	20	222	638	1	0	378	122
Future Volume (vph)	65	0	125	27	0	20	222	638	1	0	378	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0	300		450	350		300
Storage Lanes	0		1	0		0	1		1	1		1
Taper Length (ft)	25			25			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.942				0.850			0.850
Flt Protected		0.950			0.972		0.950					
Satd. Flow (prot)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Flt Permitted		0.950			0.972		0.950					
Satd. Flow (perm)	0	1770	1583	0	1706	0	1770	1863	1583	1863	1863	1583
Link Speed (mph)		35			25			50			50	
Link Distance (ft)		677			2536			1525			7358	
Travel Time (s)		13.2			69.2			20.8			100.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	0	136	29	0	22	241	693	1	0	411	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	136	0	51	0	241	693	1	0	411	133
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	15.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	0	125	27	0	20	222	638	1	0	378	122
Future Vol, veh/h	65	0	125	27	0	20	222	638	1	0	378	122
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	150	-	-	-	300	-	450	350	-	300
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	0	136	29	0	22	241	693	1	0	411	133

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1598	1587	411	1721	1719	693	544	0	0	694	0	0
Stage 1	411	411	-	1175	1175	-	-	-	-	-	-	-
Stage 2	1187	1176	-	546	544	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	86	108	641	70	90	443	1025	-	-	901	-	-
Stage 1	618	595	-	233	265	-	-	-	-	-	-	-
Stage 2	230	265	-	522	519	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 67	83	641	45	69	443	1025	-	-	901	-	-
Mov Cap-2 Maneuver	~ 67	83	-	45	69	-	-	-	-	-	-	-
Stage 1	473	595	-	178	203	-	-	-	-	-	-	-
Stage 2	167	203	-	411	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	87	128.5	2.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1025	-	-	67	641	73	901	-	-
HCM Lane V/C Ratio	0.235	-	-	1.055	0.212	0.7	-	-	-
HCM Control Delay (s)	9.6	-	-	231.1	12.1	128.5	0	-	-
HCM Lane LOS	A	-	-	F	B	F	A	-	-
HCM 95th %tile Q(veh)	0.9	-	-	5.4	0.8	3.2	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Input Data

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Cocoa**
County: **70 – Brevard**
District: **Five**

Engineer: **Chris Silver**
Date: **December 5, 2022**

Major Street: **Grissom Pkwy**
Minor Street: **Prop. Access Rd**

Major Street # Lanes: **1**
Minor Street # Lanes: **2**

Major Approach Speed: **50**
Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	762	290	0
12PM - 1PM	801	159	0
1PM - 2PM	848	167	0
2PM - 3PM	850	177	0
3PM - 4PM	1032	171	0
4PM - 5PM	1264	213	0
5PM - 6PM	1163	211	0
6PM - 7PM	904	167	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	762	290
12PM - 1PM	801	159
1PM - 2PM	848	167
2PM - 3PM	850	177
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	1032	0
4PM - 5PM	1264	0
5PM - 6PM	1163	0
6PM - 7PM	904	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1264	213	1500

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	1243	0

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	2	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☑ Yes ☐ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☑ Yes ☐ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	762	801	848	850	1,032	1,264	1,163	904
Minor	290	159	167	177	171	213	211	167

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☑ Yes	☐ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	762	801	848	850	1,032	1,264	1,163	904
Minor	290	159	167	177	171	213	211	167

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	2	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

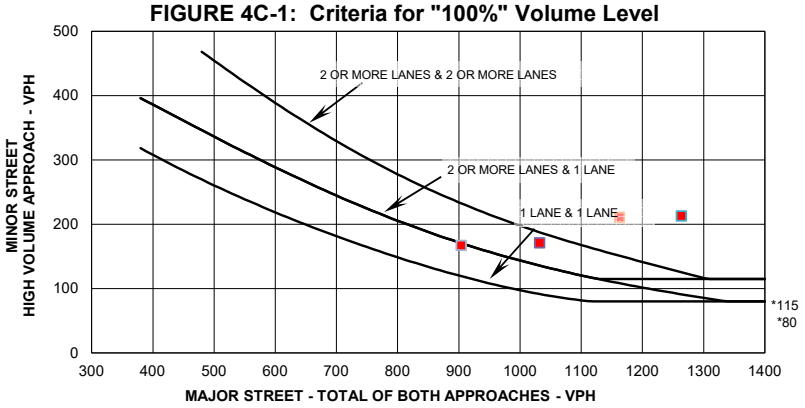
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

FIGURE 4C-1: Criteria for "100%" Volume Level



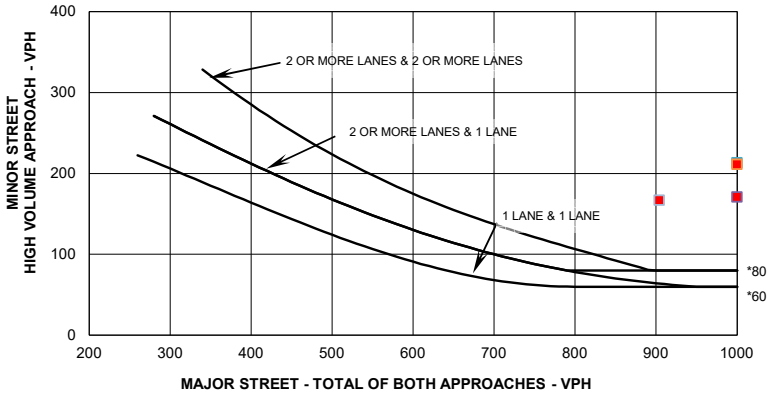
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1032	171
4PM - 5PM	1264	213
5PM - 6PM	1163	211
6PM - 7PM	904	167

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	2	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1264	213

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1264	213

Criteria

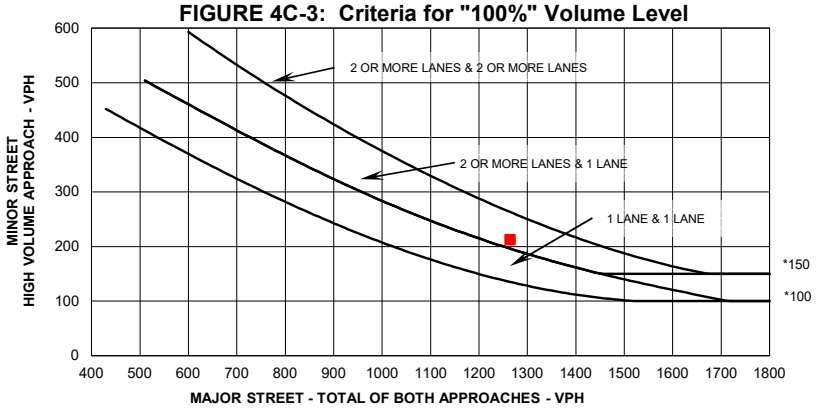
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*	0.0	
Fulfilled?:	☐ Yes ☑ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*	213	
Fulfilled?:	☑ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		1,264
Fulfilled?:	☑ Yes ☐ No	

Plot volume combination on the applicable figure below.

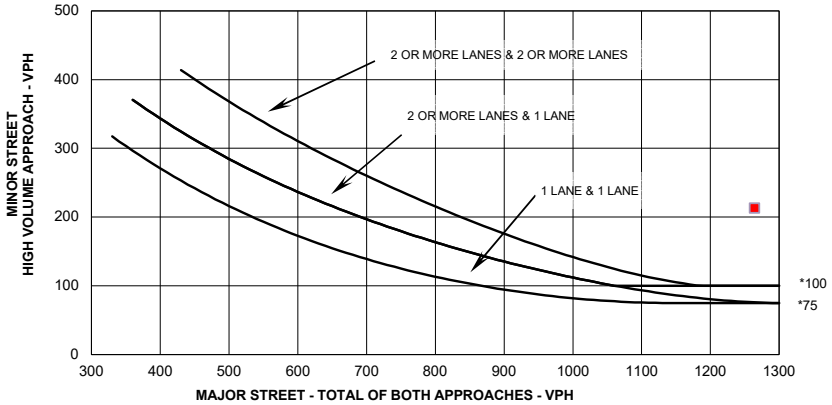
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Cocoa**	Engineer:	**Chris Silver**
County:	**70 – Brevard**	Date:	**December 5, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**2**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

Input Data

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Cocoa**
County: **70 – Brevard**
District: **Five**
Engineer: **Chris Silver**
Date: **December 5, 2022**

Major Street: **Grissom Pkwy**
Minor Street: **Prop. Access Rd**
Major Street # Lanes: **1**
Minor Street # Lanes: **2**
Major Approach Speed: **50**
Minor Approach Speed: **35**

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7AM - 8AM	759	281	0
12PM - 1PM	796	154	0
1PM - 2PM	843	162	0
2PM - 3PM	843	171	0
3PM - 4PM	1024	165	0
4PM - 5PM	1255	206	0
5PM - 6PM	1154	204	0
6PM - 7PM	897	162	0

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7AM - 8AM	759	281
12PM - 1PM	796	154
1PM - 2PM	843	162
2PM - 3PM	843	171
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
3PM - 4PM	1024	0
4PM - 5PM	1255	0
5PM - 6PM	1154	0
6PM - 7PM	897	0

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
4PM - 5PM	1255	206	1484

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
4PM - 5PM	0	0

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	2	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.* ☑ Yes ☐ No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).* ☐ Yes ☑ No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.* ☑ Yes ☐ No

Condition A - Minimum Vehicular Volume

Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☐ Yes	☑ No
80% Satisfied:	☐ Yes	☑ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100%[a]	80%[b]	70%[c]	100%[a]	80%[b]	70%[c]
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7AM - 8AM	12PM - 1PM	1PM - 2PM	2PM - 3PM	3PM - 4PM	4PM - 5PM	5PM - 6PM	6PM - 7PM
Major	759	796	843	843	1,024	1,255	1,154	897
Minor	281	154	162	171	165	206	204	162

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

Condition B - Interruption of Continuous Traffic

Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

Applicable:	☑ Yes	☐ No
100% Satisfied:	☑ Yes	☐ No
80% Satisfied:	☑ Yes	☐ No
70% Satisfied:	☑ Yes	☐ No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	**Minor**	**100%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	**7AM - 8AM**	**12PM - 1PM**	**1PM - 2PM**	**2PM - 3PM**	**3PM - 4PM**	**4PM - 5PM**	**5PM - 6PM**	**6PM - 7PM**
Major	759	796	843	843	1,024	1,255	1,154	897
Minor	281	154	162	171	165	206	204	162

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	2	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

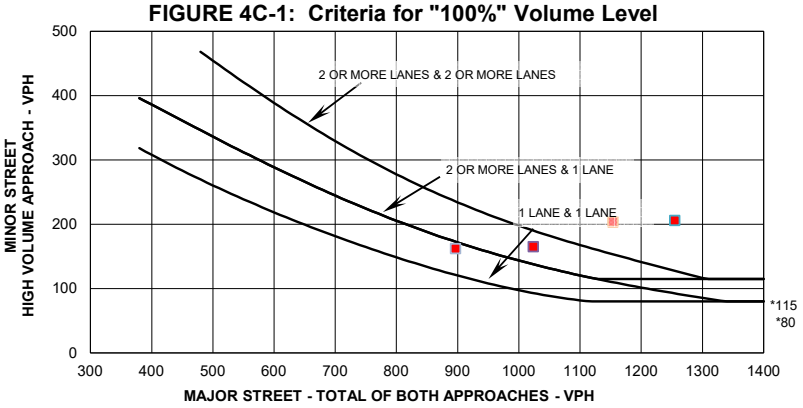
Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

FIGURE 4C-1: Criteria for "100%" Volume Level



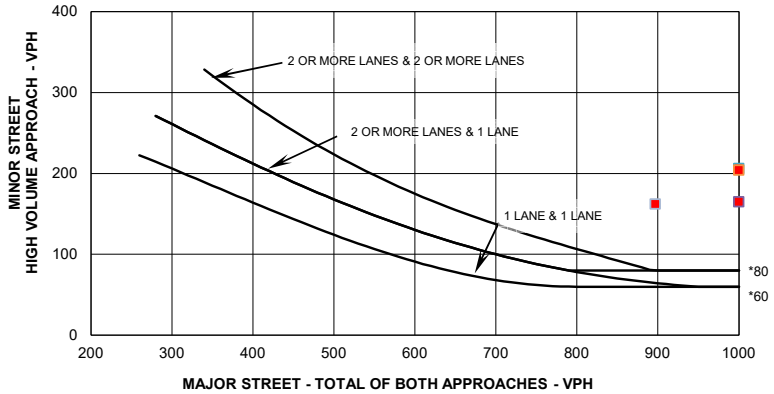
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

70% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
3PM - 4PM	1024	165
4PM - 5PM	1255	206
5PM - 6PM	1154	204
6PM - 7PM	897	162

FIGURE 4C-2: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	Cocoa	Engineer:	Chris Silver
County:	70 – Brevard	Date:	December 5, 2022
District:	Five		

Major Street:	Grissom Pkwy	Lanes:	1	Major Approach Speed:	50
Minor Street:	Prop. Access Rd	Lanes:	2	Minor Approach Speed:	35

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

Volume Level Criteria

1. Is the posted speed or 85th-percentile of major street > 40 mph? ☑ Yes ☐ No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000? ☐ Yes ☑ No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes" ☑ MAY ☑ 70% ☑ 100%

WARRANT 3 - PEAK HOUR

*If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.*

Applicable: ☑ Yes ☐ No
Satisfied: ☑ Yes ☐ No

Unusual condition justifying use of warrant:

Adj. to Amazon Dist. Center

-

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1255	206

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.
4PM - 5PM	1255	206

Criteria

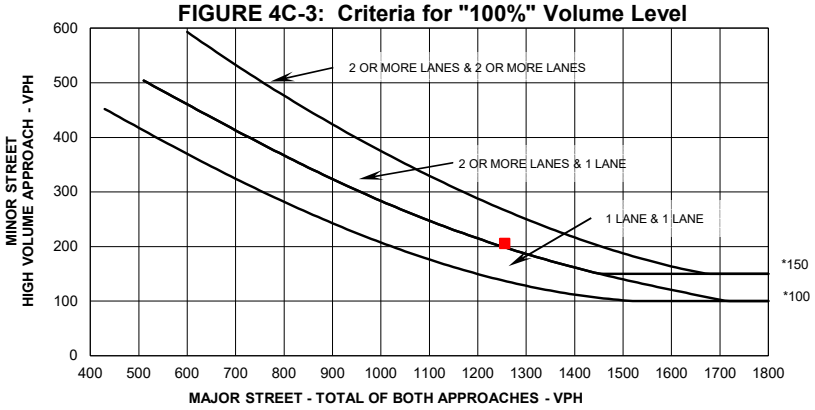
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	☐ Yes ☐ No	

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	☐ Yes ☐ No	

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	☐ Yes ☐ No	

Plot volume combination on the applicable figure below.

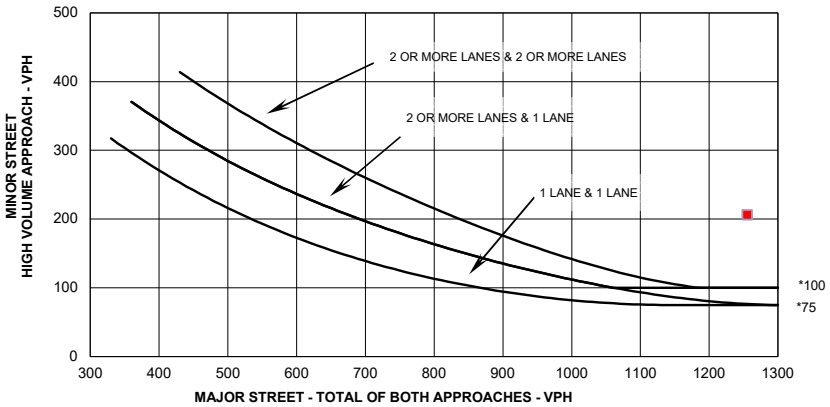
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



** Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City:	**Cocoa**	Engineer:	**Chris Silver**
County:	**70 – Brevard**	Date:	**December 5, 2022**
District:	**Five**		

Major Street:	**Grissom Pkwy**	Lanes:	**1**	Major Approach Speed:	**50**
Minor Street:	**Prop. Access Rd**	Lanes:	**2**	Minor Approach Speed:	**35**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf

CONCLUSIONS

Remarks:

WARRANTS SATISFIED:

Warrant 1	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 2	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 3	☐ Not Applicable	☑ Met	☐ Not Met
Warrant 4	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 5	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 6	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 7	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 8	☑ Not Applicable	☐ Met	☑ Not Met
Warrant 9	☑ Not Applicable	☐ Met	☑ Not Met

Bio-Tech Consulting Inc.
Environmental and Permitting Services

May 27, 2021

Scott A. Nickle
Vice President/Director of Engineering
Civil Services
100 Parnell Street Suite A
Merritt Island, Florida 32953

Proj: Lakes at Cocoa Groves
Brevard County, Florida
Section 10, Township 24 South, Range 35 East
(BTC File #1231-01)

RE: Environmental Assessment/ ERP Narrative

Dear Ms. Hebert:

The purpose of this document is to provide the City of Cocoa with the environmental information associated with the proposed Lakes at Cocoa Groves development. The site is located in the northeast corner of the I-95 and State Road 528 intersection within Section 10, Township 24 South, Range 35 East in Brevard County, Florida (**Figures 1, 2 and 3; Appendix A**). The project site is located within the St. Johns River (Canaveral Marshes to Wekiva) Hydrologic Basin.

USDA-NRCS SOILS

According to the Soil Survey of Brevard County, Florida, prepared by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), eight (8) soil types occur within the project site boundaries (Figure 4). These soil types include the following:

- **Anclote sand, depressional (#2)**
- **Basinger sand (#7)**
- **Holopaw sand (#26)**
- **Myakka sand, 0 to 2 percent slope (#36)**

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Jacksonville Office
11235 St Johns Industrial Pkwy N
Suite 2
Jacksonville, FL 32246

Tampa Office
6011 Benjamin Road
Suite 101-B
Tampa, FL 33634

Vero Beach Office
4445 North A1A
Suite 221
Vero Beach, FL 32963

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Land & Aquatic Management
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

info@bio-techconsulting.com www.bio-techconsulting.com

- **St. John sand, depressional (#55)**
- **Tomoka muck, undrained (#67)**
- **Valkaria sand (#70)**

The following presents a brief description of the soil types mapped for the subject property:

Anclote sand, depressional (#2) is a nearly level, very poorly drained sandy soil found in marshy depressions in the flatwoods, in broad areas on the flood plains, and in poorly defined drainageways. Slope is 0 to 2 percent. The surface layer of this soil type generally consists of black sand about 19 inches thick. In most years the water table for this soil type is within a depth of 10 inches for more than 6 months. In dry seasons it is deeper, but is seldom below a depth of 40 inches. Permeability of this soil type is rapid at all layers and very poorly drained.

Basinger sand (#7) is a nearly level, poorly drained sandy soil found in soughs of poorly defined drainageways and depressions in the flatwoods. The upper 2 inches of the surface layer of this soil type generally consists of very dark gray sand. The lower 6 inches of the surface layer generally consists of grayish brown sand. In most years the water table for this soil type is within a depth of 10 inches for 2 to 6 months of the year, and between 10 and 40 inches for 6 months or more. In dry seasons it is below a depth of 40 inches for short periods. This soil type is occasionally flooded for 2 to 7 days following heavy rains. Permeability of this soil type is very rapid.

Holopaw sand (#26) are nearly level, poorly drained soils on broad river flood plains and low-lying flats and in poorly defined drainageways and small depressions. These soils formed in stratified, sandy and loamy maritime materials. The permeability of Holopaw soil is rapid to a depth of about 45 inches, moderately rapid from 45 to 62 inches, and rapid from 62 to 71 inches.

Myakka sand, 0 to 2 percent slopes (#36) is a nearly level, poorly drained sandy soil found in shallow depressions in the flatwoods. The upper 4 inches of the surface layer of this soil type generally consists of very dark gray sand. The lower 4 inches of the surface layer generally consists of dark gray sand. In most years this soil type is flooded for 6 to 12 months. In dry seasons it is deeper, but is seldom below a depth of 40 inches. The permeability of this soil type is rapid in the sandy layers to a depth of about 22 inches, moderate from about 22 to 46 inches, and rapid from about 46 to 63 inches.

St. Johns soils, depressional (#55) is a nearly level, poorly drained sandy soil on broad low ridges on the flatwoods. The surface layer of this soil type consists of black sand about 11 inches thick. During most years, the water table for this soil type is within a depth of 10 inches of the surface for 2 to 6 months and between 10 and 40 inches of the surface for the rest of the time. The

permeability of this soil type is moderate in the weakly cemented layers and rapid in all other layers.

Tomoka muck, undrained (#67) is a nearly level, very poorly drained muck soil in broad flat marshes, small depressions, and swamps. Sandy and loamy layers are at a depth of 16 to 40 inches. The water table is within a depth of 10 inches for 9 to 12 months in most years, and water is frequently above the surface. In dry periods it is between 10 and 30 inches.

Valkaria sand (#70) is a nearly level, poorly drained soil in grassy sloughs, low palm hammocks and broad low areas. This soil type is frequently flooded for periods of 2 to 7 days following heavy rains. The water table is within a depth of 10 inches for 2 to 6 months of most years. In dry periods it is within a depth of 30 inches most of the time. The permeability of this soil type is rapid.

The Florida Association of Environmental Soil Scientists (FAESS) considers Anclote sand, depressional (#2), Basinger sand (#7), Holopaw sand (#26), St. Johns sand, depressional (#55), Tomoka muck, undrained (#67), and Valkaria sand (#70) to be a hydric soils. This information can be found in the Hydric Soils of Florida Handbook, Fourth Edition, March 2007.

LAND USE TYPES/VEGETATIVE COMMUNITIES

The Lakes of Canaveral Groves Stormwater Pond property currently supports six (6) land use types/vegetative communities. The upland land use types would be classified as Hardwood-Conifer Mixed (434) and Upland Scrub, Pine and Hardwoods (436). The wetland land use types/surface waters would be classified as Reservoirs between 10 – 100 acres in size (533),Wetland Forested Mix (630), Vegetated Non-Forested (640) and Freshwater Marsh (641). These areas were mapped using the Florida Land Use, Cover and Forms Classification System, Level III (FLUCCS, FDOT, 1999) (**Figure 5**). The following provides a brief description of the land use type/vegetative communities identified on the site:

Uplands

411 Pine Flatwoods

The majority of the upland areas on the subject site are best described as Pine Flatwoods (411) being comprised mainly of slash pine (*Pinus elliottii*) with a saw palmetto (*Serenoa repens*) understory. Within these natural pine areas, more dense areas are found along the forested wetland systems with a canopy of hardwoods establishing within the pine flatwoods. Vegetation observed within this land use type includes juvenile pine species, scattered cabbage palms (*Sabal palmetto*),

live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), saw palmetto (*Serenoa repens*), wiregrass (*Aristida stricta*), gallberry (*Ilex glabra*), loblolly bay (*Gordonia lasianthus*), shiny blueberry *(Vaccinium myrsinites)*, broomsedge bluestem (*Andropgon virginicus*), greenbriar (*Smilax* spp.), blackberry (*Rubus pensilvanicus*), rusty staggerbush (*Lyonia ferruginea*), wax myrtle (*Myrica cerifera*), dahoon holly (*Ilex cassine*), fetterbush (*Lyonia lucida*), muscadine grapevine (*Vitis rotundifolia*), and brackenfern (*Pteridium aquilinum*).

436 Upland Scrub, Pine and Hardwoods

Along the eastern boundary of the subject site is a community most consistent with the Upland Scrub, Pine and Hardwoods (436) FLUCFCS classification. Vegetative species observed include cabbage palm (*Sabal palmetto*), laurel oak (*Quercus laurifolia*), chapman oak (*Quercus chapmanii*), slash pine (*Pinus elliottii*), saw palmetto (*Serenoa repens*), american beautyberry (*Callicarpa americana*), gallberry (*Ilex glabra*), brackenfern (*Pteridium aquilinum*), shiny blueberry *(Vaccinium myrsinites)*, broomsedge bluestem (*Andropgon virginicus*), greenbriar (*Smilax* spp.), blackberry (*Rubus pensilvanicus*), rusty staggerbush (*Lyonia ferruginea*), wax myrtle (*Myrica cerifera*), dahoon holly (*Ilex cassine*), fetterbush (*Lyonia lucida*), and muscadine grapevine (*Vitis rotundifolia*). Soils within this community are more sandy and much less organic.

Wetlands

533 Reservoirs, 10 – 100 acres in size

Two man-made lakes are located within the project limits . The smaller of the lakes was likely excavated for fill during the construction of I-95 or State Road 528. The embankment of the surface water is vegetated with primrose willow (*Ludwigia peruviana*), yelloweyed grass (*Xyris* spp.), wax myrtle (*Morella cerifera*), spadderdock (*Nuphar* spp.), St. Johns Wort (*Hypericum fasciculatum*), and cattails (*Typha* spp.). The larger lake was permitted and constructed under SJRWMD Permit 158236-1 and is presently under construction.

630 Wetland Forested Mix

Forested wetlands are located centrally within the project site and along the southern boundary. Vegetation observed within this community type includes slash pine (*Pinus elliottii*), dahoon holly (*Ilex cassine*), laurel oak (*Quercus laurifolia*) canopy, dense cabbage palms (*Sabal palmetto*), loblolly bay (*Gordonia lasianthus*), southern magnolia (*Magnolia grandiflora*), saw palmetto (*Serenoa repens*), wiregrass (*Aristida stricta*), gallberry (*Ilex glabra*), fetterbush (*Lyonia lucida*), cinnamon fern (muscadine grapevine (*Vitis rotundifolia*), and brackenfern (*Pteridium aquilinum*),

wax myrtle (*Myrica cerifera*), greenbriar (*Smilax* spp.), nut-rush (*Scleria* spp.), swamp fern *(Blechnum serrulatum)*, yelloweyed grass (*Xyris* spp.), spike rush (*Eleocharis* spp.), St. Johns Wort (*Hypericum fasiculatum*), and blackberry (*Rubus pensilvanicus*).

640 Vegetated Non-Forested

Located along the northern boundary is an herbaceous and shrubby wetland system that has been adversely affected hydrologically by the adjacent canal. Due to the drawdown effect, this wetland consists of a low quality wetland with an inconsistent and low to moderaty hydrologic regime. Shrubby vegetation includes bushy bluestem (*Andropogon glomeratus*), broomsedge bluestem (*Andropogon virgincus*), saw palmetto (*Serenoa repens*), blackberry (*Rubus pensilvanicus*), rusty staggerbush (*Lyonia ferruginea*), wax myrtle (*Morella cerifera*), muscadine grapevine (*Vitis rotundifolia*). This wetland exhibits a very poor hydroperiod due to the influence of the adjacent canal and ditch that serves to drain this portion of the wetland system.

641 Freshwater Marsh

Freshwater marsh wetlands are embedded within the forested uplands and wetlands. Community types fitting the FLUCFCS description of Freshwater Marsh (641) are found in western portions of the site. These areas are vegetated primarily by maidencane (*Panicum hemitomon*) and St. John's wort (*Hypericum fasciculatum*). Other species observed included wax myrtle (*Myrica cerifera*), buttonbush (*Cephalanthus occidentalis*), narrow plume grass (*Saccharum baldwinii*), pickerelweed (*Pontedaria cordata*), duck potato (*Sagittaria latifolia*), (primrose willow (*Ludwigia peruviana*), red ludwigia (*Ludwigia repens*), camphorweed (*Pluchea* sp.), meadowbeauty (*Rhexia* sp.) mermaidweed (*Proserpinaca* sp.) yellow eyed grass (*Xyris* spp.) and sphagnum moss (*Sphagnum* sp.). This wetland hydroperiod is controlled by the SR 528 ditch system which drains the wetland east to the canal system. The averaged SHWL is 21.55' NAVD.

WILDLIFE AND PROTECTED SPECIES

Utilizing methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); and Florida Fish and Wildlife Conservation Commission's (FFWCC) Gopher Tortoise Permitting Guidelines (May 2017), an assessment for "listed" floral and faunal species occurring within the subject site boundaries was conducted on between September 2017 and August 2022. The surveys included both direct observations and indirect evidence, such as tracks, burrows, tree markings and vocalizations that indicated the presence of species observed. The assessment focused on

species that are "listed" by the FFWCC's - Florida's Endangered Species and Threatened Species (December 2022) that have the potential to be found in Brevard County (**Table 1; Appendix B**).

No plant species "listed" by either the Florida Department of Agriculture and Consumer Services (FDACS) or the U.S. Fish and Wildlife Service (USFWS) was identified on the site during the assessment conducted by BTC. The following is a list of those wildlife species identified during the evaluation of the site.

Reptiles and Amphibians:
black racer (*Coluber constrictor*)
brown anole (*Anolis sagrei*)
cottonmouth (*Agkistrodon piscivorus*)
Florida softshell (*Apalone ferox*)
Florida Red-bellied Turtle (*Pseudemys nelsoni*)
gopher tortoise (*Gopherus polyphemus*)*
green treefrog (*Hyla cinerea*)
green anole (*Anolis carolinensis*)
southern black racer (*Coluber constrictor priapus*)
southern leopard frog (*Rana sphenocephala*)

Birds:
American Robin (*Turdus migratorius*)
Anhinga (*Anhinga anhinga*)
Belted Kingfisher (*Megaceryle alcyon*)
Blue-Gray Gnatcatcher (*Polioptila caerulea*)
Blue Jay (*Cyanocitta cristata*)
Cattle Egret (*Bubulcus ibis*)
Common Ground-Dove (*Columbina passerina*)
Eastern Phoebe (*Sayornis phoebe*)
Gray Catbird (*Dumetella carolinensis*)
Great Blue Heron (*Ardea herodias*)
Great Egret (*Ardea alba*)
Kildeer (*Charadruis vociferous*)
Mourning Dove (*Zenaida macroura*)
Northern Bobwhite (*Colinus virginianus*)
Northern Mockingbird (*Mimus polyglottos*)
Northern Cardinal (*Cardinalis cardinalis*)
Palm Warbler (*Dendroica palmarum*)
Pine Warbler (*Dendroica pinus*)

Red-tail Hawk (*Buteo jamaicensis*)
Red-shouldered Hawk (*Buteo platypterus*)
Turkey Vulture (*Cathartes aura*)
White Ibis (*Eudocimus albus*)
Wood Stork (*Mycteria Americana*) *
Yellow-Rumped Warbler (*Dendroica coronata*)

Mammals:
armadillo (*Dasypus novemcinctus*)
bobcat (*Lynx rufus*)
common raccoon (*Procyon lotor*)
eastern cottontail rabbit (*Sylvilagus floridanus)*
eastern gray squirrel (*Sciurus carolinensi*)
feral hogs (*Sus scrofa*)
raccoon (*Procyon lotor*)
Virgina opossum (*Didelphis virginiana*)

Two of the above identified species are listed in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (December 2018):

Gopher Tortoise (Gopherus polyphemus)
State Listed as "Threatened" by FFWCC

Currently the gopher tortoise (Gopherus polyphemus) is classified as a "Category 2 Candidate Species" by USFWS, and as of September 2007 is now classified as "Threatened" by FFWCC. The basis of the "Threatened" classification by the FFWCC for the gopher tortoise is due to habitat loss and destruction of burrows. Gopher tortoises are commonly found in areas with well-drained soils associated with the pine flatwoods, pastures and abandoned orange groves. Several other protected species have a possibility of occurring in this area, as they are gopher tortoise commensal species. However, none of these commensal species were observed during the survey conducted.

The subject property was surveyed for the existence of gopher tortoises through the use of pedestrian transect. The survey covered approximately 100% of the suitable habitat present within the subject property boundaries and confirmed the presence of this species on-site. Prior to the start of construction, the developer will relocate all tortoises in accordance to an issued Gopher Tortoise Conservation Permit.

Wood Stork (Mycteria americana)
Federally Listed as "Threatened" by USFWS

The subject site is shown to be located within a Wood Stork Nesting Colony Core Foraging Area. Wood Storks typically nest colonially in medium to tall trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991; Rodgers et al. 1996). The Wood Stork *(Mycteria americana)* is listed as "Threatened" by the USFWS. Successful breeding sites are those that have limited human disturbance and low exposure to land-based predators. Because of their specialized feeding behavior, Wood Storks forage most effectively in shallow-water areas with highly concentrated prey. Typical foraging sites for the Wood Stork include freshwater marshes, depressions in cypress heads, swamp sloughs, managed impoundments, stock ponds, shallow-seasonally flooded roadside or agricultural ditches and narrow tidal creeks or shallow tidal pools. Good foraging conditions are characterized by water that is relatively calm, open, and having water depths between 5 and 15 inches (5 and 38 cm). The U.S. Fish and Wildlife Service (Service) has identified core foraging area (CFA) around all known Wood Stork nesting colonies that is important for reproductive success. In Central Florida, CFAs include suitable foraging habitat (SFH) within a 15-mile radius of the nest colony; CFAs in North Florida include SFH within a 13-mile radius of a colony. The Service believes loss of suitable foraging wetlands within these CFAs may reduce foraging opportunities for the Wood Stork.

Based on our review of available databases, there is no record of a Wood Stork rookery on the project site or within close proximity. The USFWS and the U.S. Army Corps of Engineers/FDEP require that any impacts to on-site ditches and/or wetlands, which would eliminate a portion of the Wood Stork foraging habitat, be either mitigated through the purchase of mitigation credits or recreated elsewhere on-site so that there would be no net loss of Wood Stork foraging habitat. Mitigation for the loss of herbaceous marsh wetland impacts will be mitigated on-site through the preservation of the larger wetland marsh, as well as the purchase of mitigation bank credits from TM Econ Mitigation Bank Phase 1-3. Remaining on-site wetlands will continue to support foraging habitat for this species, along with other wading bird species.

Other relevant species:

***Bald Eagle* (*Haliaeetus leucocephalus*)**
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer

protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (*Haliaeetus leucocephalus*).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. In November of 2017, the FFWCC issued "A Species Action Plan for the Bald Eagle" in response to the sunset of the 2008 Bald Eagle Management Plan. Under the USFWS's management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. As provided within the above referenced Species Action Plan, the USFWS is the regulating body responsible for issuing permits for Bald Eagles. In 2017, the need to obtain a State permit (FFWCC) for the take of Bald Eagles or their nests in Florida was eliminated following revisions to Rule 68A-16.002, F.A.C. A USFWS Bald Eagle "Non-Purposeful Take Permit" is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest without a USFWS permit.

In addition to the on-site evaluation for "listed" species, BTC conducted a review for any FFWCC recorded Bald Eagle nests on or within the vicinity of the project site. This review revealed that there are no Bald Eagle nests within one (1.0) mile of the site. As such, no developmental constraints are anticipated with respect to Bald Eagle nests.

SITE PLAN ANALYSIS

The project site contains a total of 129.828 acres of wetlands and other surface waters. These consist of 71.658 acres of forested and herbaceous wetlands and 58.170 acres of a man-made lakes and canals (**ERP Wetland Table 1, Appendix C**). The man-made lake (SWC) is currently under construction and permitted under SJRWMD Permit 158236-1. The 16.020-acre SW D is a historical borrow pit likely constructed for fill for State Road 528 or I-95. Off-site canals and ditches surround 75% of the project. The proposed project consists of the construction of a stormwater management system to serve a single-family residential community with parks, recreational sports facilities and community clubhouse.

In order to construct the project, the Applicant proposes to impact a total of 41.634 acres of wetlands and other surface waters which consists of 40.338 acres of on-site and off-site wetlands (W3), 0.204-acre of the existing man-made borrow pit and 0.254-acre of surface water impact to the off-site, but adjacent, canal system (**Figure 7**). Based on field assessments, a calculated Total

Functional Loss of -23.715 units was assessed overall (**UMAM Summary Table, Appendix D**). Compensatory mitigation consists of two separate mitigation elements: off-site mitigation land donation to SJRWMD at Kemcho Mitigation Tract and the purchase of 14.00 credits from TM Econ Mitigation Bank Phases 1-3. This mitigation plan provides an overall Functional Gain of 23.815 units.

Wetlands and Other Surface Waters Impacts

Wetland 1

Historically, this wetland system consisted of an isolated wetland system. Man-made activities on the project site and the construction of the adjacent highway systems resulted in a severed wetland system ditched to the eastern canal system. This wetland is also connected to the smaller borrow pit located in the northwest corner of the project site. With possible drainage pattern changes from development and improvements along SR 528 and the construction of the Brightline Train, Wetland 1 and the borrow pit have overtopped the borrow pit embankment and created a second outfall located to the northern canal. This canal system eventually discharges west to the St. Johns River system. This drainage network to the north and east has reduced the overall hydroperiod of this wetland system. The historical limits of this system have been separated into two systems bisected through the construction of State Road 528, leaving the two systems hydrologically connected through one small culvert. This wetland system has been isolated in the regional landscape by the major roadways that abut the site and the adjacent single-family community. As such, its use as a wildlife corridor has been significantly reduced. The historic watershed supporting this system has been reduced by the highway system and large canal network. Overall, wildlife opportunities have been reduced to local wildlife and avifauna. It is unlikely that wildlife would deviate from the nearby St. Johns River System or Indian River Lagoon to utilize this area for foraging, denning or nesting opportunities.

Wetland impact W1-1 is located in the northwest area of the wetland and consists mostly of mixed hardwoods and conifer species with portions consisting of shrubby herbaceous wetland areas. This impact area consists of the edge of the wetland system and is connected to a small borrow area constructed likely for the I-95 fill material. The wetland area is restricted to a shallow and shortened hydroperiod owing to the elevated topography and drainage effects State Road 528 ditch that drains the overall wetland system. This wetland impact totals 6.584 acres is size.

Wetland impact W1-2 is located along the southwestern and southern extent of the wetland and totals 9.362 acres. Portions of this wetland area contains some ditching and abuts State

Road 528. Historically, this wetland extended off-site to the south, but was bisected by the construction of State Road 528. Due to the location of the Brightline Train pond on the property and already existing borrow pits, the project lot and roadway design are limited to the western half of the property. This section of the wetland experiences significant secondary impacts from the adjacent roadway network due to direct drainage and noise.

Wetland impact W1-3 is the northeastern leg of the wetland system that extends northeast to the northern canal and totals 19.598 acres. Historically, this wetland continued off-site north before it was bisected by the canal system. The remaining northern extent of the wetland was filled as more homes were built in the Canaveral Groves area. This wetland consists of hydric pine flatwoods and shrubby herbaceous wetlands. The hydroperiod of the herbaceous portion of the wetland is adversely affected by both the adjacency of the canal, but a breach in the uplands provides for direct drainage and lowering of the wetland hydroperiod. Due to topography, the hydric pine flatwoods portions of the wetland drain south to the main wetland system. A series of dirt trails bisect this portion of the wetland system and allow for drainage of the wetlands.

Wetland Impact W1-4 is located along the I-95 ramp from SR 528. This herbaceous wetland does receive runoff from I-95, but is secondarily impacted by noise from the interstate and ramp. While this wetland consists of native wetland vegetation, an increase of Chinese tallow will only increase in the future. To accommodate needed stormwater and some lots, this application proposes 4.794 acres of impact for this wetland.

Wetland 3

Wetland W3 impact is situated between I-95 and a small man-made borrow pond. This wetland system provides low quality habitat owing to its adjacency to the interstate and hydrologic connectivity to the borrow pond which serves to prevent adequate attenuation. This wetland is 1.296 acres in size with approximately 1.193 acres being located within the project limits. The site plan proposes to impact 1.193 acres of this wetland, leaving 0.103 acre undisturbed. As the remaining off-site wetland is less than 0.50-acre in size and isolated, mitigation will be provided for the entire 1.296-acre wetland.

Secondary Impacts

Due to site constraints and the centrally located wetland system, secondary impacts were assessed based on the proposed site plan and mitigation proposed. Secondary impacts have been assessed along the proposed site development around Wetland 1 from lot development. Split rail fencing

will be installed at the top of bank of the rear lot boundary with conservation easement signage at the intersection of every other lot. The embankment from the rear lot to the wetland will be 20-ft wide with 5:1 slope grading down to the remaining wetland. As this created buffer will not be part of the lots and will be platted as conservation. Canopy species are anticipated to naturally recruit into this buffer area. Additionally, secondary impacts are estimated from the construction of a pier through the remaining wetland. Secondary impacts area anticipated to be minimal as pedestrian traffic should be infrequent and construction of the pier will be constructed at a height above the SHWL to prevent shading of the wetland vegetation. For the proposed pier, 2.936 acres of secondary impacts are anticipated to Wetland 1. A 35-ft impact zone was used to calculate the secondary impact from the edge of the pier railing.

Elimination and/or Reduction of Wetland Impacts

In consideration of the centralization of the wetlands/surface waters and access needs to available uplands, avoidance and minimization was not possible. With the regional fragmentation of the wetland systems by I-95, State Road 528, surrounding single-family residences and the large canal systems, the wetlands have been isolated in the regional landscape and hydrology adversely altered. The large wetland system is drained to the north by the large canal system and to the south along State Road 528 with eventual discharge to the Canaveral Groves canal system. These physical and hydrologically altering factors have diminished the diversity of species capable of utilizing the wetland systems and the overall functional value of these wetland systems for wetland and wildlife functions. With the placement of the existing borrow areas, avoiding wetland impacts was not possible in order to have a feasible project to serve housing needs of Brevard County. As these wetlands do not offer any unique characteristics within the landscape, the mitigation of the proposed wetland impacts off-site will provide for better long-term ecological benefits within the basin as a whole. Wildlife functions needed for foraging, denning and nesting habitat will remain on-site with the preservation of the remaining 28.195 acres of forested and herbaceous wetlands.

Mitigation

<u>Kemcho Mitigation</u>

The Kemcho Tract is located east of the Deep Creek Preserve (SJRWMD owned) within Sections 26 and 35, Township 17S and Range 31 East in Volusia County, Florida and totals approximately 1,000 acres (**Appendix E**). This property is located within the St. Johns River (Canaveral Marshes to Wekiva) Hydrologic Basin (18). Lands donated as part of the Kemcho Tract will be part of a 30-mile wetland and wildlife corridor that extends through Volusia and Flagler Counties containing almost 11,000 acres of forested and herbaceous wetlands, as well as uplands. To offset

proposed impacts, the Applicant proposes the preservation and donation of forested uplands and wetlands to SJRWMD.

The Kemcho Tract had been historically proposed as a large lot ranch style single-family development, as well as proposed for purchase by SJRWMD. The site has been managed with appropriate land management activities ensuring proper upland pine densities throughout the site. The preservation and donation to SJRWMD of lands within the Kemcho Tract is an important piece of the regional conservation lands and extends SJRWMD conservation lands ownership. The preservation of the property prevents future development along State owned lands and prevents nuisance and exotic proliferation from the development of the single-family lots. A management fund of $500.00 per acre will be provided to fund the District's management activities. A Phase 1 Environmental Site Assessment report will be provided during the donation process. A title insurance policy insured to SJRWMD will be provided once the mitigation has been accepted and a sketch and legal description can be created. Donation will be completed prior to the implementation of the wetland impacts.

The provided UMAM scoring has been reviewed and approved by SJRWMD. The acreages depicted in the UMAM Summary reflect the mitigation acreages for the wetland and upland communities within the specific mitigation tract to be preserved for the Lakes at Cocoa Grove project. A total of 50.13 acres of forested wetlands and uplands will provide compensatory mitigation resulting in a Functional Gain of 9.815 units. As noted on the provided mitigation figures, the acreages for the on-site trails are not included in the mitigation assessment. These trails total 1.23 acres. As such, the total donation to SJRWMD will be 51.36 acres.

<u>TM Econ Mitigation Bank</u>

To complete the overall mitigation plan, the Applicant will purchase 14 credits from TM Econ Mitigation Bank Phases 1-3 (**Appendix F**). The TM Econ Mitigation Bank Phase 1-3 is approximately 3,900 acres in size and is the headwaters to the Econlockhatchee River. This river is also part of the larger, regional corridor of the St. Johns River. This property has been managed and enhanced for the benefit of increasing habitat quality and listed species through upland land management activities such as prescribed fire and wetland enhancement through hydrologic enhancement of historic drained ditches and habitat management. The purchase of credits at TM Mitigation Bank is the participation in a program that provides critical habitat to the basin as a whole in terms of increasing habitat acreage, increasing habitat functions and preservation of listed wildlife species and provides better, long-term ecological beneficial habitat to a wider array of wildlife species than the Lakes at Cocoa Grove wetlands provide.

Cumulative Impacts

The overall functional loss of the proposed wetland impacts is -23.71 units and the overall functional gain of the mitigation plan provides 23.815 units. As the mitigation and impact areas are within the same basin and the mitigation compensates for the functional loss, there will be no unacceptable cumulative impact to Basin 18.

On-site Preservation

While not used as mitigation for the proposed wetland impacts, 30.127 acres of wetlands will remain on-site. These wetlands will continue to provide for habitat for local wildlife and wading bird species.

Division of Historical Resources

The Division of Historical Resources has determined that the project will have no effect on cultural resources listed, or eligible for listing in the National Register Historic Places (NRHP), or otherwise of archaeological significance within the survey area (**Appendix G**).

Erosion & Sediment Control

The applicant will implement and maintain erosion and sediment control measures both prior to and during the proposed project. This practice will ensure that no adverse water quality impacts to receiving waters and adjacent lands will occur during the proposed work. Control measures will retain sediment on-site and prevent potential violations of State standards. Practices incorporated will be in accordance with Chapter 6 of the Florida Land Development Manual: A Guide to Sound Land and Water Management. Details of the erosion and sediment control measures are included on the construction plans.

Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

Stephanie Salvilla

Stephanie Salvilla
Project Manager

Bio-Tech Consulting Inc.
Environmental and Permitting Services

Attachments

Appendix A:	Figures	Page 15
Appendix B:	Brevard County Wildlife Table 1	Page 24
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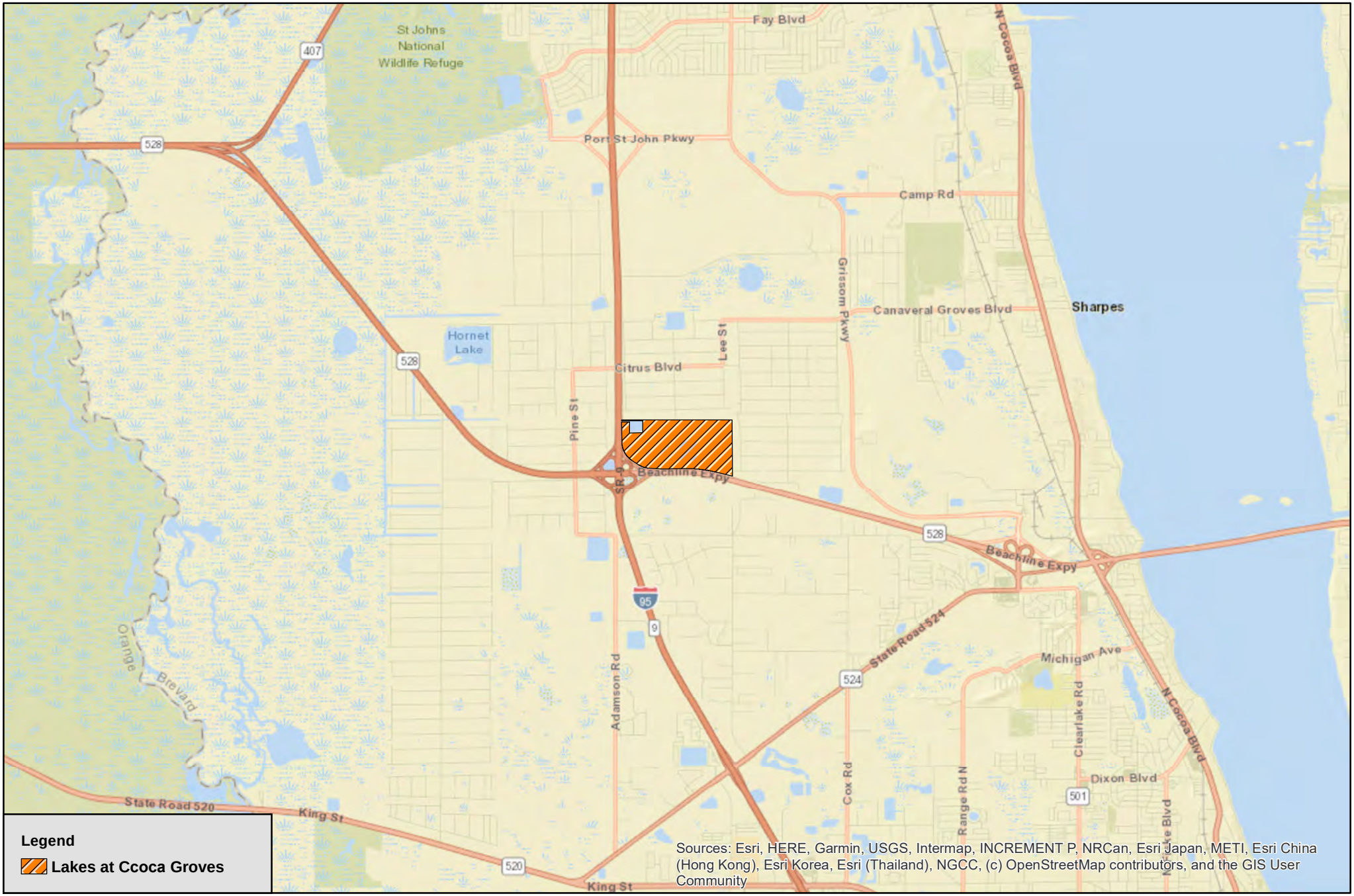
APPENDIX A – FIGURES



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Lakes at Cocoa Groves
Brevard County, Florida
Figure 1
Location Map

1 Miles

N W E S

Project #: 1231-01
Produced By: SAS
Date: 4/13/2021

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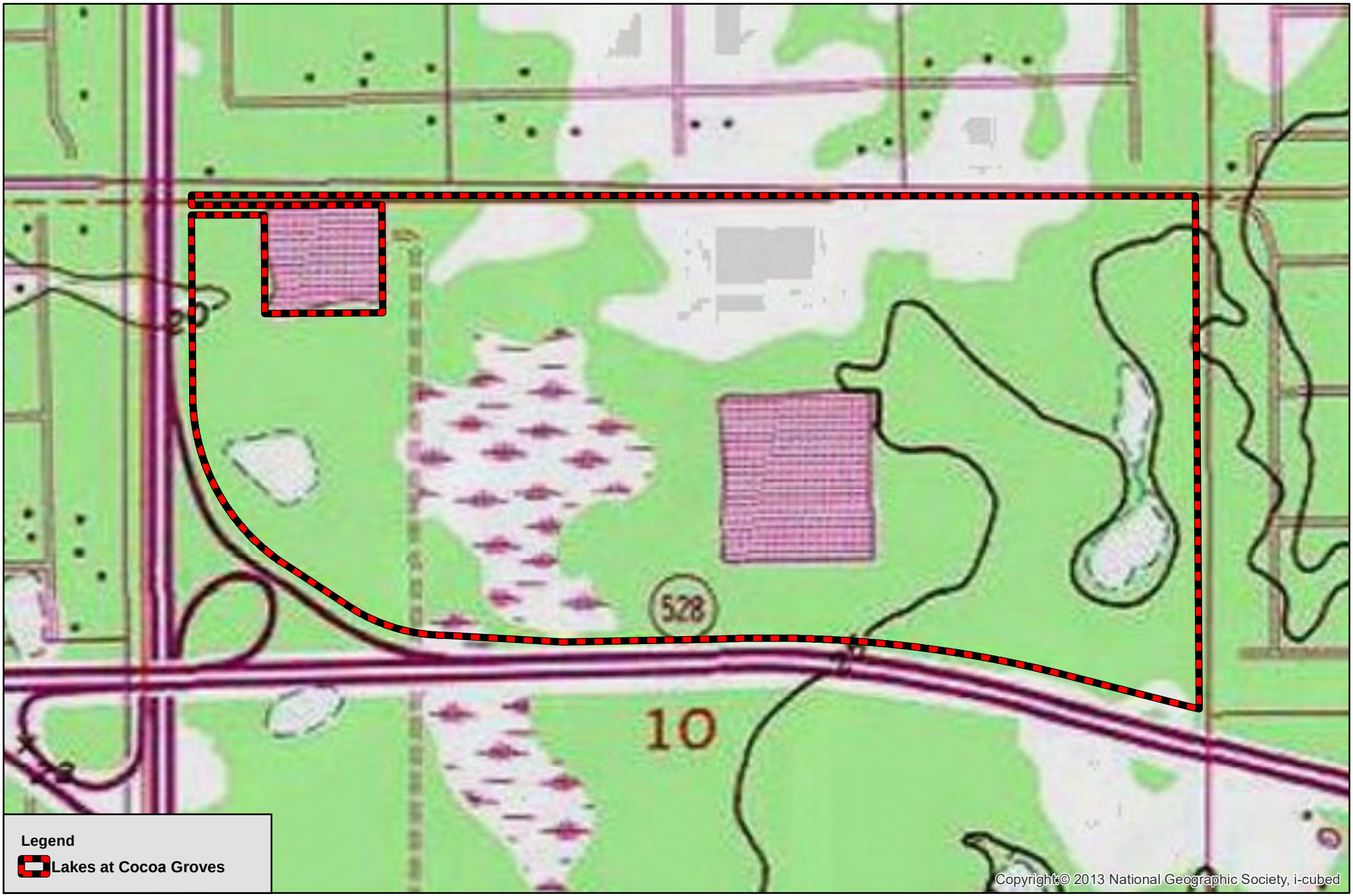
Lakes at Cocoa Groves
Brevard County, Florida
Figure 2
2020 Aerial Map

1,000 Feet

N
W E
S

Project #: 1231-01
Produced By: SAS
Date: 4/13/2021



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Environmental and Permitting Services
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Lakes at Cocoa Groves
Brevard County, Florida
Figure 3
USGS Topographic Map

1,000 Feet

N W E S

Project #: 1231-01
Produced By: SAS
Date: 4/13/2021

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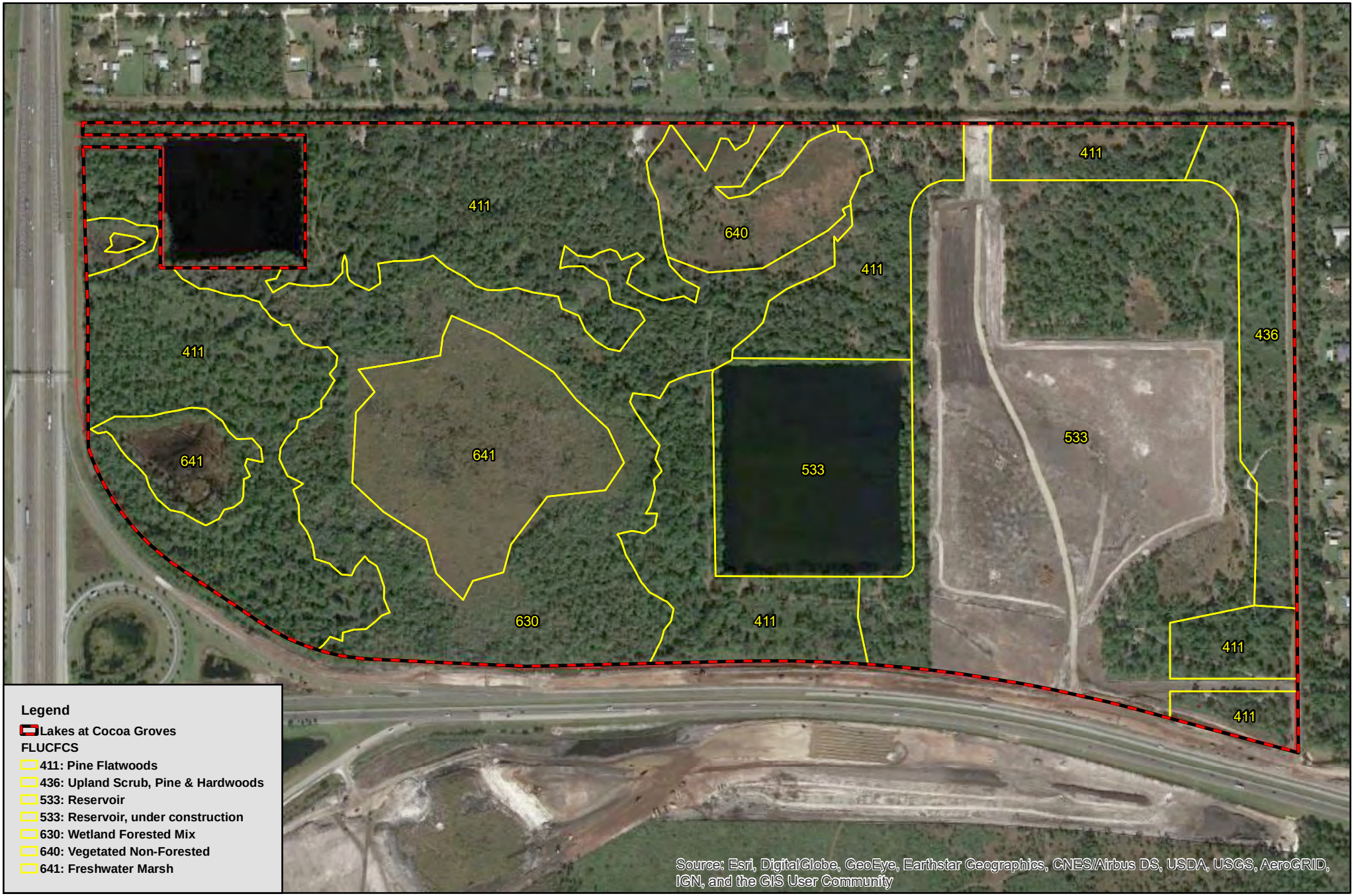
Lakes at Cocoa Groves
Brevard County, Florida
Figure 4
NRCS USDA Soils Map

1,000 Feet

N
W E
S

Project #: 1231-01
Produced By: SAS
Date: 4/13/2021



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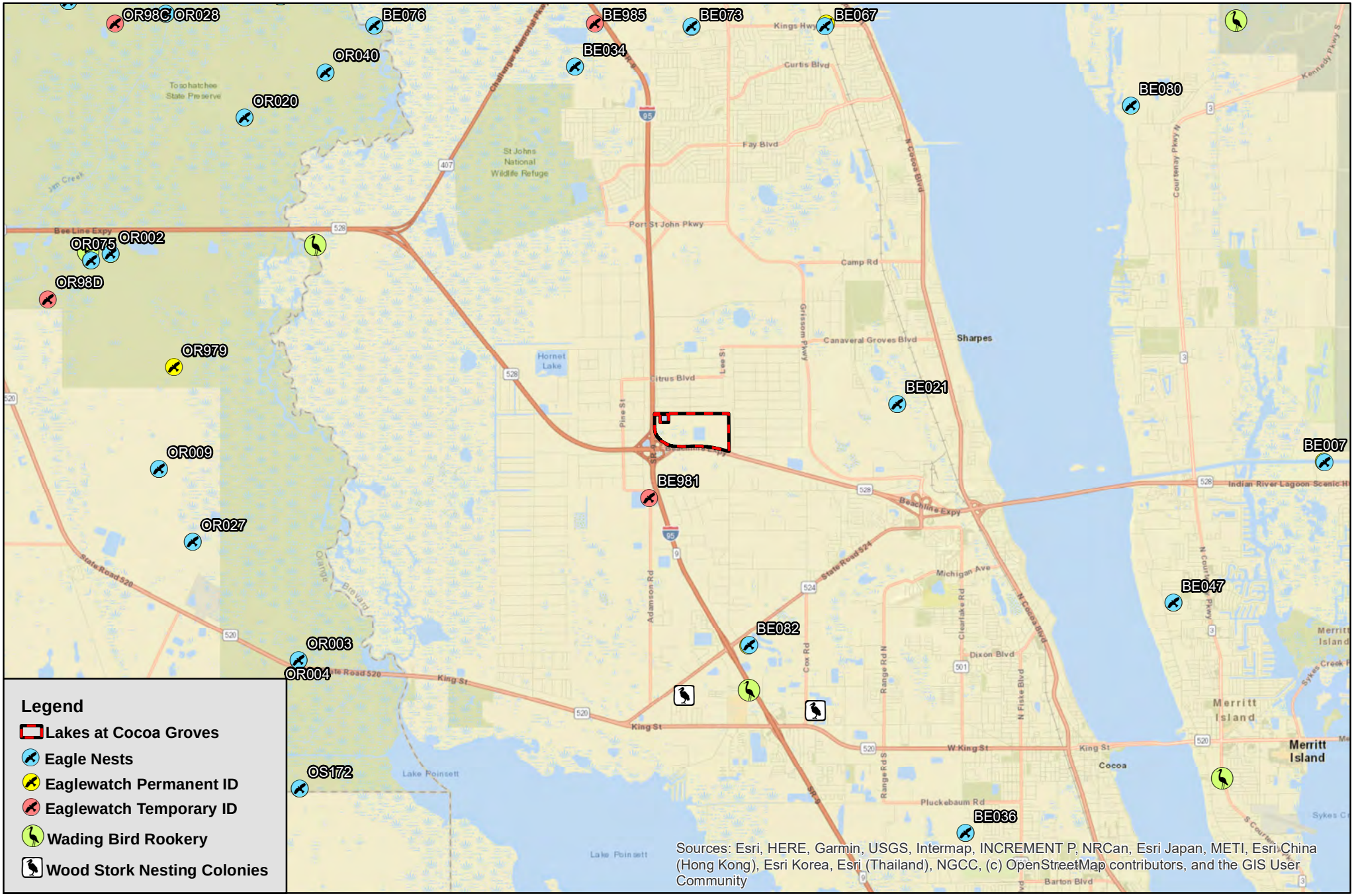
Lakes at Cocoa Groves
Brevard County, Florida
Figure 5
FLUCFCS Map

1,000 Feet

N W E S

Project #: 1231-01
Produced By: SAS
Date: 5/13/2021



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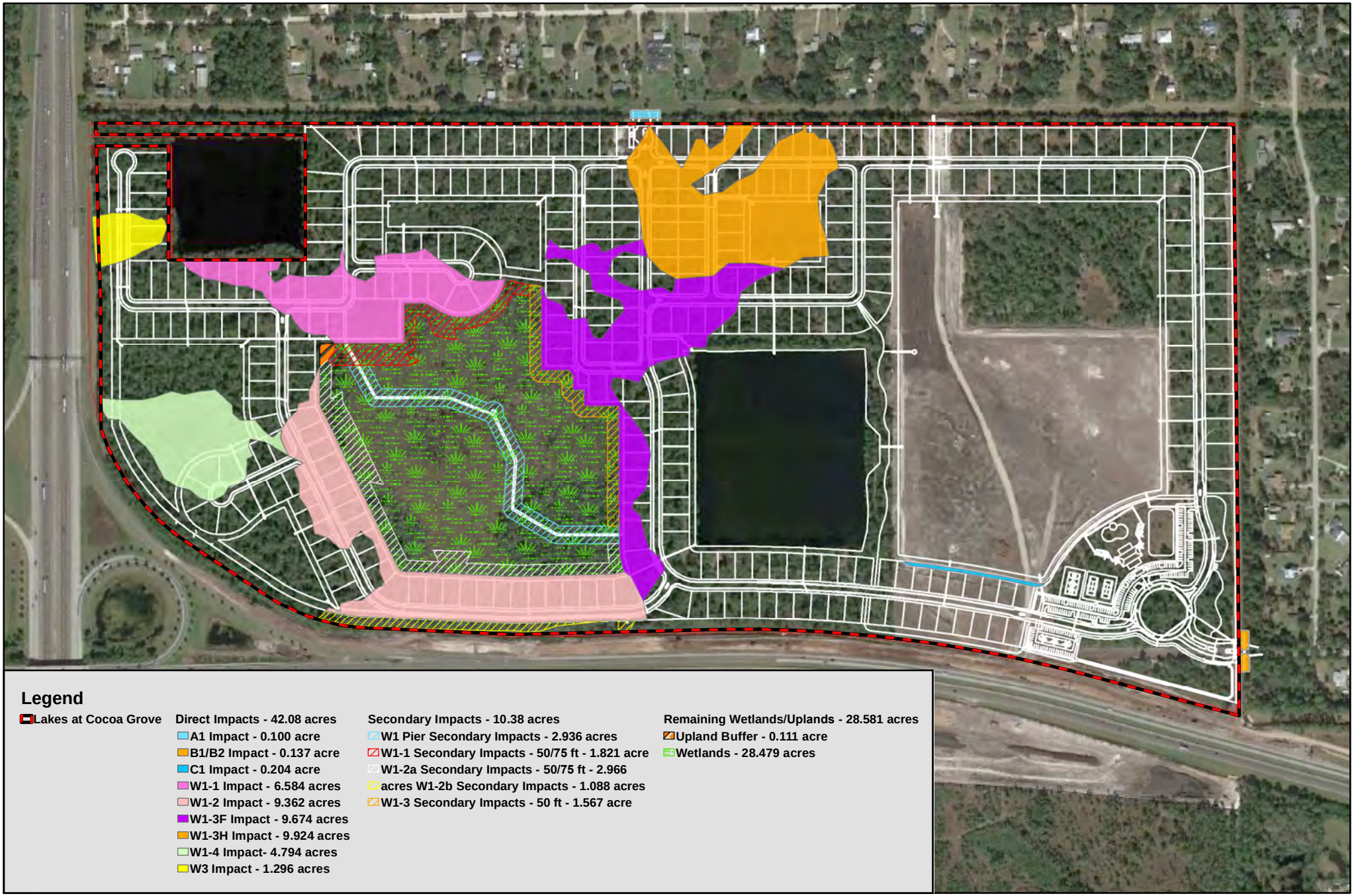
Lakes at Cocoa Groves
Brevard County, Florida
Figure 6
Wildlife Map

14,000 Feet

N W E S

Project #: 1231-01
Produced By: SAS
Date: 4/13/2021



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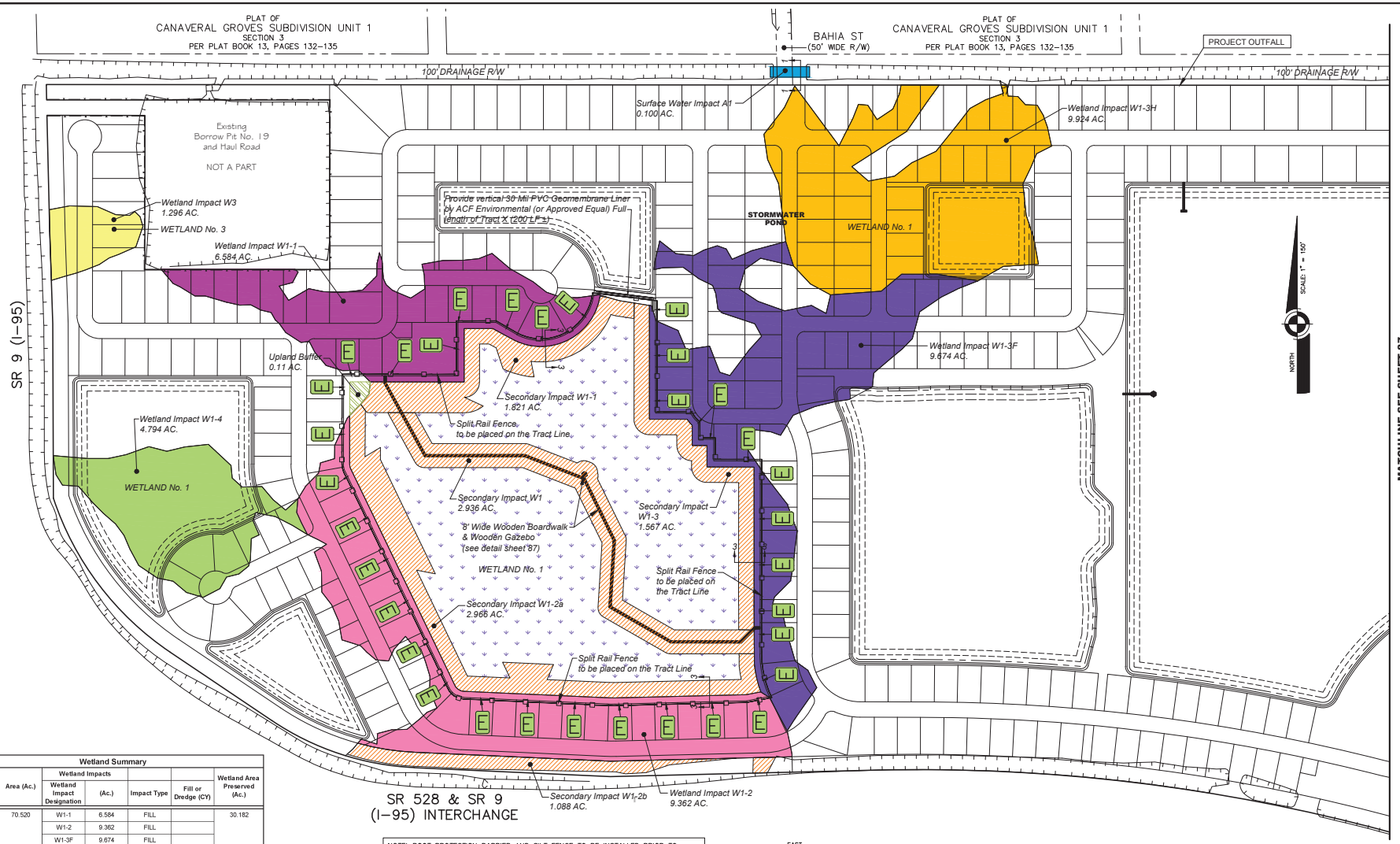
The Lakes of Canaveral Groves
Brevard County, Florida
Figure 7
Wetland Impact Map

N
W E
S

500
Feet

Project #: 1231-01
Produced By: SAS
Date: 12/6/2021



Wetland Summary

Wetland	Area (Ac.)	Wetland Impacts				Wetland Area Preserved (Ac.)
		Wetland Impact Designation	(Ac.)	Impact Type	Fill or Dredge (CY)	
Wetland 1	70.520	W1-1	6.584	FILL		30.182
		W1-2	9.362	FILL		
		W1-3F	9.674	FILL		
		W1-3H	9.924	FILL		
		W1-4	4.794	DREDGE		
Wetland 3	1.296	W3	1.296	FILL		0.000
Total	71.816		41.634			30.182

Surface Water Summary

Surface Water Designation	Description	Overall Area (Ac.)	On-Site Area (Ac.)	Surface Water Impact Designation	Impact (Ac.)	Volume (C.Y.)	Dredge Impacts (Ac.)	Fill Impacts (Ac.)
Surface Water "A"	Bahia Street Canal	0.100	0.000	A1	0.100	0.05	0.000	0.100
Surface Water "B"	South Drainage Canal	0.134	0.000	B1	0.134	0.02	0.000	0.134
Total		0.234	0.000		0.234	0.07	0.000	0.234

NOTE: ROOT PROTECTION BARRIER AND SILT FENCE TO BE INSTALLED PRIOR TO CONSTRUCTION CLEARING AND SHOULD BE MAINTAINED THROUGH PROJECT COMPLETION. FOLLOWING GROUND STABILIZATION EFFORTS, ROOT BARRIER AND SILT FENCE SHOULD BE REMOVED. SPLIT RAIL FENCE WILL THEN BE INSTALLED ON TRACT LIMITS AS SHOWN IN DETAILS.

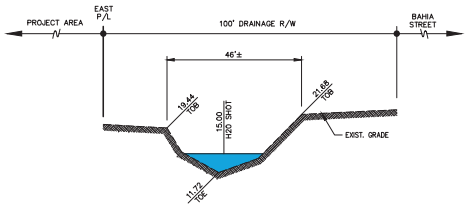
LEGEND:

EXISTING WETLAND TO BE PRESERVED

PROPOSED UPLAND BUFFER

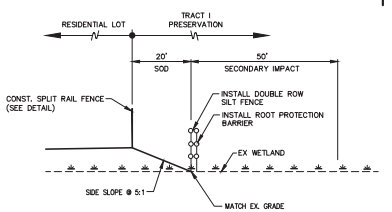
PROPOSED SPLIT RAIL FENCE

PROPOSED EDUCATION SIGN (SEE DETAIL SHEET 87)



SECTION 1–1

HORIZ. SCALE 1"=20' VERT. SCALE 1"=10'



SECTION 3–3

HORIZ. SCALE 1"=20' VERT. SCALE 1"=10'

CONSTRUCTION PLANS FOR
Lakes at Cocoa Grove
SUBDIVISION
CITY OF COCOA, FLORIDA

SURFACE WATER &
WETLAND IMPACT PLAN

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

BY	DESCRIPTION	DATE	NO.	APPR BY	CHK BY	DRN BY	DSN BY
				MEP	MEP	LB	LB

DRMP
ENGINEERS + SURVEYORS + PLANNERS + SCIENTISTS
Certificate of Authorization No. 2648
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Phone 321.453.5010 WWW.DRMP.COM

DRMP, Inc.

FLORIDA LICENSED PROFESSIONAL ENGINEER
No. 45974
STATE OF FLORIDA

Mark Evan Puckett, P.E.
State of Florida # 45974

PROJECT NUMBER: 21-0569.000
SCALE: AS SHOWN
DATE: February 21, 2020
SHEET: 86

SUBMITTED FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION

C:\Users\LBROMB~1\AppData\Local\Temp\AcPublish_13332\v412401 86-87 ENVR0.dwg Plotted: Jul 12, 2022 – 7:05pm by lbromboch

APPENDIX B – BREVARD COUNTY WILDLIFE TABLE 1

Table 1:

Potentially Occurring Listed Wildlife and Plant Species in Brevard County, Florida

Scientific Name	Common Name	Federal Status	State Status	Occurrence Status
FISH				
Acipenser oxyrinchus	Atlantic sturgeon	LE	FE	C
REPTILES				
Alligator mississippiensis	American alligator	T(S/A)	FT(S/A)	C
Caretta caretta	loggerhead sea turtle	LT	FT	C
Chelonia mydas	green sea turtle	LT	FT	C
Dermochelys coriacea	leatherback sea turtle	LE	FE	C
Drymarchon corais couperi	eastern indigo snake	LT	FT	C
Gopherus polyphemus	gopher tortoise	C	ST	C
Lepidochelys kempii	Kemp's ridley sea turtle	LE	FE	P
Pituophis melanoleucus mugitus	Florida pine snake	N	ST	C
BIRDS				
Platalea ajaja	roseate spoonbill	N	ST	C
Aphelocoma coerulescens	Florida scrub-jay	LT	FT	C
Polyborus plancus audubonii	Audubon's crested caracara	LT	FT	C
Charadrius melodus	piping plover	LT	FT	P
Egretta caerulea	little blue heron	N	ST	C
Egretta rufescens	reddish egret	N	ST	C
Egretta tricolor	tricolored heron	N	ST	C
Falco sparverius paulus	southeastern American kestrel	N	ST	P
Grus canadensis pratensis	Florida sandhill crane	N	ST	C
Haematopus palliatus	American oystercatcher	N	ST	P
Haliaeetus leucocephalus	bald eagle	N	**	C
Mycteria americana	wood stork	LT	FT	C
Pandion haliaetus	osprey	N	SSC*	C
Picoides borealis	red-cockaded woodpecker	LE	FE	C
Rynchops niger	black skimmer	N	ST	C
Athene cunicularia	burrowing owl	N	ST	P
Sterna antillarum	least tern	N	ST	C
MAMMALS				
Eubalaena glacialis	North Atlantic right whale	LE	FE	C
Peromyscus polionotus niveiventris	southeastern beach mouse	LT	FT	C
Sciurus niger shermani	Sherman's fox squirrel	N	SSC	P
Trichechus manatus (Trichechus manatus latirostris)	West Indian manatee (Florida manatee)	E, PT	FE	C

** See Rank and Status Explanations and Definitions, Special Animal Listings - Federal and State Status

County Occurrence Status

Vertebrates and Invertebrates:

C = (Confirmed) Occurrence status derived from a documented record in the FNAI data base.

P = (Potential) Occurrence status derived from a reported occurrence for the county or the occurrence lies within the published range of the taxon.

N = (Nesting) For sea turtles only; occurrence status derived from documented nesting occurrences.

APPENDIX C – WETLAND INVENTORY ERP TABLES

TABLE 1. PROJECT WETLAND (WL) AND OTHER SURFACE WATER (SW) SUMMARY

WL & SW ID	WL & SW TYPE	WL & SW SIZE	WL & SW NOT IMPACTED	SECONDARY WL & SW IMPACTS			PERMANENT WL & SW IMPACTS			MITIGATION ID
				WL & SW TYPE	IMPACT SIZE	IMPACT CODE	WL & SW TYPE	IMPACT SIZE	IMPACT CODE	
Direct Impacts										
W1-1	630/641	70.465	30.127				630/641	6.584	F	Kemcho
W1-2	630/641						630/641	9.362	F	TM Mitigation Bank
W1-3F	630						630/641	9.674	D/F	TM Mitigation Bank
W1-3H	641						630/641	9.924	D/F	Kemcho
W1-4	630/641						641	4.794	D/F	TM Mitigation Bank
W3	641	1.193	-0.103				641	1.296	F	Kemcho
SW A1	510	0.100	0.000				510	0.100	F	NMR
SW B1/B2	510	0.137	0.000				510	0.154	F	NMR
SW C	524	41.913	41.709				524	0.204	F	NMR
SW D	524	16.020	16.020				524	0.000		
Secondary Impacts										
W1 Pier	641			641	2.936	Sec				Kemcho
W1-1	630/641			630/641	1.821	Sec				Kemcho
W1-2a	630/641			630/641	2.966	Sec				Kemcho
W1-2b	630/641			630/641	1.088	Sec				Kemcho
W1-3	630/641			630/641	1.567	Sec				Kemcho
PROJECT TOTALS		129.828	87.75		10.38			42.092		

Comments: FLUCFCS - Florida Land Use, Cover and Forms Classification System
*** includes 0.103 acre of off-site wetland within I-95 ROW**

CODES (multiple entries per cell not allowed):
Wetland Type: from an established wetland classification system (see Section E, 111b.)
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other
FORM NUMBER 40C-4.900(1)

TABLE 3: PROJECT OFF-SITE MITIGATION SUMMARY

MITIGATION ID	CREATION		RESTORATION		ENHANCEMENT		KEMCHO MITIGATION TRACT WETLAND PRESERVATION		UPLAND PRESERVATION		TM ECON MITIGATION BANK	
	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TARGET TYPE	AREA	TYPE	AREA	TARGET	AREA	
Kemcho							50.130	411/44-1 624/625				
TM Econ Bank Ph 1-3											14.00	
PROJECT TOTALS:							50.13				14.00	

Comments:

CODES (multiple entries per cell not allowed):
Target Type or Type = target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation
Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Reviewer: _____

APPENDIX D – UMAM SUMMARY TABLE

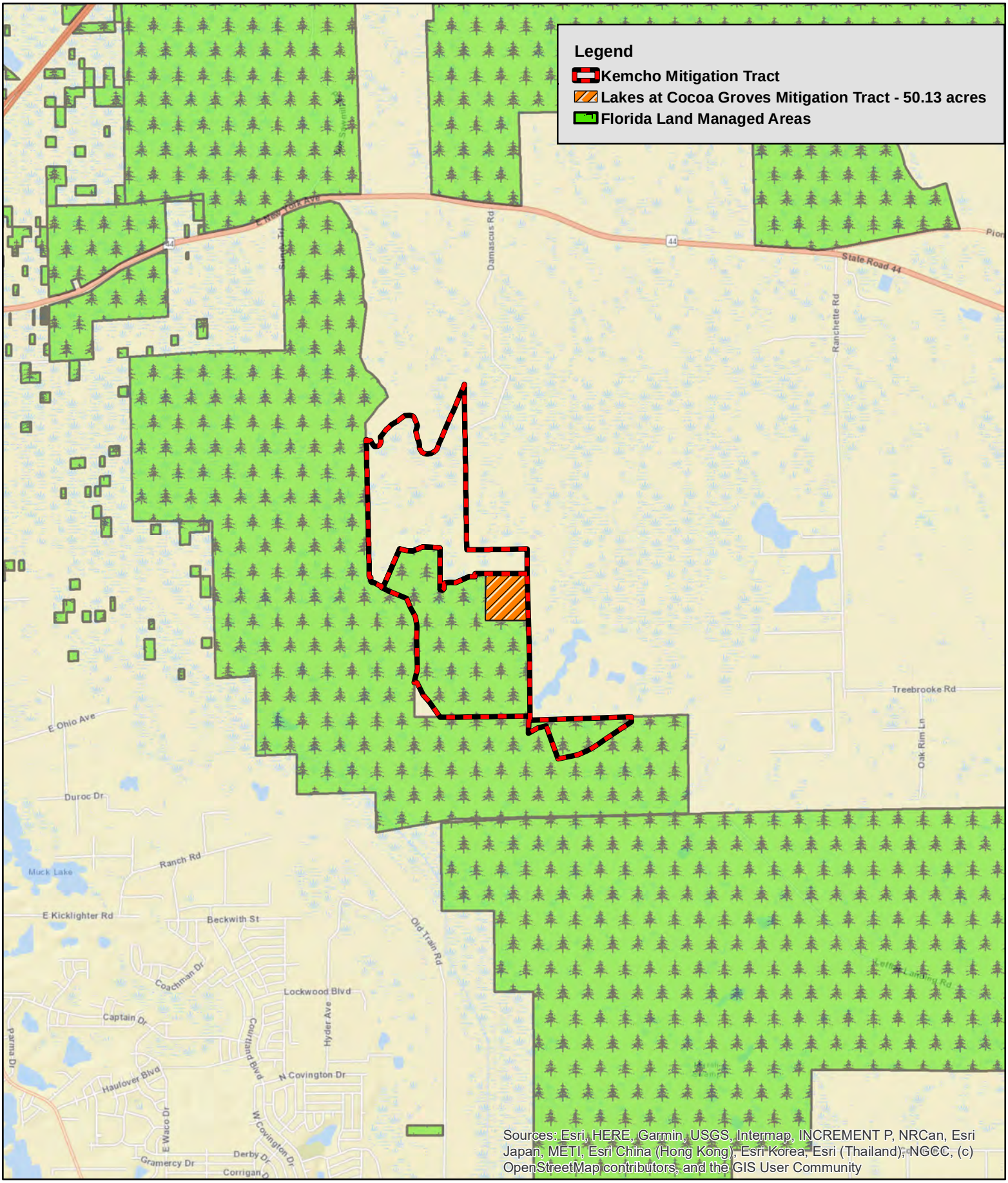
UMAM Summary Table

Project: Lakes at Canaveral Groves											
		Landscape & Location		*Water environment*		*Community structure*					
Impacts :	Habitat Type	Before	After	Before	After	Before	After	Acreage	FL	Mitigation Assignment Per 10.2.1.2 AH Vol 1 (a)	Mitigation Assignment Per 10.2.1.2 AH Vol 1 (b)
Direct Impacts											
W1-1	630/641	4	0	7	0	7	0	6.584	-3.950	KEMCHO	
W1-2	630/641	4	0	6	0	7	0	9.362	-5.305		TM Mitigation Bank
W1-3 (F)	630	4	0	7	0	7	0	9.674	-5.804		TM Mitigation Bank
W1-3 (H)	641	4	0	3	0	5	0	9.924	-3.970	KEMCHO	
W1-4 (fka W2)	641	4	0	6	0	8	0	4.794	-2.876		TM Mitigation Bank
W3 *	641	4	0	5	0	5	0	1.296	-0.605	KEMCHO	
Secondary Impacts											
Secondary Impacts - 528		4	0	7	0	5	0	1.088	-0.580	KEMCHO	
Secondary Impacts - Lots		4	3	7	7	7	6	6.354	-0.424	KEMCHO	
Secondary Impacts - Boardwalk		4	3	7	7	7	6	2.936	-0.196	KEMCHO	
Total								52.01	-23.71		

*** includes 0.103 acres of remaining wetlands both on-site and off-site that will be isolated and less than 0.50-acres in size.**

Mitigation	FG
KEMCHO Mitigation Tract - 50.13 acres	9.815
TM Econ Mitigation Bank PH 1-2	14.00
Totals	23.815

APPENDIX E – KEMCHO MITIGATION TRACT



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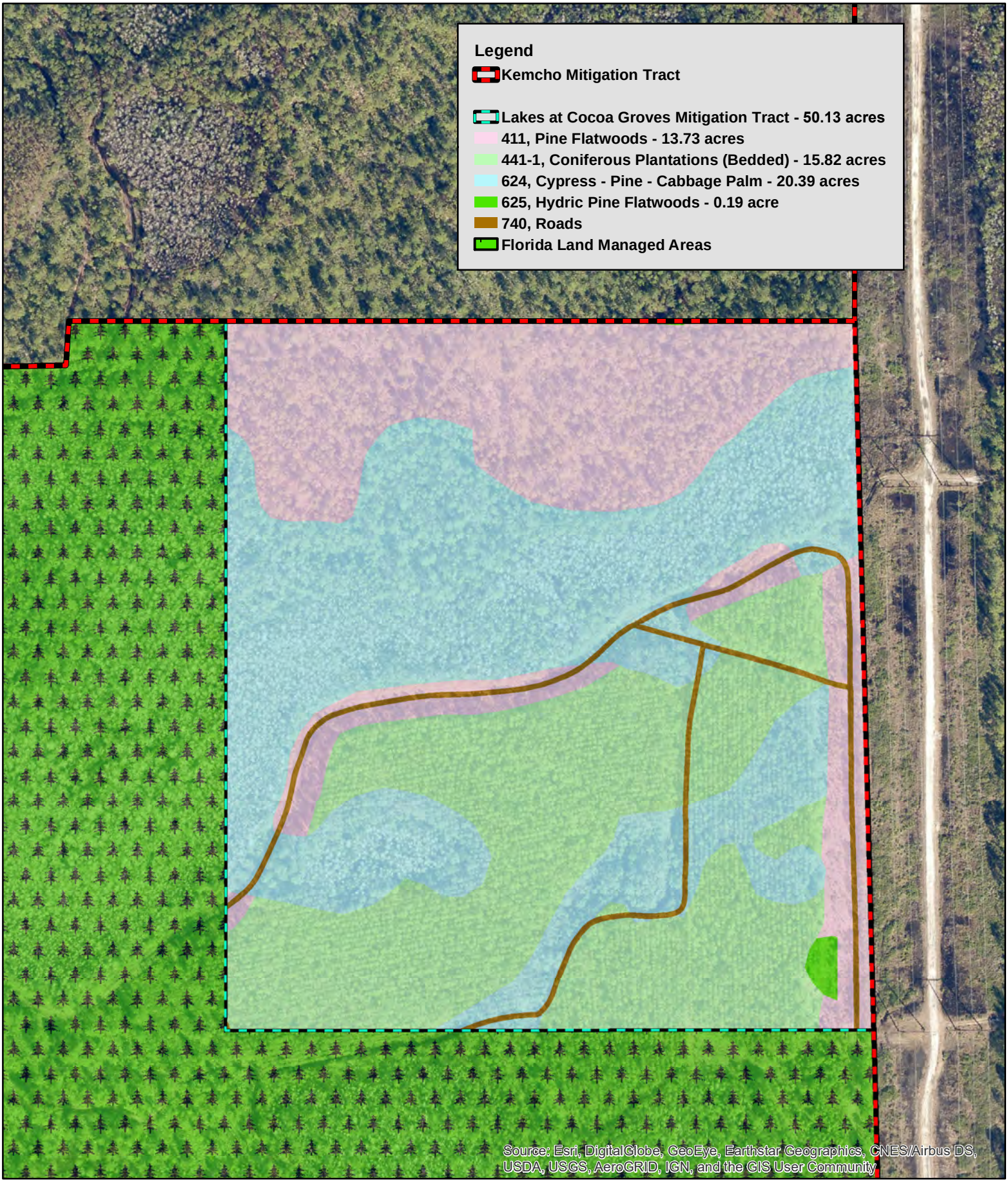
Environmental and Permitting Services
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Kemcho Mitigation Tract
Lakes of Cocoa Groves Mitigation
Volusia County, Florida
Figure 1

1 Miles

N W E S

Project #: 494-17
Produced By: SAS
Date: 5/5/2021



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www.bio-techconsulting.com

Kemcho Mitigation Tract
Lakes of Cocoa Groves Mitigation
Volusia County, Florida
Figure 2

N
W E
S

300
Feet

Project #: 494-17
Produced By: SAS
Date: 5/5/2021

APPENDIX F – TM ECON MB WITHDRAWL TRANSFER

June 14, 2023

Mr. Reid Hilliard
Technical Program Manager, Mitigation Banking
St. Johns River Water Management District
601 South Lake Destiny Road, Suite 200
Maitland, Florida 32751

Via email rhilliard@sjrwmd.com

Re: Request for Withdrawal of Mitigation Credits from TM Econ Mitigation Bank Phases 1, 2, and 3 UMAM, Permit No. 4-095-84310-7

Dear Mr. Hillard:

This letter is a request for a minor modification of the TM Econ Mitigation Bank permit for the withdrawal of credits. In support of this request, the following information is provided:

- Project Name: Lakes at Cocoa Grove
- Project Owner: Mountain Cove Homes at Lakes at Cocoa Grove, LLC
- Permit No. SJRWMD 158236-2
- Number of Credits: 14.00
- Type of Credits: General Wetlands
- Basin: 19

Please withdraw the credits from the TM Econ Mitigation Bank's ledger. If you have any questions regarding this request, please contact me at 352-874-7370.

Sincerely,

Kae Hovater
Authorized Agent
TM Econ Mitigation Bank

C: Holland Properties

APPENDIX G – DHR

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

JENNIFER KENNEDY
Interim Secretary of State

Ms. Marion Almy
Archaeological Consultants, Inc.
8110 Blaikie Court, Suite A
Sarasota, Florida 34240

January 28, 2019

RE: DHR Project File No.: 2018-5298-C, Received by DHR: January 2, 2019
Cultural Resource Assessment Survey of the Cocoa Commercial Borrow Pit, Brevard County, Florida

To Whom It May Concern:

We note that in November 2018, Archaeological Consultants, Inc., (ACI) conducted the above referenced supplemental cultural resource assessment survey (CRAS) on behalf of Bio-Tech Consulting, Inc., (Bio-Tech) in anticipation of compliance with permitting requirements. Our office proceeded to review this report with the expectation that Bio-Tech will be engaging in permitting processes that will require this office to comment on possible adverse impacts to cultural resources listed or eligible for listing in the *National Register of Historic Places (NRHP)*, or otherwise of historical, architectural, or archaeological significance. We recommend at the time such actions are taken, a copy of this letter be forwarded to the permitting agency(ies) with the application. This letter does not constitute a review under Section 106 of the *National Historic Preservation Act.*

ACI encountered no cultural resources within the 246-acre area of potential effect (APE) during their supplemental investigation. ACI concluded, in association with the results of previous survey MS#10756, that this project will have no effect on cultural resources listed, or eligible for listing in the NRHP, or otherwise of archaeological, historical, or architectural significance within the survey area. ACI recommends no additional work in the APE.

Based on the information provided, our office concurs with the results of the survey and we find the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*. Because this project is not yet subject to permitting requirements from a state or federal agency, our office abstains from supplying a determination of effects until such time that permitting agencies (and associated permit requirements) are identified for this project.

If I can be of any further help, or if you have any questions about this letter, please feel free to contact Lindsay Rothrock at *Lindsay.Rothrock@dos.myflorida.com*.

Sincerely,

Jason Aldridge
For

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer

CULTURAL RESOURCE ASSESSMENT SURVEY OF THE COCOA COMMERCIAL BORROW PIT, BREVARD COUNTY, FLORIDA

Prepared for:

Bio-Tech Consulting, Inc.
3025 East South Street
Orlando, Florida 32803

Prepared by:

Florida's First Choice in Cultural Resource Management

Archaeological Consultants, Inc.
8110 Blaikie Court, Suite A
Sarasota, Florida 34240
(941) 379-6206

November 2018

CULTURAL RESOURCE ASSESSMENT SURVEY OF THE COCOA COMMERCIAL BORROW PIT, BREVARD COUNTY, FLORIDA

Prepared for:

Bio-Tech Consulting Inc.
3025 East South Street
Orlando, Florida 32803

By:

Archaeological Consultants, Inc.
8110 Blaikie Court, Suite A
Sarasota, Florida 34240

Marion Almy - Project Manager
Christine Newman - Project Archaeologist
Justin Winkler - Archaeologist

November 2018

EXECUTIVE SUMMARY

Archaeological Consultants, Inc. (ACI) conducted a Cultural Resource Assessment Survey (CRAS) of the Cocoa Commercial Borrow Pit property for Bio-Tech Consulting Inc. The Area of Potential Effect (APE) is approximately 246 acres in size and is located northeast of the intersection of I-95 and SR 528 in Brevard County, Florida. A portion of the APE was surveyed previously for the proposed Space Needle Residential Development project (Penders 2004). No cultural resources were identified as a result of the survey and the State Historic Preservation Officer (SHPO) found the submitted report complete and sufficient (Gaske 2004; DHR No. 2004-11006). However, archaeological testing strategy has become more stringent within the past ten years, and ACI conducted additional testing in the areas previously surveyed to ensure sufficient coverage and compliance with state and federal regulations.

The purpose of this investigation was to locate and identify any cultural resources within the APE and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). As defined in 36 CFR Part § 800.16(d), the APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Based on the scale and nature of the activities, the project has a limited potential for any indirect (visual or audible) or cumulative effects outside the immediate footprint of construction. Therefore, the APE is limited to the footprint of proposed activities within the existing boundaries of the project. The archaeological and historical field surveys, completed in November 2018, were conducted as due diligence. All work was carried out in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in 36 CFR Part 800: *Protection of Historic Properties*, and in conformity with the standards contained in the Florida Division of Historical Resources' (FDHR) *Cultural Resource Management Standards and Operational Manual* (FDHR 2003). The resulting survey and report meets specifications in Chapter 1A-46, *Florida Administrative Code,* and complies with Chapters 267 and 373, *Florida Statutes*, as well as Florida's Coastal Management Program and local regulations. Principal Investigators meet the *Secretary of the Interior's Historic Preservation Professional Qualification Standards* (62 FR 33708) for archaeology, history, architecture, architectural history, or historic architecture.

Archaeological background research, including a review of the Florida Master Site File (FMSF) and the NRHP indicated that no previously recorded archaeological sites are within the APE, but one archaeological site (8BR1714) is recorded within two miles. Based on the background research, there was a low to moderate potential for prehistoric archeological sites and a low potential for historic archaeological sites. Seventy-five shovel tests were excavated; all were negative.

A review of the FMSF and the NRHP indicated no previously recorded historic structures are located within the APE. A review of the historic United States Geographical Survey (USGS) quadrangle maps (USGS 1959a-c) and historic aerial photograph (United States Department of Agriculture [USDA] 1943, 1951, 1969, 1979) did not show any structures within the APE. Additionally, the Brevard County property appraiser's website indicated that no structures were present on the property (Blickley 2018). As a result of field survey, no historic resources were identified or recorded in the APE.

Given the results of the background research and field investigations, it is the professional opinion of ACI that the proposed undertaking will have no effect on any archaeological sites or historic resources that are listed, determined eligible, or appear potentially eligible for listing in the NRHP.

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1.0 INTRODUCTION

1.1 Project Description

Archaeological Consultants, Inc. (ACI) conducted a Cultural Resource Assessment Survey (CRAS) of the Cocoa Commercial Borrow Pit property for Bio-Tech Consulting Inc. The Area of Potential Effect (APE) is approximately 246 acres in size and is located northeast of the intersection of I-95 and SR 528 in Brevard County, Florida. A portion of the APE was surveyed previously (Penders 2004). No cultural resources were identified as a result of the survey and the State Historic Preservation Officer (SHPO) found the submitted report complete and sufficient (Gaske 2004: DHR No. 2004-11006). However, archaeological testing strategy has become more stringent since the previous survey was conducted, and ACI conducted additional testing in the areas previously surveyed to ensure sufficient coverage.

1.2 Purpose

The purpose of this investigation was to locate and identify any cultural resources within the APE and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). As defined in 36 CFR Part § 800.16(d), the APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Based on the scale and nature of the activities, the project has a limited potential for any indirect (visual or audible) or cumulative effects outside the immediate footprint of construction. Therefore, the APE is limited to the footprint of proposed activities within the existing boundaries of the project. The archaeological and historical field surveys, completed in November 2018, were conducted as due diligence. All work was carried out in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in 36 CFR Part 800: *Protection of Historic Properties*, and in conformity with the standards contained in the Florida Division of Historical Resources' (FDHR) *Cultural Resource Management Standards and Operational Manual* (FDHR 2003). The resulting survey and report meets specifications in Chapter 1A-46, *Florida Administrative Code*, and complies with Chapters 267 and 373, *Florida Statutes*, as well as Florida's Coastal Management Program and local regulations. Principal Investigators meet the *Secretary of the Interior's Historic Preservation Professional Qualification Standards* (62 FR 33708) for archaeology, history, architecture, architectural history, or historic architecture.

Background research preceded the field investigations. Such work provided both an informed set of expectations concerning the kinds of cultural resources that might be anticipated within the APE, as well as a basis for evaluating any newly discovered sites.

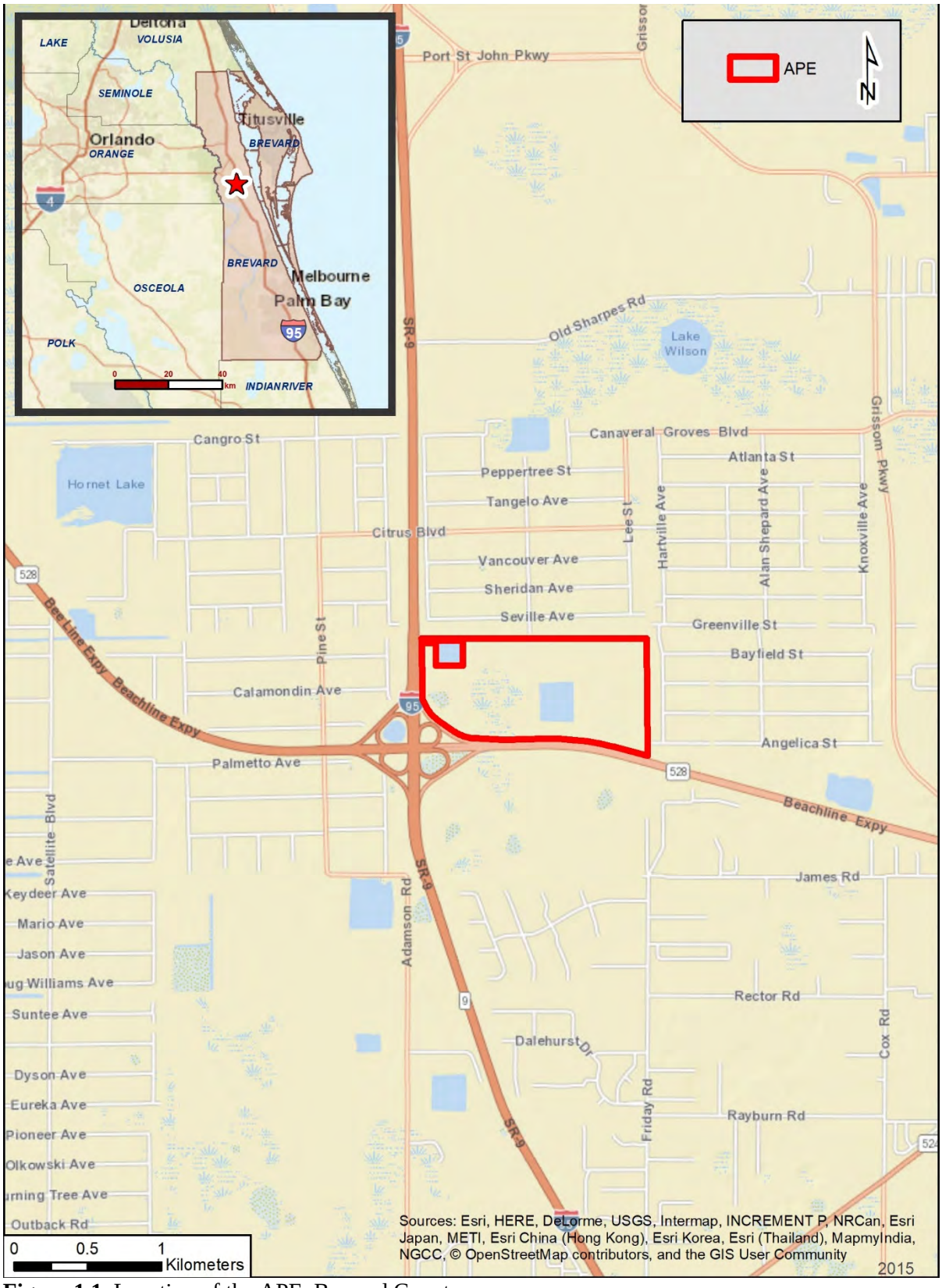

Figure 1.1. Location of the APE, Brevard County.

2.0 ENVIRONMENTAL SETTING

Environmental factors such as geology, topography, relative elevation, soils, vegetation, and water resources are important in determining where pre-colonial and historic period archaeological sites are likely to be located. These variables influenced what types of resources were available for utilization in a given area. This, in turn, influenced decisions regarding settlement location and land-use patterns. Because of the influence of the local environmental factors upon the pre-colonial period populations, a discussion of the effective environment is included.

2.1 Project Location

The APE is located in Section 10 of Township 24 South, Range 3 East (USGS Sharpes) (**Figure 2.1**). It is situated northeast of the intersection of I-95 and SR 528 within the city limits of Cocoa, in Brevard County, Florida. Three discrete, vegetated wetlands occupy approximately three-quarter of the APE (**Photo 2.1**) and a fourth small chain of wetlands are found along the eastern project limits. The lands surrounding these lowlands primarily consists of mesic flatwoods with gallberry, fetterbush, wax myrtle, loblolly bay, slash pine, saw palmetto, a few cabbage palm, and isolated occurrences of life oak (**Photo 2.2**). Disturbance exists in two isolated areas within the APE; a medium sized square borrow pit in the central portion (**Photo 2.3**) and a drainage canal along the east project boundary. A second borrow pit is located in an outparcel within the northwestern portion of the APE. This pit was utilized during the construction of I-95 and the pit within the APE was utilized during the construction of SR 520 (McDaniel 2018).

Photo 2.1. Looking south at wetland conditions in the southwestern quarter of the APE.

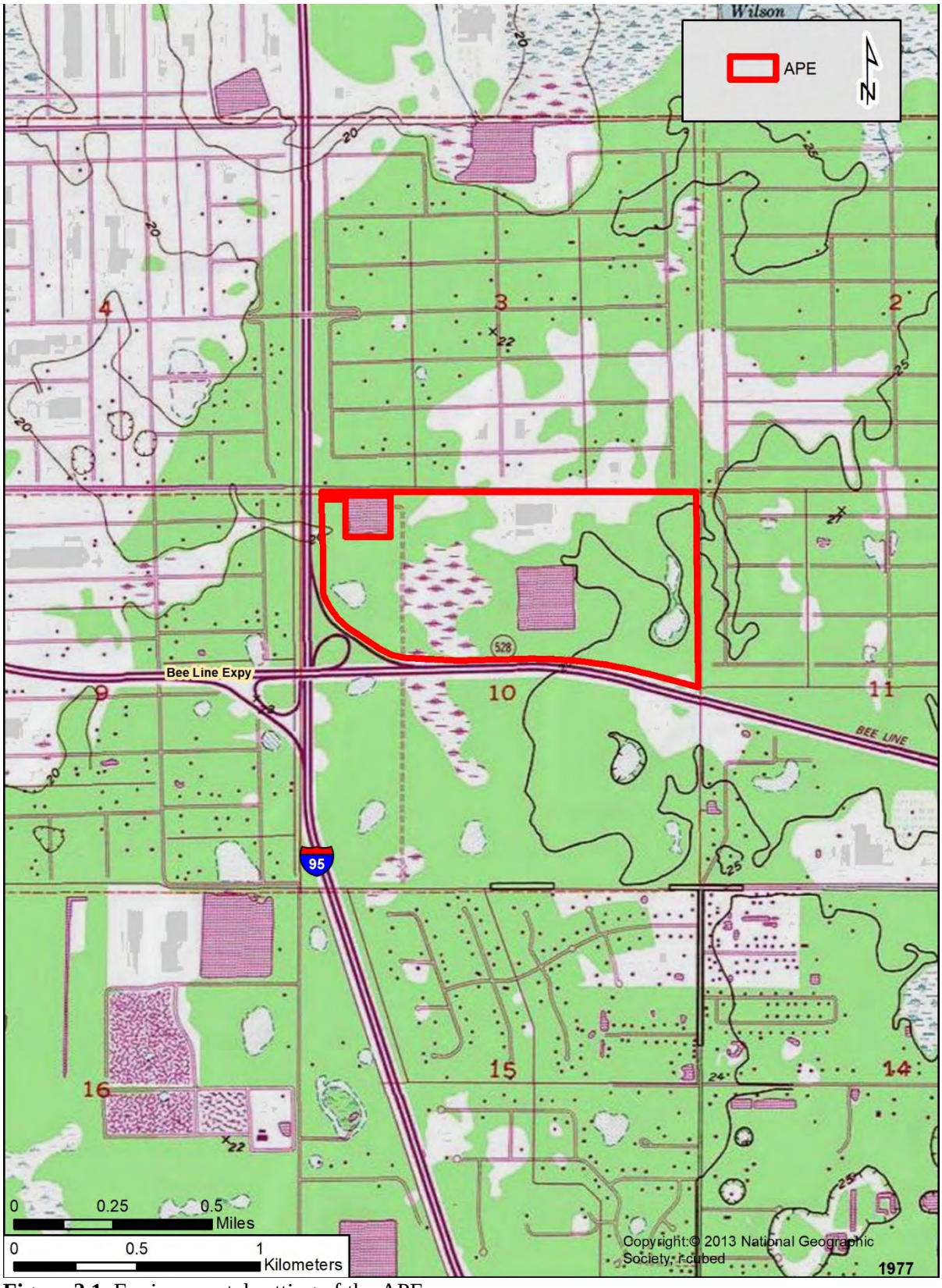

Figure 2.1. Environmental setting of the APE.

Photo 2.2. Looking north at typical conditions found within the central portion of the APE.

Photo 2.3. Looking west at central borrow pit located within the APE.

2.2 Physiography and Geology

The APE is within the midpeninsular geomorphic zone which is characterized by discontinuous highlands forming sub-parallel ridges separated by broad valleys that roughly parallel the coast (White 1970). More specifically, the project area is within the Eastern Valley (Scott 1978; White 1970). Geologically, the area is underlain by shelly sand and clay of the shelly sediments of the Plio-Pleistocene (Scott 2001; Scott et al. 2001). Elevation of the project area is around 6 to 7.6 meters (m) (20-25 feet [ft]) above mean sea level (amsl).

2.3 Soils and Vegetation

The APE lies within the Myakka-EauGallie-Immokalee soil association, which is characterized by as nearly level, poorly drained soils on the flatwoods. The area is interspersed with ridges, ponds and swamps and vegetation consists of pines, scrub oaks, saw palmetto, and pineland threeawn (U.S. Department of Agriculture [USDA] 1974, 2018). Historically, the western one third of the APE is classified as grasslands of prairie type and the eastern two thirds is pine flatwoods (Davis 1967). The specific soil types within the APE are listed in **Table 2.1** and shown in **Figure 2.2**. All are either poorly drained or very poorly drained soils.

Table 2.1. Soil types within the APE.

Soil Type and Slope	Drainage	Setting
Anclote sand, depressional	Very poor	Marshy depressions
Basinger sand	Poor	Flatwoods
Holopaw sand	Poor	Flood plains
Myakka sand, 0-2%	Poor	Broad flatwoods and areas between ridges and ponds
Myakka sand, depressional	Very poor	Depressions
St. Johns sand, depressional	Very poor	Sloughs, depressions, and poorly defined drainageways
Tomoka muck, undrained	Very poor	Flat marshes, small depressions, and swamps
Valkaria sand	Poor	Grassy sloughs and broad low areas

2.4 Paleoenvironmental Considerations

The early environment of the region was different from that seen today. Sea levels were lower, the climate was arid, and fresh water was scarce. An understanding of human ecology during the earliest periods of human occupation in Florida cannot be based on observations of the modern environment because of changes in water availability, botanical communities, and faunal resources. Aboriginal inhabitants would have developed cultural adaptations in response to the environmental changes taking place, which were then reflected in settlement patterns, site types, artifact forms, and subsistence economies.

Due to arid conditions between 16,500 and 12,500 years ago, the perched water aquifer and potable water supplies were absent (Dunbar 1981:95). Palynological studies conducted in Florida and Georgia suggest that between 13,000 and 5000 years ago, this area was covered with an upland vegetation community of scrub oak and prairie (Watts 1969, 1971, 1975). However, the environment was not static. Evidence recovered from the inundated Page-Ladson Site in north Florida has clearly demonstrated that there were two periods of low water tables and dry climatic conditions and two episodes of elevated water tables and wet conditions (Dunbar 2006c).

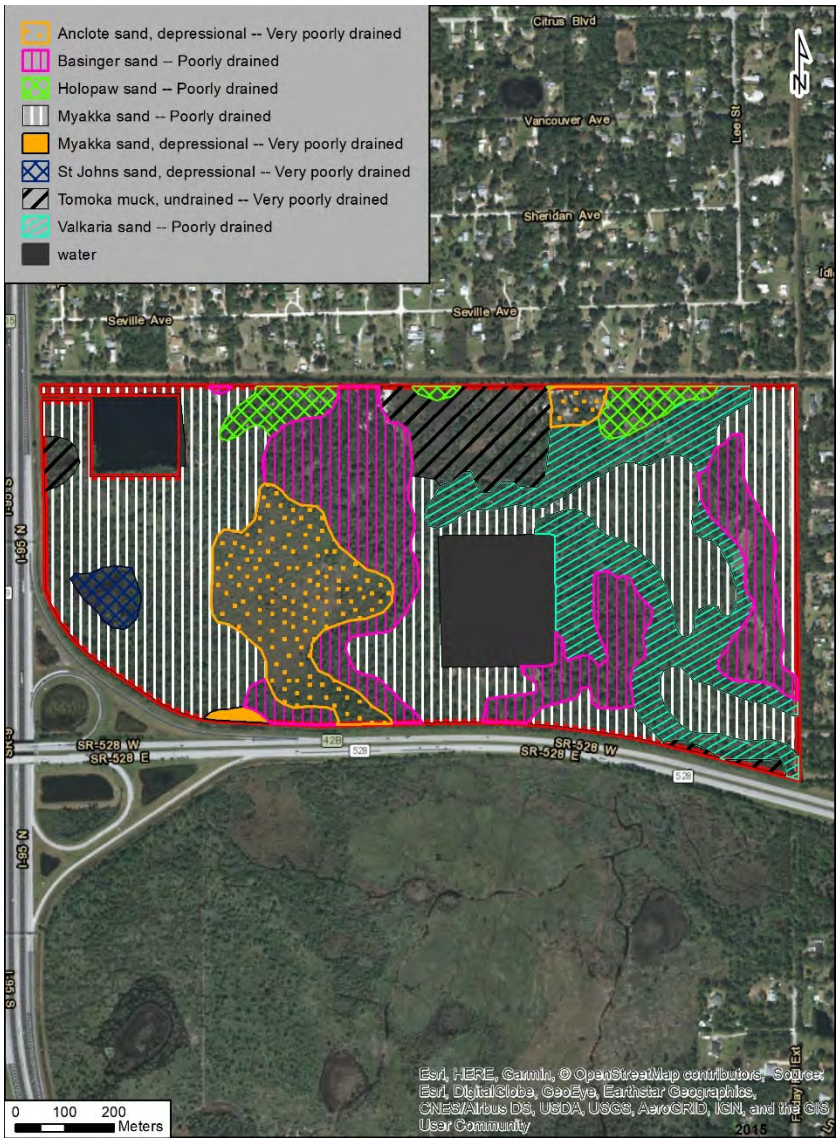

Figure 2.2. Soil types within the APE.

By 5000 years ago, a climatic event marking a brief return to Pleistocene climatic conditions induced a change toward more open vegetation. Southern pine forests replaced the oak savannahs. Extensive marshes and swamps developed along the coasts and subtropical hardwood forests became established along the southern tip of Florida (Delcourt and Delcourt 1981). Northern Florida saw an increase in oak species, grasses, and sedges (Carbone 1983). At Lake Annie, in south central Florida, pollen cores were dominated by wax myrtle and pine. The assemblage suggests that by this time, a forest dominated by longleaf pine along with cypress swamps and bayheads existed in the area (Watts 1971, 1975). About 5000 years ago, surface water was plentiful in karst terrains and the level of the Floridan aquifer rose to 1.5 m (5 ft) above present levels. With the establishment of warmer winters and cooler summers than in the preceding early Holocene, the fire-adapted pine communities prevailed. These depend on the high summer precipitation caused by the thunderstorms and the accompanying lightning strikes to spark the fires (Watts et al. 1996; Watts and Hansen 1994). The increased precipitation also resulted in the formation of the large swamp systems such as the Okefenokee and Everglades (Gleason and Stone 1994). After this time, modern floral, climatic, and environmental conditions began to be established.

3.0 CULTURAL CHRONOLOGY

A discussion of the regional culture history is included to provide a framework within which to examine the local archaeological and historical record. Archaeological and historic sites are not individual entities, but were once part of a dynamic cultural system. As a result, individual sites cannot be adequately examined or interpreted without reference to other sites and resources in the area. The culture history of an area (i.e. the archaeological region) outlines the sequence of archaeological and historical cultures through time. These are defined largely in geographical terms, but also reflect shared environmental and cultural traits. The APE is within the East and Central archaeological region Milanich (1994) (**Figure 3.1**). The Paleo-Indian, Archaic, Formative, and Mississippian stages have been defined based on material culture traits such as stone tool forms and ceramics, as well as subsistence, settlement, and burial patterns.

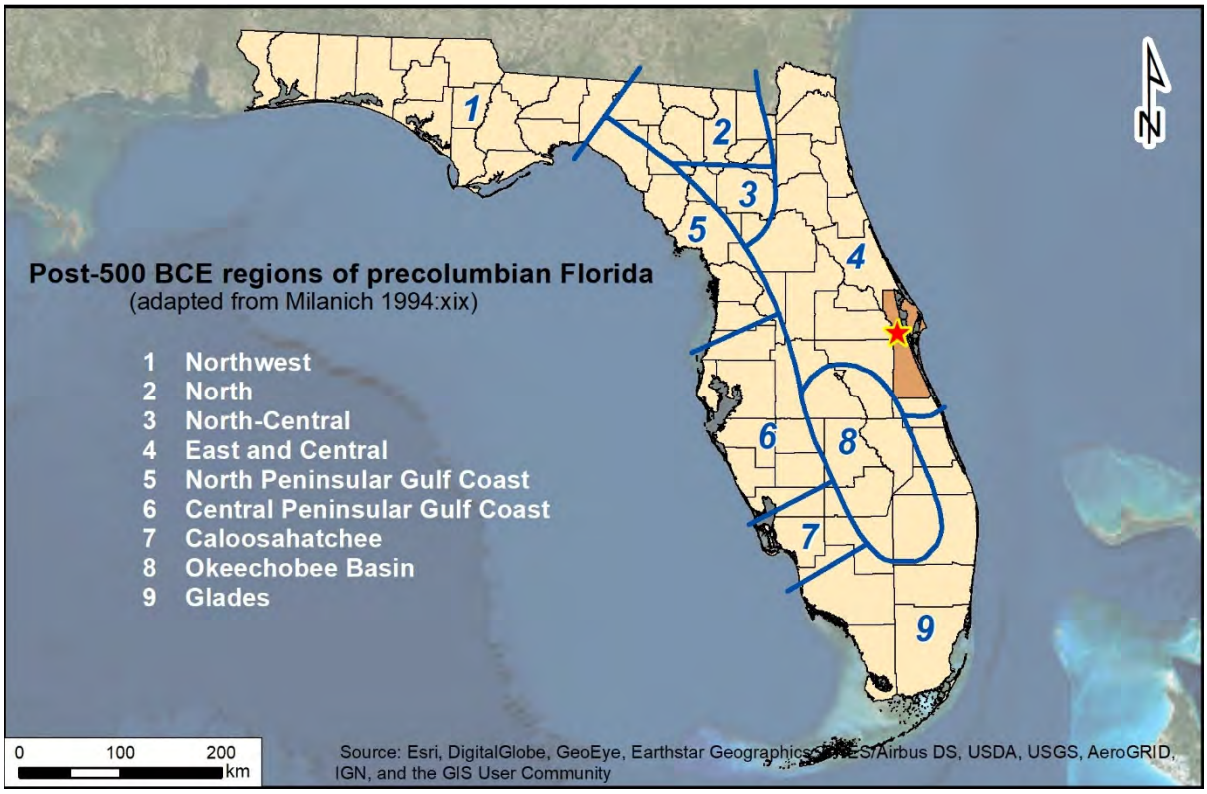

Figure 3.1. Florida Archaeological Regions.

The local history of the region is divided into four broad periods based initially upon the major governmental powers. The first period, Colonialism, occurred during the exploration and control of Florida by the Spanish and British from around 1513 until 1821. At that time, Florida became a territory of the U.S. and 21 years later became a State (Territorial and Statehood). The Civil War and Aftermath (1861-1899) period deals with the Civil War, the period of Reconstruction following the war, and the late 1800s, when the transportation systems were dramatically increased and development throughout the state expanded. The Twentieth Century period includes sub-periods defined by important historic events such as the World Wars, the Boom of the 1920s, and the Depression. Each of these periods evidenced differential development and utilization of the region, thus effecting the historic site distribution.

3.1 Paleo-Indian

The Paleo-Indian stage is the earliest known cultural manifestation in Florida, dating from roughly 12,000 to 7500 BCE [Before Common Era] (Milanich 1994). Archaeological evidence for Paleo-Indians consists primarily of scattered finds of diagnostic lanceolate-shaped projectile points. The Florida peninsula at this time was quite different than today. In general, the climate was cooler and drier with vegetation typified by xerophytic species with scrub oak, pine, open grassy prairies, and savannas (Milanich 1994:40). When human populations were arriving in Florida, the sea levels were still as much as 40 to 60 m (130-200 ft) below present levels and coastal regions of Florida extended miles beyond present-day shorelines (Faught 2004). Thus, many of these sites have been inundated (cf., Faught and Donoghue 1997).

The Paleo-Indian period has been sub-divided into three horizons based upon characteristic stone tool forms (Austin 2001). Traditionally, it is believed that the Clovis Horizon (10,500-9000 BCE) represents the initial occupation of Florida and is defined by the presence of the fluted Clovis points. These are more common in north Florida. However, recent work may indicate that Suwannee and Simpson points are contemporary with or predate Clovis (Dunbar 2006a; Stanford 1991). The Suwannee Horizon (9000-8500 BCE) is the best known of the three Paleo-Indian horizons. The lanceolate-shaped, unfluted Simpson and Suwannee projectile points are diagnostic of this time (Bullen 1975; Daniel and Wisenbaker 1987; Purdy 1981). The Suwannee tool kit includes a variety of scrapers, adzes, spokeshaves, unifacially retouched flakes, and blade-like flakes as well as bone and ivory foreshafts, pins, awls, daggers, anvils, and abraders (Austin 2001:23).

Following the Suwannee Horizon is the Late Paleo-Indian Horizon (8500-8000 BCE). The smaller Tallahassee, Santa Fe, and Beaver Lake points have traditionally been attributed to this horizon (Milanich 1994). However, many of these points have been recovered stratigraphically from late Archaic and early Woodland period components and thus, may not date to this time period at all (Austin 2001; Farr 2006). Florida notched or pseudo-notched points, including the Union, Greenbriar, and Hardaway-like points, may represent late Paleo-Indian types, but these types have not been recovered from datable contexts and their temporal placement remains uncertain (Dunbar 2006a:410).

Archaeologists hypothesize that Paleo-Indians lived in migratory bands and subsisted by gathering and hunting, including the now-extinct Pleistocene megafauna. It is likely that these nomadic hunters traveled between permanent and semi-permanent sources of water, such as artesian springs, exploiting the available resources. These watering holes would have attracted the animals, thus providing food and drink. In addition to being tethered to water sources, most of the Paleo-Indian sites are close to good quality lithic resources. The settlement pattern consisted of the establishment of semi-permanent habitation areas and the movement of the resources from their sources of procurement to the residential locale by specialized task groups (Austin 2001:25).

Although the Paleo-Indian period is generally considered to have been cooler and drier, there were major variations in the inland water tables resulting from large-scale environmental fluctuations. There are two major theories as to why most Paleo-Indian materials have been recovered from inundated sites. The Oasis theory posits that due to low water tables and scarcity of potable water, the Paleo-Indians and the game animals upon which they depended clustered around the few available water holes that were associated with sinkholes (Neill 1964). Whereas, others believe that the Paleo-Indians gathered around river-crossings to ambush the large Pleistocene animals as they crossed the rivers (Waller 1970). This implies periods of elevated water levels. Based on the research along the Aucilla and Wacissa Rivers, it appears that both theories are correct, depending upon what the local environmental conditions were at that time (Dunbar 2006b). During the wetter periods, populations

became more dispersed because the water resources were abundant and the animals they relied on could roam over a wider range.

Some of the information about this period has been derived from the underwater excavations at two inland spring sites in Sarasota County: Little Salt Spring and Warm Mineral Springs (Clausen et al. 1979). Excavation at the Harney Flats Site in Hillsborough County has provided a rich body of data concerning Paleo-Indian life ways. Analysis indicates that this site was used as a quarry-related base camp with special use activity areas (Daniel and Wisenbaker 1987). It has been suggested that Paleo-Indian settlement may not have been related as much to seasonal changes as generally postulated for the succeeding Archaic period, but instead movement was perhaps related to the scheduling of tool-kit replacement, social needs, and the availability of water, among other factors (Daniel and Wisenbaker 1987:175). Investigations along the Aucilla and Wacissa Rivers, as well as other sites within the north Florida rivers, have provided important information on the Paleo-Indian period and how the aboriginals adapted to their environmental setting (Webb 2006). Studies of the Pleistocene faunal remains from these sites clearly demonstrate the importance of these animals not for food alone, but as the raw material for their bone tool industry (Dunbar and Webb 1996).

3.2 Archaic

Climatic changes occurred, resulting in the disappearance of the Pleistocene megafauna and the demise of the Paleo-Indian culture. The disappearance of the mammoths and mastodons resulted in a reduction of open grazing lands, and thus, the subsequent disappearance of grazers such as horse, bison, and camels. With the reduction of open habitat, the herd animals were replaced by the more solitary, woodland browser: the white-tailed deer (Dunbar 2006a:426). The intertwined data of megafauna extinction and cultural change suggests a rapid and significant disruption in both the faunal and floral assemblages. The Bolen people represent the first culture adapted to the Holocene environment (Carter and Dunbar 2006). Theirs included a more specialized toolkit and the introduction of chipped-stone woodworking implements.

Due to a lack of controlled excavations and the poor preservation of organic materials in the upland sites, our knowledge of the Early Archaic artifact assemblage is limited (Carter and Dunbar 2006; Milanich 1994). Discoveries at several sites indicate that bone and wood tools were used (Clausen et al. 1979; Doran 2002; Webb 2006). The archaeological record suggests a diffuse, yet well-scheduled, pattern of exploiting both coastal and interior resources. Since water sources were more numerous and larger than previously, the Early Archaic peoples could sustain larger populations, occupy sites for longer periods, and perform activities that required longer occupation at a specific locale (Milanich 1994:67).

During the Middle Archaic, wetter conditions prevailed, sea levels began to rise, and pine forests and swamps began to emerge (Watts et al. 1996). The climate was changed to one of more pronounced seasonality with warmer summers and colder winters and by 4000 BCE the climate became essentially the same as that of today (Watts et al. 1996:29). Miller (1998:68) suggests that when sea levels reached their current positions, the St. Johns River changed its riverine characteristics to become similar to a lake in the upper reaches and estuarine in the lower reaches. This allowed for the development of a wide resource base. Settlement became focused within coastal and riverine locales (Milanich 1994:64). The Mount Taylor period has been identified for the period 5000-2000 BCE (Milanich 1994). Subsistence was based on hunting, fishing, shellfish collecting, and plant gathering. Sites are generally located along the Atlantic coast, the upper reaches of the St. Johns River, and the Ocklawaha and Wekiva Rivers (Ste. Claire 1990; Weisman 1993; Wheeler et al. 2000). The theory that Archaic populations practiced a seasonal migration pattern between the interior and the coast has been

called into question as investigations have confirmed year-round occupation of some sites (Russo 1992, 1996b; Russo et al. 1993; Russo and Ste. Claire 1992; Ste. Claire 1990).

The archaeobotanical research at the Groves' Orange Midden and the Lake Monroe Outlet Midden confirms an environment similar to today (ACI/Janus Research 2001; Newsom 1994; Purdy 1994b). Most of the botanical remains were from wetland species common along the lake margin, river swamp, and backwaters. Upland species were also utilized. Middens of mystery snail, apple snail, and mussel provide evidence of occupation and resource exploitation along the rivers of east and central Florida (Cumbaa 1976; Ellis et al. 1994; Fryman et al. 1978).

Mount Taylor sites include large base camps, smaller special-use campsites, burial areas, and extensive shell middens. The artifact inventory of the Mt. Taylor people includes stone projectile points, tools, and microliths, as well as tools and decorative items of shell, bone, and wood (ACI/Janus Research 2001; Purdy 1994a; Wheeler and McGee 1994a, 1994b). The large stemmed projectile points, especially the Newnan type, are diagnostic of this time. Other common point types include Hillsborough, Levy, Putnam, Alachua, and Marion (Bullen 1975). Silicified coral was more prevalent as a raw material (Milanich 1994) and thermal alteration of the stone became common (Ste. Claire 1987). Numerous shell and bone items indicate contact with coast.

One of the most interesting aspects of the Mount Taylor culture is evidence for mass burial interments in specially prepared areas within shell middens (Milanich and Fairbanks 1980). Such burials were found at Tick Island along the St. Johns River (Aten 1999; Bullen 1962; Jahn and Bullen 1978). Milanich (1994:81) suggests that Early and Middle Archaic peoples used aquatic environments for burial. The Early Archaic Windover Site contained primary and flexed burials within a peat pond. These were held in place with wooden stakes and the interments included grave goods such as textiles and worked bone, shell, and wood (Doran 2002). The Gauthier cemetery, situated on a palm island within a slough between a pond and Lake Poinsett, contained primary and flexed burials (Carr and Jones 1981; Sigler-Eisenberg 1984b).

Interior sites (away from the major rivers and/or coast) include the smaller lithic and ceramic scatter campsites that were most likely used for hunting or served as special use extractive sites for such activities as gathering nuts or other botanical materials (Ste. Claire 1989, 1990). The Tomoka Site is a complex of nine mounds and a surrounding village midden located near the confluence of the Tomoka and Halifax River. Occupants utilized estuarine and coastal resources as evidenced by the midden of coquina and oysters. No ceramics have been recovered from this site complex (Douglass 1882; Piatek 1992, 1994). The burial mound at Tomoka (8VO00051) is one of the earliest in Florida (Piatek 1994). Russo (1996a:284) suggests though that Florida's Archaic burial mounds were not the precursors to the extensive burial mound use seen in the more recent past, rather, they were short-lived, dead-end traditions.

Evidence from the Groves' Orange Midden indicates contact, either physically or through trade, with the Tampa Bay and possibly the Suwannee River valley areas (Purdy 1994a). The occupants of the Lake Monroe Outlet Midden obtained most of their chert from Ocala limestone (ACI/Janus Research 2001). More specifically, the materials were attributed to the Gainesville, Ocala, Lake Panasoffkee East, and West quarry clusters (Endonino 2007). Other evidence of trade can be seen in the use of soapstone, which was imported from north central Georgia, South Carolina, and Virginia (Yates 2000). Soapstone transportation most likely occurred via canoe, and evidence for canoe usage is well documented (Newsom and Purdy 1990; Purdy 1988; Wheeler et al. 2003).

By about 2000 BCE, fired clay pottery was introduced in Florida. The first ceramic types, tempered with fiber (Spanish moss or palmetto), are referred to as the Orange series. It was originally

believed that the ceramics lacked decoration until about 1650 BCE when they were decorated with geometric designs and punctations. Research has called the entire Orange chronology into question (Sassaman 2003). Based on a series of AMS dates on soot from Orange Incised sherds from the middle St. Johns Valley and from radiocarbon dates on oyster and charcoal in association with Orange ceramics near the mouth of the river, all Orange ceramic types occur within the time span of roughly 2150-1650 BCE. In addition, Cordell (2004) has documented the presence of sponge spicules in the Orange ceramic paste (the diagnostic trait of St. Johns wares) which suggest that the St. Johns ceramic tradition extends back to the beginning of ceramic use in the region (Sassaman 2003:11). The projectile point assemblage was the same, with the addition of the Clay, Culbreath, and Lafayette types (Bullen 1975).

There is little difference between Middle/Late Archaic and Orange populations except that there are more Orange sites and the density of sites is higher. Orange settlements were primarily located near wetland locales. The abundance of resources located in and near the wetlands permitted larger settlements. The adaptation to this environment allowed for a wider variety of resources to be exploited and greater variability in settlement patterns. Shellfish, fish, and other food sources were now available from coastal and freshwater wetlands resulting in an increase in population size.

Bridging the end of the Archaic and the beginning of the Formative stage is the Transitional period (1200 to 500 BCE), which was characterized by increased regionalism, population growth, and socio-cultural complexity (Bullen 1959, 1970). The diffusion of culture traits, resulting from the movements of small groups of people, led to the spread of several ceramic and tool traditions (Bullen 1959). The major changes in post-Transitional cultures cannot be attributed to environmental changes but rather the result of social, political, religious, and technological innovations introduced from elsewhere in the eastern U.S. (Miller 1998:76).

3.3 Formative

The period from about 500 BCE until 750 CE (Common Era) in this area is referred to as St. Johns I, which has been divided into three sub-periods: St. Johns I (500 BCE-100 CE), St. Johns Ia (100-500 CE), and St. Johns Ib (500-750 CE) based on characteristic ceramic types (Milanich 1994:247). There are regional variants of this tradition: the St. Marys to the north and the Indian River to the south. The St. Marys Region is located at the mouth of the St. Johns and extends northward into Georgia (Russo 1992). Sites in this area contain a mixture of Georgia ceramics as well as St. Johns ceramics. At the southern end is the Indian River Region which was first defined by Rouse (1951). There is a higher prevalence of sand-tempered wares in this region. Malabar I is coeval with St. Johns I. Malabar II occurs at the same time as St. Johns.

Settlement patterns during this time were virtually the same as that seen for the earlier periods, i.e. along the coastal estuaries and larger rivers. The Twin Mounds Site faunal analysis suggests that there was a slight decrease in the dependence on freshwater shellfish during the St. Johns periods as opposed to the preceding Orange period (Weisman 1993). Based on that analysis, there was an increase in the use of reptilian resources. There was also a tremendous increase in the number of archaeological sites during this time. An apparent trend from St. Johns I through Ib times was a population shift into the northern part of the St. Johns River valley, possibly due to the need for more arable land (Milanich and Fairbanks 1980:158).

Village wares were almost all St. Johns Plain throughout this period. St. Johns Incised is associated with the Early St. Johns I period. Deptford and Swift Creek pottery or copies are occasionally present in St. Johns I and Ia periods. St. Johns Cordmarked ceramics are associated with the St. Johns Ia period while Dunns Creek Red is associated with the St. Johns Ia and Ib periods. In her analysis of

the ceramics from Edgewater Landing, Cordell (Russo et al. 1989:68) notes that through time, St. Johns Plain ceramics become sandier due to increased use of quartz sand as an aplastic agent.

Evidence of the continuous use of burial mounds begins at this time. Many of the burials were found in large central pits, probably the result of secondary interments. Some changes in the burial practices include the possible use of log tombs during the St. Johns Ia period as well as inclusion of Hopewellian-Yent complex exotic trade items (Milanich 1994:261). Much of the information on St. Johns I period burial practices have been obtained from the Ross Hammock Site in Volusia County (Bullen et al. 1967). This site complex consists of two large burial mounds and an extensive village midden located on the west shore of Mosquito Lagoon (Bullen et al. 1967:16). The Benton Mound dates to the St. Johns Ia period (Miller 1994). Other ceremonial activities associated with these sites include the "killing" of ceramic pots.

Year-round occupation of the coast and along the rivers occurred with special use-activity sites located in other locales and short-term campsites on the coast as well. Excavations at the Sligh and Lake Jessup South sites suggest that they served as villages or long-term encampments (Dickinson and Wayne 1996; Wayne and Dickinson 1993). The wide variety of tools and abundance of ceramics suggests a relatively sedentary group. Hunting, food preparation, and tool making were common site activities. The site pattern consists of small, probably individual household midden deposits with structural evidence limited to arcs of shallow post holes, often shell-filled, and fire pits (Dickinson and Wayne 1996:108). The Hontoon Island site has provided a wealth of data due to the preservation of many classes of artifacts within the inundated midden deposits. Evidence of an extensive wood-working tradition is noted by the numerous carved items recovered from the river as well as the debitage remaining from the carving activities (Purdy 1987). The faunal and botanical analyses suggested that the site was occupied on a year round basis and that most of the resources were collected within 5-10 km (3-6 mi) of the site (Newsom 1987; Wing and McKean 1987).

The survey of the Edgewater Landing tract recorded several shell midden deposits that date to this period (Johnson and Ste. Claire 1988). Excavations conducted at two of the sites indicated occupation during the St. Johns Ia and St. Johns Ib periods. Both sites were characterized as short-term camps established to harvest oysters and hardshell clams. The sites were occupied irregularly throughout the year, but contained evidence indicating that the sites were utilized during all seasons of the year (Russo et al. 1989). The Seminole Rest site is a large quahog clam-processing center located along Mosquito Lagoon (Horvath 1995). The faunal analysis indicated that the site was used throughout the year, but did not appear to be occupied on a year-round basis (Quitmyer 1995). Although located along the lagoon's shore, fish made up only a small portion of the diet, less than 15%, and mammals even less (Kozuch 1995).

3.4 Mississippian

The St. Johns II period has been divided into three sub-periods: St. Johns IIa (750-1050 CE), St. Johns IIb (1050-1513 CE), and St. Johns IIc (1513-1565 CE). These periods are marked by the presence of St. Johns Check Stamped pottery. St. Johns II carries on the tradition and is marked only by the introduction of check-stamped pottery (Goggin 1952:70). Occupation of riverine and coastal shell middens continued, although Miller (1998:80) notes that there is a relative increase in the number of non-riverine and non-coastal sites, perhaps as the result of locating sites in more agriculturally suited locales. Such sites are quite numerous, suggesting an increase in population.

Hunting and gathering remained important but the dependence upon cultivated crops such as maize, squash, and gourds increased in some areas. The use of gourds as domesticates is still being

studied as there is no evidence for cultivation even though gourds and squashes have been around for thousands of years prior to this period (Newsom et al. 1993). In the upper St. Johns basin, the practice of horticulture was not adopted because the wetland ecology and subsistence strategies were different (Russo 1984; Sigler-Eisenberg 1984a; Sigler-Eisenberg et al. 1985). At the Gauthier site, fish and aquatic turtles were the primary subsistence items, with relatively little reliance upon terrestrial game or freshwater shellfish (Sigler-Eisenberg 1984b).

There was an increase in the number and size of villages during the St. Johns IIa period suggesting population expansion. A ranked society may have evolved as evidenced by the differential burial customs. No longer were all people interred in burial mounds. Deagan (1978:109) notes that around 1000 CE a population shift from the more southern and southwestern areas into the northern areas is evidenced by changes in relative frequencies of burial mounds in the areas over time. Excavations of several burial mounds revealed a new pattern in that the burials were placed on their backs with their heads or feet pointing toward the mound center (Jennings et al. 1957; Willey 1954).

The St. Johns IIb period (ca. 900-1250/1300 CE) is characterized by the adoption of some Mississippian traits into the ceremonial system as well as the presence of St. Johns Simple Stamped ceramics. The Mississippian lifestyle, however, never became dominant, possibly because the soils were not suitable for full agricultural pursuits. A more complex socio-political organization is suggested by the presence of platform mounds at the ceremonial centers: Mill Cove Complex near the mouth of the St. Johns River and Mt. Royal just north of Lake George (Ashley 2012). Copper beads and ornaments, as well as greenstone celts, have been recovered from several sites, indicating contact with the Mississippian world. Mt. Royal has been considered a center of dispersal in the marine shell trade due to the tremendous quality of unmodified whelk shells recovered from the mound (Ashley 2005). By around 1300 CE, influence from the Mississippian world waned, probably due to the fall and abandonment of the Macon Plateau to the north and the disruption of the existing interaction networks. At this time, the major sites were apparently abandoned and the St. Johns II people moved further south, up the St. Johns River. However, within two centuries, the introduction of corn farming and the shift from long-distance trading to territorial raiding created the volatile landscape that was encountered by the Europeans when they first arrived (Ashley 2012:125).

The St. Johns IIc period is marked by the introduction of European artifacts in some of the mounds. Three Native American ethnic groups were known to inhabit east central Florida at the time of Spanish contact: the Ais, the Mayaca, and the Jororo. The Ais lived along the Atlantic Coast and were closely involved with the Spanish. They inhabited the coastal strand and Indian River areas at this time. They apparently mixed indigenous hunting/gathering/fishing economy with the salvaging of Spanish shipwrecks (Milanich 1995:64-65). The Timucuans shared a common language but cannot be considered as a specific cultural group because the range of the Timucuan speakers was crosscut by dialect, techno-environmental, ceremonial, political and geographical differences (Deagan 1978:89). The Mayaca occupied eastern Lake, western Volusia, and Seminole counties. The Jororo occupied the area of Orange and Seminole Counties, extending southward into Polk and Highlands Counties (Milanich 1995:63). They pursued a hunting-gathering-fishing economy (Newsom 1987). Although these Indians apparently continued the St. Johns tradition, they did not share the same Timucuan language as the St. Johns people further north (Milanich 1995).

3.5 Colonialism

The cultural traditions of the native Floridians ended with the advent of European expeditions to the New World. The initial events, authorized by the Spanish Crown in the 1500s, ushered in devastating European contact. After Ponce de Leon's landing in 1513, Spanish explorations were

confined along the west coast of Florida and European contact along the east coast was left to a few shipwrecked sailors from treasure ships that sailed through the Straits of Florida on their way to Spain. Cape Canaveral was a landmark for these explorers and sailors. The French established Fort Caroline, near today's Jacksonville, to promote their interests in the New World. The need to protect the treasure galleons led Spain to remove the French from the region. Pedro Menéndez de Avilés led the Spanish fleet in its conquest of Fort Caroline and the destruction of the French.

During Spain's first period of occupancy (1565-1763), it failed to establish permanent settlements in the project area. Located on the fringe of Spanish activity centered in St. Augustine, Brevard County was too far removed for Spain to exert political control (Milanich and Fairbanks 1980). Missionization of the Jororo and Mayaca began in the late 1600s, and in 1728 Joseph de Bullones wrote to the king that the Jororo were "gone" (Hann 2003:132). Evidence of European contact with the Jororo is seen at the Philip and Goodnow mounds where glass beads and iron scissors have been recovered (Milanich 1995). Due to the attempts of the Spanish military and missionaries to alter the traditional lifeways, by the end of the seventeenth century these aboriginal populations were virtually extinct.

The area that now constitutes the state of Florida was ceded to England in 1763 after two centuries of Spanish possession. England governed Florida until 1783 when the Treaty of Paris returned Florida to Spain; however, Spanish influence was nominal during this second period of ownership. Prior to the American colonial settlement of Florida, remnants of the Creek Nation and other Indian groups from Alabama, Georgia, and South Carolina moved into Florida and began to repopulate the vacuum created by the decimation of the aboriginal inhabitants. The Seminoles, as these migrating groups of Indians became known, formed at various times, loose confederacies for mutual protection against the American Nation to the north (Tebeau 1980:72).

3.6 Territorial and Statehood

The bloody conflict between the Americans and the Seminoles over Florida first came to a head in 1818, and was subsequently known as the First Seminole War. In 1821, Florida became a U.S. Territory due to the war and the Adams-Onis Treaty. Andrew Jackson, named provisional governor, divided the territory into St. Johns and Escambia Counties. St. Johns County included the lands lying east of the Suwannee River. In the first territorial census (1825), 5077 people were reported within St. Johns County, and by 1830, that number had risen to 8956 (Tebeau 1980:134).

Even though the First Seminole War was fought in north Florida, the Treaty of Moultrie Creek in 1823, at the end of the war, was to affect the settlement of all of Florida. The Seminoles relinquished their claim to the whole peninsula in return for an approximately four million acre reservation south of Ocala and north of Charlotte Harbor (Mahon 1985). The reservation was found to be nearly barren, with poor soils, few good hammocks, and frequently covered with water during the rainy season (Knetsch 2008:8). The treaty never satisfied the Indians or the Anglo-Americans. The inadequacy of the reservation and desperate situation of the Seminoles living there, plus the mounting demand of the Anglo-Americans for their removal, soon produced another conflict.

By 1835, the Second Seminole War was underway. Mosquito County, which encompassed present Osceola, Lake, Orange, Seminole, Brevard, and Volusia Counties as well as parts of several other counties, was sparsely occupied with mostly sugar plantations along the rivers near the coast. In 1835, the Territory's legislative council established the county seat at John Bunch's plantation in New Smyrna. However, before the first session could be held, the threat of Indian attacks forced the county government to move to St. Augustine, the seat of St. Johns County, for safety. During the war, court was held concurrently with that for St. Johns County (Robison and Andrews 1995).

Fort Ann, Fort Pierce, Fort Taylor, Fort Christmas, and Fort Basinger were a few of the forts established during this period. Fort Ann was established in 1837 under the direction of General Joseph Hernandez. Lt. Irwin of the 1st Artillery was ordered to oversee the construction of a fortification at the Haulover, capable of being defended by one company, which was to remain when the rest of the guard had left (Paterno 2003). After less than one year of service, Fort Ann was abandoned. Although most of the fighting occurred around the Kissimmee River and Everglades areas, sporadic outbreaks of violence erupted throughout central and south Florida. Seminoles ransacked or torched sixteen of the plantations on the northern Mosquito Lagoon by January 1836 (Eriksen 1994:36). The Second Seminole War lasted until 1842 when the federal government decided to end the conflict be withdrawing troops from Florida. Some of the battle-weary Seminoles were persuaded to migrate west where the government had set aside land for them. However, those who were adamant about remaining were allowed to do so, but were pushed further south into the Everglades and Big Cypress Swamp.

Encouraged by the passage of the Armed Occupation Act in 1842, which was designed to promote settlement and protect the Florida frontier, Anglo-American pioneers and their families move south throughout Florida. The Act made available 200,000 acres outside of the already developed regions south of Gainesville to the Peace River, barring coastal lands and those within two miles of a fort. The Armed Occupation Act stipulated that any family or single man over 18 years of age able to bear arms could earn title to 160 acres by erecting a habitable dwelling, cultivating at least five acres of land, and living on it for five years. During the nine month period the law was in effect, 1184 permits were issued, totaling some 189,400 acres (Covington 1961:48; Dunn 1989:24-25). Prospective settlers filed 112 patents for land along the Indian River between Merritt Island and Lake Worth. These settlements collectively received the name of the Indian River Colony (Shofner 1995:45).

3.7 Statehood

In 1844, the territorial government had reduced Mosquito County and renamed it Orange County. The following year, Brevard County was carved from it and named St. Lucie County and the Union admitted the State of Florida with Tallahassee as the capital. In 1855, St. Lucie was renamed Brevard and the area was reduced in size again. Repeated boundary adjustments granted portions of Brevard County to Polk, Orange, Dade, and Manatee Counties throughout the next 20 years. In 1844, A.H. Jones surveyed the exterior and interior lines of Township 24 South, Range 35 East. Section 10 was described as saw grass ponds, 2nd rate pine, open pine land, and wet savanna (State of Florida 1844: 166, 176-178). No historic features were noted within or adjacent to the APE in the field notes or on the *Plat* (State of Florida 1844, 1845) (**Figure 3.2**).

Throughout the intervening years between the Second and Third Seminole Wars, tensions erupted periodically between the settlers and the Seminoles. For example, in 1849, a renegade group of Seminoles attacked the Indian River Colony. As a result, the remaining settlers abandoned their land to flee to the safety of St. Augustine (Shofner 1995:52). Then, in December 1855, the Third Seminole War, or Billy Bowlegs War, started as a result of pressure placed on the Native Americans remaining in Florida to move west (Covington 1982). The war started in present day Collier County when Billy Bowlegs and 30 warriors attacked an army camp, killing four soldiers and wounding four others. This hostile action renewed state and federal interest in the final elimination of the Seminoles from Florida. As a result, several regional military posts were established (Tebeau 1966).

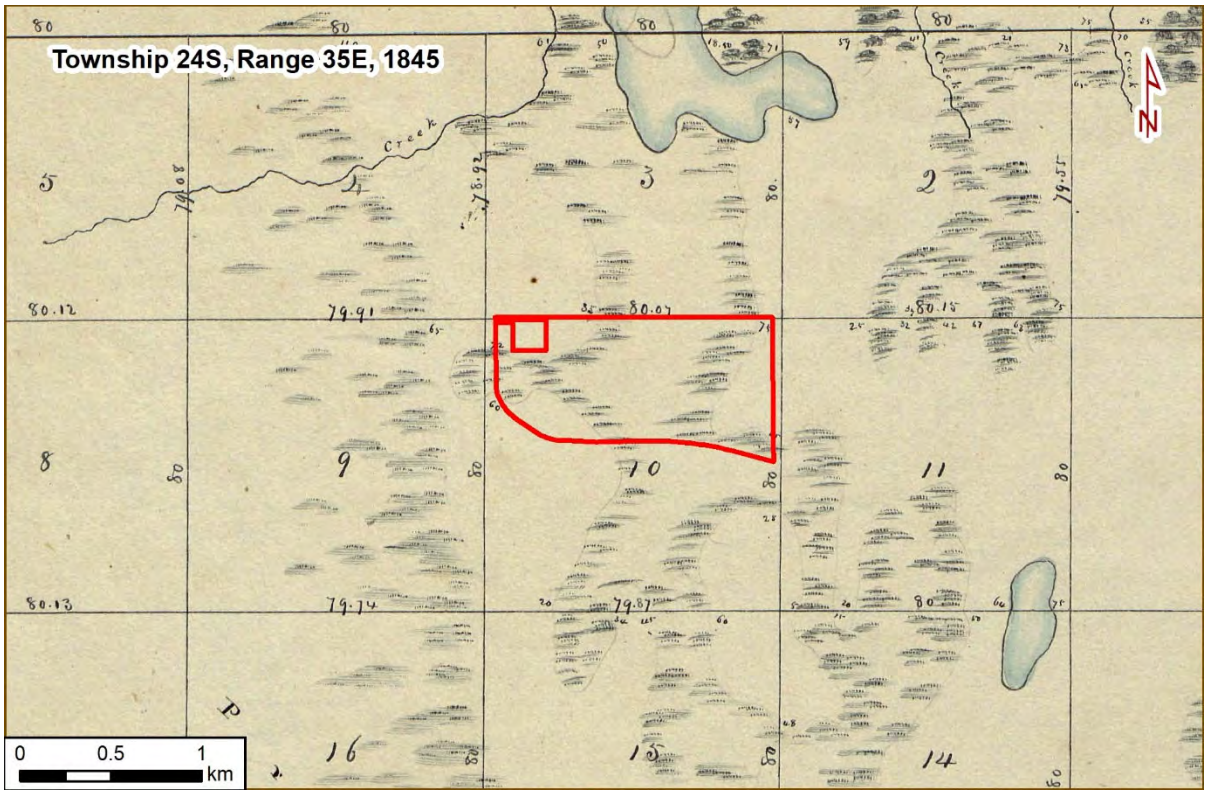

Figure 3.2. 1845 Plat showing the APE.

Military action was not decisive during the war; therefore, in 1858, the U.S. Government resorted to monetary persuasion to induce the remaining of Seminoles to migrate west. Chief Billy Bowlegs accepted $5000 for himself, $2500 for his lost cattle, each warrior received $500, and $100 was given to each woman and child. On May 8, 1858, the Third Seminole War was declared officially over (Covington 1982:78-80).

The 1860 Census counted only 267 individuals living in Brevard County. Most of the settlers in the Indian River area grew subsistence crops, but according to the census taker, no individual or firm yielded any product that valued over $500 per year. Cattle ranching composed the largest industry in the county; 39 people owned cattle, of which five owned more than 3000 head (Shofner 1995:65-66). The lone exception was Douglas Dummett who settled on the southern end of Mosquito Lagoon. He "discovered" a large number of orange trees along the coast and river and started grafting and cultivating groves. By 1865, Dummett was famous for his "Indian River" oranges (Eriksen 1994:31-33). It was at this time that John C. Houston purchased land in Section 14 (State of Florida n.d.:90).

3.8 Civil War and Reconstruction

In 1861, Florida followed South Carolina's lead and seceded from the Union in the prelude to the Civil War. Florida had much at stake in this war, as evidenced in a report released from Tallahassee in June 1861. It listed the Florida land value as $35,127,721 and the value of slaves at $29,024,513 (Dunn 1989:59). While the coast of Florida experienced a naval blockade during the war, the interior of the state saw very little military action. One of the major contributions of the state to the war effort was in the supplying of beef and salt to the Confederate Government. The Confederate Government

estimated that three-fourths of the cattle which Florida supplied to them originated from Brevard and Manatee counties (Shofner 1995:72).

Immediately following the war, the South underwent as period of "Reconstruction" to prepare the Confederate States for readmission to the Union. The program was administered by the U.S. Congress, and on July 25, 1868, Florida officially returned to the Union (Tebeau 1980:251). It was not until the 1870s, when a wooden tramway was built from Lake Harney to Titusville that any great influx of people into the project area became feasible. The region was now producing oranges and other fruits, shellfish, vegetables, venison, and hides for shipment north to Jacksonville via the river routes (Rouse 1951:61).

During the Reconstruction period, Florida's financial crisis, born of pre-war railroad bonded indebtedness, led Governor William Bloxham to search for a buyer for an immense amount of state lands. Bloxham's wish was to raise adequate capital in one sale to free from litigation the remainder of state lands for desperately needed revenue. In 1881, Hamilton Disston, a Philadelphia investor and friend of Governor Bloxham, purchased four million acres from the State of Florida to clear the state's debt. This transaction, which became known as the Disston Purchase, enabled the distribution of large land subsidies to railroad companies, inducing them to begin extensive construction programs for new lines throughout the state. Hamilton Disston and the railroad companies, in turn, sold smaller parcels of land to developers and private investors. The APE and all of Section 10 was deeded to the Florida Coast Line Canal and Transportation Company in 1906 (State of Florida n.d.:85).

By 1880, 1497 individuals resided in Brevard County. The Civil War stimulated growth in the Indian River area in two ways: many Southerners sought new homes to escape the unrest in the neighboring ex-Confederate states, and the war brought prosperity to a large number of Northerners who sought vacation homes in the warmer climates (Shofner 1995:83). After 1879, the county contained fewer cattlemen while the citrus, pineapple, and vegetable industries developed rapidly between the Indian and St. Johns Rivers. After the Civil War, many settlements along the Indian River developed into towns. These included Titusville, which was named the County Seat in 1880, Cocoa, Melbourne, and Eau Gallie. Many communities along the river established post offices; Cocoa's was established in 1884 and Eau Gallie's in 1871 (Bradbury and Hallock 1962:24). In general, during the late 1880s, the settlers of the area almost all had a garden for food. The people grew and shipped beans, tomatoes, cabbage, cucumbers, eggplants, onions, watermelons, guavas, and bananas (Shofner 1995).

3.9 Twentieth Century

The turn of the century prompted optimism and excitement over growth and development. With increased financial resources and machinery, extensive reaches of the county's lands were now available for development. In most cases, the land required intensive drainage for agricultural development and settlement. Drainage systems reclaimed for settlement large sections of swampland between Melbourne and Vero Beach, and led to an improved road system and an increasing population.

The first twenty years of the new century witnessed the advent of progressivism in which governments expanded their services beyond traditional limits of the previous century. During this time the automobile, telephone, and electricity transformed Brevard County from isolation into a county linked with the rest of the state and the nation. Two roads significantly opened up the communities along the Indian River: Dixie Highway and Cheney Highway. Dixie Highway, completed through Brevard County in September 1916, eventually linked Chicago and Miami. Cheney Highway, today's State Road 50, linked the Indian River area with Orlando. In 1917, the first bridge to span the Indian

River was constructed. This bridge from Cocoa to Merritt Island provided a link to numerous communities on Merritt Island.

By 1920, the county population numbered over 8500, a 90% increase over the 4717 residents of 1910. The mild winters, the growing number of tourists, and larger use of the automobile, the completion of roads, the prosperity of the 1920s, and the promise by the state legislature never to pass state income or inheritance taxes prompted the boom. Other improvements included the construction of bridges across the Indian River, which provided easy access to the beaches.

By 1926-27, the bottom fell out of the Florida real estate market. Massive freight car congestion from hundreds of loaded cars sitting in railroad yards caused the Florida East Coast Railway to embargo all but perishable goods in August of 1925 (Curl 1986:84-84). The embargo spread to other railroads throughout the state, and, as a result, most construction halted. The 1926 real estate economy was based upon such wild land speculation that banks could not keep track of loans or property values.

To make the situation even worse, two hurricanes hit south Florida in 1926 and 1928. Neither hurricane caused much damage to Brevard County, but they destroyed confidence in Florida as a tropical paradise and created a flood of refugees fleeing northward. Soon after, the collapse of the Florida Land Boom, the October 1929 stock market crash, and the onset of the Great Depression left the Brevard area in a state of stagnation. Residents managed to survive on fish, oranges, deer, and turtles. By the mid-1930s, federal programs, implemented by the Roosevelt administration, started employing large numbers of construction workers, helping to revive the economy of the state. The programs were instrumental in the construction of parks, bridges, and public buildings. In Brevard County, some of these projects included the construction of the Melbourne Airport, the Intercoastal Waterway, the repairing of schools, paving roads, and the preparation of detailed maps of the county (Eriksen 1994).

By the 1960s, the exposure of the Brevard County area with televised NASA lift-offs increased tourism. The space race also demanded civilian and military personnel to work at the installation and at the technological industries created to support KSC. By the late 1960s, at the peak of the Apollo program, Brevard County relied heavily upon space-related employment. This reliance created an acute problem when the county underwent a recession in the early 1970s because KSC, CCAFS, and related industries laid off workers at the conclusion of the Apollo program (Tebeau 1980:464). The economy eventually stabilized by the late 1970s and continued to diversify in the 1980s relying on increased industry and tourism (Stone 1988). In the years between 1980 and 1990, the county population increased 46%, between 1990 and 2000, the increase was 19%, and between 2000 and 2010, the increase was 14%. The 2017 estimate is 575,211 individuals with the largest percentage employed in trade, transportation, and utilities (17.2%) followed by education and health services (16.8%). It is Florida's tenth most populous county (Enterprise Florida 2018).

3.10 Project Area Specifics

A review of aerial photographs, available from the Publication of Archival, Library & Museum Materials (PALMM), revealed that the general project area was undeveloped through the 1940s and 1950s. However, by 1969, ditching, borrow pits, and roads were in place, and these changed the general drainage patterns of the area (USDA 1943, 1951, 1969) (**Figure 3.3**). Other than the borrow pit and the ditching, the APE has remained undeveloped, and no structures were noted on the historic aerials or the USGS quadrangle maps (USGS 1949a-c).

Figure 3.3. 1969 aerial photograph showing the APE.

4.0 RESEARCH CONSIDERATIONS AND METHODS

4.1 Background Research and Literature Review

A review of archaeological and historical literature, records and other documents and data pertaining to the project area was conducted. The focus of this research was to ascertain the types of cultural resources known in the project area and vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP, the FMSF, cultural resource survey reports, published books and articles, and historic aerial photographs. The FMSF information used in this report dates from October 2018, which is the most recent edition. However, according to FMSF staff, input may be a month or more behind receipt of reports and site files. An informal interview was conducted with Sonny McDaniel, a decades-long, informal overseer of the tract. He reported no knowledge of cultural resources found within the APE (McDaniel 2018).

4.1.1 Archaeological Considerations

A review of the FMSF revealed that no archaeological sites have been recorded within the APE, and one site is recorded within one mile (**Figure 4.1**). No artifacts were found on the property during a previous survey of a portion of the APE (Penders 2004). Site 8BR01714, Sharpe, is a low density artifact scatter recorded as a result of a survey of the proposed Buccaneer Gas Pipeline. It is located almost two miles to the northeast of the APE. Two artifacts, a Florida Archaic Stemmed projectile point and a chert flake fragment, were recovered from a road surface adjacent to several borrow pits. No artifacts were found in the two shovel tests placed in the area (Estabrook 2000). The SHPO has determined the site ineligible for NRHP listing.

Several additional surveys have been conducted with one mile of the APE (**Table 4.1**). These include a survey of six selected areas within Brevard County (Bense and Phillips 1990), a survey for a cellular tower (Ambrosino 2005); three surveys for highway projects (Browning 1991; Janus Research 2001, 2005); and two surveys for the All Aboard Passenger Rail project (Janus Research 2013, 2016).

Table 4.1. Cultural Resource Assessment Surveys within one mile of the APE.

REFERENCE	PROJECT
Bense and Phillips 1990	Archaeological Assessment of Six Selected Areas in Brevard County: A First Generation Model.
Browning 1991	CRAS, SR 528/Beeline Expressway Interchange at I-95
Estabrook 2000	CRAS, Proposed Buccaneer Gas Pipeline
Janus Research 2001	CRAS, I-95 PD&E Study from SR 514 to SR 50
Penders 2004	Archaeological Survey, Proposed Space Needle Residential Development
Janus Research 2005	CRAS, SR 528 PD&E Study from SR 520 to the Port Canaveral Terminal B Interchange
Ambrosino 2005	Archaeological and Historical Survey, Beeline and I-95 Tower
Janus Research 2013	CRAS, All Aboard Florida Passenger Rail Project from Orlando to West Palm Beach
Janus Research 2016	Addendum to CRAS, All Aboard Florida Passenger Rail Project from Orlando to West Palm Beach

Yellow color represents surveys within APE.

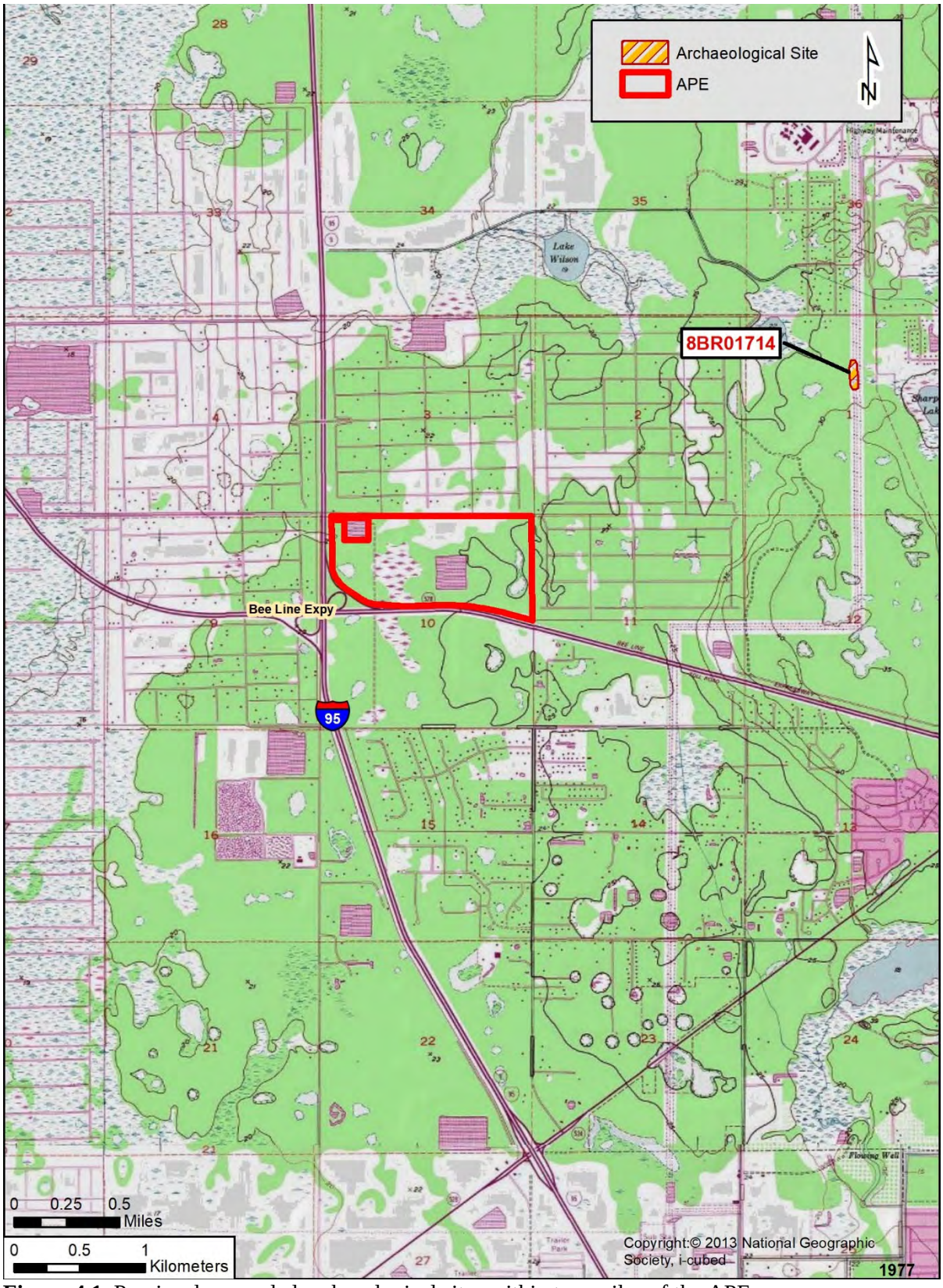

Figure 4.1. Previously recorded archaeological sites within two miles of the APE.

The previously noted CRAS reports and others in the general area reflect a general lack of sites in environments similar to the APE (Bense and Phillips 1990; Fryman et al. 1979). Archaeological sites in this region tend to be located on elevated land, adjacent to lakes, rivers, and large swamps. Based on these data, the poorly drained soils, the lack of elevated land, and the past disturbances, the archaeological potential of the APE was considered low to moderate.

Based on the results of historic research, the potential for early historic period archaeological sites was considered low. No 19th century homesteads, forts, military trails, or Indian encampments were expected (State of Florida 1844, 1845). In addition, a review of the 20th century aerials and quadrangle maps revealed an absence of structures (USDA 1943, 1951, 1969, 1979; USGS 1949a-c).

4.1.2 Historical Considerations

A review of the FMSF revealed that no historic structures were recorded previously within the APE. Examination of 1943-1979 aerial photographs and the historic USGS quadrangle maps indicated low potential for historic structures (USDA 1943, 1951, 1969, 1979; USGS 1949a-c).

4.2 Field Methodology

The FDHR's Module Three, *Guidelines for Use by Historic Professionals*, indicates that the first stage of archaeological field survey is a reconnaissance of the project area to "ground truth," or ascertain the validity of the predictive model (FDHR 2003). During this part of the survey, the researcher assesses whether the initial predictive model needs adjustment based on disturbance or conditions such as constructed features (i.e., parking lots, buildings, etc.), underground utilities, landscape alterations (i.e., ditches and swales, mined land, dredged and filled land, agricultural fields), or other constraints that may affect the archaeological potential. Additionally, these Guidelines indicate that non-systematic "judgmental" testing may be appropriate in urbanized environments where pavement, utilities, and constructed features make systematic testing unfeasible; in geographically restricted areas such as proposed pond sites; or within project areas that have limited high and moderate probability zones, but where a larger subsurface testing sample may be desired. While predictive models are useful in determining preliminary testing strategies in a broad context, it is understood that testing intervals may be altered due to conditions encountered by the field crew at the time of survey. A reasonable and good faith effort was made to identify the historic properties within the APE (cf., Advisory Council on Historic Preservation n.d.).

Archaeological field survey methods consisted surface reconnaissance combined with systematic subsurface testing. The systematic shovel tests were placed at 50 m and 100 m intervals across the project area. Shovel tests were circular and measured approximately 50 centimeters (cm) (20 inches [in]) in diameter by at least 1 m in depth unless precluded by water. All soil removed from the shovel tests was screened through a 0.25 in mesh hardware cloth to maximize the recovery of artifacts. The locations of all shovel tests were recorded using a Trimble GeoXT, and following the recording of relevant data such as stratigraphic profile and artifact finds, all shovel tests were refilled.

Historical field methodology consisted of a preliminary reconnaissance survey of the area to determine the location of all historic properties believed to be 50 years of age or older, and to ascertain if any resources adjacent to the project corridor could be eligible for listing in the NRHP.

4.3 Laboratory Methods and Curation

No artifacts were recovered, thus no laboratory methods were utilized. All project-related records, including maps, field notes, and photos, will be maintained at the ACI office (P18127) in Sarasota unless the client requests otherwise.

4.4 Inadvertent/Unexpected Discoveries

Occasionally, archaeological deposits, subsurface features or unmarked human remains are encountered during the course of development, even though the project area may have previously received a thorough and professionally adequate cultural resources assessment. Such events are rare, but they do occur. In the event that human remains are encountered during the course of development, the procedures outlined in Chapter 872, *FS* must be followed. However, it was not anticipated that such sites would be found during this survey.

In the event such discoveries are made during the development process, all activities in the immediate vicinity of the discovery will be suspended, and a professional archaeologist will be contacted to evaluate the importance of the discovery. The area will be examined by the archaeologist, who, in consultation with staff of the Florida SHPO, will determine if the discovery is significant or potentially significant. In the event the discovery is found to be not significant, the work may immediately resume. If, on the other hand, the discovery is found to be significant or potentially significant, then development activities in the immediate vicinity of the discovery will continue to be suspended until such time as a mitigation plan, acceptable to SHPO, is developed and implemented. Development activities may then resume within the discovery area, but only when conducted in accordance with the guidelines and conditions of the approved mitigation plan.

5.0 SURVEY RESULTS AND RECOMMENDATIONS

5.1 Archaeological

The archaeological investigations conducted within the APE consisted of surface reconnaissance combined with systematic and judgmental subsurface testing. A total of 75 shovel tests was excavated within the APE (**Figure 5.1**). Twenty-four were placed at 50 m intervals and fifty-one at 100 m intervals and judgmentally across the property. Prior to testing, the 2004 shovel test locations were plotted and ACI's tests were placed to supplement the earlier tests. All shovel tests were sterile of prehistoric and historic artifacts, and no artifacts were observed on the surface. These results concur with the 2004 results (Penders 2004). A reasonable and good faith effort was made per the regulations laid out in 36 CFR § 800.4(b)(1) (Advisory Council on Historic Preservation n.d.) to test all areas of the APE; however, wet conditions precluded testing in some areas and water often entered the shovel tests soon after breaking ground (**Photo 5.1**).

Photo 5.1. Shovel test condition within large wetland adjacent to the central mining pit.

The stratigraphy found in the shovel tests consisted of a 0 to 100 centimeters below surface (cmbs) (0 to 39 in) of gray sand in the flatwoods. In the wetlands, the stratigraphy was 0 to 50 cmbs (0 to 20 in) of dark gray muck, with water at the surface, and in the wetland periphery, the stratigraphy was 0 to 20 cmbs (0 to 8 in) of gray sand followed by 20 to 100 cmbs (8 to 39 in) of brown sand, with water entering the test between 40 to 60 cmbs (16 to 24 in).

No artifacts were recovered from the shovel tests, and no artifacts were noted on the surface. Thus, no archaeological sites which are listed, determined eligible, or appear to be considered potentially eligible for listing in the NRHP are located within the APE.

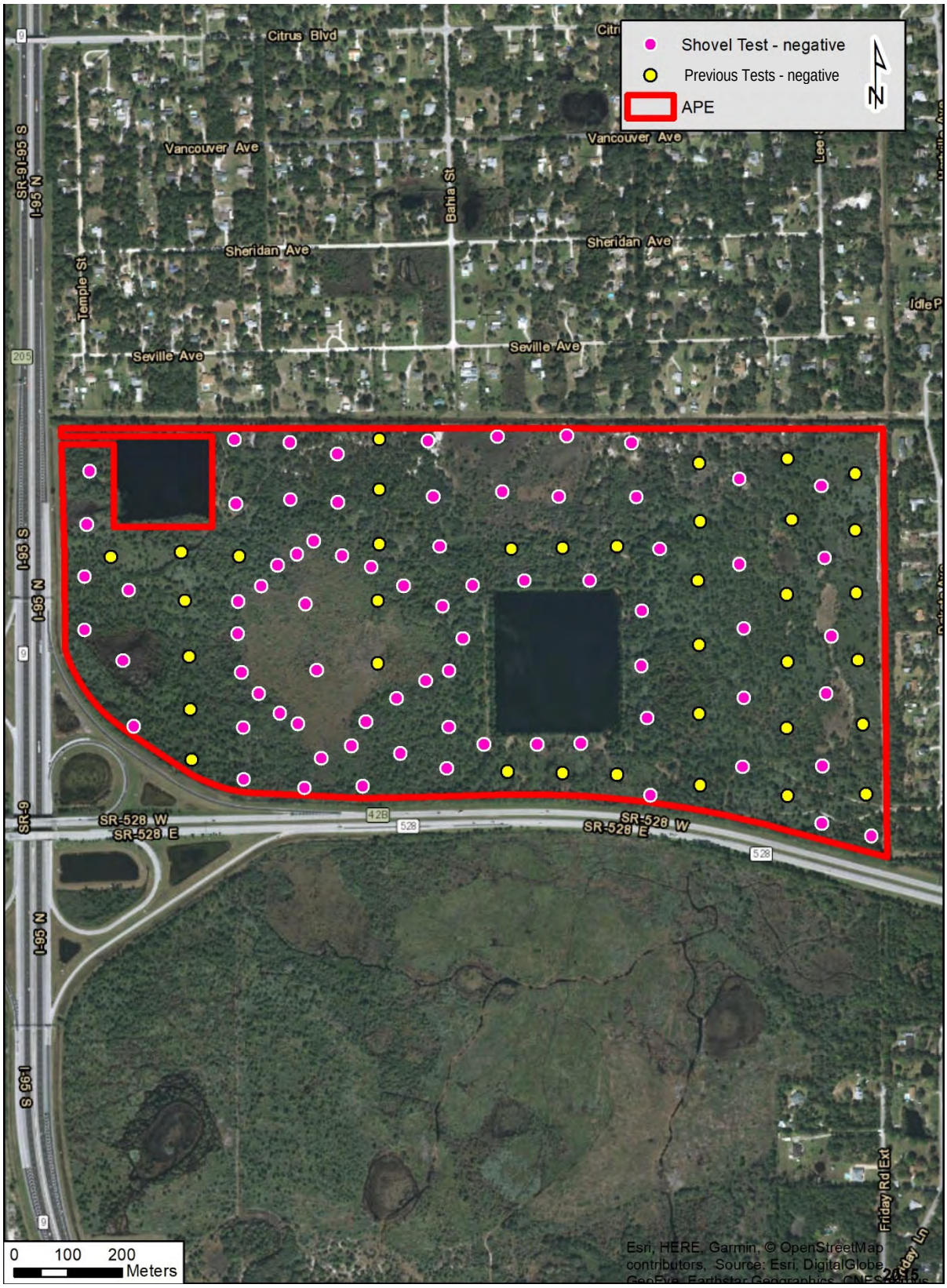

Figure 5.1. Location of the shovel tests within the APE. ACI tests are shown in pink and 2004 tests are shown in yellow. All tests were negative.

5.2 Historical

The historical/architectural resource survey indicated an absence of historic resources (50 years of age or older) within the APE. Thus, no historic resources which are listed, determined eligible, or appear to be considered potentially eligible for listing in the NRHP are located within the APE.

5.3 Conclusions and Recommendations

Given the results of background research and field surveys (2004, 2018), it is the opinion of ACI that the development of the APE will have no effect on any archaeological sites or historic resources that are listed, determined eligible, or which appear to be potentially eligible for listing in the NRHP within the APE. No further investigations are recommended.

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APPENDIX A: Survey Log

Ent D (FMSF only)_____

Survey Log Sheet

Florida Master Site File
Version 4.1 1/07

Survey # (FMSF only) _____

Consult *Guide to the Survey Log Sheet* for detailed instructions.

Identification and Bibliographic Information

Survey Project (name and project phase) CRAS, Cocoa Commercial Borrow Pit, Brevard County, Phase I

Report Title (exactly as on title page) Cultural Resource Assessment Survey of the Cocoa Commercial Borrow Pit, Brevard County, Florida

Report Authors (as on title page, last names first) 1. Almy, Marion 3. _____
2. _____ 4. _____

Publication Date (year) 2018 **Total Number of Pages in Report** (count text, figures, tables, not site forms) 41

Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)
P18127, ACI, Sarasota, Florida

Supervisors of Fieldwork (even if same as author) Names Marion Almy

Affiliation of Fieldworkers: Organization Archaeological Consultants Inc City Sarasota

Key Words/Phrases (Don't use county name, or common words like *archaeology*, *structure*, *survey, architecture, etc.*)

1. No sites 3. _____ 5. _____ 7. _____
2. _____ 4. _____ 6. _____ 8. _____

Survey Sponsors (corporation, government unit, organization or person directly funding fieldwork)

Name Bio-Tech Consulting Inc. Organization _____

Address/Phone/E-mail 3025 East South Street Orlando, Florida 32803

Recorder of Log Sheet Marion Almy **Date Log Sheet Completed** 11-27-2018

Is this survey or project a continuation of a previous project? ☒ No ☐ Yes: **Previous survey #s (FMSF only)** _____

Mapping

Counties (List each one in which field survey was done; attach additional sheet if necessary)

1. Brevard 3. _____ 5. _____
2. _____ 4. _____ 6. _____

USGS 1:24,000 Map Names/Year of Latest Revision (attach additional sheet if necessary)

1. Name SHARPES Year _____ 4. Name _____ Year _____
2. Name _____ Year _____ 5. Name _____ Year _____
3. Name _____ Year _____ 6. Name _____ Year _____

Description of Survey Area

Dates for Fieldwork: Start 11-12-2018 End 11-16-2018 **Total Area Surveyed** (fill in one) _____ hectares 246 acres

Number of Distinct Tracts or Areas Surveyed 1

If Corridor (fill in one for each) **Width:** _____ meters _____ feet **Length:** _____ kilometers _____ miles

Survey Log Sheet

Survey #_____

Research and Field Methods

Types of Survey (check all that apply): ☒archaeological ☐architectural ☐historical/archival ☐underwater ☐damage assessment ☐monitoring report ☐other(describe): _____

Scope/Intensity/Procedures 75 50 x 50 x 1 00 cm, 1/4 inch screened shovel tests conducted at 50 m intervals (24), and judgmentally and 100 m intervals (51).

Preliminary Methods (check as many as apply to the project as a whole)

☐Florida Archives (Gray Building)	☐library research- *local public*	☒local property or tax records	☒other historic maps
☐Florida Photo Archives (Gray Building)	☐library-special collection - *nonlocal*	☐newspaper files	☒soils maps or data
☒Site File property search	☒Public Lands Survey (maps at DEP)	☒literature search	☒windshield survey
☒Site File survey search	☒local informant(s)	☐Sanborn Insurance maps	☒aerial photography

☐other (describe): _____

Archaeological Methods (check as many as apply to the project as a whole)

☐Check here if **NO** archaeological methods were used.

☐surface collection, controlled	☐shovel test-other screen size	☐block excavation (at least 2x2 m)
☐surface collection, **un**controlled	☐water screen	☐soil resistivity
☒shovel test-1/4"screen	☐posthole tests	☐magnetometer
☐shovel test-1/8" screen	☐auger tests	☐side scan sonar
☐shovel test 1/16"screen	☐coring	☒pedestrian survey
☐shovel test-unscreened	☐test excavation (at least 1x2 m)	☐unknown

☐other (describe): _____

Historical/Architectural Methods (check as many as apply to the project as a whole)

☐Check here if **NO** historical/architectural methods were used.

☐building permits	☐demolition permits	☐neighbor interview	☐subdivision maps
☐commercial permits	☐exposed ground inspected	☐occupant interview	☐tax records
☐interior documentation	☒local property records	☐occupation permits	☐unknown

☐other (describe): _____

Survey Results (cultural resources recorded)

Site Significance Evaluated? ☐Yes ☒No

Count of Previously Recorded Sites 0 **Count of Newly Recorded Sites** 0

Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8". Attach additional pages if necessary.) N/A

Newly Recorded Site #'s (Are all originals and not updates? List site #'s without "8". Attach additional pages if necessary.) N/A

Site Forms Used: ☐Site File Paper Form ☒Site File Electronic Recording Form

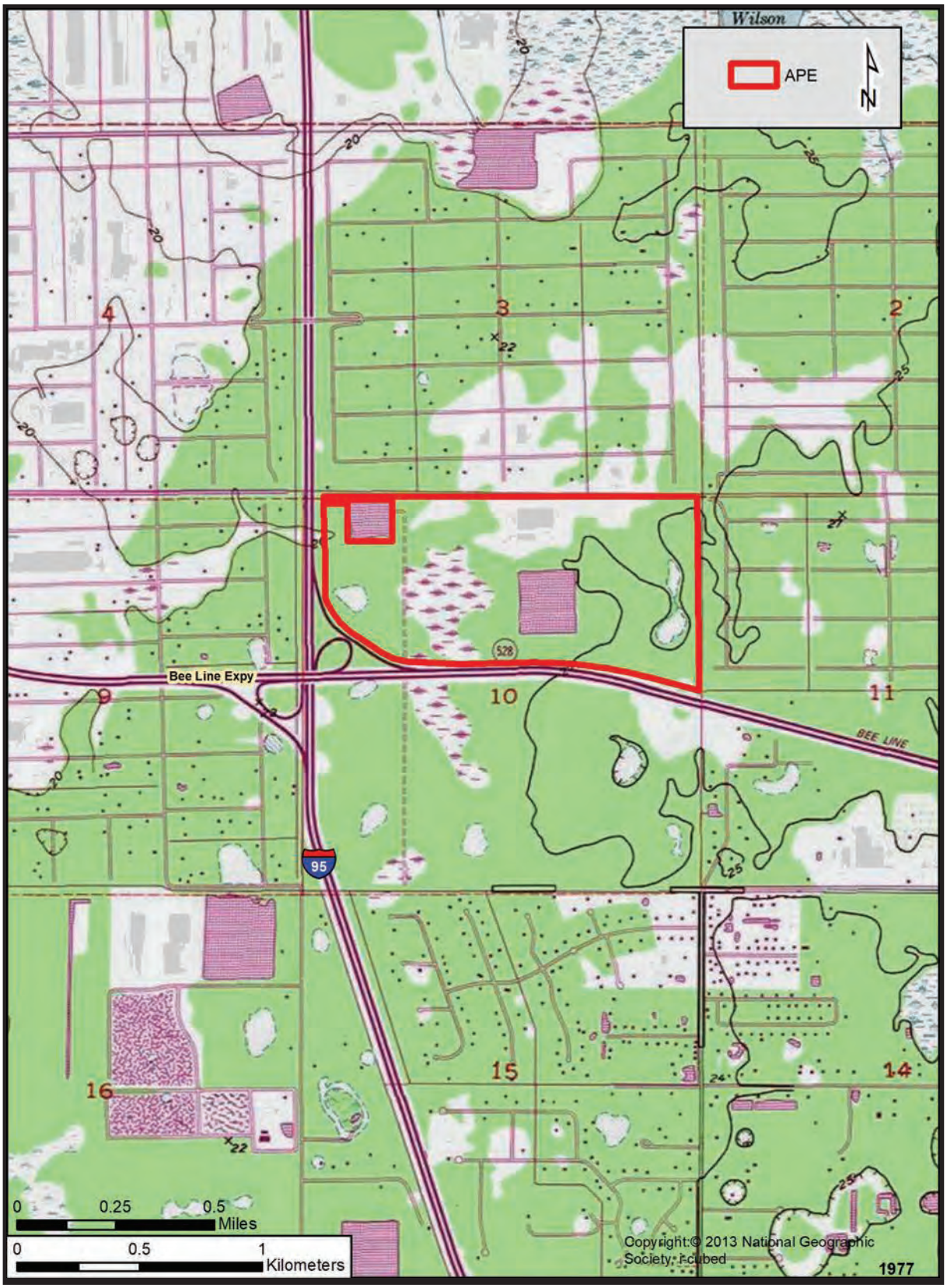
*****REQUIRED: ATTACH PLOT OF SURVEY AREA ON PHOTOCOPY OF USGS 1:24,000 MAP(S)*****

SHPO USE ONLY **SHPO USE ONLY** **SHPO USE ONLY**

Origin of Report: ☐872 ☐CARL ☐UW ☐1A32 # _____ ☐Academic ☐Contract ☐Avocational ☐Grant Project # _____ ☐Compliance Review: CRAT # _____

Type of Document: ☐Archaeological Survey ☐Historical/Architectural Survey ☐Marine Survey ☐Cell Tower CRAS ☐Monitoring Report ☐Overview ☐Excavation Report ☐Multi-Site Excavation Report ☐Structure Detailed Report ☐Library, Hist. or Archival Doc ☐MPS ☐MRA ☐TG ☐Other: _____

Document Destination: _____ **Plotability:** _____



Cocoa Commercial Borrow Pit
Township 24 South, Range 35 East, Section 10
USGS Sharpes
Brevard County

9-1-1 Administration/Address Assignment

2725 Judge Fran Jamieson Way
Building A, Room 120
Viera, Florida 32940

BOARD OF COUNTY COMMISSIONERS
Emergency Management

September 21, 2022

Sandra Leone, Planner
City of Cocoa
65 Stone Street
Cocoa, FL 32922

Dear Ms. Leone:

RE: Street Name Request: Lakes at Cocoa Groves

The below listed street names are reserved and will be held in reserve status for a period of two years. If these names are not implemented within this time frame and another customer requests the names, they will be released for their use. Therefore, if the applicant still wants to utilize the street names, they need to contact this office to re-reserve the names.

Pampas	**Orchard**	**Zamia**	**Centipede**	**Fescue**
Rye	**Perennial**	**Napier**	**Scutch**	

NOTE: The City has final authority regarding street name approval and street suffix.

Upon recording of the Plat, the City or Developer needs to provide a .pdf copy of the recorded document to our office for addressing and 9-1-1 purposes. A copy of the addressed plat will be emailed to the City, once it has been processed. If the City requires any hard copies of the addressed plat, additional copies must be provided. Upon processing of the recorded document, our office will input the new street names and address ranges into the Enhanced 9-1-1 Database and Mapping System.

Your continued cooperation is appreciated. If you need any further assistance you may reach our office at (321) 690-6846 or by email at address.assign@brevardfl.gov.

Sincerely,

Regina R. Mahaney

Regina R. Mahaney
9-1-1 Addressing Coordinator
Brevard County 9-1-1 Administration

cc: Barry Cabaniss, DRMP

TLC ENGINEERING SOLUTIONS
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ELECTRICAL SYMBOL LEGEND

BASIC MATERIALS

SYMBOL	DESCRIPTION
S_{WP}	SINGLE POLE SWITCH WITH WEATHERPROOF COVER
S_{WPL}	SINGLE POLE SWITCH WITH WEATHERPROOF LOCKING COVER
WP	GFI RECEPTACLE. WP DENOTES UL LISTED AS WEATHERPROOF IN USE AND UL LISTED WEATHER RESISTANT. MOUNTED AT 48" AFF.
	LIGHTING CONTROL TIME CLOCK
	PHOTOCELL, MOUNTED ON ROOF FACING NORTH
GND	GROUND BAR
J	JUNCTION BOX
J	JUNCTION BOX- WALL MOUNTED
SPD	SURGE PROTECTION DEVICE
T	TRANSFORMER
30AR / NF	NON-FUSED DISCONNECT SWITCH, SIZE AS NOTED NF DENOTES NON-FUSED
30AR / 20AF	FUSED DISCONNECT AR DENOTES AMP RATING OF SWITCH AF DENOTES AMP FUSE SIZE, * DENOTES SIZE PER MANUFACTURER RECOMMENDATIONS.
MCP SIZE; 30/3; 0; 3R	# OF POLES COMBINATION MAGNETIC MOTOR STARTER, SIZE & # OF POLES 3 POLE UNLESS OTHERWISE NOTED ENCLOSURE NEMA RATING. NEMA STARTER SIZE
	BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, FLUSH MOUNTED
	BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, SURFACE MOUNTED
	BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, FLUSH MOUNTED
	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. CONDUIT SHALL INCLUDE PHASE, NEUTRAL AND GROUND CONDUCTORS AS REQUIRED FOR CIRCUITS (UNLESS OTHERWISE NOTED).
	GROUND ROD 3/4" x 20'
UP	CONDUIT TURNING UP
DN	CONDUIT TURNING DOWN
	CONDUIT STUB
	CONDUIT CONTINUED

LIGHTING

SYMBOL	DESCRIPTION
	LED POLE TOP MOUNTED FULL CUT OFF FIXTURE
	LED BOLLARD

SHEET MANAGER

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E-201	ELECTRICAL PHOTOMETRIC PLAN - AMENITY CENTER
E-501	LIGHT FIXTURE CUTSHEETS
E-701	ELECTRICAL DETAILS

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT.

REVISIONS

NO.	DATE	DESCRIPTION	BY

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
DRS	DRS	MMH	MMH

ELECTRICAL SYMBOLS LIST & SHEET INDEX

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

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ELECTRICAL GENERAL NOTES

APPLICABLE CODES

APPLICABLE CODES:

WORK UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE AND IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE FOLLOWING CODES AND STANDARDS INCLUDING THE REGULATIONS OF GOVERNING LOCAL, STATE, COUNTY AND OTHER APPLICABLE CODES. REFER TO SPECIFICATIONS FOR ADDITIONAL CODE REQUIREMENTS:

BUILDING CODES:
- FLORIDA BUILDING CODE, 8TH EDITION (2023)
- FLORIDA ENERGY CONSERVATION CODE, 8TH EDITION (2023)
- FLORIDA FIRE PREVENTION CODE, 8TH EDITION (2023)

ADDITIONAL CODES, STANDARDS, AND REQUIREMENTS
1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
2. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE).
3. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA).
4. REQUIREMENTS OF LOCAL POWER COMPANY.
5. THE AMERICANS WITH DISABILITIES ACT (ADA).
6. OWNER'S PUBLISHED DESIGN STANDARDS.

ALL MATERIALS SHALL BE NEW AND FREE OF DEFECTS, AND SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LAB, AS DEFINED BY OSHA. WHERE NO LABELING OR LISTING SERVICE IS AVAILABLE FOR CERTAIN TYPES OF EQUIPMENT, TEST DATA SHALL BE SUBMITTED TO VALIDATE THAT EQUIPMENT MEETS OF EXCEEDS AVAILABLE STANDARDS.

NATIONAL FIRE PROTECTION (NFPA) STANDARDS:
- NFPA 10, 2018 EDITION, STANDARD FOR PORTABLE FIRE EXTINGUISHERS.
- NFPA 13, 2019 EDITION, STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.
- NFPA 20, 2019 EDITION, STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION.
- NFPA 30, 2021 EDITION, FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE.
- NFPA 37, 2021 EDITION, STANDARD FOR THE INSTALLATION AND USE OF STATIONARY COMBUSTION ENGINES AND GAS TURBINES.
- NFPA 45, 2019 EDITION, STANDARD ON FIRE PROTECTION FOR LABORATORIES USING CHEMICALS.
- NFPA 54, 2021 EDITION, NATIONAL FUEL GAS CODE.
- NFPA 70, 2020 EDITION, NATIONAL ELECTRICAL CODE®.
- NFPA 72, 2019 EDITION, NATIONAL FIRE ALARM AND SIGNALING CODE.
- NFPA 75, 2020 EDITION, STANDARD FOR THE PROTECTION OF INFORMATION TECHNOLOGY EQUIPMENT.
- NFPA 80, 2019 EDITION, STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES.
- NFPA 85, 2019 EDITION, BOILER AND COMBUSTION SYSTEMS HAZARDS CODE.
- NFPA 88A, 2019 EDITION, STANDARD FOR PARKING STRUCTURES.
- NFPA 90A, 2021 EDITION, STANDARD FOR THE INSTALLATION OF AIR-CONDITIONING AND VENTILATING SYSTEMS.
- NFPA 90B, 2021 EDITION, STANDARD FOR THE INSTALLATION OF WARM AIR HEATING AND AIR-CONDITIONING SYSTEMS.
- NFPA 92, 2018 EDITION, STANDARD FOR SMOKE-CONTROL SYSTEMS.
- NFPA 99, 2021 EDITION, HEALTH CARE FACILITIES CODE.
- NFPA 101, 2021 EDITION, LIFE SAFETY CODE®.
- NFPA 110, 2019 EDITION, STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS.
- NFPA 111, 2019 EDITION, STANDARD ON STORED ELECTRICAL ENERGY EMERGENCY AND STANDBY POWER SYSTEMS.
- NFPA 780, 2020 EDITION, INSTALLATION OF LIGHTNING PROTECTION SYSTEMS

IDENTIFICATION

1. PROVIDE TYPED PANEL DIRECTORIES FOR ALL NEW PANELBOARDS, AND EXISTING PANELBOARDS AFFECTED BY THIS PROJECT. DIRECTORIES SHALL REFLECT PROJECT AS- BUILT CONDITIONS FOR ALL BRANCH CIRCUITS. DIRECTORIES SHALL INCLUDE WHERE EACH PANEL IS FED FROM. ADDITIONALLY, EACH BRANCH CIRCUIT LOAD DESCRIPTION SHALL INCLUDE THE ROOM NUMBER(S) FOR EACH LOAD (I.E., RECEPTACLES-RMS 501,503). ROOM NUMBERS SHALL BE BASED ON ACTUAL ROOM SIGNAGE INSTALLED IN FIELD. COORDINATE EXACT ROOM NUMBERS WITH ARCHITECT/ENGINEER AND OWNER PRIOR TO COMPLETION OF PANEL DIRECTORIES.
2. PROVIDE ENGRAVED PLASTIC LAMINATE NAME TAGS ON EACH SWITCHBOARD, SWITCHGEAR, DISTRIBUTION PANEL, PANELBOARD, MOTOR CONTROL CENTER, SAFETY SWITCH, ENCLOSED CIRCUIT BREAKER, CABINET, STEP-DOWN TRANSFORMER, TRANSFER SWITCH, ETC., AND ANY OTHER MAJOR COMPONENT OF THE ELECTRICAL SYSTEM.
3. PROVIDE ENGRAVED PLASTIC LAMINATE NAME TAGS FOR EACH DISTRIBUTION BREAKER OR BRANCH CIRCUIT BREAKER IN SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND OTHER DISTRIBUTION EQUIPMENT. NAME TAG SHALL INCLUDE LOAD DESCRIPTION AND ROOM NUMBER FOR EACH LOAD.
4. ARC FLASH DANGER/WARNING LABELS SHALL BE APPLIED TO SWITCHBOARD, PANELBOARDS, AND EQUIPMENT CONTROLLERS PER NEC.
5. PROVIDE LABELS ON THE INSIDE OF EACH DEVICE COVERPLATE, IDENTIFYING THE PANEL(S)/ CIRCUIT NUMBER(S) DEVICE IS CONNECTED TO.
6. PROVIDE NEATLY, HANDWRITTEN IDENTIFICATION ON THE EXTERIOR COVER OF ALL JUNCTION BOXES, PULLBOXES AND WIREWAYS, IDENTIFYING THE PANEL(S)/ CIRCUIT NUMBER(S) CONTAINED WITHIN.
7. PROVIDE A PERMANENT SIGN ON THE MAIN ELECTRICAL ROOM DOOR TO THE BUILDING STATING THAT THE MAIN SERVICE DISCONNECTING MEANS IS LOCATED INSIDE.
8. PROVIDE A PERMANENT LABEL ON ALL PANELBOARDS, SWITCHBOARDS, SWITCHGEAR, MOTOR CONTROL CENTERS AND DISTRIBUTION PANELS STATING "DO NOT WORK ON EQUIPMENT WHILE ENERGIZED. LOCK- OUT TAG-OUT REQUIRED".
9. PROVIDE REQUIRED IDENTIFICATION PER ANSI STANDARDS, NEC REQUIREMENTS, AND OWNER'S PUBLISHED DESIGN STANDARDS WHERE APPLICABLE.
10. PROVIDE ENGRAVED PHENOLIC LABEL ON ALL NEW SERVICE EQUIPMENT TO INDICATE THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED. PROVIDE LABEL ON ALL EXISTING SERVICE EQUIPMENT WHEN MODIFICATIONS OCCUR THAT AFFECT THE MAXIMUM AVAILABLE FAULT CURRENT AT THE SERVICE.

GENERAL REQUIREMENTS

1. THE DRAWINGS AND APPLICABLE SPECIFICATIONS SHALL BE CONSIDERED SUPPLEMENTARY. ONE TO THE OTHER AND ARE CONSIDERED THE "CONTRACT DOCUMENTS". ALL WORKMANSHIP, METHODS AND/OR MATERIALS DESCRIBED OR IMPLIED BY ONE AND NOT DESCRIBED OR IMPLIED BY THE OTHER SHALL BE PROVIDED, FURNISHED OR PERFORMED AS IF IT HAD APPEARED IN BOTH SECTIONS. THE TERM "CONTRACT DOCUMENTS" DESCRIBED HEREIN IS NOT LIMITED SOLELY TO THE ELECTRICAL PORTION OF THE DRAWINGS AND SPECIFICATIONS, BUT ENCOMPASSES THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS AS A WHOLE.
2. THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY DETAIL OF CONSTRUCTION, METHODS, MATERIALS AND EQUIPMENT, OR EXACT LOCATIONS, ROUTING, ETC. THEY INDICATE THE RESULT TO BE ACHIEVED BY THE ASSEMBLAGE OF SEVERAL SYSTEMS FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. DO NOT SCALE THE CONTRACT DOCUMENTS. COORDINATE EXACT EQUIPMENT LOCATIONS WITH THE ARCHITECTURAL, CIVIL AND STRUCTURAL CONTRACT DOCUMENTS, AS WELL AS FIELD CONDITIONS, APPROVED SHOP DRAWINGS AND WORK OF ALL OTHER DIVISIONS/TRADES.
3. THE TERM "PROVIDE" USED IN THE CONTRACT DOCUMENTS INDICATES TO FURNISH AND INSTALL MATERIALS REQUIRED FOR CORRECT INSTALLATION OF A COMPLETE SYSTEM, UNLESS SPECIFICALLY NOTED OTHERWISE
4. UNLESS NOTED AS EXISTING, ALL ELECTRICAL INDICATED ON THE CONTRACT DOCUMENTS SHALL BE NEW, SHALL BE U.L. LISTED, AND SHALL BEAR A U.L. LABEL. WHERE NO U.L. LABEL OR LISTING IS AVAILABLE, THE MATERIAL SHALL BE LISTED WITH AN APPROVED, NATIONALLY RECOGNIZED ELECTRICAL TESTING AGENCY.
5. PROVIDE EXPERIENCED, QUALIFIED AND RESPONSIBLE SUPERVISION FOR ALL WORK REQUIRED BY THE CONTRACT DOCUMENTS. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, TO THE SATISFACTION OF THE ARCHITECT/ENGINEER AND OWNER.
6. CARRY ALL INSURANCE REQUIRED TO PROTECT AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FORTHE DURATION OF THIS PROJECT.
7. GUARANTEE ALL MATERIALS AND WORKMANSHIP ARE FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE ARCHITECT/ENGINEER AND OWNER, UNLESS NOTED OTHERWISE IN DIVISION 1. AT NO ADDITIONAL COSTS, PROVIDE THE CORRECTION OF ANY DEFECTS INCLUDING REPAIR OR REPLACEMENT.
8. INCLUDE ALL COSTS ASSOCIATED WITH PERMITS, LICENSES, FEES, INSPECTIONS, TESTING AND TEMPORARY POWER IN THE BID PRICE, UNLESS NOTED OTHERWISE.
9. IF HAZARDOUS MATERIALS ARE ENCOUNTERED, COMPLY WITH ALL APPLICABLE RULES, REGULATIONS AND GUIDELINES CONCERNING REMOVAL, HANDLING, DISPOSAL AND PROTECTION AGAINST ENVIRONMENTAL EXPOSURE OR POLLUTION. PROVIDE DOCUMENTATION OF SAID COMPLIANCE.
10. PROVIDE ELECTRONIC SUBMITTALS (PRODUCT DATA & SHOP DRAWINGS) FOR EACH MAJOR COMPONENT OF THE ELECTRICAL SYSTEM FOR REVIEW BY THE ARCHITECT/ENGINEER AND OWNER. MAJOR COMPONENTS INCLUDE, BUT ARE NOT LIMITED TO, RACEWAYS, BOXES, WIRE AND CABLE, EQUIPMENT, DEVICES, LIGHT FIXTURES, SWITCHGEAR, PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES. FIRE ALARM SYSTEM, ETC. ALL SUBMITTALS ARE TO BE REVIEWED AND APPROVED BY THE CONTRACTOR FOR CONFORMANCE WITH THE PROJECT REQUIREMENTS PRIOR TO SUBMITTING TO THE ARCHITECT/ENGINEER. ALLOW A MINIMUM OF TEN (10) BUSINESS DAYS FOR REVIEW BY ARCHITECT/ENGINEER, UNLESS NOTED OTHERWISE IN DIVISION 1.
11. THE ELECTRICAL PORTION OF THE CONTRACT DOCUMENTS ARE COORDINATED WITH THE DESIGN BASIS EQUIPMENT SPECIFIED BY DIVISION 26 AND OTHER DIVISIONS. WHERE THE CONTRACTOR ELECTS TO SUBSTITUTE A PRODUCT IN LIEU OF PROVIDING THE DESIGN BASIS, AND SAID SUBSTITUTION IS ACCEPTED BY THE ARCHITECT/ENGINEER AND OWNER, THE CONTRACTOR SHALL MAKE ALL CORRECTIONS TO THE ELECTRICAL SYSTEM NECESSARY IN ORDER TO ENSURE A COMPLETE AND OPERATIONAL INSTALLATION OF THE EQUIPMENT AT NO ADDITIONAL COSTS. WHERE THE CONTRACTOR'S DESIGN SUBSTITUTION RESULTS IN THE NEED FOR THE ENGINEER TO REVISE THE CONTRACT DOCUMENTS, THE ENGINEER RESERVES THE RIGHT TO REQUEST COMPENSATION FROM THE CONTRACTOR FOR SAID SERVICES.
12. MAINTAIN A CURRENT AND ACCURATE SET OF PROJECT RECORD DOCUMENTS (AS-BUILTS) AT THE SITE THROUGHOUT THE DURATION OF THE PROJECT. RECORD DRAWINGS SHALL BE UPDATED EACH DAY TO REFLECT THE ACTUAL LOCATIONS, SIZES, ROUTING, ETC. OF EACH PORTION OF THE ELECTRICAL SYSTEM AFFECTED BY THIS WORK. A FINAL SET OF RECORD DOCUMENTS SHALL BE ISSUED TO THE ARCHITECT/ ENGINEER FOR REVIEW AND THEN SUBMITTED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF FINAL ACCEPTANCE. PROVIDE RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING SINGLE LINE DIAGRAM, POWER RISER DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM, SITE PLANS AND ALL ELECTRICAL FLOOR PLANS, DETAILS, PANEL SCHEDULES, ETC.
13. PROVIDE AN OPERATING AND MAINTENANCE MANUAL TO OWNER PRIOR TO THE FINAL ACCEPTANCE. THE MANUAL SHALL INCLUDE, AS A MINIMUM, (1) SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. ALSO PROVIDE TWO OPERATIONS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS AND METHOD OF OPERATION FOR EQUIPMENT SHALL BE CLEARLY IDENTIFIED, AND THE NAME, PHONE NUMBER AND ADDRESS OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
14. INCLUDE ALL COSTS FOR EXCAVATION, SAW CUTTING, DIRECTIONAL BORING, CORE DRILLING, BACKFILLING, SURFACE RESTORATION, REPAIR OF FINISHES, ETC. THAT IS REQUIRED IN ORDER TO MEET THE PROJECT REQUIREMENTS.
15. INCLUDE IN BID ALL COSTS ASSOCIATED WITH TEMPORARY ELECTRICAL SERVICE AS REQUIRED FOR USE BY ALL TRADES DURING CONSTRUCTION. REMOVE TEMPORARY POWER AT THE COMPLETION OF THE PROJECT. OBTAIN AND PAY FOR ALL REQUIRED PERMITS FOR TEMPORARY POWER. ENGINEER OF RECORD SHALL BE PROVIDED WITH ADDITIONAL COMPENSATION FROM THE CONTRACTOR WHERE SIGNED & SEALED DRAWINGS ARE REQUESTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD IF REQUIRED BY THE AHJ FOR THE TEMPORARY POWER.
16. LOCATE, IDENTIFY, PROTECT AND DOCUMENT ALL UTILITY LINES LOCATED WITHIN THE PROJECT BOUNDARY. FOR LOCATING SITE UTILITIES, CONTACT ALL LOCAL MUNICIPALITIES AND UTILITIES AT LEAST 48 HOURS PRIOR TO DIGGING.
17. INCLUDE IN BID THE TRANSPORT AND DISPOSAL OR RECYLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES, REGULATIONS AND GUIDELINES APPLICABLE. COMPLY FULLY WITH ALL APPLICABLE STATUTES REGARDING MERCURY-CONTAINING DEVICES, AND WITH ALL LOCAL, STATE AND FEDERAL APPLICABLE GUIDELINES AT THE TIME OF DISPOSAL. PROVIDE OWNER WITH WRITTEN CERTIFICATION OF ACCEPTED DISPOSAL.

ELECTRICAL EQUIPMENT

1. EQUIPMENT SHALL BE OF MATERIALS SUITABLE FOR AND RATED FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED. ALL COMPONENTS OF THE ELECTRICAL SYSTEM LOCATED OUTDOORS OR INDOORS WHERE EXPOSED TO SIGNIFICANT MOISTURE SHALL BE WEATHERPROOF, NEMA 3R, AS A MINIMUM, WHETHER INDICATED ON THE CONTRACT DRAWINGS OR NOT.
2. TERMINATION PROVISIONS FOR ALL ELECTRICAL EQUIPMENT (PANELBOARDS, SWITCHBOARD, TRANSFORMERS, DISCONNECT SWITCHES, MOTOR CONTROLLERS, AUTOMATIC TRANSFER SWITCHES, ENCLOSED CIRCUIT BREAKERS, BUSWAYS, ETC.) SHALL BE LISTED AND IDENTIFIED FOR USE WITH MINIMUM 75 DEG. F CONDUCTORS IN ACCORDANCE WITH NEC.
3. WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT SHALL BE IN COMPLIANCE WITH NEC.
4. THE ELECTRICAL DEDICATED EQUIPMENT SPACE EXTENDING FROM FLOOR TO 6' ABOVE ELECTRICAL EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER DISTANCE IS LOWER, WITH A WIDTH AND DEPTH OF THE PANELBOARD OR SWITCHBOARD MUST BE CLEAR OF ALL PIPING, DUCTS, ARCHITECTURAL APPURTENANCES AND OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION IN ACCORDANCE WITH NEC.
5. PROVIDE A REINFORCED CONCRETE PAD, SIZED 4" LARGER IN ALL DIRECTIONS THAN THE FOOTPRINT OF THE EQUIPMENT, AND 4" HIGH, FOR ALL FREESTANDING, FLOOR-MOUNTED ELECTRICAL EQUIPMENT. PROVIDE VIBRATION ISOLATORS AND/OR ANCHORS PER MANUFACTURER'S INSTRUCTIONS.
6. ALL PANELBOARDS OR DISCONNECT SWITCHES LOCATED IN KITCHEN AREAS SHALL BE STAINLESS STEEL (COVER AND DOOR WHERE PANEL IS FLUSH MOUNTED; PANEL BOX, COVER & DOOR WHERE SURFACE MOUNTED).
7. PROVIDE SURGE PROTECTION DEVICE FOR ALL MAIN SERVICE EQUIPMENT, PANELBOARDS SERVING SENSITIVE ELECTRONIC EQUIPMENT (DATA RACKS) OR COMPUTERS, EMERGENCY SWITCHBOARDS AND PANELBOARDS, LIGHTING PANELS SERVING EXTERIOR LIGHTING, POWER CIRCUITS OR LOW VOLTAGE (FIRE ALARM, TELECOMMUNICATIONS) EXITING THE BUILDING. PROVIDE MINIMUM 30A/3P BREAKER IN BRANCH CIRCUIT PANELBOARDS AND 60A/3P IN DISTRIBUTION PANELBOARDS OR SWITCHBOARDS, UNLESS NOTED OTHERWISE, OR PER THE SPD MANUFACTURER'S RECOMMENDATIONS FOR SURGE PROTECTION DEVICE.

ELECTRICAL DEVICES OUTLET BOXES, JUNCTION BOXES

1. LIGHT SWITCHES SHALL BE MOUNTED 48 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE, UNLESS NOTED OTHERWISE.
2. RECEPTACLES, VOICE/DATA OUTLETS AND WALL FURNITURE FEEDS SHALL BE MOUNTED 18 INCHES ABOVE FINISHED FLOOR TO CENTER LINE OF DEVICE, UNLESS NOTED OTHERWISE. ABOVE COUNTER RECEPTACLES SHALL BE MOUNTED 6" ABOVE BACK SPLASH TO CENTERLINE OF DEVICE, UNLESS NOTED OTHERWISE.
3. IT IS THE INTENT THAT ALL DEVICE OUTLET BOXES (POWER AND SYSTEMS) BE FLUSH MOUNTED IN WALLS, CEILINGS OR FLOORS, AND JUNCTION BOXES FLUSH MOUNTED IN WALLS, CEILINGS, OR FLOORS, OR CONCEALED ABOVE ACCESSIBLE CEILINGS, AND NOT SURFACE MOUNTED, UNLESS SPECIFICALLY NOTED ON THE CONTRACT DRAWINGS, OR UNLESS THE ARCHITECT/ENGINEER GRANTS WRITTEN PERMISSION.
4. ALL COMPONENTS OF THE ELECTRICAL SYSTEM (INCLUDE RACEWAYS, ELECTRICAL EQUIPMENT, OUTLET BOXES, JUNCTION BOXES, ETC.) LOCATED IN A HAZARDOUS (CLASSIFIED) LOCATION SHALL BE APPROVED FOR USE IN SAID LOCATION, AS DEFINED BY THE NEC, WHETHER INDICATED ON THE CONTRACT DOCUMENTS OR NOT.
5. ALL DEVICES SHALL BE MOUNTED VERTICALLY, UNLESS NOTED OTHERWISE.
6. ALL RECEPTACLES SHALL BE MOUNTED SUCH THAT THE GROUND PIN IS MOUNTED UP.
7. WHERE DEVICES ARE SHOWN IN WALLS BACK-TO-BACK ON OPPOSITE SIDES, INSTALL SO THAT THEY ARE SEPARATED BY AT LEAST 12".
8. RECEPTACLES OR JUNCTION BOXES FOR ELECTRIC WATER COOLERS AND VENDING MACHINES SHALL BE LOCATED DIRECTLY BEHIND SAID APPLIANCE, CONCEALED FROM DIRECT VIEW. RECEPTACLES AND/OR HARD WIRED EQUIPMENT CONNECTIONS SHALL BE PROTECTED BY A READILY ACCESSIBLE GFCI FEED- THRU DEVICE LOCATED IMMEDIATELY ADJACENT TO THE APPLIANCE OR BE PROTECTED BY GFCI BREAKER IN THE PANELBOARD. ALL GFCI DEVICES MUST BE READILY ACCESSIBLE PER THE NEC.
9. ALL EXTERIOR RECEPTACLES OR RECEPTACLES LOCATED IN AREAS SUBJECT TO MOISTURE (PARKING GARAGE, WASHDOWN AREAS IN KITCHEN, ETC) SHALL BE GFCI TYPE. ALL EXTERIOR RECEPTACLES SHALL WE PROVIDED WITH CAST METAL, IN-USE COVER UNLESS NOTED OTHERWISE.
10. ALL RECEPTACLES LOCATED IN KITCHENS, BATHROOMS, MECHANICAL ROOMS, JANITOR CLOSETS, ELEVATOR SHAFTS, ELEVATOR EQUIPMENT ROOMS, FOR ELEVATOR SUMP PUMP(S) OR INSTALLED WITHIN 6' OF THE INSIDE FACE OF A SINK, SHALL BE GFCI TYPE OR GFCI PROTECTED.
11. ALL RECEPTACLES LOCATED IN CHILD-CARE FACILITIES, DWELLING UNITS, HOTEL/MOTEL GUEST ROOMS, PEDIATRIC CLINICS OR PEDIATRIC CAREA AREAS, AND OTHER AREAS AS EQUIRED BY NEC AND LOCAL CODE REQUIREMENTS SHALL BE TAMPER RESISTANT.
12. WHEN ELECTRICAL BOXES ARE LOCATED IN VERTICAL FIRE-RESISTIVE ASSEMBLIES, THEY SHALL BE INSTALLED WITHOUT AFFECTING THE FIRE CLASSIFICATION. ALL OF THE FOLLOWING CONDITIONS SHALL BE MET:
    A. ALL ELECTRICAL BOXES SHALL BE METALLIC.
    B. BOX OPENING SHALL OCCUR ONLY ON ONE SIDE OF FRAMING SPACE.
    C. BOX OPENING SHALL NOT EXCEED 16 SQUARE INCHES.
    D. ALL CLEARANCES BETWEEN OUTLET BOX AND GYPSUM BOARD SHALL BE COMPLETELY FILLED WITH JOINT COMPOUND (OR OTHER APPROVED MATERIAL).
    E. PROVIDE A WALL AROUND OUTLETS LARGER THAN 16 SQUARE INCHES. THE INTEGRITY OF THE WALL RATING SHALL BE MAINTAINED.
    F. THE TOTAL AGGREGATE SURFACE AREA OF THE BOXES SHALL NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET.
    G. OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE RESISTIVE ASSEMBLIES SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES.
    H. OUTLET BOXES SHALL BE SECURELY FASTENED TO WALL FRAMING MEMBERS.
    I. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT NOT TO EXCEED 1/8 INCH BETWEEN THE EDGES OF THE OUTLET BOX AND THE EDGES OF THE OPENING.

RACEWAYS

1. FLEXIBLE METAL CONDUIT AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT (FMC & LFMC) SHALL NOT BE USED IN LENGTHS THAT EXCEED 6'-0" UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS THE ARCHITECT/ENGINEER GRANTS WRITTEN PERMISSION.
2. ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS, INCLUDING LOW VOLTAGE SYSTEMS, SHALL BE INSTALLED IN A COMPLETE RACEWAY SYSTEM (CONDUIT) UNLESS SPECIFICALLY NOTED OTHERWISE.
3. THE USE OF ELECTRICAL NON-METALLIC TUBING (ENT) AND LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT (LFNC) ARE PROHIBITED UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS THE ARCHITECT/ENGINEER OR OWNER GRANTS WRITTEN PERMISSION.
4. CONNECTIONS TO TRANSFORMERS, AHU'S, AND PUMPS SHALL BE WITH LIQUIDTIGHT, FLEXIBLE METAL CONDUIT.
5. NO PVC CONDUIT MAY BE USED INSIDE OF BUILDING UNLESS ROUTED UNDERGROUND, AND UNLESS NOTED OTHERWISE.
6. ALL CONDUIT TERMINATIONS AT TERMINAL BOARDS ARE TO HAVE GROUNDING BUSHINGS AT CONDUIT ENDS.
7. ALL CONDUITS ARE TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO EXISTING CONDITIONS (I.E., EXPOSED CEILINGS, BUILDING EXTERIOR WALL RUNS). CONCEAL ALL CONDUITS ABOVE CEILINGS OR IN WALLS AND MILLWORK. WHERE EXISTING CONDITIONS DICTATE THAT CONDUITS CANNOT BE CONCEALED, NOTIFY ARCHITECT/ENGINEER PRIOR TO INSTALLING CONDUIT FOR RESOLUTION TO ROUTING.
8. SEAL ALL PENETRATIONS AND OPENINGS MADE DURING EXECUTION OF WORK IN FIRE-RATED AND SMOKE-RATED WALLS. WALLS SHALL BE SEALED WITH UL-APPROVED PRODUCT WITH THE SAME OR GREATER RATING OF WALL PENETRATED.
9. PROVIDE ALL PENETRATIONS THROUGH FLOORS, WALLS, CEILINGS AND ROOFS WHERE REQUIRED. COORDINATE LOCATIONS AND SIZES WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS, FIELD CONDITIONS AND WORK OF ALL OTHER DIVISIONS/TRADES. ALL OPENINGS ARE TO BE SEALED WATERTIGHT.
10. ALL RACEWAYS THAT TURN UP THROUGH THE SLAB OR INTO ELECTRICAL EQUIPMENT FROM UNDERGROUND SHALL BE RIGID GALVANIZED STEEL (RGS) WITH BITUMASTIC COATING FOR AT LEAST THE FINAL 18" LENGTH. THE USE OF NON-METALLIC CONDUIT ABOVE GRADE IS PROHIBITED.
11. PANEL SCHEDULES AND FLOOR PLANS MAY INDICATE DEDICATED HOMERUNS FOR EACH BRANCH CIRCUIT. BRANCH CIRCUITS MAY BE GROUPED IN A COMMON HOMERUN WHERE THE HOMERUN DOES NOT EXCEED 3 PHASE CONDUCTORS, 3 NEUTRAL CONDUCTORS, AND 1 EQUIPMENT GROUND. THE HOMERUN RACEWAY SIZE AND CONDUCTOR SIZE SHALL BE INCREASED AS NECESSARY TO COMPLY WITH THE NEC FOR 40% MAXIMUM FILL AND DERATING REQUIREMENTS.
12. PROVIDE SEAL OFF FITTINGS, APPROVED FOR SUCH USE, WHERE RACEWAYS PENETRATE BETWEEN A DRY, CONDITIONED ENVIRONMENT AND THE EXTERIOR OR OTHER WET ENVIRONMENTS AND ADDITIONAL AREAS WHERE CONDUITS PASS FROM WARM TO COLD LOCATIONS SUCH AS WALK-IN COOLERS OR FREEZERS, BOILER ROOMS, ETC.
13. PROVIDE POLYOLEFIN JET-LINE #232 (NYLON PULL STRING) IN EACH EMPTY CONDUIT WITH ENGRAVED METAL TAG INDICATING CONDUIT DESIGNATION.
14. ALL HOMERUNS SHALL BE IN 3/4" RACEWAY MINIMUM. 1/2" RACEWAY IS ACCEPTABLE FOR A SINGLE CIRCUIT FROM THE HOMERUN TO REMAINING DEVICES.
15. CONTRACTOR SHALL USE COMPRESSION FITTINGS ONLY FOR EMT CONDUIT.
16. WHERE RACEWAYS ARE INSTALLED IN SLABS, THE MINIMUM SPACING, MAXIMUM RACEWAY SIZE, AND ANY OTHER STRUCTURAL LIMITATIONS SHALL BE COORDINATED WITH THE STRUCTURAL DRAWINGS AND THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

LIGHTING

1. LIGHT FIXTURES SUPPORTED BY CEILING GRID SHALL BE SUPPORTED AS FOLLOWS: LIGHT FIXTURES WEIGHING LESS THAN 10 POUNDS SHALL HAVE 12-GAUGE HANGER WIRE CONNECTED FROM THE LIGHT FIXTURE TO THE STRUCTURE ABOVE. LIGHT FIXTURES WEIGHING 10 POUNDS OR MORE SHALL HAVE (2) 12-GAUGE HANGER WIRES ATTACHED AT OPPOSITE CORNERS OF THE LIGHT FIXTURE TO THE STRUCTURE ABOVE.
2. COORDINATE EXACT LOCATIONS OF LIGHT FIXTURES IN LAY-IN AND GYPBOARD CEILINGS WITH ARCHITECTURAL REFLECTED CEILING PLANS, AND WALL MOUNTED EXTERIOR AND INTERIOR LIGHT FIXTURES WITH ARCHITECTURAL ELEVATIONS PRIOR TO INSTALLATION. WHERE THE QUANTITY OF LIGHTS DIFFERS BETWEEN THE ARCHITECTURAL RCP AND THE ELECTRICAL LIGHTING PLANS, PROVIDE THE HIGHEST QUANTITY OF FIXTURES IN THE BID PRICE. THE DISCREPANCY IN QUANTITY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER. THE HIGHEST QUANTITY SHALL BE CIRCUITED TO THE LOCAL ROOM OR AREA LIGHTING CIRCUITS AND LIGHTING CONTROL DEVICES, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ARCHITECT/ENGINEER.
3. VERIFY ACTUAL CEILING CONSTRUCTION TYPE AS DEFINED ON THE ARCHITECTURAL DRAWINGS AND FURNISH ALL LIGHT FIXTURES WITH THE CORRECT MOUNTING DEVICES WHETHER OR NOT SUCH VARIATIONS ARE INDICATED BY THE LIGHT FIXTURE CATALOG NUMBER. VERIFY THE DEPTH OF ALL RECESSED LIGHT FIXTURES WITH THE ARCHITECTURAL DRAWINGS PRIOR TO ORDERING LIGHT FIXTURES. ANY DISCREPANCIES THAT WOULD CAUSE THE RECESSED LIGHT FIXTURES NOT TO FIT INTO CEILING SHALL BE REPORTED TO ARCHITECT/ENGINEER PRIOR TO ORDERING.
4. LIGHT FIXTURES RECESSED IN FIRE-RATED CEILINGS SHALL BE PROVIDED WITH APPROVED FIRE- RATED ENCLOSURE WITH A FIRE RATING EQUAL TO THAT OF THE CEILING. PROVIDE A MINIMUM OF 3" CLEARANCE FROM SIDES AND TOP OF RECESSED LIGHT FIXTURES.
5. MODIFY ALL LIGHT FIXTURE CATALOG NUMBERS AS REQUIRED TO COORDINATE WITH THE LIGHTING BRANCH CIRCUIT VOLTAGES INDICATED. COORDINATE THE CATALOG NUMBERS WITH THE EXACT FIXTURE MOUNTING AND TRIM REQUIRED BY THE CEILING IN WHICH EACH FIXTURE IS BEING INSTALLED.
6. ALL LIGHT FIXTURES SHALL BE PROVIDED COMPLETE WITH LAMPS, UNLESS OTHERWISE NOTED.
7. ALL EXIT LIGHTS, LIGHT FIXTURES INDICATED WITH UNSWITCHED CIRCUIT (NIGHTLIGHT NL), EMERGENCY TWIN-HEAD FIXTURES WITH INTEGRAL BATTERY PACKS, AND BATTERY PACKS INTEGRAL TO LIGHT FIXTURES, SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING OR LIGHTING CONTROLS.
8. PROVIDE UL WET LABEL OR IP67 RATED LIGHT FIXTURES FOR ALL FIXTURES LOCATED OUTSIDE OR IN PARKING GARAGES, IN SHOWERS, OR OPEN STRUCTURES.
9. EXTERIOR LIGHTING BALLASTS/DRIVERS SHALL HAVE A MINIMUM STARTING TEMPERATURE OF -40 DEGREE C, AND A NORMAL AMBIENT OPERATING TEMPERATURE OF 40 DEGREE C.
10. PROVIDE FUSING FOR ALL EXTERIOR LIGHT FIXTURES, OR FIXTURES IN P

LIGHTING FIXTURE SCHEDULE - STREET LIGHTS

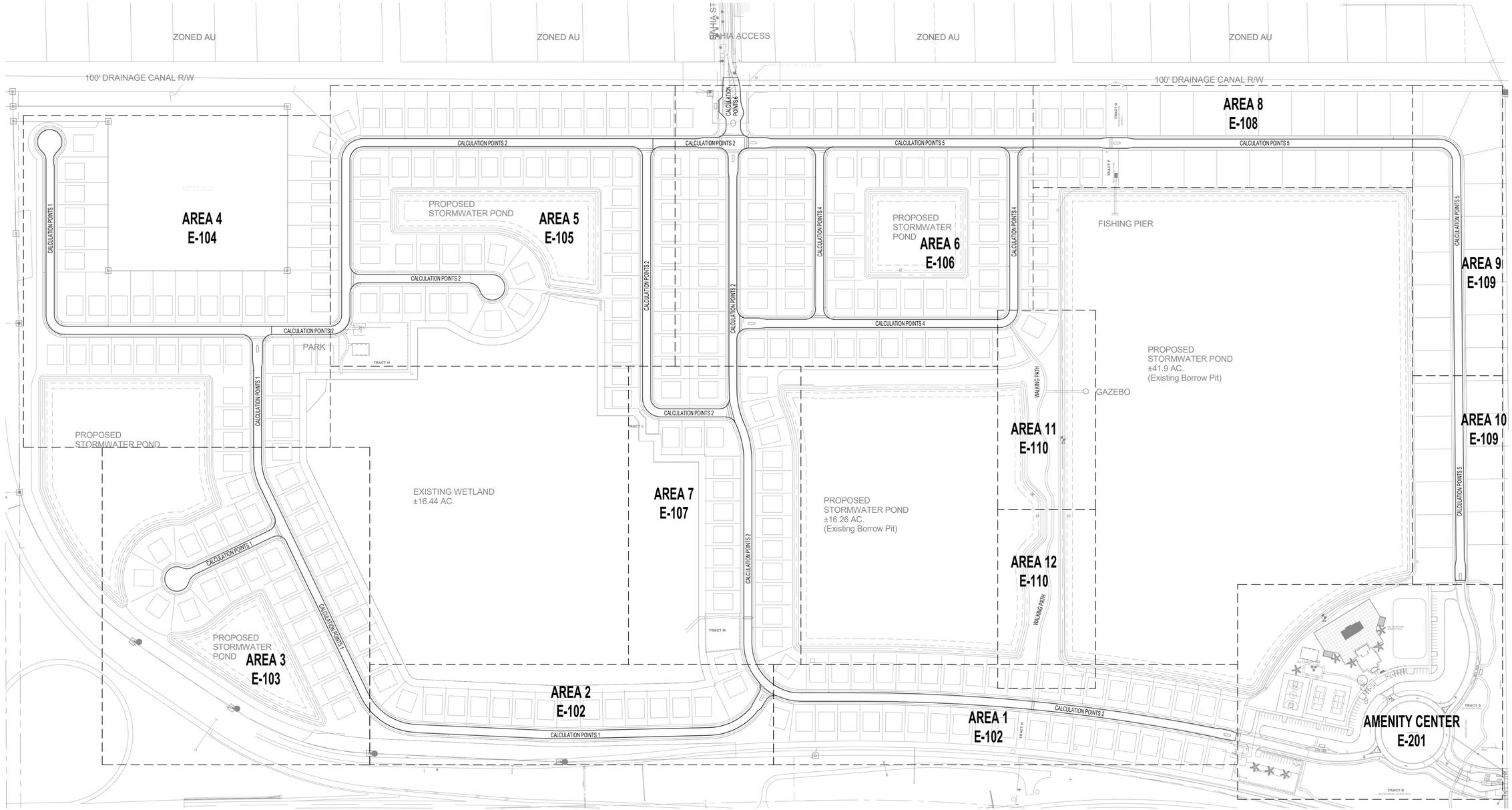
TYPE	Count	DESCRIPTION	MANUFACTURER / MODEL	LAMP SOURCE	WATTAGE	COMMENTS
MC2	124	FULL CUT OFF POLE TOP LED, 6,231 LUMENS, 4000K, TYPE SL2 DISTRIBUTION, 16' MOUNTING HEIGHT.	COOPER LIGHTING / MSA-SA1C-740-U-SL2	LED	59 VA	PROVIDE AUTOMATIC ON-BOARD DUSK TO DAWN LIGHTING CONTROL
MC4	3	FULL CUT OFF POLE TOP LED, 6,287 LUMENS, 4000K, TYPE T4FT DISTRIBUTION, 16' MOUNTING HEIGHT.	COOPER LIGHTING / MSA-SA1C-740-U-T4FT	LED	59 VA	PROVIDE AUTOMATIC ON-BOARD DUSK TO DAWN LIGHTING CONTROL
PLB	22	LED BOLLALRD, 35" HEIGTH, 300 LUMENS, 4000K, SOLAR POWERED.	FIRST LIGHT TECHNOLOGIES / PLB-102-BK-ASM-NW-00	LED	N/A	PROVIDE AUTOMATIC ON-BOARD DUSK TO DAWN LIGHTING CONTROL

NOTES:

1. IF THERE IS A DISCREPANCY BETWEEN THE FIXTURE DESCRIPTION, THE LIGHTING GENERAL NOTES, THE LIGHTING SPECIFICATIONS, AND THE CATALOG NUMBER LISTED, THE FIXTURE DESCRIPTION SHALL TAKE PRECEDENCE.
2. WHERE A SINGLE MANUFACTURER IS LISTED WITH A CORRESPONDING CATALOG NUMBER, THIS MANUFACTURER SHALL BE CONSIDERED THE BASIS OF DESIGN SELECTION. OTHER MANUFACTURERS WILL BE CONSIDERED AS "APPROVED EQUAL" ONLY IF THEIR LIGHTING FIXTURE MEETS OR EXCEEDS THE BASIS OF DESIGN SELECTION IN TYPE AND QUALITY OF CONSTRUCTION, LOUVER FINISHES, LENSES, HOUSING FINISHES, PHOTOMETRICS, SELECTED OPTIONS AND ACCESSORIES. APPROVED EQUAL MANUFACTURERS MUST ALSO MATCH OVERALL APPEARANCE AND DIMENSIONS OF BASIS OF DESIGN SELECTION. WHERE ONLY A MANUFACTURER'S NAME IS LISTED, THE FIXTURE SHALL COMPLY WITH THE DESCRIPTION, VOLTAGE, LAMP TYPE AND WATTAGE, AND ANY NOTED REMARKS, THE LIGHTING FIXTURE SCHEDULE NOTES, AND THE LIGHTING SPECIFICATIONS.
3. WHERE A MANUFACTURER IS SELECTED BY THE CONTRACTOR, OTHER THAN THAT LISTED AS THE BASIS OF DESIGN, PHOTOMETRIC CALCULATIONS SHALL BE SUBMITTED FOR THE FOLLOWING AREAS PRIOR TO APPROVAL: OPERATING ROOM, CONTROL ROOM, SURGICAL CORRIDORS, AND SCRUB AREAS.
5. FIXTURE COLOR/FINISH TO BE DETERMINED BY OWNER.
6. FPL TO CONFIRM LIGHT FIXTURE VOLTAGE.

STREET LIGHTING CACLULATION SUMMARY

DESCRIPTION	AVG	MAX	MIN	AVG/MIN	MAX/MIN
CALC POINTS 1	0.85 fC	3.2 Fc	0.1 Fc	8.50	32.0
CALC POINTS 2	0.86 fC	3.2 Fc	0.1 Fc	8.60	32.0
CALC POINTS 3	0.86 Fc	3.1 Fc	0.1 Fc	8.60	31.0
CALC POINTS 4	0.90 Fc	3.0 Fc	0.1 Fc	9.00	30.0
CALC POINTS 5	0.96 Fc	3.2 Fc	0.1 Fc	9.60	32.0
CALC POINTS 6	1.41 Fc	2.9 Fc	0.3 Fc	4.70	9.67
WALKING PATH	0.12 Fc	0.2 Fc	0.1 Fc	1.20	2.00



1 E-101 ELECTRICAL OVERALL SITE PLAN
1" = 160'-0"

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CHECKED BY: MMH
APPROVED BY: MMH

ELECTRICAL OVERALL SITE PLAN

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

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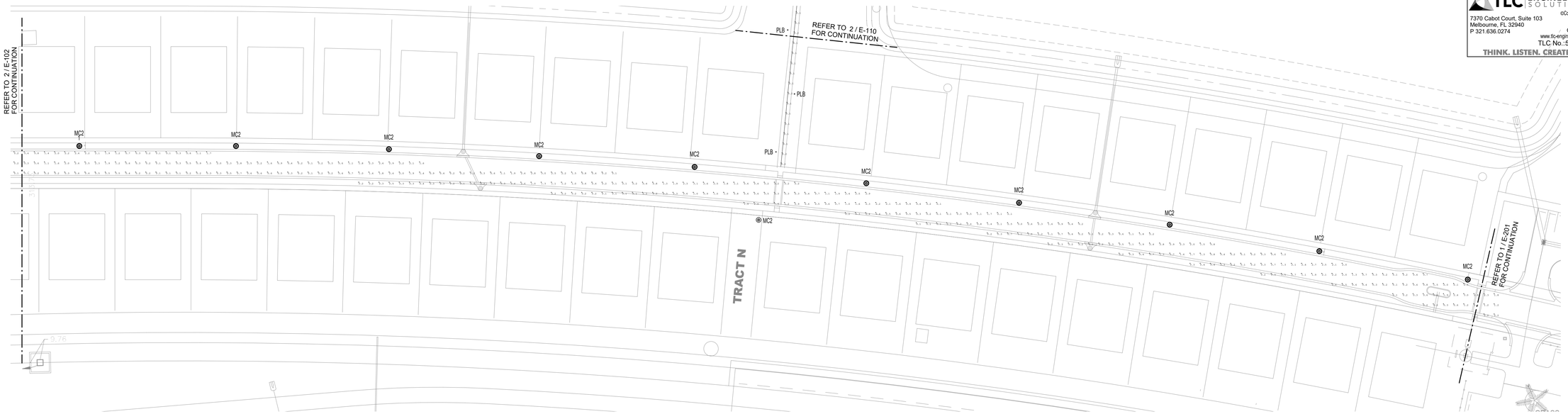

1 E-102 ELECTRICAL PHOTOMETRIC PLAN - AREA 1
1" = 50'-0"

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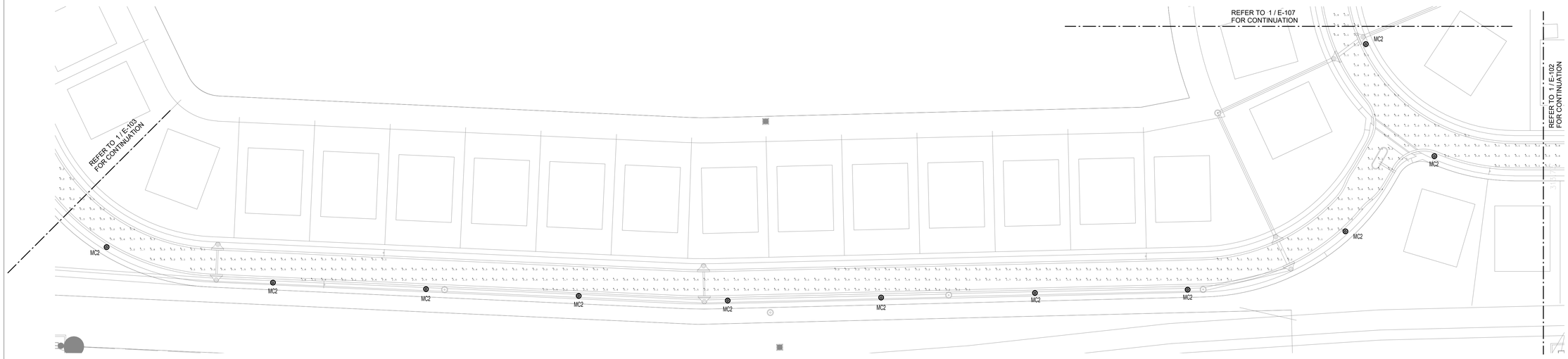
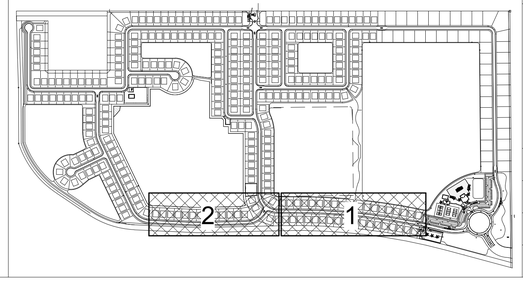


2 E-102 ELECTRICAL PHOTOMETRIC PLAN - AREA 2
1" = 50'-0"

NORTH

KEY PLAN



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APPROVED BY	MMH

ELECTRICAL PHOTOMETRIC PLAN - AREA 1 & 2

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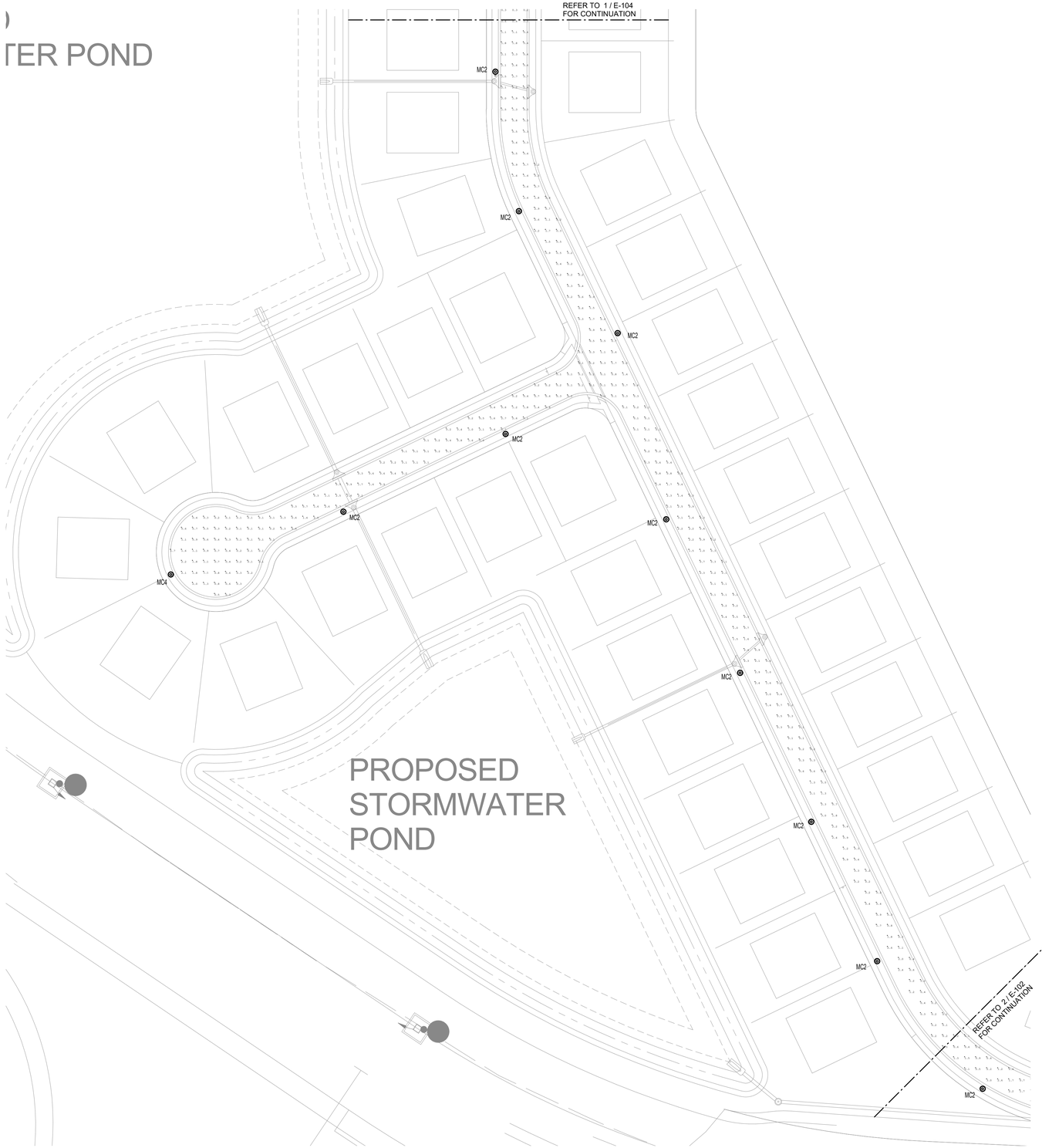
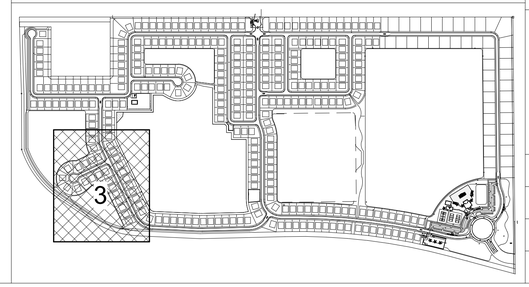


1 E-103 ELECTRICAL PHOTOMETRIC PLAN - AREA 3
1" = 50'-0"

KEY PLAN



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ELECTRICAL PHOTOMETRIC PLAN - AREA 3

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LAKES AT COCOA GROVES
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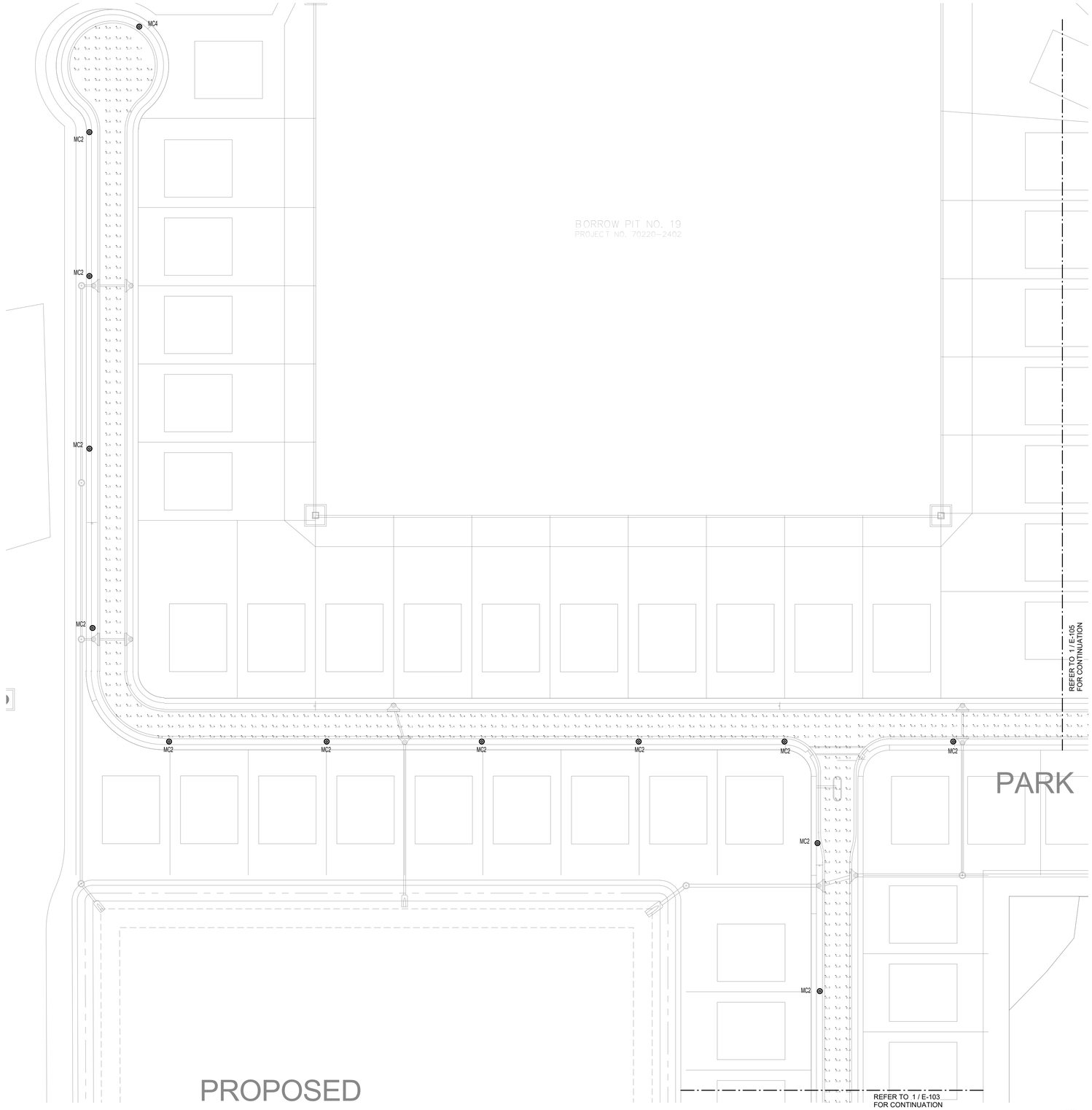
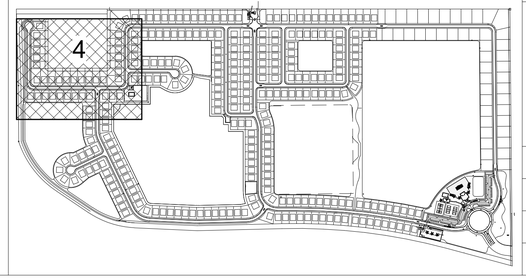


1 E-104 ELECTRICAL PHOTOMETRIC PLAN - AREA 4
1" = 50'-0"

KEY PLAN



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ELECTRICAL PHOTOMETRIC PLAN - AREA 4

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LAKES AT COCOA GROVES
COCOA, FLORIDA

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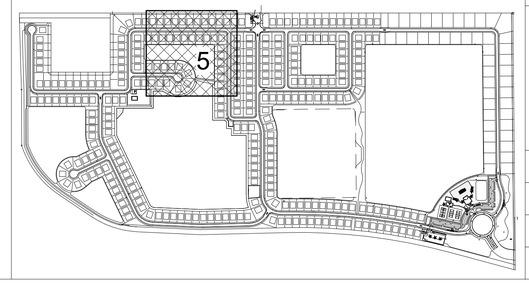
1 E-105 ELECTRICAL PHOTOMETRIC PLAN - AREA 5
1" = 50'-0"

NORTH

KEY PLAN



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ELECTRICAL PHOTOMETRIC PLAN - AREA 5

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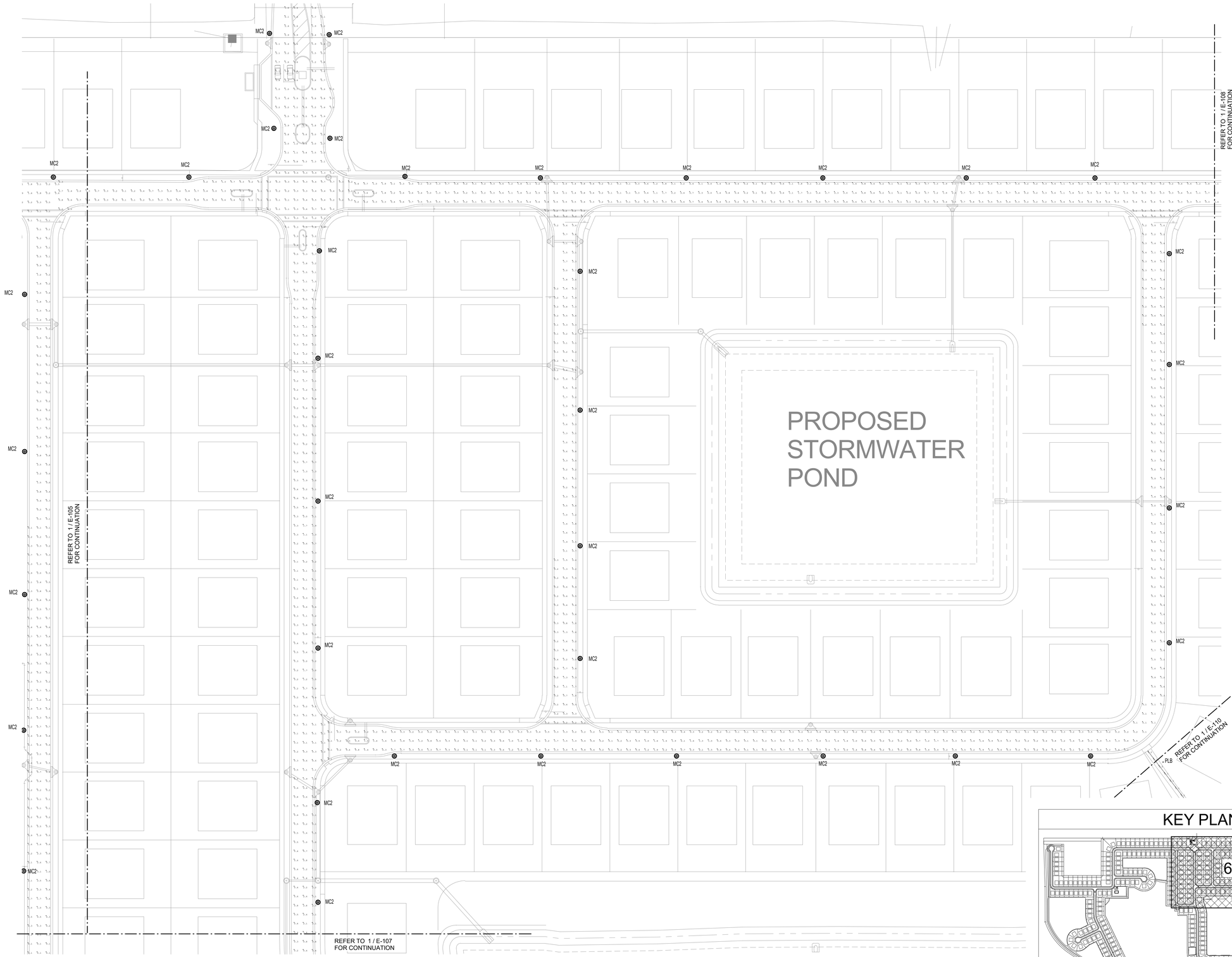
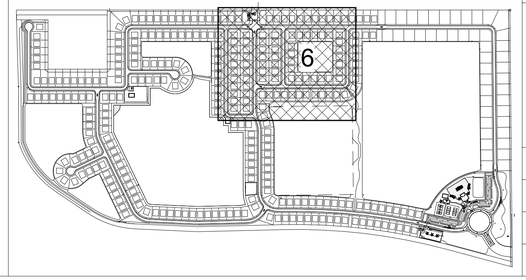


1 E-106 ELECTRICAL PHOTOMETRIC PLAN - AREA 6
1" = 50'-0"

NORTH

KEY PLAN



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ELECTRICAL PHOTOMETRIC PLAN - AREA 6

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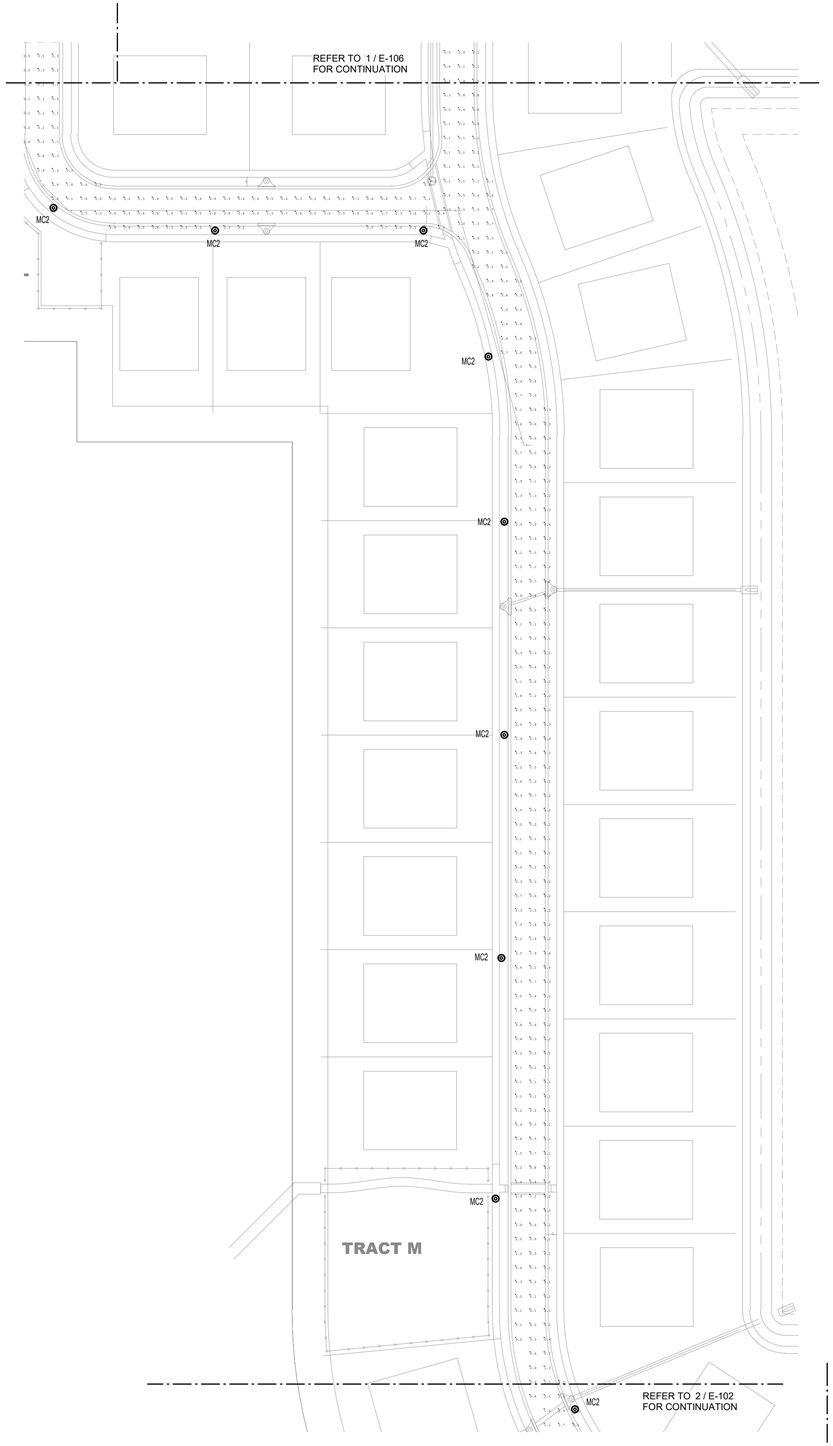
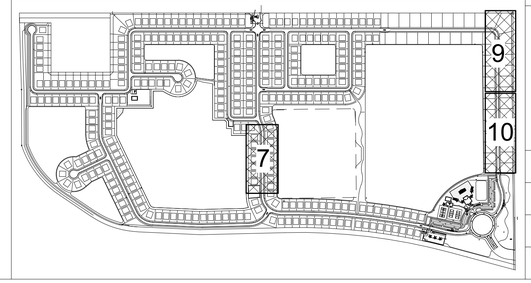


1 E-107 ELECTRICAL PHOTOMETRIC PLAN - AREA 7
1" = 50'-0"

NORTH

KEY PLAN



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ELECTRICAL PHOTOMETRIC PLAN - AREA 7

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
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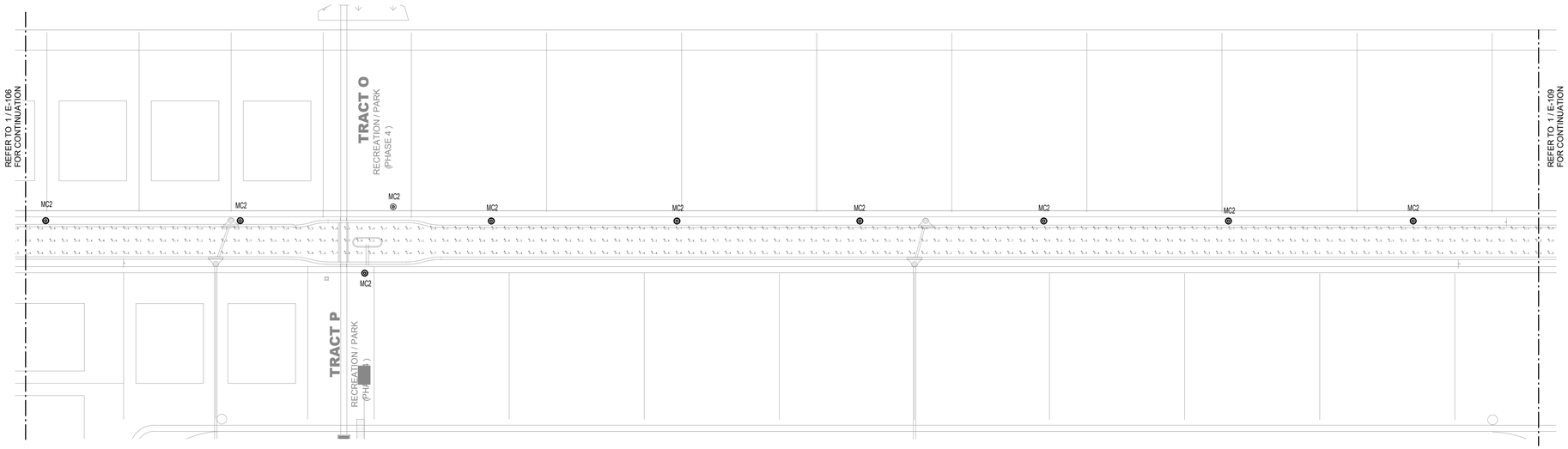
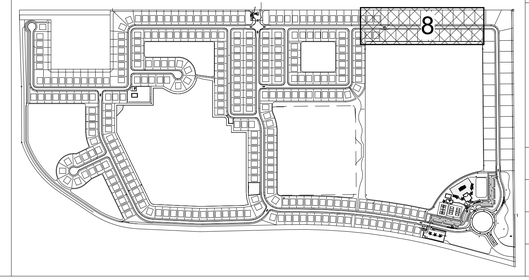
DRAWING:	E-107



1 E-108 ELECTRICAL PHOTOMETRIC PLAN - AREA 8
1" = 50'-0"

NORTH

KEY PLAN



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ELECTRICAL PHOTOMETRIC PLAN - AREA 8

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LAKES AT COCOA GROVES
COCOA, FLORIDA

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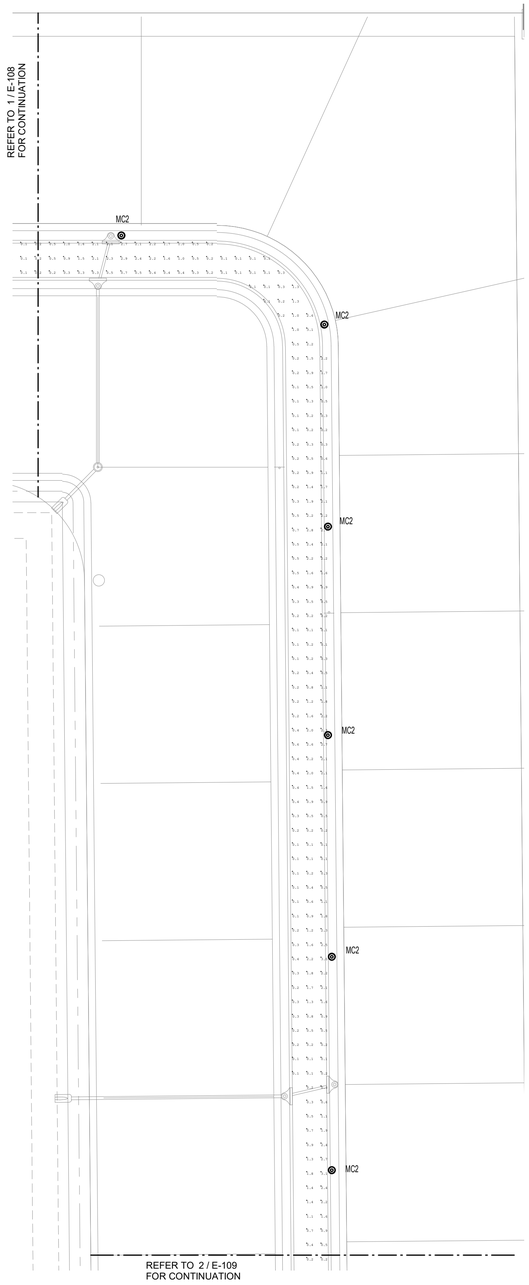
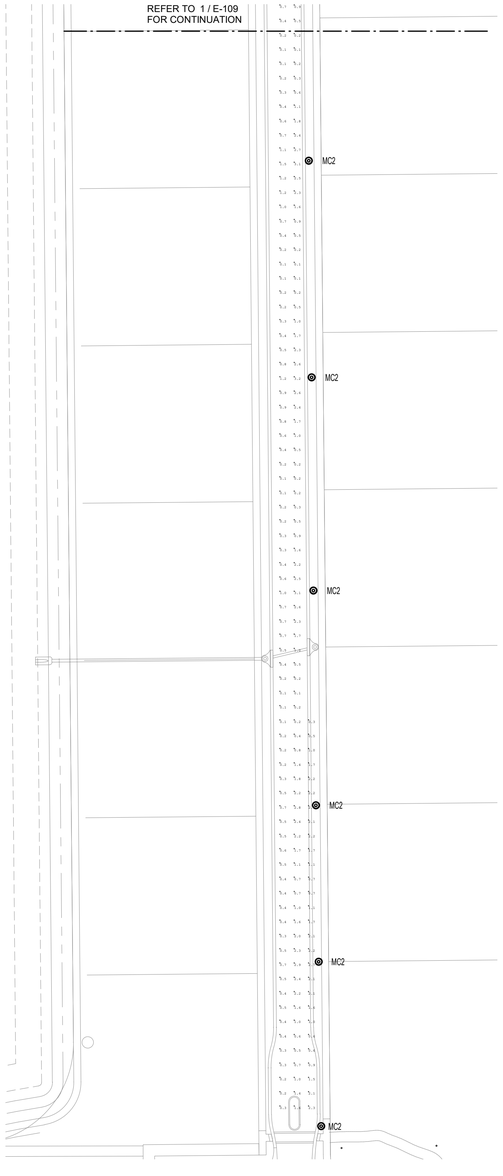
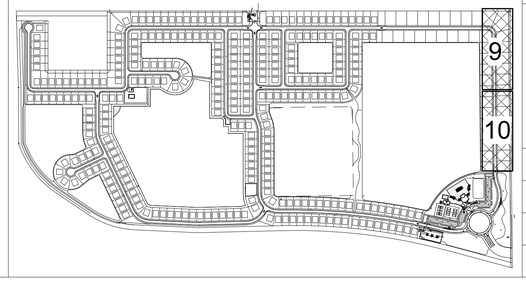


1 E-109 ELECTRICAL PHOTOMETRIC PLAN - AREA 9
1" = 50'-0"
NORTH



2 E-109 ELECTRICAL PHOTOMETRIC PLAN - AREA 10
1" = 50'-0"
NORTH

KEY PLAN



REVISIONS			
NO.	DATE	DESCRIPTION	BY

DESIGNED BY	DRS
DRAWN BY	DRS
CHECKED BY	MMH
APPROVED BY	MMH

ELECTRICAL PHOTOMETRIC PLAN - AREA 9 & 10

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

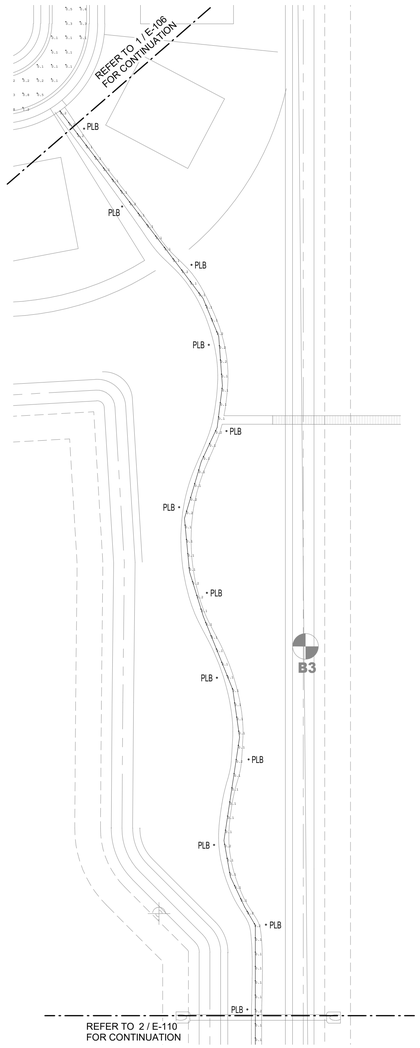
CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2648
100 Parnell Street Suite A, Merritt Island, FL 32953
Phone:321.453.0010 Fax:321.454.6885 WWW.DRMP.COM
DRMP, Inc.

NOT FOR CONSTRUCTION

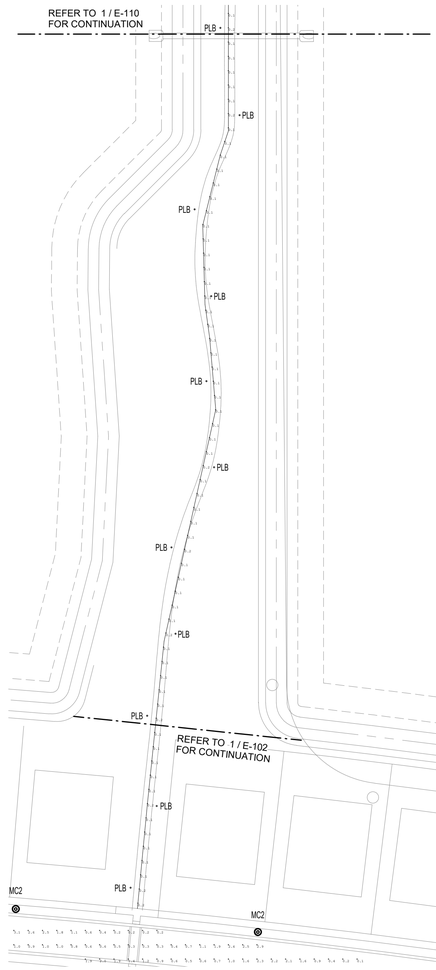
M. MONCEF HADIJI, P.E.
Florida License #48022

PROJECT NO.:	21-0251.002
SCALE:	1" = 50'-0"
DATE:	01-25-2024
DRAWING:	E-109



1 E-110 ELECTRICAL PHOTOMETRIC PLAN - AREA 11
1" = 50'-0"

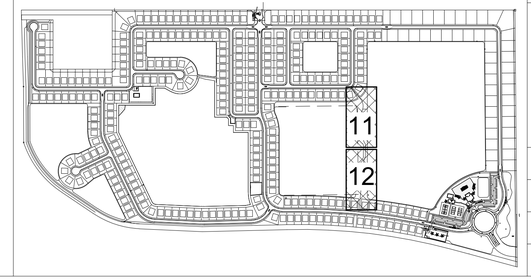
NORTH



2 E-110 ELECTRICAL PHOTOMETRIC PLAN - AREA 12
1" = 50'-0"

NORTH

KEY PLAN



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TLC No.: 521165
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REVISIONS

NO.	DATE	DESCRIPTION	BY

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
DRS	DRS	MMH	MMH

ELECTRICAL PHOTOMETRIC PLAN - AREA 11 & 12

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

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M. MONCEF HADIJI, P.E.
Florida License #48022

PROJECT NO.:	21-0251.002
SCALE:	1" = 50'-0"
DATE:	01-25-2024
DRAWING:	E-110

LIGHTING FIXTURE SCHEDULE

TYPE	Count	DESCRIPTION	MANUFACTURER / MODEL	LAMP SOURCE	WATTAGE	Comments
MB4	18	FULL CUT OFF POLE TOP LED, 6,231 LUMENS, 4000K, TYPE SL2 DISTRIBUTION, 16' MOUNTING HEIGHT.	COOPER LIGHTING / MSA-SA1C-740-U-SL2	LED	59 VA	PROVIDE AUTOMATIC ON-BOARD DUSK TO DAWN LIGHTING CONTROL
MC2	5	FULL CUT OFF POLE TOP LED, 6,231 LUMENS, 4000K, TYPE SL2 DISTRIBUTION, 16' MOUNTING HEIGHT.	COOPER LIGHTING / MSA-SA1C-740-U-SL2	LED	59 VA	PROVIDE AUTOMATIC ON-BOARD DUSK TO DAWN LIGHTING CONTROL
PLB	27	LED BOLLALRD, 35" HEIGTH, 300 LUMENS, 4000K, SOLAR POWERED.	FIRST LIGHT TECHNOLOGIES / PLB-102-BK-ASM-NW-00	LED	N/A	

NOTES:

1. IF THERE IS A DISCREPANCY BETWEEN THE FIXTURE DESCRIPTION, THE LIGHTING GENERAL NOTES, THE LIGHTING SPECIFICATIONS, AND THE CATALOG NUMBER LISTED, THE FIXTURE DESCRIPTION SHALL TAKE PRECEDENCE.

2. WHERE A SINGLE MANUFACTURER IS LISTED WITH A CORRESPONDING CATALOG NUMBER, THIS MANUFACTURER SHALL BE CONSIDERED THE BASIS OF DESIGN SELECTION. OTHER MANUFACTURERS WILL BE CONSIDERED AS "APPROVED EQUAL" ONLY IF THEIR LIGHTING FIXTURE MEETS OR EXCEEDS THE BASIS OF DESIGN SELECTION IN TYPE AND QUALITY OF CONSTRUCTION, LOUVER FINISHES, LENSES, HOUSING FINISHES, PHOTOMETRICS, SELECTED OPTIONS AND ACCESSORIES. APPROVED EQUAL MANUFACTURERS MUST ALSO MATCH OVERALL APPEARANCE AND DIMENSIONS OF BASIS OF DESIGN SELECTION. WHERE ONLY A MANUFACTURER'S NAME IS LISTED, THE FIXTURE SHALL COMPLY WITH THE DESCRIPTION, VOLTAGE, LAMP TYPE AND WATTAGE, AND ANY NOTED REMARKS, THE LIGHTING FIXTURE SCHEDULE NOTES, AND THE LIGHTING SPECIFICATIONS.

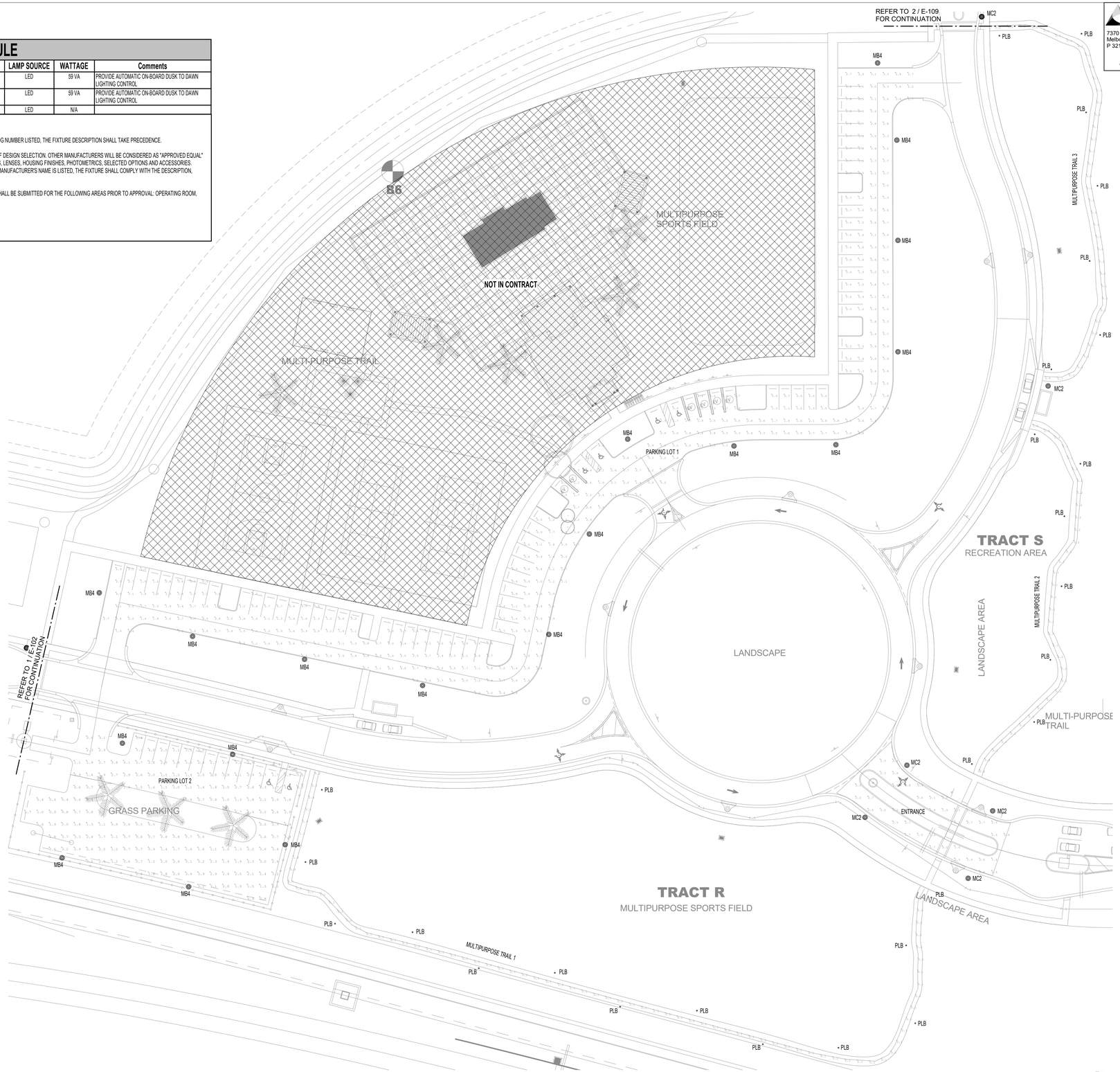
3. WHERE A MANUFACTURER IS SELECTED BY THE CONTRACTOR, OTHER THAN THAT LISTED AS THE BASIS OF DESIGN, PHOTOMETRIC CALCULATIONS SHALL BE SUBMITTED FOR THE FOLLOWING AREAS PRIOR TO APPROVAL: OPERATING ROOM, CONTROL ROOM, SURGICAL CORRIDORS, AND SCRUB AREAS.

5. FIXTURE COLOR/FINISH TO BE DETERMINED BY OWNER.

6. FPL TO CONFIRM LIGHT FIXTURE VOLTAGE.

AMENITY CENTER CACLULATION SUMMARY

DESCRIPTION	AVG	MAX	MIN	AVG/MIN	MAX/MIN
ENTRANCE	2.28 Fc	3.0 Fc	1.2 Fc	2.30	2.50
PARKING LOT 1	1.89 Fc	4.3 Fc	0.4 Fc	4.73	10.75
PARKING LOT 2	1.90 Fc	4.1 Fc	0.4 Fc	4.75	10.25
MULTIPURPOSE TRAIL 1	0.23 Fc	2.4 Fc	0.1 Fc	2.30	24.0
MULTIPURPOSE TRAIL 2	0.22 Fc	1.6 Fc	0.1 Fc	2.20	16.0
MULTIPURPOSE TRAIL 3	0.22 Fc	2.6 Fc	0.1 Fc	2.20	26.0



1 E-201 ELECTRICAL PHOTOMETRIC PLAN - AMENITY CENTER
1" = 40'-0"

NORTH

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COA 15
www.tlc-engineers.com
TLC No.: 521165
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REVISIONS

NO.	DATE	DESCRIPTION	BY

DESIGNED BY: DRS
DRAWN BY: DRS
CHECKED BY: MMH
APPROVED BY: MMH

ELECTRICAL PHOTOMETRIC PLAN - AMENITY CENTER

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

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DRMP, Inc.

NOT FOR CONSTRUCTION

M. MONCEF HADIJI, P.E.
Florida License #48022

PROJECT NO.: 21-0251.002
SCALE: As indicated
DATE: 01-25-2024
DRAWING: E-201

Project		Catalog #		Type	
Prepared by		Notes		Date	

Invue

MSA MESA

Decorative Area Luminaire

Product Features

WaveLinx · Light Architect™

Interactive Menu

- Order Information page 2
- Optical Distributions page 3
- Product Specifications page 4
- Energy & Performance data page 5
- Control Options page 13

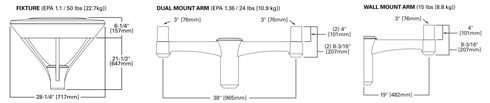
Product Certifications

ISTI · cULus Certified · DLC · DLC Premium · RoHS · IP66 · 1.5G VIB · 3G VIB · 5 YEAR · ida · FCC Class A

Quick Facts

- Die-cast aluminum housing and door
- Lumens packages ranging from 3,000 - 29,000 lumens
- Choice of 13 high-efficiency, patented AccuLED Optics™
- Base casting slip fits over a standard 3" O.D. tenon
- Wall, single and dual-mount configurations available
- 10kV/10vkA surge protection standard
- LED fixture features a five-year warranty

Dimensional and Mounting Details



COOPER Lighting Solutions

Ordering Information

SAMPLE NUMBER: **MSA-SAA-740-U-T3-GM**

Product Family [1, 2]	Light Engine		Color Temperature	Voltage	Distribution	Finish [4]
	Configuration	Drive Current				
MSA=Mesa **BAA-MSA**=Mesa Buy American Act [31] **TAA-MSA**=Mesa Trade Agreement Act Compliant [32]	**SA1**=1 Square **SA2**=2 Squares **SA3**=3 Squares **SA4**=4 Squares	**A**=615mA **B**=800mA **C**=1050mA(1A) **D**=1200mA(1.2A)	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI,6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **835**=80CRI, 3500K **840**=80CRI, 4000K **AMB**=590nm, Amber [16,20]	**U**=Universal (120-277V) **9**=347V **8**=480V [5]	**T2**=Type II **T3**=Type III **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90 Spill Light Eliminator Left **SLR**=90 Spill Light Eliminator Right **RW**=Rectangular Wide Type I **SNQ**=Type V Square Narrow **SMQ**=Type V Square Medium **SWQ**=Type V Square Wide	**AP**=Grey **BK**=Black **BZ**=Bronze **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **CC**=Coastal Construction

Options (Add as Suffix)	Accessories (Order Separately) [37]
10MSP=10kV MOV Surge Protection Device **20K**=208V UL 1449 Fused Surge Protection Device **20MSP**=20kV MOV Surge Protection Device **3**=Three Position Terminal Block **2L**=UL Listed / CSA Certified [7] **DIM**=External 0-10V Dimming Leads **EBP**=Emergency Battery Pack [8,27] **CBP**=Cold Weather Emergency Battery Pack [8,27] **CC**=Coastal Construction [9] **UL**=UL Listed / CSA Certified **HSS**=House Side Shield [10] **G3**=3G Vibration Rated **HA**=50°C High Ambient Temperature **IM**=Internal Dome Hinge [1] **LCF**=Light Square Trim Plate Painted to Match Housing **DALI**=DALI Driver [11] **BPC**=Button Type Photocontrol	**PR**=NEMA 3-PIN Twistlock Photocontrol Receptacle **PR7**=NEMA 7-PIN Twistlock Photocontrol Receptacle **LLPC**=Long Life Twistlock NEMA Photocontrol [12] **MS/DIM-L08**=Motion Sensor for Dimming Operation, Up to 8' Mounting Height [13,33] **MS/DIM-L20**=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [13,33] **MS/DIM-L40**=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [13,33] **LWR-LW**=Enlighted Sensor, 8'-16' MH [13,15,34] **LWR-LN**=Enlighted Sensor, 16'-40' MH [13,15,34] **ZD**=DALI-enabled 4-PIN Twistlock Receptacle [14,33] **ZW**=WaveLinx enabled 4-PIN Twistlock Receptacle [14,33] **SWP04XX**=WaveLinx Wireless Sensor, 7' - 15' Mounting Height [15,16,17,18] **SWP05XX**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height [15,16,17,18]	**SA6028-XX**=Dual Mount Arm [1] **SA6029-XX**=Wall Mount Arm [1] **OA/RA1013**=Photocontrol Shorting Cap **OA/RA1016**=NEMA Photocontrol - Multi-Tap **OA/RA1027**=NEMA Photocontrol - 480V **OA/RA1201**=NEMA Photocontrol - 347V **OA1223**=10kV Circuit Module Replacement **FSIR-100**=Wireless Configuration Tool for Motion Sensor [35] **LS/HSS**=House Side Shield [10,21] **SWP04-XX**=WaveLinx Wireless Sensor, 7' - 15' Mounting Height [15,16,17,18] **SWP05-XX**=WaveLinx Wireless Sensor, 15' - 40' Mounting Height [15,16,17,18] **WGC-TP-10A**=WaveLinx Outdoor Control Module [36]

NOTES
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
3. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
4. Not available with sensor options at 1.2A drive current. Not available in combination with HA high ambient and sensor options at 1A drive current.
5. Custom and RAL color matching available upon request. Consult your lighting representative at Cooper Lighting Solutions for more information.
6. Not available with LWR or SWPD sensor options. Not available with SA1 light square configuration. 2L is with MS/DIM sensors only available with UNV voltage.
7. Not available with 480V or 347V options.
8. Not available with high ambient (HA), high voltage (8 or 9), or 1.2A drive current configurations. Universal voltage (UNV) and drive currents 1A and lower only. Rated to maximum 25C ambient operating temperatures.
9. Salt spray tested to 5,000hrs per ASTM B117. Scribe rating of 9 per ASTM D1654.
10. House side shield not for use with SNQ, SMQ, SWQ, or RW distributions. The Light Square trim plate is painted black when the HSS option is selected.
11. Utilizes internal step-down transformer when 347V or 480V is selected.
12. Includes 3-PIN or 7-PIN twistlock receptacle (PR or PR7).
13. Controls system is not available with photocontrol (BPC), photocontrol receptacle (PR or PR7), or other controls systems (MS, ZD, ZW, LWR, DALI, or DIM).
14. Enlighted wireless sensors are factory installed and require network components (LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities. See website for Enlighted application information.
15. Requires 4-PIN twistlock receptacle (ZD or ZW) option.
16. Replace XX with sensor color (WH, BZ or BK).
17. Sensor passive infrared (PIR) may be overly sensitive with operating below -20°C (-4°F).
18. For this device to be field configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system commissioning to be installed for operation. See website for more WaveLinx application information.
19. Replace XX with paint color.
20. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
21. Must order one per light square when ordering as a field-installable accessory.
22. Requires 7-PIN NEMA twistlock receptacle (PR7) option. The WDLC7 cannot be used in conjunction with other control systems (MS, ZW, ZD or LWR). Operates on 120-347V input voltages.
23. Available only with 120-277V.
24. Amber spectrum is ideal for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Exact luminaire wattage available in IES files. Available with SWQ, SMQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
25. Not available with HA option.
26. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information.

Product Specifications

Construction
- Die-cast aluminum main housing and permanent mold spider mount base maintain a minimum Ø.125" wall thickness.
- Integral aluminum heat sink provides superior thermal +40°C ambient with optional 50°C environments.
- Standard 1.5G vibration, 3G optional.
- Top mounted door assembly, heavy wall, diecast aluminum door maintains a nominal Ø.125 thickness
- Door includes a 4.5" stainless steel safety tether standard or an optional self-retaining interior hinge.
- Continuous silicone gasket provided to seal housing door assembly and optic tray
- Downlight lens is LED board integrated UV treated polycarbonate over optics, each individually sealed to IP66 rating.
- Four inset fasteners on underside of housing provide access to luminaire interior.
- Housing and optics IK10 impact rated.

Optics
- Choice of thirteen patented, high efficiency AccuLED Optic™ technology manufactured from injection-molded UV treated polycarbonate. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing.
- AccuLED Optic technology creates consistent distributions with the scalability to meet customized application requirements
- Offered in multiple CCTs (+/-275K). For the ultimate level of spill light control, an optional house side shield accessory can be field or factory installed.

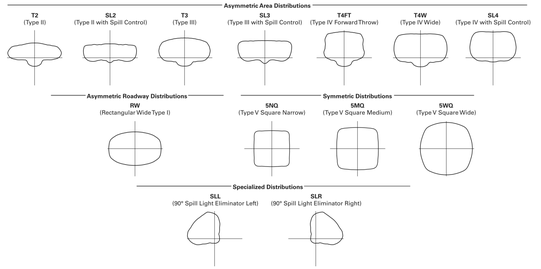
Electrical
- LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life.
- Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 50°C ambient environments.
- All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection.
- Lightsquares feature an IP66 enclosure rating.
- Occupancy sensor and dimming options available.

Mounting
- Fitter assembly mounts over 3" O.D. Tenon via four concealed, steel set screws and jam-setscrews.

Finish
- Housing is finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear.
- Lightsquares cover plates are standard white and may be specified to match finish of luminaire housing.
- Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.
- Available in Coastal Construction, salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.

Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Optical Distributions



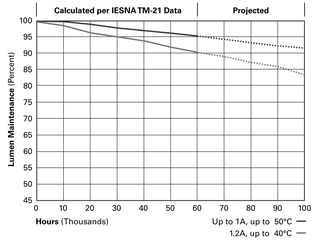
Lumen Maintenance

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Project L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

View PMM Mesa IES files



COOPER Lighting Solutions

FIRSTLIGHT TECHNOLOGIES

PLB Series

SOLAR POWERED LED BOLLARD

Project:

Type: Quantity:

The PLB series solar powered LED bollard is ideal for architectural and commercial pathway applications. The stylish, contemporary design combined with high quality construction and unequalled solar powered performance make the PLB series an excellent fit where quality lighting is required.

PLB solar powered bollards are fully self-contained and offer significant advantages over typical wired bollards:
- Low installation, remediation and electrical design costs
- No electricity bills and no scheduled maintenance
- Immune from power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is "self-learning" and allows the lights to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.

TECHNICAL SPECIFICATIONS

Solar Module:
- High impact, UV resistant encapsulation
- High-efficiency mono-crystalline cells
- Integrated into bollard housing
- Used for day/night detection (no photocell required)

Solar Lighting Controller (SLC):
- High efficiency Maximum Power Point Tracking (MPPT) charge controller
- Micro-controller based technology
- High-efficiency LED driver
- Integrated into bollard housing
- Designed to automatically manage lighting performance based on environmental conditions and lighting requirements

Battery:
- High-performance lithium ($LiFePO_4$)
- Exceptional 10+ year lifecycle
- High-temperature tolerance
- Contained within bollard post
- Designed for easy battery changes when required
- Plug-and-play, sealed connector

Wireless Controls:
- Easy-to-use interface via iOS smartphone app
- Configure and control lighting profiles
- Adjust dusk and dawn thresholds

LEDs and Optics:
- Greater than 100,000 hour L70 lifetime LED
- Extra Warm White (2700K), Warm White (3000K), Neutral White (4000K), and Amber (595nm) LEDs available
- Type 3 and Type 5 full cut-off high efficiency optics
- Typical lumen output 450 lumens
- Wildlife-friendly amber option available

Mechanical Construction:
- Cast, marine-grade, corrosion resistant aluminum housing
- IP67 protection
- Extruded, low copper aluminum post
- Stainless fasteners with security fastener option
- High-strength mounting base
- Architectural grade, super durable, TGIC powder coat
- Four standard colors with custom colors available

Factory Set Lighting Profiles:
- 11 standard duration profiles available
- Real-time lighting profile options available
- See lighting profile sheet for all options
- Lighting profiles are field configurable with app

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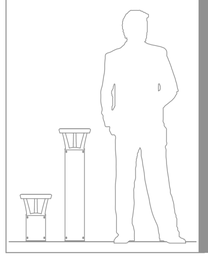
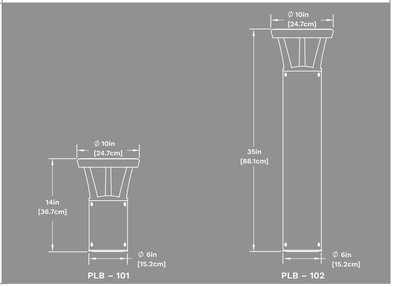
FIRSTLIGHT TECHNOLOGIES

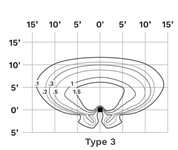
PLB Series

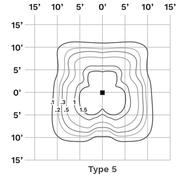
SOLAR POWERED LED BOLLARD





PHOTOMETRICS (IES files available on website)





Notes:
- Photometrics based on PLB 102 mounting height
- All light levels in foot candles (fc) with 4000K color temperature and typical lumen output
- To convert to lux multiply light level by 10.7
- Typical lumen levels based off of Type 5 optic with the default profile using neutral white LEDs
- Contact us for help in choosing the right lighting profile and distribution
- Specifications subject to change without notice

ORDER MATRIX

Series	Height	Finish	Distribution	LED	Lighting Profile (Full list on website)	Options
PLB	**101** - 14"	**BK** - Black	**ASM** - Type 3	**XW** - 2700K	**00** - On at dusk, off at dawn	**SEC** - Security Fasteners
	102 - 35"	**BZ** - Bronze	**SYM** - Type 5	**WW** - 3000K	**04** - On at dusk, dim to 30% after 5 hours, brighten to 100% 1 hour before dawn (DEFAULT)	**PA** - Pre-Ship Anchor Bolts
		SV - Silver		**NW** - 4000K	**09** - On at dusk, dim to 30% after 3 hours, brighten to 100% 1 hour before dawn, off at dawn	**BLS** - Backlight Shield
		WH - White		**AMB** - Amber	**TX0000X0000** - T=Real-time based lighting profile. X=Choose O (Off), or D (Dim) or B (Bright).	
		CC - Custom			0000= Choose event time between 00:00 and 23:59. Second event optional	

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TLC ENGINEERING SOLUTIONS
7370 Cabot Court, Suite 103
Melbourne, FL 32940
P 321.636.0274
COA 15
www.tlc-engineers.com
TLC No.: 521165
THINK. LISTEN. CREATE.
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REVISIONS

NO.	DATE	DESCRIPTION	BY

DESIGNED BY: DRS
DRAWN BY: DRS
CHECKED BY: MMH
APPROVED BY: MMH

LIGHT FIXTURE CUTSHEETS

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

DRMP ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2648
100 Parnell Street Suite A, Merritt Island, FL 32953
Phone:321.453.0010 Fax:321.454.6885 WWW.DRMP.COM
DRMP, Inc.

NOT FOR CONSTRUCTION

M. MONCEF HADJI, P.E.
Florida License #48022

PROJECT NO.: 21-0251.002
SCALE: N.T.S
DATE: 01-25-2024
DRAWING: E-501

TLC ENGINEERING SOLUTIONS
7370 Cabot Court, Suite 103
Melbourne, FL 32940
P 321.636.0274
COA 15
www.tlc-engineers.com
TLC No.: 521165
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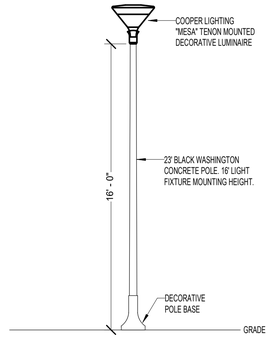
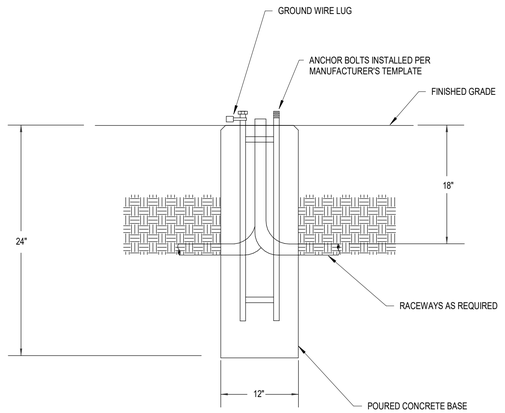


NOTES:
1. FIXTURE AND POLE DESIGNED AND INSTALLED BY FPL.

MSA POLE DETAIL
No Scale — 1



BOLLARD BASE
No Scale — 2

REVISIONS

NO.	DATE	DESCRIPTION	BY

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
DRS	DRS	MMH	MMH

ELECTRICAL DETAILS

CONSTRUCTION PLANS FOR
LAKES AT COCOA GROVES
COCOA, FLORIDA

DO NOT SCALE THIS DRAWING – DIMENSIONS AND NOTES TAKE PREFERENCE

DRMP
ENGINEERS • SURVEYORS • PLANNERS • SCIENTISTS
Certificate of Authorization No. 2648
100 Panell Street Suite A, Merritt Island, FL 32953
Phone:321.453.0010 Fax:321.454.6885 WWW.DRMP.COM
DRMP, Inc.

NOT FOR CONSTRUCTION

M. MONCEF HADJI, P.E.
Florida License #48022

PROJECT NO.: 21-0251.002
SCALE: As indicated
DATE: 01-25-2024
DRAWING: E-701

EXHIBIT A

DESCRIPTION (ORB 8563, PG 760):

PARCEL 1:

A PARCEL OF LAND LYING IN THE NORTH 1/2 OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA; RUN THENCE SOUTH 89°57'44" EAST, ALONG THE NORTH LINE OF SAID SECTION 10, A DISTANCE OF 329.44 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 89°57'44" EAST, ALONG SAID NORTH LINE A DISTANCE OF 2266.28 FEET; THENCE DEPARTING SAID NORTH LINE OF SECTION 10, SOUTH 00°32'12" EAST, A DISTANCE OF 2235.09 FEET TO A POINT ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 528 (ALSO KNOWN AS THE "BEE LINE EXPRESSWAY", FORMERLY KNOWN AS STATE ROAD NO. 524); THENCE SOUTH 88°36'31" WEST (CALCULATED MEASUREMENT) SOUTH 88°40'54" WEST (DEED) ALONG SAID EXISTING NORTH RIGHT-OF-WAY LINE A DISTANCE OF 454.64 FEET; THENCE NORTH 87°19'06" WEST, A DISTANCE OF 638.49 FEET, TO A POINT OF CURVATURE OF A CURVE CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 900.00 FEET, A CENTRAL ANGLE OF 31°18'50" (CALCULATED MEASUREMENT) 31°18'48" (DEED); THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 491.88 FEET (CALCULATED MEASUREMENT) 491.87 (DEED) FEET; THENCE NORTH 56°04'39" WEST (CALCULATED MEASUREMENT) NORTH 56°00'19" WEST (DEED), A DISTANCE OF 398.70 FEET (CALCULATED MEASUREMENT) 398.75 FEET (DEED) TO A POINT OF CURVATURE OF A NON-TANGENT CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 969.79 FEET, A CENTRAL ANGLE OF 37°46'38"; THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE, A DISTANCE OF 639.42 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE 95); THENCE NORTH 00°11'53" WEST, ALONG SAID EAST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE 95), A DISTANCE OF 566.36 FEET; THENCE NORTH 01°55'04" WEST, A DISTANCE OF 300.93 FEET; THENCE NORTH 01°20'38" WEST, A DISTANCE OF 476.50 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH:

PARCEL 2:

A PARCEL OF LAND LYING IN THE NORTH HALF OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, RUN THENCE S 89°57'44" E, ALONG THE NORTH LINE OF SAID SECTION 10, A DISTANCE OF 2595.72 FEET TO THE POINT-OF-BEGINNING; THENCE CONTINUE S 89°57'44" E, ALONG SAID NORTH LINE OF SECTION 10, A DISTANCE OF 70.51 FEET, TO THE NORTH ¼ CORNER OF SECTION 10; THENCE S 89°57'56" E, ALONG SAID NORTH LINE OF SECTION 10, A DISTANCE OF 1926.93 FEET; THENCE DEPARTING SAID NORTH LINE, S 00°32'12" E, A DISTANCE OF 2404.54 FEET, TO A POINT ON A CURVE ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 528 (ALSO KNOWN AS THE "BEE LINE EXPRESSWAY", FORMERLY KNOWN AS STATE ROAD NO. 524); THENCE ALONG SAID

EXISTING NORTH RIGHT-OF-WAY LINE AND ALONG SAID CURVE THAT IS CONCAVE TO THE SOUTH, HAVING A RADIUS OF 5879.58 FEET, A CENTRAL ANGLE OF 15°41'33"; THENCE WESTERLY, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 1610.32 FEET; THENCE S 88°36'31" W (CALCULATED MEASUREMENT) S 88°40'54" W (DEED), A DISTANCE OF 404.03 FEET; THENCE DEPARTING SAID NORTH RIGHT-OF-WAY LINE, N 00°32'12" W, A DISTANCE OF 2235.09 FEET, TO THE POINT-OF-BEGINNING.

TOGETHER WITH:

PARCEL 3:

A PARCEL OF LAND LYING IN THE NORTH HALF OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, RUN THENCE S 89°57'44" E, ALONG THE NORTH LINE OF SAID SECTION 10, A DISTANCE OF 2666.23 FEET TO THE NORTH 1/4 CORNER OF SECTION 10; THENCE S 89°57'56" E, ALONG SAID NORTH LINE OF SECTION 10, A DISTANCE OF 1926.93 FEET TO THE POINT-OF-BEGINNING; THENCE CONTINUE S 89°57'56" E, ALONG SAID NORTH LINE OF SAID SECTION 10, A DISTANCE OF 738.58 FEET TO THE NORTHEAST CORNER OF SECTION 10; THENCE S 00°32'12" E, ALONG THE EAST LINE OF SAID SECTION 10, A DISTANCE OF 2602.18 FEET, TO A POINT ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 528 (ALSO KNOWN AS THE "BEE LINE EXPRESSWAY", FORMERLY KNOWN AS STATE ROAD NO. 524); THENCE N 74°59'21" W, ALONG SAID EXISTING NORTH RIGHT-OF-WAY LINE, A DISTANCE OF 693.63 FEET, TO A POINT-OF-CURVATURE OF A CURVE CONCAVE TO THE SOUTH, HAVING A RADIUS OF 5879.58 FEET, A CENTRAL ANGLE OF 00°42'35", THENCE WESTERLY, ALONG THE ARC OF SAID CURVE, A DISTANCE OF 72.84 FEET; THENCE DEPARTING SAID NORTH RIGHT-OF-WAY LINE, N 00°32'12" W, A DISTANCE OF 2404.54 FEET TO THE POINT-OF-BEGINNING.

LESS AND EXCEPT THE AREA FOR BORROW PIT NO. 19 AND HAUL ROAD AS SET FORTH IN CIRCUIT COURT MINUTE BOOK 57, PAGE 479, PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, OTHER THAN THE REVERSIONARY INTEREST, DESCRIBED AS FOLLOWS:

BORROW PIT NO. 19

A PARCEL OF LAND IN THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA:

COMMENCE AT THE NORTH BOUNDARY OF SAID SECTION 10, AT A POINT 150 FEET EAST FROM THE NORTHWEST CORNER THEREOF, RUN THENCE SOUTH 00°12'38" EAST, 50 FEET; THENCE NORTH 89°59'22" EAST, 499.83 FEET TO THE NORTHWEST CORNER OF BORROW PIT NO. 19 AND THE POINT OF BEGINNING; CONTINUE THENCE NORTH 89°59'22" EAST, 600 FEET; THENCE SOUTH 00°00'38" EAST, 550 FEET; THENCE SOUTH 89°59'22" WEST, 600 FEET; THENCE NORTH 00°00'38" WEST, 550 FEET TO THE POINT OF BEGINNING.

AND

HAUL ROUTE FOR BORROW PIT NO. 19

THAT PART OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST, LYING SOUTH AND WITHIN 50 FEET OF A LINE DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHWEST CORNER OF BORROW PIT NO. 19 AS DESCRIBED ABOVE, RUN THENCE SOUTH 89°59'22" WEST, 499.83 FEET TO THE END OF SAID LINE AS HEREIN DESCRIBED.

OPINION OF TITLE

To: City of Cocoa:

With the understanding that this Opinion of Title is furnished to City of Cocoa, Florida, as inducement for acceptance and in compliance with Chapter 28, Subdivision Code, and as an inducement for acceptance of a proposed final subdivision plat or waiver of plat covering the real property hereinafter described, it is hereby certified that I have examined a complete "Abstract of Title" covering the period from the beginning to the date of the commitment to the 5th day of January, 2024, at the hour of 11:00 PM, inclusive, of the following described property. I know of no reason that this Title Policy is inaccurate or incomplete.

Legal Description:

A PARCEL OF LAND AS DESCRIBED IN O.R. BOOK 8563 PAGE 760 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA AND LYING IN SECTION 10, TOWNSHIP 24 SOUTH, RANGE 35 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE NORTHEAST CORNER OF SAID SECTION 10; THENCE S. 00°31'49" E., ALONG THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 10, A DISTANCE OF 2602.21 FEET TO A POINT LYING 44.08 FEET N. 00°31'49" E. OF THE EAST QUARTER CORNER OF SAID SECTION 10, SAID POINT ALSO BEING ON THE NORTHERLY RIGHT-OF-WAY LINE OF STATE ROAD NO. 528 AS SHOWN ON SECTION MAP 70007-2508; THENCE N. 74°59'21" W., ALONG SAID NORTH RIGHT-OF-WAY LINE, A DISTANCE OF 693.63 FEET TO THE POINT-OF-CURVATURE OF A 5879.58 FOOT RADIUS CIRCULAR CURVE CONCAVE SOUTHERLY; THENCE EASTERLY, ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 16°24'08" A DISTANCE OF 1683.16 FEET, SAID CURVE HAVING A CHORD BEARING OF N. 83°11'25" W. AND A CHORD DISTANCE OF 1677.42 FEET; THENCE S. 88°36'31" W., ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 858.67 FEET; THENCE N. 87°23'29" W., ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 638.50 FEET TO THE POINT-OF-CURVATURE OF A 900.00 FOOT RADIUS CIRCULAR CURVE CONCAVE NORTHEASTERLY, SAID CURVE ALSO BEING THE NORTHEASTERLY RIGHT-OF-WAY LINE OF THE STATE ROAD NO. 528 AND I-95 INTERCHANGE; THENCE NORTHWEST ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 31°18'50" A DISTANCE OF 491.88 FEET, SAID CURVE HAVING A CHORD BEARING OF N. 71°44'04" W. AND A CHORD DISTANCE OF 485.78 FEET; THENCE N. 56°04'39" W., ALONG SAID STATE ROAD 528/I-95 RIGHT-OF-WAY LINE, A DISTANCE OF 398.70 FEET TO A NON-TANGENT POINT ON A 969.79 FOOT RADIUS CIRCULAR CURVE CONCAVE NORTHEASTERLY; THENCE NORTHWESTERLY, ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 37°46'38" A DISTANCE OF 639.42 FEET, SAID CURVE HAVING A CHORD BEARING OF N. 37°11'20" W. AND A CHORD DISTANCE OF 627.90 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF I-95 PER FDOT MAP SECTION 70220; THENCE N. 00°11'53" W., ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 566.36 FEET; THENCE N. 01°55'04" W., ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 300.93 FEET; THENCE N. 01°21'38" W., ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 376.15 FEET TO A POINT ON THE SOUTH LINE OF A BORROW PIT NO. 19 HAUL ROAD; THENCE S. 89°58'02 E., ALONG SAID SOUTH LINE, A DISTANCE OF 318.30 FEET TO A POINT ON THE WEST LINE OF BORROW PIT NO. 19 PER FDOT PROJECT NO. 70220-2402; THENCE ALONG THE WEST, SOUTH, EAST AND NORTH LINES OF SAID BORROW PIT, THE FOLLOWING FOUR COURSES; S. 00°01'58" W. A DISTANCE OF 500.00 FEET; THENCE S. 89°58'02" E. A DISTANCE OF 600.00 FEET; THENCE N. 00°01'58" E. A DISTANCE OF 550.00

FEET; THENCE N. 89°58'02" W. A DISTANCE OF 919.51 FEET TO A POINT ON THE AFORESAID EASTERLY RIGHT-OF-WAY LINE OF I-95; THENCE N. 01°20'38" W., ALONG SAID EASTERLY RIGHT-OF-WAY LINE, A DISTANCE OF 50.01 FEET TO A POINT ON THE NORTH LINE OF THE NORTHWEST ¼ OF SAID SECTION 10; THENCE S. 89°58'02" E., ALONG SAID NORTH LINE, A DISTANCE OF 2337.02 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 10; THENCE S. 89°58'06" E., ALONG THE NORTH LINE OF THE NORTHEAST ¼ OF SAID SECTION 10, A DISTANCE OF 2665.57 FEET TO THE POINT-OF-BEGINNING.

CONTAINING 246.43 ACRES MORE OR LESS.

I am of the opinion that on the last mentioned date the fee simple title to the above described property was vested in: **MOUNTAIN COVE HOMES AT LAKES AT COCOA GROVE LLC, A FLORIDA LIMITED LIABILITY COMPANY,** with Victor F. Solorzano as the authorized person for Mountain Cove Homes at Lakes at Cocoa Grove, LLC.

Subject to the following encumbrances, liens and other exceptions:

1. **RECORDED MORTGAGES:**

   Mortgage to Brightline Trains Florida, LLC, a Delaware limited liability company, recorded in O.R. Book 9037 at Page 2806 of the Public Records of Brevard County, Florida.

2. **RECORDED CONSTRUCTION LIENS, CONTRACT LIENS AND JUDGEMENTS:**

   NONE.

3. **GENERAL EXCEPTIONS:**

   A. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed after the date of this Opinion of Title.

   B. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting title that would be disclosed by an accurate and complete survey of the Property. The term "encroachment" includes encroachments of existing improvements located on the Property onto adjoining land, and encroachments on the Property of existing improvements located on the adjoined land.

   C. Rights or claims of parties in possession not recorded in Public Records.

   D. Construction, Mechanic's, Contractors' or Materialmen's lien claims, if any, where no notice thereof appears of record.

   E. Easements, or claims of easements, not shown by Public Records.

   F. General or special taxes and assessments required to be paid in the year 2023 and subsequent years.

4. **SPECIAL EXCEPTIONS:**

A. Any lien provided by County Ordinance or by Chapter 159, F.S., in favor of any city, town, village or port authority, for unpaid service charges for services by any water systems, sewer systems or gas systems serving the land described herein; and any lien for waste fees in favor of any county or municipality.

B. Reservation of ingress, egress and utility easement as set forth in Warranty Deed recorded under O.R. Book 78, Page 639 of the Public Records of Brevard County, Florida. A copy is attached hereto as **Exhibit A**.

C. Stipulated Settlement Agreement recorded in O.R. Book 5837, Page 2226 as re-recorded in O.R. Book 7076, Page 2414 and as affected by Settlement Implementation Agreement recorded in O.R. Book 8564, Page 2243, Public Records of Brevard County, Florida.

D. Temporary Easement for public road transportation purposes recorded in O.R. Book 8725, Page 1796, Public Records of Brevard County, Florida.

E. Easement contained in instrument recorded March 3, 2021, under O.R. Book 9037 at Page 2799 of the Public Records of Brevard County, Florida.

F. Easement contained in instrument recorded June 23, 2022, under O.R. Book 9541 at Page 338 of the Public Records of Brevard County, Florida.

G. Mortgage to Brightline Trains Florida, LLC, a Delaware limited liability company, recorded in O.R. Book 9037 at Page 2806 of the Public Records of Brevard County, Florida.

H. Rights of the lessees under unrecorded leases.

I HEREBY CERTIFY that I have reviewed all the aforementioned encumbrances and exceptions and that none of them hinder or affect the recording or enforcement of the Declaration of Restrictions.

Therefore, it is my opinion that the following party(ies) must join in the agreement in order to make the Declaration of Restrictions a valid and binding covenant on the lands described herein.

Name	Interest	Special Exception Number
Brightline Trains Florida, LLC	Mortgagee	4G.

The following is a description of the aforementioned abstract and its continuations:

Number	Company Certifying	No. of Entries	Period Covered
2828401	Old Republic National Title		Beginning of time to 1/05/2024

I HEREBY CERTIFY that the legal description contained in this Opinion of Title coincides with, and is the same as, the legal description in the proffered, recordable agreement.

I, the undersigned, further certify that I am an attorney-at-law duly admitted to practice in the State of Florida and a member in good standing of the Florida Bar.

Respectfully submitted this 25th day of January 2024.

Alexis Gonzalez, Esq.
Florida Bar No. 180785
3162 Commodore Plaza, Suite 3E
Miami, Florida 33133

STATE OF FLORIDA }
} ss:
COUNTY OF MIAMI-DADE }

The foregoing instrument was acknowledged before me by means of physical presence [✓] or online notarization [ ] me this 25th day of January, 2024, by Alexis Gonzalez, Esq., who is personally known to me or has produced _____, as identification.

Meghhaa
Notary Public

Meghhaa Kumaarr
Print Name

My Commission Expires:

MEGHHAA KUMAARR
Notary Public - State of Florida
Commission # HH 425241
My Comm. Expires Jul 24, 2027
Bonded through National Notary Assn.

EXHIBIT A

OFFI RECS - 78 PAGE 639 #22750 5.

WARRANTY DEED (FROM CORPORATION) PAPCO'S FORM A-3 PAPCO PUBLISHING CORPORATION MIAMI 36, FLORIDA

Warranty Deed

This Indenture, *Made, this* 17th *day of* JANUARY *A. D. 19* 58.

BETWEEN EPIC, INC. *a corporation existing under the laws of the State of* Florida *, having its principal place of business in the County of* Broward *and State of* Florida *, and lawfully authorized to transact business in the State of Florida, party of the first part, and* HARRY ZITREEN as Trustee, whose mailing address is: c/o Federal Title & Insurance Corp., P. O. Box 1135 North Miami, Florida

of the County of Dade *and State of* Florida *party of the second part WITNESSETH:*

That the said party of the first part, for and in consideration of the sum of

----------TEN----------

Dollars, to it in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged has granted, bargained and sold to the said party of the second part, his *heirs and assigns forever, the following described land situate, lying and being in the County of* BREVARD *and State of Florida, to-wit:*

Section 10, Township 24 South, Range 35 East, containing 640 acres, Brevard County, Florida, subject to an easement hereby reserved by seller 15' in width along east line of said section, to be used for ingress and egress and utility purposes only.

N. B. This conveyance is made subject to the following:
The lien of that certain mortgage being the mortgage dated May 25, 1951, recorded in Mortgage Book 122, page 270 of the Public Records of Brevard County, Florida; and
The lien of that certain mortgage being the mortgage dated Aug. 13, 1956, recorded in Mortgage Book 202, page 21 of the Public Records of Brevard County, Florida; and
Easements of record, road rights-of-way and 1958 real property taxes.

And the said party of the first part does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, the said party of the first part has caused these presents to be signed in its name by its proper officers, and its corporate seal to be affixed, attested by its secretary, the day and year above written.

(Corporate Seal)

ATTEST: _____ *Secretary*

EPIC, INC.

By _____ *President.*

Signed, sealed and delivered in presence of us:

_____

_____

RECORD AND RETURN TO:
G. [illegible] SULLIVAN, ATTY.
P. O. BOX 100, HOLLYWOOD, FLA.

154811

OFFICIAL RECORDS 78 PAGE 640

State of Florida,

County of Broward

I Hereby Certify, *that on this* 17th *day of* January *A. D.* 1958 *, before me personally appeared* Ira A. Hotchkiss *and* Jay I. Kislak *President and Secretary respectively of* EPIC, INC. *, a corporation under the laws of the State of* Florida *, to me known to be the persons who signed the foregoing instrument as such officers and severally acknowledged the execution thereof to be their free act and deed as such officers for the uses and purposes therein mentioned and that they affixed thereto the official seal of said corporation, and that the said instrument is the act and deed of said corporation.*

deceased

Witness *my signature and official seal at* Hollywood *in the County of* Broward *and State of* Florida *the day and year last aforesaid.*

Janice Cooley (Seal)

My commission expires:

Notary Public, State of Florida at large
My commission expires June 15, 1959.
Bonded by American Surety Co. of N. Y.

154811

RECORDING $ 3.00

PAPCO'S FORM A-3

D. M. Buchanan

TRACT H
Page 2
1 Unit

TRACT H
Page 3
1 Unit

TRACT H
Page 4
2 Units

TRACT H
Page 5
1 Unit

TRACT H
Page 6
1 Unit

TRACT H
Page 7
1 Unit

TRACT L
Page 2
1 Unit

TRACT L
Page 4
1 Unit

TRACT M
Page 2
1 Unit

1 Unit

TRACT M
Page 4
1 Unit

TRACT M
Page 5
1 Unit

TRACT M
Page 6
1 Unit

TRACT O
TRACT P
TRACT S
TRACT N
Page 1
1 Unit x Each

TRACT O
TRACT P
TRACT S
TRACT N
Page 2
1 Unit x Each

TRACT Q
Page 2
1 Unit

TRACT Q
Page 2
1 Unit

TRACT Q
Page 4
1 Unit

TRACT Q
Page 5
2 Units

TRACT Q
Page 6
1 Unit

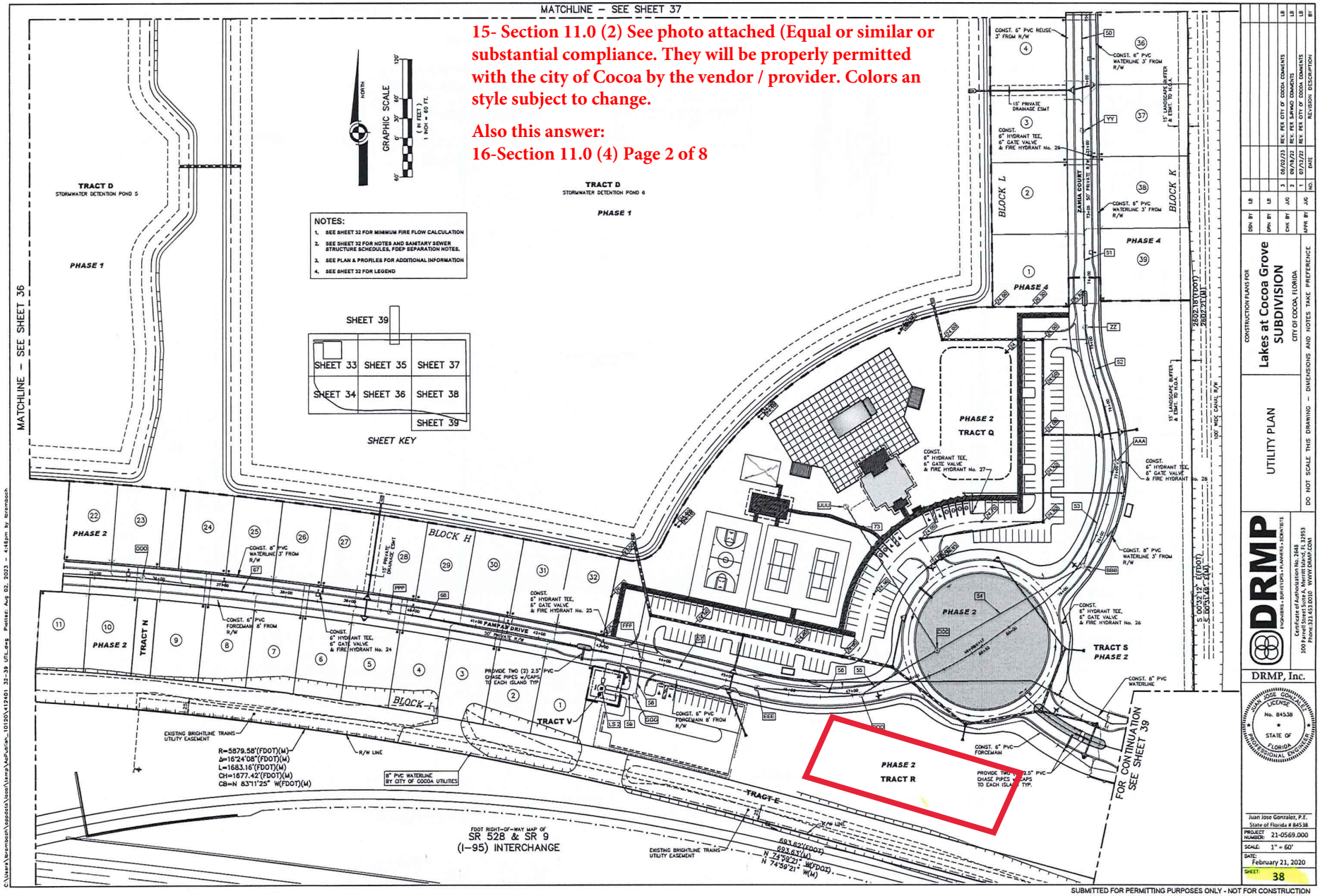
TRACT Q
Page 7
2 Units

Settlement Implementation Agreement, or Book 8564 / Page 2243 (Page 2 of 8 of Comments).

TRACT R

ITEM # 15

15- Section 11.0 (2) require a multiuse Sport Field.
Please provide details for the multiuse sport field in TRACT R.



Sodded/Grass area to be use as a multi use sport field, soccer, football, field Hockey, Lacrosse. Marking and accessories will be place at time of event. Goal and goal post with Nets, Etc. to will be 100% Removable / Portable.

St. Johns River
Water Management District
Michael A. Register, P.E., Executive Director

4049 Reid Street • P.O. Box 1429 • Palatka, FL 32178-1429 • 386-329-4500 • www.sjrwmd.com

February 16, 2023

Victor F Solorzano – *Sent via email:* sales@mountaincovehomes.com
Mountain Cove Homes at Lakes at Cocoa Grove, LLC
4878 SW 74th Ct
Miami, FL 33155-4454

SUBJECT: Permit Number: 158236-2
Project Name: Lakes at Cocoa Grove

Dear Mr. Solorzano:

Enclosed is your individual permit issued by the St. Johns River Water Management District on February 16, 2023. This permit is a legal document and should be kept with your other important documents. Permit issuance does not relieve you from the responsibility of obtaining any necessary permits from any federal, state, or local agencies for your project.

Technical Staff Report:
If you wish to review a copy of the Technical Staff Report (TSR) that provides the District's staff analysis of your permit application, you may view the TSR by going to the Permitting section of the District's website at www.sjrwmd.com/permitting. Using the "search applications and permits" feature, you can use your permit number or project name to find information about the permit. When you see the results of your search, click on the permit number and then on the TSR folder.

Noticing Your Permit:
For noticing instructions, please refer to the noticing materials in this package regarding closing the point of entry for someone to challenge the issuance of your permit. Please note that if a timely petition for administrative hearing is filed, your permit will become non-final and any activities that you choose to undertake pursuant to your permit will be at your own risk. Please refer to the attached Notice of Rights to determine any legal rights you may have concerning the District's agency action.

Compliance with Permit Conditions:
To submit your required permit compliance information, go to the District's website at www.sjrwmd.com/permitting. Under the "Apply for a permit or submit compliance data" section, click to sign-in to your existing account or to create a new account. Select the "Compliance Submittal" tab, enter your permit number, and select "No Specific Date" for the Compliance Due Date Range. You will then be able to view all the compliance submittal requirements for your project. Select the compliance item that you are ready to submit and then attach the appropriate information or form. The forms to comply with your permit conditions are available at www.sjrwmd.com/permitting under the section "Handbooks, forms, fees, final orders". Click on forms to view all permit compliance forms, then scroll to the ERP application forms section and select the applicable compliance forms. Alternatively, if you have difficulty finding forms or need

GOVERNING BOARD

Rob Bradley, CHAIR FLEMING ISLAND
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Douglas Burnett ST. AUGUSTINE
Cole Oliver MERRITT ISLAND
Janet Price FERNANDINA BEACH

copies of the appropriate forms, please contact the Bureau of Regulatory Support at (386) 329-4570.

Transferring Your Permit:
Your permit requires you to notify the District within 30 days of any change in ownership or control of the project or activity covered by the permit, or within 30 days of any change in ownership or control of the real property on which the permitted project or activity is located or occurs. You will need to provide the District with the information specified in rule 62-330.340, Florida Administrative Code (F.A.C.). Generally, this will require you to complete and submit Form 62-330.340(1), "Request to Transfer Permit," available at http://www.sjrwmd.com/permitting/permitforms.html.

Please note that a permittee is liable for compliance with the permit before the permit is transferred. The District, therefore, recommends that you request a permit transfer in advance in accordance with the applicable rules. You are encouraged to contact District staff for assistance with this process.

Thank you and please let us know if you have additional questions. For general questions contact e-permit@sjrwmd.com or (386) 329-4570.

Sincerely,

Michelle Reiber

Michelle Reiber, Bureau Chief
Division of Regulatory Services
St. Johns River Water Management District
525 Community College Parkway, S.E.
Palm Bay, FL 32909
(321) 409-2129

Enclosures: Permit
Notice of Rights
List of Newspapers for Publication

cc: District Permit File
Registered Professional Consultant: Mark Puckett – *Sent via email:* mpuckett@drmp.com
DRMP, Inc.
Environmental Consultant: Stephanie Salvilla
Bio-Tech Consulting, Inc.
Sent via email: stephanie@bio-techconsulting.com
DEP Contact: Daniel J Shideler – *Sent via email:* Daniel.shideler@dep.state.fl.us

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
Post Office Box 1429
Palatka, Florida 32178-1429

PERMIT NO: 158236-2 **DATE ISSUED:** February 16, 2023

PROJECT NAME: Lakes at Cocoa Grove

A PERMIT AUTHORIZING:
Construction and operation of a Stormwater Management System for a 246.43-acre project known as Lakes at Cocoa Grove as per plans received by the District on September 20, 2022, and irrigation plans received by the District on January 3, 2023.

LOCATION:
Section(s): 10 Township(s): 24S Range(s): 35E
Brevard County

Receiving Water Body:

Name	Class
Lake Wilson Outlet Canal	III Fresh

ISSUED TO:
Mountain Cove Homes at Lakes at Cocoa Grove, LLC
4878 SW 74th Ct
Miami, FL 33155-4454

The permittee agrees to hold and save the St. Johns River Water Management District and its successors harmless from any and all damages, claims, or liabilities which may arise from permit issuance. Said application, including all plans and specifications attached thereto, is by reference made a part hereof.

This permit does not convey to the permittee any property rights nor any rights or privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation or requirement affecting the rights of other bodies or agencies. All structures and works installed by permittee hereunder shall remain the property of the permittee.

This permit may be revoked, modified, or transferred at any time pursuant to the appropriate provisions of Chapter 373, Florida Statutes.

PERMIT IS CONDITIONED UPON:
See conditions on attached “Exhibit A”, dated February 16, 2023

AUTHORIZED BY: St. Johns River Water Management District
Division of Regulatory Services

By: Nanette Church

Nanette Church
Supervising Regulatory Scientist

"EXHIBIT A"
CONDITIONS FOR ISSUANCE OF PERMIT NUMBER 158236-2
Lakes at Cocoa Grove
DATED: February 16, 2023

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with Rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under Chapter 373, F.S.

2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the District staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.

3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation June 2007), and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), which are both incorporated by reference in subparagraph 62-330.050(9)(b)5, F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.

4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the District a fully executed Form 62-330.350(1), "Construction Commencement Notice," (October 1, 2013) (http://www.flrules.org/Gateway/reference.asp?No=Ref-02505), incorporated by reference herein, indicating the expected start and completion dates. A copy of this form may be obtained from the District, as described in subsection 62-330.010(5), F.A.C., and shall be submitted electronically or by mail to the Agency. However, for activities involving more than one acre of construction that also require a NPDES stormwater construction general permit, submittal of the Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Form 62-621.300(4)(b), shall also serve as notice of commencement of construction under this chapter and, in such a case, submittal of Form 62-330.350(1) is not required.

5. Unless the permit is transferred under Rule 62-330.340, F.A.C., or transferred to an operating entity under Rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms and conditions of the permit for the life of the project or activity.

6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:

    a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex — "Construction Completion and Inspection Certification for Activities Associated with a Private Single-Family Dwelling Unit" [Form 62-330.310(3)]; or

    b. For all other activities — "As-Built Certification and Request for Conversion to

Operation Phase" [Form 62-330.310(1)].

c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.

7. If the final operation and maintenance entity is a third party:

   a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as-built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.4 of Volume I) as filed with the Florida Department of State, Division of Corporations and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.

   b. Within 30 days of submittal of the as- built certification, the permittee shall submit "Request for Transfer of Environmental Resource Permit to the Perpetual Operation and Maintenance Entity" [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.

8. The permittee shall notify the District in writing of changes required by any other regulatory District that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.

9. This permit does not:

   a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in Chapter 62-330, F.A.C.;

   b. Convey to the permittee or create in the permittee any interest in real property;

   c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or

   d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.

10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.

11. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.

12. The permittee shall notify the District in writing:

    a. Immediately if any previously submitted information is discovered to be inaccurate; and

b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with Rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.

13. Upon reasonable notice to the permittee, District staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.

14. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, stone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section (DHR), at (850) 245-6333, as well as the appropriate permitting agency office. Project activities shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, F.S. For project activities subject to prior consultation with the DHR and as an alternative to the above requirements, the permittee may follow procedures for unanticipated discoveries as set forth within a cultural resources assessment survey determined complete and sufficient by DHR and included as a specific permit condition herein.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under Rule 62-330.201, F.A.C., provides otherwise.

16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under Chapter 62-330, F.A.C., or cause violations of state water quality standards.

17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the District will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with Rule 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

19. This permit for construction will expire five years from the date of issuance.

20. All wetland areas or water bodies that are outside the specific limits of construction authorized by this permit must be protected from erosion, siltation, scouring or excess turbidity, and dewatering.

21. This permit does not authorize the permittee to cause any adverse impact to or "take" of state listed species and other regulated species of fish and wildlife. Compliance with state laws regulating the take of fish and wildlife is the responsibility of the owner or applicant

associated with this project. Please refer to Chapter 68A-27 of the Florida Administrative Code for definitions of “take” and a list of fish and wildlife species. If listed species are observed onsite, FWC staff are available to provide decision support information or assist in obtaining the appropriate FWC permits. Most marine endangered and threatened species are statutorily protected and a “take” permit cannot be issued. Requests for further information or review can be sent to FWCConservationPlanningServices@MyFWC.com.

22. At a minimum, all retention and detention storage areas must be excavated to rough grade prior to building construction or placement of impervious surface within the area to be served by those facilities. To prevent reduction in storage volume and percolation rates, all accumulated sediment must be removed from the storage area prior to final grading and stabilization.

23. The operation and maintenance entity shall submit inspection reports to the District one year after the operation phase of the permit becomes effective and every two years thereafter on form 62-330.311(1), "Operation and Maintenance Inspection Certification". The inspection form must be signed and sealed by an appropriate registered professional.

24. Before the start of any construction, the permittee must provide the District with documentation demonstrating that 14 General Wetland mitigation credits have been debited from the TM-Econ Mitigation Bank ledger.

25. In the event that the permittee does not successfully complete the transaction to obtain 14 General Wetland mitigation credits from TM-Econ Mitigation Bank, the permittee must obtain a permit modification to provide alternative mitigation.

26. The permittee has proposed a mitigation plan which includes an offsite donation of land to the District. This offsite land donation shall be completed prior to the start of construction activities authorized under the permit within the permitted project boundary. The proposed parcel for donation known as "Kemcho Mitigation Tract (J Acquisitions Volusia LLC)" is depicted in the RAI response provided by the Bio-Tech Consulting, Inc." Kemcho Mitigation Tract " received by the District on August 10, 2022, and comprises 52.01 acres in total. The portion of the donation parcel associated with this project is depicted on Figure 1 "Kemcho Mitigation Tract " received by the District on August 10, 2022, and is comprised of 52.01 acres. The ecological value associated with the proposed mitigation plan has been assessed based on the entire 51.33-acre parcel being donated in one transaction and being perpetually managed. If the 51.33-acre parcel is not donated in one transaction, the permittee shall propose additional mitigation to address the mitigation deficit, which is acceptable to the District, prior to the start of construction activities authorized under the permit within the permitted project boundary. Since the permittee offers this property as mitigation to offset the proposed adverse impacts approved under this permit, the property must, at the time of transfer, be in as good an environmental condition as when the property was offered as mitigation, and must be free of encumbrances that adversely affect the mitigation value of the property. Prior to transfer of the property to the District, the permittee shall contact the Bureaus of Land Management and Real Estate Services to coordinate the procedure and provide the required documents for the property transaction. The permittee shall pay for all costs associated with the transfer of the property including, but not limited to, title insurance, boundary surveys including boundary lines marked on the ground, environmental assessments with a 50-year chain of title report, recording fees, documentary stamps, preparation of the warranty deed, prorated property taxes prior to transfer to the District, and a management endowment of $500 per acre. In addition, the permittee is responsible for all remediation prior to transfer to the District.

27. The proposed project must be constructed and operated as per plans received by the District on September 20, 2022, and irrigation plans received by the District on January 3, 2023.

Notice of Rights

1. A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code, the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P. O. Box 1429, Palatka Florida 32178-1429 (4049 Reid St., Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-six (26) days of the District depositing the notice of District decision in the mail (for those persons to whom the District mails actual notice), within twenty-one (21) days of the District emailing the notice of District decision (for those persons to whom the District emails actual notice), or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes, and Chapter 28-106, Florida Administrative Code. The District will not accept a petition sent by facsimile (fax), as explained in paragraph no. 4 below.

2. Please be advised that if you wish to dispute this District decision, mediation may be available and that choosing mediation does not affect your right to an administrative hearing. If you wish to request mediation, you must do so in a timely-filed petition. If all parties, including the District, agree to the details of the mediation procedure, in writing, within 10 days after the time period stated in the announcement for election of an administrative remedy under Sections 120.569 and 120.57, Florida Statutes, the time limitations imposed by Sections 120.569 and 120.57, Florida Statutes, shall be tolled to allow mediation of the disputed District decision. The mediation must be concluded within 60 days of the date of the parties' written agreement, or such other timeframe agreed to by the parties in writing. Any mediation agreement must include provisions for selecting a mediator, a statement that each party shall be responsible for paying its pro-rata share of the costs and fees associated with mediation, and the mediating parties' understanding regarding the confidentiality of discussions and documents introduced during mediation. If mediation results in settlement of the administrative dispute, the District will enter a final order consistent with the settlement agreement. If mediation terminates without settlement of the dispute, the District will notify all the parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Florida Statutes, is resumed. Even if a party chooses not to engage in formal mediation, or if formal mediation does not result in a settlement agreement, the District will remain willing to engage in informal settlement discussions.

3. A person whose substantial interests are or may be affected has the right to an informal administrative hearing pursuant to Sections 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must also comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.

Notice of Rights

4. A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District's regular business hours. The District's regular business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District's regular business hours shall be deemed filed as of 8:00 a.m. on the District's next regular business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at *sjrwmd.com*. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile is prohibited and shall not constitute filing.

5. Failure to file a petition for an administrative hearing within the requisite timeframe shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, Florida Administrative Code).

6. The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. A person whose substantial interests are or may be affected by the District's final action has the right to become a party to the proceeding, in accordance with the requirements set forth above.

7. Pursuant to Section 120.68, Florida Statutes, a party to the proceeding before the District who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

8. A District action is considered rendered, as referred to in paragraph no. 7 above, after it is signed on behalf of the District and filed by the District Clerk.

9. Failure to observe the relevant timeframes for filing a petition for judicial review as described in paragraph no. 7 above will result in waiver of that right to review.

NOTICING INFORMATION

Please be advised that the St. Johns River Water Management District will not publish a notice in the newspaper advising the public that it has issued a permit for this project.

Newspaper publication, using the District's notice form, notifies members of the public of their right to challenge the issuance of the permit. If proper notice is given by newspaper publication, then there is a 21-day time limit for someone to file a petition for an administrative hearing to challenge the issuance of the permit.

To close the point of entry for filing a petition, you may publish (at your own expense) a one-time notice of the District's decision in a newspaper of general circulation within the affected area as defined in Section 50.011 of the Florida Statutes. If you do not publish a newspaper notice to close the point of entry, the time to challenge the issuance of your permit will not expire and someone could file a petition even after your project is constructed.

A copy of the notice form and a partial list of newspapers of general circulation are attached for your convenience. However, you are not limited to those listed newspapers. If you choose to close the point of entry and the notice is published, the newspaper will return to you an affidavit of publication. In that event, it is important that you either submit a scanned copy of the affidavit by emailing it to *compliancesupport@sjrwmd.com* (preferred method) **or** send a copy of the original affidavit to:

Office of Records and Regulatory Support
4049 Reid Street
Palatka, FL 32177

If you have any questions, please contact the Office of Records and Regulatory Support at (386) 329-4570.

NOTICE OF AGENCY ACTION TAKEN BY THE
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Notice is given that the following permit was issued on _____:

(Name and address of applicant)_____
permit#_____. The project is located in _____County, Section _____, Township _____ South, Range _____ East. The permit authorizes a surface water management system on _____ acres for _____ known as _____. The receiving water body is _____.

A person whose substantial interests are or may be affected has the right to request an administrative hearing by filing a written petition with the St. Johns River Water Management District (District). Pursuant to Chapter 28-106 and Rule 40C-1.1007, Florida Administrative Code (F.A.C.), the petition must be filed (received) either by delivery at the office of the District Clerk at District Headquarters, P.O. Box 1429, Palatka FL 32178-1429 (4049 Reid St, Palatka, FL 32177) or by e-mail with the District Clerk at Clerk@sjrwmd.com, within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail or email actual notice). A petition must comply with Sections 120.54(5)(b)4. and 120.569(2)(c), Florida Statutes (F.S.), and Chapter 28-106, F.A.C. The District will not accept a petition sent by facsimile (fax). Mediation pursuant to Section 120.573, F.S., may be available and choosing mediation does not affect your right to an administrative hearing.

A petition for an administrative hearing is deemed filed upon receipt of the complete petition by the District Clerk at the District Headquarters in Palatka, Florida during the District's regular business hours. The District's regular business hours are 8 a.m. – 5 p.m., excluding weekends and District holidays. Petitions received by the District Clerk after the District's regular business hours shall be deemed filed as of 8 a.m. on the District's next regular business day. The District's acceptance of petitions filed by e-mail is subject to certain conditions set forth in the District's Statement of Agency Organization and Operation (issued pursuant to Rule 28-101.001, Florida Administrative Code), which is available for viewing at www.sjrwmd.com. These conditions include, but are not limited to, the petition being in the form of a PDF or TIFF file and being capable of being stored and printed by the District. Further, pursuant to the District's Statement of Agency Organization and Operation, attempting to file a petition by facsimile (fax) is prohibited and shall not constitute filing.

The right to an administrative hearing and the relevant procedures to be followed are governed by Chapter 120, Florida Statutes, Chapter 28-106, Florida Administrative Code, and Rule 40C-1.1007, Florida Administrative Code. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means the District's final action may be different from the position taken by it in this notice. **Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing. (Rule 28-106.111, F.A.C.).**

If you wish to do so, please visit http://www.sjrwmd.com/nor_dec/ to read the complete Notice of Rights to determine any legal rights you may have concerning the District's decision(s) on the permit application(s) described above. You can also request the Notice of Rights by contacting the Director of Office of Records and Regulatory Support, 4049 Reid St., Palatka, FL 32177-2529, tele. no. (386)329-4570.

NEWSPAPER ADVERTISING

ALACHUA
The Alachua County Record, Legal Advertising
P. O. Box 806
Gainesville, FL 32602
352-377-2444/ fax 352-338-1986

BAKER
Baker County Press, Legal Advertising
P. O. Box 598
Maclenny, FL 32063
904-259-2400/ fax 904-259-6502

BRADFORD
Bradford County Telegraph, Legal Advertising
P. O. Drawer A
Starke, FL 32901
904-964-6305/ fax 904-964-8628

BREVARD
Florida Today, Legal Advertising
P. O. Box 419000
Melbourne, FL 32941-9000
321-242-3832/ fax 321-242-6618

CLAY
Clay Today, Legal Advertising
1560 Kinsley Ave., Suite 1
Orange Park, FL 32073
904-264-3200/ fax 904-264-3285

DUVAL
Daily Record, Legal Advertising
P. O. Box 1769
Jacksonville, FL 32201
904-356-2466 / fax 904-353-2628

FLAGLER
Flagler Tribune, c/o News Journal
P. O. Box 2831
Daytona Beach, FL 32120-2831
386- 681-2322

INDIAN RIVER
Treasure Coast News
760 NW Enterprise Dr.
Port St. Lucie, FL 34986
772-283-5252

LAKE
Daily Commercial, Legal Advertising
P. O. Drawer 490007
Leesburg, FL 34749
352-365-8235/fax 352-365-1951

MARION
Ocala Star Banner, Legal Advertising
2121 SW 19th Avenue Road
Ocala, FL 34474
352-867-4010/fax 352-867-4126

NASSAU
News-Leader, Legal Advertising
P. O. Box 766
Fernandina Beach, FL 32035
904-261-3696/fax 904-261-3698

OKEECHOBEE
Okeechobee News, Legal Advertising
P. O. Box 639
Okeechobee, FL 34973-0639
863-763-3134/fax 863-763-5901

ORANGE
Sentinel Communications, Legal Advertising
633 N. Orange Avenue
Orlando, FL 32801
407-420-5160/ fax 407-420-5011

OSCEOLA
Little Sentinel, Legal Advertising
633 N. Orange Avenue
Orlando, FL 32801
407-420-5160/ fax 407-420-5011

PUTNAM
Palatka Daily News, Legal Advertising
P. O. Box 777
Palatka, FL 32178
386-312-5200/ fax 386-312-5209

ST. JOHNS
St. Augustine Record, Legal Advertising
P. O. Box 1630
St. Augustine, FL 32085
904-819-3439

SEMINOLE
Sanford Herald, Legal Advertising
300 North French Avenue
Sanford, FL 32771
407-323-9408

VOLUSIA
News Journal Corporation, Legal Advertising
P. O. Box 2831
Daytona Beach, FL 32120-2831
(386) 681-2322

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THE LAKES AT

COCOA GROVES

MountainCove HOMES

ARTIST CONCEPT

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PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

THE LAKES AT
COCOA
GROVES

HOME FEATURES

Single Family Gold Series

Estates Homes Platinum Series

Multiple Lakes • Multiple Amenities

Over-sized Lots • Plenty of Open Spaces • Gated Community

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

THE LAKES AT
COCOA
GROVES

Single Family Gold Series

American Robin | ELEVATIONS

ELEVATION 1

ARTIST CONCEPT

ELEVATION 2

ARTIST CONCEPT

ONE-STORY · 4 BEDROOMS · 3 BATHROOMS · LIVING ROOM · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

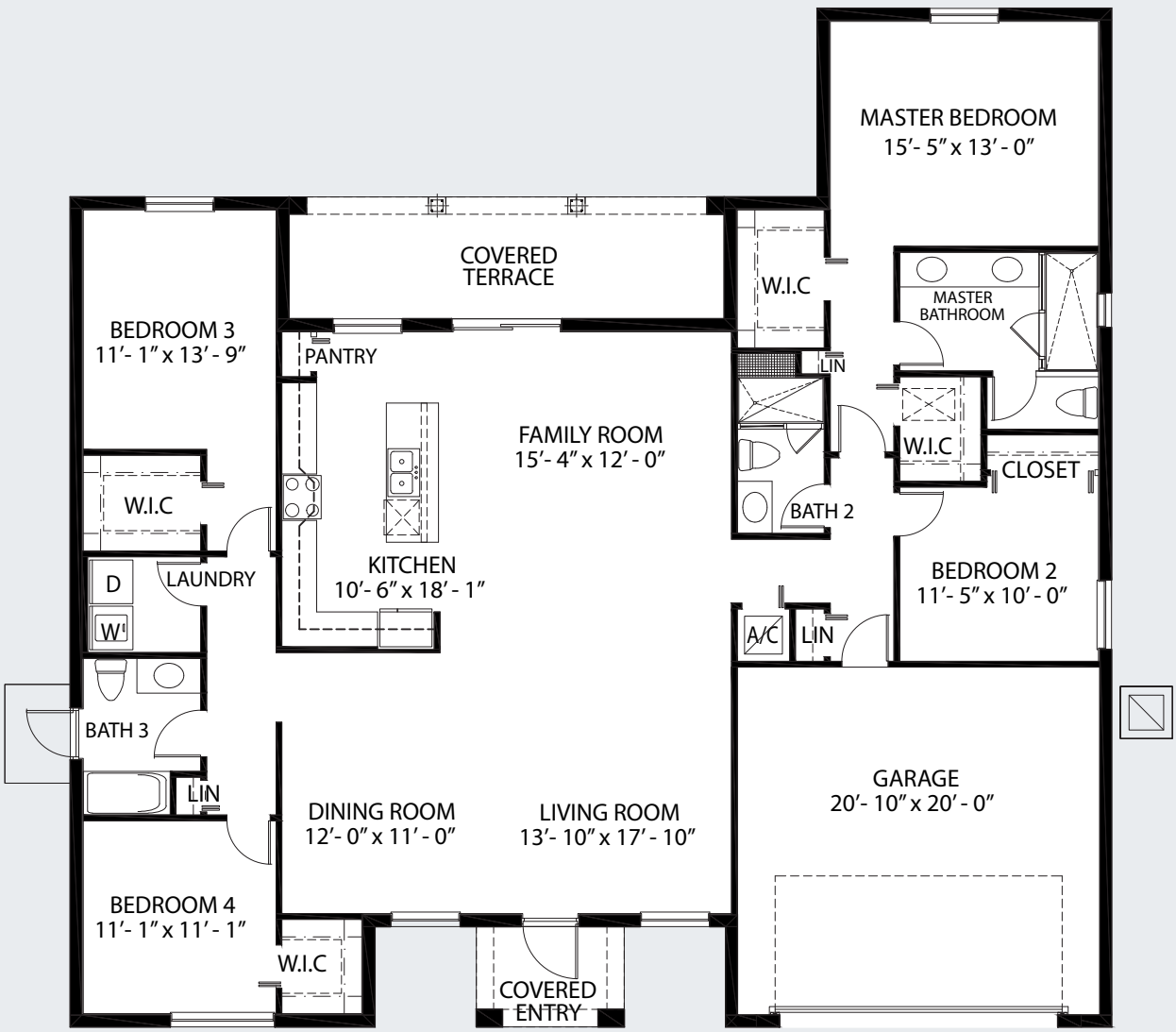
2,296 Sq. Ft. Under Air • 224 Sq. Ft. Covered Entry and Terrace • 448 Sq. Ft. Garage • 2,968 Total Sq. Ft.

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

THE LAKES AT
COCOA
GROVES

Single Family Gold Series

American Robin | FLOOR PLANS



FLOOR PLAN

ONE-STORY · 4 BEDROOMS · 3 BATHROOMS · LIVING ROOM · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

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THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Brown Pelican | ELEVATIONS

ELEVATION 1

ARTIST CONCEPT

ELEVATION 2

ARTIST CONCEPT

TWO-STORY · 4 BEDROOMS · 3.5 BATHROOMS · FOYER · GREAT ROOM · COVERED ENTRY · 2- CAR GARAGE

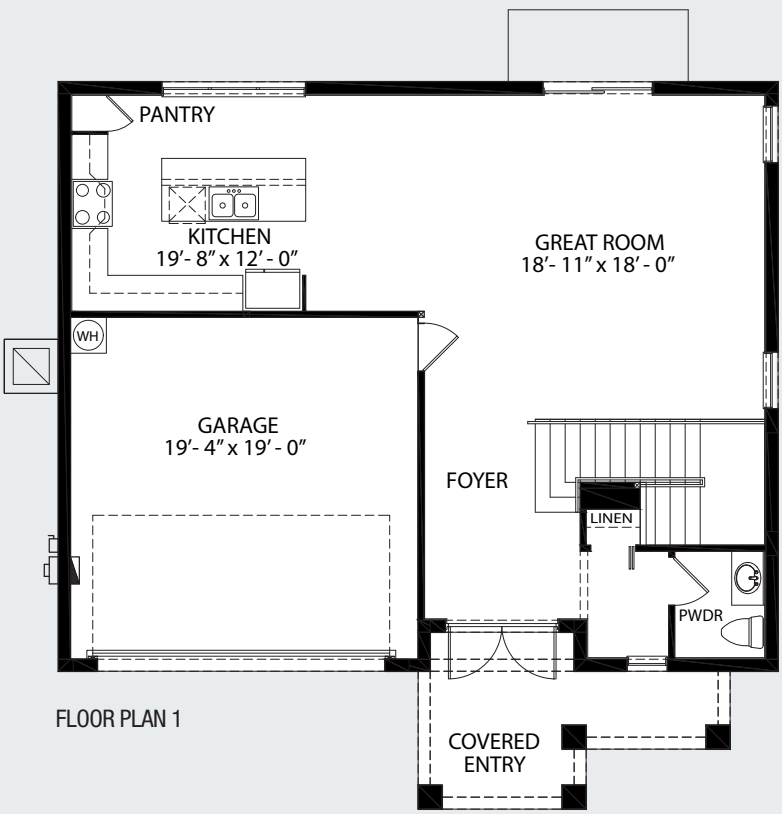
2,138 Sq. Ft. Under Air • 126 Sq. Ft. Covered Entry • 394 Sq. Ft. Garage • 2,658 Total Sq. Ft.

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

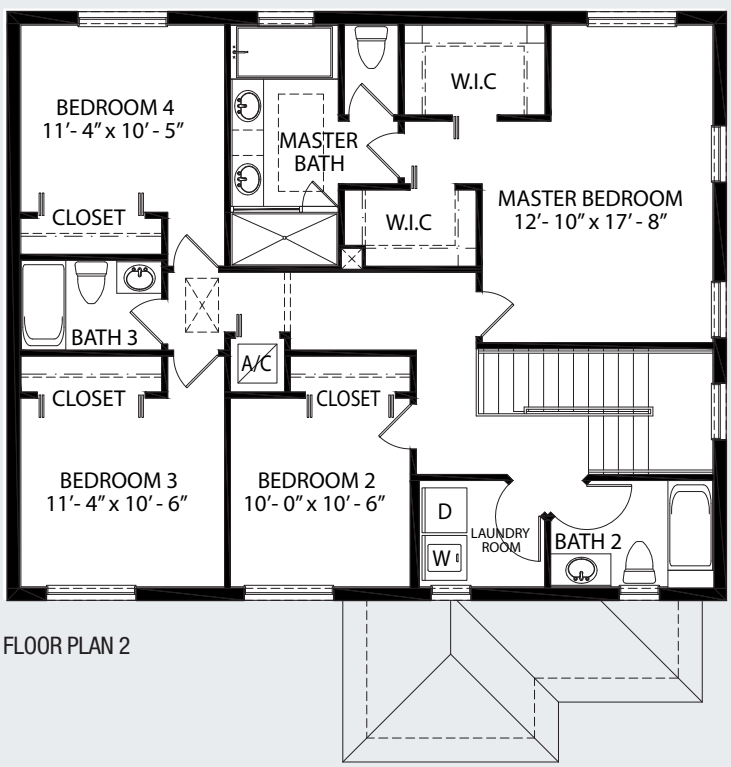
THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Brown Pelican | FLOOR PLANS



FLOOR PLAN 1



FLOOR PLAN 2

TWO-STORY · 4 BEDROOMS · 3.5 BATHROOMS · FOYER · GREAT ROOM · COVERED ENTRY · 2- CAR GARAGE

2,138 Sq. Ft. Under Air • 126 Sq. Ft. Covered Entry • 394 Sq. Ft. Garage • 2,658 Total Sq. Ft.

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THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Common Nighthawk | ELEVATIONS

ELEVATION 1
ARTIST CONCEPT

ELEVATION 2
ARTIST CONCEPT

TWO-STORY · 4 BEDROOMS · 3 BATHROOMS · LIVING ROOM · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

2,462 Sq. Ft. Under Air • 63 Sq. Ft. Covered Entry • 393 Sq. Ft. Garage • 2,918 Total Sq. Ft.

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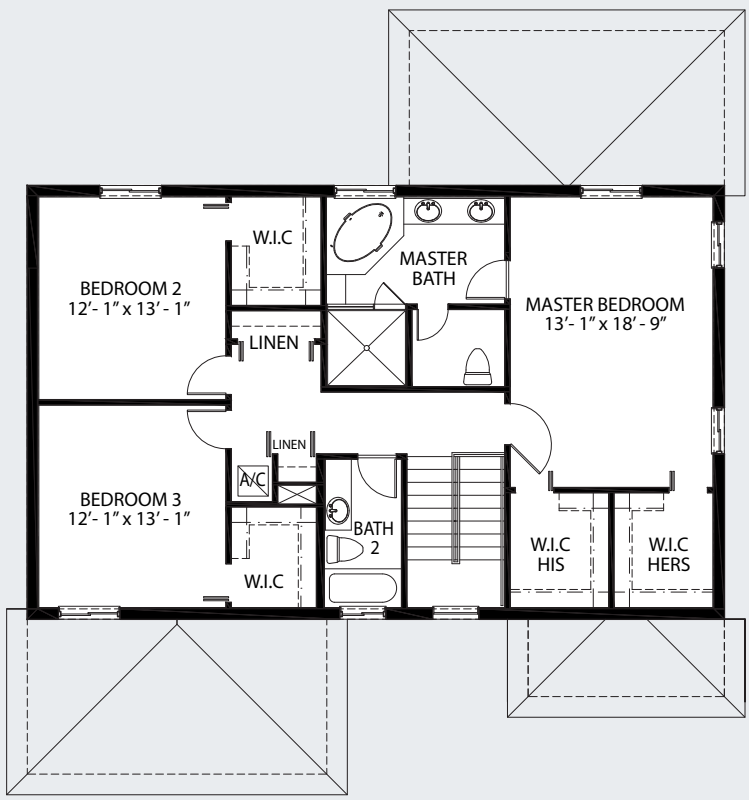
THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Common Nighthawk | FLOOR PLANS

FLOOR PLAN 1



FLOOR PLAN 2

TWO-STORY · 4 BEDROOMS · 3 BATHROOMS · LIVING ROOM · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

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THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Dark-Eyed Junco | ELEVATIONS

ELEVATION 1
ARTIST CONCEPT

ELEVATION 2
ARTIST CONCEPT

ONE-STORY · 4 BEDROOMS · 3 BATHROOMS · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

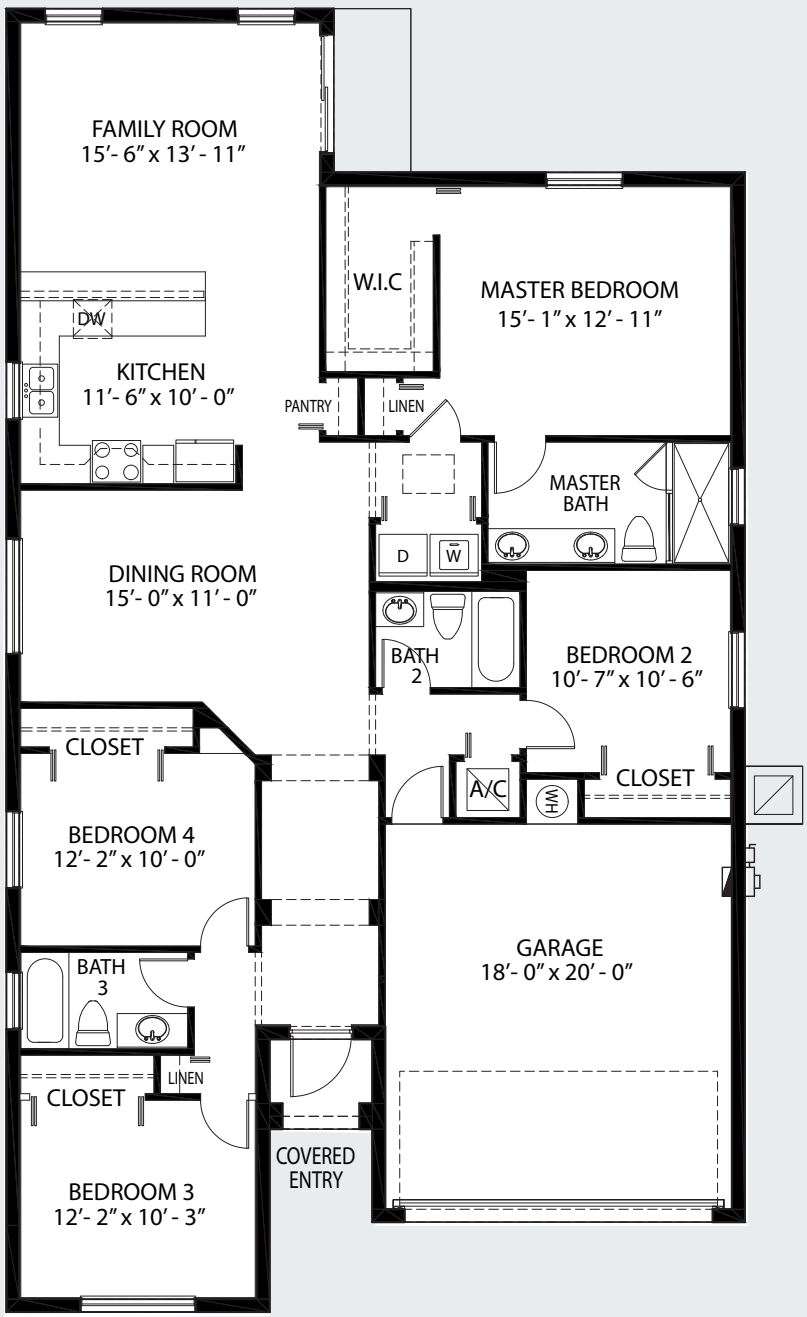
1848 Sq. Ft. Under Air • 25 Sq. Ft. Covered Entry • 398 Sq. Ft. Garage • 2,271 Total Sq. Ft.

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Dark-Eyed Junco | FLOOR PLANS



FLOOR PLAN

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THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Eastern King Bird | ELEVATIONS

ELEVATION 1
ARTIST CONCEPT

ELEVATION 2
ARTIST CONCEPT

TWO-STORY · 5 BEDROOMS · 4 BATHROOMS · LIVING ROOM · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

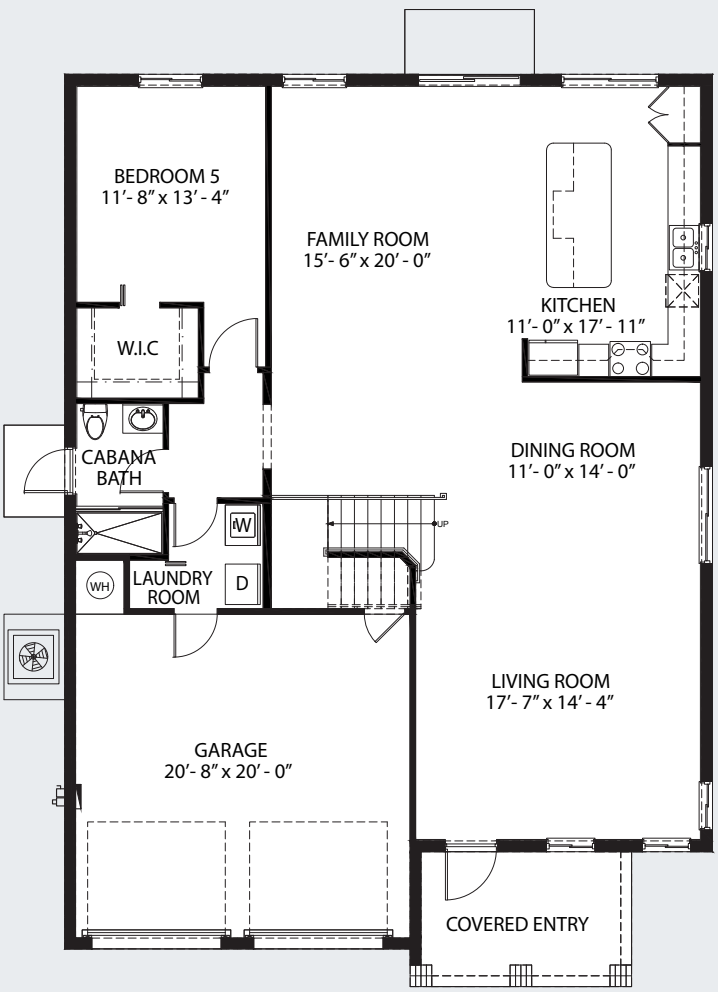
3,243 Sq. Ft. Under Air • 114 Sq. Ft. Covered Entry • 457 Sq. Ft. Garage • 3,814 Total Sq. Ft.

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

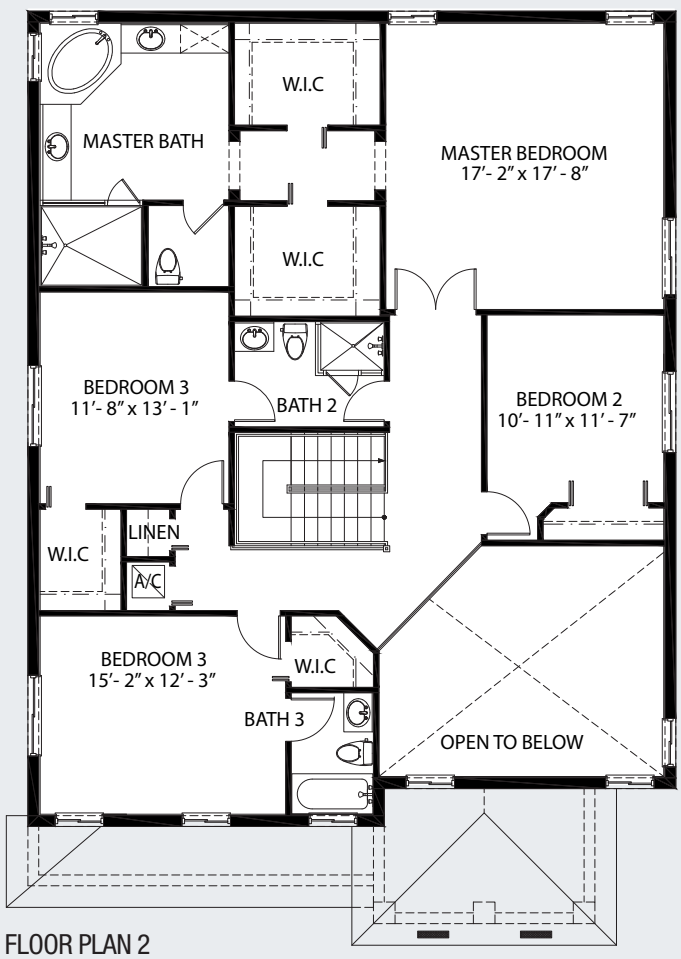
THE LAKES AT
COCOA
GROVES

Single Family Gold Series

Eastern King Bird | FLOOR PLANS



FLOOR PLAN 1



FLOOR PLAN 2

TWO-STORY · 5 BEDROOMS · 4 BATHROOMS · LIVING ROOM · FAMILY ROOM · DINING ROOM · COVERED ENTRY · 2- CAR GARAGE

3,243 Sq. Ft. Under Air • 114 Sq. Ft. Covered Entry • 457 Sq. Ft. Garage • 3,814 Total Sq. Ft.

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THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Arbor | ELEVATIONS

ELEVATION 1

ARTIST CONCEPT

ELEVATION 2

ARTIST CONCEPT

TWO-STORY · 4 BEDROOMS · 4 BATHROOMS · · LIVING ROOM · DINING ROOM · FAMILY ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

2,461 Sq. Ft. Under Air • 619 Sq. Ft. Covered Entry and Terrace • 428 Sq. Ft. Garage • 3,508 Total Sq. Ft.

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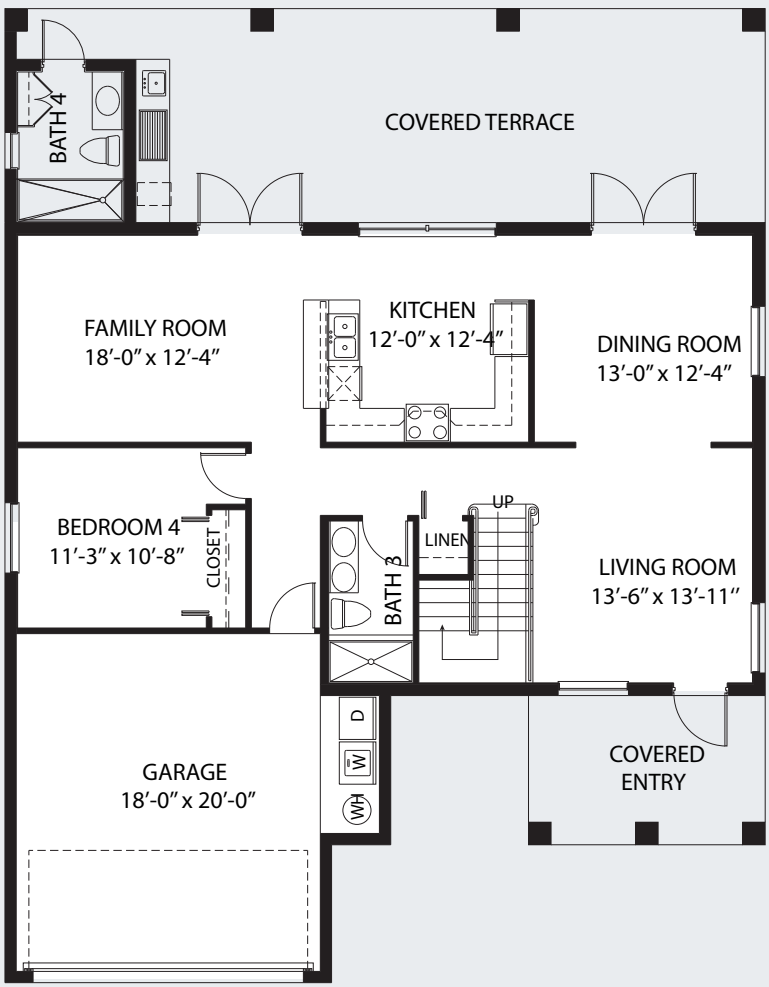
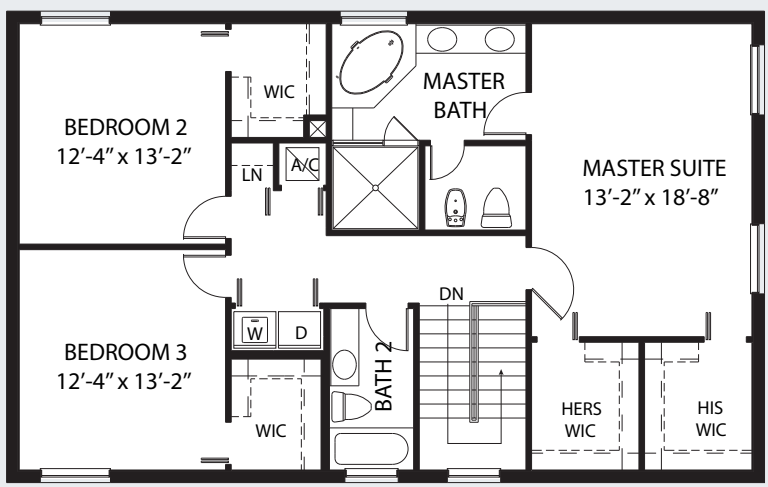
THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Arbor | FLOOR PLANS



GROUND FLOOR



SECOND FLOOR

TWO-STORY · 4 BEDROOMS · 4 BATHROOMS · · LIVING ROOM · DINING ROOM · FAMILY ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

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THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Birch | ELEVATIONS

ELEVATION 1
ARTIST CONCEPT

ELEVATION 2
ARTIST CONCEPT

TWO-STORY · 4 BEDROOMS · 4.5 BATHROOMS · GREAT ROOM · LIVING ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

2,565 Sq. Ft. Under Air • 545 Sq. Ft. Covered Entry and Terrace • 427 Sq. Ft. Garage • 3,537 Total Sq. Ft.

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THE LAKES AT
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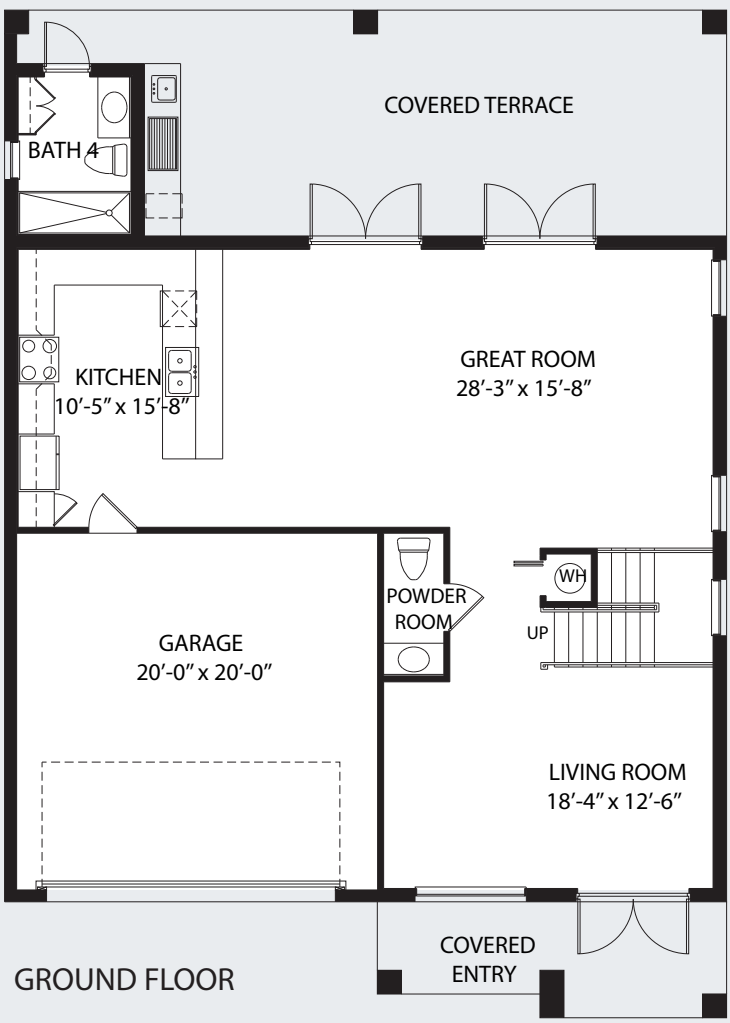
GROVES

Estates Homes Platinum Series

Birch | FLOOR PLANS



GROUND FLOOR

SECOND FLOOR

TWO-STORY · 4 BEDROOMS · 4.5 BATHROOMS · GREAT ROOM · LIVING ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

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THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Cypress | ELEVATIONS

ELEVATION 1
ARTIST CONCEPT

ELEVATION 2
ARTIST CONCEPT

TWO-STORY · 5 BEDROOMS · 5 BATHROOMS · LIVING ROOM · DINING ROOM · FAMILY ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

3,578 Sq. Ft. Under Air • 487 Sq. Ft. Covered Entry and Terrace • 444 Sq. Ft. Garage • 4,509 Total Sq. Ft.

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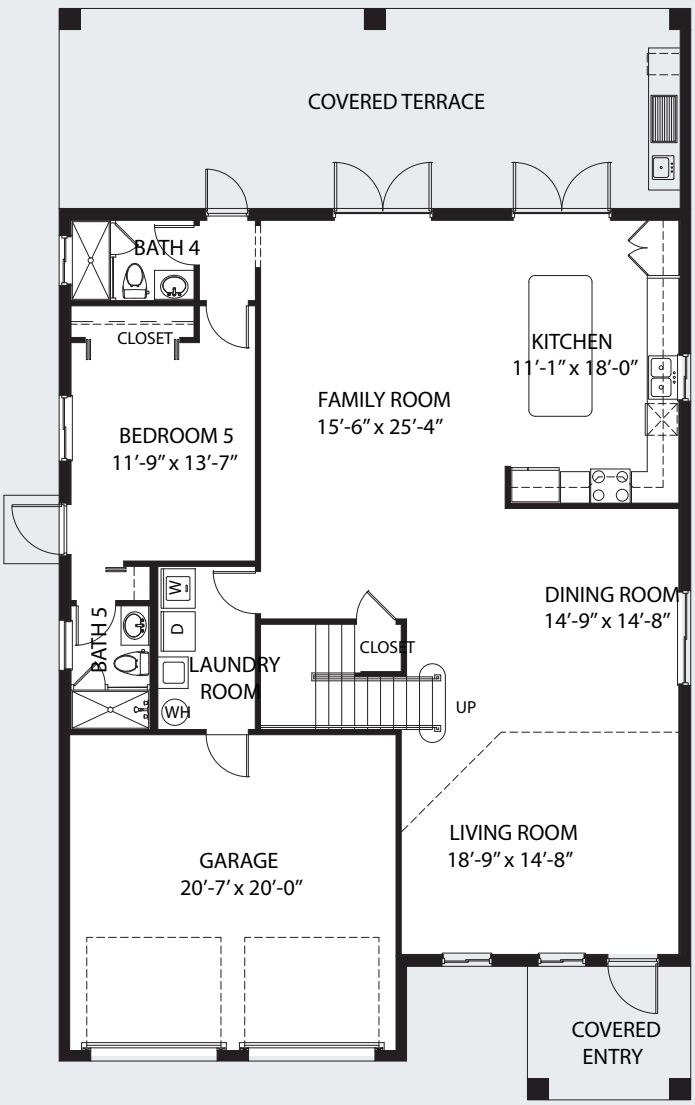
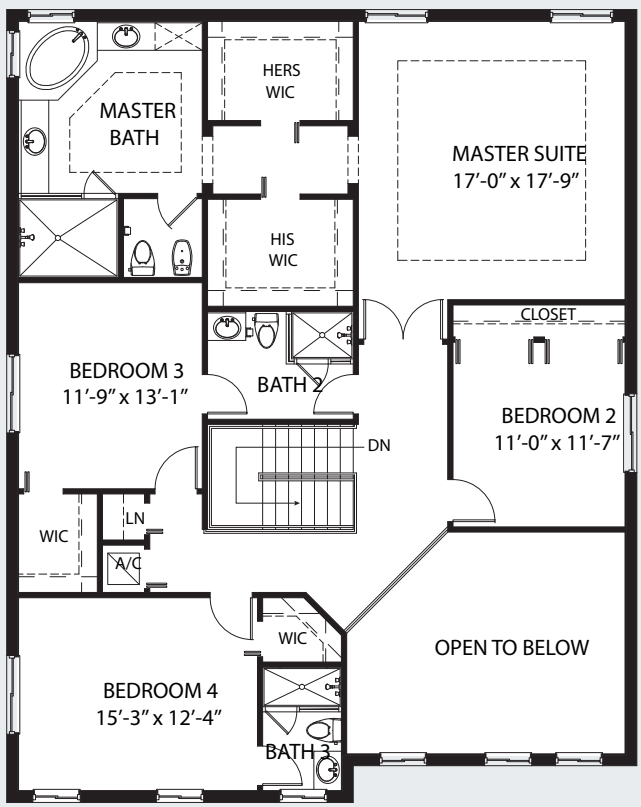
THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Cypress | FLOOR PLANS



GROUND FLOOR



SECOND FLOOR

TWO-STORY · 5 BEDROOMS · 5 BATHROOMS · LIVING ROOM · DINING ROOM · FAMILY ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

3,578 Sq. Ft. Under Air • 487 Sq. Ft. Covered Entry and Terrace • 444 Sq. Ft. Garage • 4,509 Total Sq. Ft.

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Deerwood | ELEVATIONS

ELEVATION 1
ARTIST CONCEPT

TWO-STORY · 5 BEDROOMS · 5 BATHROOMS · LIVING ROOM · DINING ROOM · FAMILY ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

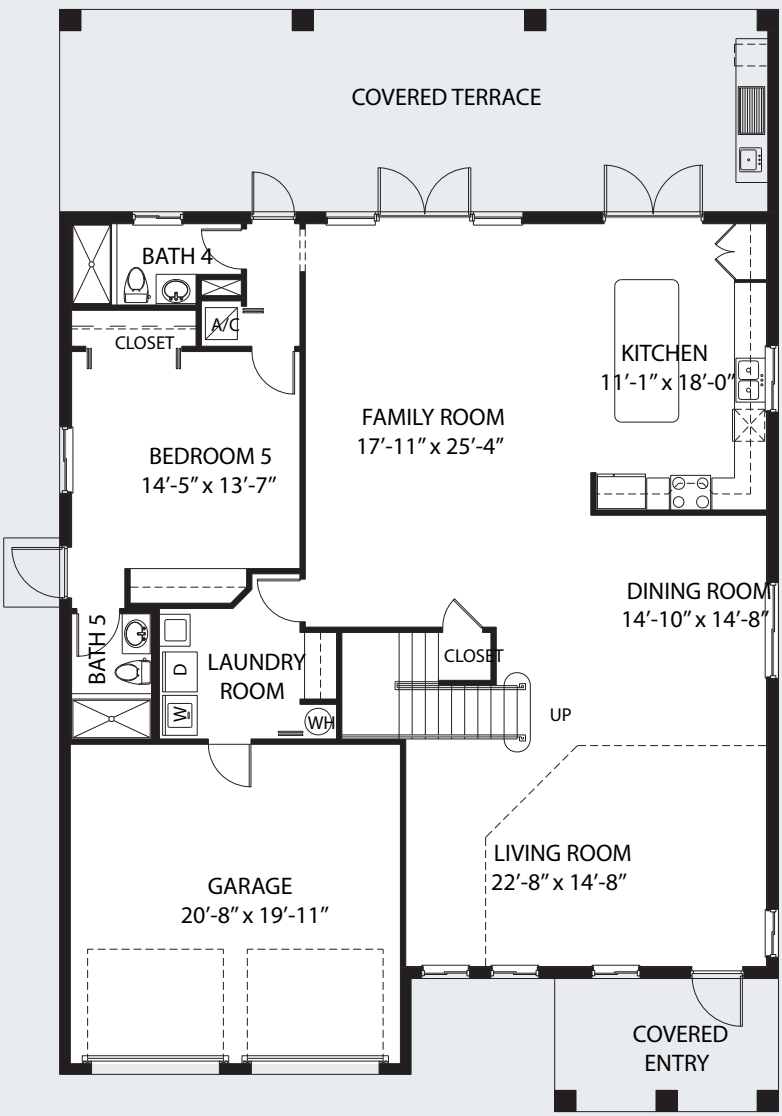
3,740 Sq. Ft. Under Air • 687 Sq. Ft. Covered Entry and Terrace • 445 Sq. Ft. Garage • 4,872 Total Sq. Ft.

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

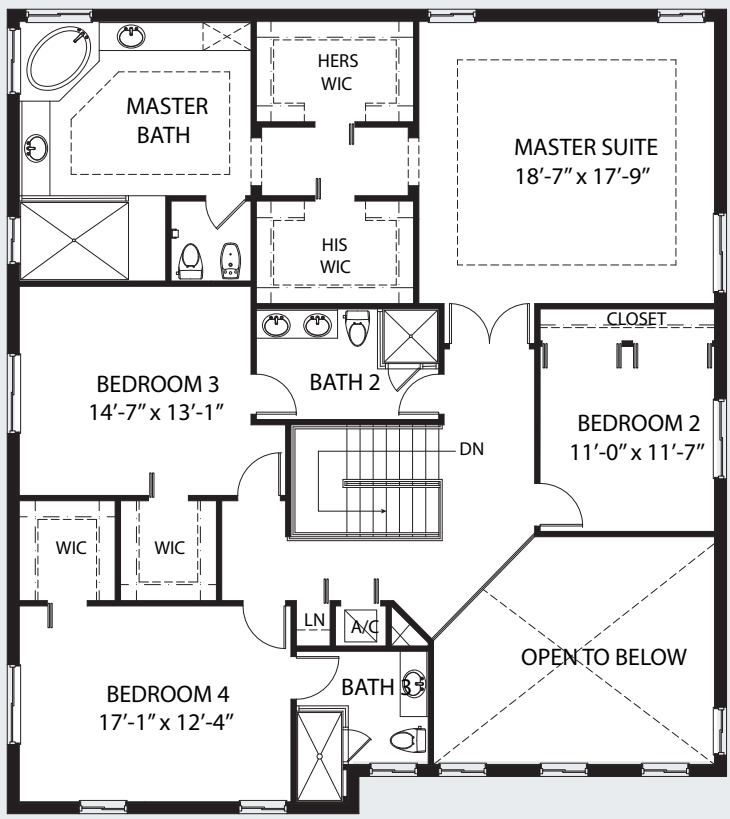
THE LAKES AT
COCOA
GROVES

Estates Homes Platinum Series

Deerwood | FLOOR PLANS



GROUND FLOOR



SECOND FLOOR

TWO-STORY · 5 BEDROOMS · 5 BATHROOMS · LIVING ROOM · DINING ROOM · FAMILY ROOM · COVERED ENTRY · COVERED TERRACE · 2-CAR GARAGE

3,740 Sq. Ft. Under Air • 687 Sq. Ft. Covered Entry and Terrace • 445 Sq. Ft. Garage • 4,872 Total Sq. Ft.

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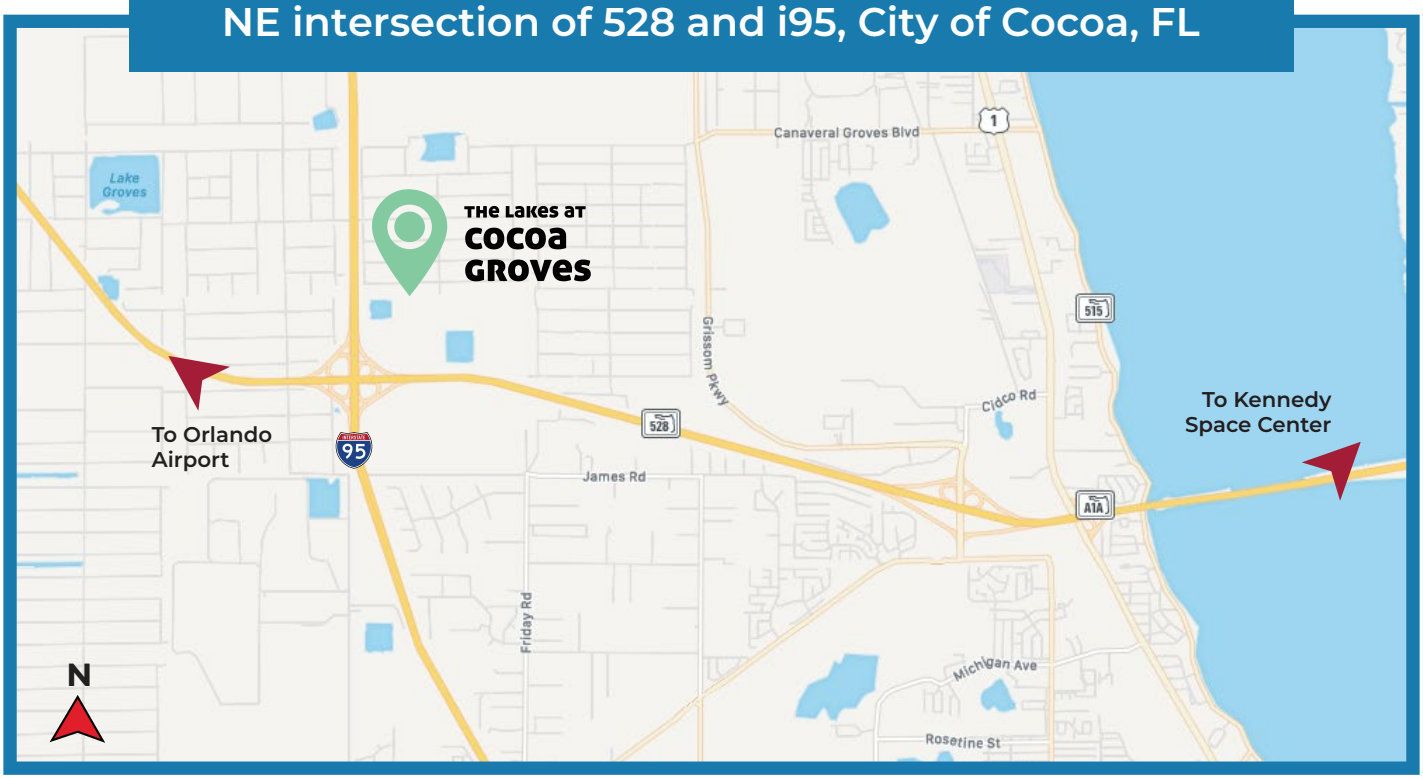
SITE PLANS

PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

THE LAKES AT

COCOA GROVES

NE intersection of 528 and i95, City of Cocoa, FL



MountainCove HOMES

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PLANS, ARCHITECTURAL DRAWINGS, PICTURES, PHOTOGRAPHS, FEATURES, COLORS, AND ELEVATIONS ARE THE ARTIST'S CONCEPT AND MAY CONTAIN OPTIONS WHICH ARE NOT STANDARD. BUILDER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO THE PLANS AND SPECIFICATIONS, INCLUDING BUILDING ORIENTATION ON LOT AND REVERSAL. PROVIDED DIMENSIONS AND SQUARE FOOTAGE ARE APPROXIMATE AND SHOULD NOT BE USED AS REPRESENTATION OF THE HOME'S PRECISE OR ACTUAL SIZE. ANY STATEMENT, VERBAL OR WRITTEN, REGARDING "A/C SQUARE FEET", OR "TOTAL AREA SQUARE FEET", OR ANY REPRESENTATION OF THE SQUARE FOOTAGE SIZE OF ANY HOME IS A SHORTHAND DESCRIPTION OF THE MANNER IN WHICH THE SQUARE FOOTAGE WAS ESTIMATED AND SHOULD NOT BE CONSTRUED TO INDICATE SURENESS.

WARRANTY DEED (FROM CORPORATION) PAPCO'S FORM A-3 PAPCO PUBLISHING CORPORATION MIAMI 38, FLORIDA

Warranty Deed

This Indenture, *Made, this* 17th *day of* JANUARY *A. D. 19* 58.

BETWEEN EPIC, INC., *a corporation existing under the laws of the State of* Florida *, having its principal place of business in the County of* Broward *and State of* Florida *, and lawfully authorized to transact business in the State of Florida, party of the first part, and* HARRY ZITREEN as Trustee, whose mailing address is: c/o Federal Title & Insurance Corp., P. O. Box 1135 North Miami, Florida

of the County of Dade *and State of* Florida *party of the second part WITNESSETH:*

That the said party of the first part, for and in consideration of the sum of

----------TEN----------

Dollars, to it in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged has granted, bargained and sold to the said party of the second part. his *heirs and assigns forever, the following described land situate, lying and being in the County of* BREVARD *and State of Florida, to-wit:*

Section 10, Township 24 South, Range 35 East, containing 640 acres, Brevard County, Florida, subject to an easement hereby reserved by seller 15' in width along east line of said section, to be used for ingress and egress and utility purposes only.

N. B. This conveyance is made subject to the following:
The lien of that certain mortgage being the mortgage dated May 25, 1951, recorded in Mortgage Book 122, page 279 of the Public Records of Brevard County, Florida; and
The lien of that certain mortgage being the mortgage dated Aug. 13, 1956, recorded in Mortgage Book 202, page 21 of the Public Records of Brevard County, Florida; and
Easements of record, road rights-of-way and 1958 real property taxes.

And the said party of the first part does hereby fully warrant the title to said land, and will defend the same against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, the said party of the first part has caused these presents to be signed in its name by its proper officers, and its corporate seal to be affixed, attested by its secretary, the day and year above written.

(Corporate Seal)

ATTEST: [signature] Secretary

EPIC, INC.

By [signature] President.

Signed, sealed and delivered in presence of us:

[signature]

[signature]

RECORD AND RETURN TO.
S. M. LEDERMAN, ATTY.
P. O. BOX 160, HOLLYWOOD, FLA.

154811

OFFICIAL RECORDS 78 PAGE 640

FILED

State of Florida,

County of Broward

I Hereby Certify, that on this 17th day of January A. D. 1958, before me personally appeared Ira A. Hotchkiss and Jay I. Kislak President and Secretary respectively of EPIC, INC., a corporation under the laws of the State of Florida, to me known to be the persons who signed the foregoing instrument as such officers and severally acknowledged the execution thereof to be their free act and deed as such officers for the uses and purposes therein mentioned and that they affixed thereto the official seal of said corporation, and that the said instrument is the act and deed of said corporation.

Witness my signature and official seal at Hollywood in the County of Broward and State of Florida the day and year last aforesaid.

Jaime Canby (Seal)

My commission expires:
Notary Public, State of Florida at large
My commission expires June 15, 1959.
Bonded by American Surety Co. of N. Y.

SECOS

154811 RECORDING $ 3.00
TOTAL $ 3.00
PARCO'S FORM A-3

D. M. Buchanan

Stamps: $10000, $10000, $1000, $1000, $500, $300, $100, $50, $10, 50 cents, $100, 010982, $30, 017067

I have hereunto set my hand and affixed the seal of the Circuit Court of said Judicial Circuit in and for Broward County, Florida, this 17th day of January A. D. 1958.

Clerk Circuit Court
Broward County, Florida

Form 521 2/59 Page 107

ER 7733

RIGHT-OF-WAY AGREEMENT

OFFICIAL RECS 549 PAGE 351

20

KNOW ALL MEN BY THESE PRESENTS that Raymond W. Tompkins, a single man

of the County of ORANGE and State of FLORIDA in consideration of the sum of One Dollar ($1.00) and other valuable considerations, receipt of which is hereby acknowledged, do hereby grant to the Florida Power & Light Company, a corporation organized and existing under the laws of the State of Florida, whose address is P. O. Box 3100, (25 S. E. 2nd Avenue) Miami, Florida, and to its successors and assigns, an easement forever for a right-of-way [redacted] to be used for the construction, operation and maintenance of one or more electric transmission and distribution lines, including wires, poles, "H" frame structures, towers, anchors, guys, telephone and telegraph lines and appurtenant equipment, in, over, upon and across the following described lands of the Grantor, situated in the County of Brevard and State of Florida and more particularly described as follows:

A Right of Way 290 Feet in width being the North 290 Feet of the SW¼ of Section 12, Township 24 South, Range 35 East, Brevard County, Florida; also,

A Right of Way 320 feet in width being the West 320 feet of the N½ of the NE¼ of Section 12, Township 24 South, Range 35 East, Brevard County, Florida,

ANDERSON, RUSH, DEAN, LOWNDES & van den BERG
Attorneys at Law
P. O. Box 2268
ORLANDO, FLORIDA

BREVARD COUNTY
STATE of FLORIDA
DOCUMENTARY STAMP TAX
DEC 1962
COMPTROLLER
P.D. 13114
020

together with the right and privilege to reconstruct, inspect, alter, improve, remove or relocate such transmission and distribution lines on the lands above described, with all rights and privileges necessary or convenient for the full enjoyment or the use thereof for the above-mentioned purposes, including the right to cut and keep clear all trees and undergrowth and other obstructions within said right-of-way and all trees of such height on lands of Grantor adjoining said right-of way that may interfere with the proper construction, operation and maintenance of said electric transmission and distribution lines, [redacted] for the purpose of exercising the easement herein granted.

M.H.W.

The Grantor, however, reserves the right and privilege to use the above-described right-of-way for agricultural and all other purposes except as herein granted or as might interfere with Grantee's use, occupation or enjoyment thereof; and provided further by way of illustration and not of limitation to the grant herein made, no portion of the right-of-way shall be excavated or altered without written permission of the Grantee and no building, structure or obstruction shall be located or constructed on said right-of-way by the Grantor, his successors, heirs or assigns.

IN WITNESS WHEREOF, the Grantor has executed this agreement this 10th day of December, 1962.

Signed, sealed and delivered in the presence of:

James C. Rush

Florence Edwards

Raymond W. Tompkins (SEAL)

Raymond W. Tompkins (SEAL)

(SEAL)

(SEAL)

STATE OF FLORIDA AND COUNTY OF ORANGE

OFFICIAL RECORDS 549 PAGE 355

I, a Notary Public in and for the County and State aforesaid, do hereby certify that RAYMOND W. TOMPKINS, a single man known to me, personally appeared before me and acknowledged the execution of the foregoing instrument for the uses and purposes therein expressed.

WITNESS my hand and official seal in said County and State this 10th day of December 19 62

Notary Public, State of Florida at Large.

My Commission expires: _____ 19 _____

Notary Public, State of Florida at Large
My Commission Expires Oct. 23, 1964
Bonded by American Surety Co. of N. Y.

STATE OF FLORIDA AND COUNTY OF _____

I HEREBY CERTIFY that before me, personally appeared _____, respectively, _____ President and _____ Secretary of _____ a Corporation organized under the Laws of the State of _____, to me known to be the persons described in and who executed the foregoing instrument, and severally acknowledged the execution thereof to be their free act and deed as such officers, for the uses and purposes therein mentioned; and that they affixed thereto the official seal of said corporation and that said instrument is the act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal at _____ in the County of _____ and State of Florida, this _____ day of _____ 19 _____

Notary Public for the State of Florida

My Commission expires: _____ 19 _____

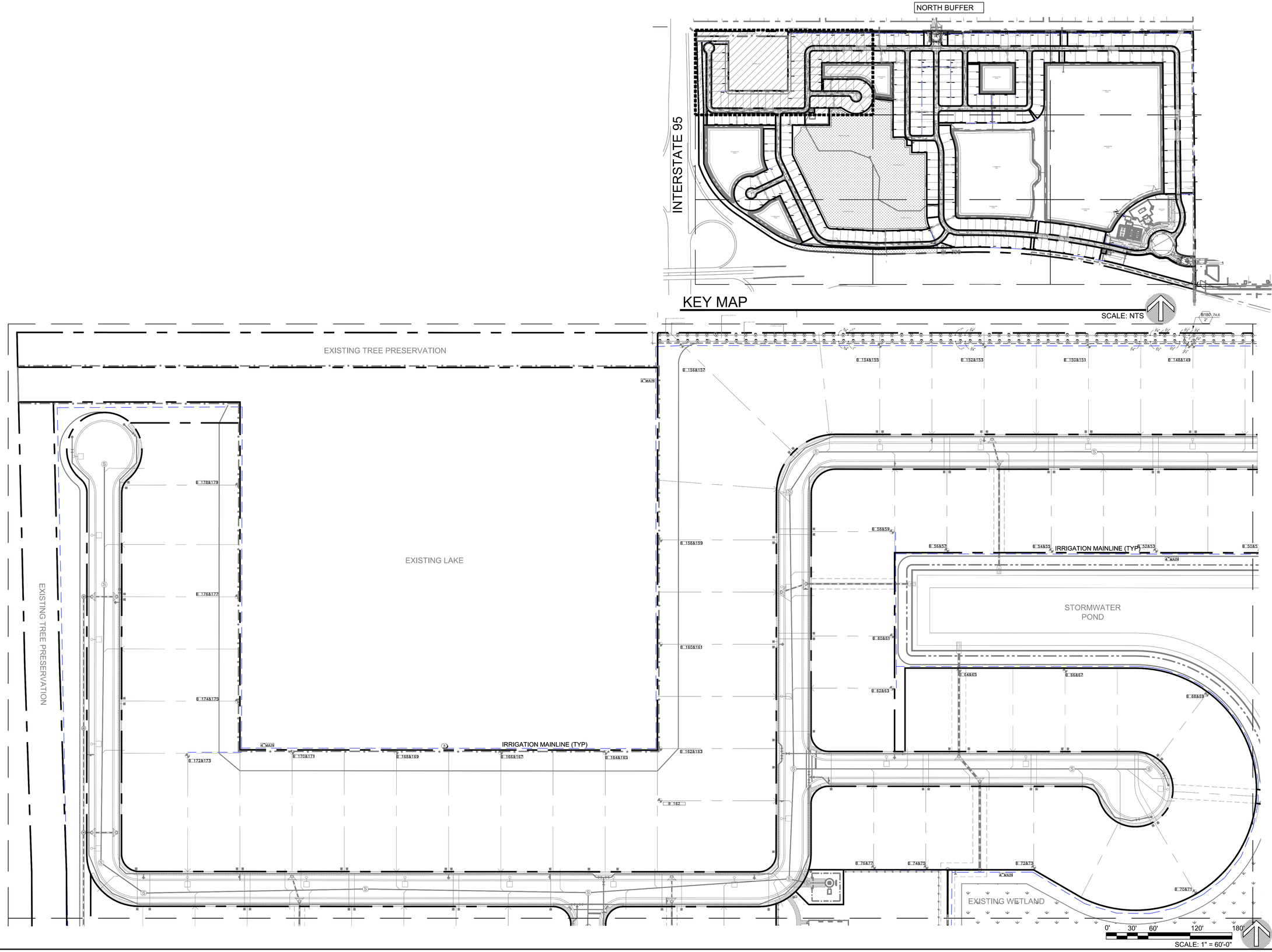
ANDERSON, RUSH, DEAN, LOWNDES & van den BERG
Attorneys at Law
P. O. Box 2238
ORLANDO, FLORIDA

FILED AND RECORDED
BREVARD COUNTY, FLA.
VERIFIED
329852
1962 DEC 19 PM 2 57

Clerk of Circuit Court
By _____ Deputy Clerk

RECORDING
FLA. DOC. STAMPS
INT. TAX STAMPS
TOTAL $

329852



Susan Hall, ASLA
LANDSCAPE ARCHITECTURE
LC26000357
4425 CROOKED MILE RD.
MERRITT ISLAND, FL 32952
PHONE: (321) 449-0790
FAX: (321) 449-1225
www.hall-la.com

LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE
09-22-21

DESIGN
S.H.

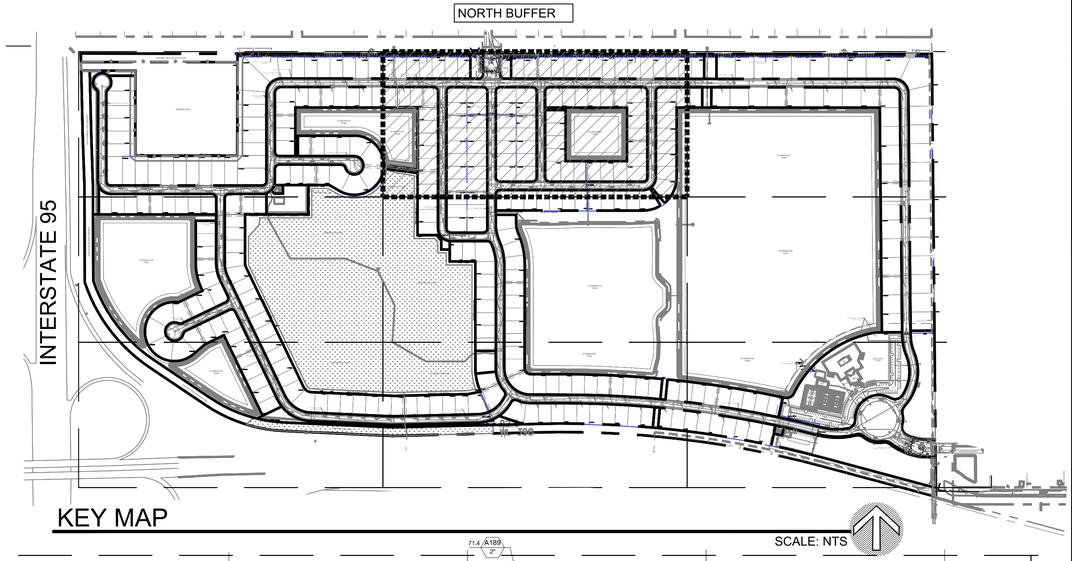
DRAWN
S.K.

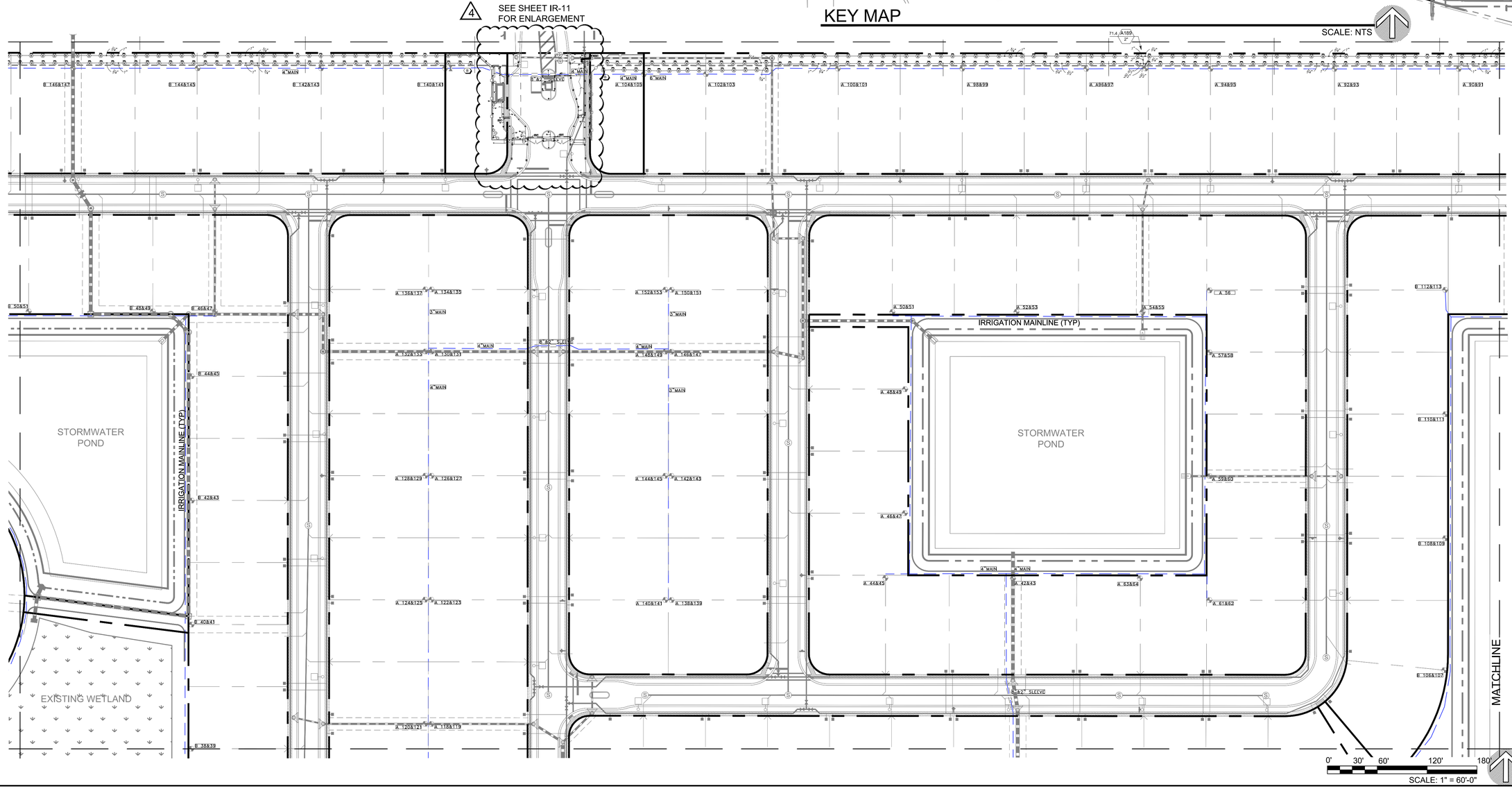
SCALE
1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
SUSAN E. HALL LANDSCAPE ARCHITECT LC26000357 STATE OF FLORIDA
06-30-23

SHEET IR-1 OF 14





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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10

Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE
09-22-21

DESIGN
S.H.

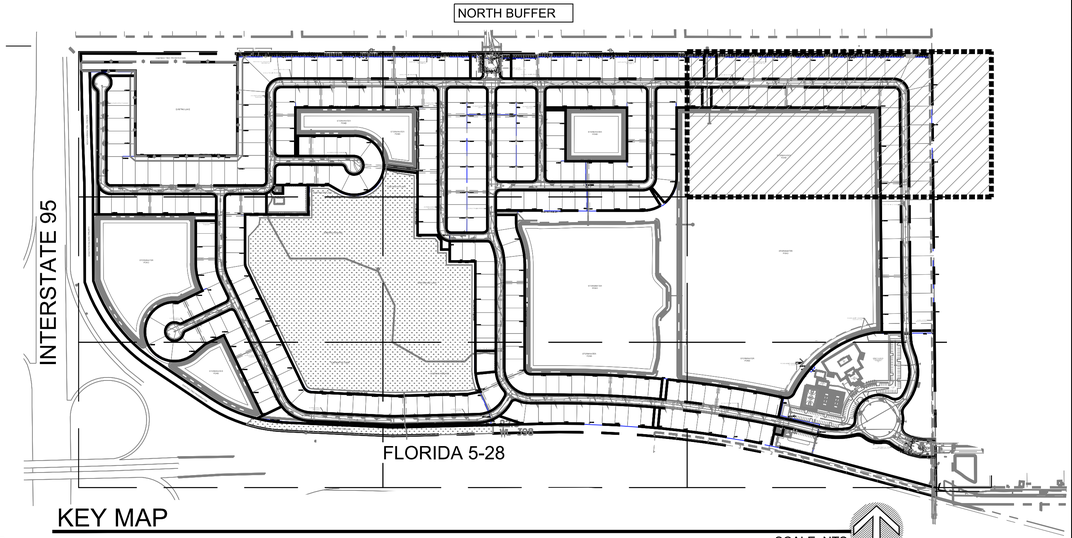
DRAWN
S.K.

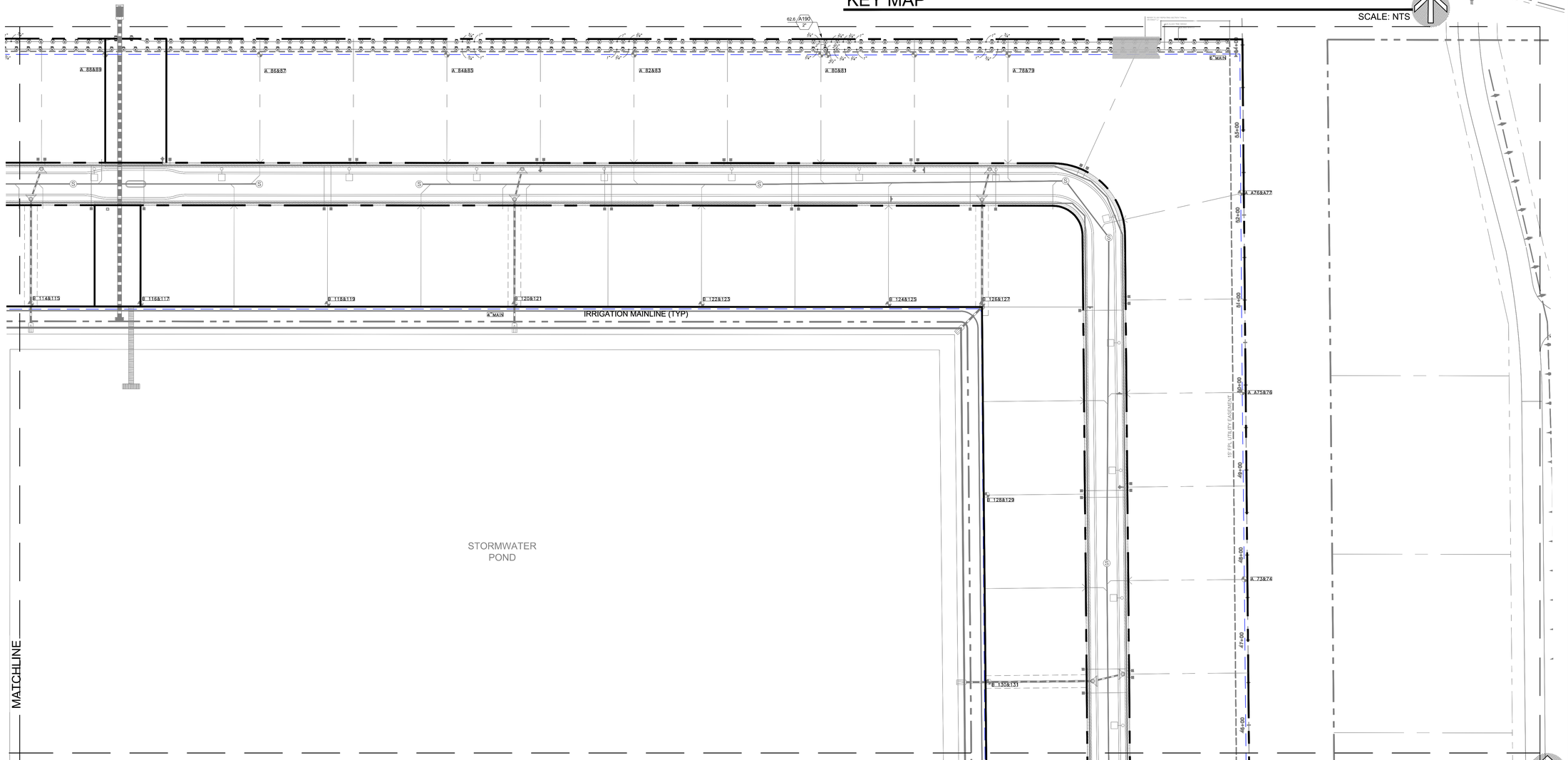
SCALE
1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22
3 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL
REGISTERED LANDSCAPE ARCHITECT SUSAN HALL LC26000357 STATE OF FLORIDA
06-30-23

SHEET IR-2 OF 14





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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE 09-22-21

DESIGN S.H.

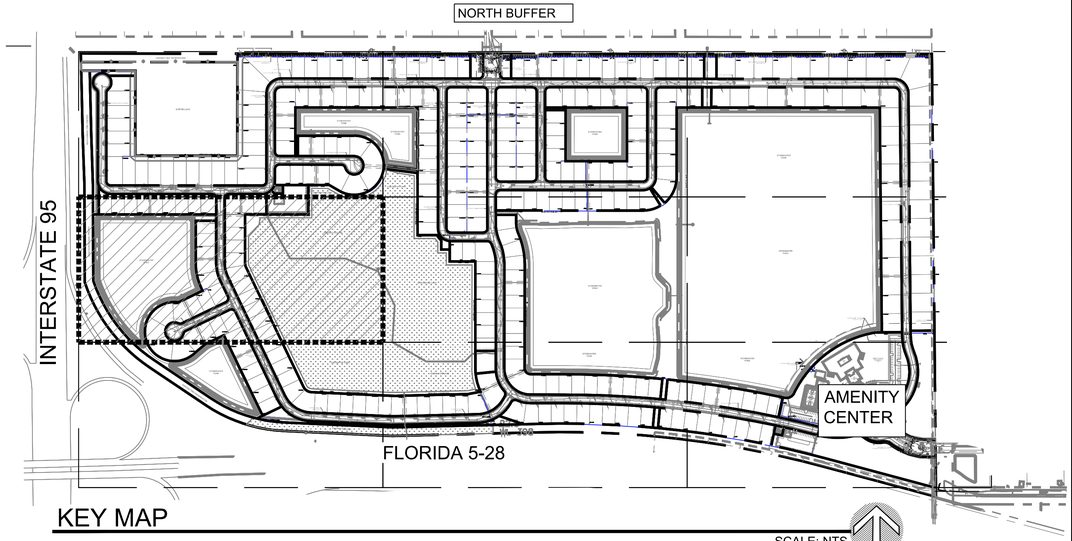
DRAWN S.K.

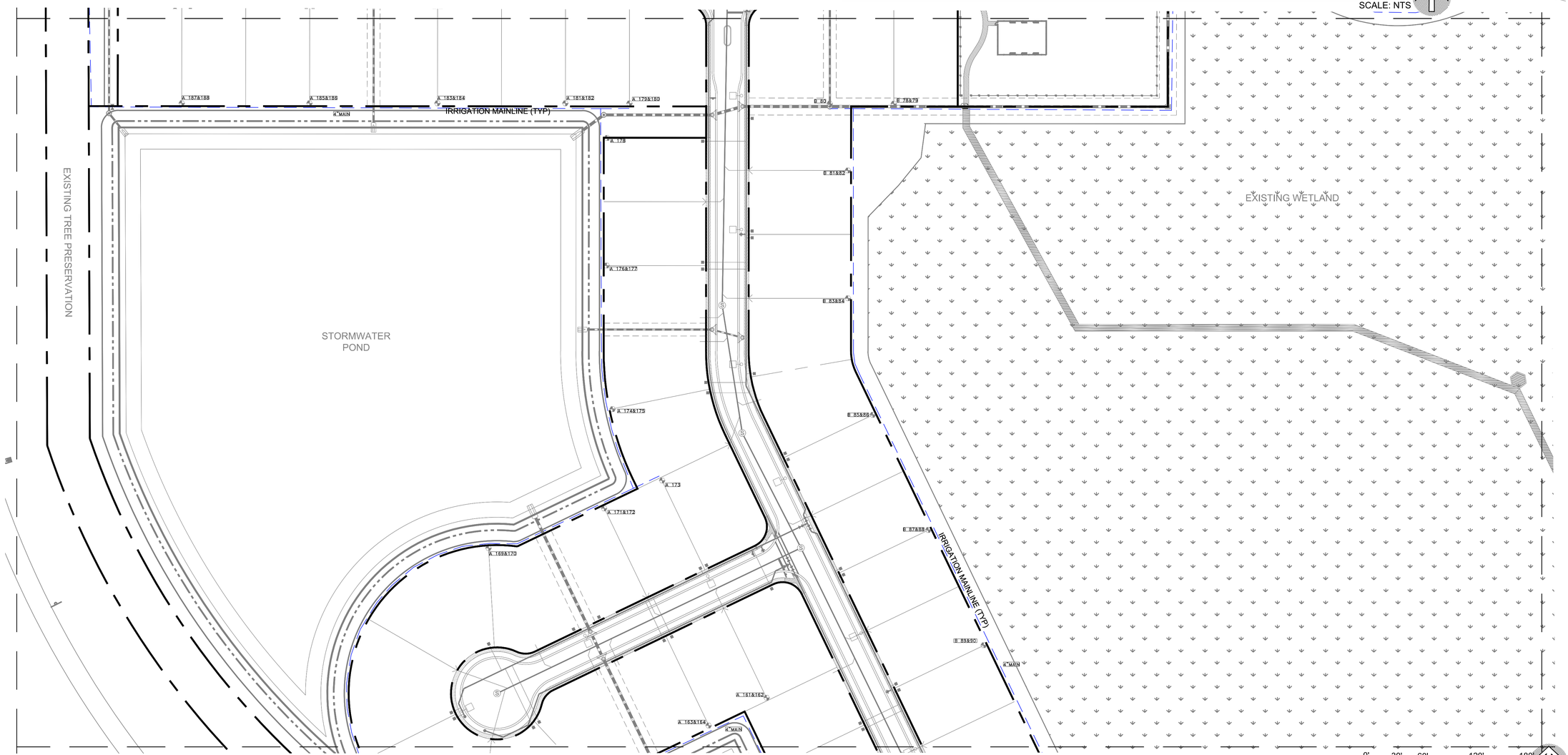
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
SUSAN TERESA HALL TOOLE
#85
REGISTERED LANDSCAPE ARCHITECT
STATE OF FLORIDA
06-30-23

SHEET IR-3 OF 14





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PHONE: (321) 449-0790
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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE 09-22-21

DESIGN S.H.

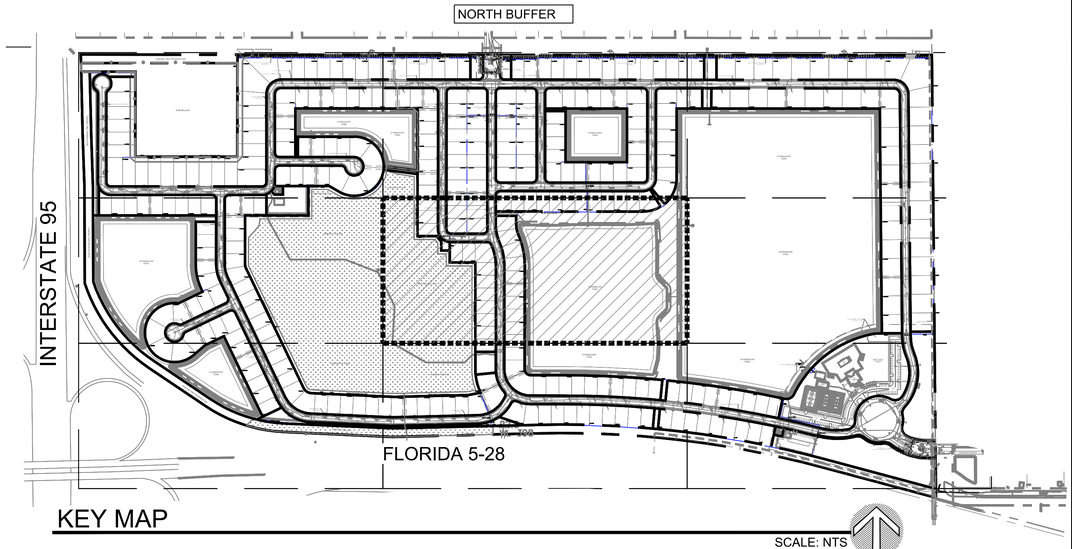
DRAWN S.K.

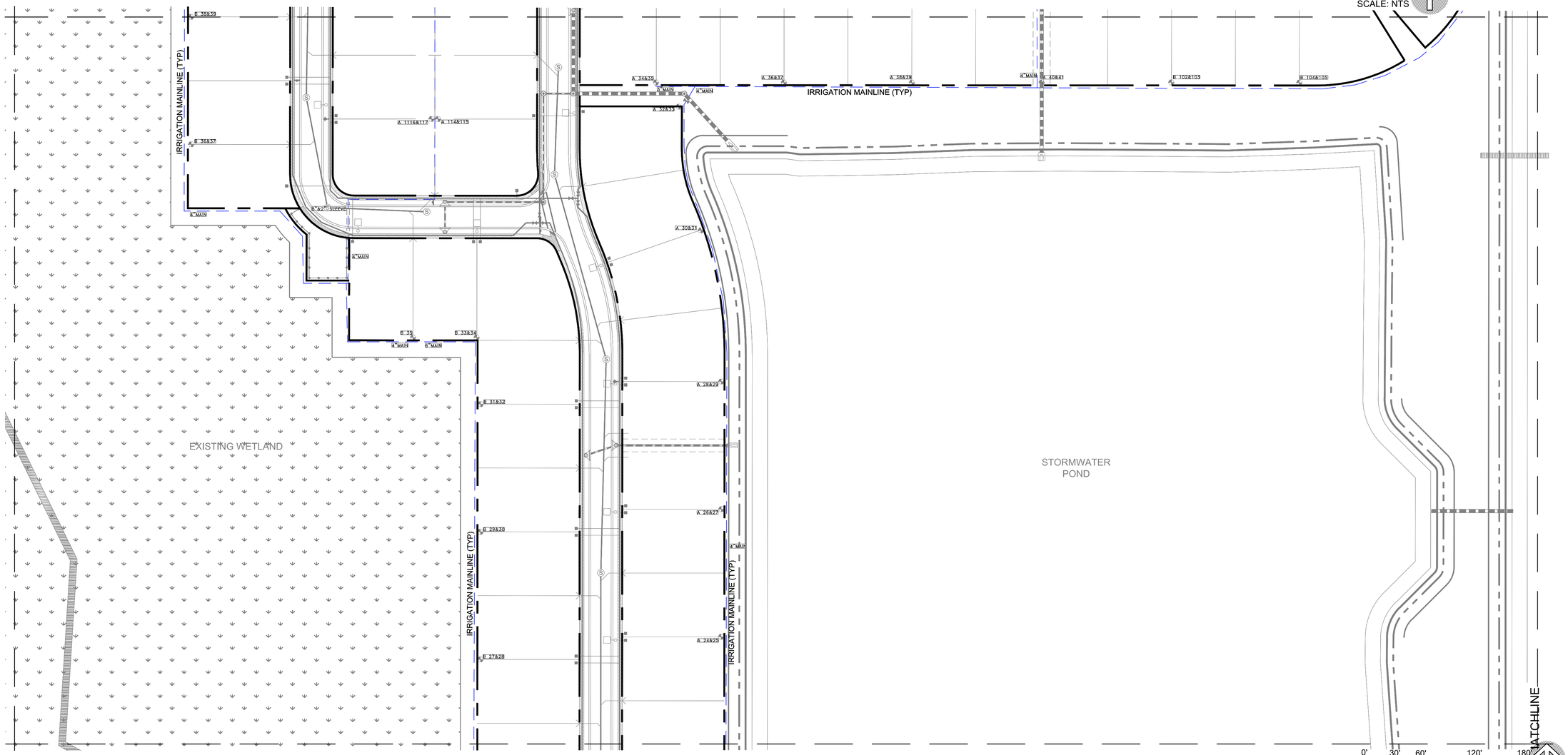
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #6670 FLORIDA
06-30-23

IR-4 SHEET 14 OF





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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE 09-22-21

DESIGN S.H.

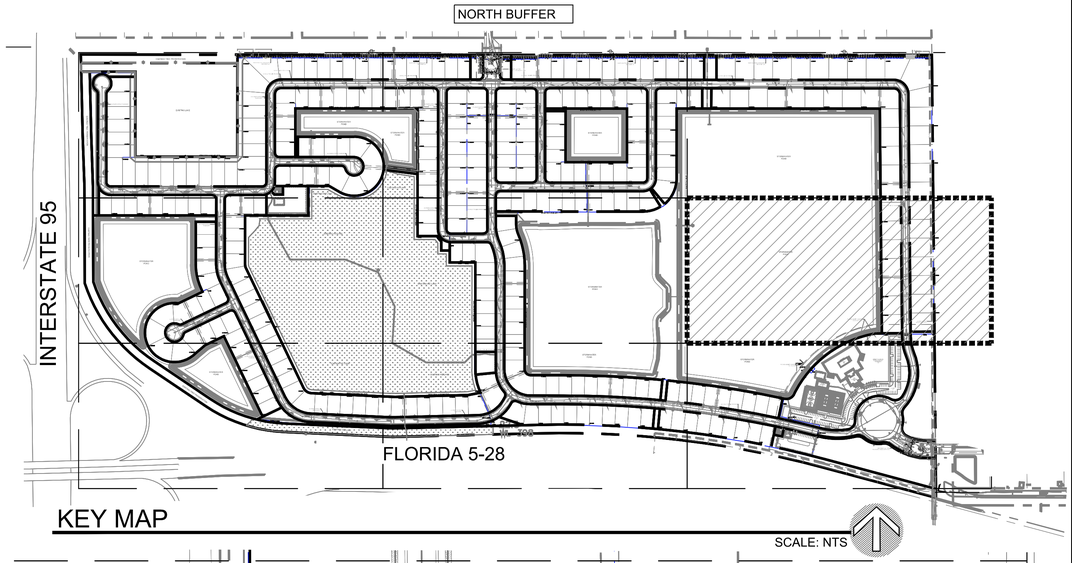
DRAWN S.K.

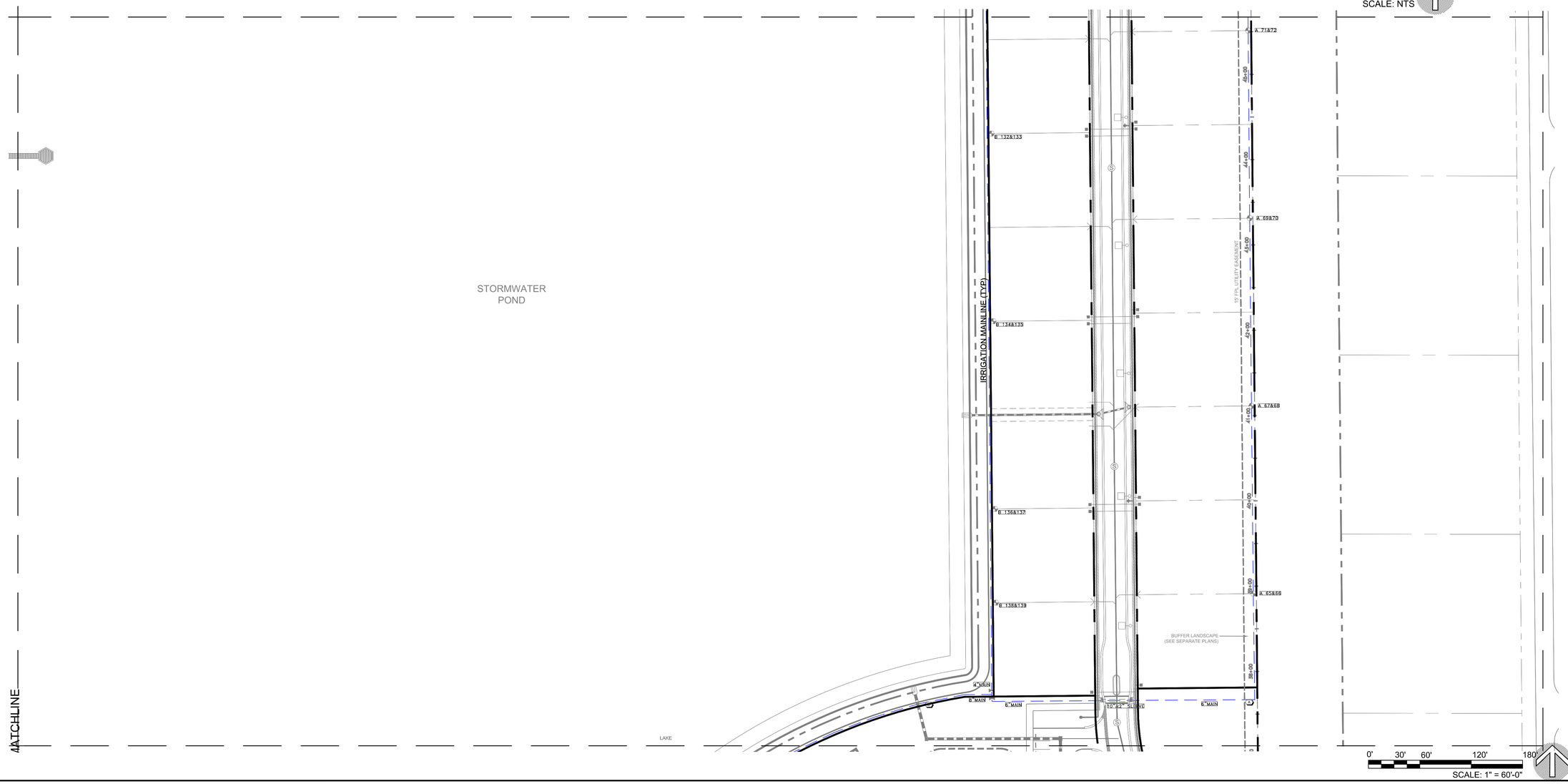
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
SUSAN HALL REGISTERED LANDSCAPE ARCHITECT FLORIDA
06-30-23

SHEET IR-5 OF 14





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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE 09-22-21

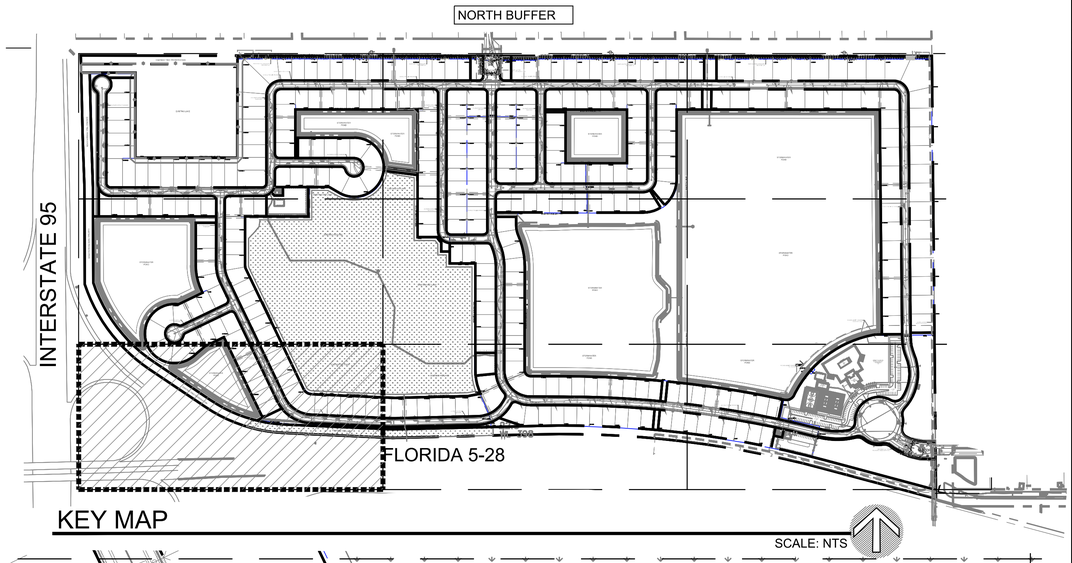
DESIGN S.H.

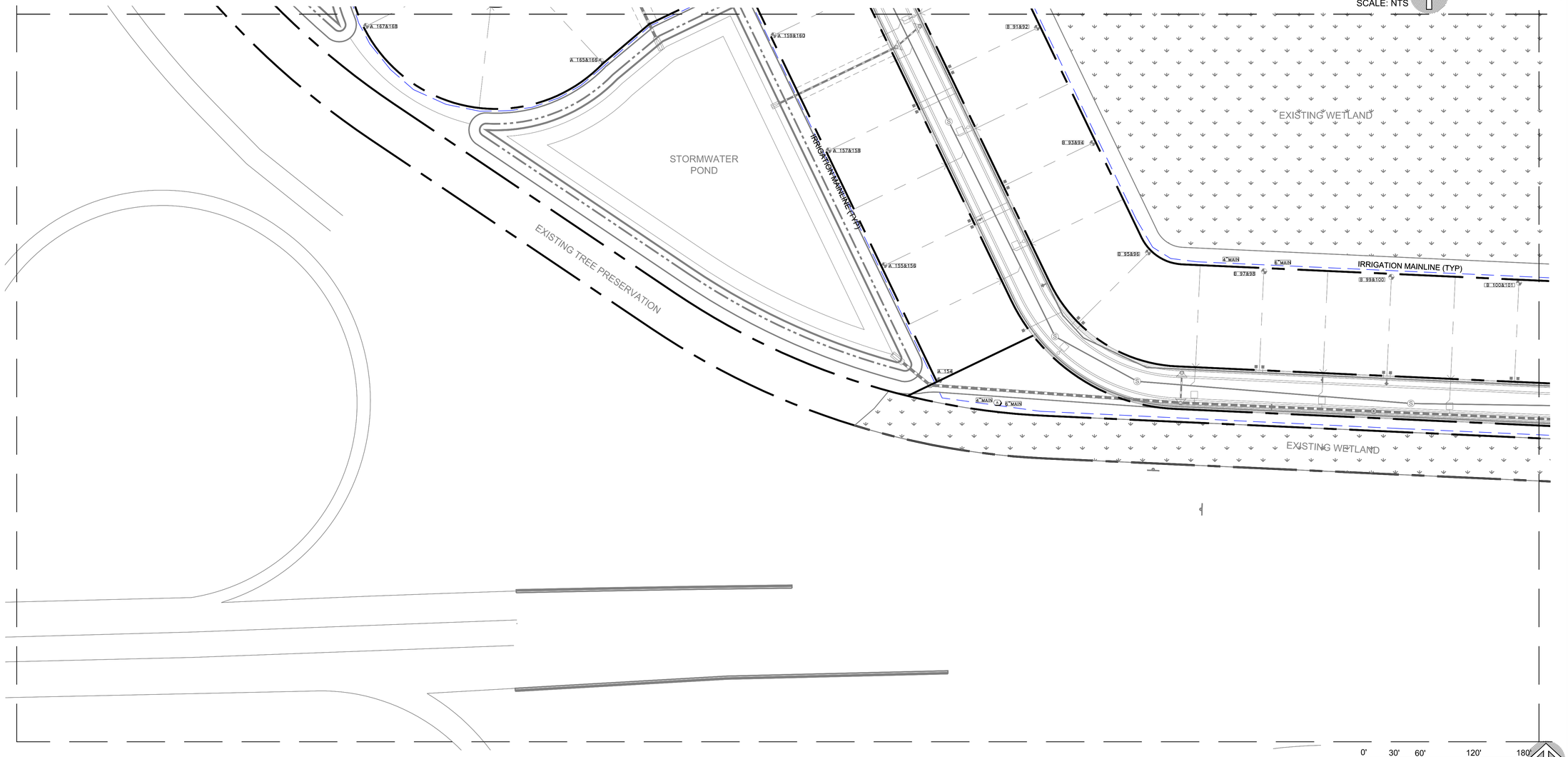
DRAWN S.K.

SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
REGISTERED LANDSCAPE ARCHITECT SUSAN HALL LC26000357 FLORIDA
06-30-23





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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE 09-22-21

DESIGN S.H.

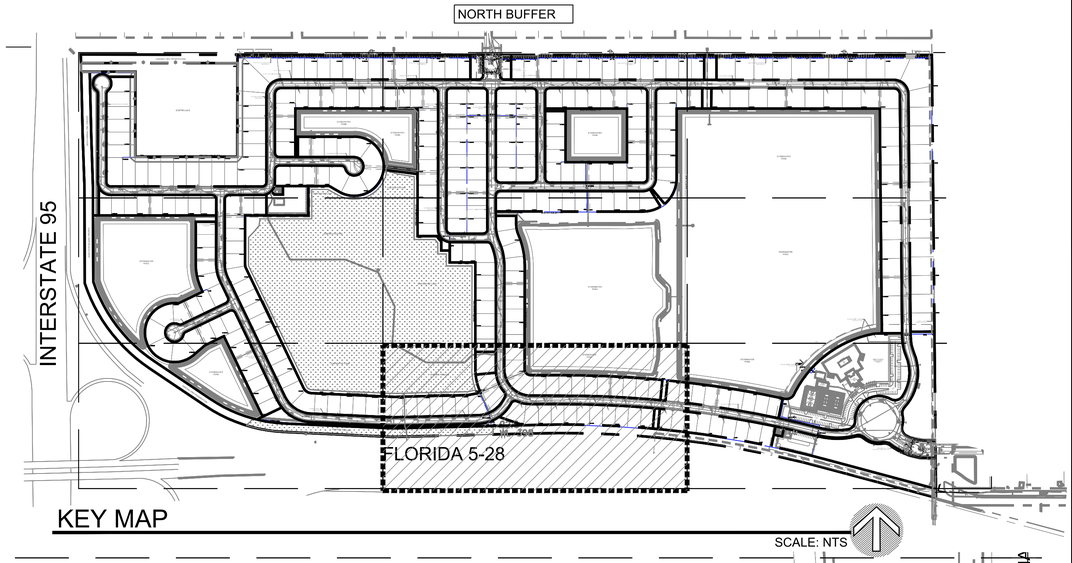
DRAWN S.K.

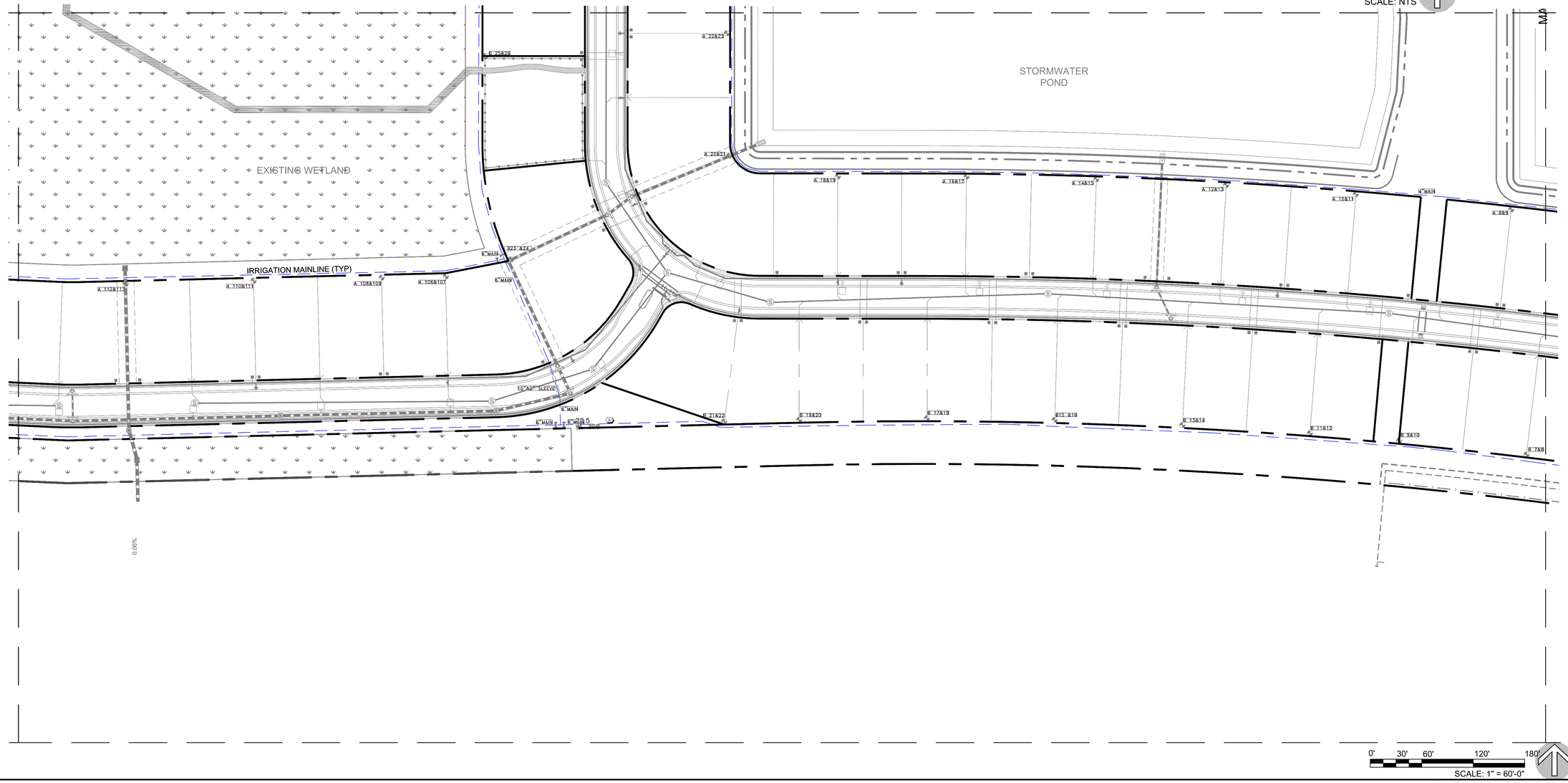
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
SUSAN TERESA HALL TOOLE #885 REGISTERED LANDSCAPE ARCHITECT STATE OF FLORIDA
06-30-23

IR-7 SHEET | 14 OF





Susan Hall, ASLA
LANDSCAPE ARCHITECTURE
LC26000357
4425 CROOKED MILE RD.
MERRITT ISLAND, FL 32952
PHONE: (321) 449-0790
FAX: (321) 449-1225
www.hall-la.com

LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE 09-22-21

DESIGN S.H.

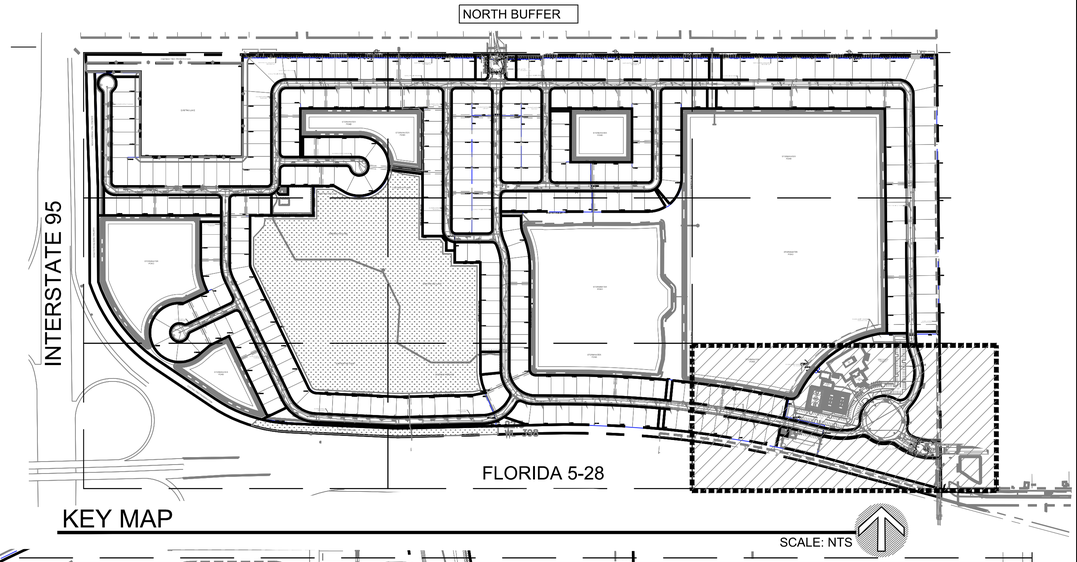
DRAWN S.K.

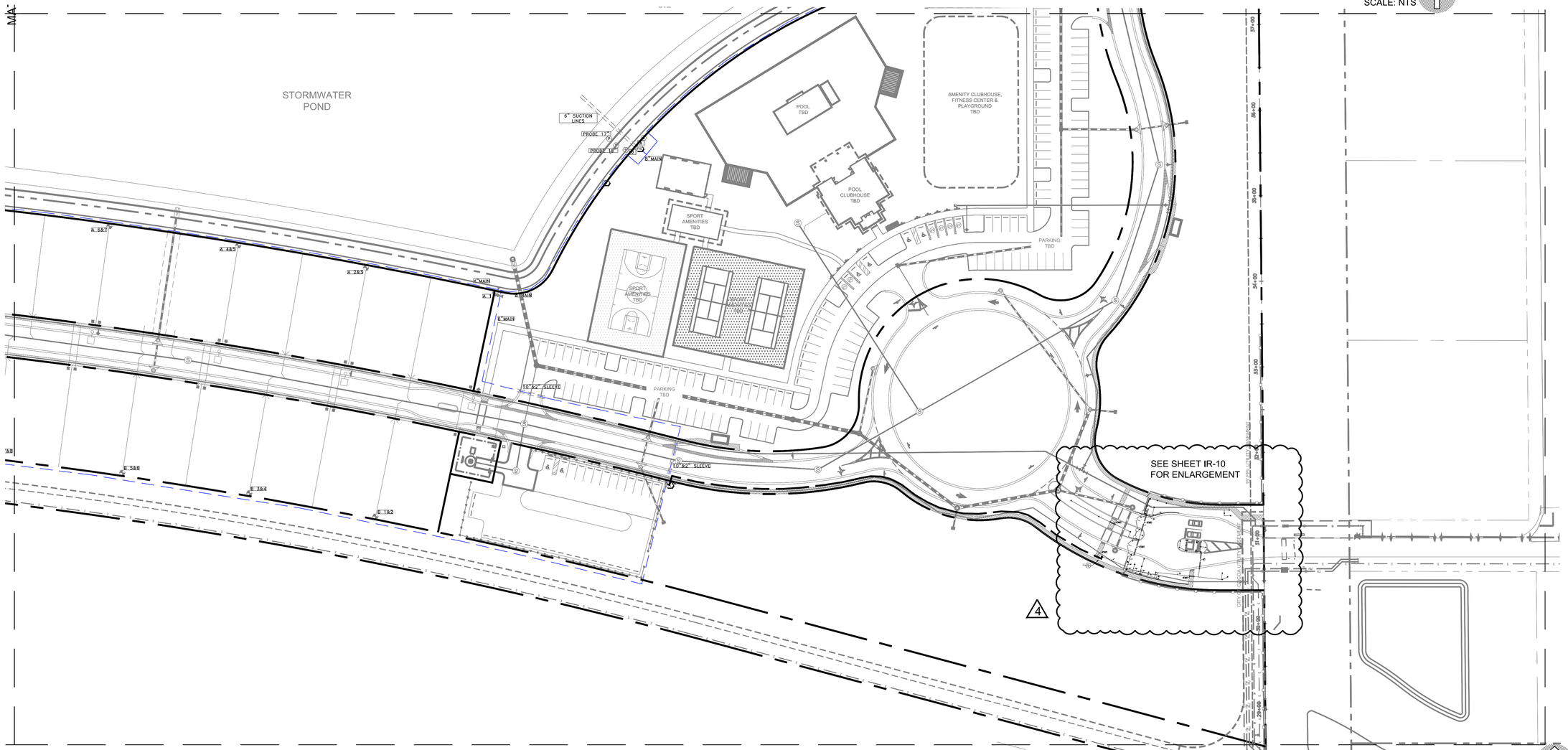
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22

SEAL
SUSAN HALL LANDSCAPE ARCHITECT LC26000357 REGISTERED FLORIDA
06-30-23

IR-8 SHEET | 14 OF





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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION MAINLINE PLAN

DATE
09-22-21

DESIGN
S.H.

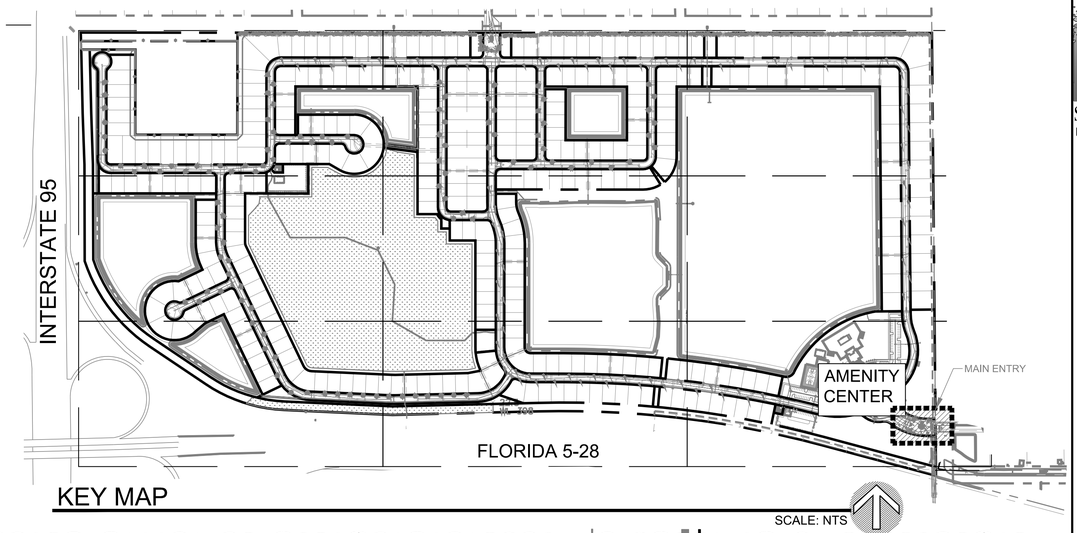
DRAWN
S.K.

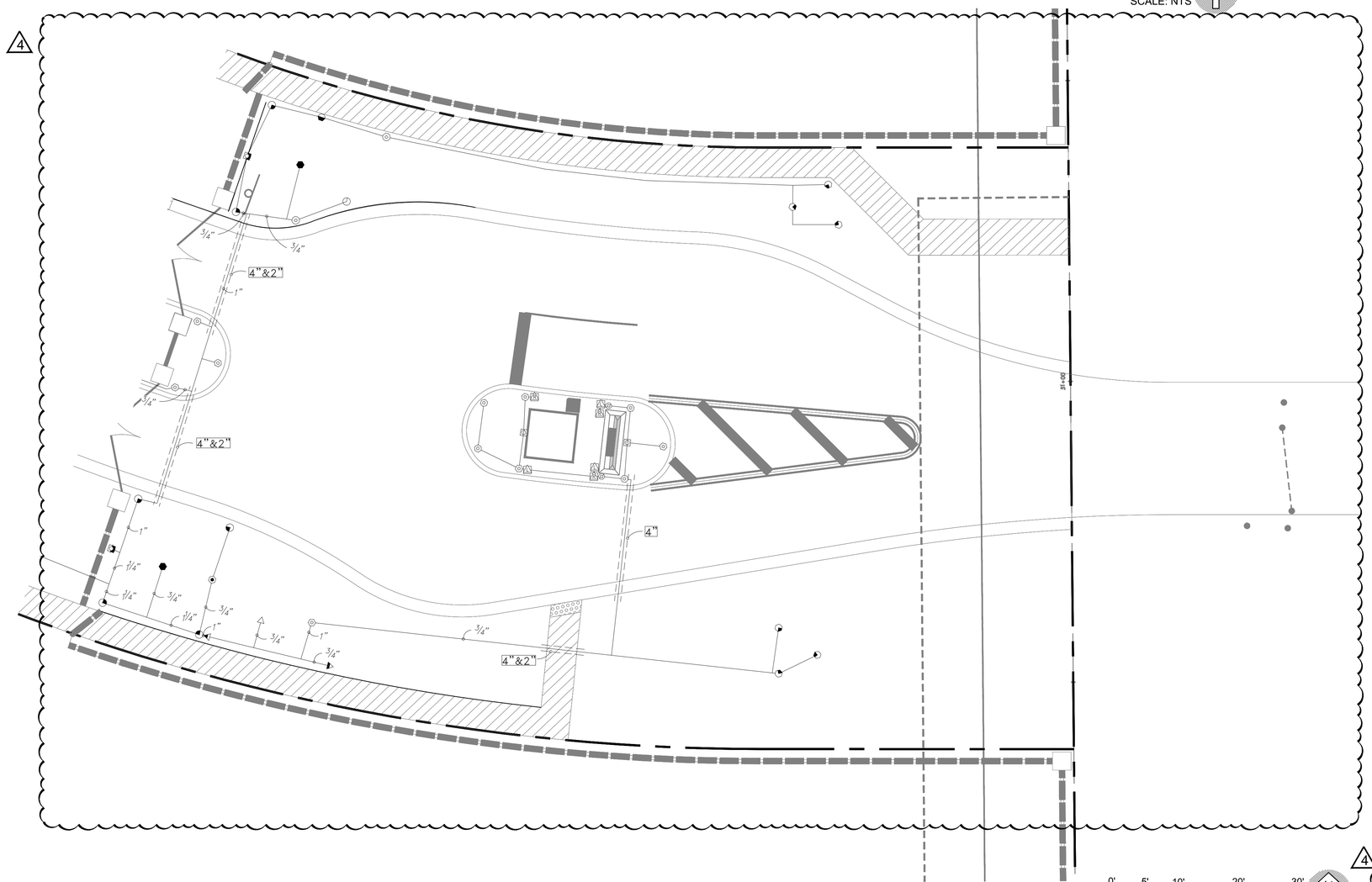
SCALE
1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 11-01-22
3 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL
REGISTERED LANDSCAPE ARCHITECT SUSAN HALL #859 FLORIDA
06-30-23

SHEET IR-9 OF 14





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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10

Cocoa, FL

SHEET TITLE
Main Entry Irrigation Plan

DATE
02-27-23

DESIGN
S.H.

DRAWN
M.M.

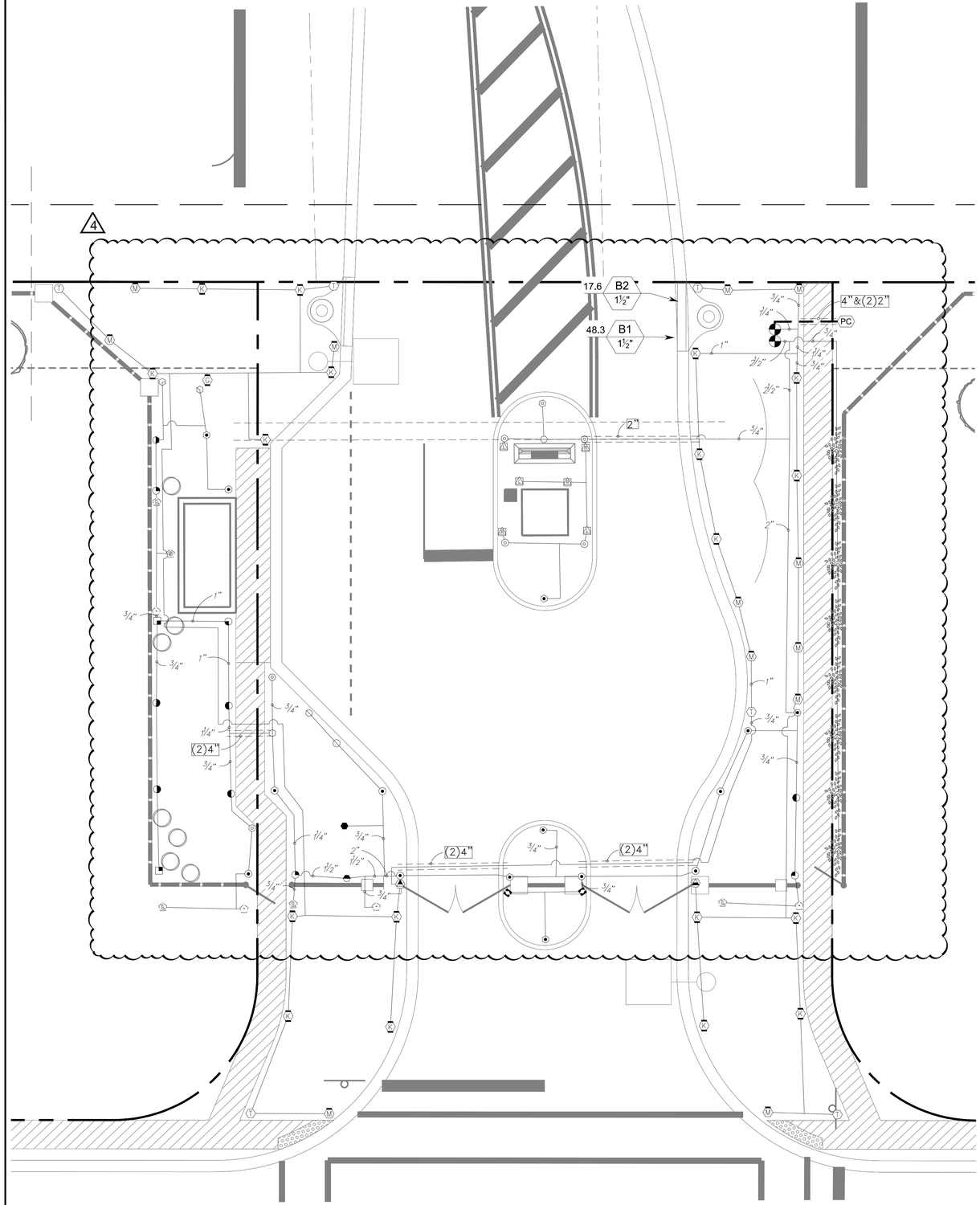
SCALE
1" = 10'-0"

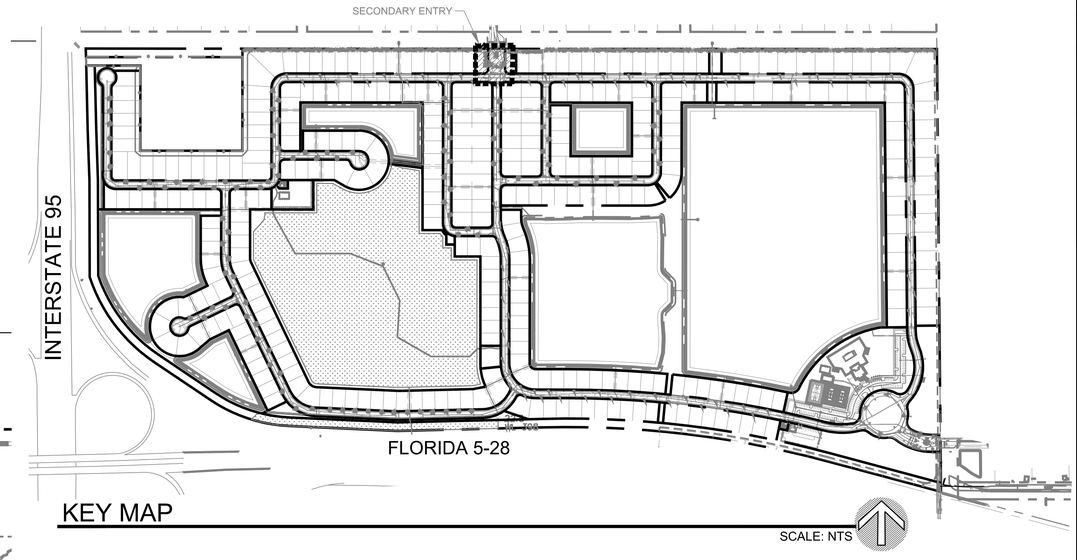
REVISIONS
4 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL
REGISTERED LANDSCAPE ARCHITECT #851 SUSAN HALL FLORIDA
06-30-23

4

SHEET IR-10 OF 14





0' 5' 10' 20' 30'
SCALE: 1" = 10'-0"

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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Secondary Entry Irrigation Plan

DATE 09-22-21

DESIGN S.H.

DRAWN M.M.

SCALE 1" = 10'-0"

REVISIONS
4 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL
REGISTERED LANDSCAPE ARCHITECT #851 SUSAN HALL FLORIDA
06-30-23

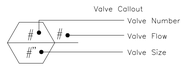
4

SHEET IR-11 OF 14

BUFFER IRRIGATION LEGEND

SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS
M	Hunter MP1000 PROS-06	560	90-210	40		14'
K	Hunter MP2000 PROS-06	2	90-210	40		19'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Future Point of Connection for two lots. Install a service tee with a 2" PVC ball valve in a 12" Valve Box and coil three feet of control wire inside the box. Valves and decoders shall be installed with lot irrigation.	190
	Irritrol 100P-S in a 12" Valve Box	3
	Glow Gasket Bell Isolation Valve in a 12" Valve Box	13
A B	Hunter A2C-225D-P part of the pump station Each controller shall have a separate different colored IDWIRE installed.	2
S	Hunter MINI-CLIK Rain Sensor	2
A	Future Point of Connection- Install service tee with a 2" PVC ball valve and coil three feet of control wire from Controller A for future connection.	4
B	Future Point of Connection- Install service tee with a 2" PVC ball valve and coil three feet of control wire from Controller A for future connection.	6
PS	Site One PIB-20-C-203-D/FE-600H/ACC-3-60/HU03-TM-D	1
	Irrigation Lateral Line: PVC Class 160	8,000 l.f.
	Irrigation Mainline: PVC Class 200 Gasket Bell 4", 6" &8" (size as shown)	33,300 l.f.
	Pipe Sleeve: PVC Schedule 40	

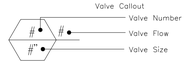


4 ENTRANCE IRRIGATION LEGEND

SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS
	Hunter PROS-06-CV 08H	2	180	30	0.47	8'
	Hunter PROS-06-CV 10H	2	180	30	0.88	10'
	Hunter PROS-06-CV 15Q	2	90	30	0.97	15'
	Hunter PROS-06-CV 04A	2	Adj	30		4'
	Hunter PROS-06-CV 10A	2	Adj	30		10'
	Hunter PROS-06-CV Rain Bird 15LCS	4	LCS	30	0.49	4'x15'
	unter PROS-06-CV Rain Bird 15RCS	4	RCS	30	0.49	4'x15'
	unter PROS-06-CV Rain Bird 15SST	1	SST	30	1.21	4'x30'
	Hunter PROS-12-CV LCS-515	1	LCS	30	0.65	5'x15'
	Hunter PROS-12-CV RCS-515	1	RCS	30	0.65	5'x15'
	Hunter PROS-12-CV SS-530	1	SST	30	1.3	5'x30'
	Hunter PROS-12-CV 08H	3	180	30	0.47	8'
	Hunter PROS-12-CV 08Q	1	90	30	0.24	8'
	Hunter PROS-12-CV 08T	1	120	30	0.32	8'
	Hunter PROS-12-CV 10F	3	360	30	1.59	10'
	Hunter PROS-12-CV 10H	3	180	30	0.88	10'
	Hunter PROS-12-CV 10Q	6	90	30	0.42	10'
	Hunter PROS-12-CV 12H	1	180	30	1.3	12'
	Hunter PROS-12-CV 12T	1	120	30	0.89	12'
	Hunter PROS-12-CV 15H	5	180	30	1.86	15'
	Hunter PROS-12-CV 15Q	10	90	30	0.97	15'
	Hunter PROS-12-CV 08A	16	Adj	30		8'
	Hunter PROS-12-CV 10A	9	Adj	30		10'
	Hunter PROS-12-CV 12A	4	Adj	30		12'
	Hunter PROS-12-CV 15A	7	Adj	30		15'
	Hunter PROS-12-CV Rain Bird 15LCS	6	LCS	30	0.49	4'x15'
	Hunter PROS-12-CV Rain Bird 15RCS	6	RCS	30	0.49	4'x15'
T	Hunter MP Corner PROS-06-CV T	6	Adj	40		14'
	Hunter MP Strip PROS-06-CV LST	1	LCS	40	0.22	5'x15'
	Hunter MP Strip PROS-06-CV RST	1	RCS	40	0.22	5'x15'
M	Hunter MP1000 PROS-06-CV M	12	90-210	40		14'
G	Hunter MP2000 PROS-06-CV G	1	210-270	40		19'
K	Hunter MP2000 PROS-06-CV K	18	90-210	40		19'
H	Two Hunter PCB 25	3 x2	360	30	2 x.25	3'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	HE-20T	8 x2

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Irritrol 100P-S in a 12" Valve Box	3
PC	Point of Connection- Existing mainline and control wire stub out point from master plan to be field located.	2
	Irrigation Lateral Line: PVC Class 160	2,200 l.f.
	Irrigation Mainline: PVC Class 200 3"	560 l.f.
	Pipe Sleeve: PVC Schedule 40	



IRRIGATION NOTES

1. THE PLANS AND DRAWINGS ARE DIAGRAMMATIC OF THE WORK TO BE PERFORMED. SOME COMPONENTS MAY BE SHOWN OUTSIDE THE WORK AREA FOR CLARITY. THE WORK SHALL BE EXECUTED IN A MANNER TO AVOID CONFLICTS WITH UTILITIES AND OTHER ELEMENTS OF CONSTRUCTION, INCLUDING LANDSCAPE MATERIALS. ALL DEVIATIONS FROM THE PLANS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE BEING INSTALLED. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY ASPECT OF THE IRRIGATION SYSTEM AS SHOWN ON THE PLANS AND DRAWINGS, WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES, OR DISCREPANCIES EXIST THAT MIGHT NOT HAVE BEEN KNOWN DURING THE DESIGN OF THE IRRIGATION SYSTEM. IN THE EVENT THAT NOTIFICATION OF THE CONFLICT IS NOT APPROVED BY THE OWNER'S REPRESENTATIVE, THE CONTRACTOR WILL ASSUME FULL RESPONSIBILITY FOR ALL REVISIONS.
2. THE IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS, IRRIGATION SYSTEM SPECIFICATIONS AND ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH ALL PREVAILING LOCAL CODES, ORDINANCES, AND REGULATIONS.
3. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS, INCLUDING UTILITY LOCATIONS, BEFORE INSTALLATION OF THE IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THE PLANS – CONTRACTOR TO VERIFY. COORDINATE ALL IRRIGATION SYSTEM CONSTRUCTION WITH EXISTING AND NEW PLANTINGS TO AVOID CONFLICT OR INTERFERENCE WITH LOCATION OF PIPING, SLEEVING, CABLES, AND SERVICE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION WITH ALL OTHER CONSTRUCTION ON SITE, ESPECIALLY LANDSCAPE INSTALLATION. IRRIGATION SYSTEM SHALL BE RELOCATED AT NO ADDITIONAL COST FOR ANY CONFLICT WITH LANDSCAPE INSTALLATION OR ANY OTHER SITE CONSTRUCTION OR EXISTING CONDITIONS. ALL COMPONENTS THAT ARE NOT CONTAINED WITHIN THE SPECIFIC AREAS SHOWN OR CALLED OUT ON THE DRAWINGS WILL NOT BE ACCEPTED. ALL PIPING AND OTHER COMPONENTS ARE TO REMAIN WITHIN THE PROPERTY OF THE OWNER.
4. WHERE EXISTING OR NEW TREES, LIGHT STANDARDS, SIGNS, ELECTRONIC CONTROLLERS AND/OR OTHER OBJECTS ARE AN OBSTRUCTION TO AN IRRIGATION SPRINKLER'S PATTERN, THE COMPONENT AND PIPING SHALL BE RELOCATED AS NECESSARY TO OBTAIN PROPER COVERAGE OF AN IRRIGATION SPRINKLER'S PATTERN, THE COMPONENT AND PIPING SHALL BE RELOCATED AS NECESSARY TO OBTAIN THE PROPER COVERAGE WITHOUT DAMAGING THE OBSTRUCTION. OWNER'S REPRESENTATIVE SHALL DETERMINE WHETHER AN OBSTRUCTION OCCURS OR NOT.
5. COMPONENT SPACING ARE MAXIMUM. DO NOT EXCEED SPACING SHOWN OR NOTED ON THE PLANS. COMPONENT SPACING MAY BE ADJUSTED TO ACCOMMODATE CHANGES IN TERRAIN AND PLANTING LAYOUT AS LONG AS THE MODIFIED SPACING DO NOT EXCEED THE SPACING SHOWN IN THE PLANS. UNLESS SHOWN OTHERWISE, CONTRACTOR SHALL PROVIDE 100% COVERAGE.
6. ALL MATERIALS AND EQUIPMENT SHOWN SHALL BE NEW AND INSTALLED AS DETAILED ON THE PLANS. IF THE DRAWINGS DO NOT THOROUGHLY DESCRIBE THE TECHNIQUES TO BE USED, THE INSTALLER SHALL FOLLOW THE INSTALLATION METHODS AND INSTRUCTIONS RECOMMENDED BY THEIR MANUFACTURER.
7. THE LOCATION OF THE IRRIGATION MAINLINE SHALL BE IDENTIFIED IN THE FIELD AND APPROVED BY THE OWNER'S REPRESENTATIVE BEFORE INSTALLATION.
8. IRRIGATION CONTRACTOR SHALL ADJUST ALL SPRINKLERS, CONTROLLER AND OTHER DEVICES TO OBTAIN SPECIFIED OPERATING PARAMETERS, INCLUDING COVERAGE, OPERATING PRESSURE, FLOW RATES AND OPERATION TIME, AS INDICATED ON THE DRAWINGS AND IN THE IRRIGATION SYSTEM SPECIFICATIONS.
9. CONTRACTOR TO PROVIDE INSTALLATION SHOP DRAWINGS AND MANUFACTURER PRODUCT INFORMATION FOR ALL IRRIGATION COMPONENTS. ALL INSTALLATIONS SHALL BE AS RECOMMENDED BY MANUFACTURERS. THE QUANTITIES SHOWN IN THE LEGENDS AND SYMBOL SHEETS SHALL NOT BE USED FOR BIDDING PURPOSES. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONDUCTING A COMPREHENSIVE MATERIALS TAKEOFF TO DETERMINE THE ACTUAL QUANTITIES OF MATERIAL NECESSARY TO EXECUTE THE WORK DESCRIBED IN THE DOCUMENTS.
10. ALL TRENCHES SHALL BE BACKFILLED WITH CLEAN, DEBRIS-FREE MATERIALS. CLEAN SAND SHALL BE USED FOR BEDDING MATERIAL IF PARENT SOIL CANNOT BE ADEQUATELY RID OF ROCK AND OTHER EXTRANEOUS DEBRIS. PULLING PIPE SHALL BE PROHIBITED.
11. ALL SOLVENT WELDING SHALL BE PRECEDED BY PRIMING OF THE FITTINGS AND PIPE AS RECOMMENDED BY THE MANUFACTURER.
12. ALL MAINLINE CHANGE OF DIRECTION FITTINGS SHALL BE DUCTILE IRON GASKET BELL WITH THRUST BLOCKS. ALL SERVICE TEES SHALL BE PVC GASKET BELL FOR LOTS AND FUTURE CONNECTION POINTS.
13. IRRIGATION CONTRACTOR TO INSTALL CHRISTY ZONE TAGS WITH THE CORRESPONDING CONTROLLER ZONE NUMBER.
14. ALL IRRIGATION LINES UNDER PAVEMENT SHALL BE INSTALLED WITHIN SCH. 40 PVC SLEEVES AS NOTED. IRRIGATION COMMUNICATION CABLE SHALL HAVE IT'S OWN SEPARATE SLEEVE UNLESS NOTED OTHERWISE.
15. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR ALL SLEEVING.
16. ALL UNSIZED PIPE SHALL BE 3/4".
17. IRRIGATION LATERAL LINES TO BE BURIED AT A DEPTH OF 12".
18. IRRIGATION MAINLINES TO BE BURIED AT A DEPTH OF 24".
19. ALL COMPONENTS INSTALLED BY THE IRRIGATION CONTRACTOR, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE MAINLINE, CONTROL VALVES, ISOLATION VALVES, GROUND RODS AND SPLICED BOXES SHALL BE LOCATED WITH A MEASUREMENT FROM TWO FIXED POINTS.
20. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE LANDSCAPE SUPERVISOR.
21. THE CONTROL WIRE FROM THE CONTROLLERS SHALL BE HUNTER ID1BLU FOR CONTROLLER A AND IDORG FOR CONTROLLER B. ALL SPLICES INTO HUNTER IDWIRE1 CONTROL WIRE TO BE MADE WITH 3M-DBR6 WATER PROOF CONNECTORS. ALL WIRE SPLICES FROM THE DECODER TO THE CONTROL VALVE TO BE MADE WITH 3M-DBY6 WIRE CONNECTORS. THE CONTROL WIRE SHALL BE GROUNDED EVERY 500' ALONG THE WIRE PATH. INSTALL HUNTER ICD DECODERS AT VALVE LOCATIONS.
22. MULTIPLE ZONES TO OPERATE AT ONE TIME WITH TOTAL FLOW NOT TO EXCEED 600 GALLONS PER MINUTE. IRRIGATION CONTRACTOR SHALL HAVE ALL FLOWS LEARNED BY THE CONTROLLER. PROGRAM CONTROLLER AUTOMATIC SHUT DOWN FOR EXCESSIVE FLOW EVENTS. ONLY ONE CONTROLLER SHALL OPERATE AT ONE TIME SO FLOW MONITORING CAN OPERATE. ZONES SHALL BE PROGRAMMED SO FLOW IS SPREAD OUT ACROSS THE SITE WITH A MAXIMUM FLOW OF 250 GPM IN ANY QUADRANT. A MAXIMUM FLOW OF 200 GPM SHALL BE OPERATED ON A 4" MAINLINE LOOP. A MAXIMUM FLOW OF 80 GPM SHALL BE ON A 3" RUN.
23. THE OWNER SHALL DETERMINE THE LOCATION OF THE PUMP STATION. THE OWNER SHALL PROVIDE ELECTRICAL SERVICE TO THE PUMP STATION. THE IRRIGATION CONTRACTOR SHALL VERIFY THE ELECTRICAL SERVICE PROVIDED PRIOR TO ORDERING THE PUMP STATION.

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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION SPECIFICATIONS

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

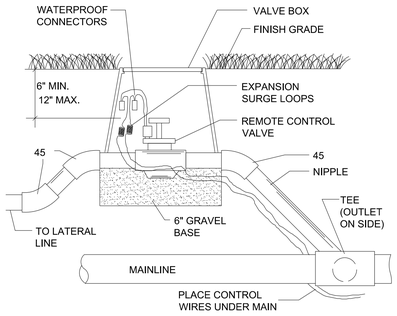
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #850 STATE OF FLORIDA
06-30-23

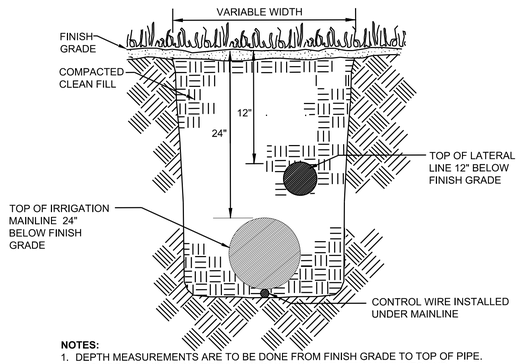
4

MARK ALL VALVE BOXES WITH THE ZONE NUMBER AS DIRECTED BY THE LANDSCAPE ARCHITECT.



ELECTRIC VALVE INSTALLATION DETAIL

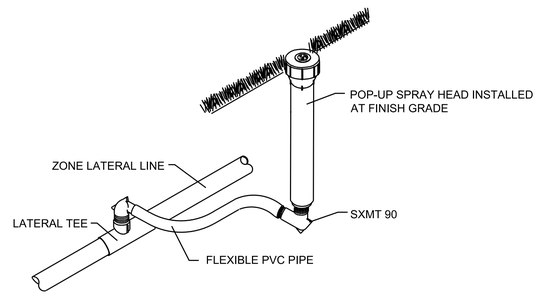
SCALE: NTS



NOTES:
1. DEPTH MEASUREMENTS ARE TO BE DONE FROM FINISH GRADE TO TOP OF PIPE.
2. PROVIDE A 6" MINIMUM VERTICAL SEPARATION BETWEEN MAINLINES AND LATERAL LINES.
3. ALL TRENCHES SHALL BE BACKFILLED WITH CLEAN SOIL FREE OF DEBRIS & NOXIOUS WEEDS. TRENCHES SHALL BE COMPACTED TO A 90% STANDARD PROCTOR DENSITY, ASTMD698-78.

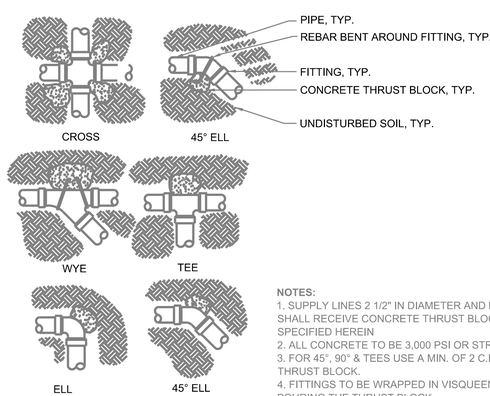
TRENCHING DETAIL

SCALE: NTS



SPRAY HEAD INSTALLATION DETAIL

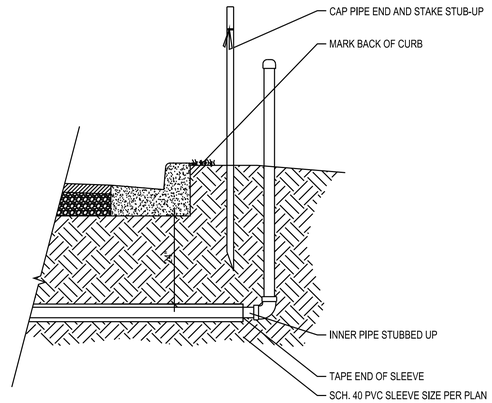
SCALE: NTS



NOTES:
1. SUPPLY LINES 2 1/2" IN DIAMETER AND LARGER SHALL RECEIVE CONCRETE THRUST BLOCKS AS SPECIFIED HEREIN
2. ALL CONCRETE TO BE 3,000 PSI OR STRONGER
3. FOR 45°, 90° & TEES USE A MIN. OF 2 C.F. PER THRUST BLOCK.
4. FITTINGS TO BE WRAPPED IN VISQUEEN BEFORE POURING THE THRUST BLOCK

THRUST BLOCK DETAIL

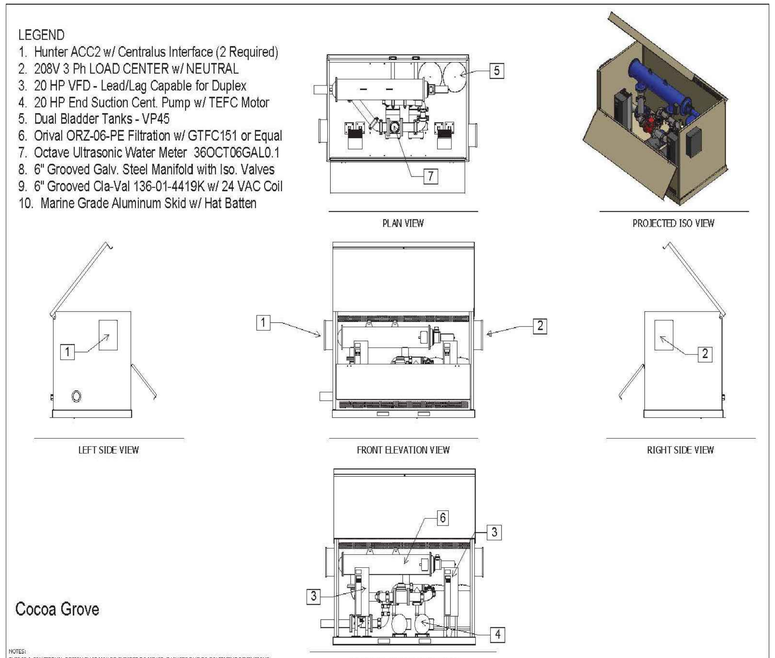
SCALE: NTS



SLEEVING ROUGH-IN DETAIL

SCALE: NTS

LEGEND
1. Hunter ACC2 w/ Centralus Interface (2 Required)
2. 208V 3 Ph LOAD CENTER w/ NEUTRAL
3. 20 HP VFD - Lead/Lag Capable for Duplex
4. 20 HP End Suction Cent. Pump w/ TEFC Motor
5. Dual Bladder Tanks - VP45
6. Orival ORZ-06-PE Filtration w/ GTFC151 or Equal
7. Octave Ultrasonic Water Meter 36OCT06GAL0.1
8. 6" Grooved Galv. Steel Manifold with Iso. Valves
9. 6" Grooved Cla-Val 136-01-4419K w/ 24 VAC Coil
10. Marine Grade Aluminum Skid w/ Hat Batten



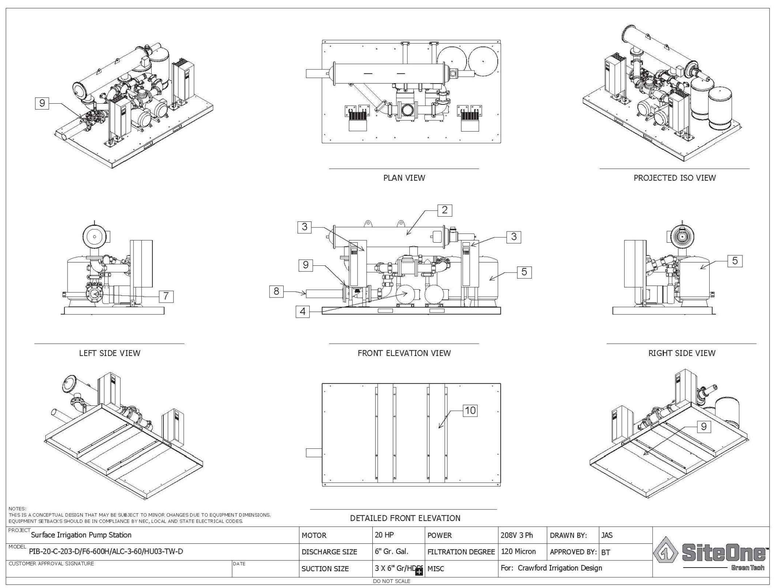
Cocoa Grove

NOTES:
THIS IS A CONCEPTUAL DESIGN THAT MAY BE SUBJECT TO MINOR CHANGES DUE TO EQUIPMENT DIMENSIONS. EQUIPMENT SETBACKS SHOULD BE IN COMPLIANCE BY NEC, LOCAL AND STATE ELECTRICAL CODES.

PROJECT: Surface Irrigation Pump Station	MOTOR	20 HP	POWER	208V 3 Ph	DRAWN BY:	JAS
MODEL: PIB-20-C-203-D/F6-600H/ALC-3-60/HU03-TW-D	DISCHARGE SIZE	6" Gr. Gal.	FILTRATION DEGREE	120 Micron	APPROVED BY:	BT
CUSTOMER APPROVAL SIGNATURE / DATE	SUCTION SIZE	3 X 6" Gr/HDPE	MISC	For: Crawford Irrigation Design		

DO NOT SCALE

SiteOne Brown Tech



Cocoa Grove

NOTES:
THIS IS A CONCEPTUAL DESIGN THAT MAY BE SUBJECT TO MINOR CHANGES DUE TO EQUIPMENT DIMENSIONS. EQUIPMENT SETBACKS SHOULD BE IN COMPLIANCE BY NEC, LOCAL AND STATE ELECTRICAL CODES.

PROJECT: Surface Irrigation Pump Station	MOTOR	20 HP	POWER	208V 3 Ph	DRAWN BY:	JAS
MODEL: PIB-20-C-203-D/F6-600H/ALC-3-60/HU03-TW-D	DISCHARGE SIZE	6" Gr. Gal.	FILTRATION DEGREE	120 Micron	APPROVED BY:	BT
CUSTOMER APPROVAL SIGNATURE / DATE	SUCTION SIZE	3 X 6" Gr/HDPE	MISC	For: Crawford Irrigation Design		

DO NOT SCALE

SiteOne Brown Tech

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
IRRIGATION DETAILS

DATE
09-22-21

DESIGN
S.H.

DRAWN
S.K.

SCALE
1" = 60'-0"

REVISIONS
1. RESPONSE TO COMMENT 08-31-22
2. RESPONSE TO COMMENT 11-01-22
3. RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL

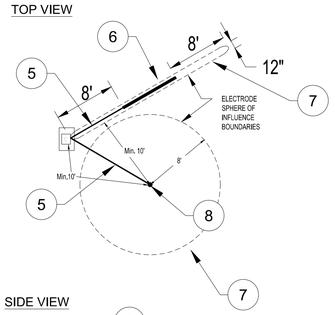
06-30-23

4

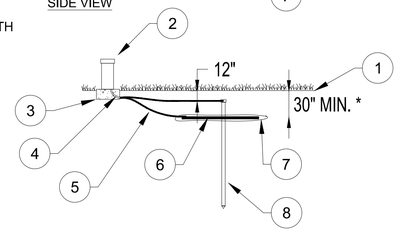
IR-13 SHEET | 14 OF

1. FINISH GRADE
2. CONTROLLER OR CONTROLLER MOUNTED IN PUMP STATION
3. CONCRETE PAD
4. 1.5" SCH-40 PVC SWEEP ELL FOR WIRE
5. RUN 6 AWG SOLID COPPER WIRES CONTINUOUSLY FROM GROUND ROD / PLATE TO CONTROLLER BUS BAR.
6. COPPER GROUND PLATE (4"x96"x.0625") WITH 25-FEET OF #6 AWG INSULATED GREEN WIRE WITH YELLOW STRIPE PRE-WELDED TO GROUND PLATE, (PAIGE ELECTRIC 18299IC). PROVIDE MINIMUM OF (2) 50LB BAGS OF EARTH CONTACT MATERIAL (POWER SET BY PAIGE ELECTRIC 182199IC).
7. SPHERE OF INFLUENCE.
8. 5/8"X8' COPPER CLAD GROUND ROD WITH 15-FEET OF #6 AWG INSULATED GREEN WIRE PRE-WELDED TO GROUND ROD (PAIGE ELECTRIC 182000IC6).

TOP VIEW



SIDE VIEW



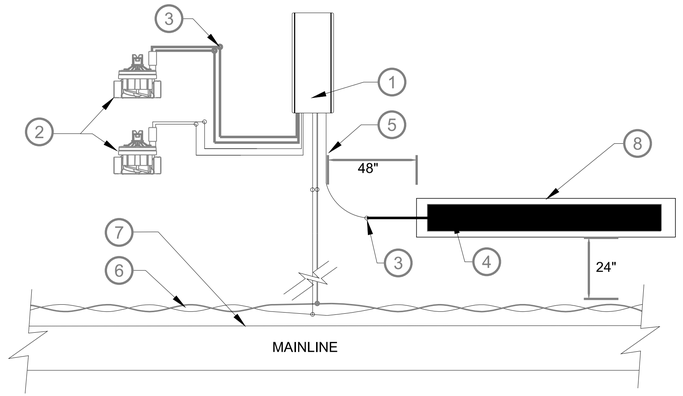
NOTE;
1. DO NOT INSTALL ANY OTHER WIRE OR CABLE WITHIN THE SPHERE OF INFLUENCE.
2. INSTALL GROUNDING PLATE MINIMUM 30" BELOW FINISHED GRADE, OR BELOW FROSTLINE, WHICHEVER IS DEEPER.
3. MEGGAR TEST GROUNDING GRID, MINIMUM 10 OHMS OR LESS REQUIRED, CONTRACTOR TO PROVIDE ON HIS LETTER HEAD, TIME, DATE, AND TEST RESULT. SUBMIT A COPY TO OWNER OR OWNERS REP. PRIOR TO FINAL WALK THROUGH

00 CONTROLLER GROUNDING DETAIL

Hunter

NTS.

1. DECODER.
2. REMOTE CONTROL VALVE.
3. 3M-DBRY-6 SPLICE KIT (7 TOTAL).
4. A 15-FOOT CONTINUOUS LENGTH OF 10 AWG, GREEN INSULATED, WITH EXTRUDED YELLOW STRIPE, SOLID COPPER WIRE IS WELDED TO THE 4"x36" COPPER GROUNDING PLATE (PAIGE ELECTRIC 182201IC).
5. DECODER GROUND WIRE.
6. HUNTER ID1 WIRE (PAIGE ELECTRIC P7354D OR EQUAL) IN 1" CONDUIT (CONDUIT NOT SHOWN).
7. MAINLINE.
8. 4"X36" COPPER GROUNDING PLATE. INSTALLED IN AREA CLEAR FOR EQUIPMENT 48" FROM END OF PLATE, AND 24' TO THE SIDES. MINIMUM 36" COVER. WITH (1) 50LB BAG EARTH CONTACT MATERIAL. POWER SET BY (PAIGE ELECTRIC 1820058).

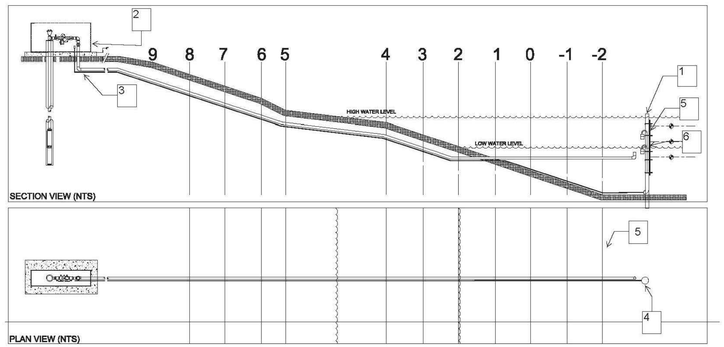


NOTES;
1. VALVE BOX AND DECODER WIRE CONDUIT NOT SHOWN IN DETAIL FOR CLARITY.
2. USE 3M-DBRY-6 FOR ALL WIRE SPLICES.
3. MEGGAR TEST DECODER GROUNDING, 10 OHMS OR LESS REQUIRED. SUBMIT RESULTS TOGETHER WITH CONTROLLER TEST SUBMITTAL. USE VALVE STATION NUMBER AS IDENTIFIER.
4. AT A MINIMUM, EARTH GROUND SHOULD BE CONNECTED AT THE FIRST DECODER, EVERY12TH VALVE/ DECODER, OR 1,000-FEET OF WIRE RUN (WHICHEVER IS SHORTER), AND AT ALL TIMES INSTALL A GROUND PLATE AT THE LAST VALVE/ DECODER IN ANY WIRE RUN.
5. WHEN USING GROUND RODS. PROVIDE 5/8" DIAMETER x 8' LONG COPPER CLAD STEEL GROUND RODS WITH 15-FEET PRE-WELDED #6 AWG INSULATED GREEN WIRE (PAIGE ELECTRIC # 182000IC6). THE RODS ARE TO BE DRIVEN INTO THE GROUND IN A VERTICAL POSITION OR AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES AT A LOCATION 10-FEET FROM THE ELECTRONIC EQUIPMENT, THE GROUND PLATE, OR THE WIRES AND CABLES CONNECTED TO SAID EQUIPMENT. THE GROUNDING RODS SHALL BE COVERED BY A VALVE BOX. INSTALL GROUNDING CIRCUIT COMPONENTS IN STRAIGHT LINES. WHEN NECESSARY TO BEND WIRES, MAKE SWEEPING TURNS WITH A MINIMUM RADIUS OF 8-INCHES.

00 DECODER GROUNDING DETAIL

Hunter

NTS.



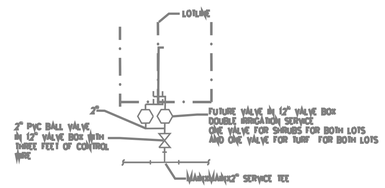
LEGEND
1. Concrete Monument Post (4" x 4")
2. See PIB Detail (PIB-20-C-203)
3. 1" PVC Gray Conduit (Sch 40)
4. Aluminum Shroud (Floats Enclosed)
5. Pump Up Float
6. Pump Down Float

NOTE:

Cocoa Grove

PROJECT: Pump Down Safety Float W/ AUX Pump UP Float		MOTOR	See Pump	POWER	24VAC MAX	DRAWN BY:	JAS
MODEL: GT-DLLC		DISCHARGE SIZE	See Pump	FILTRATION DEGREE	N/A	APPROVED BY:	BWT
CUSTOMER APPROVAL SIGNATURE	DATE	SUCTION SIZE	See Pump	MISC	Crawford Irrigation Design		
		DO NOT SCALE					

SiteOne Green Tech



DOUBLE OVERSIZED LOT SERVICE

SCALE: N.T.S.

REAR LOT IRRIGATION NOTE

THE IRRIGATION PLAN IS DRAWN SCHEMATICALLY FOR GRAPHIC CLARITY. ALL MAINLINE SHALL BE LOCATED WITHIN 3' OF PROPERTY LINE UNLESS DIRECTED OTHERWISE BY OWNER AND SITE CONTRACTOR. THE MAINLINE ROUTE SHALL BE FLAGGED OUT AND APPROVED BY THE OWNER AND SITE CONTRACTOR PRIOR TO INSTALLATION. OWNER AND SITE CONTRACTOR SHALL DETERMINE WHETHER MAINLINE AND CONTROL WIRE ARE INSTALLED INSIDE OR OUTSIDE OF LOT LINES.

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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE: IRRIGATION DETAILS

DATE: 09-22-21

DESIGN: S.H.

DRAWN: S.K.

SCALE: 1" = 60'-0"

REVISIONS
4 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL

06-30-23

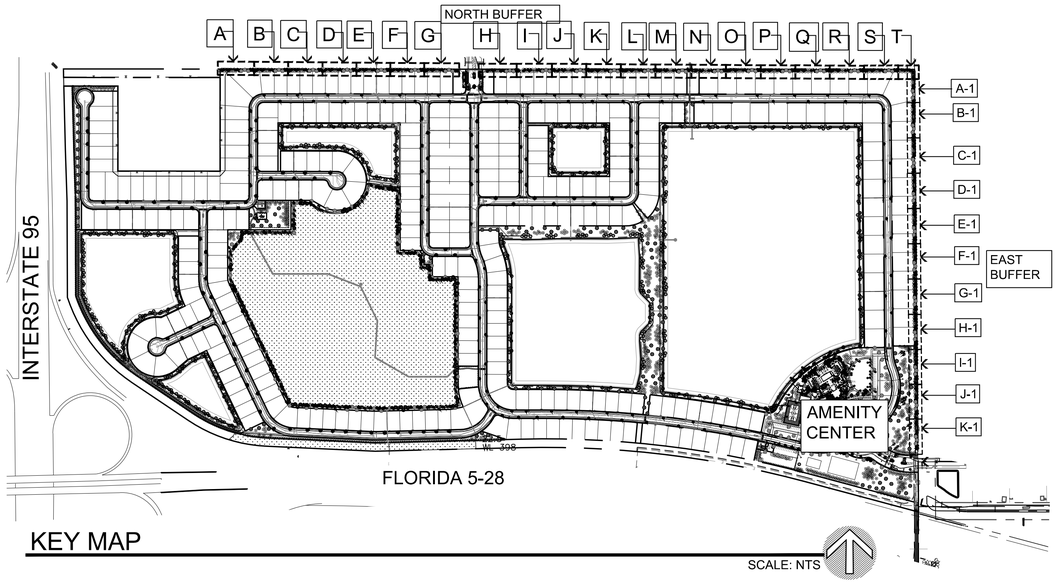
4

IR-14 SHEET 14 OF

NOTES TO CONTRACTOR:

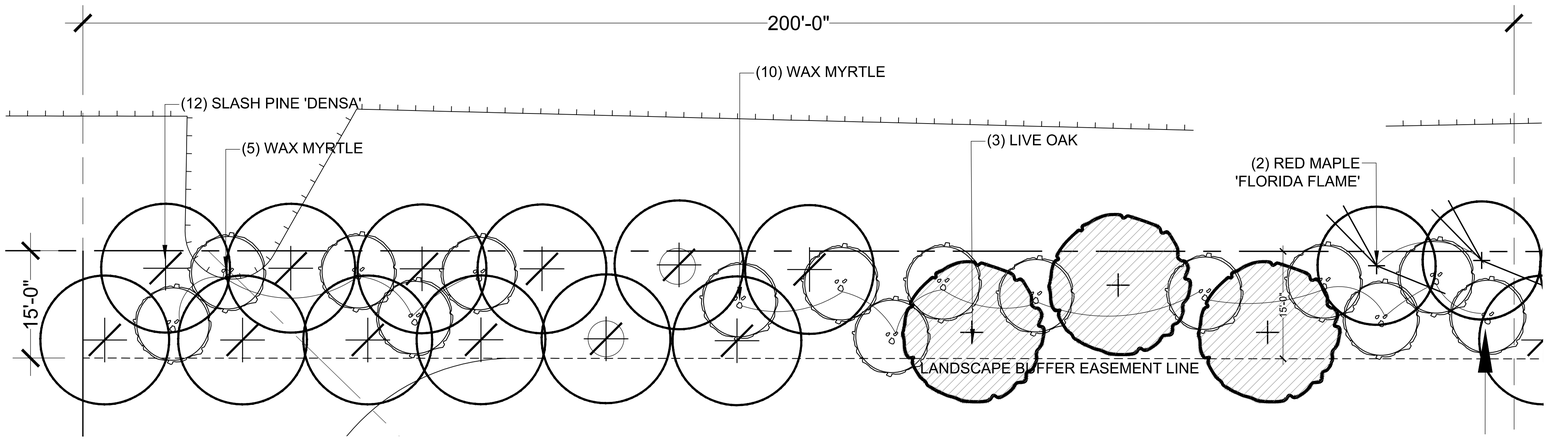
1. ALL MATERIAL CALCULATIONS ARE BASED ON MEASUREMENTS FROM AUTOCAD DRAWINGS AND DO NOT INCLUDE SHRINKAGE, CUTS & WASTE, ETC. CONTRACTOR IS RESPONSIBLE FOR MEASURING & VERIFYING QUANTITIES/CALCULATIONS FOR THE PROJECT.
2. ALL TREES WITHIN SODDED AREAS SHALL RECEIVE MULCH RINGS.

- ALL LABELED AREAS ON KEY MAY SHOWN ARE REPEATING 200' SECTIONS AS SHOWN ON 'TYPICAL PROTOTYPE TREE PLANTING PLAN' , UNLESS SPECIFIED.
- PLANTING AREAS THAT ARE NOT REPEATING 200' SECTIONS ARE AREA 'T'. REFER TO KEY MAP.



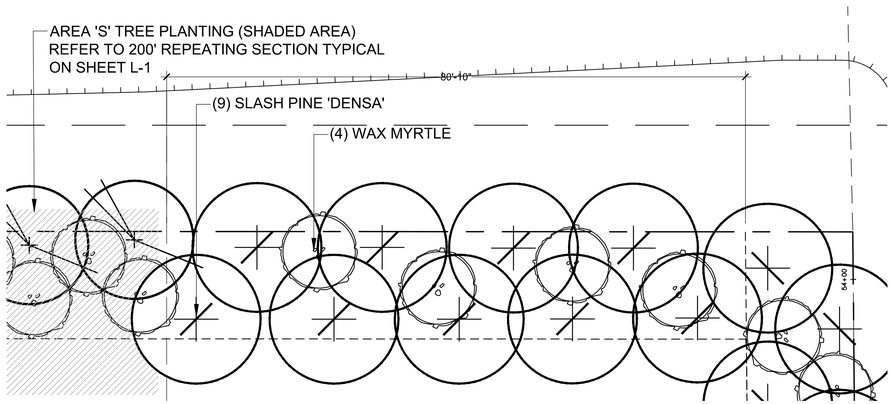
KEY MAP

SCALE: NTS



TYPICAL BUFFER TREE PLANTING PLAN- 200' SECTION
(TYPICAL OF NORTH BUFFER SECTIONS A-S)

SCALE: 1" = 10'-0"



AREA 'T' TREE PLANTING PLAN- NORTH BUFFER

SCALE: 1" = 10'-0"

0' 10' 20' 30'

SCALE: 1" = 10 '-0"

KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG

It's fast, It's free, It's the law.

Call 811 two business days before digging

Susan Hall, ASLA
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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Tree Buffer Planting Plan

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

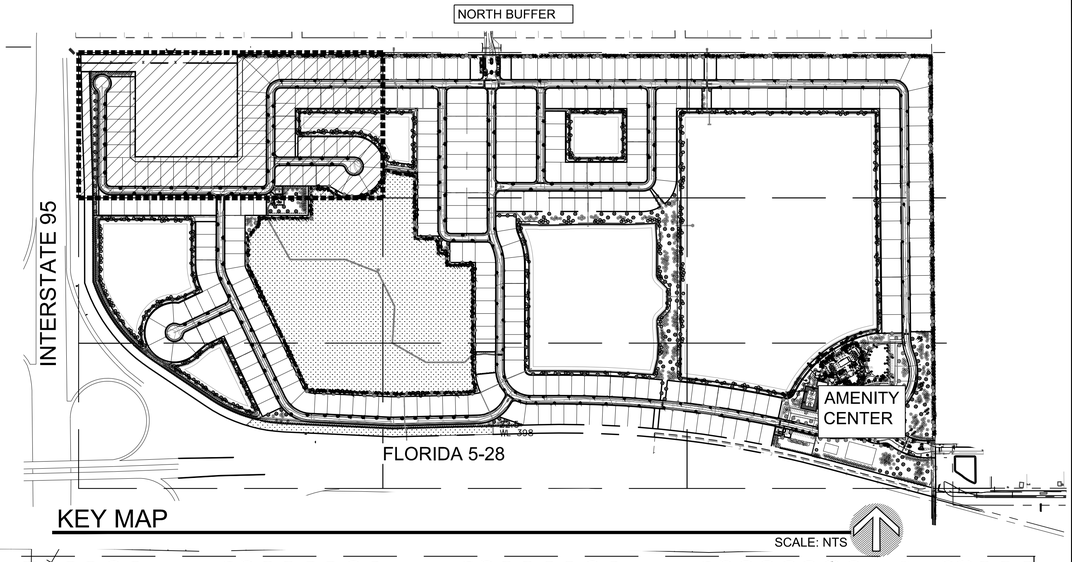
SCALE 1" = 10'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #857 STATE OF FLORIDA
01-26-24

5

REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.



KEY MAP

SCALE: NTS

EXISTING TREE PRESERVATION

(85) SLASH PINE
(13) LIVE OAK
(6) CRAPE MYRTLE 'TUSKEGEE'
EXISTING LAKE
EXISTING TREE PRESERVATION
(4) TREES AT 3" CALIPER TO BE INSTALLED BY HOMEOWNER AT TIME OF INDIVIDUAL LOT CONSTRUCTION - TYPICAL OF 350 LOTS

NORTH BUFFER LANDSCAPE; SEE SHEET L-1
STREET LIGHT POLE (TYP)
(7) HOLLY 'NELLIE STEVENS'
(21) CRAPE MYRTLE 'MUSKOGEE'
(13) LIVE OAK
(52) BALD CYPRESS
STORMWATER POND
(6) CRAPE MYRTLE 'TUSKEGEE'
(31) SLASH PINE
(1) LIVE OAK
(7) BALD CYPRESS
(6) LIVE OAK
BAHIA SOD
(11) RED MAPLE
(7) WAX MYRTLE
EXISTING WETLAND

0' 30' 60' 120' 180'
SCALE: 1" = 60'-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

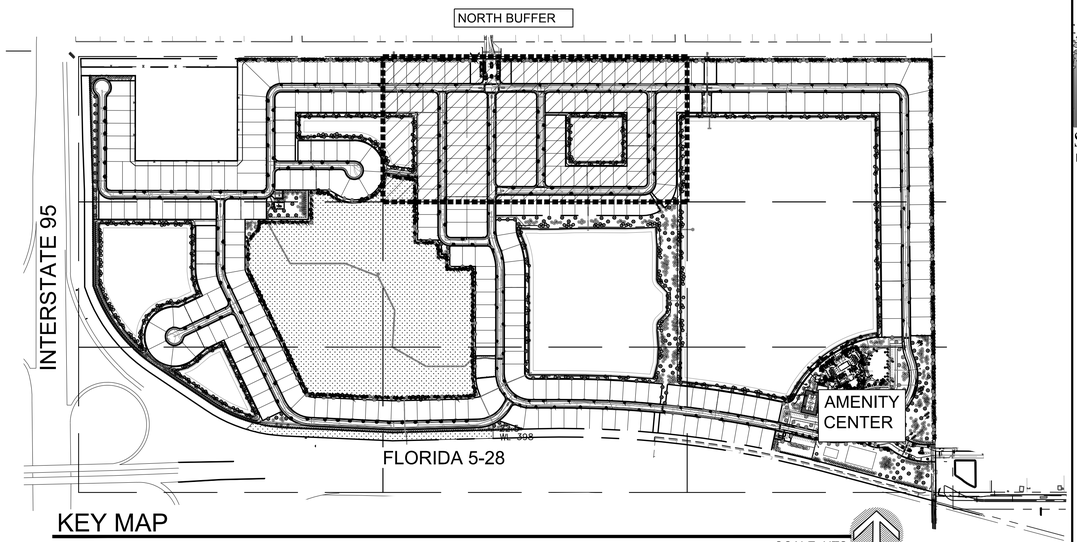
DATE 09-22-21
DESIGN S.H.
DRAWN S.K.
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #85 LICENSED FLORIDA
01-26-24

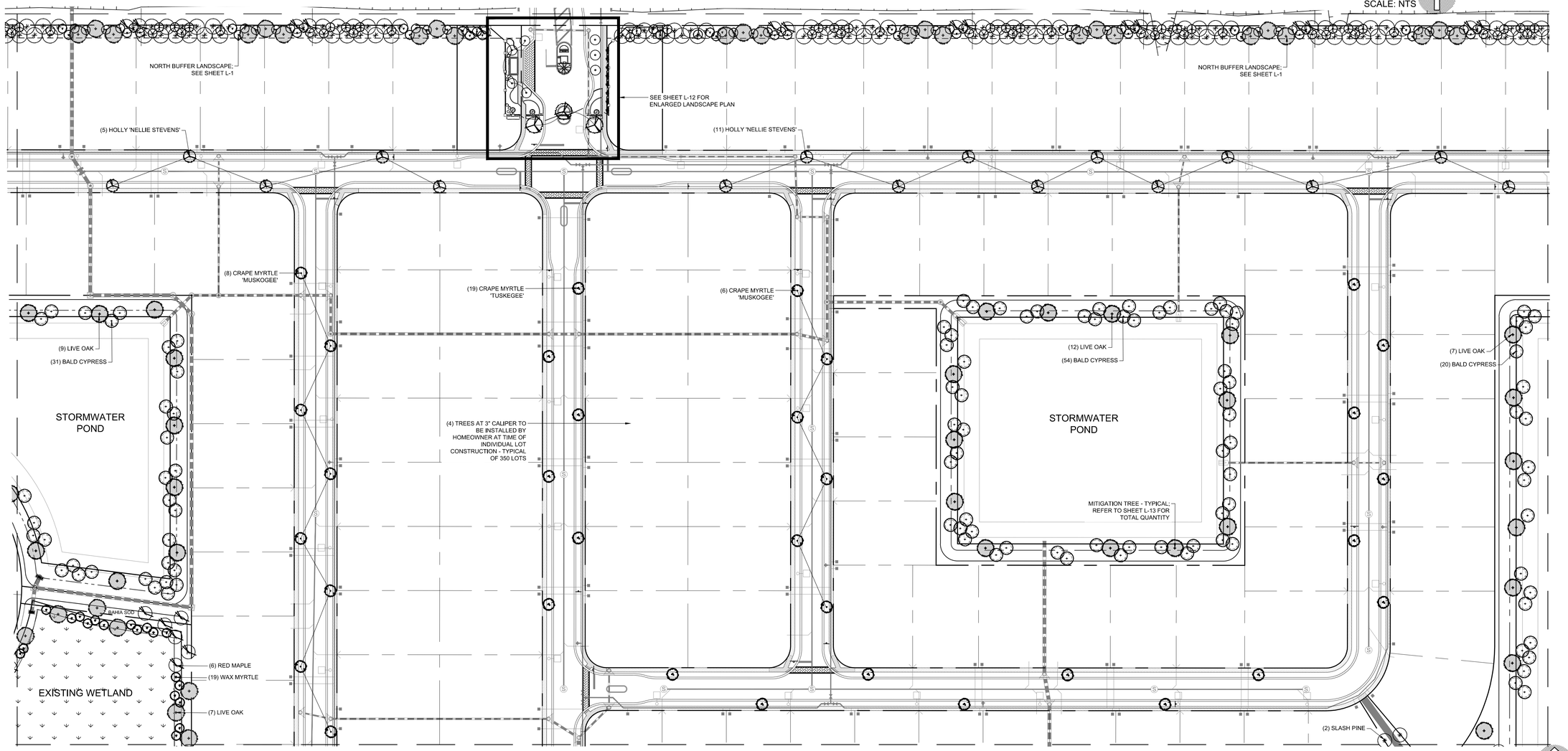
SHEET L-2 OF 25

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.



KEY MAP

SCALE: NTS



0' 30' 60' 120' 180'

SCALE: 1" = 60'-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE 09-22-21

DESIGN S.H.

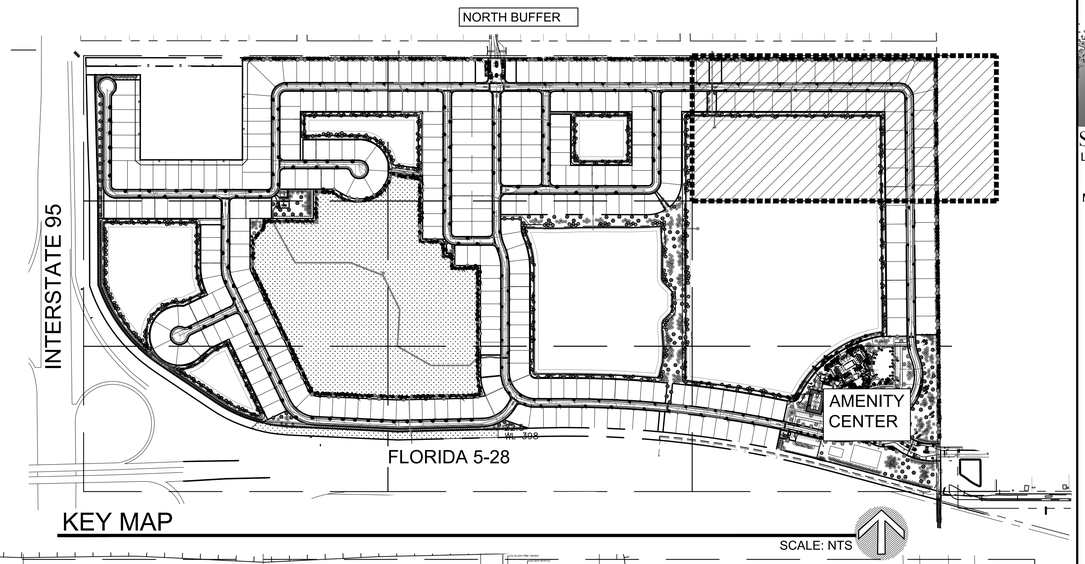
DRAWN S.K.

SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 02-27-23
3 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN TRACY HALL TYSON #85 LANDSCAPE ARCHITECT STATE OF FLORIDA
01-26-24

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.



KEY MAP

SCALE: NTS

NORTH BUFFER LANDSCAPE; SEE SHEET L-1

5 (16) HOLLY 'NELLIE STEVENS'

(2) LIVE OAK

(6) SLASH PINE

5 (4) TREES AT 3" CALIPER TO BE INSTALLED BY HOMEOWNER AT TIME OF INDIVIDUAL LOT CONSTRUCTION - TYPICAL OF 350 LOTS

(48) BALD CYPRESS

(12) LIVE OAK

STORMWATER POND

EAST BUFFER LANDSCAPE; SEE SHEET L-1

0' 30' 60' 120' 180'

SCALE: 1" = 60'-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

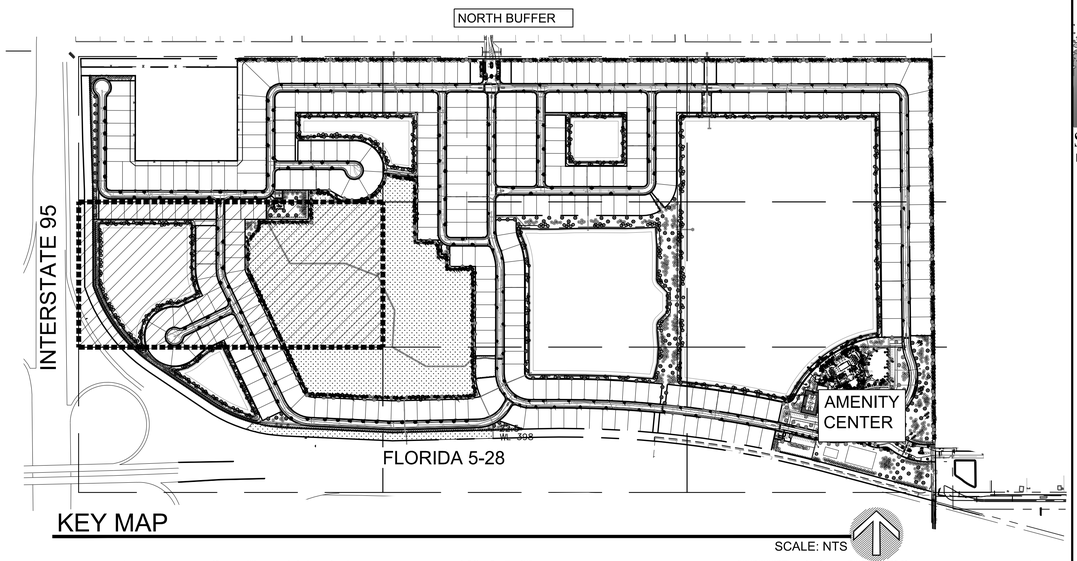
SCALE 1" = 60'-0"

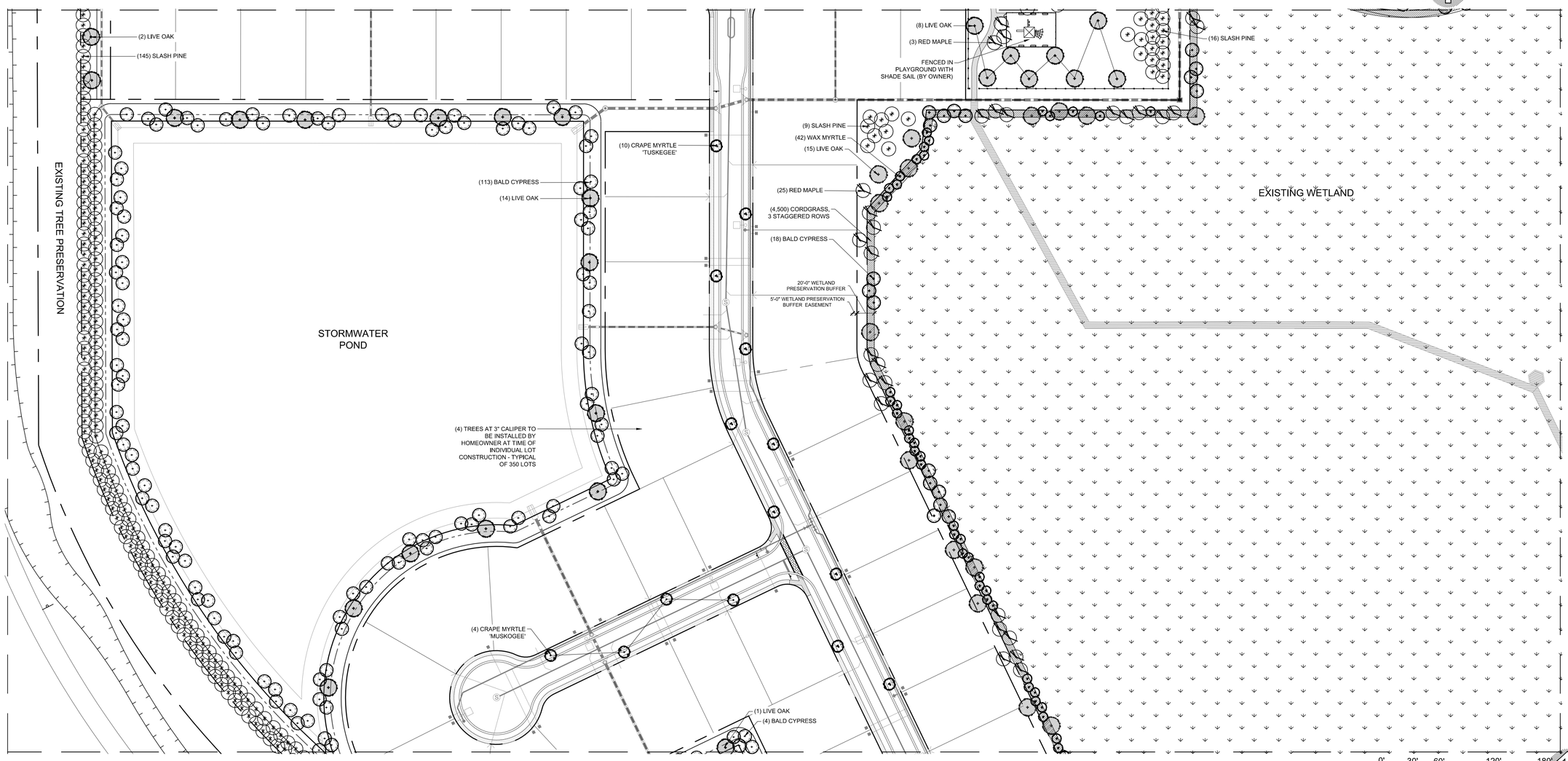
REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #850 FLORIDA
01-26-24

SHEET L-4 OF 25

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.





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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

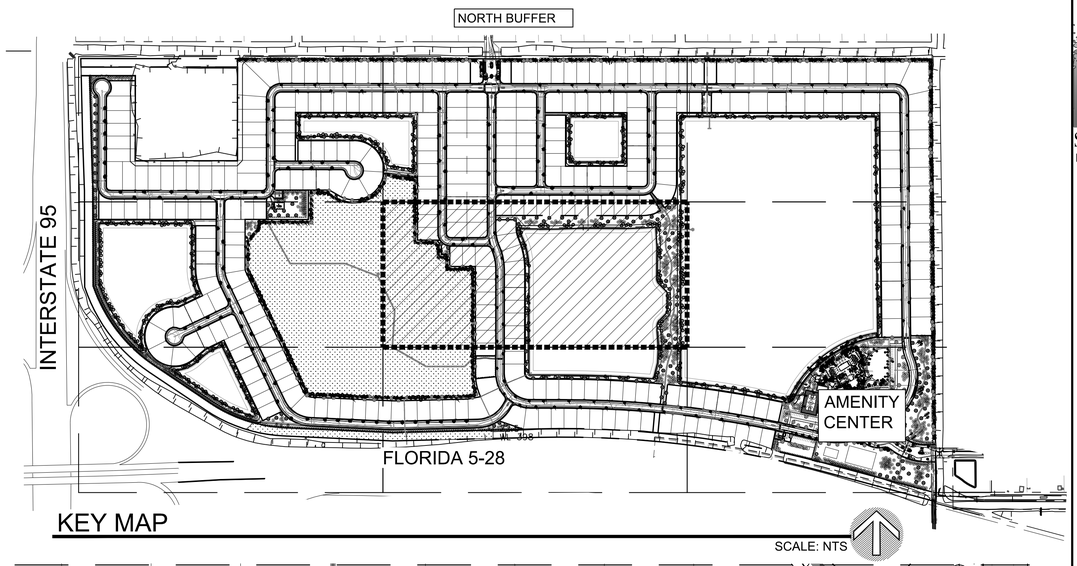
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL LEE ISOM
REGISTERED LANDSCAPE ARCHITECT
FLORIDA
01-26-24

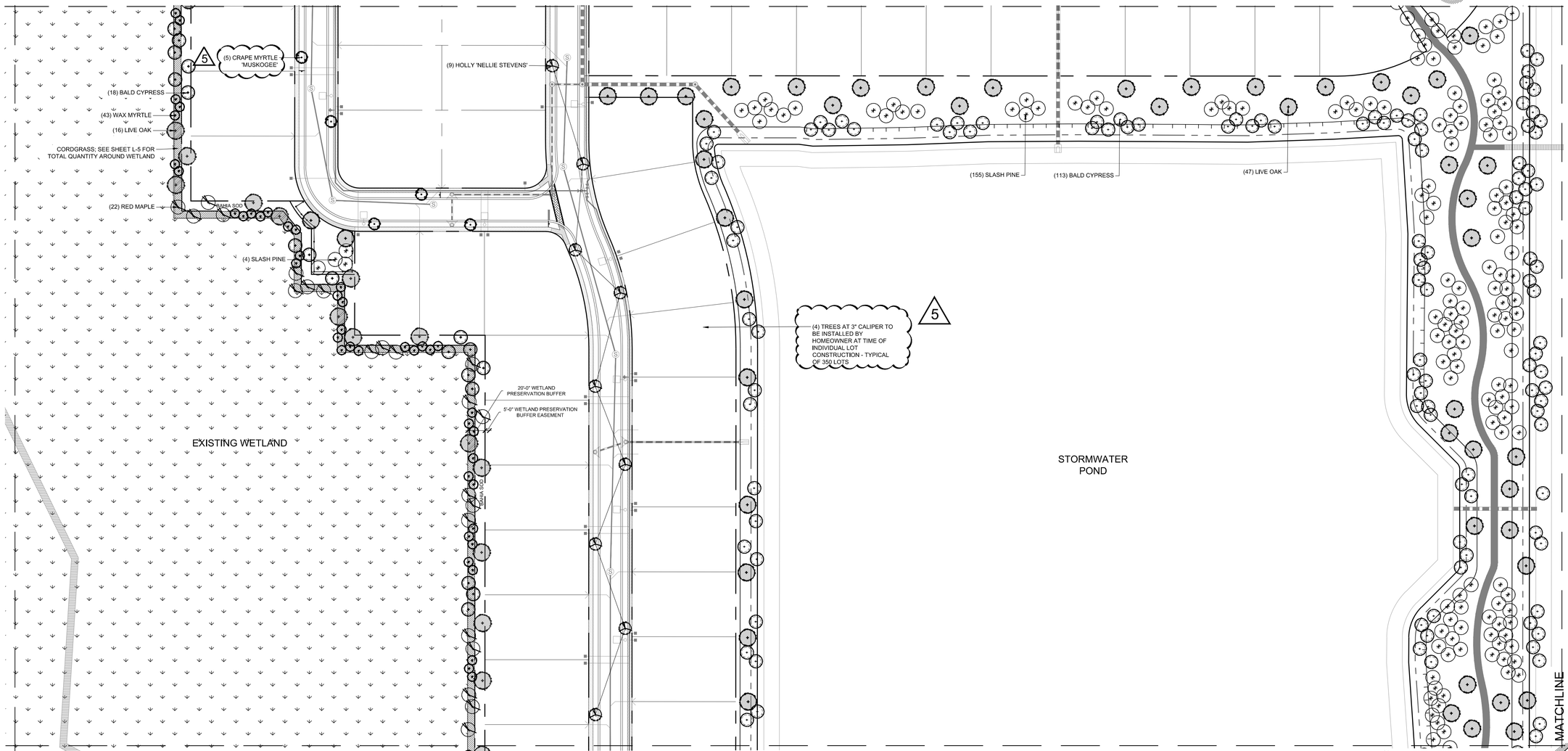
SHEET L-5 OF 25

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.



KEY MAP

SCALE: NTS



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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

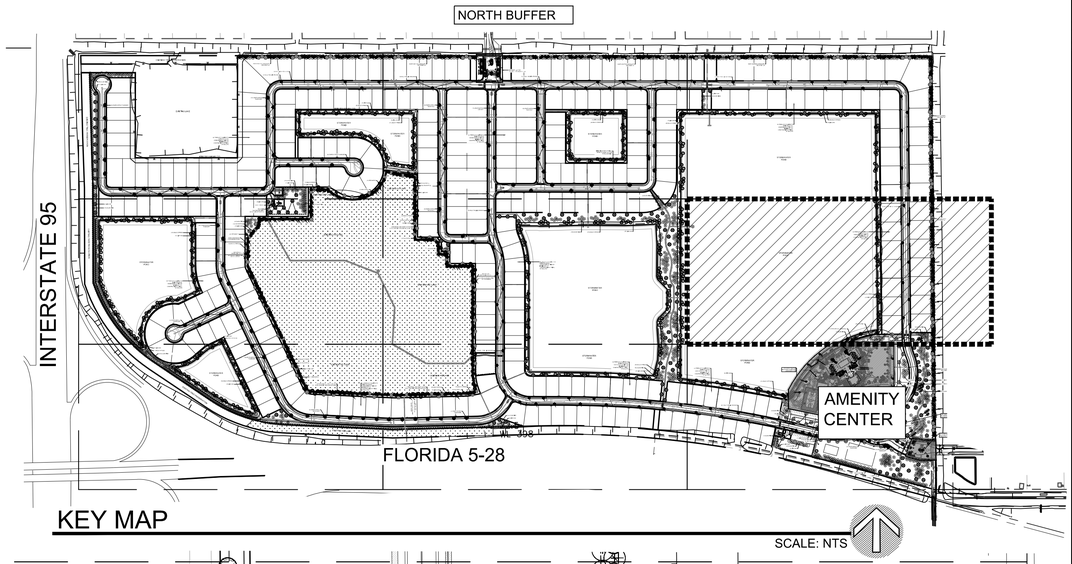
SCALE 1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
5 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL LANDSCAPE ARCHITECT LC26000357 STATE OF FLORIDA
01-26-24

SHEET L-6 OF 25

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.



KEY MAP

SCALE: NTS

MATCHLINE

STORMWATER POND

5 (4) TREES AT 3" CALIPER TO BE INSTALLED BY HOMEOWNER AT TIME OF INDIVIDUAL LOT CONSTRUCTION - TYPICAL

(7) HOLLY 'NELLIE STEVENS'

EAST BUFFER LANDSCAPE; SEE SHEET L-1

(30) BALD CYPRESS

(10) LIVE OAK

(9) SLASH PINE

(1) CRAPE MYRTLE 'MUSKOGEE'

(3) MAGNOLIA

(12) SLASH PINE

(3) RED MAPLE

0' 30' 60' 120' 180'

SCALE: 1" = 60'-0"

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SHEET TITLE
Common Area Planting Plan

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

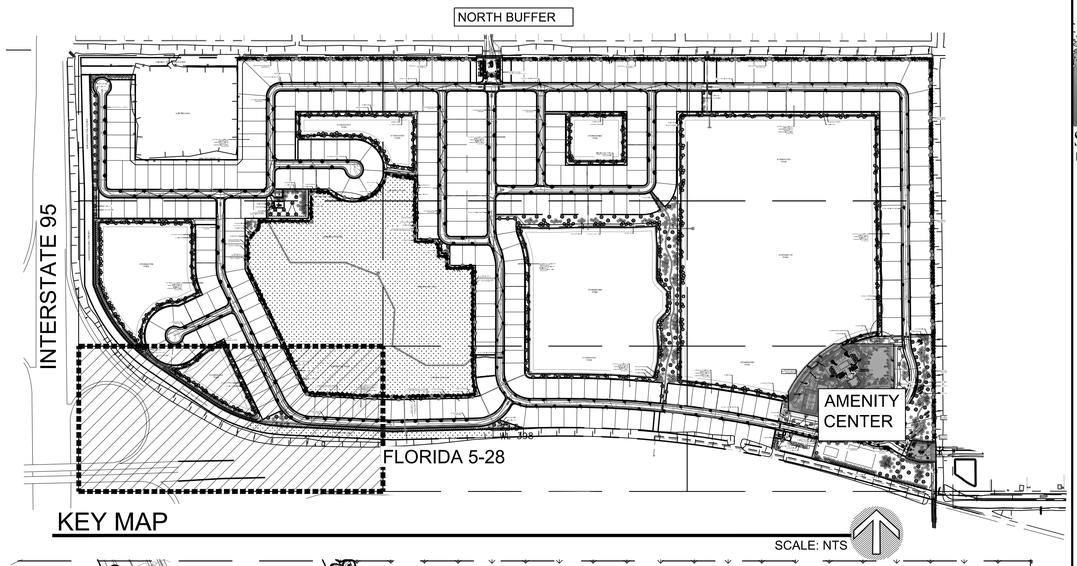
SCALE 1" = 60'-0"

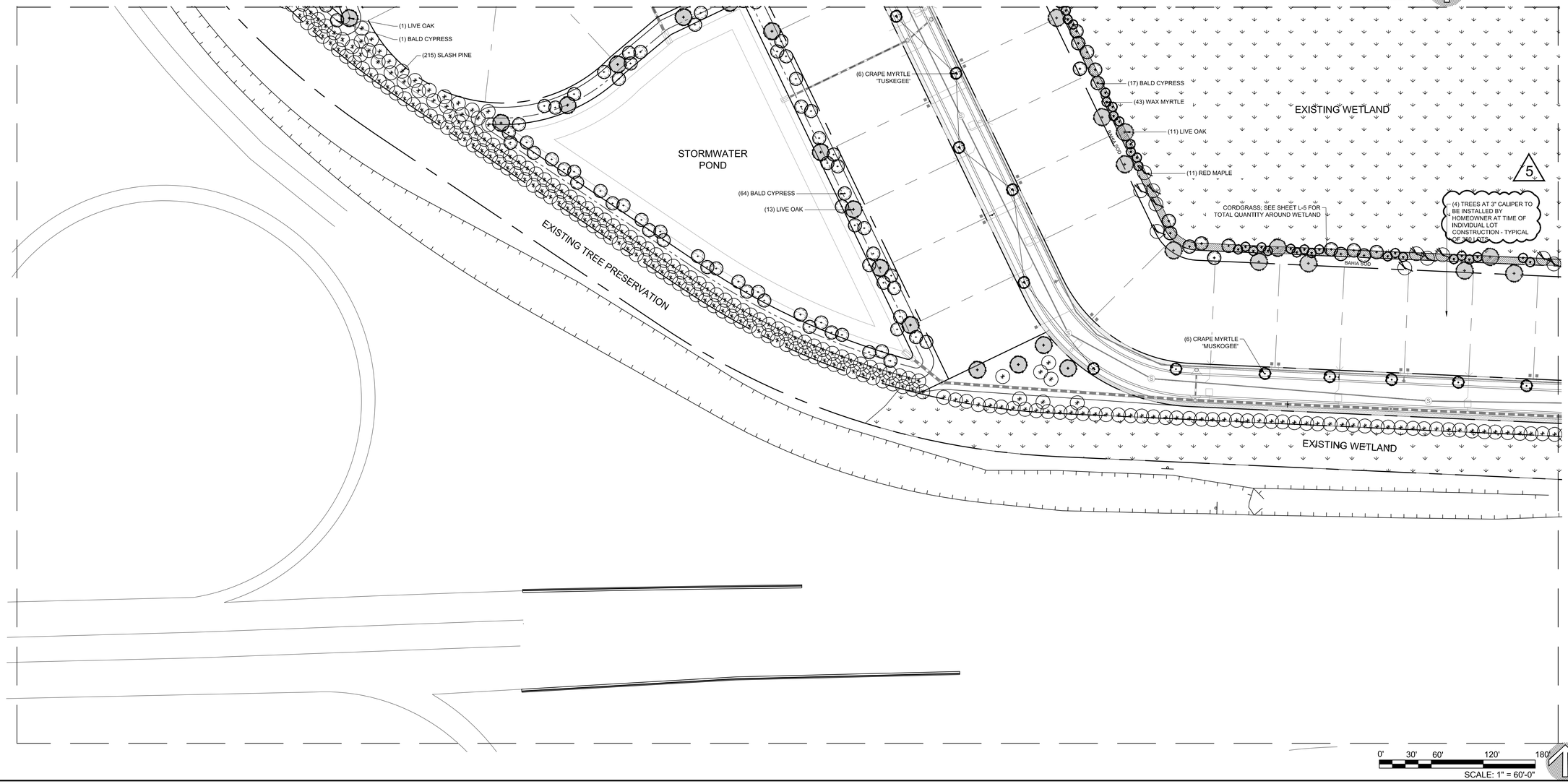
REVISIONS
1 RESPONSE TO COMMENT 08-31-22
5 RESPONSE TO COMMENT (AMIENITY REVISION) 01-26-24

SEAL
SUSAN HALL LANDSCAPE ARCHITECT LC26000357 STATE OF FLORIDA
01-26-24

SHEET L-7 OF 25

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.





Susan Hall, ASLA
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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE
09-22-21

DESIGN
S.H.

DRAWN
S.K.

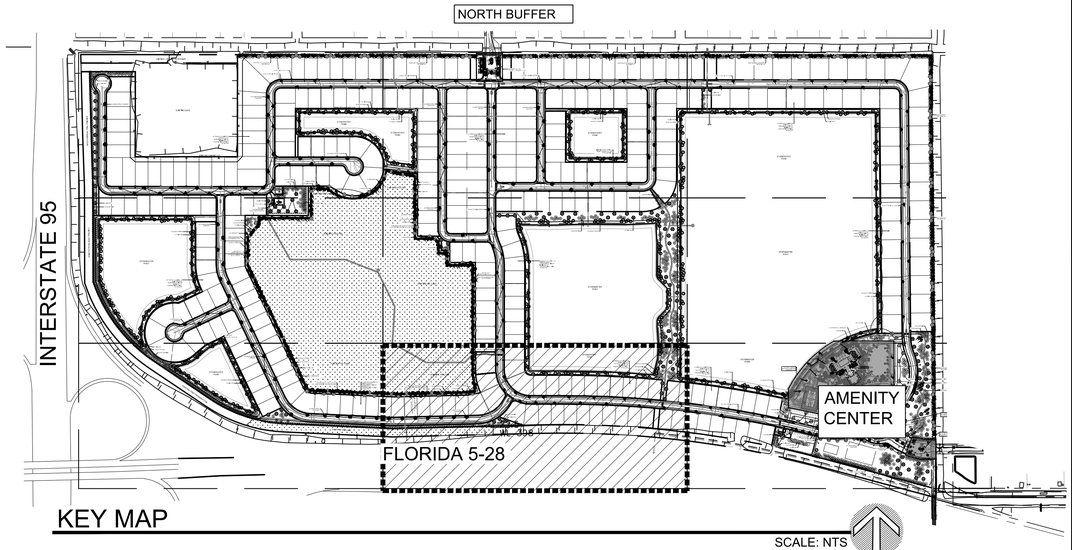
SCALE
1" = 60'-0"

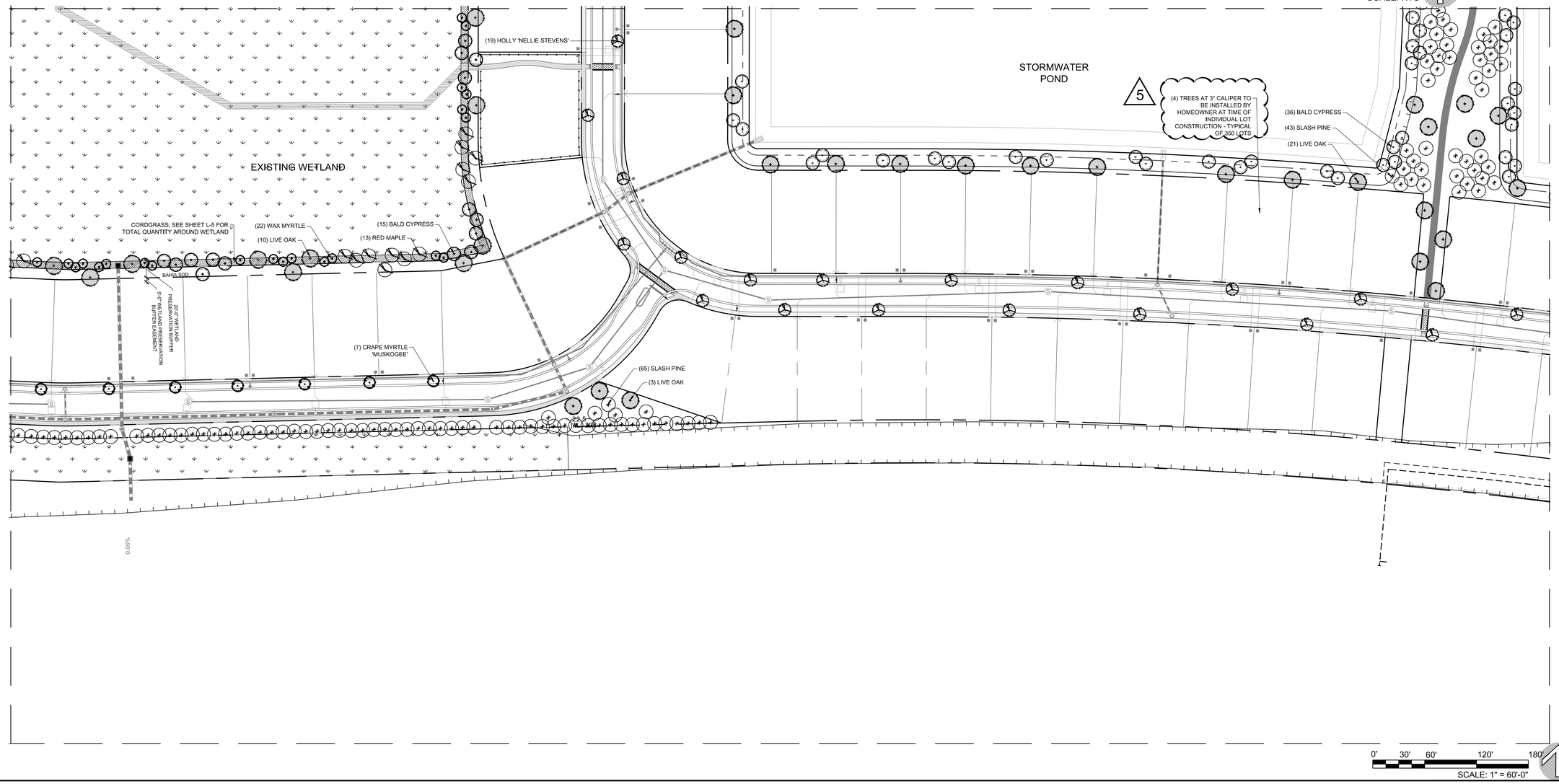
REVISIONS
1 RESPONSE TO COMMENT 08-31-22
5 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
REGISTERED LANDSCAPE ARCHITECT #850 STATE OF FLORIDA
01-26-24

SHEET L-8 OF 25

5 REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.





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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE 09-22-21

DESIGN S.H.

DRAWN S.K.

SCALE 1" = 60'-0"

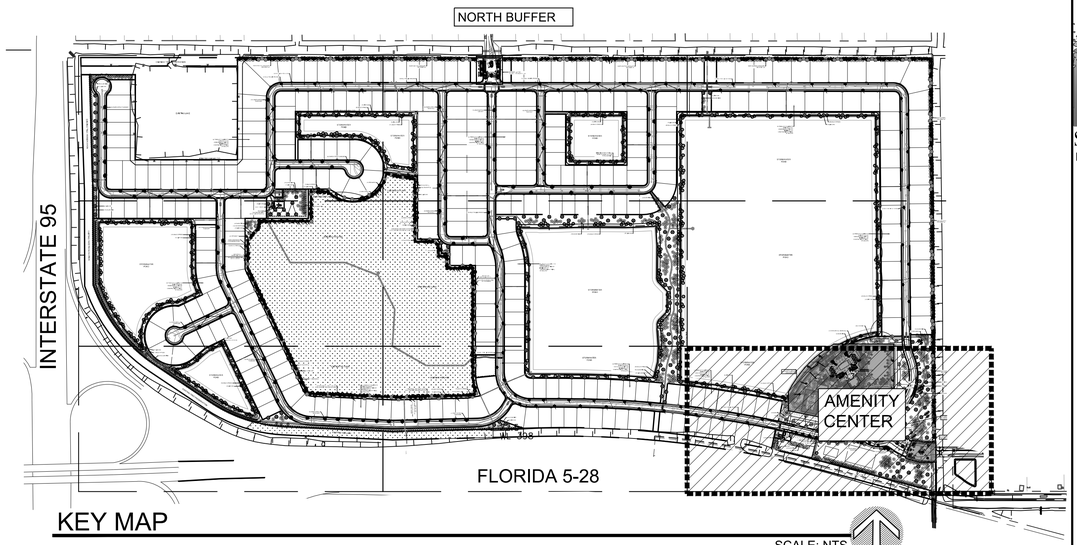
REVISIONS
1 RESPONSE TO COMMENT 08-31-22
5 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL REG. NO. 6666 LANDSCAPE ARCHITECT STATE OF FLORIDA
01-26-24

SHEET L-9 OF 25

5

REVISION 5 NOTE:
TREE MITIGATION LANDSCAPE ADDED
THROUGHOUT THE SITE'S COMMON AREAS.



KEY MAP

SCALE: NTS

5

(4) TREES AT 3" CALIPER TO BE INSTALLED BY HOMEOWNER AT TIME OF INDIVIDUAL LOT CONSTRUCTION - TYPICAL OF 350 LOTS

STORMWATER POND

(8) LIVE OAK

(21) BALD CYPRESS

(6) HOLLY 'NELLIE STEVENS'

(4) SLASH PINE

(12) LIVE OAK

(7) SLASH PINE

(13) RIBBON PALM

(6) SLASH PINE

(9) LIVE OAK

(3) LIVE OAK

(6) SLASH PINE

(2) LIVE OAK

SEE SHEET 10.1 FOR ENLARGED CLUBHOUSE LANDSCAPE PLAN

TOT LOT

POOL

POOL CLUBHOUSE FITNESS CENTER AND RESTROOMS

COVERED PAVILION

BASKETBALL COURT

TENNIS COURTS

MAIL KIOSK

PAVERS

(4) MAGNOLIA

EVENT LAWN (COMMON BERMUDA TURF)

50' X 80' MULTI USE SPORTS FIELD - COMMON BERMUDA TURF

100' X 165' MULTI USE SPORTS FIELD - COMMON BERMUDA TURF

(3) CRAPE MYRTLE 'MUSKOGEE'

(3) CRAPE MYRTLE 'MUSKOGEE'

(136) SLASH PINE

(13) LIVE OAK

EAST BUFFER LANDSCAPE; SEE SHEET L-1

(11) SLASH PINE

PAVERS

(21) LIVE OAK

(11) RED MAPLE

(82) SLASH PINE

(7) LIVE OAK

(4) MAGNOLIA

SEE SHEET 10.2 FOR ENLARGED ROUNDABOUT LANDSCAPE PLAN

(2) RIBBON PALM

SEE SHEET L-11 FOR ENLARGED FRONT ENTRY LANDSCAPE PLAN

(3) MAGNOLIA

OUTFALL STRUCTURE

31+00

30+00

29+00

0' 30' 60' 120' 180'

SCALE: 1" = 60'-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Common Area Planting Plan

DATE
09-22-21

DESIGN
S.H.

DRAWN
S.K.

SCALE
1" = 60'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 02-27-23
3 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
REGISTERED LANDSCAPE ARCHITECT SUSAN HALL #850 FLORIDA
01-26-24

SHEET L-10 OF 25

HAMMOCK LAWN (SYNTHETIC TURF)

FIRE PIT ON PAVERS IN SYNTHETIC TURF LAWN

FENCED IN PLAYGROUND WITH SHADE SAIL (BY OWNER)

TOT LOT

COVERED PAVILION

BASKETBALL COURT
(SPORTSMASTER ACRYLIC COAT OVER ASPHALT)

TENNIS COURTS
(SPORTSMASTER ACRYLIC COAT OVER ASPHALT)

PAVERS

POOL

SUNSHELF

CABANA TYP

BBQ AREA WITH GRILLS AND PERGOLA

CORNHOLE

POOL CLUBHOUSE, FITNESS CENTER, AND RESTROOMS

EVENT LAWN (COMMON BERMUDA TURF)

FIRE TABLES AND LOUNGE SEATING

WATER FEATURE

CONCRETE WALK

BIKE RACKS

EV

IRRIGATION NOTE:
ALL LANDSCAPE AROUND THE CLUBHOUSE AND COMMON AMENITIES WILL BE IRRIGATED AS PART OF THE OVERALL SYSTEM DRAWN FROM THE LAKE AND PROVIDING 100% COVERAGE.

0' 10' 20' 40' 60'
SCALE: 1" = 20 '-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Clubhouse Landscape Plan

DATE 09-22-21

DESIGN S.H.

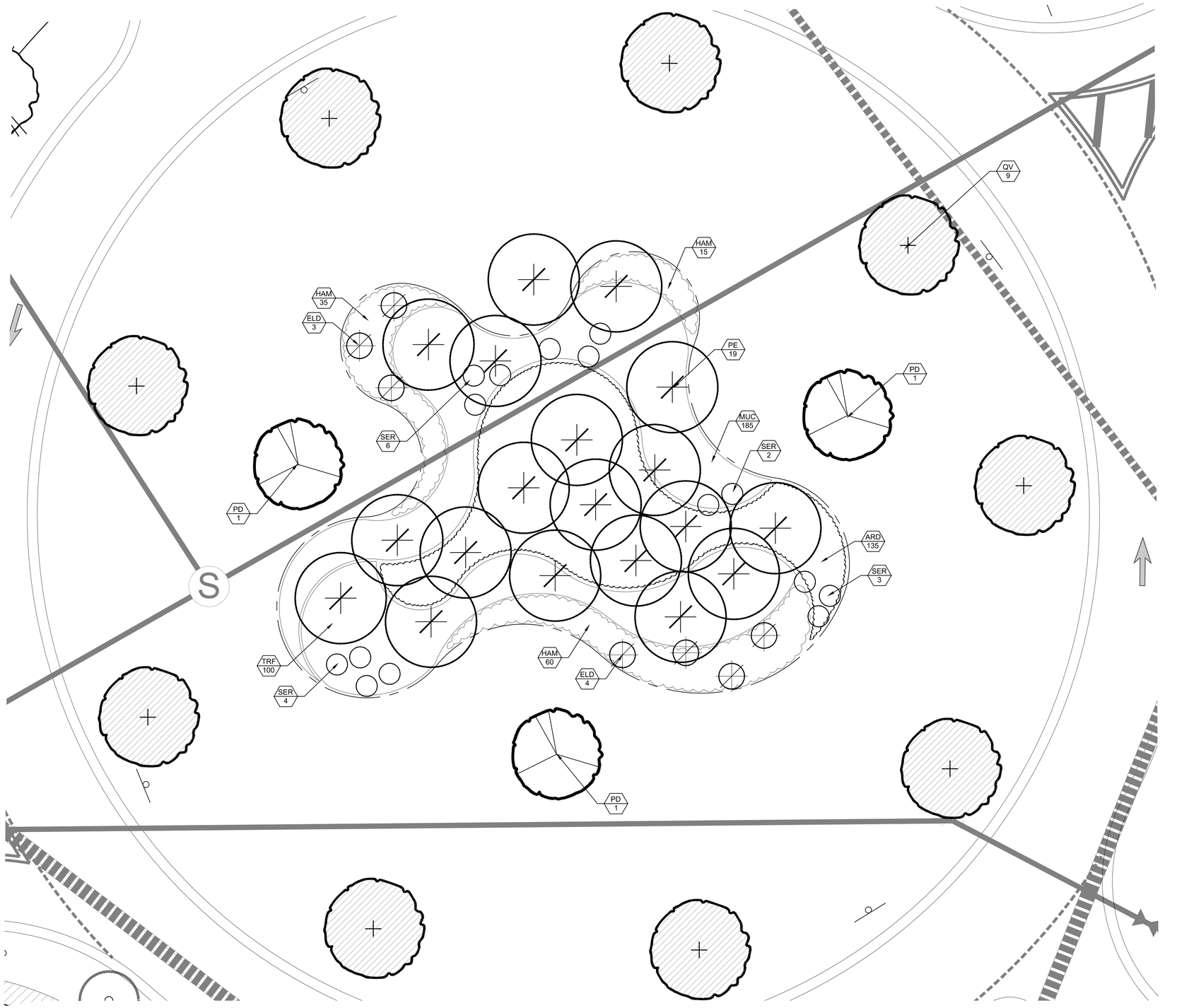
DRAWN M.M.

SCALE 1" = 20'-0"

REVISIONS
5 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #85 STATE OF FLORIDA
01-26-24

5 L-10.1 SHEET 25 OF



0' 5' 10' 20' 30'
SCALE: 1" = 10'-0"

Susan Hall, ASLA
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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Round-a-bout
Landscape Plan

DATE 09-22-21

DESIGN S.H.

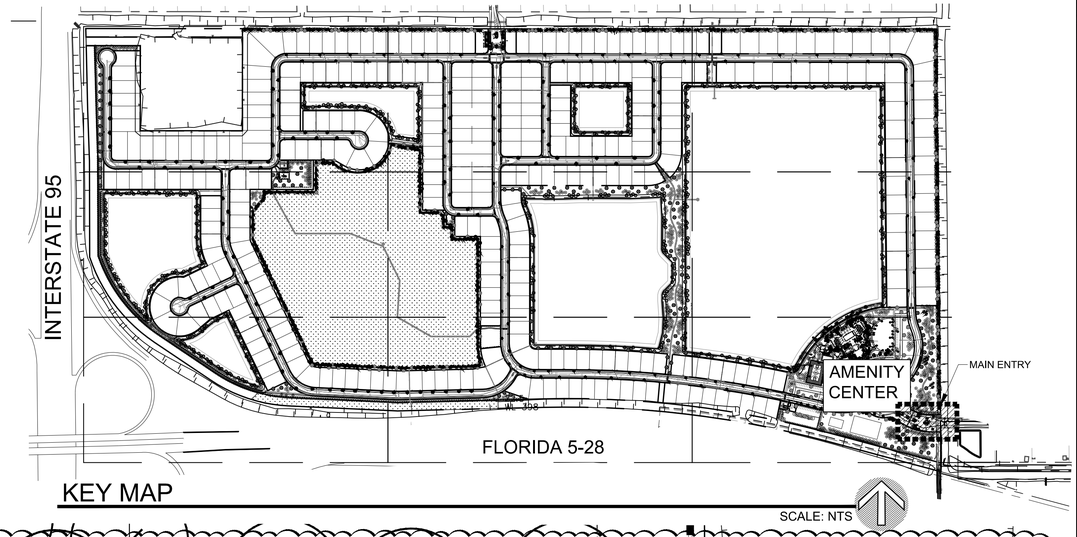
DRAWN M.M.

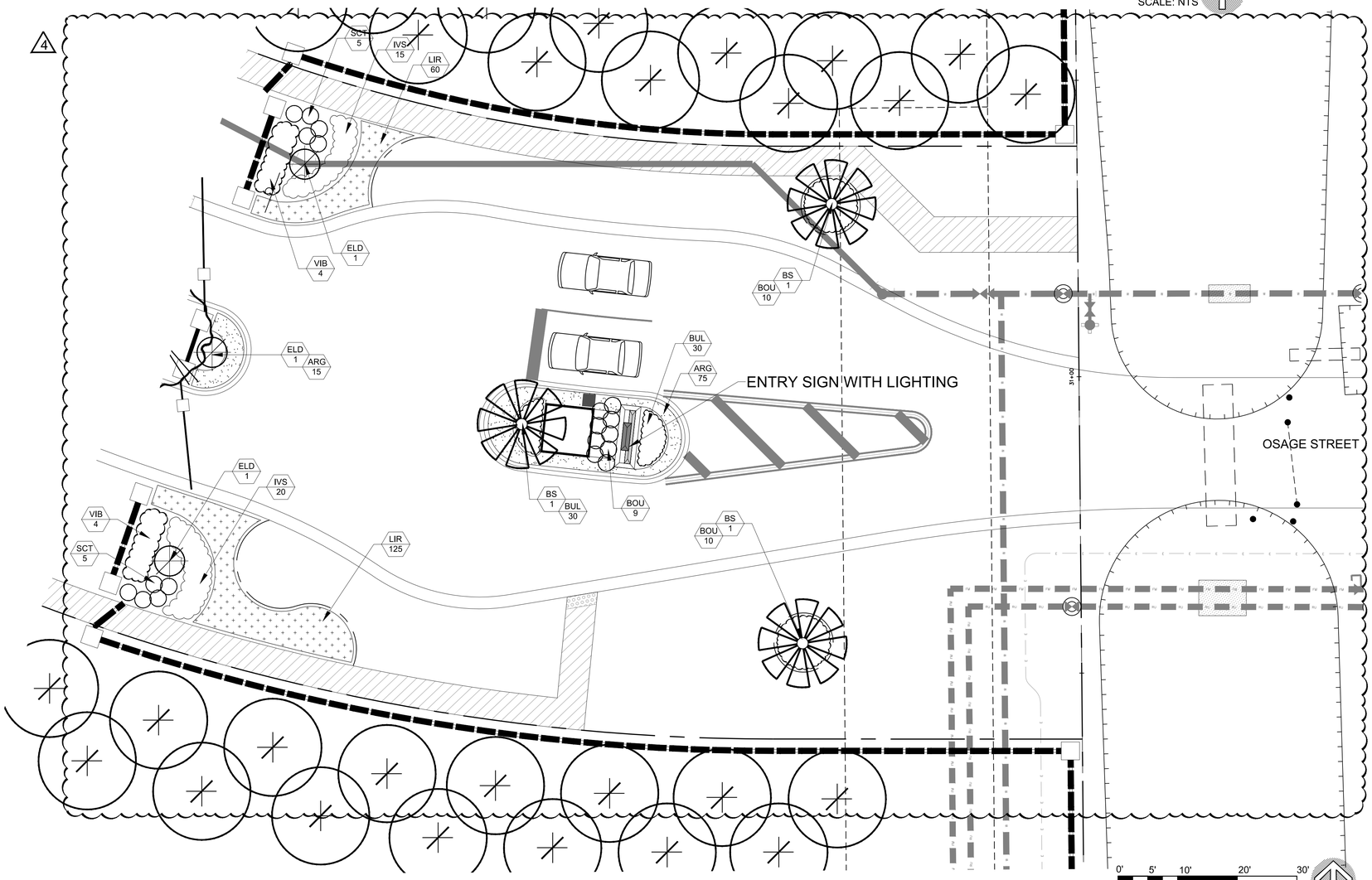
SCALE 1" = 10'-0"

REVISIONS
5 RESPONSE TO COMMENT (AMENITY REVISION) 01-26-24

SEAL
SUSAN HALL LICENSED LANDSCAPE ARCHITECT 6666667 STATE OF FLORIDA
01-26-24

5 L-10.1 SHEET 25 OF





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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Main Entry Landscape Plan

DATE 02-27-23

DESIGN S.H.

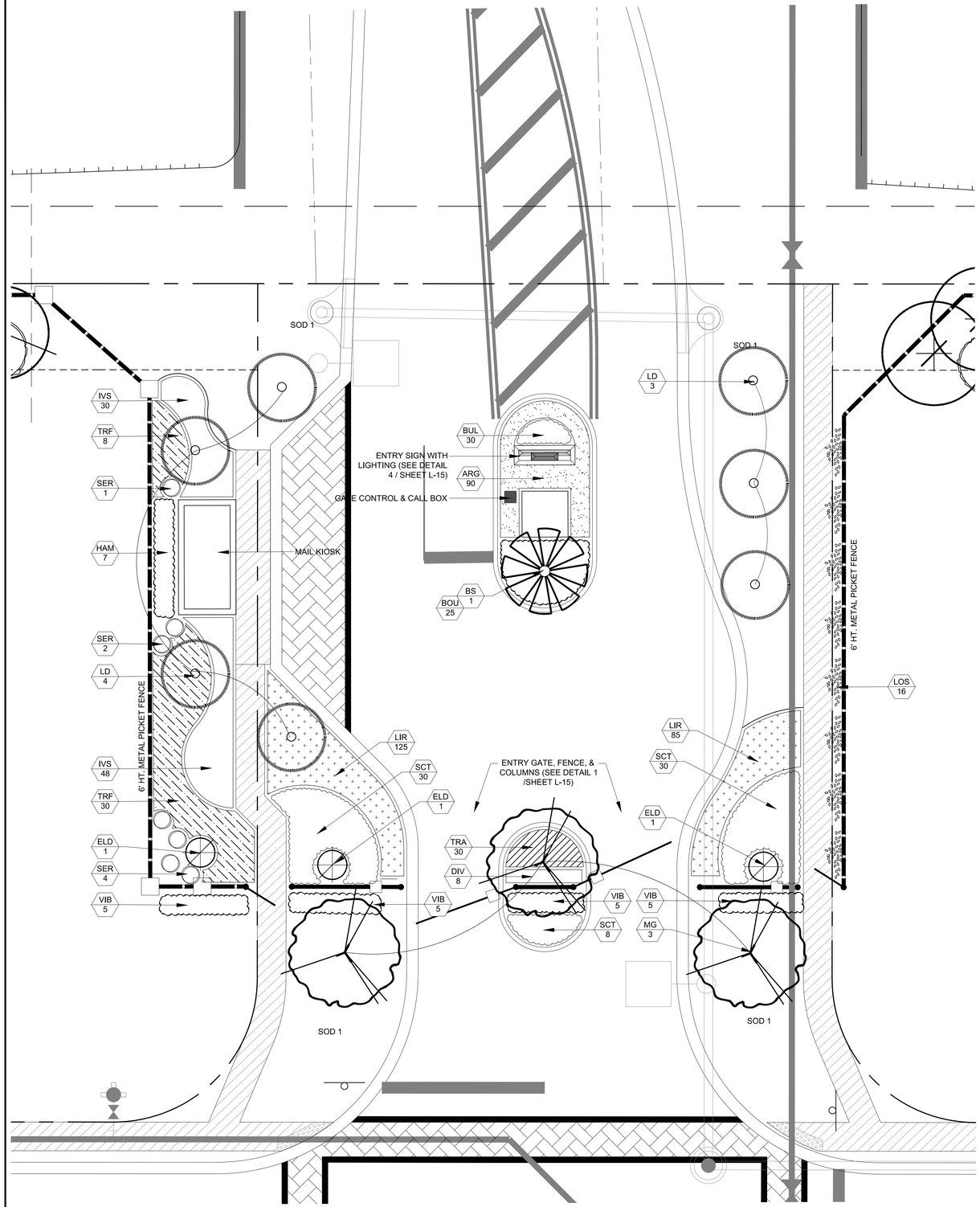
DRAWN M.M.

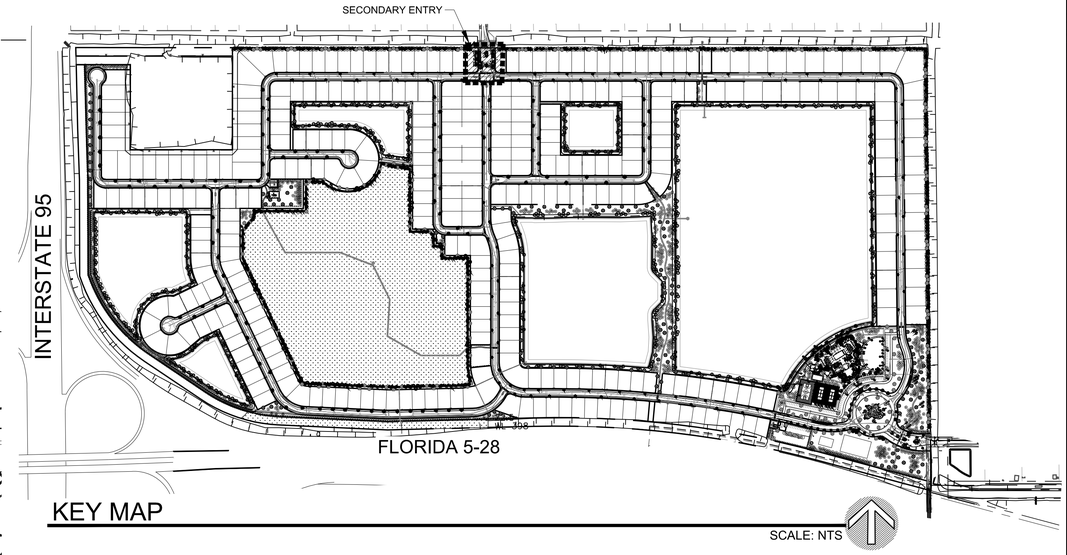
SCALE 1" = 10'-0"

REVISIONS
1 RESPONSE TO COMMENT 02-27-23
2 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

SEAL
SUSAN HALL REGISTERED LANDSCAPE ARCHITECT FLORIDA
01-26-24

L-11 SHEET | 25 OF





SCALE: 1" = 10'-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10

Cocoa, FL

SHEET TITLE
Secondary Entry Landscape Plan

DATE
09-22-21

DESIGN
S.H.

DRAWN
M.M.

SCALE
1" = 10'-0"

REVISIONS
1 RESPONSE TO COMMENT 02-27-23

SEAL
01-26-24

L-12 SHEET 25 OF

North Buffer Plant List - The Lakes at Cocoa Groves

5

PLANT MATERIAL

TREES & PALMS

QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING
57	*Quercus virginiana*	Live Oak	45G	12' ht x 5' spd x 3" caliper; Florida Grade#1	As Shown
38	*Acer rubrum 'Florida Flame'*	Red Maple 'Florida Flame'	FG	12' ht x 5' spd x 3" caliper; min.	As Shown
237	*Pinus elliottii 'Densa'*	Slash Pine 'Densa'	FG	staggered ht 12-14' ht x 3-4' spd x 3" caliper min.	As Shown
289	*Myrica cerifera*	Wax Myrtle	Container	6' ht x 3" caliper; multi trunk	As Shown
621	**Sub Total of Trees**				

Sections; Refer to key Map

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	9
15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	4

East Buffer Plant List - The Lakes at Cocoa Groves

PLANT MATERIAL

TREES & PALMS

QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING
33	*Quercus virginiana*	Live Oak	45G	12' ht x 5' spd x 3" caliper; Florida Grade#1	As Shown
22	*Acer rubrum 'Florida Flame'*	Red Maple 'Florida Flame'	FG	12' ht x 5' spd x 3" caliper; min.	As Shown
132	*Pinus elliottii 'Densa'*	Slash Pine 'Densa'	FG	staggered ht 12-14' ht x 3-4' spd x 3" caliper min.	As Shown
165	*Myrica cerifera*	Wax Myrtle	Container	6' ht x 3" caliper; multi trunk	As Shown
352	**Sub Total of Trees**				

Sections; Refer to key Map

A-1	B-1	C-1	D-1	E-1	F-1	G-1	H-1	I-1	J-1	K-1
3	3	3	3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2	2	2	2
12	12	12	12	12	12	12	12	12	12	12
15	15	15	15	15	15	15	15	15	15	15

ABBREVIATIONS

CAL - CALIPER
CONC. - CONCRETE
C.T. - CLEAR TRUNK
CY - CUBIC YARD
EA. - EACH
EX. - EXISTING
FFE - FINISHED FLOOR ELEVATION
FG - FIELD GROWN
FM - FORCE MAIN
FTB - FULL TO BASE
G - GALLON
GAL - GALLON
GW - GREY WOOD
HT - HEIGHT
LF - LINEAR FOOT
MT - MULTI TRUNK
OC - ON CENTER
OA - OVERALL HEIGHT
PLTG. - PLANTING
SF - SQUARE FEET
SPD - SPREAD
TOB - TOP OF BANK
TYP. - TYPICAL

Streetscape & Common Area - Lakes at Cocoa Grove

5

PLANT MATERIAL

QTY	CODE	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING	SHEET NUMBERS								
TREES							L-2	L-3	L-4	L-5	L-6	L-7	L-8	L-9	L-10
105		*Acer rubrum 'Florida Flame'*	Red Maple 'Florida Flame'	45g	12'ht, full to base, 3" caliper minimum	As Shown	11	6		28	22	3	11	13	11
80		*Ilex 'Nellie R. Stevens'*	Holly 'Nellie Stevens'	45g	10'ht, full to base, 3" caliper minimum	As Shown	7	16	16		9	7		19	6
64		*Lagerstroemia indica 'Muskogee'*	Crape Myrtle 'Muskogee'	30g	10' ht., multi trunk, 3" caliper minimum	As Shown	21	14		4	5	1	6	7	6
47		*Lagerstroemia indica 'Tuskegee'*	Crape Myrtle 'Tuskegee'	30g	10' ht., multi trunk, 3" caliper minimum	As Shown	12	19		10			6		
14		*Magnolia grandiflora 'DD Blanchard'*	Magnolia 'DD Blanchard'	100g	14' ht. x 5' spd., 5' clear trunk, 4"caliper minimum	As Shown						3			11
176		*Myrica cerifera*	Wax Myrtle	Container	6' ht x 3" caliper; multi trunk	As Shown	7	19		42	43		43	22	
1049		*Pinus elliottii 'densa'*	Slash Pine	FG	12' ht. x 5' spd., 3"caliper minimum	As Shown	116	2	6	170	159	21	215	108	252
329		*Quercus virginiana*	Live Oak	45g	12' ht. x 6' spd., 3"caliper minimum	As Shown	33	35	14	40	63	10	25	34	75
662		*Taxodium distichum*	Bald Cypress	FG	12' ht. x 5' spd., 3"caliper minimum	As Shown	59	105	48	135	131	30	82	51	21
2526	**Sub Total Trees**														
PALMS							L-2	L-3	L-4	L-5	L-6	L-7	L-8	L-9	L-10
15		*Livistona Decipiens*	Ribbon Palm	FG	8',12',15' staggered clear trunk hts.	As Shown									15
SHRUBS & GROUNDCOVERS							L-2	L-3	L-4	L-5	L-6	L-7	L-8	L-9	L-10
4500		*Spartina bakeri*	Cordgrass	1G	14"ht., full	36" oc				4500					

Entry Landscape Plant List - Lakes at Cocoa Grove

5

PLANT MATERIAL

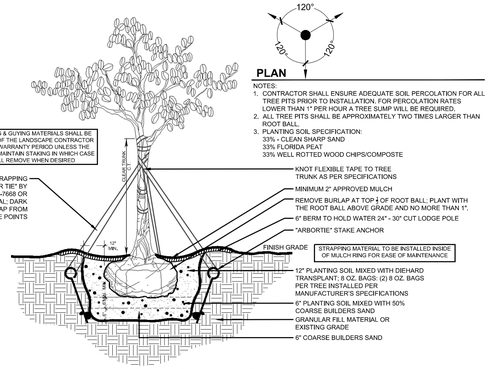
QTY	CODE	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING	SHEET NUMBERS		NATIVE	WATER WISE
TREES							L-11	L-12		
3	MG	*Magnolia grandiflora 'DD Blanchard'*	Magnolia 'DD Blanchard'	100g	14' ht. x 5' spd., 5' clear trunk, 4"caliper minimum	As Shown		3	✓	✓
3	**Subtotal of Trees**									
PALMS							L-11	L-12		
7	LD	*Livistona Decipiens*	Ribbon Palm	FG	8' clear trunk ht., diamond cut trunk, matched	As Shown		7		✓
4	BS	*Bismarkia nobilis 'Silver Select'*	Silver Bismarkia Palm	100g	12' overall planted height	As Shown	3	1		✓
SHRUBS & GROUNDCOVERS							L-11	L-12		
180	ARG	*Arachis glabrata*	Perennial Peanut	1g	4" ht. x 12" spd.	18" oc	90	90		✓
54	BOU	*Bougainvillea 'Helen Johnson Dwarf'*	Dwarf Bougainvillea 'Helen Johnson'	7g	18"ht. x 18"spd.	30"oc	29	25		✓
6	ELD	*Elaeocarpus decipiens*	Japanese Blueberry	15g	5' ht., full to base	As shown	3	3		✓
8	DIV	*Dietes vegeta*	African Iris	1g	18"ht., full	24" oc		8		✓
295	LIR	*Liriope muscari 'Super Blue'*	Liriope 'Super Blue'	1g	12" ht., full	18" oc	185	110		✓
16	LOS	*Lonicera sempervirens*	Coral Honeysuckle Vine	3g	30"ht. remove wood trellis & train onto picket fence	5' oc		16	✓	✓
7	HAM	*Hamelia patens 'compacta'*	Dwarf Firebush	3g	16"ht. x 16"spd.	36" oc		7	✓	✓
113	IVS	*Ilex vomitoria 'Stokes Dwarf'*	Ilex 'Stokes Dwarf'	3g	10"ht. x 12"spd.	24" oc	35	78	✓	✓
78	SCT	*Schefflera arboricola 'Trinette'*	Variegated Arboricola 'Trinette'	3g	18"ht. x 18"spd.	30" oc	10	68		✓
90	BUL	*Bulbine frutescens 'Hallmark'*	Bulbine 'Hallmark'	1g	12"ht., full	12" oc	60	30		✓
7	SER	*Serenoa repens 'Silver Form'*	Silver Saw Palmetto	7g	14"ht. x 20"spd.	42" oc		7	✓	✓
30	TRA	*Trachelospermum asiaticum*	Asiatic Jasmine	1g	4" ht. x 12" spd.	18" oc		30		✓
30	TRF	*Tripsacum floridana*	Dwarf Fakahatchee Grass	3g	24"ht., full	42" oc		30	✓	✓
28	VIB	*Viburnum suspensum*	Sandankwa Viburnum	3g	18"ht. x 18"spd.	36" oc	8	20		✓

Clubhouse & Round-a-bout Plant List - Lakes at Cocoa Grove

5

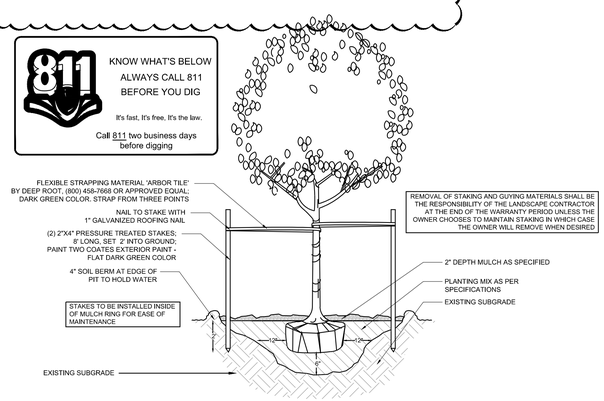
PLANT MATERIAL

QTY	CODE	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING	SHEET NUMBERS		NATIVE	WATER WISE
TREES & PALMS							L-10.1	L-10.2		
2	IN	*Ilex 'Nellie R. Stevens'*	Holly 'Nellie Stevens'	45g	10'ht, full to base, 3" caliper minimum	As Shown	2			✓
4	LM	*Lagerstroemia indica 'Muskogee'*	Crape Myrtle 'Muskogee'	30g	10' ht., multi trunk, 3" caliper minimum	As Shown	4			✓
5	LT	*Lagerstroemia indica 'Tuskegee'*	Crape Myrtle 'Tuskegee'	30g	10' ht., multi trunk, 3" caliper minimum	As Shown	5			✓
6	MG	*Magnolia grandiflora 'DD Blanchard'*	Magnolia 'DD Blanchard'	100g	14' ht. x 5' spd., 5' clear trunk, 4"caliper minimum	As Shown	6		✓	✓
3	PD	*Peltophorum dubium*	Yellow Poinciana	100g	14' ht. x 7' spd., 4"caliper minimum	As Shown		3		✓
54	PE	*Pinus elliottii 'densa'*	Slash Pine	FG	12-14' ht. x 5' spd., 3"caliper minimum	As Shown	35	19	✓	✓
33	QV	*Quercus virginiana*	Live Oak	65g	14' ht. x 7' spd., 4"caliper minimum	As Shown	24	9	✓	✓
5	TD	*Taxodium distichum*	Bald Cypress	FG	14' ht. x 5' spd., 4"caliper minimum	As Shown	5		✓	✓
112										
TREES & PALMS							L-10.1	L-10.2		
3	BS	*Bismarkia nobilis 'Silver Select'*	Silver Bismarkia Palm	100g	12' overall planted height	As Shown	3			✓
5	BM	*Butiagrus nabonnandii X*	Mule Palm	FG	12'-14' overall planted height	As Shown	5			✓
12	LD	*Livistona Decipiens*	Ribbon Palm	FG	8',12',15' staggered clear trunk hts.	As Shown	12			✓
6	PM	*Phoenix dactylifera 'Medjool'*	Medjool Date Palm	FG	12', 14', 18' staggered clear trunk heights	As Shown	6			✓
2	PR	*Phoenix reclinata*	Senegal Date Palm	FG	18'-22' mulit clear trunk height; specimen	As Shown	2			✓
5	SP	*Sabal palmetto*	Cabbage Palm	FG	8',12',15' staggered clear trunk hts.	As Shown	5		✓	✓
SHRUBS & GROUNDCOVERS							L-11	L-12		
16	AEB	*Aechmea blanchettiana 'Raspberry'*	Bromeliad 'Raspberry'	3g	18"ht. x 18"spd.	36"oc	16			✓
135	ARD	*Ardisian escallonioides*	Marlberry	7g	30"ht. x 24"spd.	48"oc		135	✓	✓
140	BOU	*Bougainvillea 'Helen Johnson Dwarf'*	Dwarf Bougainvillea 'Helen Johnson'	7g	18"ht. x 18"spd.	30"oc	140			✓
9	ELD	*Elaeocarpus decipiens*	Japanese Blueberry	15g	5' ht., full to base	As shown	2	7		✓
100	DIV	*Dietes vegeta*	African Iris	1g	18"ht., full	24" oc	100			✓
170	HAM	*Hamelia patens 'compacta'*	Dwarf Firebush	3g	16"ht. x 16"spd.	36" oc	60	110	✓	✓
260	IVS	*Ilex vomitoria 'Stokes Dwarf'*	Ilex 'Stokes Dwarf'	3g	10"ht. x 12"spd.	24" oc	260		✓	✓
335	MUC	*Muhlenbergia capillaris*	Muhly Grass	3g	18"ht., full	36" oc	150	185	✓	✓
10	PB	*Plumeria pudica 'Bridal Bouquet'*	Plumeria 'Bridal Bouquet'	25g	5'-6'ht.	As Shown	10			✓
420	SCT	*Schefflera arboricola 'Trinette'*	Variegated Arboricola 'Trinette'	3g	18"ht. x 18"spd.	30" oc	420			✓
25	SER	*Serenoa repens 'Silver Form'*	Silver Saw Palmetto	7g	14"ht. x 20"spd.	42" oc	10	15	✓	✓
490	TRF	*Tripsacum floridana*	Dwarf Fakahatchee Grass	3g	24"ht., full	42" oc	390	100	✓	✓
240	VIB	*Viburnum suspensum*	Sandankwa Viburnum	3g	18"ht. x 18"spd.	36" oc	240			✓



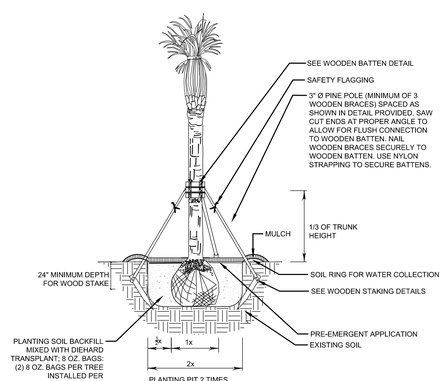
TREE PLANTING & GUYING DETAIL

N.T.S.



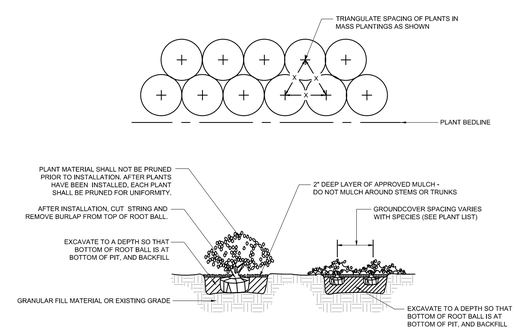
SPECIMEN TREE GUYING DETAIL

N.T.S.



PALM PLANTING DETAIL

N.T.S.



SHRUB & GROUNDCOVER PLANTING DETAIL

N.T.S.

Susan Hall, ASLA
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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Landscape Details and Plant Lists

DATE
09-22-21

DESIGN
S.H.

DRAWN
S.K.

SCALE
1" = 40'-0"

REVISIONS

1	RESPONSE TO COMMENT	08-31-22
2	RESPONSE TO COMMENT	02-27-23
3	RESPONSE TO COMMENT (ENTRY REVISION)	06-30-23
4	RESPONSE TO COMMENT (AMENITY REVISION)	01-26-24

SEAL
SUSAN HALL LANDSCAPE ARCHITECT #853 FLORIDA
01-26-24

SHEET L-13 OF 25

LANDSCAPE SPECIFICATIONS:

1.00 GENERAL

1.01 The Contractor is reminded that the General Conditions and / or Special Conditions of this contract govern the work of this section of the Specifications whether attached hereto or not. Subcontractors undertaking to perform work under this Section shall be made fully aware of these documents and of their responsibilities and obligations thereunder. In the event of any discrepancies between the drawings and specifications and the following 'Scope of Work', the latter shall prevail.

2.00 SCOPE OF WORK

2.01 The work of this Section shall include all labor, materials, equipment, appliances, and accessories necessary for the complete performance of all excavation, grading, planting and backfill work in accordance with these Specifications and the Contract Drawing. Without restricting the generality of the foregoing, the items listed below and similar items shown on the Contract Drawings shall constitute the work of this Section:

A. Finish grading and final site preparation of all areas to be landscaped.
B. Furnishing and incorporating fertilizer and other soil amendments.
C. Furnishing plant materials and grass materials and installing same.
D. Furnishing and placing 'Planting Mixture' and other miscellaneous items to complete the work.
E. Replacement of unsatisfactory plant material.
F. Clean-up.

3.00 SITE PREPARATION

3.01 The Contractor shall provide finish grading and final preparation of all areas to be landscaped to within 2" of finish grade. This will require raking and pulverizing of all areas in order to crumble dirt, clogs and / or debris. The Landscape Contractor shall be responsible for finish grading, which is the top 2" of the site.

4.00 MATERIALS

4.01 Plant materials shall be furnished by the Landscape Contractor and as indicated on the plans. All plant materials shall meet or exceed the following standards.

A. Plant species and sizes shall conform with plant list. Nomenclature shall conform to Standardized plant names, in accordance with the latest edition of the Florida Department of Agriculture's Grades and Standards for Nursery Plants.
B. All plants shall be nursery grown or as stipulated herein and shall comply with all required inspections, grading standards and plant regulations as set forth in the Florida Department of Agriculture 'Grades and Standards for Nursery Plants' , including revisions. Ensure that plant materials are shipped with tags stating the botanical and common name of the plant.
C. The minimum grade for all trees, palms, shrubs, and groundcovers shall be Florida No. 1 and shall meet or exceed the size and quality standards of the American Association of Nursery Stock, sponsored by the American Association of Nurserymen, latest addition, unless otherwise indicated and all plants shall be sound, healthy and vigorous, well-branched and densely foliated when in leaf. They shall have healthy, well developed root systems and shall be free of disease and insect pests, eggs or larvae. Florida Fancy material shall be provided where plant list specifies 'specimen'.
D. The determining measurements for trees shall be the height and spread, and shall be measured from the top of the plant to the root crown, not to include the immediate terminal growth. Their width shall be measured across the normal spread of the branches. Both measurements shall be made with the plants in their normal position.
E. Plants larger in size than those specified may be used with approval of the Landscape Architect at no additional cost to the Owner. If the use of the larger plants is approved, the ball of earth or spread of roots shall be increased proportionately.
F. Container grown plants the same quality as balled and burlapped plants may be substituted in lieu thereof. Plants grown in containers shall be delivered and remain in the containers in a shady location until planted. Plants in containers shall be watered prior to transportation and shall be kept moist until planted. The container must be removed prior to planting, with care as not to injure the roots.
G. Grass materials shall consist of the following:
   1. Sod: Solid sod shall be as indicated on the drawings. Sod must be strongly rooted and free of pernicious weeds. Mow to a height not to exceed 1 1/2" before lifting. Lifts shall have a uniform thickness of 1 inch to 1 1/2 inches. Sod containing nutgrass, lippia water sedge, dollar weed, or other common turfweed species (if applicable), will not be accepted.
   2. Sodding installation:
      a) Sodding shall be done as soon as practical following finish grading. The day before sod installation, the contractor shall rake 50# Milorganite per 1000 sf of area to receive sod. Ground shall be leveled with the back of a rake and sod laid with joints closely butted so that no voids are visible, keeping surface of sod flush with the adjoining seeded areas and or pavements. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Hand tamp to ensure contact with subgrade, and water thoroughly with a fine spray immediately after laying.
      b) After sod is in place, it shall be top dressed with sufficient sharp, clean 60% sand/40% muck soil mix to fill all voids remaining and thoroughly watered to wash the top dressing into the sodded surface.
      c) All sod areas shall then be rolled using a vibrating #1500 sod roller if deemed necessary by the Landscape Architect, following installation.
      d) It is the Landscape Contractor's responsibility to keep new sod properly watered until completion of the contract. All watering shall meet specifications according to 'Grades and Standards' Section 983.

H. Substitutions in plant species or size will be made only with prior written permission of the Landscape Architect.
I. If, in the opinion of the Landscape Architect, materials and/or work do not conform with the plans and specifications, it may be rejected and upon rejection, must be removed immediately from the site by the Contractor and replaced.
J. The Contractor shall be responsible for the certification and inspection of plant material that may be required by local, state, or federal authorities and shall bear the cost of the same, if any.

4.02 Materials used to install the job shall meet or exceed the following standards:

A. Planting mix to be used for planting shall be: 1/3 coarse sand, 1/3 Florida peat,1/3 well rotted pine chips or compost. 70% sand / 30% muck shall be used in planters or areas with poor drainage.
B. Fertilizers: Fertilizer shall be delivered mixed as specified in standard bags, sealed, and showing weight by analysis and name of manufacturer. Fertilizer shall be stored in weatherproof storage and in such a manner that its effectiveness will not be impaired.
C. Mulch: Mulch shall be 'Coco Brown' mulch from Florida Mulch or approved equal.
D. Water: All water required for the execution of the work shall be supplied at the site by the Owner.

5.00 INSTALLATION

5.01 The Planting operations used to install the job shall meet or exceed the following standards:

A. Excavation of Plant Pits: Plant pit excavations shall be roughly cylindrical in shape, with their side approximately vertical. Pit shall be excavated so that bottom of pit is same depth as root ball. Plants shall be centered in the hole, with the trunk location as shown in the plans. Holes for balled and burlapped plants shall be large enough to allow 12" minimum (depending on root ball size) of back fill around the sides of the root ball, and 12" of back fill beneath the root ball. In all cases the diameter of the plant hole shall be twice the diameter of the root ball. Where excess material has been excavated from the plant hole, the excavated material may be used to backfill to the proper level. Mix existing excavated material in 50% / 50% ratio with new planting soil mix. The Contractor, in excavation for plantings shall take care not to damage underground utilities or other sub-surface obstructions, and shall be held liable for their repair, if damaged.
B. Setting Plants: All trees shall be set so, that when settled, the top of the root ball will be flush with the surrounding area of the finish grade or slightly above finish grade. Each plant shall be planted in planting soil mix in the center of the pit. Shrubs shall be set flush with the surrounding finish grade of the planting area. The back fill shall be made with prepared planting in mixture as specified herein and shall be firmly rodded and watered, so that no air-pockets remain. The quantity of water applied immediately upon planting shall be sufficient to thoroughly moisten all of the backfilled earth. Plants shall be kept in a moistened condition the duration of the planting.
C. Staking and Guying: All trees shall be staked or guyed as shown in the details and according to the following specifications.
   1. Use wide plastic, rubber or other flexible strapping materials to support the tree to stakes or ground anchors that will give as the tree moves in any direction up to 30 degrees. Use strapping material 'Arbor Tie' by Deep Root (800) 458-7668 dark green color, or approved equal. Do not use rope or wire through a hose. Use guy chords, hose or any other thin bracing or anchorage material which has a minimum 12" [300 mm] length of high visibility flagging tape secured to guys, midway between the tree and stakes for safety.
   2. Stake trees larger than 1" [25 mm] diameter and smaller than 2" [50 mm] diameter with a 2" by 2" [50 by 50 mm] stake, set at least 2' [0/6 m] in ground and extending to the crown of the plant. Firmly fasten the plant to the stake with flexible strapping materials as noted above.
   3. TREES OF 2 TO 3 ½" [50 MM TO 90 MM] CALIPER: Stake all trees, other than palm trees, larger than 2" [50 mm] caliper and smaller than 3 ½" [90 mm] caliper with two 2" by 4" [50 by 100 mm] stakes, 8' [2.4 m] long, set 2' [0.6 m] in the ground. Place the tree midway between the stakes and hold it firmly in place by flexible strapping materials as noted above.
   4. LARGE TREES: Guy all trees, other than palm trees, larger than 3 ½" [90 mm] caliper, from at least three points, with flexible strapping materials as noted above. Anchor flexible strapping to 2" by 4" by 24" [50 by 100 by 600 mm] stakes, driven into the ground such that the top of the stake is at least 3" [75 mm] below the finished ground.
   5. SPECIAL REQUIREMENTS FOR PALM TREES: Brace palms which are to be staked with three 2" by 4" [50 by 100 mm] wood braces, toe-nailed to cleats which are securely banded at two points to the palm, at a point one third the height of the trunk. Pad the trunk with five layers of bubble wrap under the cleats. Place braces approximately 120 degrees apart and secure them underground by 2" by 4" by 12" [50 by 100 by 300 mm] stake pads. Paint wood flat dark green exterior paint, two coats.
   6. TREE PROTECTION AND ROOT BARRIERS: Install tree barriers when called for in the Contract Documents or by the Landscape Architect to protect existing trees from damage during project construction. Place barricades at the drip line of the tree foliage or as far from the base of the tree trunk as possible. Barricades shall be able to withstand bumps by heavy equipment and trucks. Maintain barricades in good condition. When called for in the Contract Documents, install root barriers or fabrics in accordance with the details shown.

D. Pruning: All broken or damaged roots or branches shall be cut smoothly and the tops of all trees shall be pruned in a manner complying with standard horticultural practice. At the time pruning is completed, all remaining wood shall be alive.
E. Mulching: Within one week after planting, mulch material shall be uniformly applied to a minimum loose thickness of 2 inches, over the entire area of the backfilled hole or bed. The mulch shall be maintained continuously in place until the time of final inspection, and must be a minimum of 2 inches thick to be accepted. Mulch shall not be placed against stems or trunks.
F. Fertilizing: Feeding of all trees shall be done with a slow release granular 12-6-8 with complete minors turf and ornamental fertilizer, as per manufacturer's instructions. Contractor shall submit and label to the Landscape Architect for approval prior to application.

6.00 MAINTENANCE

6.01 Maintenance and hand watering of all trees by the Landscape Contractor shall terminate upon final acceptance of such work, but shall not discharge the Landscape Contractor from his responsibility to honor the guarantee period. Maintenance prior to final acceptance shall include the removal of all dead or dying twigs and branches, the weeding, watering and normal pruning of plant material.

7.00 GUARANTEE

7.01 The Landscape Contractor shall guarantee and maintain all new field grown trees and all field grown palms for a period of one year. All containerized trees for a period of 180 days, and all sod for a period of 90 days. The Landscape Contractor shall replace at the direction of the Landscape Architect all trees, shrubs, or groundcovers deemed by the Landscape Architect to be unacceptable, due to death or damage; acts of God, Owner negligence and vandalism excepted. The guarantee period shall begin upon substantial completion of the job, as determined by the landscape architect.

7.02 New material used to replace material unacceptable to the Landscape Architect, shall be guaranteed for similar period from date of installation.

8.00 FINAL INSPECTION AND ACCEPTANCE

8.01 The Landscape Contractor shall advise the Landscape Architect in writing at the end of the guarantee period that the project is ready for final inspection. Only upon notification to the Landscape Architect by the Landscape Contractor in writing and subsequent inspection attended by the Landscape Contractor shall the requirements of the guarantee be met.

9.00 CLEAN-UP

9.01 Upon completion of all work under this section, the Landscape Contractor shall clear the site of all debris, superfluous material and all equipment to the satisfaction of the Landscape Architect

9.02 End

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www.hall-la.com

LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

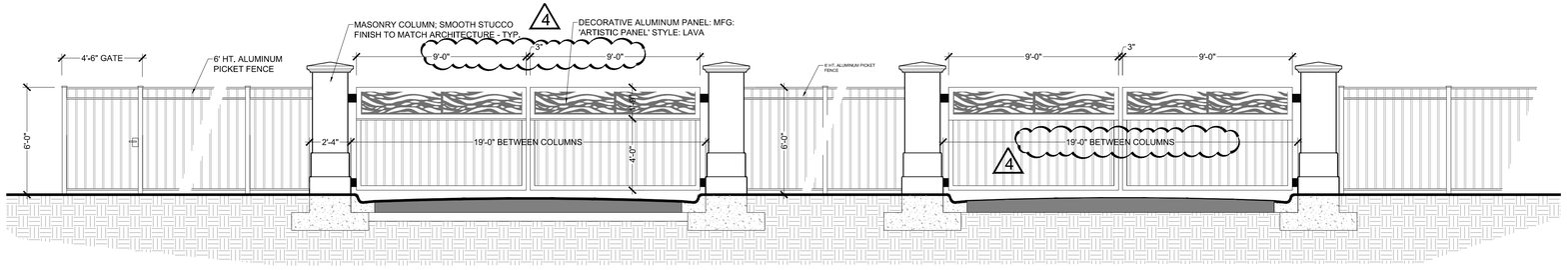
SHEET TITLE
Landscape Specifications

DATE 09-22-21
DESIGN S.H.
DRAWN S.K.
SCALE NTS

REVISIONS
1 RESPONSE TO COMMENT 02-27-23

SEAL
SUSAN HALL LICENSED LANDSCAPE ARCHITECT 6666 STATE OF FLORIDA
01-26-24

L-14 SHEET | 25 OF



1 L15 ENTRY GATE - DESIGN INTENT ELEVATION

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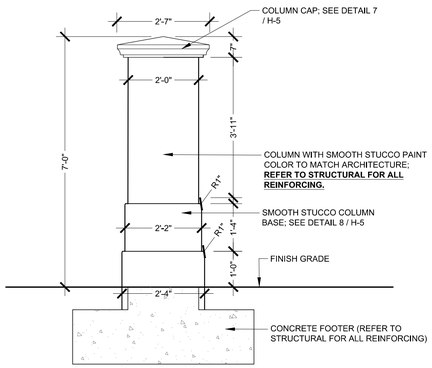

2 L15 FENCE COLUMN - ELEVATION

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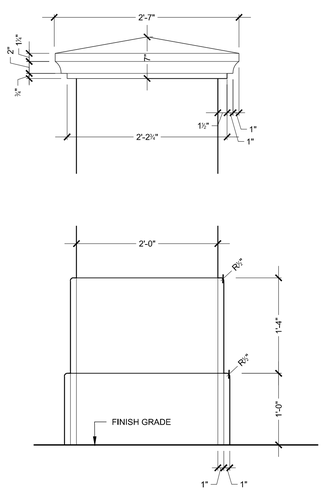

3 L15 FENCE COLUMN - BASE & CAP DETAIL

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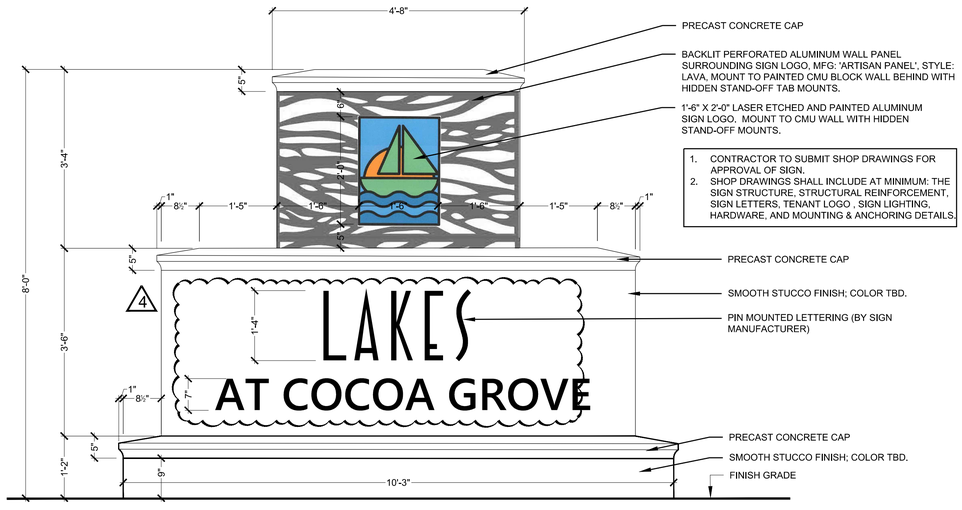
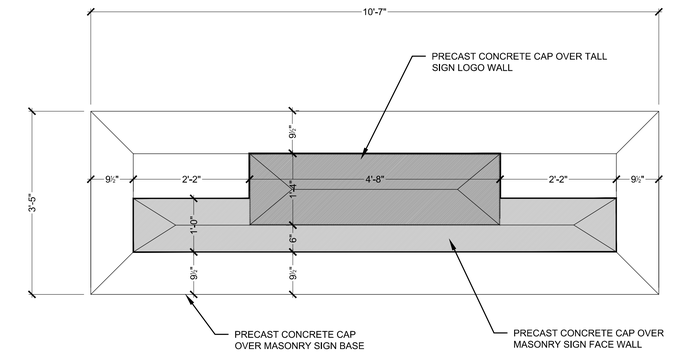


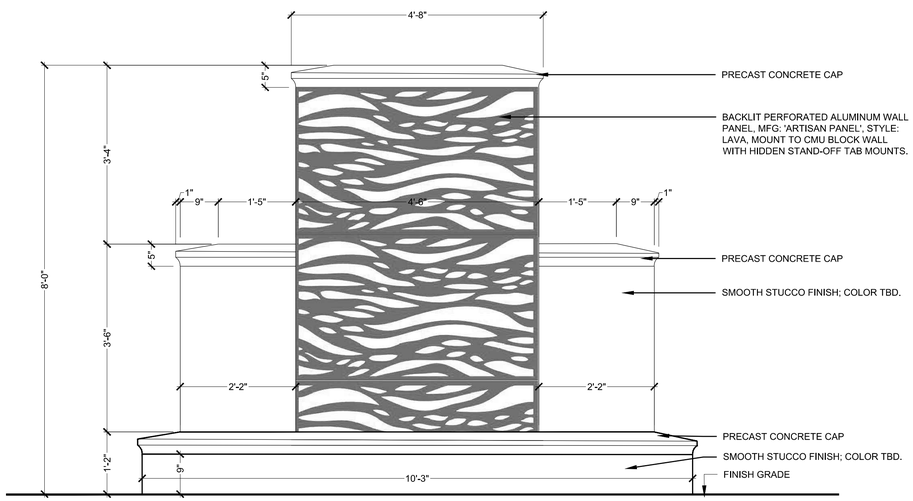
4 L15 ENTRY SIGN - FRONT ELEVATION

SCALE: 3/4" = 1'-0"



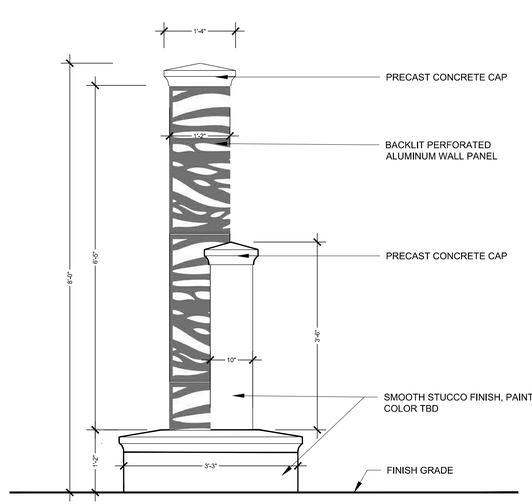
5 L15 ENTRY SIGN- PLAN

SCALE: 3/4" = 1'-0"



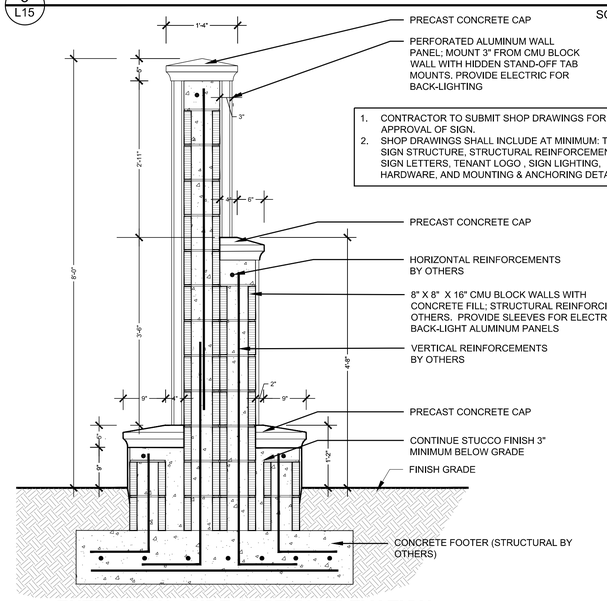
6 L15 ENTRY SIGN - BACK ELEVATION

SCALE: 3/4" = 1'-0"



7 L15 ENTRY SIGN - SIDE ELEVATION

SCALE: 3/4" = 1'-0"



8 L15 ENTRY SIGN - SIDE SECTION ELEVATION

SCALE: 3/4" = 1'-0"

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LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
HARDSCAPE DETAILS

DATE 02-27-23

DESIGN S.H.

DRAWN M.M.

SCALE AS SHOWN

REVISIONS
1 RESPONSE TO COMMENT 02-27-23
2 RESPONSE TO COMMENT (ENTRY REVISION) 06-30-23

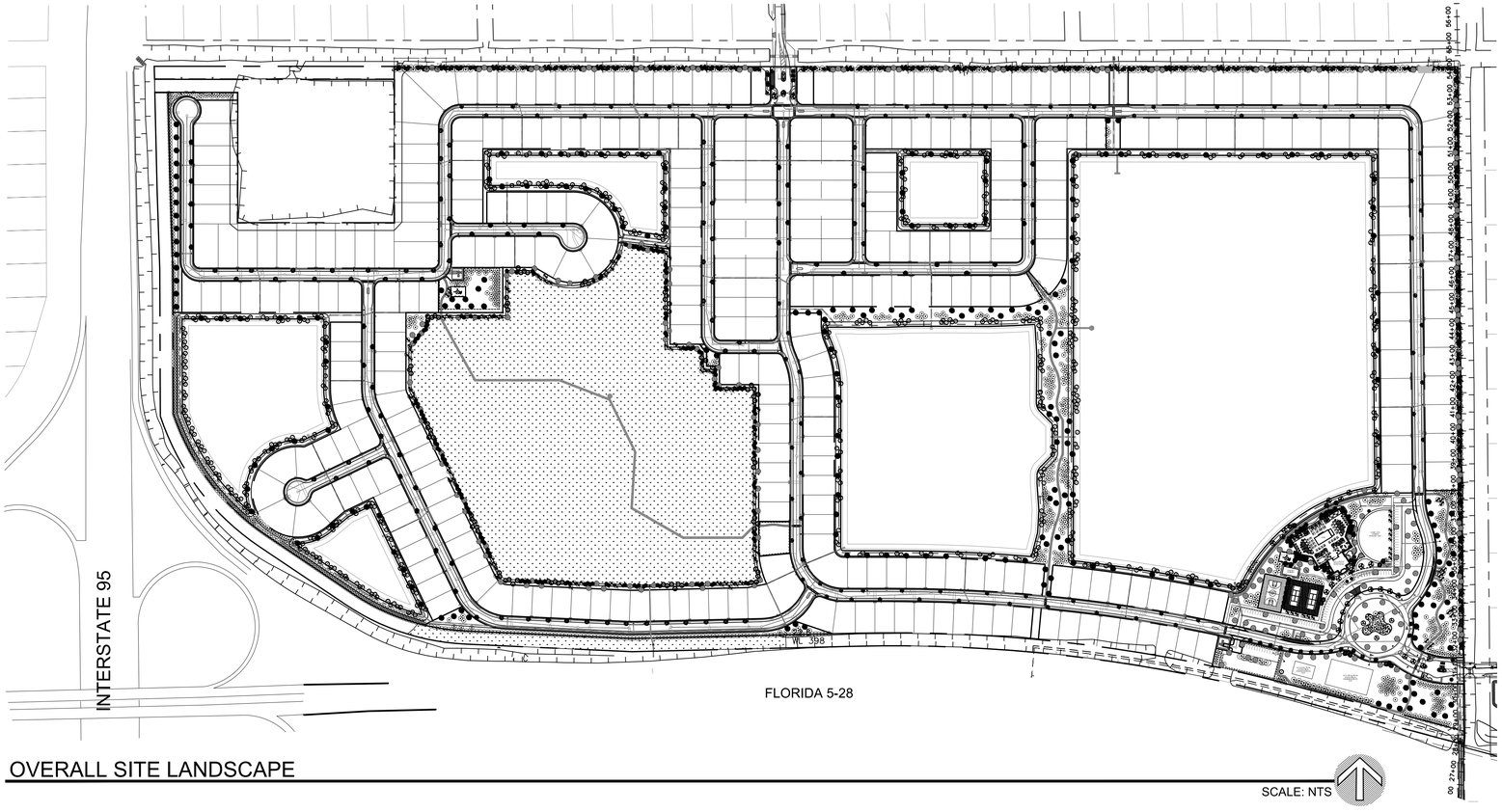
SEAL
SUSAN HALL LICENSED LANDSCAPE ARCHITECT #857 FLORIDA
01-26-24

SHEET L-15 OF 15

LAKES AT COCOA GROVES

PRELIMINARY LANDSCAPE PLANS

SUBMITTED: 01-26-24



OVERALL SITE LANDSCAPE

SCALE: NTS

TREE MITIGATION CALCULATIONS:

REQUIRED REPLACEMENT TREES: 10,363 TREES (@ 3" CALIPER)

PROPOSED TREES: 5,014 TREES (@ 3" CALIPER)
(INCLUDES 4 TREES PER LOT TO BE INSTALLED DURING INDIVIDUAL LOT CONSTRUCTION)

10,363 REQUIRED TREES - 5,014 PROPOSED TREES = 5,349 REPLACEMENT TREES ARE UNABLE TO FIT ONTO THE SITE. THE REMAINDER OF THE TREE MITIGATION WILL BE PROVIDED BY CONTRIBUTION TO THE CITY'S ARBOR MITIGATION FUND AT THE RATE OF $100.00 PER INCH NOT REPLACED:

5,349 TREES X 3"= 16,047" NOT REPLACED
16,047" X $100 = $1,604,700.00

NOTE:
PLEASE SEE EXHIBIT 'B' (SHEETS B.0 THROUGH B.4) FOR TREE MITIGATION CALCULATIONS.

SHEET INDEX		ISSUE DATE	REVISION
L-0	LANDSCAPE COVER SHEET	01-26-24	
B.O	EXHIBIT - TREE MITIGATION CALCULATIONS	01-26-24	
B.1	EXHIBIT - TREE PRESERVATION	01-26-24	
B.2	EXHIBIT - TREE PRESERVATION	01-26-24	
B.3	EXHIBIT - TREE REMOVAL	01-26-24	
B.4	EXHIBIT - TREE REMOVAL & SUMMARY	01-26-24	
L-1	TREE BUFFER PLANTING PLAN	01-26-24	
L-2	COMMON AREA PLANTING PLAN	01-26-24	
L-3	COMMON AREA PLANTING PLAN	01-26-24	
L-4	COMMON AREA PLANTING PLAN	01-26-24	
L-5	COMMON AREA PLANTING PLAN	01-26-24	
L-6	COMMON AREA PLANTING PLAN	01-26-24	
L-7	COMMON AREA PLANTING PLAN	01-26-24	
L-8	COMMON AREA PLANTING PLAN	01-26-24	
L-9	COMMON AREA PLANTING PLAN	01-26-24	
L-10	COMMON AREA PLANTING PLAN	01-26-24	
L-10.1	CLUBHOUSE LANDSCAPE PLAN	01-26-24	
L-10.2	ROUND-A-BOUT LANDSCAPE PLAN	01-26-24	
L-11	MAIN ENTRY LANDSCAPE PLAN	01-26-24	
L-12	SECONDARY ENTRY LANDSCAPE PLAN	01-26-24	
L-13	LANDSCAPE DETAILS & PLANT LISTS	01-26-24	
L-14	LANDSCAPE SPECIFICATIONS	01-26-24	
L-15	HARDSCAPE DETAILS	01-26-24	
IR-1 TO IR-14	IRRIGATION PLANS	06-30-23	

0' 25' 50' 100' 150'
SCALE: 1" = 50'-0"

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LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
LANDSCAPE COVER SHEET

DATE 08-07-2023

DESIGN S.H.

DRAWN M.M.

SCALE 1" = 10'-0"

REVISIONS

SEAL

01-26-24

L-0 SHEET | 23 OF

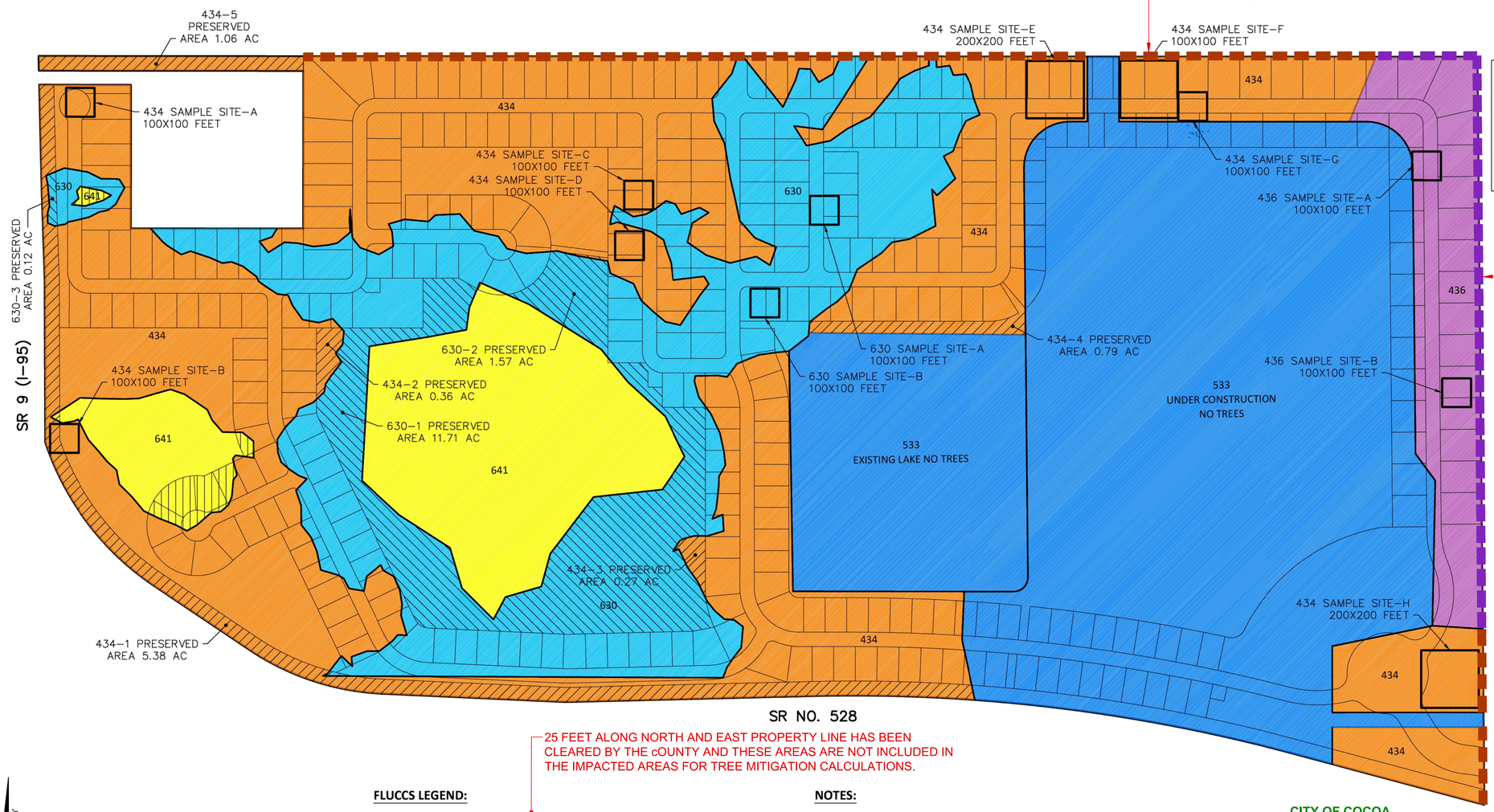
LAKES AT COCOA GROVE TREE SURVEY

TOWNSHIP 24 SOUTH, RANGE 35 EAST, SECTION 10, BREVARD COUNTY, FLORIDA

25 FEET ALONG NORTH AND EAST PROPERTY LINE HAS BEEN CLEARED BY THE cOUNTY AND THESE AREAS ARE NOT INCLUDED IN THE IMPACTED AREAS FOR TREE MITIGATION CALCULATIONS.

EXHIBIT B.0
TREE MITIGATION CALCULATIONS
PER CITY OF COCOA CODE ORDINANCE 20-2023 AMENDED TREE REPLACEMENT STANDARDS

PREPARED BY:
SUSAN HALL LANDSCAPE ARCHITECTURE
12-04-23



25 FEET ALONG NORTH AND EAST PROPERTY LINE HAS BEEN CLEARED BY THE cOUNTY AND THESE AREAS ARE NOT INCLUDED IN THE IMPACTED AREAS FOR TREE MITIGATION CALCULATIONS

25 FEET ALONG NORTH AND EAST PROPERTY LINE HAS BEEN CLEARED BY THE cOUNTY AND THESE AREAS ARE NOT INCLUDED IN THE IMPACTED AREAS FOR TREE MITIGATION CALCULATIONS.

IMPORTANT NOTE:

- THE BASE SURVEY AND EXTRAPOLATED DATA FOR TOTAL *TREE INCHES* REMOVED WAS PROVIDED BY BUSSEN-MAYER ENGINEERING GROUP, INC. ON JUNE 28, 2021. (TEXT SHOWN IN BLACK)
- THE TEXT IN RED & GREEN DENOTED HEREIN REPRESENT THE TREE REMOVAL AND PRESERVATION CALCULATIONS PER THE CITY'S *CURRENT TREE MITIGATION CODE* AND WERE PERFORMED BY SUSAN HALL LANDSCAPE ARCHITECTURE, LLC.

SCALE: 1" = 200'
NORTH

GRAPHIC SCALE
200' 0' 100' 200' 400'
(IN FEET)
1 INCH = 200 FT.

FLUCCS LEGEND:

	TOTAL AREA	IMPACTED AREA	PRESERVED AREA	
434 - HARDWOOD - CONIFER	85.46 AC	75.3 AC ~~77.60 AC.~~	7.86 AC.	
436 - UPLAND SCRUB, PINE AND HARDWOODS	10.59 AC	9.2 AC ~~10.59 AC.~~	0.00 AC.	
630 - WETLAND FORESTED MIX	45.00 AC	31.72 AC.	13.28 AC.	
533 - RESERVOIR, UNDER CONSTRUCTION	83.79 AC	83.97 AC.	0.00 AC.	
641 - FRESHWATER MARSH	21.51 AC	1.15 AC.	20.36 AC.	
TOTALS	246.43 AC	205.03 AC.	41.50 AC.	

PRESERVED AREA:

		% OF HABITAT	% OF SITE
434	7.86 AC	9.2%	3.19%
630	13.28 AC.	29.5%	5.39%

NOTES:

1. THIS IS NOT A BOUNDARY SURVEY.
2. LAST FIELD DATE OF SURVEY: JUNE 16, 2021
3. THIS TREE SURVEY IS BASED ON SURVEYING REPRESENTATIVE TREE AREAS WITHIN EACH HABITAT AREA AND THEN EXTRAPOLATING OUT TO OBTAIN THE ESTIMATED NUMBER OF TREES ON-SITE.
4. I HEREBY CERTIFY THAT THE SURVEY SHOWN HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AS PERFORMED UNDER MY DIRECTION AND SUPERVISION, AND THAT IT MEETS OR EXCEEDS THE STANDARDS OF PRACTICE AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17.05 FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES. SEE TITLE BLOCK FOR SIGNATURE AND SEAL.
5. THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES LISTED BELOW AND COPIES ARE VALID ONLY WHEN BEARING THE SURVEYOR'S ORIGINAL SIGNATURE AND SEAL OR VERIFIED ELECTRONIC SIGNATURE AND SEAL.
6. CERTIFIED FOR THE EXCLUSIVE USE OF:
   LAKES AT COCOA GROVE

CITY OF COCOA
SEC. 22(E)(5)(d) - Table 1 - Replacement Credit for Trees Preserved

D.B.H of Preserved Tree	Reduction in Replacement Trees* **
6" - 23"	For every 12" preserved, 1 credit
24" - 35"	8 Credits
36" - 42"	10 Credits
Greater than 42"	12 Credits

* One credit is equivalent to a 3" replacement tree.

CITY OF COCOA
SEC. 22(E)(5)(e) - Table 2 - Tree Replacement Standards

TABLE 2 – Tree Replacement Standards

D.B.H. of Protected Tree	Number of Replacement Trees Required for Each Tree Removed	Minimum Size of Replacement Tree	Total Replacement Required (Inches)
6" – 12"	1	3"	3"
13" – 23"	4	3"	12"
24" and above (Specimen)	Minimum of 9	3"	Minimum 27" or equivalent to inches removed

REVISIONS | DATE | JCC

Sec.: 10
Twp.: 24 South
Rng.: 35 East

J. BARRY CABANISS, P.L.S.
LICENSE NO. 4524

LAKES AT COCOA GROVE
TREE SURVEY
Brevard County Florida

Bussen-Mayer Engineering Group, Inc.
100 PARNELL STREET • MERRITT ISLAND, FLORIDA 32953
PH. NO.: (321) 453-0010 • CERTIFICATE NO.: 3535

Date: JUNE 28, 2021
Scale: 1" = 200'
Proj. No.: 412401

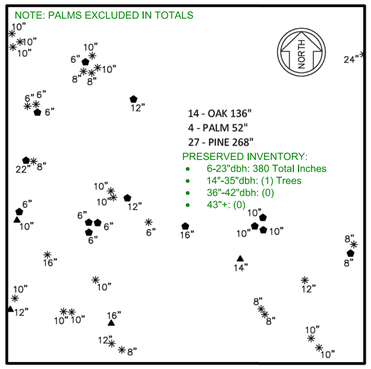
Sheet Name:
TREE INVENTORY SURVEY

Sheet: 1 of 3

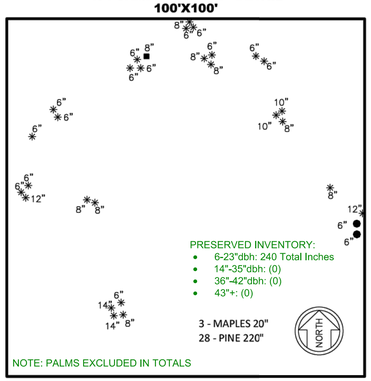
SURVEY DEPT.

C:\Dwg\Sur\412401 Lakes at Cocoa Grove-TP 3 - T24S-R35E-S10\412401-sr02.dwg, 7/7/2021 12:45:55 PM, Cad-1

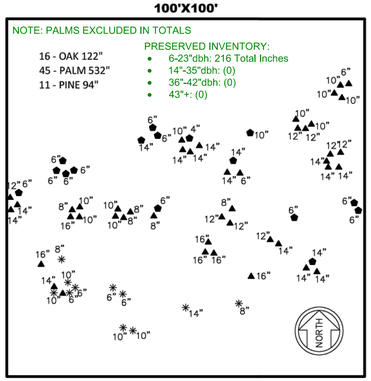
434 SAMPLE SITE "A" DETAIL
100'X100'



434 SAMPLE SITE "B" DETAIL
100'X100'



434 SAMPLE SITE "C" DETAIL
100'X100'



434 SAMPLE SITE "D" DETAIL
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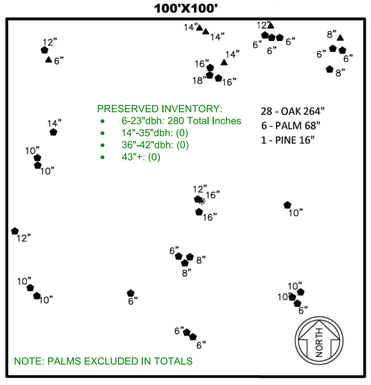
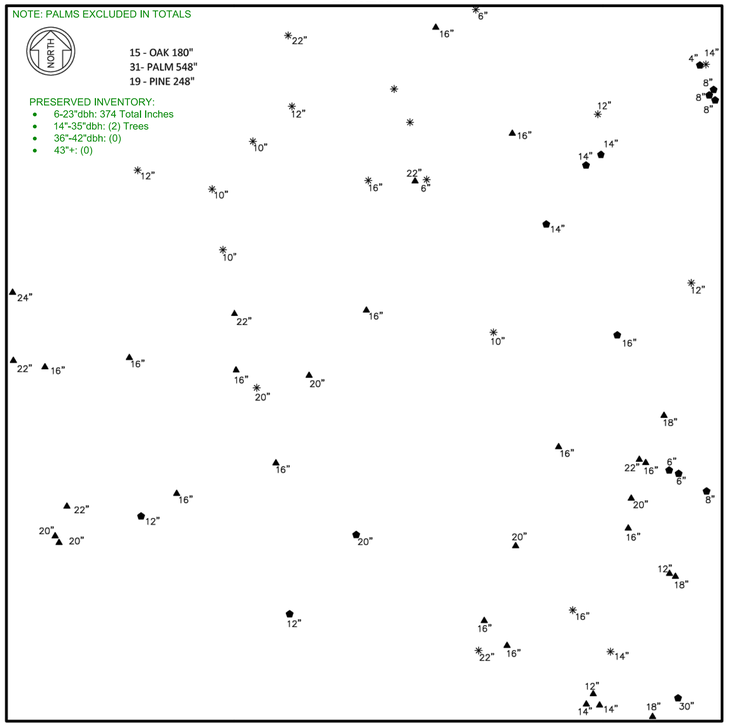
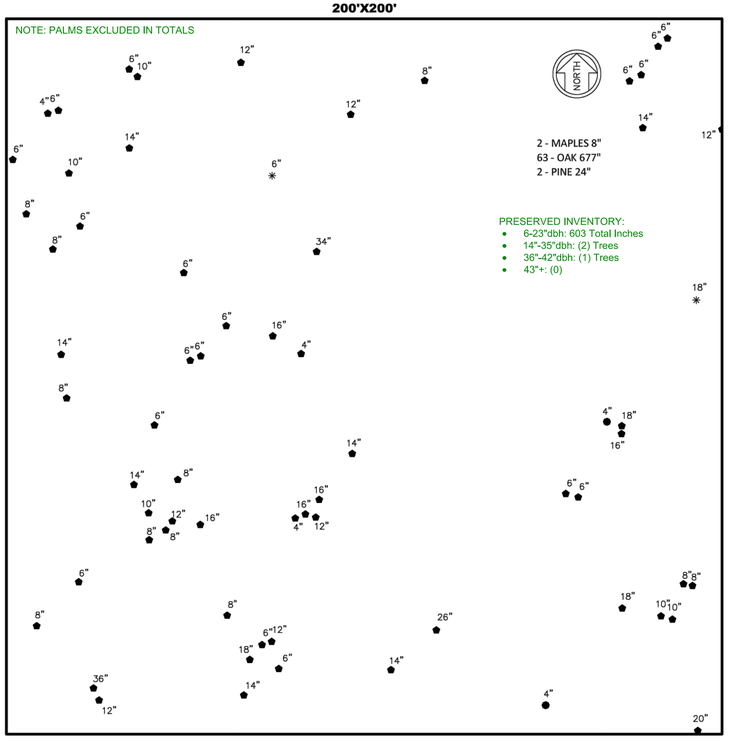


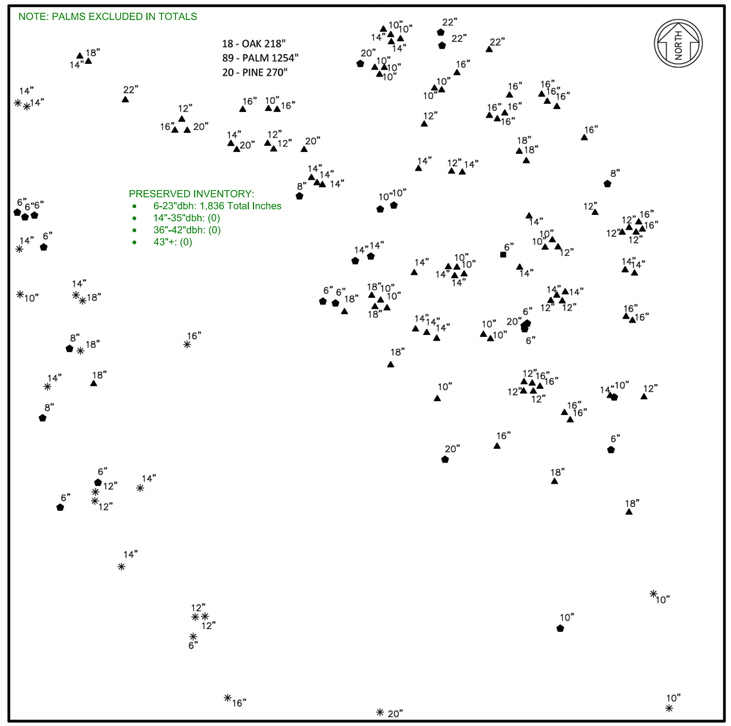
434 SAMPLE SITE "E" DETAIL
200'X200'



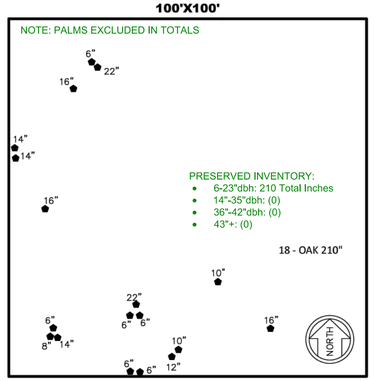
434 SAMPLE SITE "F" DETAIL
200'X200'



434 SAMPLE SITE "G" DETAIL
200'X200'



434 SAMPLE SITE "H" DETAIL
100'X100'



434 AVERAGE TREE COVERAGE

SAMPLE AREA	OAK (IN INCHES)	PALM (IN INCHES)	PINE (IN INCHES)	MAPLE (IN INCHES)	TOTAL
A	50,370	19,259	99,259	0	168,888
B	0	0	81,481	7,407	88,888
C	45,185	197,037	34,815	0	277,037
D	97,778	25,185	0	0	122,963
E	16,363	49,818	22,545	0	88,726
F	61,545	0	2,182	727	64,454
G	77,778	0	0	0	77,778
H	24,909	113,273	23,273	0	161,455
TOTALS	373,928	404,572	263,555	8,134	1,050,189
AVERAGE	46,741	50,572	32,944	1,017	131,274
PRESERVED AREA REDUCTION OF 9.2%	-4,299	-4,653	-3,031	-94	-12,077
TOTAL INCHES OF IMPACTED TREES BY HABITAT	42,442	45,919	29,913	923	119,197

NOTE: PALMS EXCLUDED IN TOTALS

HABITAT 434 - AVERAGE TREE PRESERVATION CREDITS

Sample Area	Total Inches of 6-23" dbh Trees / 12"	QTY 24-35" dbh Trees	QTY 36-42" dbh trees	QTY of 42"+ dbh
A	11728	370	0	0
B	7407	0	0	0
C	6667	0	0	0
D	8642	0	0	0
E	2833	182	0	0
F	4568	182	91	0
G	3697	0	0	0
H	6481	0	0	0
TOTAL	**52024**	**734**	**91**	**0**
Average	6503	91.8	11.4	0
No. Of Tree Credits	x 1 Tree Credit	x 8 Tree Credits	x 10 Tree Credits	x 12 Tree Credits
Preservation Tree Credits	6503	734	114	0

Habitat 434 Total Preservation Trees:	7351
Percentage of Habitat Preserved:	9.20%
Adjusted Total Trees based on Preserved Area:	676

TREE LEGEND:

ELM
MAPLE
OAK
PALM
PINE
UNKNOWN SPECIES

NOTE: ALL TREE FIGURES SHOWN IN INCHES (") ARE DBH MEASUREMENTS

434 HARDWOOD-CONIFER (85.46AC.)

SAMPLE AREA "A"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
• 6-23"dbh: 380 Total Inches / 0.0027 = 140,740" 140,740" / 12" = 11,728 credits
• 14"-35"dbh: (1) / 0.0027 = 370 credits
• 36"-42"dbh: (0) / 0.0027 = 0 credits
• 43"+: (0) / 0.0027 = 0 credits

0 MAPLES=0"		
14 OAKS=136"	136"/0.0027 =	50,370"
4 PALMS=52"	52"/0.0027 =	19,259"
27 PINES=268"	268"/0.0027 =	99,259"
		168,888 TOTAL TREE INCHES

SAMPLE AREA "B"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
• 6-23"dbh: 240 Total Inches / 0.0027 = 88,889" 88,889" / 12" = 7,407 credits
• 14"-35"dbh: (0) / 0.0027 = 0 credits
• 36"-42"dbh: (0) / 0.0027 = 0 credits
• 43"+: (0) / 0.0027 = 0 credits

3 MAPLES=20"	20"/0.0027 =	7,407"
0 OAKS=0"		
0 PALMS=0"		
28 PINES=220"	220"/0.0027 =	81,481"
		88,888 TOTAL TREE INCHES

SAMPLE AREA "C"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
• 6-23"dbh: 216 Total Inches / 0.0027 = 80,000" 80,000" / 12" = 6,667 credits
• 14"-35"dbh: (0) / 0.0027 = 0 credits
• 36"-42"dbh: (0) / 0.0027 = 0 credits
• 43"+: (0) / 0.0027 = 0 credits

0 MAPLES=0"		
16 OAKS=122"	122"/0.0027 =	45,185"
45 PALMS=532"	532"/0.0027 =	197,037"
11 PINES=94"	94"/0.0027 =	34,815"
		277,037 TOTAL TREE INCHES

SAMPLE AREA "D"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
• 6-23"dbh: 280 Total Inches / 0.0027 = 103,703" 103,703" / 12" = 8,642 credits
• 14"-35"dbh: (0) / 0.0027 = 0 credits
• 36"-42"dbh: (0) / 0.0027 = 0 credits
• 43"+: (0) / 0.0027 = 0 credits

0 MAPLES=0"		
28 OAKS=264"	264"/0.0027 =	97,778"
6 PALMS=68"	68"/0.0027 =	25,185"
0 PINES=0"		
		122,963 TOTAL TREE INCHES

SAMPLE AREA "E"
AREA 200'X200;=40,000S.F. = 0.92AC.
0.92AC./85.46AC.=0.011 OR 01.1%
• 6-23"dbh: 374 Total Inches / 0.011 = 34,000" 34,000" / 12" = 2,833 credits
• 14"-35"dbh: (2) / 0.011 = 182 credits
• 36"-42"dbh: (0) / 0.011 = 0 credits
• 43"+: (0) / 0.011 = 0 credits

0 MAPLES=0"		
15 OAKS=180"	180"/0.011 =	16,363"
31 PALMS=548"	548"/0.011 =	49,818"
19 PINES=248"	248"/0.011 =	22,545"
		88,726 TOTAL TREE INCHES

SAMPLE AREA "F"
AREA 200'X200;=40,000S.F. = 0.92AC.
0.92AC./85.46AC.=0.011 OR 01.1%
• 6-23"dbh: 603 Total Inches / 0.011 = 54,818" 54,818" / 12" = 4,568 credits
• 14"-35"dbh: (2) / 0.011 = 182 credits
• 36"-42"dbh: (1) / 0.011 = 91 credits
• 43"+: (0) / 0.011 = 0 credits

2 MAPLES=8"	8"/0.011 =	727"
63 OAKS=677"	677"/0.011 =	61,545"
0 PALMS=0"		
2 PINES=248"	24"/0.011 =	2,182"
		64,454 TOTAL TREE INCHES

SAMPLE AREA "G"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
• 6-23"dbh: 488 Total Inches / 0.011 = 44,363" 44,363" / 12" = 3,697 credits
• 14"-35"dbh: (0) / 0.011 = 0 credits
• 36"-42"dbh: (0) / 0.011 = 0 credits
• 43"+: (0) / 0.011 = 0 credits

0 MAPLES=0"		
18 OAKS=210"	210"/0.0027 =	77,778"
0 PALMS=0"		
0 PINES=0"		
		77,778 TOTAL TREE INCHES

SAMPLE AREA "H"
AREA 200'X200;=40,000S.F. = 0.92AC.
0.92AC./85.46AC.=0.011 OR 01.1%
• 6-23"dbh: 210 Total Inches / 0.0027 = 77,777" 77,777" / 12" = 6,481 credits
• 14"-35"dbh: (0) / 0.0027 = 0 credits
• 36"-42"dbh: (0) / 0.0027 = 0 credits
• 43"+: (0) / 0.0027 = 0 credits

0 MAPLES=0"		
26 OAKS=274"	274"/0.011 =	24,909"
91 PALMS=1,246"	1,246"/0.011 =	113,273"
20 PINES=256"	256"/0.011=	23,273"
		161,455 TOTAL TREE INCHES

IMPORTANT NOTE:

- THE BASE SURVEY AND EXTRAPOLATED DATA FOR TOTAL *TREE INCHES* REMOVED WAS PROVIDED BY BUSSEN-MAYER ENGINEERING GROUP, INC. ON JUNE 28, 2021. (TEXT SHOWN IN BLACK)
- THE TEXT IN GREE DENOTES THE TREE PRESERVATION CALCULATIONS PER THE CITY'S *CURRENT TREE MITIGATION CODE* AND WERE PERFORMED BY SUSAN HALL LANDSCAPE ARCHITECTURE, LLC.

EXHIBIT B.1
TREE PRESERVATION
CALCULATIONS FOR HABITAT 434 (PER SURVEY / INCLUDED REFERENCE)

PREPARED BY:
SUSAN HALL LANDSCAPE ARCHITECTURE
12-04-23

JCC
REVISIONS
DATE

Sec.: 10
Twp.: 24 South
Rge.: 35 East

J. BARRY CABANISS, P.L.S.
LICENSE NO. 4524

Bussen-Mayer Engineering Group, Inc.
100 PARNELL STREET • MERRITT ISLAND, FLORIDA 32953
PH. NO.: (321) 453-0010 • CERTIFICATE NO.: 3535

Florida
Brevard County

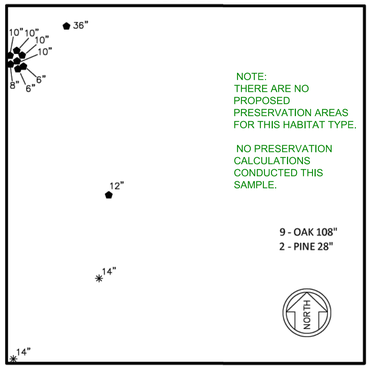
LAKE COCOA VE
TREE SURVEY

Date: JUNE 28, 2021
Scale: 1" = 20'
Proj. No.: 412401
Sheet Name: **TREE INVENTORY SURVEY**
Sheet: **2** of 3

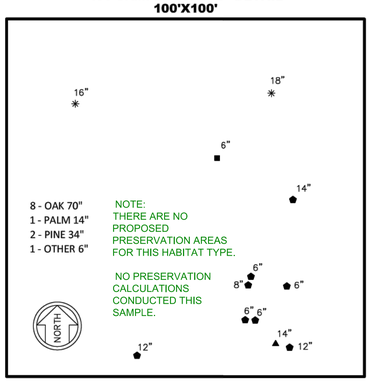
SURVEY DEPT.

C:\Dwg\Sur\412401 Lakes at Cocoa Grove-TP 3 - T24S-R35E-S10\412401-sr02.dwg, 7/7/2021 12:45:57 PM, Cadi-1

436 SAMPLE SITE "A" DETAIL
100'X100'



436 SAMPLE SITE "B" DETAIL
100'X100'



NOTE: ALL TREE FIGURES SHOWN IN INCHES (") ARE DBH MEASUREMENTS

436 UPLAND SCRUB, PINE AND HARDWOOD (10.59AC.)

SAMPLE AREA "A"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./10.59AC.=0.022 OR 2.2%

0 MAPLES=0"		
2 OAKS=108"	108"/0.022 =	4,909"
0 PALMS=0"		
1 PINES=28"	28"/0.022 =	1273"
		6,182 TOTAL TREE INCHES

SAMPLE AREA "B"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./10.59AC.=0.022 OR 2.2%

0 MAPLES=0"		
8 OAKS=70"	70"/0.022 =	3,182"
1 PALMS=14"	14"/0.022 =	636"
2 PINES=34"	34"/0.022 =	1,545"
		5,363 TOTAL TREE INCHES

436 AVERAGE TREE COVERAGE

SAMPLE AREA	OAK (IN INCHES)	PALM (IN INCHES)	PINE (IN INCHES)	MAPLE (IN INCHES)	TOTAL
A	4,909	0	1,273	0	6,182
B	3,182	636	1,545	0	5,363
TOTALS	8,091	636	2,818	0	11,545
AVERAGE	4,046	318	1,409	0	5,773
PRESERVED AREA REDUCTION OF 0%	0	0	0	0	0
TOTAL INCHES OF IMPACTED TREES BY HABITAT	4,046	318	1,409	0	5,773

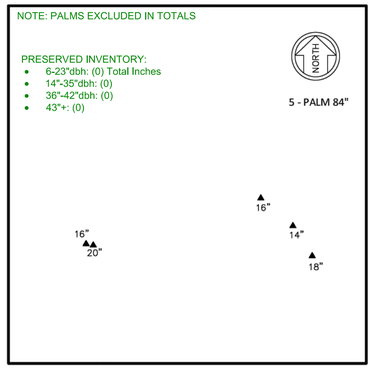
NOTE:
THERE ARE NO PROPOSED PRESERVATION AREAS FOR THIS HABITAT TYPE.

NO PRESERVATION CALCULATIONS CONDUCTED FOR THIS HABITAT TYPE.

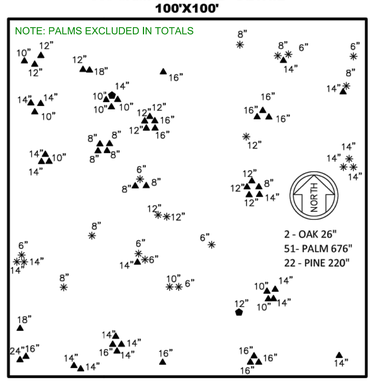
TREE LEGEND:

ELM
MAPLE
OAK
PALM
PINE
UNKNOWN SPECIES

630 SAMPLE SITE "A" DETAIL
100'X100'



630 SAMPLE SITE "B" DETAIL
100'X100'



PRESERVED INVENTORY:
- 6-23"dbh: (246) Total Inches
- 14"-35"dbh: (0)
- 36"-42"dbh: (0)
- 43"+: (0)

NOTE: ALL TREE FIGURES SHOWN IN INCHES (") ARE DBH MEASUREMENTS

630 WETLAND FORESTED MIX (45.00AC.)

SAMPLE AREA "A"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./45.00AC.=0.0051 OR 0.51%

- 6-23"dbh: 0 Total Inches / 0.0051 = 0" 0" / 12" = 0 credits
- 14"-35"dbh: (0) / 0.0051 = 0 credits
- 36"-42"dbh: (0) / 0.0051 = 0 credits
- 43"+: (0) / 0.0051 = 0 credits

0 MAPLES=0"		
0 OAKS=0"		
5 PALMS=132"	132"/0.0051 =	25,826"
0 PINES=0"		
		25,826 TOTAL TREE INCHES

SAMPLE AREA "B"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./45.00AC.=0.0051 OR 0.51%

- 6-23"dbh: 246 Total Inches / 0.0051 = 48,235" 48,235" / 12" = 4,020 credits
- 14"-35"dbh: (0) / 0.0051 = 0 credits
- 36"-42"dbh: (0) / 0.0051 = 0 credits
- 43"+: (0) / 0.0051 = 0 credits

0 MAPLES=0"		
2 OAKS=22"	22"/0.0051 =	4,314"
55 PALMS=720"	720"/0.0051 =	141,176"
22 PINES=210"	204"/0.0051 =	40,000"
		185,490 TOTAL TREE INCHES

630 AVERAGE TREE COVERAGE

SAMPLE AREA	OAK (IN INCHES)	PALM (IN INCHES)	PINE (IN INCHES)	MAPLE (IN INCHES)	TOTAL
A	0	25,826	0	0	25,826
B	4,314	141,176	40,000	0	185,490
TOTALS	4,314	167,002	40,000	0	211,316
AVERAGE	2,157	83,501	20,000	0	105,658
RESERVED AREA REDUCTION OF 29.5%	636	24,633	5,900	0	31,169
TOTAL INCHES OF IMPACTED TREES BY HABITAT	1,521	58,868	14,100	0	74,489

TOTAL INCHES OF IMPACTED TREES SUMMERY

HABITAT TYPE	INCHES OF TREE IMPACT
434	119,197
436	5,773
630	74,489
533	0
641	0
TOTAL	199,459 INCHES

*** REDUCTION FOR HOUSE PAD PER CODE (BASED ON 60X60 FOOT HOUE PAD)**

350 HOMES X 60' X60'=1,260,000/43,560=28.93 ACRES
IMPACTED OVER 205.03 ACRES
PERCENT REDUCTION=28.93/205.03=14.1%
14% OF 199,459 INCHES=27,924 INCHES

GRAND TOTAL INCHES IMPACTED=171,535 INCHES

HABITAT 630 - AVERAGE TREE PRESERVATION CREDITS

Sample Area	Total Inches of 6-23" dbh Trees / 12"	QTY 24-35" dbh Trees	QTY 36-42" dbh trees	QTY of 42"+ dbh
A	1373	0	196	0
B	14902	196	0	0
TOTAL	**16275**	**196**	**196**	**0**
Average	8137	98	98	0
No. Of Tree Credits	x 1 Tree Credit	x 8 Tree Credits	x 10 Tree Credits	x 12 Tree Credits
Preservation Tree Credits	8137	784	980	0

Habitat 630 Total Preservation Trees:	9902
Percentage of Habitat Preserved:	29.50%
Adjusted Total Trees based on Preserved Area:	2921

IMPORTANT NOTE:

- THE BASE SURVEY AND EXTRAPOLATED DATA FOR TOTAL *TREE INCHES* REMOVED WAS PROVIDED BY BUSSEN-MAYER ENGINEERING GROUP, INC. ON JUNE 28, 2021. (TEXT SHOWN IN BLACK)
- THE TEXT IN GREE DENOTES THE TREE PRESERVATION CALCULATIONS PER THE CITY'S *CURRENT TREE MITIGATION CODE* AND WERE PERFORMED BY SUSAN HALL LANDSCAPE ARCHITECTURE, LLC.

EXHIBIT B.2
TREE PRESERVATION
CALCULATIONS
FOR HABITATS 436 AND 630 (PER SURVEY / INCLUDED REFERENCE)

PREPARED BY:
SUSAN HALL LANDSCAPE ARCHITECTURE
12-04-23

JCC
REVISIONS
DATE

Sec.: 10
Twp.: 24 South
Rng.: 35 East

J. BARRY CABANISS, P.L.S.
LICENSE NO. 4524

Florida

LAKES AT COCOA GROVE
TREE SURVEY

Brevard County

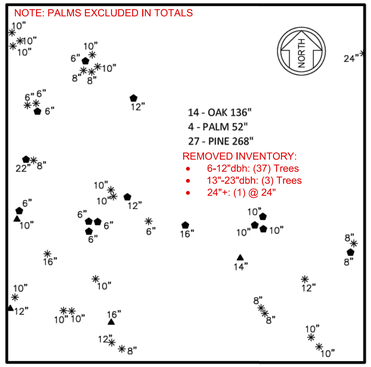
Bussen-Mayer Engineering Group, Inc.
100 PARNELL STREET • MERRITT ISLAND, FLORIDA 32953
PH. NO.: (321) 453-0010 • CERTIFICATE NO.: 3535

Date: JUNE 28, 2021
Scale: 1" = 20'
Proj. No.: 412401
Sheet Name: **TREE INVENTORY SURVEY**
Sheet: **3** of 3

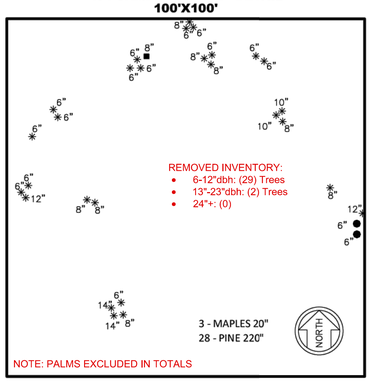
SURVEY DEPT.

C:\Dwg\Sur\412401 Lakes at Cocoa Grove-TP 3 - T24S-R35E-S10412401-sr02.dwg, 8/2/2021 7:03:28 PM, Carl-1

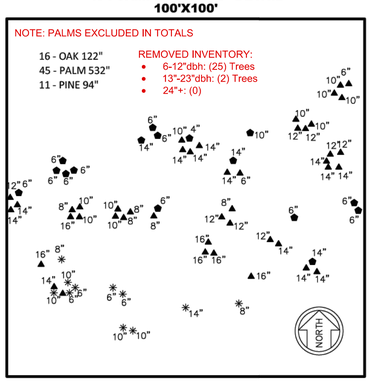
434 SAMPLE SITE "A" DETAIL
100'X100'



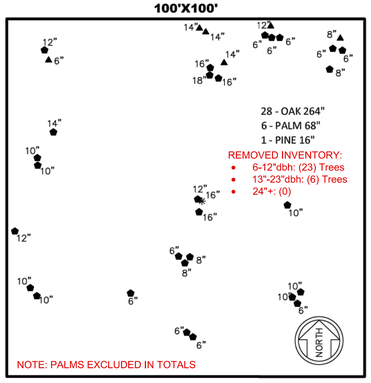
434 SAMPLE SITE "B" DETAIL
100'X100'



434 SAMPLE SITE "C" DETAIL
100'X100'

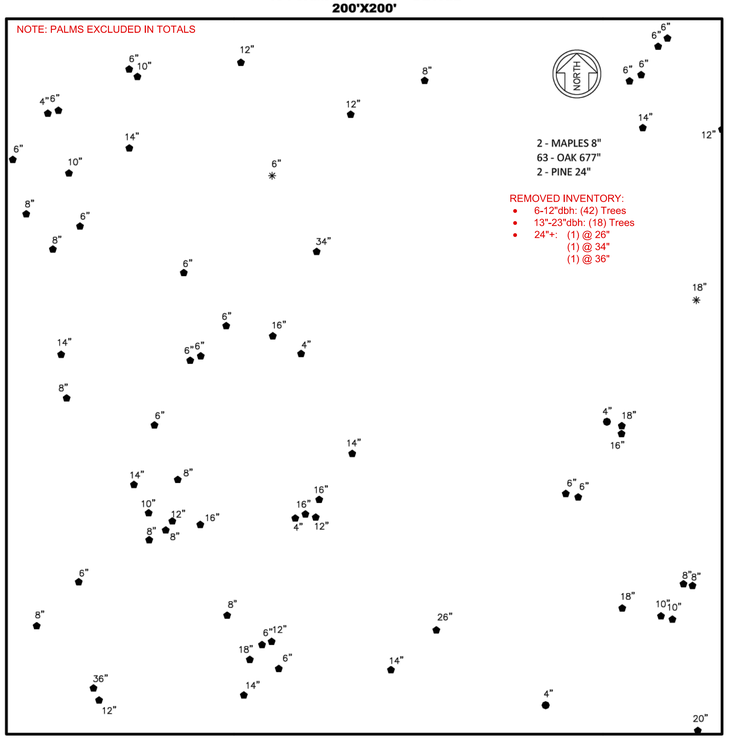


434 SAMPLE SITE "D" DETAIL
100'X100'

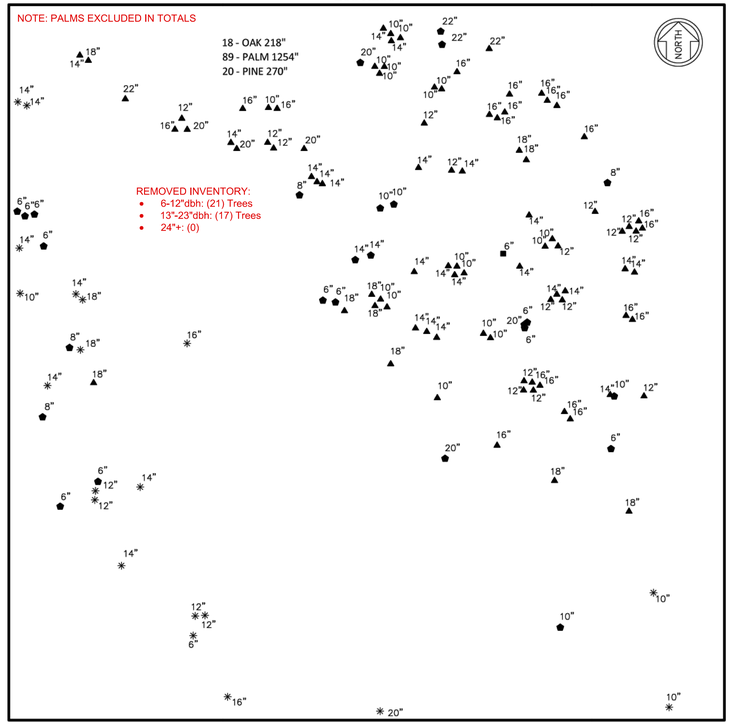


434 SAMPLE SITE "E" DETAIL
200'X200'

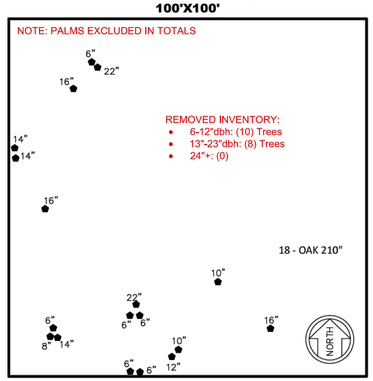
434 SAMPLE SITE "F" DETAIL
200'X200'



434 SAMPLE SITE "G" DETAIL
200'X200'



434 SAMPLE SITE "H" DETAIL
100'X100'



TREE LEGEND:

- ELM
- MAPLE
- OAK
- PALM
- PINE
- UNKNOWN SPECIES

434 AVERAGE TREE COVERAGE

SAMPLE AREA	OAK (IN INCHES)	PALM (IN INCHES)	PINE (IN INCHES)	MAPLE (IN INCHES)	TOTAL
A	50,370	19,259	99,259	0	168,888
B	0	0	81,481	7,407	88,888
C	45,185	197,037	34,815	0	277,037
D	97,778	25,185	0	0	122,963
E	16,363	49,818	22,545	0	88,726
F	61,545	0	2,182	727	64,454
G	77,778	0	0	0	77,778
H	24,909	113,273	23,273	0	161,455
TOTALS	373,928	404,572	263,555	8,134	1,050,189
AVERAGE	46,741	50,572	32,944	1,017	131,274
PRESERVED AREA REDUCTION OF 9.2%	-4,299	-4,653	-3,031	-94	-12,077
TOTAL INCHES OF IMPACTED TREES BY HABITAT	42,442	45,919	29,913	923	119,197

NOTE: PALMS EXCLUDED IN TOTALS

HABITAT 434 - AVERAGE TREE REMOVAL

Sample Area	QTY 6-12" dbh Trees	QTY 13-23" dbh Trees	QTY 24"+ dbh Trees
A	13704	1111	370
B	10741	741	0
C	9259	741	0
D	8519	2222	0
E	1455	1545	91
F	3818	1636	273
G	1909	1545	0
H	3704	2963	0
TOTALS	**53108**	**12505**	**734**
Average	6638.5	1563.1	92
No. of trees Required for DBH range	x 1 Replacement Tree	x 4 Replacement Trees	10 Trees (based on avererage 30" DBH)
Replacement Trees Required	6638	6253	918

Habitat 434 Total Replacement Trees:	13809
Percentage of Habitat Impacted:	88.10%
Adjusted Total Trees based on Impacted Area:	12165

NOTE: ALL TREE FIGURES SHOWN IN INCHES (") ARE DBH MEASUREMENTS

434 HARDWOOD-CONIFER (85.46AC.)

SAMPLE AREA "A"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
- 6-12"dbh: (37) Trees / 0.0027 = 13,704 trees
- 13"-23"dbh: (3) Trees / 0.0027 = 1,111 trees
- 24"+: (1) @ 24" / 0.0027 = 370 trees

0 MAPLES=0"
14 OAKS=136" 136"/0.0027 = 50,370"
4 PALMS=52" 52"/0.0027 = 19,259"
27 PINES=268" 268"/0.0027 = 99,259"
168,888 TOTAL TREE INCHES

SAMPLE AREA "B"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
- 6-12"dbh: (29) Trees / 0.0027 = 10,740 trees
- 13"-23"dbh: (2) Trees / 0.0027 = 740 trees
- 24"+: (0) / 0.0027 = 0 trees

3 MAPLES=20" 20"/0.0027 = 7,407"
0 OAKS=0"
0 PALMS=0"
28 PINES=220" 220"/0.0027 = 81,481"
88,888 TOTAL TREE INCHES

SAMPLE AREA "C"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
- 6-12"dbh: (25) Trees / 0.0027 = 9,259 trees
- 13"-23"dbh: (2) Trees / 0.0027 = 370 trees
- 24"+: (0) / 0.0027 = 0 trees

0 MAPLES=0"
16 OAKS=122" 122"/0.0027 = 45,185"
45 PALMS=532" 532"/0.0027 = 197,037"
11 PINES=94" 94"/0.0027 = 34,815"
277,037 TOTAL TREE INCHES

SAMPLE AREA "D"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
- 6-12"dbh: (23) Trees / 0.0027 = 8,518 trees
- 13"-23"dbh: (6) Trees / 0.0027 = 2,222 trees
- 24"+: (0) / 0.0027 = 0 trees

0 MAPLES=0"
28 OAKS=264" 264"/0.0027 = 97,778"
6 PALMS=68" 68"/0.0027 = 25,185"
0 PINES=0"
122,963 TOTAL TREE INCHES

SAMPLE AREA "E"
AREA 200'X200;=40,000S.F. = 0.92AC.
0.92AC./85.46AC.=0.011 OR 01.1%
- 6-12"dbh: (16) Trees / 0.011 = 1,454 trees
- 13"-23"dbh: (17) Trees / 0.011 = 1,545 trees
- 24"+: (1) @30" / 0.011 = 90 trees

0 MAPLES=0"
15 OAKS=180" 180"/0.011 = 16,363"
31 PALMS=548" 548"/0.011 = 49,818"
19 PINES=248" 248"/0.011 = 22,545"
88,726 TOTAL TREE INCHES

SAMPLE AREA "F"
AREA 200'X200;=40,000S.F. = 0.92AC.
0.92AC./85.46AC.=0.011 OR 01.1%
- 6-12"dbh: (42) Trees / 0.011 = 3,818 trees
- 13"-23"dbh: (18) Trees / 0.011 = 1,636 trees
- 24"+: (1) @26" / 0.011 = 90 trees
  (1) @34" / 0.011 = 90 trees
  (1) @36" / 0.011 = 90 trees

2 MAPLES=8" 8"/0.011 =
63 OAKS=677" 677"/0.011 = 61,545"
0 PALMS=0"
2 PINES=248" 24"/0.011 = 2,182"
64,454 TOTAL TREE INCHES

SAMPLE AREA "G"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./85.46AC.=0.0027 OR 0.27%
- 6-12"dbh: (21) Trees / 0.011 = 1,909 trees
- 13"-23"dbh: (17) Trees / 0.011 = 1,545 trees
- 24"+: (0) / 0.011 = 0 trees

0 MAPLES=0"
18 OAKS=210" 210"/0.0027 = 77,778"
0 PALMS=0"
0 PINES=0"
77,778 TOTAL TREE INCHES

SAMPLE AREA "H"
AREA 100'X200;=40,000S.F. = 0.92AC.
0.92AC./85.46AC.=0.011 OR 01.1%
- 6-12"dbh: (10) Trees / 0.0027 = 3,703 trees
- 13"-23"dbh: (8) Trees / 0.0027 = 2,962 trees
- 24"+: (0) / 0.0027 = 0 trees

0 MAPLES=0"
26 OAKS=274" 274"/0.011 = 24,909"
91 PALMS=1,246" 1,246"/0.011 = 113,273"
20 PINES=256" 256"/0.011= 23,273"
161,455 TOTAL TREE INCHES

IMPORTANT NOTE:

- THE BASE SURVEY AND EXTRAPOLATED DATA FOR TOTAL *TREE INCHES* REMOVED WAS PROVIDED BY BUSSEN-MAYER ENGINEERING GROUP, INC. ON JUNE 28, 2021. (TEXT SHOWN IN BLACK)
- THE TEXT IN RED DENOTES THE TREE REMOVAL CALCULATIONS PER THE CITY'S *CURRENT TREE MITIGATION CODE* AND WERE PERFORMED BY SUSAN HALL LANDSCAPE ARCHITECTURE, LLC.

EXHIBIT B.3
TREE REMOVAL
CALCULATIONS FOR HABITAT 434 (PER SURVEY / INCLUDED REFERENCE)

PREPARED BY:
SUSAN HALL LANDSCAPE ARCHITECTURE
12-04-23

JCC
REVISIONS
DATE

Sec.: 10
Twp.: 24 South
Rng.: 35 East

J. BARRY CABANISS, P.L.S.
LICENSE NO. 4524

LAKES AT COCOA GROVE
TREE SURVEY
Brevard County Florida

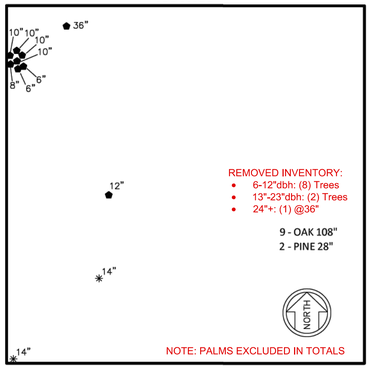
Bussen-Mayer Engineering Group, Inc.
100 PARNELL STREET • MERRITT ISLAND, FLORIDA 32953
PH. NO.: (321) 453-3010 • CERTIFICATE NO.: 3535

Date: JUNE 28, 2021
Scale: 1" = 20'
Proj. No.: 412401
Sheet Name: **TREE INVENTORY SURVEY**
Sheet: **2** of 3

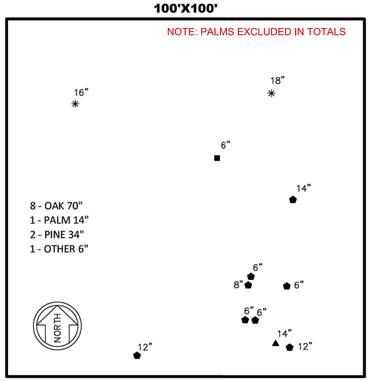
SURVEY DEPT.

C:\Dwg\Sur\412401 Lakes at Cocoa Grove-TP 3 - T24S-R35E-S10\412401-sr02.dwg, 7/7/2021 12:45:57 PM, Cadi-1

436 SAMPLE SITE "A" DETAIL
100'X100'



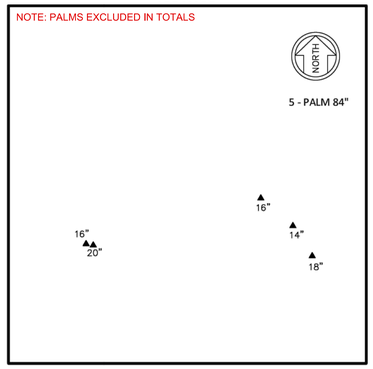
436 SAMPLE SITE "B" DETAIL
100'X100'



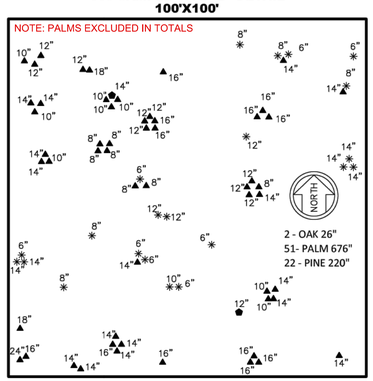
TREE LEGEND:

- ELM
- MAPLE
- OAK
- PALM
- PINE
- UNKNOWN SPECIES

630 SAMPLE SITE "A" DETAIL
100'X100'



630 SAMPLE SITE "B" DETAIL
100'X100'



REMOVED INVENTORY:
- 6-12"dbh: (18) Trees
- 13"-23"dbh: (5) Trees
- 24"+: (0)

NOTE: ALL TREE FIGURES SHOWN IN INCHES (") ARE DBH MEASUREMENTS

436 UPLAND SCRUB, PINE AND HARDWOOD (10.59AC.)

SAMPLE AREA "A"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./10.59AC.=0.022 OR 2.2%

- 6-12"dbh: (8) Trees / 0.022 = 364 trees
- 13"-23"dbh: (2) Trees / 0.022 = 91 trees
- 24"+: (1) @36" / 0.022 = 45 trees

0 MAPLES=0"		
2 OAKS=108"	108"/0.022 =	4,909"
0 PALMS=0"		
1 PINES=28"	28"/0.022 =	1273"
		6,182 TOTAL TREE INCHES

SAMPLE AREA "B"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./10.59AC.=0.022 OR 2.2%

- 6-12"dbh: (8) Trees / 0.022 = 364 trees
- 13"-23"dbh: (3) Trees / 0.022 = 136 trees
- 24"+: (0) / 0.022 = 0 trees

0 MAPLES=0"		
8 OAKS=70"	70"/0.022 =	3,182"
1 PALMS=14"	14"/0.022 =	636"
2 PINES=34"	34"/0.022 =	1,545"
		5,363 TOTAL TREE INCHES

436 AVERAGE TREE COVERAGE

SAMPLE AREA	OAK (IN INCHES)	PALM (IN INCHES)	PINE (IN INCHES)	MAPLE (IN INCHES)	TOTAL
A	4,909	0	1,273	0	6,182
B	3,182	636	1,545	0	5,363
TOTALS	8,091	636	2,818	0	11,545
AVERAGE	4,046	318	1,409	0	5,773
PRESERVED AREA REDUCTION OF 0%	0	0	0	0	0
TOTAL INCHES OF IMPACTED TREES BY HABITAT	4,046	318	1,409	0	5,773

HABITAT 436 - AVERAGE TREE REMOVAL			
Sample Area	QTY 6-12" dbh Trees	QTY 13-23" dbh Trees	QTY 24"+ dbh Trees
A	364	91	45
B	364	136	0
TOTALS	**727**	**227**	**45**
Average	363.6	113.6	23
No. of trees Required for DBH range	x 1 Replacement Tree	x 4 Replacement Trees	12 Tree (based on avererage 36" DBH)
Replacement Trees Required	364	455	227

Habitat 436 Total Replacement Trees:	1045
Percentage of Habitat Impacted:	86.8%
Total Trees based on Impacted Area:	907

NOTE: ALL TREE FIGURES SHOWN IN INCHES (") ARE DBH MEASUREMENTS

630 WETLAND FORESTED MIX (45.00AC.)

SAMPLE AREA "A"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./45.00AC.=0.0051 OR 0.51%

- 6-12"dbh: (0) Trees / 0.0051 = 0 trees
- 13"-23"dbh: (0) Trees / 0.0051 = 0 trees
- 24"+: (0) / 0.0051 = 0 trees

0 MAPLES=0"		
0 OAKS=0"		
5 PALMS=132"	132"/0.0051 =	25,826"
0 PINES=0"		
		25,826 TOTAL TREE INCHES

SAMPLE AREA "B"
AREA 100'X100;=10,000S.F. = 0.23AC.
0.23AC./45.00AC.=0.0051 OR 0.51%

- 6-12"dbh: (18) Trees / 0.0051 = 3,529 trees
- 13"-23"dbh: (5) Trees / 0.0051 = 980 trees
- 24"+: (0) / 0.0051 = 0 trees

0 MAPLES=0"		
2 OAKS=22"	22"/0.0051 =	4,314"
55 PALMS=720"	720"/0.0051 =	141,176"
22 PINES=210"	204"/0.0051 =	40,000"
		185,490 TOTAL TREE INCHES

630 AVERAGE TREE COVERAGE

SAMPLE AREA	OAK (IN INCHES)	PALM (IN INCHES)	PINE (IN INCHES)	MAPLE (IN INCHES)	TOTAL
A	0	25,826	0	0	25,826
B	4,314	141,176	40,000	0	185,490
TOTALS	4,314	167,002	40,000	0	211,316
AVERAGE	2,157	83,501	20,000	0	105,658
RESERVED AREA REDUCTION OF 29.5%	636	24,633	5,900	0	31,169
TOTAL INCHES OF IMPACTED TREES BY HABITAT	1,521	58,868	14,100	0	74,489

HABITAT 630 - AVERAGE TREE REMOVAL			
Sample Area	QTY 6-12" dbh Trees	QTY 13-23" dbh Trees	QTY 24"+ dbh Trees
A	0	0	0
B	3529	980	0
TOTALS	**3529**	**980**	**0**
Average	1764.7	490.2	0
No. of trees Required for DBH range	x 1 Replacement Tree	x 4 Replacement Trees	10 Trees (based on avererage 30" DBH)
Replacement Trees Required	1765	1961	0

Habitat 630 Total Replacement Trees:	3725
Percentage of Habitat Impacted:	70.5%
Adjusted Total Trees based on Impacted Area:	2626

TOTAL INCHES OF IMPACTED TREES SUMMERY

HABITAT TYPE	INCHES OF TREE IMPACT
434	119,197
436	5,773
630	74,489
533	0
641	0
TOTAL	199,459 INCHES

*** REDUCTION FOR HOUSE PAD PER CODE (BASED ON 60X60 FOOT HOUE PAD)**

350 HOMES X 60' X60'=1,260,000/43,560=28.93 ACRES
IMPACTED OVER 205.03 ACRES
PERCENT REDUCTION=28.93/205.03=14.1%
14% OF 199,459 INCHES=27,924 INCHES

GRAND TOTAL INCHES IMPACTED=171,535 INCHES

SUMMARY TREE REPLACEMENT REQUIRED				
Habitat Type	Impacted Area (Acres)	Quantity Replacement Trees	Less Preservation Tree	Remaining Replacement Trees
434	75.30	12165	-676	11489
436	9.20	907	0	907
630	31.72	2626	-2921	-295
533	83.97	0	0	0
641	1.15	0	0	0
TOTALS	**201.34**	**15698**	**-3597**	**12101**

REDUCTION FOR HOUSE PAD (BASED ON 60'X60' HOUSE PAD)	
No. of Individual Lots on Site	350
Typical building envelope with 7.5' offset (sf area)	3,600
Total Building Envelope Area (sf)	1260000
Total Building Envelope Area (Acre)	28.93
Total Impacted Area (Acre)	201.34
Percent Reduction (Building Area within Total Impacted Areas:)	14.4%
Remaining Replacement Trees from Summary Above:	12101
Less 14.1% Building Reduction:	1,738
Grand Total Replacement Trees Required:	**10,363**

GRAND TOTAL *REPLACEMENT TREES* REQUIRED: 10,363

IMPORTANT NOTE:

- THE BASE SURVEY AND EXTRAPOLATED DATA FOR TOTAL *TREE INCHES* REMOVED WAS PROVIDED BY BUSSEN-MAYER ENGINEERING GROUP, INC. ON JUNE 28, 2021. (TEXT SHOWN IN BLACK)
- THE TEXT IN RED DENOTES THE TREE REMOVAL CALCULATIONS PER THE CITY'S *CURRENT TREE MITIGATION CODE* AND WERE PERFORMED BY SUSAN HALL LANDSCAPE ARCHITECTURE, LLC.

EXHIBIT B.4
TREE REMOVAL & SUMMARY
CALCULATIONS
FOR HABITATS 436 AND 630 (PER SURVEY / INCLUDED REFERENCE)

PREPARED BY:
SUSAN HALL
LANDSCAPE ARCHITECTURE
12-04-23

JCC
REVISIONS
DATE

Sec.: 10
Twp.: 24 South
Rng.: 35 East

J. BARRY CABANISS, P.L.S.
LICENSE NO. 4524

Florida

Bussen-Mayer Engineering Group, Inc.
100 PARNELL STREET • MERRITT ISLAND, FLORIDA 32953
PH. NO.: (321) 453-0010 • CERTIFICATE NO.: 3535

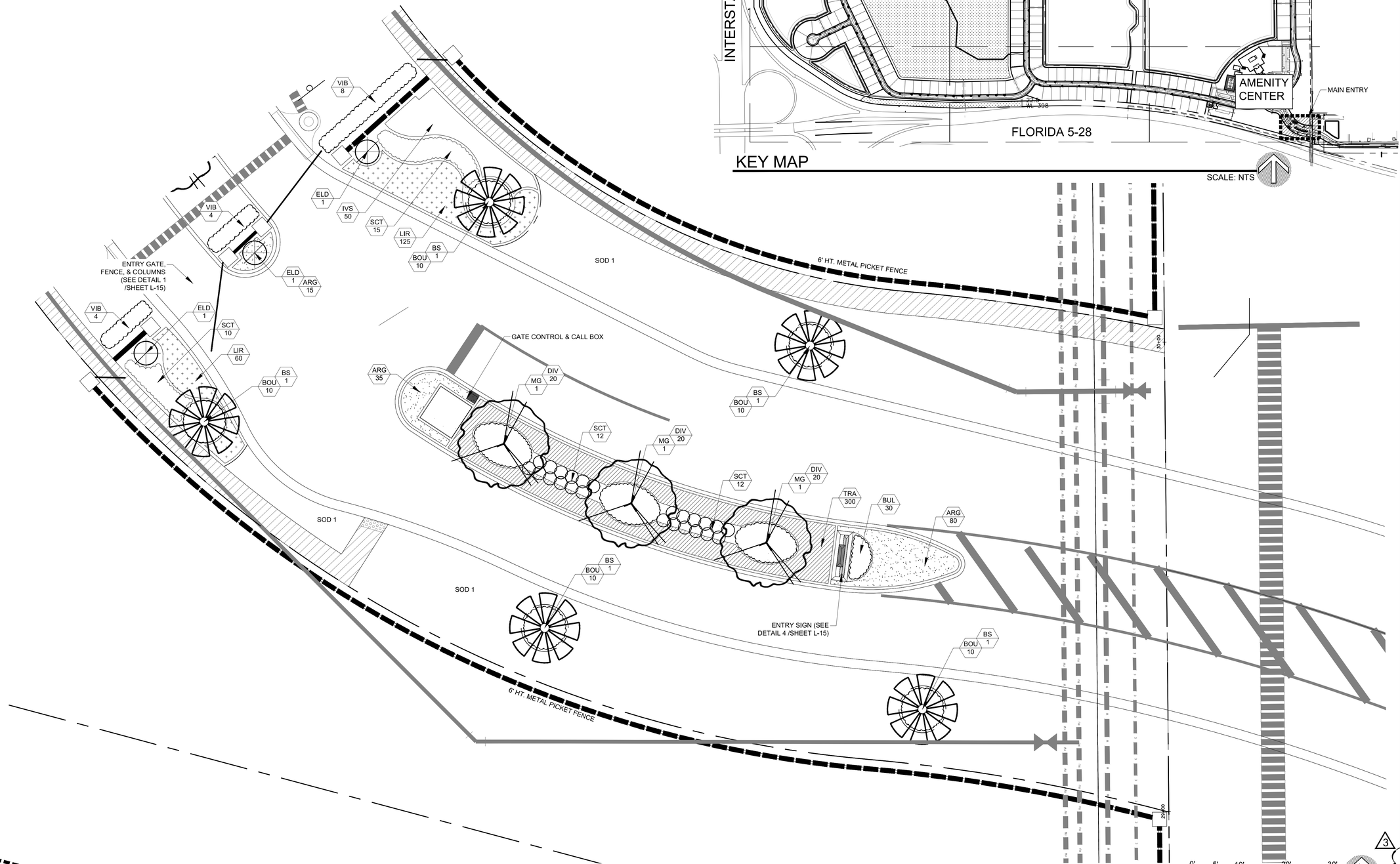
LAKES AT COCOA GROVE
TREE SURVEY

Brevard County

Date: JUNE 28, 2021
Scale: 1" = 20'
Proj. No.: 412401
Sheet Name: **TREE INVENTORY SURVEY**
Sheet: **3** of 3

SURVEY DEPT.

C:\Dwg\Sur\412401 Lakes at Cocoa Grove-TP 3 - T24S-R35E-S10412401-sr02.dwg, 8/2/2021 7:03:28 PM, Cadi-1



Susan Hall, ASLA
LANDSCAPE ARCHITECTURE
LC26000357
4425 CROOKED MILE RD.
MERRITT ISLAND, FL 32952
PHONE: (321) 449-0790
FAX: (321) 449-1225
www.hall-la.com

LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Main Entry Landscape Plan

DATE 02-27-23

DESIGN S.H.

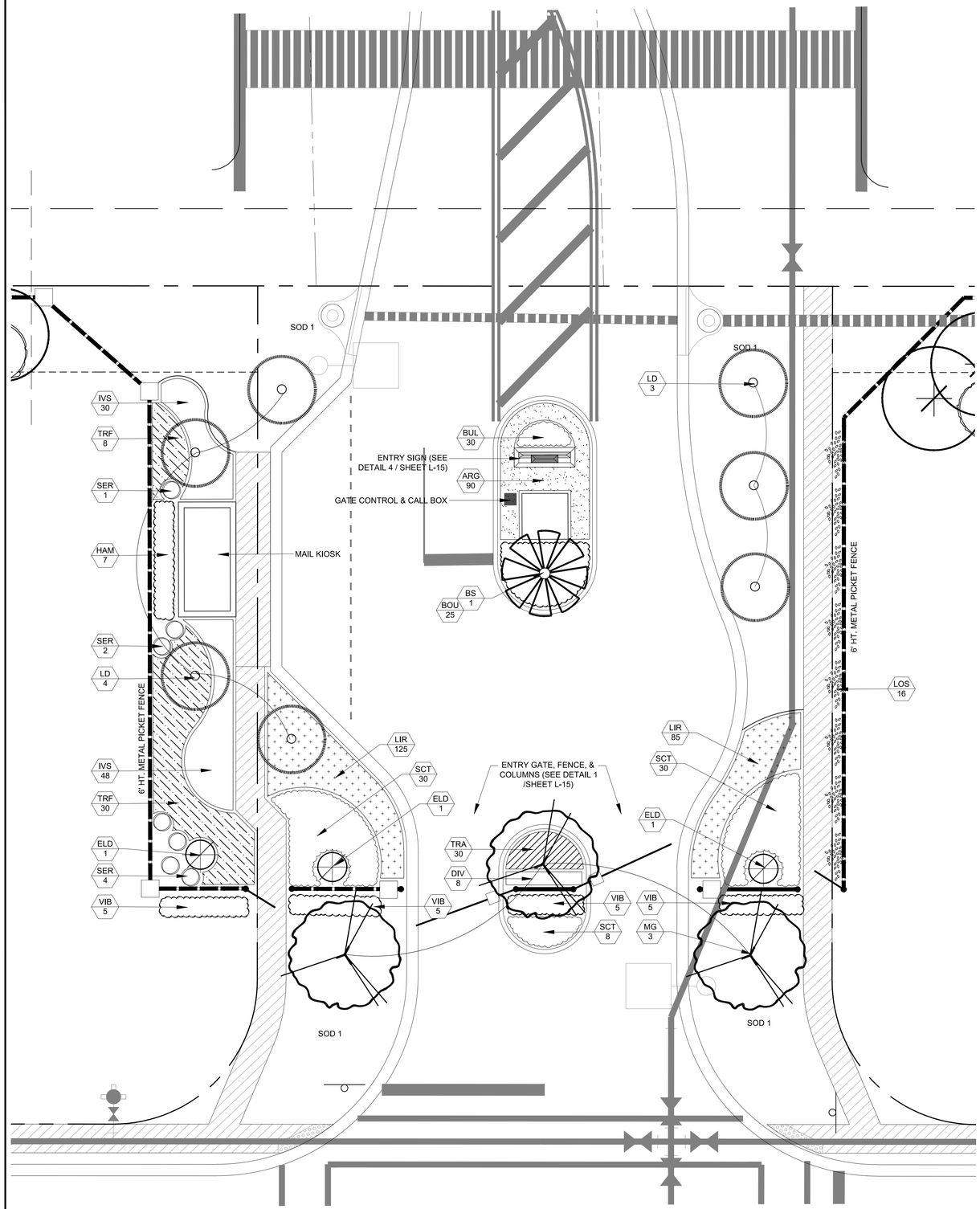
DRAWN M.M.

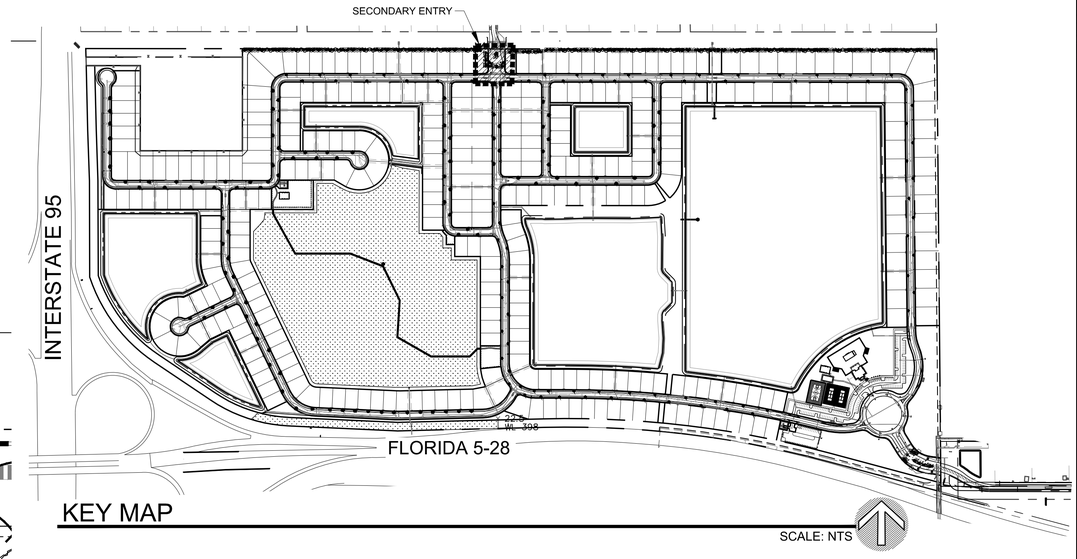
SCALE 1" = 10'-0"

REVISIONS
3 RESPONSE TO COMMENT 02-27-23

SEAL
REGISTERED LANDSCAPE ARCHITECT SUSAN HALL #859 STATE OF FLORIDA
02-27-23

SHEET L-11 OF 15





0' 5' 10' 20' 30'
SCALE: 1" = 10'-0"

Susan Hall, ASLA
LANDSCAPE ARCHITECTURE
LC26000357
4425 CROOKED MILE RD.
MERRITT ISLAND, FL 32952
PHONE: (321) 449-0790
FAX: (321) 449-1225
www.hall-la.com

LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Secondary Entry Landscape Plan

DATE 09-22-21

DESIGN S.H.

DRAWN M.M.

SCALE 1" = 10'-0"

REVISIONS
3 RESPONSE TO COMMENT 02-27-23

SEAL
REGISTERED LANDSCAPE ARCHITECT #852 STATE OF FLORIDA
02-27-23

3

SHEET L-12 OF 15

The Lakes at Cocoa Groves - North Buffer Plant List (Revision #1)

PLANT MATERIAL

TREES & PALMS

	QTY	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING
	57	*Quercus virginiana*	Live Oak	65G	15' ht x 6' spd x 4" caliper; Florida Grade#1	As Shown
	38	*Acer rubrum 'Florida Flame'*	Red Maple 'Florida Flame'	FG	16' ht x 7' spd x 4" caliper; min.	As Shown
Δ1	237	*Pinus elliottii 'Densa'*	Slash Pine 'Densa'	FG	staggered ht 14-16' ht x 3-4' spd x 4" caliper min.	As Shown
Δ1	289	*Myrica cerifera*	Wax Myrtle	Container	6' ht x 4" caliper; multi trunk	As Shown

Sections; Refer to key Map

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	9
	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	4

MISCELLANEOUS LANDSCAPE ITEMS

		Site Preparation- The General Contractor shall provide the rough grade, the Landscape Contractor shall provide the fine grading as specified in the plans.
	TBD	SF_Sod Bahia; ***Landscape Contractor to field-verify amount needed.***
Δ1	104	CY_Planting Mix- 33% Clean Sharp Sand, 33% Florida Peat, 33% Well-rotted Wood Chips/Compost. (North Buffer)
Δ1	92	CY_Mulch - 'Coco Brown' Mulch from Florida Mulch; Approx. 20 sq ft of mulch per Tree for 5' Mulch Ring (North Buffer = 12,420 SF)

Bracing, Guying, Staking & Fertilizing is to be included in the unit price for installed plant material;
This estimate reflects current market pricing as of the date listed and is subject to change.

* We strive to be as accurate as possible with sod measurements, however, changing field conditions will affect the final sod amount required. Please be aware that our sod calculations are not exact and additional sod could be required. **Additional sod will be the owner's responsibility and added to the final contract amount**.

811 KNOW WHAT'S BELOW
ALWAYS CALL 811
BEFORE YOU DIG
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Call 811 two business days before digging

3

Lakes at Cocoa Grove - Street Trees

PLANT MATERIAL

QTY	CODE	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING	L-2	L-3	L-4	L-5	L-6	L-7	L-8	L-9	L-10	NATIVE	WATER WISE
TREES & PALMS																	
81		*Ilex 'Nellie R. Stevens'*	Holly 'Nellie Stevens'	Container	10'ht, full to base, 4" caliper minimum	As Shown	7	16	17		9	7		19	6		✓
58		*Lagerstroemia indica 'Muskogee'*	Crape Myrtle 'Muskogee'	Container	10' ht., multi trunk, 4" caliper minimum	As Shown	21	14		4	6		6	7			✓
47		*Lagerstroemia indica 'Tuskegee'*	Crape Myrtle 'Tuskegee'	Container	10' ht., multi trunk, 4" caliper minimum	As Shown	12	19		10			6				✓
186																	

3

Enty Landscape Plant List - Lakes at Cocoa Grove

PLANT MATERIAL

QTY	CODE	BOTANICAL NAME	COMMON NAME	INSTALLED SIZE	SPECIFICATIONS	SPACING	SHEET NUMBERS L-11	SHEET NUMBERS L-12	NATIVE	WATER WISE
TREES & PALMS										
7	LD	*Livistona Decipiens*	Ribbon Palm	FG	8' clear trunk ht., diamond cut trunk, matched	As Shown		7		✓
6	MG	*Magnolia grandiflora 'DD Blanchard'*	Magnolia 'DD Blanchard'	100g	14' ht. x 5' spd., 5' clear trunk, 4"caliper minimum	As Shown	3	3	✓	✓
6	BS	*Bismarkia nobilis 'Silver Select'*	Silver Bismarkia Palm	100g	12' overall planted height	As Shown	5	1		✓

SHRUBS & GROUNDCOVERS							**L-11**	**L-12**		
90	ARG	*Arachis glabrata*	Perennial Peanut	1g	4" ht. x 12" spd.	18" oc	130	**90**		✓
25	BOU	*Bougainvillea 'Helen Johnson Dwarf'*	Dwarf Bougainvillea 'Helen Johnson'	7g	18"ht. x 18"spd.	30"oc	50	25		✓
3	ELD	*Elaeocarpus decipiens*	Japanese Blueberry	15g	5' ht., full to base	As shown	3	3		✓
8	DIV	*Dietes vegeta*	African Iris	1g	18"ht., full	24" oc	60	8		✓
110	LIR	*Liriope muscari 'Super Blue'*	Liriope 'Super Blue'	1g	12" ht., full	18" oc	185	110		✓
16	LOS	*Lonicera sempervirens*	Coral Honeysuckle Vine	3g	30"ht. remove wood trellis & train onto picket fence	5' oc		16	✓	✓
7	HAM	*Hamelia patens 'compacta'*	Dwarf Firebush	3g	16"ht. x 16"spd.	36" oc		7	✓	✓
78	IVS	*Ilex vomitoria 'Stokes Dwarf'*	Ilex 'Stokes Dwarf'	3g	10"ht. x 12"spd.	24" oc	50	78	✓	✓
68	SCT	*Schefflera arboricola 'Trinette'*	Variegated Arboricola 'Trinette'	3g	18"ht. x 18"spd.	30" oc	37	68		✓
30	BUL	*Bulbine frutescens 'Hallmark'*	Bulbine 'Hallmark'	1g	12"ht., full	12" oc	30	30		✓
7	SER	*Serenoa repens 'Silver Form'*	Silver Saw Palmetto	7g	14"ht. x 20"spd.	42" oc		7	✓	✓
30	TRA	*Trachelospermum asiaticum*	Asiatic Jasmine	1g	4" ht. x 12" spd.	18" oc	300	30		✓
30	TRF	*Tripsacum floridana*	Dwarf Fakahatchee Grass	3g	24"ht., full	42" oc		30	✓	✓
20	VIB	*Viburnum suspensum*	Sandankwa Viburnum	3g	18"ht. x 18"spd.	36" oc	16	20		✓

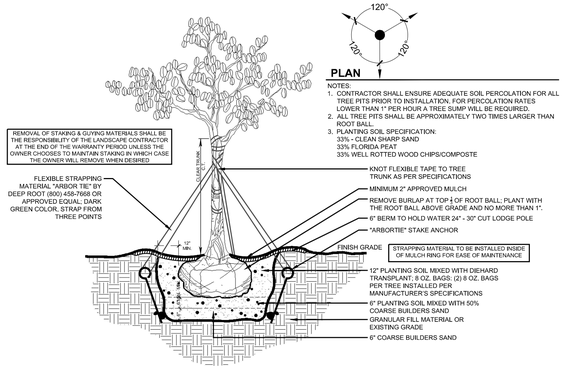
MISCELLANEOUS LANDSCAPE ITEMS

10,700	SF	Sod type 1: St. Augustine 'Floratam' (includes 10% shrinkage) Landscape Contractor to field-verify amount needed
25	CY	Planting Mix- 33% Clean Sharp Sand, 33% Florida Peat, 33% Well-rotted Wood Chips/Compost
55	CY	Mulch: 'Coco Brown' Mulch from Florida Mulch
1	LS	Irrigation

Bracing, Guying, Staking & Fertilizing is to be included in the unit price for installed plant material

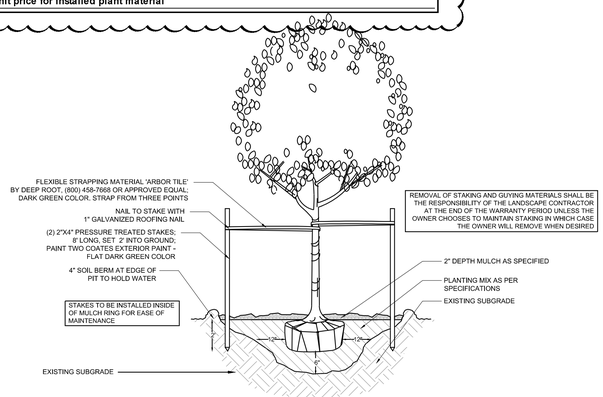
ABBREVIATIONS

CAL - CALIPER
CONC. - CONCRETE
C.T. - CLEAR TRUNK
CY - CUBIC YARD
EA. - EACH
EX. - EXISTING
FFE - FINISHED FLOOR ELEVATION
FG - FIELD GROWN
FM - FORCE MAIN
FTB - FULL TO BASE
G - GALLON
GAL - GALLON
GW - GREY WOOD
HT - HEIGHT
LF - LINEAR FOOT
MT - MULTI TRUNK
OC - ON CENTER
OA - OVERALL HEIGHT
PLTG. - PLANTING
SF - SQUARE FEET
SPD - SPREAD
TOB - TOP OF BANK
TYP. - TYPICAL



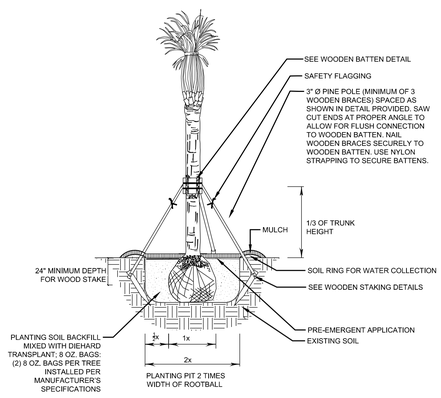
TREE PLANTING & GUYING DETAIL

N.T.S.



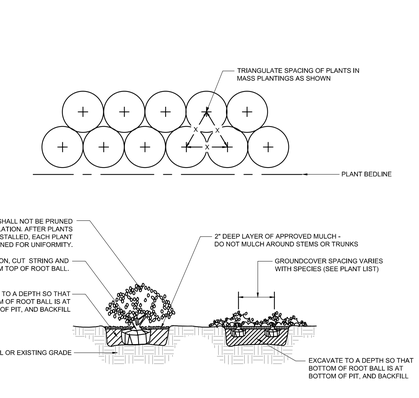
SPECIMEN TREE GUYING DETAIL

N.T.S.



PALM PLANTING DETAIL

N.T.S.



SHRUB & GROUNDCOVER PLANTING DETAIL

N.T.S.

3

Susan Hall, ASLA
LANDSCAPE ARCHITECTURE
LC26000357
4425 CROOKED MILE RD.
MERRITT ISLAND, FL 32952
PHONE: (321) 449-0790
FAX: (321) 449-1225
www.hall-la.com

LAKES AT COCOA GROVES
Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
Landscape Details and Specifications

DATE 09-22-21

DESIGN S.H.

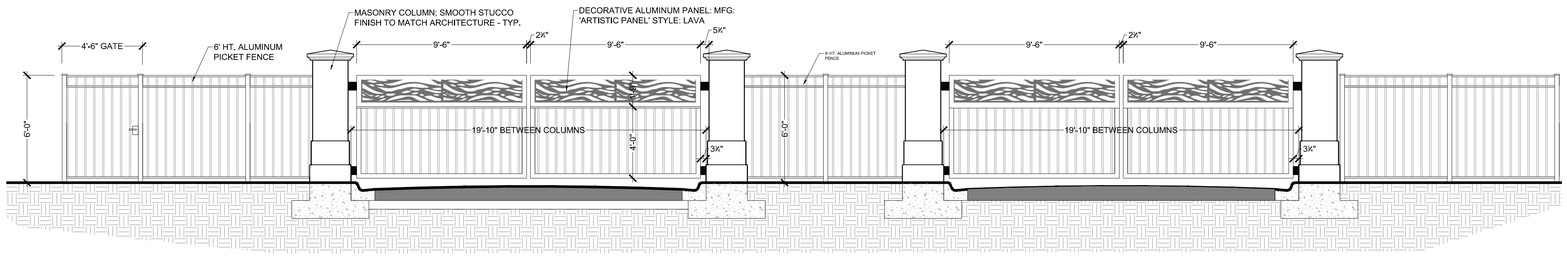
DRAWN S.K.

SCALE 1" = 40'-0"

REVISIONS
1 RESPONSE TO COMMENT 08-31-22
2 RESPONSE TO COMMENT 02-27-23

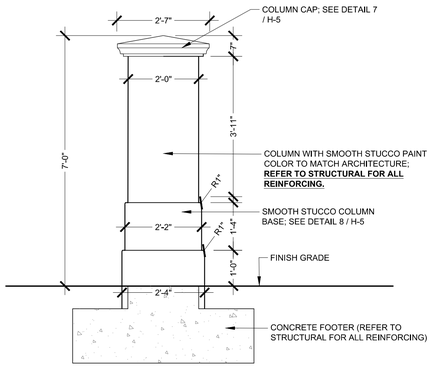
SEAL
REGISTERED LANDSCAPE ARCHITECT #850 STATE OF FLORIDA
02-27-23

SHEET L-13 OF 15



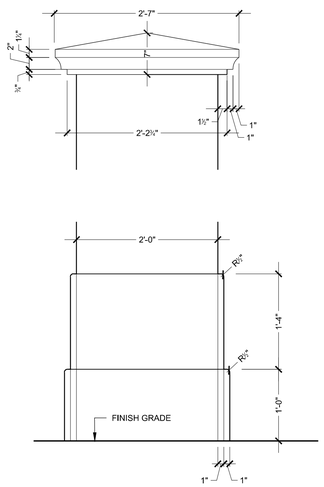
1 L15 ENTRY GATE - DESIGN INTENT ELEVATION

SCALE: 1/4" = 1'-0"



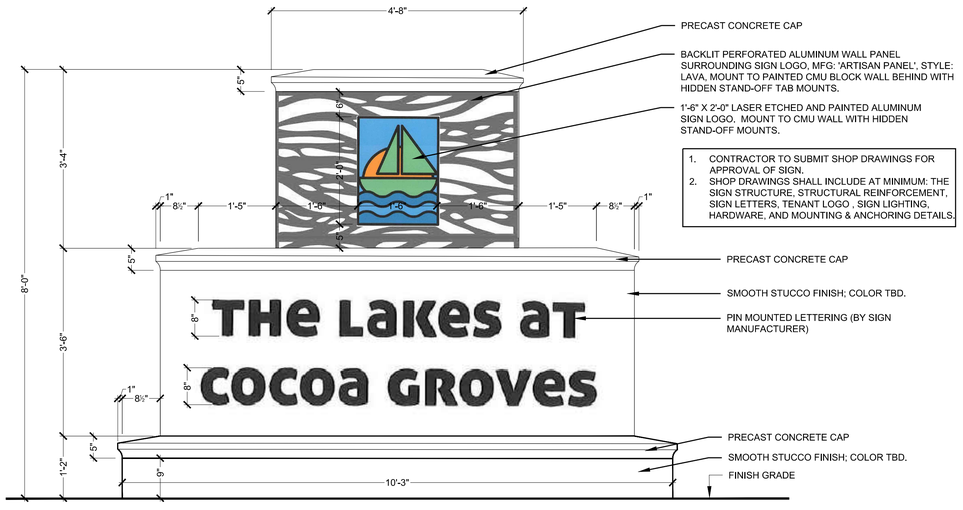
2 L15 FENCE COLUMN - ELEVATION

SCALE: 1/2" = 1'-0"



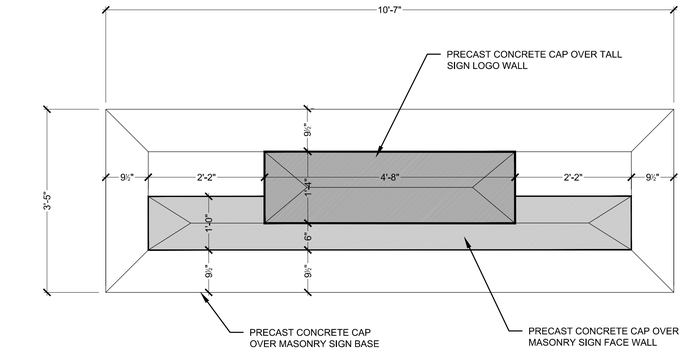
3 L15 FENCE COLUMN - BASE & CAP DETAIL

SCALE: 1" = 1'-0"



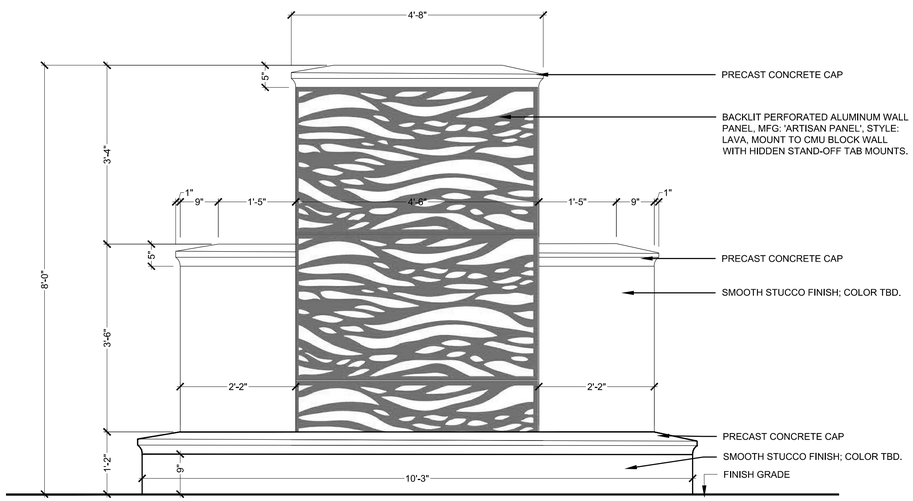
4 L15 ENTRY SIGN - FRONT ELEVATION

SCALE: 3/4" = 1'-0"



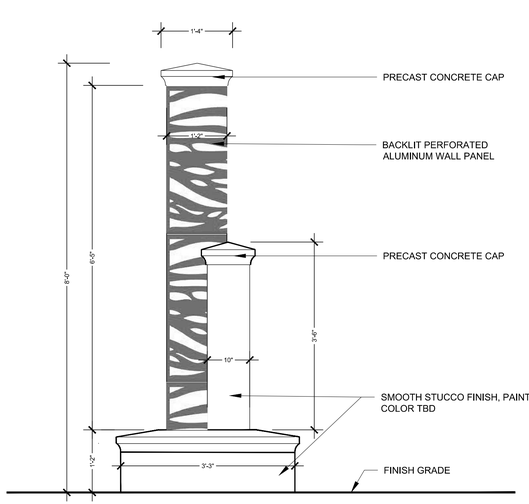
5 L15 ENTRY SIGN- PLAN

SCALE: 3/4" = 1'-0"



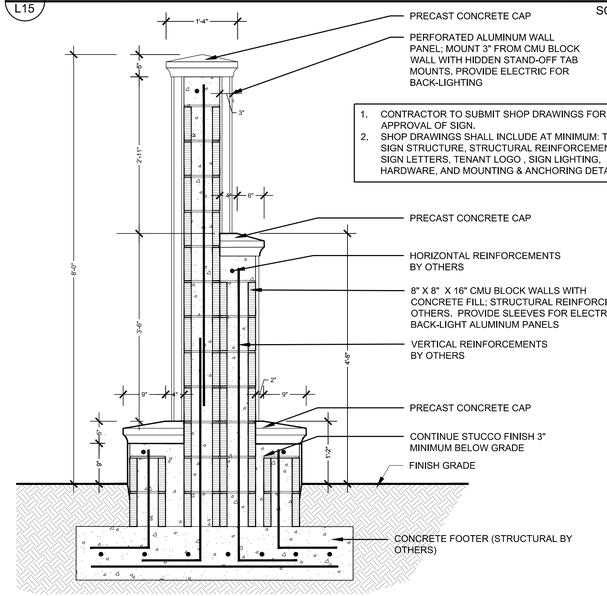
6 L15 ENTRY SIGN - BACK ELEVATION

SCALE: 3/4" = 1'-0"



7 L15 ENTRY SIGN - SIDE ELEVATION

SCALE: 3/4" = 1'-0"



8 L15 ENTRY SIGN - SIDE SECTION ELEVATION

SCALE: 3/4" = 1'-0"

Susan Hall, ASLA
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MERRITT ISLAND, FL 32952
PHONE: (321) 449-0790
FAX: (321) 449-1225
www.hall-la.com

THE LAKES AT COCOA GROVES

Township 24 South, Range 35 East, Section 10
Cocoa, FL

SHEET TITLE
HARDSCAPE DETAILS

DATE 02-27-23

DESIGN S.H.

DRAWN M.M.

SCALE AS SHOWN

REVISIONS
3 RESPONSE TO COMMENT 02-27-23

SEAL
SUSAN HALL LICENSED LANDSCAPE ARCHITECT #850 FLORIDA
02-27-23

3

SHEET L-15 | OF 15

LocaliQ
Florida
GANNETT

PO Box 631244 Cincinnati, OH 45263-1244

PROOF OF PUBLICATION

CITY OF COCOA (TE)
Accounting Division
City Of Cocoa - Te
65 Stone ST
Cocoa FL 32922-7982

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01/23/2024

Affiant further says that the website or newspaper complies with all legal requirements for publication in chapter 50, Florida Statutes.
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Notary, State of WI, County of Brown

1-7-25

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CITY OF COCOA
NOTICE OF PUBLIC HEARING, ZONING MAP AMENDMENT AND SITE PLAN & PRELIMINARY PLAT APPROVAL
NOTICE IS HEREBY GIVEN THAT THE PLANNING & ZONING BOARD/LOCAL PLANNING AGENCY AND CITY COUNCIL PROPOSE TO CONSIDER THE FOLLOWING:

PZ-24-02100001 – ZONING MAP AMENDMENT (301 S. Cocoa Blvd)

A. Ordinance XX-2024. AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COCOA, BREVARD COUNTY, FLORIDA; amending the Official Zoning Map designation of eleven (11) parcels of real property, totaling 1.39 acres, more or less, and generally located on the southwest corner of SR-520 and US-1, more particularly depicted and legally described on Exhibit "A" attached hereto, from Commercial Parkway District (C-P) to Neighborhood Commercial (C-N); providing for the repeal of prior inconsistent ordinances and resolutions, severability, and an effective date. Parcel ID numbers: 24-36-33-31-A-5, 24-36-33-31-C-1, 24-36-33-31-D-11, 24-36-33-31-D-12, 24-36-33-31-D-13, 24-36-33-31-C-2, 24-36-33-31-*-R.1, 24-36-33-31-*-R.2, 24-36-33-31-*-R.3, 24-36-33-31-*-R.4, and 24-36-33-31-*-R.5.

PZ-21-00100002- SITE PLAN AND PRELIMINARY PLAT APPROVAL (Lakes at Cocoa Groves)

B. Consideration of a large-scale site plan and preliminary plat, pursuant to Chapter 18 and Appendix A, Zoning, Article XIII, Sec. 1 of the Cocoa City Code, of one (1) parcel of real property, totaling 246.43 acres, more or less, and generally located on the northeast corner of SR-528 and I-95, in Cocoa, Florida, for a residential subdivision of approximately 350 lots with private recreational common space and amenities. Tax Parcel ID number: 24-35-10-00-3.

PLANNING & ZONING BOARD/ LOCAL PLANNING AGENCY PUBLIC HEARING WILL BE HELD FOR BOTH ITEMS ON:
February 7, 2024
CITY COUNCIL 1st PUBLIC HEARING FOR ITEM A WILL BE HELD ON
February 13, 2024
CITY COUNCIL FINAL PUBLIC HEARING FOR THE PRELIMINARY PLAT IN ITEM B WILL BE HELD ON
February 13, 2024
ALL HEARINGS WILL TAKE PLACE AT 6:00 P.M. OR SOON THEREAFTER IN THE COCOA CITY HALL COUNCIL CHAMBERS LOCATED AT 65 STONE STREET, COCOA, FL

General Notice Information:

This is a public meeting. Interested parties are hereby advised that they may appear at said meeting and be heard. The facility wherein this public meeting will be held is accessible to the physically handicapped. In accordance with the Americans With Disabilities Act, persons needing assistance to participate in any of these proceedings should contact the City Clerk of the City of Cocoa, listed below, at least 48 hours prior to the meeting: Monica Arsenault, Assistant City Clerk, 65 Stone Street, Cocoa, by telephone at (321) 433-8488 or via email at marsenault@cocoafl.gov.

Pursuant to Section 286.0105, Florida Statutes, the City hereby advises the public that if a person decides to appeal any decision made by the BOA, P&Z Board/LPA or City Council with respect to any matter considered at its meeting or hearing, that person will need a record of the proceedings and for such purpose, affected persons may need to assure that a verbatim record of the proceedings is made, and such record shall include the testimony and evidence upon which the appeal is to be based. This notice does not constitute consent by the City for the introduction or admission into evidence of otherwise inadmissible or irrelevant evidence, nor does it authorize challenges or appeals otherwise not allowed by law.

The BOA or PZ Board/LPA meeting may include the attendance of one (1) or more members of the Cocoa City Council who may or may not participate in the Board discussions held at this public hearing. The BOA, PZ Board/LPA and City Council reserve the right to continue or postpone hearings to a date certain without re-advertising.

Public Participation Information:

Members of the public may view the meeting agenda, ordinances, project applications, supporting documents, and staff reports on the City's website at the following link prior to attending or commenting:

• City of Cocoa meeting calendar at https://cocoa.legistar.com/Calendar.aspx

Documents pertaining to the above may also be inspected at the Community Services Department, between 8:00 a.m. and 5:00 p.m., Monday through Friday, or by phoning (321) 433-8535.

Interested persons may submit their written comments or questions prior to the meeting through Email at meetings@cocoafl.org, or via E-comments through the online agenda at the link above. Any electronic comments submitted will be made part of the meeting record.

Viewing In Real Time. Interested persons are encouraged to view and listen to the hearings live by accessing the meetings at the following internet address:

• City of Cocoa meeting calendar at https://cocoa.legistar.com/Calendar.aspx

However, the City is not responsible for technical difficulties that may occur while attempting to view or listen to the meeting on the internet.

Special Information for Quasi-Judicial Hearings:

Any person that (1) can demonstrate that they may suffer special damages different in kind and degree from that of the general public at large; and (2) wishes to present factual or expert witnesses and/or evidence at the quasi-judicial hearing is highly encouraged to immediately contact Lucilene Ribeiro, Planner, at (321) 433-8535 or lribeiro@cocoafl.gov, to make proper arrangements for presentation of witnesses and/or evidence. All witnesses should be identified and all evidentiary documents and exhibits that are intended to be distributed to the BOA, P&Z/LPA and City Council should be submitted to Ms. Ribeiro via email or mail at least three (3) days prior to the hearing.

Legislation Details (With Text)

File #:	24-060	**Version:**	1	**Name:**	
Type:	Agenda			**Status:**	Agenda Ready
File created:	1/30/2024			**In control:**	Planning and Zoning / Local Planning Agency
On agenda:	2/7/2024			**Final action:**	
Title:	Consideration of a Zoning Map Amendment consistent with Appendix A, Zoning, Article XXI, to change the Zoning Map designation of eleven parcels totaling 1.39 acres, with the address 301 S. Cocoa Blvd., from C-P, Commercial Parkway, to C-N, Neighborhood Commercial.				
Sponsors:					
Indexes:					
Code sections:					
Attachments:					

Date	Ver.	Action By	Action	Result

PLANNING & ZONING BOARD/LOCAL PLANNING AGENCY AGENDA ITEM

Memo Date: January 30, 2024
Agenda Date: February 7, 2024
Prepared By: Stephen Noto, AICP - Planning Consultant
Through: Stockton Whitten - City Manager
Requested Action:
Consideration of a Zoning Map Amendment consistent with Appendix A, Zoning, Article XXI, to change the Zoning Map designation of eleven parcels totaling 1.39 acres, with the address 301 S. Cocoa Blvd., from C-P, Commercial Parkway, to C-N, Neighborhood Commercial.

BACKGROUND:

The applicant, Ms. Mary D. Solik, Esq., on behalf of the property owner, Biscaya Holdings, LLC., is requesting to amend the Zoning Map designation of eleven parcels totaling 1.39 acres, with the address 301 S. Cocoa Blvd., from C-P, Commercial Parkway, to C-N, Neighborhood Commercial. The eleven parcel ID numbers that encompass the Subject Property, as part of the Laphams Subdivision as recorded in 1912, are as follows:

• 24-36-33-31-A-5 • 24-36-33-31-C-1 • 24-36-33-31-D-11 • 24-36-33-31-D-12 • 24-36-33-31-D-13 • 24-36-33-31-C-2 • 24-36-33-31-*-R.1 • 24-36-33-31-*-R.2 • 24-36-33-31-*-R.3 • 24-36-33-31-*-R.4 • 24-36-33-31-*-R.5

The reason for the requested change is the applicant has identified that the existing zoning district of C-P is not an applicable zoning district with the current Future Land Use (FLU) designation of MU, Mixed Use, per Figure FLU-1 of the Future Land Use Element. The applicant is planning to redevelop

the property in the future but is pursuing this step prior to the formal site plan submittal. While not made part of this submittal package, based on recent discussions with the application, the desire is to develop a “retail automotive gasoline/fuel sales as an accessory use to convenience store”, which would be a special exception use subject to certain conditions in the C-N if the rezoning were approved. However, the applicant has not identified an intended use of the property in the rezoning application. A more detailed analysis of the zoning and FLU applicability issue will be provided later in this staff report.

In 2022, ModWash, LLC, applied for a Zoning Map Amendment (ZMA) and Comprehensive Plan Map Amendment (CPA) for the subject property. The CPA was to amend the future land use designation from MU, to COMM, Commercial. The ZMA request to rezone the subject property was from C-P, to C-G, General Commercial. The purpose of the requests was in order to construct a 4,320 sq. ft. self-serve carwash with amenities.
For a variety of factors, staff at that time recommended denial of both requests, and the project did not move forward past the May 4, 2022 Planning & Zoning Board Meeting. Some of the facts of that case are similar in this scenario, and may also be touched upon in this staff report.

Future Land Use Designation: Current: MU, Mixed Use

Zoning District: Current: C-P, Commercial Parkway

Proposed: C-N, Neighborhood Commercial

Existing Land Use: Commercial Related Amenities, Vacant Commercial Land

Council District: District 1 - Councilmember Goins

Legal Ad Date: January 23, 2024

Overview of Surrounding Area:

	Future Land Use Designations	**Zoning Districts**	**Land Uses**
North	MU, Mixed Use	PUD, Planned Unit Development; C-N, Neighborhood Commercial	Used Automobile Sales
South	COMM, Commercial	RU-1-7, Single-Family Residential District	Garage/Auto-Body/Auto Paint Shop
East	MU, Mixed Use; COMM, Commercial	RU-2-15, Multiple Family Dwelling	Commercial Related Amenities/Dealership Sales/Service Center/Vacant Commercial Land/Parking Lot Commercial

West	MU, Mixed Use	RU-1-7, Single-Family Residential District	FEC Railroad/Recreation Hall/Vacant Commercial Land/State Owned Land-Vacant

I. Rezoning Analysis

The Planning & Zoning Division staff have addressed the criteria contained in Appendix A of the City of Cocoa, Article XXI, Section 1(G) as follows:

a. *The proposed change is contrary to the established land use pattern.*

Staff Finding: The City's FLU Map provides for a Mixed-Use (MU) FLU Corridor on the south side of SR520/King St. that extends from S. Fiske Blvd. east to Cocoa Village/Riveredge Blvd. This area falls within parts of both the Diamond Square CRA and the Cocoa CRA. As shown on the Cocoa CRA map, the MU FLU extends north at the intersection of SR520/King St. and US 1. There are a number of zoning and FLU applicability conflicts within this corridor, as many parcels have C-G and C-P zoning, which are not applicable with the MU FLU, as noted in Figure FLU-1 in the Future Land Use Element of the Comprehensive Plan.

As a result of these consistency and applicability issues, the City is embarking on a Visioning Study to best determine how to manage and direct the needed zoning changes along the corridor, while also meeting the intent of the MU FLU designation, which is copied for convenience below:

"Per Policy 1.1.2.6: Mixed-Use (MU). The Mixed-Use land use category is intended to provide a mixture of residential, commercial, office, recreational and institutional uses along the major transportation corridors (such as SR 520 and US 1). The mixed-use could be developed as single uses on separate parcels or as a mixture of uses within a single development. Based on current land use trends, the City estimates that the mix of uses in the mixed-use category will be 50 percent residential and 50 percent non-residential. The Floor Area Ratio (FAR) measure shall not be applied to residential developments, or the residential portion of a mixed-use building or development. The following criteria shall be used for determining appropriate locations for mixed-use land use areas.

A. Areas within a quarter mile walking distances of public transit stations, transitional areas between high and low intensity uses, and areas adjacent to major corridors within the City are appropriate for

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Mixed-Use category.

B. The land development regulations implementing this category shall encourage a compact and walkable environment to reduce vehicle miles of travel and encourage use of public transit.
C. Development within mixed-use shall be encouraged to follow Transit Oriented Design (TOD) principles.
D. Unified architectural and streetscape themes are encouraged for all developments within the Mixed-Use category.
E. Mixed use buildings within a single development will be highly encouraged in this category.
F. For a mixed-use building, only retail sales, offices and services and restaurants are permitted on the ground floor.
G. If residential housing units are developed as part of a vertical mixed-use project a bonus of up to 5 units per acre may be achieved.
H. For the purposes of analyzing public facilities impacts of proposed Future Land Use Map amendments, a mix of 50% residential and 50% non-residential land area split shall be utilized."

As part of the Visioning Study, it is possible that different performance standards may be implemented within the corridor to protect neighboring uses from more intense commercial uses, such as enhanced landscape or setback standards, architectural standards, or lot design standards. Given the vision of the MU FLU designation, it is clear that a different type of development environment is desired in the area that incorporates Transit Oriented Design principles, unified architectural and streetscape themes, and encourages vertical mixed-use development, which may also impact the allowed zoning districts in the MU FLU designation and the permitted and special exception uses within those applicable zoning districts.

The City recently released RFP # P-24-04 COC, Professional Services for New Community Redevelopment Plan Update. This RFP was issued by the Cocoa Community Redevelopment Agency (CRA), the Diamond Square Community Redevelopment Agency, and the City, in order to review and update both the CRA Plan for the Cocoa CRA and the Diamond Square CRA. Of note from this update is that not only is the subject property located within the Cocoa CRA, but it is also directly adjacent to the Diamond Square CRA. Additionally, one of the Visioning and Revitalization Efforts required of the RFP includes both CRA Districts with a "particular focus on the SR 520 and US 1 corridors".

In the Data and Analysis of the City's Comprehensive Plan from 2010, as prepared by Land Design Innovations, a number of statements were made, which were subsequently adopted by the City, related to mixed use development, the need for high quality redevelopment, and the City's vital corridors. The following excerpts from said document are provided for context when

considering the intent of the MU FLU designation and the surrounding land use patterns of the subject property:

1. The intent of the category is to *encourage the development of compact mixed-use centers and avoid a strip commercial development pattern*. This category is not intended to require a mix of uses for each site, but rather to achieve an area-wide mix of uses.

Staff Note: The intent of the MU designation may not be fully realized through the existing land use pattern, given that the zoning districts that are currently compatible with it, per the Comprehensive Plan, allows for use types that generally are part of strip commercial development. This is one of several reasons why the City is taking on additional Visioning reviews, and why this specific request and application is not timely.

2. The Mixed-Use land use is applicable to areas generally along SR 520 (King Street) and US 1. The FLUM shows 120 acres of Mixed-Use. The City anticipates that by 2020, the mix of uses in the Mixed-Use land use category will be about 50% nonresidential and 50% residential.

3. Weaknesses identified in 2004 Analysis of Economic Development Environment in the City by the University of Florida:
    a. Too many greyfields, brownfield areas and distressed commercial corridors in the City. The U.S. 1 corridor has many vacant strip malls, which are considered unsightly and a deterrent for businesses.
    b. Need for continued and stricter aesthetics and design standards for the corridors. The buildings on the commercial corridors lack quality architecture design and landscaping and streetscape features.
    c. Lack of quality affordable housing and diversity of housing choices for middle and | upper income home buyers.
    d. Negative self-image and lack of an articulated and shared community vision of the City.

Staff Note: As seen in 3b, 3c, and 3d, above, there remains a need for the City to incorporate aesthetic and design standards for its vital corridors. While the City has taken significant efforts to assist with this effort, such as the gateway corridor signage that was installed at the intersection of SR 520 and US1, more work is required for the City to realize its ultimate goals and objectives. Without this work, the proposed rezoning would not be consistent with the established land use pattern as envisioned by the City's Comprehensive Plan.

4. SR 524, US 1, SR 501, and SR 520 are the major commercial corridors of the City. They consist primarily of auto-oriented strip shopping centers that lack adequate pedestrian and bicycle access. The developments along these corridors also lack quality architectural design and adequate landscaping and are generally poorly maintained.
5. The City adopted a Vision Plan in June 1996 to guide the future development of the

City. The plan included the analysis of the physical, social and economic conditions of the City. The plan identified two primary challenges facing the City - improving the general image of the City and diversification and strengthening of the City's economic base. The Vision Plan included economic, land use, urban design, infrastructure and governmental and administrative strategies for future development, including a conceptual long range master land use plan and an action plan to implement the vision.

6. Both the 1996 vision plan and the 2006 workshop identified similar issues including lack of identity, economic development and affordable housing. The City has consistently taken efforts to address and overcome these issues by implementing the goals and objectives of the vision plan and will continue these efforts.
7. SR 520, U.S. 1, SR 524, Dixon Boulevard and Fiske Boulevard (SR 519) are the major commercial corridors in Cocoa. These major corridors should be developed as mix-used corridors.

Staff Note: This observations of 4-7 further emphasizes the great need for thoughtful design standards to be applied to the corridor.

The above information provides context to the historical policy direction of the City, and how additional work is needed to ensure that these policies are seen through. The existing land use pattern of the area can be generally described as strip commercial that has either gone through multiple generations of re-use or been redevelopment in a manner that is not realizing the full desire of the mixed-use policies or desires of the City that have been consistent for close to thirty years. It would be of great benefit to the City that this vital corridor, which impacts both the Diamond Square and Cocoa CRA's, as well as the Cocoa Village, be developed in a manner that meets the full intent and requirements of the code.

As mentioned above, there is one structure of significance north of this site in the Florida Department of Transportation (FDOT) right-of-way (ROW). The structure is one of the four "Cocoa" signs as depicted in Exhibit E. The four corners of the major arterial intersection are the western historical entrance to Cocoa Village and the Cocoa Community Redevelopment Agency (CRA). The work to make the intersection prominent began in May of 2002 when the Cocoa Redevelopment Agency voted to start the process to vacate Stone Street and to acquire the needed properties for the sign. See Exhibit F. Cocoa Redevelopment Agency minutes show the desire to redevelop the land at this intersection since 2002. It is important that this prominent corner, announcing the entrance to downtown Cocoa, be developed consistently with the City's expressed long -term land use goals and vision for the corridor, which is a mixed-use center.

As such, the permitted uses in the C-N should be analyzed in light of mixed-use center policies of the City Council and the existence of the "Cocoa" sign directly in front of the subject property, making it one of the most prominent gateways of the City. The C-N district would allow:

(1) Retail stores, sales and display rooms (except automotive) and similar uses, including places such as bakeries in which goods are produced and sold at retail upon the premises.
(2) Personal service establishments such as beauty and barbershops, laundry and dry-cleaning pickup stations, tailor shops and similar uses.
(3) Professional offices, studios, clinics, laboratories, general offices and similar uses.
(4) Restaurants, subject to the following:

a. Outdoor entertainment shall be prohibited;
b. The restaurant shall be required to close no later than 10:00 PM on Sunday through Thursday and no later than 12:00 AM on Friday and Saturday; and
c. Walls and/or opaque vegetative screening buffers shall be required between the restaurant and adjacent properties with residential zoning designations.

(5) Multiple-family and single-family residences as regulated in section 5, RU-2-15 District.
(6) Financial institutions.
(7) Pharmacy, medical marijuana treatment center dispensing facilities, apothecary and optical services. Medical marijuana treatment center dispensing facilities shall not be located within five hundred (500) feet of the real property that comprises a public or private elementary, middle or secondary school, unless the city council approves the location at a public hearing and determines that the location promotes the public health, safety, and general welfare of the community, or as otherwise provided in F.S. Ch. 381, as may hereafter be amended.
(8) Child care centers, day nurseries of kindergartens.
(9) Package store, beer and wine.

In addition, special exception uses that would be permitted include bars and lounges, with or without a package store; package stores; and retail automotive gasoline/fuel sales as an accessory use to convenience stores, with certain conditions.

Many of these uses may not be desirable at the most prominent gateway to the City nor consistent with the mixed-use vision, including pharmacies and medical marijuana treatment center facilities, package stores, and bars and lounges.

b. *The proposed change would create an isolated district unrelated to adjacent and nearby districts.*

Staff Finding: As seen on the City's zoning map, the corridor in general is a mix of C-G, C-P, and C-C zoning. The closest parcels with C-N zoning are at the intersections of Blake Ave. and Bernard St., the western terminus of Whaley St. (Emma Jewel Charter Academy), and a parcel at the termini of Bernard St./Thomas Ln./Pineapple Ave. that is owned by the City. None of those parcels have the MU FLU designation, however. Other C-N parcels are generally located on Peachtree St. between Pineda St. and Prospect Ave., as well as a portion of the northeast side of the City along SR 524, 501, Dixon Blvd. and US 1. The locations, however, have FLU designations of Neighborhood Commercial (NCOMM) or Commercial (COMM). None of the properties with a current C-N zoning district have frontage along SR 520 or are located in the SR 520 corridor. The closest C-N zoned property is located 0.35 miles away, which would result in an isolated zoning district were the subject property be rezoned as C-N.

Additionally, the locations of said existing parcels with C-N zoning better meet the intent of the C-N district as defined in Section 11: "The provisions of this district are intended to apply to an area adjacent to major arterial streets and convenient to major residential areas. The types of uses permitted are intended to serve the consumer needs of nearby residential neighborhoods as well as the commercial needs of the motorist. Lot sizes and other restrictions are intended to reduce conflicts with adjacent residential uses to minimize the interruption of traffic along thoroughfares."

Access to nearby neighborhoods is very complex in this area. Due to the vacation of Stone

St., and subsequent lack of pedestrian connectivity to the Diamond Square neighborhood to the west, accessibility to the site is limited to mainly vehicular use. While, there are multiple curb-cuts and access points from SR 520/King St. and the prior Stone St. right-of-way (ROW) curb cut on U.S. 1 east of the railroad tracks, it is very unclear how the intent of both the MU FLU designation and C-N zoning will be met. In fact, for all of the aforementioned existing properties with C-N zoning, they each are located directly adjacent to property that is zoned for residential purposes, such as RE (Residential Estate), RU-1-7 (Single Family Residential), RU-2-15 (Multiple Family Dwelling District). These locations are consistent with the intent of the C-N district to be located "convenient to major residential areas."
In this case, the proposed C-N rezoning would not be located conveniently to a major residential area as it is separated from the Diamond Square residential community by the railroad tracks as well as both C-W and C-G zoned property lining the railroad tracks on the western side.

Based on an analysis of both the zoning and FLU maps, there does not appear to be one parcel within the City that has the MU FLU and the C-N zoning designation. As part of the applicant's petition, they noted that adjacent and nearby properties all have commercial zoning (none neighborhood commercial). While there is a mixture of commercial zoning districts in the area, the application did not provide the additional detail that the C-G and C-W parcels to the west, on the southside of SR520/King St., and the C-P parcels in the immediate area, are not applicable with the MU FLU designation as shown in Figure FLU-1 of the Future Land Use Element. As previously noted, the City has identified these inconsistencies and has begun a Visioning study to determine the most appropriate manner to encourage consistency between the zoning categories and the Comprehensive Plan, as well as two CRA studies to best determine the appropriate redevelopment strategies of the SR 520 and US 1 corridor.

c. *The proposed change would materially alter the population density pattern and thereby increase or overtax the load on public facilities such as schools, utilities, streets, access, etc.*

Staff Finding: The proposed change has the potential to alter the population density pattern. While the application has stated that no residential development is proposed, the application also did not provide a conceptual plan to detail what the proposed development is. As such, the proposed zoning district of C-N, Neighborhood Commercial, does allow, by right, multiple-family and single-family residences, as regulated in Section 5, RU-2-15 District. The RU-2-15 district allows a maximum of 15 dwelling units per acre, which could yield a maximum of 21 dwelling units on the Subject Property. As previously noted, impacts to the streets and access are also unknown due to the existing curb cuts on SR 520/King St., US 1, and Stone St. Without a full analysis, the impact to public facilities is unknown.

d. *Existing district boundaries are illogically drawn in relation to existing conditions on the property proposed for change.*

Staff Finding: The existing boundaries are not illogically drawn in relation to existing conditions on the property. The property is currently vacant. While rezoning it to C-N would resolve the applicability and consistency with the MU FLU, as previously noted, there are no other C-N properties in the area, and would therefore create an isolated district that is illogically drawn. The existing C-P zoning district is consistently found on the four corners of the U.S.1 and SR 520 intersection and south of the subject property.

By contrast, were the property to be rezoned to C-N, the intent of the district would not be met based on the location and conditions of the existing property due to its lack of convenience to adjacent neighborhoods.

e. *The proposed change would be contrary to the Future Land Use Map and would have an adverse effect on the Comprehensive Plan.*

Staff Finding: The existing FLUM designation of the subject property is MU. The proposed rezoning would be consistent with Figure FLU-1 of the Future Land Use Element as C-N is identified as an applicable zoning district within the MU designation.

The MU district is detailed as follows:

Policy 1.1.2.6: Mixed-Use (MU). The Mixed-Use land use category is intended to provide a mixture of residential, commercial, office, recreational and institutional uses along the major transportation corridors (such as SR 520 and US 1). The mixed-use could be developed as single uses on separate parcels or as a mixture of uses within a single development. Based on current land use trends, the City estimates that the mix of uses in the mixed-use category will be 50 percent residential and 50 percent non-residential. The Floor Area Ratio (FAR) measure shall not be applied to residential developments, or the residential portion of a mixed-use building or development. The following criteria shall be used for determining appropriate locations for mixed-use land use areas.

A. Areas within a quarter mile walking distances of public transit stations, transitional areas between high and low intensity uses, and areas adjacent to major corridors within the City are appropriate for Mixed-Use category.
B. The land development regulations implementing this category shall encourage a compact and walkable environment to reduce vehicle miles of travel and encourage use of public transit.
C. Development within mixed-use shall be encouraged to follow Transit Oriented Design (TOD) principles.
D. Unified architectural and streetscape themes are encouraged for all developments within the Mixed-Use category.
E. Mixed use buildings within a single development will be highly encouraged in this category.
F. For a mixed-use building, only retail sales,

offices and services and restaurants are permitted on the ground floor.

G. If residential housing units are developed as part of a vertical mixed use project a bonus of up to 5 units per acre may be achieved.

H. For the purposes of analyzing public facilities impacts of proposed Future Land Use Map amendments, a mix of 50% residential and 50% non-residential land area split shall be utilized.

The application that was provided noted that the proposed uses on the property are "Commercial uses consistent with C-N zoning". The applicant has had at least two pre-application meetings with the City in order to redevelop the property with what the Code defines as "Retail automotive gasoline/fuel sales as an accessory use to convenience stores". That said use is a Special Exception within the C-N zoning district. In the event the applicant does pursue such a use, they will be required to meet the five (5) conditions for Retail automotive gasoline/fuel sales as an accessory use to convenience stores as detailed in Section 11(C)(10), and Article XVII, Section 2.

In addition, as mentioned earlier, the City is undertaking multiple studies to determine the best path forward to bring parcels that are not consistent with the Comprehensive Plan in to compliance, as well as how to manage the existing CRA's. This may include further modifications to the Land Development Code having to do with design, uses, and other bulk regulations as detailed above in subsection (a).

f. *Changed or changing conditions make the passage of the proposed amendment necessary.*

Staff Finding: The existing zoning district is not compatible with the FLU designation of the subject property. As a matter of consistency and compatibility, a property should have a zoning district that is compatible with the FLU designation. However, the corridor has not seen significant change that would make the proposed amendment necessary. The MU FLU was established in 2010 in an effort to promote mixed-use developments. As previously noted in the report, this specific intersection is seen as having high importance to the Diamond Square CRA, Cocoa CRA, SR 520/US1 intersection, and the Cocoa Village. A more appropriate zoning strategy should be undertaken to support redevelopment on the subject property, that is consistent with the vision and possible changing conditions in the corridor.

g. *The proposed change will adversely influence living conditions in the neighborhood.*

Staff Finding: The Subject Property was previously developed with commercial uses with curb -cuts on SR520/King St. and US1. The impact to the surrounding neighborhoods is unknown as a final use is unknown. The applicant or eventual developer of the subject property will be required to meet or exceed the requirements of the Land Development Code and Comprehensive Plan.

h. *The proposed change will create or excessively increase traffic congestion or otherwise affect*

public safety.

Staff Finding: The proposed change may impact traffic congestion and flow, however the full impacts will not be fully reviewed until site planning when a traffic study is reviewed. It is anticipated that the number of curb cuts will be modified to better limit access.

i. *The proposed change will create a drainage problem.*

Staff Finding: No drainage problems are anticipated as a result of the rezoning. Any new construction would be required to comply with all applicable regulations and permitting requirements.

j. *The proposed change will seriously reduce light and air to adjacent areas.*

Staff Finding: Any new construction is required to meet the requirements of the City Code to ensure light and air to adjacent areas are not reduced. It is not anticipated that this project will bring such negative impact.

k. *The proposed change will adversely affect property values in the adjacent areas.*

Staff Finding: It is not anticipated that property values would be affected by the proposed rezoning. Uses that are similar in nature generally have a positive value impact upon each other.

l. *The proposed change will be a deterrent to the improvement or development of adjacent property in accord with existing regulations.*

Staff Finding: It is not anticipated that the proposed rezoning would be a deterrent to the improvement or development of adjacent property. Development of the property will be self-contained, which will result in little to no impact on the improvement or development of other properties but result in an overall negative impact to the MU FLU vision.

m. *The proposed change will constitute a grant of special privilege to an individual owner as contrasted with the public welfare.*

Staff Finding: The proposed change will not constitute a grant of special privilege to the property owner of the subject property as contrasted with the public welfare.

n. *There are substantial reasons why the property cannot be used in accord with existing zoning.*

Staff Finding: The existing C-P zoning is not compliant with the existing FLU designation of MU, Mixed Use. A zoning change is required to redevelop the property. However, as noted previously, greater coordination is needed between the applicant and the City to maximize the existing growth policies, existing vision, and visioning scopes that will impact the development potential of the property.

o. *Whether the change suggested is out of scale with the needs of the neighborhood of the city.*

Staff Finding: The proposed rezoning creates a situation whereby the zoning category that is requested would be the only property with the requested category of C-N. The impacts of such a change is unknown and as a result, the City is beginning a visioning exercise of the corridor to better understand how to bring the zoning and FLU designations in to compliance. That action will provide better direction and understanding of what the needs of the neighborhood and City are.

p. *It is impossible to find other adequate sites in the city for the proposed use in districts already permitting such use.*

Staff Finding: The applicant has stated on the application that without the change, the property owners are deprived of any use of their property.
As explained above, the City is embarking on a Visioning Process to ensure that an appropriate zoning designation with design standards and regulations consistent with the MU FLU will be applied as soon as possible. The application further details that the proposed use is “Commercial uses consistent with C-N zoning”. As previously noted, the applicant has had multiple pre-app meetings outlining their intent to construct a “Retail automotive gasoline/fuel sales as an accessory use to convenience stores”. There are many other sites where such a use could occur, though the applicant does not own those parcels.

Consistency with Comprehensive Plan Policies and Objectives

The proposed RU-2-15 zoning designation is consistent with the allowable uses under the “Medium Density Residential” Future Land Use per the City of Cocoa Comprehensive Plan.

Concurrency Management/Adequate Public Facilities

Section 15-22 of the City Code provides for a concurrency management system to ensure public facilities and services needed to support development are available concurrent with the impacts of such development and that development orders and development permits are not issued in a manner that will not result in a reduction in the levels of service below the adopted level of service standards adopted by the City for public facilities and services, as contained in the City’s adopted Comprehensive Plan.

Consistent with the requirements of Article IV (Concurrency Management System), Chapter 15 of the Code of the City of Cocoa, the applicant/developer will be required to submit a final application for concurrency review prior to issuance of any City of Cocoa permits. If capacity issues relating to any public facilities or services regulated by the City of Cocoa adopted Comprehensive Plan is identified, necessary and appropriate mitigation will be required to be addressed prior to construction. However, because the maximum density remains unchanged, no further impact to public facilities is anticipated.

BUDGETARY IMPACT:

N/A

PREVIOUS ACTION:

None

RECOMMENDED MOTION:

Staff recommends that the Planning & Zoning Board recommend DENIAL to City Council of the Zoning Map Amendment consistent with Appendix A, Zoning, Article XXI, to change the Zoning Map designation of 11 parcels totaling 1.39 acres from C-P (Commercial Parkway District) to C-N (Neighborhood Commercial) as depicted on Exhibit A)

N

COCOA
FLORIDA

301 S Cocoa Blvd Location

January 11, 2024

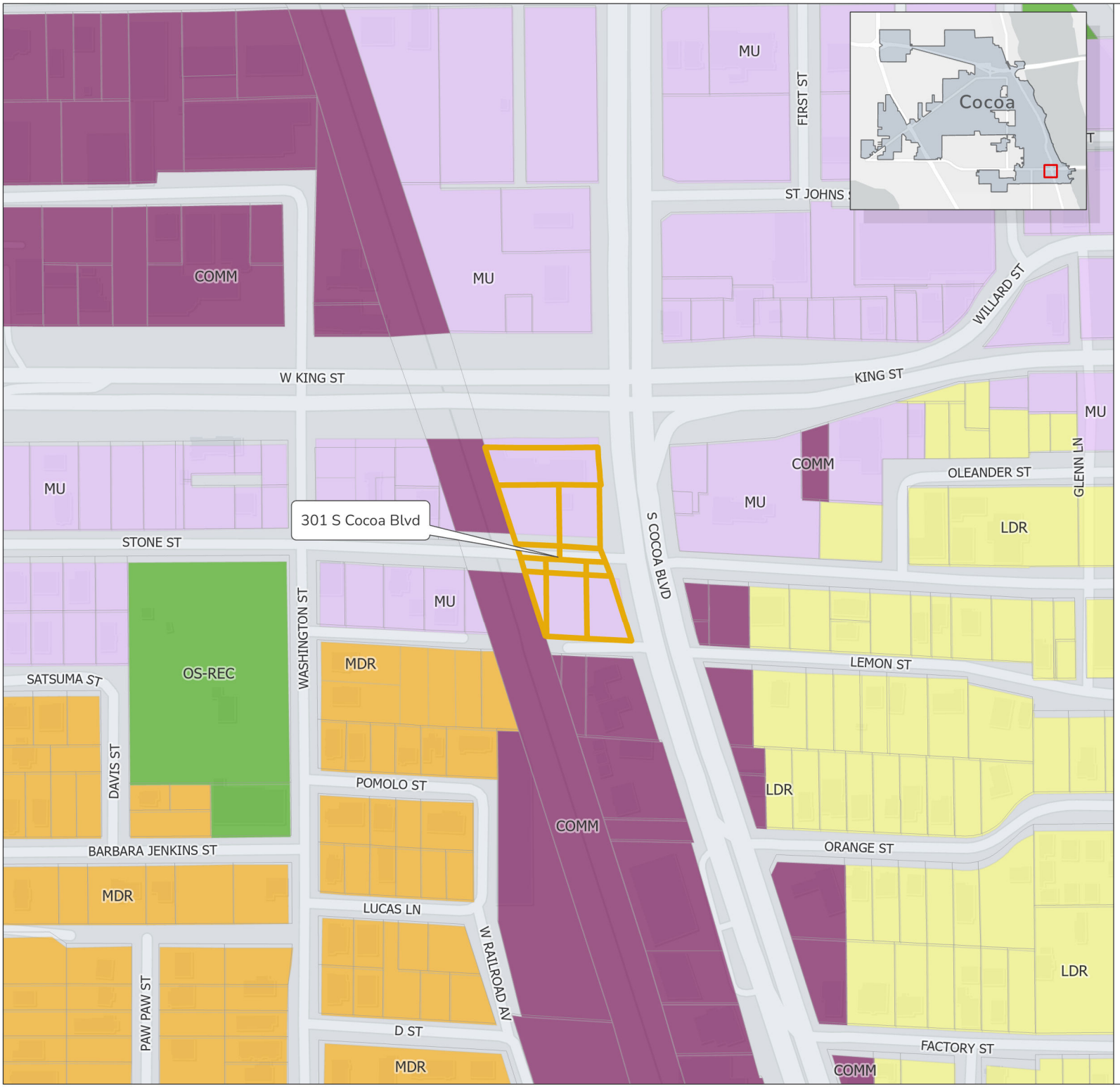
Subject Parcels

Parcels

Cocoa City Boundary

0 200 400 Feet

P20240108-103001.0.1



301 S Cocoa Blvd Future Land Use

January 11, 2024

Subject Parcels

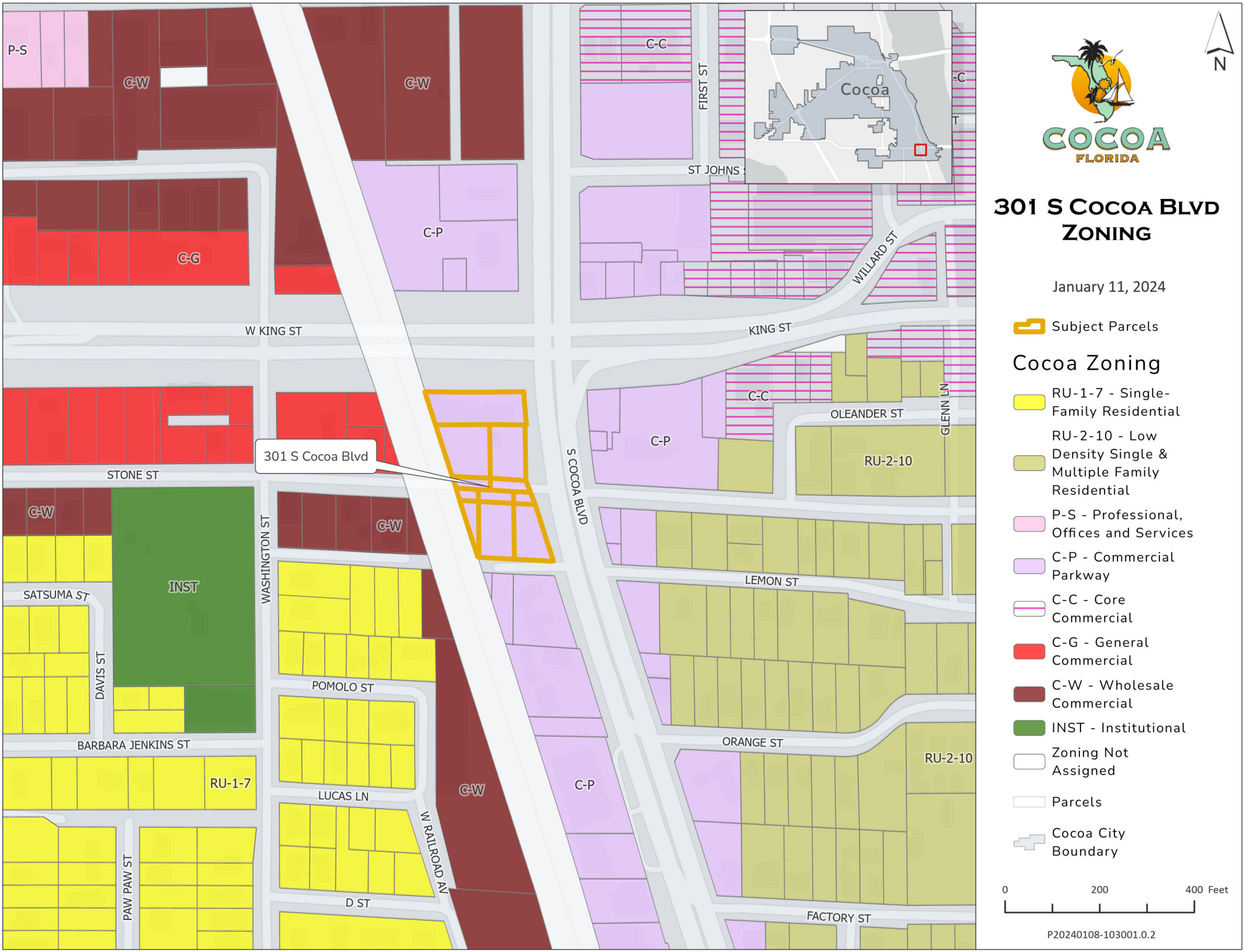
Future Land Use

- Low Density Residential
- Medium Density Residential
- Commercial
- Mixed Use
- Recreation/Open Space
- Parcels
- Cocoa City Boundary

N

0 200 400 Feet

P20240108-103001.0.3



COCOA
FLORIDA

N

301 S Cocoa Blvd Zoning

January 11, 2024

Subject Parcels

Cocoa Zoning

- RU-1-7 - Single-Family Residential
- RU-2-10 - Low Density Single & Multiple Family Residential
- P-S - Professional, Offices and Services
- C-P - Commercial Parkway
- C-C - Core Commercial
- C-G - General Commercial
- C-W - Wholesale Commercial
- INST - Institutional
- Zoning Not Assigned
- Parcels
- Cocoa City Boundary

0 200 400 Feet

P20240108-103001.0.2

CITY OF COCOA
COMPREHENSIVE PLAN

DATA & ANALYSIS

October 2010

Prepared By:

LAND DESIGN INNOVATIONS
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and

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Community Development Department
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By adding the approved units (2,750 units) and the potential units (3,453 units), the City has a total development potential of 6,203 new residential units. By 2020, the City would have 14,735 dwelling units, which is calculated by adding the potential new units (6,203) to the existing units (8,532). Comparing the need (15,027) with the holding capacity (14,735), the City will have a deficit of 292 residential units.

Residential development will be accommodated based on the following ranges of density (see mixed-use category below for additional areas allowing residential uses):

- Very Low Density Residential – Up to 4 units per acre
- Low Density Residential – Up to 7 dwelling units per acre
- Medium Density Residential – Up to 15 dwelling units per acre
- High Density Residential – Up to 25 dwelling units per acre

c. Future Commercial Land Use

The commercial category will primarily consist of commercial and office uses. Projections of future commercial land were based on current ratio of land use to population. Based on the 2009 population of 16,825, the ratio is currently 30 commercial acres per 1,000 residents. This ratio includes the commercial development included within mixed-use areas. Applying the 2009 ratio to the 2020 population projection, the City would need a total of 906 commercial acres.

Economic development is one of the big focuses of the City. In order to encourage economic activities, the City needs to increase the current land use allocation percentage for the commercial activities. The FLUM designates 1,150 acres of commercial land use. The acreage is split between commercial acres (867 acres/77%) and neighborhood commercial acres (284 acres/23%).

d. Future Mixed-Use Land Use

In addition to the more traditional commercial land use category, the City is establishing a mixed-use land use category to support commercial development in a mixed-use setting with supporting residential uses. The intent of the category is to encourage the development of compact mixed-use centers and avoid a strip commercial development pattern. This category is not intended to require a mix of uses for each site, but rather to achieve an area-wide mix of uses.

The Mixed-Use land use is applicable to areas generally along SR 520 (King Street) and US 1. The FLUM shows 120 acres of Mixed-Use. The City anticipates that by 2020, the mix of uses in the Mixed-Use land use category will be about 50% non-residential and 50% residential.

e. Future Regional Activity Center

The Regional Activity Center (RAC) land use category allows compact, high intensity and mixed-use developments on parcels with land area of 50 acres or more. The amount of RAC acreage required to meet future growth is shown in **Table I-4**. Currently, there are approximately 270 acres of land designated RAC on the FLUM. The RAC areas are located at the intersection of I-95 and SR524, known as Brevard

Crossings Regional Activity Center. The RAC acreage is not expected to grow through the planning horizon.

f. Future Industrial Land Use

Industrial land use projections were calculated using the same basic methodology as described above for commercial lands. The amount of industrial acreage required to meet future growth is shown in **Table I-4**. Currently, there are approximately 675 acres of developed industrial lands within the City of Cocoa, or 40 acres for every 1,000 residents. Based on the projected population for 2020, there would be a need for 1,230 acres of industrial land use, using the 2009 ratio. The 2020 FLUM provides 1,245 acres for industrial uses, allowing a 15-acre surplus.

Industrial uses tend to benefit an economy more than other uses such as residential and institutional. To enable desirable future economic development outcomes, the City needs to increase the current land use allocation percentage for the industrial activities. Based upon the current work force and community needs, it is projected that the demand for industrial uses will increase. Therefore, the City may need additional industrial land acreage to meet the future demand.

g. Future Institutional Land Use

Currently, the City of Cocoa has a low percentage of institutional land use as a percentage of overall land use The institutional uses owned by non-profit and public organizations do not contribute to ad-valorem taxes; therefore, a smaller percentage of these uses is not a negative indicator for the City. However, the City needs land in this category to accommodate those institutional uses that are generators of public activities (such as civic centers, museum and arena) to offset lost ad-valorem taxes from other institutional uses that do not pay ad-valorem taxes. Based upon an analysis of existing and future needs, the City anticipates the need to acquire additional land to accommodate its public facility and service functions as the population increases. **Table I-4** indicates an increase in demand for institutional acres (1,140 acres by 2020 over the 626 acres in 2009). The increase is based upon an average of 37 acres per 1,000 residents. The 2020 FLUM shows a total of 249 acres of institutional land use, which indicates a deficit of 891 acres. Therefore, the City needs additional institutional land acreage to meet the projected future demand.

h. Future Recreation/Open Space Land Use

Currently, the City of Cocoa has 156.66 acres of recreation and open space lands within the City, 71 acres of which are designated Recreation and Open Space on the Future Land Use Map. This translates into an actual level of service of 6.91 acres/1,000 population. With a projected total population of 30,656 persons by 2020, the City will have an excess of 118.34 acres of recreation and open space land to meet the future demand. Therefore, it is not anticipated that the City will require additional lands for the Recreation and Open Space future land use category over the 10 year planning horizon.

i. Future Conservation Land Use

This land use category includes those lands that contain valuable and threatened natural resources such as floodplains, estuarine properties and unique ecological communities. Several areas in the central portion of the City and along US 1 have already been designated as conservation, but there may be other noteworthy areas identified in the future which may be considered for conservation designation on the Future Land Use Map. Additional conservation lands can also be anticipated with annexations of natural resources.

4. Need for Redevelopment

The City of Cocoa contains limited areas of blight characterized by aging buildings, inadequate and obsolete infrastructure and lack of employment opportunities. Under Florida law (Chapter 163, Part III, F.S.), local governments are permitted to designate areas as Community Redevelopment Areas where deterioration is severe or widespread. The City of Cocoa has established three community redevelopment areas (CRAs), including the Cocoa (Downtown) CRA, the U.S. 1 Corridor CRA and the Diamond Square CRA, encompassing a total 1,403 acres. **Map I-8** shows the location of the City's redevelopment areas.

The Cocoa (Downtown) CRA was established in 1998 and encompasses approximately 280 acres, with its boundaries extending north to Mitchell Street, south to the City limits, west to the railroad tracks and east to the Indian River Lagoon. The Cocoa Community Redevelopment Agency sponsors a Commercial Façade Improvement Program to benefit property owners in the Cocoa (Downtown) CRA. Matching grants of up to $10,000 are available per commercial parcel to qualified owners. Cocoa Village, located in the Cocoa downtown CRA, is the best example of the City's successful redevelopment efforts.

The U.S. 1 Corridor CRA was established in 1998 and encompasses approximately 805 acres, with its boundaries extending north to Clearlake Road, south to School Street, west to the Fiske Boulevard and east to U.S. 1. The U.S. 1 Corridor Redevelopment Agency also sponsors a Commercial Façade Improvement Program. Matching grants of up to $10,000 are available per commercial parcel to qualified owners.

The Diamond Square CRA, created in 1998, is located on the southern border of the City and is approximately 318 acres in size. The Diamond Square CRA encompasses the area bordered by Oleander Road on the west, School Street on the north, railroad tracks on the east and Poinsetta Drive on the south. The Diamond Square Redevelopment agency sponsors façade improvement programs that offer a matching grant of up to $2,500 per residential parcel and $10,000 per commercial parcel to qualified owners. The agency provides funding at a maximum of $2,000 per program to programs whose services are located within the Diamond Square CRA and whose program goals match one or more of the goals of the agency. The agency also offers a first time homebuyers program and a drainage improvement program.

In addition to the creation of the community redevelopment areas, the City has focused other targeted efforts on economic development in the City. Economic Development is discussed in **Section E** of this element.

5. Proposed Development and Redevelopment of Flood Prone Areas

Floodplain areas, as defined by the Federal Emergency Management Agency, include the 100-year floodplain (Zone AE) and the velocity zone (Zone VE). Flood-prone areas in Cocoa are depicted in **Map XII-2** in the Conservation Element. Much of the development within flood-prone areas occurred before the adoption of state and local regulations in the early 1980's.

Implementation of the comprehensive plan goals, objectives and policies and enforcement of the land development regulations will direct new growth away from areas particularly susceptible to flooding from severe storms or hurricanes and will ensure that all redevelopment activities will be consistent with regulations that result in their safe construction.

6. Dredge Disposal

As noted in the inventory section, there are currently no dredge spoil sites within the City.

7. Hazard Mitigation

The Brevard Local Mitigation Strategy is the guiding plan for local governments in the County's coastal planning area. The City has not prepared a Post-Disaster Redevelopment Plan, nor has Brevard County.

The City of Cocoa's coastal planning area includes the parts of the City that are adjacent to the littoral area along the Indian River Lagoon. The entire coastal planning area within the City of Cocoa is predominantly developed. There are a number of water-dependent uses, including recreation sites, boat ramps and marinas. None of the water-dependent land uses can be relocated. In addition to these water-dependent uses, there are a number of single family residential uses and water-related uses in the coastal high hazard area. Water-related uses include numerous commercial enterprises, such as boating and other marine related facilities. There are also several publicly owned parks along the Indian River Lagoon. The City does not currently anticipate the need to relocate, modify, or acquire any of these uses which it does not already own. However, in the wake of a storm event, City personnel will make inspections of all damaged structures. When the City has determined that a structure has suffered damage of greater than fifty percent (50%) of its value, the City will require that the owner rebuild landward of the existing structure or modify the structure in such a way that additional damage is unlikely. In some instances, the City may consider acquiring damaged structures and their lots in order to expand park areas or prevent build-back in areas of extensive erosion.

The City is mostly built out within the coastal planning area with the exceptions of one or two sites on the Indian River Lagoon. The vacant areas consist primarily of low density residential properties with some scatted commercial properties within the downtown. Commercial and residential land uses within this area are expected to continue as the predominant activities. The City of Cocoa land development code addresses lot coverage, setbacks from wetlands and water bodies, and protection of native vegetation by new development and redevelopment projects. Therefore, no special consideration for proposed land uses is necessary over and above those required to deal with the existing land uses addressed above. However, if older neighborhoods or communities are scheduled to be

revitalized or redeveloped, hazard mitigation should be an aspect considered and integrated into the project prior to the time of development approval.

D. GREEN HOUSE GAS REDUCTION AND ENERGY CONSERVATION

Greenhouse gases (GHGs) are the gases in the atmosphere that trap heat. Carbon dioxide, methane, nitrous oxide, ozone and fluorinated gases are some of the most abundant GHGs in the atmosphere. Some of the GHGs, such as carbon dioxide, occur naturally in the atmosphere through natural processes and human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities. The greenhouse gases that enter the atmosphere because of the human activities are listed below.

- Carbon Dioxide - Burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement).
- Methane – Production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- Nitrous Oxide – Agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.
- Fluorinated Gases (also known as High Global Warming Potential Gases) – Variety of Industrial processes.

While greenhouse gases play a vital role in maintaining the necessary conditions for life on Earth, the rapidly increasing concentrations of these gases are causing a rise in global temperature – Global Warming. It is now apparent that the increasing atmospheric concentration of GHGs resulting from human activities is changing the climate in ways that pose serious risks to citizen's health, economy, and environment. The Florida Legislature enacted House Bill 697 in its 2008 session. HB 697 amended Chapter 163, F.S. to address green house gas reduction and energy conservation through comprehensive plans. Chapter 163.31776(a), F.S., requires that the Future Land Use Element include greenhouse gas reduction strategies and energy efficient land use patterns, accounting for existing and future energy electric power generation and transmission systems.

The land use pattern plays a significant role in reducing vehicle miles travelled (VMT) and thus in reducing energy consumption and its associated GHGs emission. VMT can be reduced by promoting strategies such as compact development, high density development arranged to encourage pedestrians, bicycle and transit use, transit oriented development and mixed-use development. The preservation of historic buildings and their adaptive reuse result in energy conservation. These buildings are typically closer to population centers and adaptive reuse generally involves lower impacts on natural resources than new construction. The use of "green" building standards, as opposed to conventional codes, results in energy conservation. In addition, protecting and enhancing green spaces provides natural carbon sinks in soils, vegetation and streambeds to mitigate carbon emissions.

Implementation of the City of Cocoa's comprehensive plan goals, objectives and policies and enforcement of the land development regulations will reduce urban sprawl and VMT, encourage more mixed-use development in specific areas in the City, preserve green space and promote education of citizens in energy conservation measure and practices.

E. ECONOMIC DEVELOPMENT

Economic development must be considered as part of the City's long term plans in concert with planning for land use, transportation facilities and other services in order to coordinate the targeted location and support for business and industry. For the City of Cocoa, economic development is defined as a strategic program to:

- Increase the standard of living and quality of life for City residents.
- Stimulate job growth and provide higher-income jobs for residents.
- Diversify the local economy to provide stability during economic downturns and to provide a steady and growing tax base.

1. Current Economic Development Programs

The City's Office of Economic Development (ED) is responsible for all the economic development activities in the City. The goal of the ED Office is to strengthen and diversify the City's economy and expand the tax base, while enhancing the quality of life enjoyed by current residents, businesses and visitors. The City has taken several steps since 2000 to foster the entrepreneurial environment by encouraging new business formation, retaining and improving success of existing business and attracting businesses.

The City of Cocoa is a member of a non-profit organization known as the Economic Development Commission (EDC) of Florida's Space Coast. The EDC provides education, training and financial incentives to the businesses that are trying to expand and relocate in the Space Coast area. The City works closely with the EDC on projects planned in Cocoa.

The City offers a variety of local, state and federal programs and incentives to businesses that locate, expand and do business in Cocoa, including:

- *Florida Enterprise Zone*: Enterprise Zones encourage economic growth and investment in distressed areas by offering tax advantages and incentives to businesses locating within the zone boundaries. In 2002, the City adopted an enterprise zone boundary (see **Map I-9**) and the corresponding Enterprise Zone Strategic Plan. The City was awarded Enterprise Zone 501 (EZ 501) in 2003.
- *Small Business Assistance Program*: The City offers financial assistance to new and expanding businesses with costs associated with small-scale infrastructure project and development fees.
- *Tax Abatement Program*: This program offers a City ad valorem tax exemption for new and expanding businesses within the City. The scope of exemption is generally determined by the number of new jobs created, as well as the wages associated with the newly created jobs.
- *Foreign Trade Zone*: A Foreign Trade Zone (FTZ) is land deemed to be outside the United States customs territory for purposes of duty assessment. Companies located in a foreign trade zone are able to defer, reduce and/or eliminate import duties. When goods are withdrawn from the FTZ and entered into the commerce of the United States the appropriate duty is levied upon the goods, if applicable. The City of Cocoa Foreign Trade Zone offers significant benefits for many types of businesses that import goods. Almost 24 acres of Foreign Trade Zone # 136 lie

within the City of Cocoa, located at the TATE Industrial Park. **Map I-9** shows the boundary of Foreign Trade Zone in the City.

- *Historically Underutilized Business Zones* (HUBZones): The program provides federal contracting and sub-contracting opportunities for qualified small businesses located in designated areas. The City has two census tracts that are designated non-metropolitan HubZones by the U.S. Small Business Administration.
- *Brownfield Redevelopment Program*: In 2003, the City of Cocoa established a Brownfield Redevelopment Program, which is funded through a Brownfields Assessment Grant by the U.S. Environmental Protection Agency (EPA). The redevelopment plan offers environmental Site Assessments to determine the nature and extent of contamination, facilitates applicants' participation in the State's Program, assists with redevelopment planning, provides coordination between intergovernmental agencies and participates in promotions for brownfield sites/projects.

2. Analysis of the Economic Development Environment in Cocoa

In 2005, the City and the University of Florida conducted a comprehensive assessment of the economic development environment in the City of Cocoa. The strengths identified in the report included:

- Strategic location that provides excellent access to the regional market, yet offers the advantage of more accessibility and lower costs.
- Good primary transportation infrastructure including excellent road network that provides a location incentive to businesses seeking sites in close proximity to interstate highways for major freight transport. The City is also in close proximity to Port Canaveral, which is the second busiest cruise port in the world.
- Rich valuable history that can be seen in its Victorian homes, historic hotels and the historic Cocoa Village. The Village has year-round special events and a variety of restaurants and shops, many locally-owned and arts-based.
- Positive City government willing to annex surrounding properties and to create and implement economic development plans to rebound from problems that have plagued the City.

The weaknesses identified in the report included:

- Too many greyfield, brownfield areas and distressed commercial corridors in the City. The U.S. 1 corridor has many vacant strip malls, which are considered unsightly and a deterrent for businesses.
- Need for continued and stricter aesthetics and design standards for the corridors. The buildings on the commercial corridors lack quality architecture design and landscaping and streetscape features.
- Lack of high tech employers, high-skilled jobs, professional offices, variety of restaurants and accommodation services in the City.
- Lack of quality affordable housing and diversity of housing choices for middle and upper income home buyers.

- Negative self-image and lack of an articulated and shared community vision of the City.

The report proposed a series of implementation strategies to build on strengths, mitigate weaknesses and capitalize assets for economic development. The report also identified the following goals and objectives representing key issues that should be addressed in this comprehensive plan.

- *Employment Opportunities*: The City should support and work with County and community leaders to meet the economic diversification needs of the community with emphasis on local job creation, business expansion and attraction of high-value-added commercial activity. The employment growth in the City will benefit other existing market sectors and will generate wealth within the community.
- *Business Expansion, Attraction and Retention*: The City, County and private leadership should work together to develop and implement economic development strategies that will establish a business environment that supports the operation, retention and expansion of existing Cocoa businesses, as well as the attraction and development of new commercial enterprises.
- *Coordination of Economic Diversification Efforts*: The City and County should coordinate the collaborative efforts between the public and community leadership. The efforts should be concentrated on developing industry clusters which will make the greatest contribution to job growth and wealth creation.
- *Streamlining Permitting and Regulatory Process*: The City should provide incentives such as expedited permitting to assist higher education institutions to expand when they are ready.
- *Economic Development Advisory Board*: To involve community stakeholders, the City should create an advisory board consisting of local community and business leaders.
- *Maintain Infrastructure for Supporting Economic Development*: The City should maintain adequate infrastructure for encouraging economic activities in the industrial and commercial sectors. The City should maintain or increase the current land use allocation percentages for industrial and commercial activities for the purposes of strengthening the revenue tax base of the City.
- *Increase Tourism*: The City should develop strategies to attract tourists by expanding recreational, entertainment, environmental, and cultural activities that are clean, family friendly, diverse, and unique.
- *Encourage Growth in Regional Industries with Supporting Activities*: The City should collaborate with the greater region to identify opportunities in the related service industries present in the region. The City should also encourage employment growth in high growth industries and small businesses through various programs and public/private partnerships.

In the last few years, economic development efforts by the City have accelerated, yielding very positive results for Cocoa. The Historic Cocoa Village is an example of successful downtown redevelopment and has become a destination for tourists and residents.

F. URBAN FORM

Urban form refers to the physical layout and design of a city. Characteristics such as urban density and intensity, block layout, street layout, streetscape, building placement/orientation and location define the urban form of a city. As the development standards change in terms of the above mentioned characteristics, the urban form also changes.

Incorporated in 1895, the City of Cocoa was a fairly compact city in the early 20th century. The compact form is visible in the older areas of Cocoa including the Cocoa downtown, the Historic Cocoa Village and downtown neighborhoods, which have narrow lots, are pedestrian oriented and include a mix of uses at higher densities. In the mid-20th century, the automobile began to dominate the development market. The development moved from the inner-city to the outskirts, and was characterized by low density and auto-dependent uses. Moreover, the development of railroad and major transportation improvements disrupted older commercial and residential neighborhoods. The result of this trend was the less efficient use of the infrastructure with no pressure for infill development. The urban form of the City changed from a dense compact form to a suburban sprawl form.

The City residents and past studies have identified the negative visual character of the major transportation corridors, the lack of overall identity of the City and the negative impact of the enclaves that detract from the City's aesthetics. The widening of US 1 in the 1950's by FDOT was one of the major reasons for the poor quality development along US 1, the loss of inner-city connectivity and the loss of businesses along the US 1 corridor in the City.

SR 524, US 1, SR 501, and SR 520 are the major commercial corridors of the City. They consist primarily of auto-oriented strip shopping centers that lack adequate pedestrian and bicycle access. The developments along these corridors also lack quality architectural design and adequate landscaping and are generally poorly maintened.

The City has two large enclaves along SR 501. These enclaves contribute to loss of inner city connectivity, land use conflicts and inefficient use of existing facilities and services. Additionally, the layout of some of the urbanized areas of the City is not very well organized or interconnected. These factors contribute to an image of disorder.

The City's goal is to create a physical planning framework to improve the quality of life and to ensure that new development shapes the City into a unique community that residents can identify with. A comprehensive urban design approach, citywide and on specific areas and corridors in the City, will be required to correct the disjointed nature of the past piecemeal development.

1. Vision Plan

A Vision Plan describes the kind of community that people who live and work in it want it to become over the next 10 to 20 years. It identifies what people value and want to preserve, what improvements are needed and how change should occur. A vision plan helps in creating a positive image and community identity, which is lacking in the City of Cocoa. A positive image helps to improve public relations. The awareness of the existing and desired image of an area can be the basis for a capital improvement plan and public policy formation. A positive image is important to a City government because it reflects on the excellence of service the government provides, attracts high quality business and well educated people.

The City adopted a Vision Plan in June 1996 to guide the future development of the City. The plan included the analysis of the physical, social and economic conditions of the City. The plan identified two primary challenges facing the City – improving the general image of the City and diversification and strengthening of the City's economic base. The Vision Plan included economic, land use, urban design, infrastructure and governmental and administrative strategies for future development, including a conceptual long range master land use plan and an action plan to implement the vision. The plan identified five redevelopment goals for the City:

- **Economic Function**: Strengthen downtown and core areas of Cocoa as a mixed-use center that will attract and serve the people of the region. Create a strong new industrial employment base.
- **Regional Context**: Strengthen the Cocoa area as a unique place within the County.
- **Community Role**: Strengthen Cocoa's contribution to the general well-being of the community.
- **General Environment Character**: Improve the physical image within the City.
- **Implementation**: Enable revitalization of the City to be a successful and on-going reality.

In addition to the Visions Plan, the City held a visioning public workshop in September 2007 to obtain public input on the issues facing the community. During the workshop, the citizens and city staff identified the following two major issues within the community:

- **Housing**: An abundance of affordable housing is located within the City. The balance of incomes has shifted to a very low income base compared to the County average.
- **Revitalization**: A serious concern was acknowledged about the visual appearance of the City and the overall identity. Economic and redevelopment efforts have been arduous because of the City's appearance and unfair perception.

Both the 1996 vision plan and the 2006 workshop identified similar issues including lack of identity, economic development and affordable housing. The City has consistently taken efforts to address and overcome these issues by implementing the goals and objectives of the vision plan and will continue these efforts.

The City will also plan to invite additional community input and to update the vision plan. While updating the master plan contained in the vision plan, the City will identify the character districts in the City and their interconnectivity. The several character districts within the City of Cocoa may include:

- **City Center**: Cocoa's downtown, the City center, is located on the east side of US 1. It can be characterized as a small village business area with one-story shops and restaurants. The downtown has an excellent collection of historic buildings, many of which have been renovated for adaptive reuse. The Historic Cocoa Village is the major attraction of the area.

- **Commercial Nodes**: Other than the downtown area, there are no well defined commercial nodes within the City. The Brevard Crossing RAC, located at the intersection of I-95 and SR 524, is intended to include a mixed-use activity center; however, development has not occurred to date.
- **Corridors**: SR 520, U.S. 1, SR 524, Dixon Boulevard and Fiske Boulevard (SR 519) are the major commercial corridors in Cocoa. These major corridors should be developed as mix-used corridors.
- **Waterfront**: The City is located along the Indian River Lagoon. Existing land use along the Indian River is primarily medium-density residential with some commercial uses in the downtown area, most of which provide limited access to the waterfront.

2. Form-based Design Guidelines for Corridors

Design standards can be used to guide development toward creating a cohesive urban pattern of buildings and streetscapes. When the aesthetic appearance of a community is maintained or improved, a sense of pride develops for the residents, owners and merchants. The quality appearance of its commercial corridors can help the City competitively in the regional market.

The City has established form-based design standards for the Downtown Cocoa Redevelopment Area. The City is also partnering with the FDOT to widen U.S. 1 from four lanes to six lanes and to upgrade the aesthetics and design of the widening project by adding landscaping and gateway features. The City is coordinating with the Space Coast TPO and FDOT to improve the existing sidewalks and bike trails in the City.

The City should continue its efforts in the creation of a quality, safe and functional urban environment by establishing form-based design standards for the commercial corridors along SR 520, U.S. 1, SR 524, Dixon Boulevard and Fiske Boulevard (SR 519), the CRAs and the waterfront. These standards should implement the desired vision of each area.

3. Safe Community

A sense of security is one of the important characteristics of a great community. Research has shown the relationship between the environment and criminal behavior. There is a relationship between declining areas, areas of low property ownership and higher crime rates. The perception of a higher crime rate in an area results in disinvestment, a lack of maintenance and decline due to a fear of crime. In turn, the economic loss and fear escalate the opportunities for crime.

The opportunity and fear of crime can be deterred through good maintenance practices and the proper design and use of the environment. This concept is known as "Crime Prevention Through Environmental Design" or CPTED. The major premise of CPTED is that an environment can be designed to reduce the opportunities for crime and the fear of crime, without resorting to building fortresses. The primary principles of CPTED include the proper design and defined use of buildings and sites, reinforcement of territoriality and responsibility by residents, and the use of access control as well as natural surveillance.

Proactive deterrence of crime depends on a thoughtful understanding of how site and building design guide human behavior. At a neighborhood scale, defining the boundaries of the neighborhood and giving it a themed identity help to establish a known "territory" that

can be defended. Defining the appropriate behavior in public areas and designing the sites to support those behaviors will deter unwanted behaviors. Controlling access to a public space so that the area can be effectively monitored and help deter vandals. Providing visual access to public areas and pedestrian routes of travel are techniques that can be applied to deter crime. The City will consider incorporating CPTED principles in its land development code.

COCOA

18"

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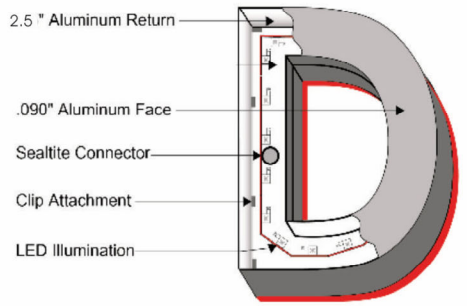
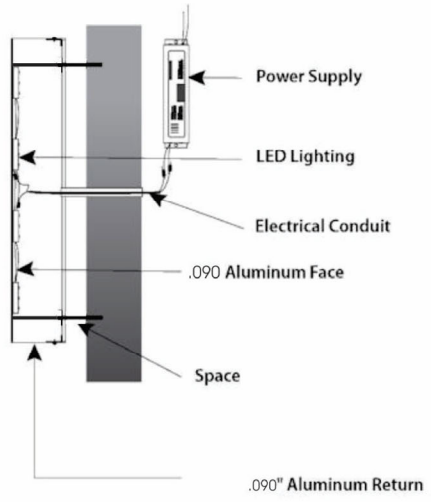


FRONT VIEW



4 Corners SR 520 / US Hwy 1

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SOD
OVERHEAD POWER LINE
MATCHLINE: SHEET LD-6
MATCHLINE: SHEET LD-7
EXISTING R.O.W. LINE (TYP)
WATER LINE
118.0 S.Y. MULCH
1 PC
17 PM
90 JO
38 HL
LIMIT OF SOD
9 AN
9 PR-1
25.3 S.Y. MULCH
31 RIA
33 RIA
29 PA
22 JCP
25.8 S.Y. MULCH
11.8 S.Y. MULCH
15 RIA
TELEPHONE LINE
347
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349
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351
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KING ST.
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SANITARY LINE
22 JCP
8.2 S.Y. MULCH
10 RIA
34 PA
27.1 S.Y. MULCH
33 RIA
90 JO
17 PM
10 PR-1
1 PC
50 HL
LIMIT OF SOD
SOD
134.3 S.Y. MULCH
13.7 S.Y. MULCH
16 RIA
SOD - BAHIA
SOD-1 - ST. AUGUSTINE
SIGHT TRIANGLE REQUIRES A 2' MAXIMUM SHRUB HEIGHT AND AN 8' MINIMUM CLEAR TRUNK HEIGHT.
PROPOSED R.O.W. LINE (TYP)
36 HL
1 PC
101.3 S.Y. MULCH
SIGHT TRIANGLE REQUIRES A 2' MAXIMUM SHRUB HEIGHT AND AN 8' MINIMUM CLEAR TRUNK HEIGHT.
36 RIA
63 JO
30.2 S.Y. MULCH
15 JCP
29 PA
26.5 S.Y. MULCH
30 RIA
16 PM
LIMIT OF SOD
8 PR-1
9 AN
14.8 S.Y. MULCH
13 RIA
18.5 S.Y. MULCH
32 RIA
77 JO
27.5 S.Y. MULCH
8 PR-1
9 AN
38 HL
LIMIT OF SOD
29 PA
1 PC
18 RIA
18 JCP
104.7 S.Y. MULCH
16 PM
WATER LINE
PROPOSED R.O.W. LINE (TYP)
SIGHT TRIANGLE 710 FEET.
SIGHT TRIANGLE 710 FEET.
OVERHEAD POWER LINE
EXISTING R.O.W. LINE (TYP)
SIGHT TRIANGLE 710 FEET
MATCHLINE: SHEET LD-7
MATCHLINE: SHEET LD-8
1 PR-2
32 LCR
13 JCP
3 LJ
56 RIA
3
ALL AREAS BEHIND SIDEWALK AND TO THE RIGHT OF WAY LINE NOT DESIGNATED AS PLANTING BEDS SHALL BE SODDED WITH SEASHORE PALPALUM.
0 10' 20' 40'
SCALE: 1"=20'
NORTH

REVISIONS					
BY	DESCRIPTION	DATE	BY	DESCRIPTION	

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DEPARTMENT OF TRANSPORTATION

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S.R. 5 (U.S. 1)
LANDSCAPE PLAN

SHEET NO. LD-7

MINUTES
COCOA REDEVELOPMENT AGENCY

May 7, 2002

The Cocoa Redevelopment Agency held its regular meeting on Tuesday, May 7, 2002 in the City Council Meeting Room, located at 300 Brunson Boulevard in Cocoa, as publicly noted.

I. OPENING MATTERS

Vice Chairperson Collins called the meeting to order at 7:14 p.m. The following Agency members and officials were present:

PRESENT:	Judy Parrish	Chairperson – Attended Briefly By Phone
	Jewel Collins	Vice Chairperson
	Brenda Warner	Agency Member
	Edward Lanni	Agency Member
	Harrison Vanderslice	Agency Member
	Joseph Colombo	Agency Counsel
	Anthony Garganese	Agency Counsel

STAFF: Clarence Hulse, Assistant City Manager; Donna Renberg, Grants; Kenneth Koch, Community Development Manager; John Titkanich, Economic Development Manager, Nelson Lau, Planning Manager; Chenita Joiner, Housing Manager; Marc Dick, Landscape Architect; Denise Damiano, Recording Secretary.

Ms. Collins provided the invocation, and Ms. Warner led the assembly in the Pledge of Allegiance.

II: APPROVAL OF AGENDA AND MINUTES OF PREVIOUS MEETING

AGENDA: Regular meeting of May 7, 2002

* **MOTION by Mr. Lanni; Seconded by Mr. Vanderslice, to approve the agenda.**

THE MOTION CARRIED UNANIMOUSLY (4-0)

MINUTES: Regular meeting of May 7, 2002

* **MOTION by Mr. Lanni; Seconded by Mr. Vanderslice, to approve the minutes as presented.**

THE MOTION CARRIED UNANIMOUSLY (4-0)

III. DELEGATIONS

No delegations noted at this time.

IV. NEW BUSINESS

1. Legal Representation for the Cocoa RDA

Mr. Titkanich revealed that on April 10, 2002 a letter was received from the law firm of Brown, Ward, Salzman and Weiss stating that the law firm no longer employed the current Cocoa RDA attorney, Joe Colombo.[1] Brown, Ward, Salzman and Weiss asked if the Cocoa RDA would like to retain Mr. Colombo as counsel or if they wished to continue with the services of the law firm. Staff recommends that Cocoa RDA continue with the services of Brown, Ward, Salzman and Weiss.[2]

* **MOTION by Mr. Vanderslice; Seconded by Ms. Warner to go with the Staff's recommendation of continuing with the services of Brown, Ward, Salzman and Weiss.**

AYES: Warner, Lanni and Vanderslice.

NAYS: Collins.

THE MOTION CARRIED 3-1 with Vice Chairperson Collins dissenting.

V. OLD BUSINESS

3. Redevelopment of southwest corner of SR520 and US1

Mr. Titkanich reminded the Board that at the last meeting, Mr. Micah Savell, President of The Right Site Inc., came before the board outlining a development opportunity and asked for the boards support or direction.

Mr. Titkanich said since that time, Staff has continued discussion with Mr. Savell and a number of concerns have arisen, such as the inability to acquire the parcels in a timely manner, reasonable cost, and the main reason: one of the parcel owners is deceased with no heirs listed. It was noted that Mr. Savell has purchased the tax certificate for the property but given the lengthy process to acquire the property it would preclude development of the site because it then becomes cost prohibitive from both the stand point of Mr. Savell and an end user, such as CVS Pharmacy.

Mr. Titkanich reminded the Board that they had indicated support for the vacation of Stone Street and the development of the site and said that Mr. Savell also went to the Diamond Square Development agency and presented them with the development plan.

[1] Please see Attachment A
[2] Please see Attachment B

Mr. Titkanich reported that Diamond Square also unanimously supported the project and pledged $25,000 in Streetscape improvements to ensure pedestrian access from the neighborhood to Hwy. 520, recognizing that the Stone Street crossing at Florida East Coast Railroad would be closed. Mr. Titkanich explained that FEC had met with the City and had acknowledged that with the number of accidents they have had in the past they have been meeting with cities up and down the coast to eliminate unnecessary crossings and are beginning the process to close the Stone Street crossing. He added that it was based on those findings that the Diamond Square Board decided to pledge money and Mr. Titkanich then advised the Board that one powerful remedy or tool at the Cocoa RDA's disposal is the power of eminent domain, especially when used for the assembling of parcels.

Mr. Titkanich recommends that the Board file papers for eminent domain action for the three parcels south of Stone Street and Staff is also asking that the Board transfer money from the Signage Program in the amount of $7,500, which will be repaid at a later date once the developer acquires the parcels from the City, for the cost of the acquisition as well as for the expenses occurred to acquire the parcels.

Vice Chairperson Collins asked for verification that regardless of any motions passed tonight, the matters would still have to come before the council. Former Agency Counsel Colombo remarked that eminent domain issues could not be advanced without the Council's approval. Agency Counsel Garganese then asked for clarification as to who was giving legal advice to the Cocoa RDA this evening and pointed out that Motion was carried in favor of retaining the services of his firm, Brown, Ward, Salzman and Weiss. Mr. Garganese went on to say that the City Council had authorized the Cocoa RDA to begin eminent domain proceedings and explained that the City Council will become involved but the matter will come back before the Cocoa RDA, which will then have to adopt a resolution stating the necessity of instituting the eminent domain proceedings. Mr. Garganese noted that a public purpose would also have to be set forth and that much of that work has already been done because a redevelopment plan to eliminate slum and blight has been established. Mr. Garganese noted that he will present the Agency with relevant paperwork at the next meeting.

* **MOTION by Mr. Vanderslice; Seconded by Chairperson Parrish, to authorize staff and the RDA Attorney to initiate eminent domain proceedings for the acquisition of three Stone Street parcels for the purposes of reassembly and development.**

THE MOTION CARRIED UNANIMOUSLY (5-0) WITH CHAIRPERSON PARRISH VOTING BY PHONE

* **MOTION by Mr. Vanderslice; Seconded by Mr. Lanni, to authorize the temporary transfer of $7,500 from the Signage Program Account to the Land Account to cover expenses associated with the acquisition of the proposed parcels, expenses including two independent real estate appraisals of each parcel so property owners receive just and fair value.**

THE MOTION CARRIED UNANIMOUSLY (5-0) WITH CHAIRPERSON PARRISH VOTING BY PHONE

Chairperson Parrish then left the meeting, terminating her phone call at 7:28 p.m.

III. DELEGATIONS

George Vanderhall, 705 Howard Street, Cocoa, voiced concerns that Diamond Square RDA was unaware that eminent domain was involved in the process when they pledged Streetscape Improvements for the redevelopment of the southwest corner of SR520 and US1.

Mr. Vanderhall took a moment to commend Staff members, mentioning Mr. Vanderslice in particular, for their economic savvy in obtaining funding.

James F. Ford, 705 Aurora Avenue, Cocoa, remarked that eminent domain might negatively affect some residents and lead to problems. Vice Chairperson Collins said that the Council and Cocoa RDA would revisit the subject of eminent domain as pertaining to the redevelopment of the southwest corner of SR520 and US1.

Former Counsel Colombo left the meeting at 7:32 p.m. Vice Chairperson Collins thanked Mr. Colombo for his efforts.

IV. NEW BUSINESS

1. Legal Representation for the Cocoa RDA

See above – Discussion immediately following Approval of Agenda and Minutes of previous meeting.

2. Lee Wenner T-Dock Upgrade – Cocoa Belle

Mr. Koch said that in November, Staff had been asked to investigate the cost and feasibility of T-Dock commercial upgrades for cruise, dinner, and charter boats at Lee Wenner Park. The Downtown RDA Plan does include some discussion about commercial docking for dinner and charter boats as secondary priority projects[3] and Staff has been working on possible improvements to the T-Dock project. Mr. Koch said the estimate for improvement to the T-Docks is approximately $18,000, with the funds providing better pilings, upgrades to needed areas, and the possible installation of lighting fixtures.

Staff is asking Cocoa RDA for a budget transfer of $18,000 from the Contingency Account to the T-Dock Improvement Account with improvements being pending on State approval of commercial vessels dockage at Lee Wenner Park and an RFP process from Brevard County for competitive bid in order to operate out of Lee Wenner Park.[4]

[3] Please see Attachment C
[4] Please see Attachment D

ZONING MAP AMENDMENT APPLICATION (MAP ONLY)

Community Services Department
Planning and Zoning Division
65 Stone Street
Cocoa, Florida 32922

Phone: (321) 433-8535
Fax: (321) 433-8543
Web: http://www.cocoafl.org

This form is divided into steps, which will help you prepare your application, provide supplemental items, and prepare for the Planning & Zoning Board and City Council hearings. A pre-application meeting with Staff is **required**.

For Office Use Only - Date Received

Stamp Only When Application is Fully Complete

Please TYPE or PRINT this application neatly.

1. **Existing Zoning Category:** **C-P Commercial Parkway District**
2. **Proposed Zoning Category:** **C-N Neighborhood Commercial**
3. **Existing Future Land Use Category: MU Mixed Use**
4. **Proposed Future Land Use Category (*if applicable*):**
5. **Applicant Information:** ** NOTE: Applicant is the main contact, who must attend the meeting!*

   Company (if applicable): Doty Solik Law

   Name: Mary D. Solik, Esq.

   Mailing Address: 121 S. Orange Ave STE 1500

   City: Orlando State: FL Zip Code: 32801

   Phone #: 407 378 7868 Fax #:

   Mobile #: 407 925 4738 E-mail: msolik@dotysoliklaw.com

6. **Property Owner Information:** ** Check here if same as Applicant* → ☐
   ** If more than one owner, attach additional sheet with names and addresses.*

   Company (if applicable): Biscaya Cocoa Holdings, LLC

   Name: Pablo Camposano and Oded M. Kaiser

   Mailing Address: 325 S Biscayne Blvd. Unit 3423

   City: Miami State: FL Zip Code: 33131

   Phone #: Fax #:

   Mobile #: 786 326 7500 E-mail: omaxkaiser@gmail.com

7. **Property Information:**

Street Address and Location: 301 S. Cocoa Blvd, Cocoa, FL Complete Parcel list attached_____

Parcel ID: * *If more than two Parcel IDs, attach additional sheet with Parcel IDs.*

☐☐-☐☐-☐☐-☐☐-☐☐☐☐☐.☐-☐☐☐☐.☐☐

☐☐-☐☐-☐☐-☐☐-☐☐☐☐☐.☐-☐☐☐☐.☐☐

Tax Account Numbers: * *If more than two Tax Account #s, attach additional sheet with Tax Account #s.*

☐☐☐☐☐☐☐ ☐☐☐☐☐☐☐

Land Area: _____ square feet or 1.39 acres_____ acres

Existing Use(s) on Property: Property is vacant_____

Proposed Use(s) on Property: Commercial uses consistent with C-N Zoning_____

8. **Please submit the following items in order complete the application:**

a. ☒ **Notarized application.**

b. ☒ **List of owners within 500 feet.** A "radius map package" from Brevard County containing a certified mailing list with mailing labels and a map of all property owners of record who reside within a 500-foot radius of the subject property is required for public notice. It is the applicant's responsibility to request these materials with the Brevard County GIS Department that are available free of charge. Inquiries need to be emailed to **servicedesk@brevardfl.gov** and forwarded to the **City of Cocoa Planning and Zoning Department** when available.

c. ☒ **Application fee.** Please make checks payable to the 'City of Cocoa' and submit payment **ONLY** to the Community Services Department. Public mail notice and legal advertising fees must also be paid a few weeks after application submittal. See Schedule of Fees, Charges and Expenses for applicable fees.

d. ☒ **Proof of ownership.** A copy of the most recent recorded warranty deed is required.

e. ☒ **Letter of authorization.** If the applicant is not the property owner, a notarized letter of authorization or agent affidavit is required, unless the applicant is the Attorney of the owner. Each property owner must complete a separate authorization form or other suitable documentation to allow the agent to act upon his/her behalf. A sample "Letter of Authorization" form is available from the City.

f. ☒ **Corporate documents.** If the applicant/owner is representing a company, articles of incorporation which show the applicant/owner is authorized to represent the company is required. A data record printout from the Florida Department of State, Division of Corporations website may also be provided (http://www.sunbiz.org/corpweb/inquiry/search.html).

g. ☒ **Certified boundary survey.** Submit a certified survey showing all existing structures and all proposed structures.

h. ☒ **Legal description.** Submit a typed copy of the legal description. It may be submitted on a computer disk or by e-mail.

i. ☐ **Additional information (optional).** Submit any information that may be helpful in understanding the request. This may include a site plan drawing, photos, sketches, elevations, or letters from adjoining property owners.

9. **Application filing deadline.** The application filing deadline is on the first day of each month at 5:00 pm for public hearings that are held in the following month. For Zoning Map Amendment applications that are submitted concurrently with other applications, the earlier filing deadline shall apply.

10. **Application filing procedure.** This application, together with all required exhibits and attachments, shall be completed and filed with the Planning and Zoning Division.

Public hearings process information – please read this!

11. **Dates and locations of public hearings.** All zoning map amendments require one hearing in front of the Planning & Zoning Board and two hearings in front of the City of Cocoa Council.

12. **Board types.** The Planning & Zoning Board is an advisory board to the City Council and therefore is only authorized to make recommendations. City Council is an authoritative body and is able to make binding decisions.

13. **Presence required at the public hearings.** The applicant or his/her representative must be present to answer any questions concerning the application. If there are extenuating circumstances why the applicant or his/her representative cannot attend, he or she must notify the City in writing prior to the public hearing.

14. **Preparing for the public hearings.** It is the applicant's responsibility to research and know all laws that may be applicable and may affect the outcome of any decision on the application request. The City assumes no responsibility or liability relating to the applicant's failure to research and know all applicable laws including, but not limited to state, federal, and city laws, codes, land development regulations, and the comprehensive plan.

15. **Exhibits at public hearings.** If photographs, documents, maps or other materials are provided to the Board/Council as evidence at the public hearing, the applicant must leave those instruments with the Recording Secretary. By law those instruments automatically become part of the public records and cannot be returned to the applicant.

16. **Witnesses at public hearings.** For the purposes of making a decision on the application, the Board/Council shall only consider testimony of qualified witnesses. A witness is determined by the Board/Council and is generally based on:
    a. The witness has personal knowledge of the fact in which the witness will testify; and/or
    b. In the case of testimony consisting of opinions or inferences, the testimony is qualified as the following:
        1. *Layman witness*: Testimony of a witness other than an expert witness is qualified only if:
            - The witness can readily, and with equal accuracy and adequacy, communicate what he or she perceived to the Board without testifying in the form of opinions or inferences.
            - The opinions and inferences do not require any special knowledge, skill experience or training.
        2. *Expert witness*. Testimony of an expert witness is qualified only if:
            - The subject matter is proper for expert testimony because scientific, technical, or other specialized skill will help the Board understand the evidence being presented, or helps establish a fact in issue.
            - The witness is adequately qualified to express an opinion on the matter.

17. **Planning & Zoning Board vs. City Council actions.** If the Planning & Zoning Board finds that the facts presented in the matter justify approval, it may recommend to approve the request, or a portion thereof, and it may specify any conditions deemed necessary to preserve the intent of the City of Cocoa Code. If the Board finds that the facts presented do not justify approval, it may recommend to deny the request and will specify the reasons for denial. A decision is usually made at the same meeting that the hearing is held. Regardless of the outcome, the application will be forwarded to the City Council for consideration where a final decision can be made.

18. In order to approve a zoning map amendment, the Planning & Zoning Board and City Council must consider and study the criteria listed below (as described in Appendix A, Article XXII, Section 1 (G)(1) of the City of Cocoa Code). Please provide your consideration of the following criteria and any pertinent data and evidence that may be useful to the Planning & Zoning Board and City Council. Use extra sheets if necessary.

a. **Whether or not the proposed change is contrary to the established land use pattern.**

No. The subject property is at the southwest corner of SR 520 and US1, both heavily traveled commercial corridors.

b. **Whether or not the proposed change would create an isolated district unrelated to adjacent and nearby districts.**

No. adjacent and nearby properties all have commercial zoning.

c. **Whether or not the proposed change would materially alter the population density pattern and thereby increase or overtax the load on public facilities such as schools, utilities, streets, access, etc.**

No residential development is proposed. The subject property was previously improved with commercial uses and no new

Utility demands are created by the proposed change.

d. **Whether or not existing district boundaries are illogically drawn in relation to existing conditions on the property proposed for change.**

No.

e. **Whether or not the proposed change would be contrary to the land use plan and would have an adverse effect on the comprehensive plan.**

No. The rezoning is being requested to bring the subject property into compliance with the land use plan. The current Zoning is inconsistent with the MU Future Land Use designation.

f. **Whether or not changed or changing conditions make the passage of the proposed amendment necessary.**

Yes. The change in the FLU designation of the property from Commercial to MU has rendered the current zoning Inconsistent with the FLU map.

g. Whether or not the proposed change will adversely influence living conditions in the neighborhood.

No. The property has historically been developed with commercial uses and is separated from the nearest Neighborhood by RR tracks.

h. Whether or not the proposed change will create or excessively increase traffic congestion or otherwise affect public safety.

No.

i. Whether or not the proposed change will create a drainage problem.

No. The subject property was previously developed with commercial uses without code compliant stormwater Management. Any new development will have to meet current code standards for drainage.

j. Whether or not the proposed change will seriously reduce light and air to adjacent areas.

No.

k. Whether or not the proposed change will adversely affect property values in the adjacent areas.

No. The proposed change is to a less intense commercial zoning than the current zoning.

l. Whether or not the proposed change will be a deterrent to the improvement or development of adjacent property in accord with existing regulations.

No.

m. Whether or not the proposed change will constitute a grant of special privilege to an individual owner as contrasted with the public welfare.

No.

n. Whether or not there are substantial reasons why the property cannot be used in accord with existing zoning.

Yes. The current zoning is inconsistent with the FLU designation on the subject property. The property cannot be Used at all until the inconsistency is corrected.

o. Whether or not the change suggested is out of scale with the needs of the neighborhood.

No.

p. Whether or not the it is impossible to find other adequate sites in the city for the proposed use in districts already permitting such use.

Without the change the property owners are deprived of any use of their property.

19. Signatures and Notarization.

STATE OF FLORIDA COUNTY OF ORANGE. I, MARY D. SOLIK being first duly sworn, depose and say that:

☐ I am the applicant, or if corporation, I am the officer of the corporation authorized to act on this request.

☒ I am the legal representative of the applicant of this application and a notarized Letter of Authorization form or agent affidavit accompanies this application giving written, unless the applicant is the Attorney representing the owner.

I hereby certify that I have read, completed and understand this application and applicable petition, and understand that if my application and all associated attachments are not complete and accurate in all respects, the application will not be scheduled for a public hearing. I further understand that this application must be complete and accurate prior to the advertising of a public hearing.

Mary D Solik
(APPLICANT SIGNATURE)

Machele Rowe
Comm.#GG949073
Expires: May 18, 2024
Bonded Thru Aaron Notary
(Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known ☒ OR Produced Identification ☐

Type of I.D. Produced _____

Machelle Rowe
(NOTARY PUBLIC SIGNATURE)

STATE OF FLORIDA, COUNTY OF BREVARD

Sworn and subscribed to before me this 13th day of DECEMBER, 20 23

FOR OFFICE USE ONLY

Fee of $_____ in cash ☐ or check ☐ (No. _____) payable to the "City of Cocoa".

Receipt Number: _____

Date: _____

Signature from Planning & Zoning Division:

_____

BISCAYA COCOA HOLDINGS, LLC

Parcel List

24-36-33-31-A-5

24-36-33-31-C-1

24-36-33-31-D-11

24-36-33-31-D-12

24-36-33-31-D-13

24-36-33-31-C-2

24-36-33-31-*-R.1

24-36-33-31-*-R.2

24-36-33-31-*-R.3

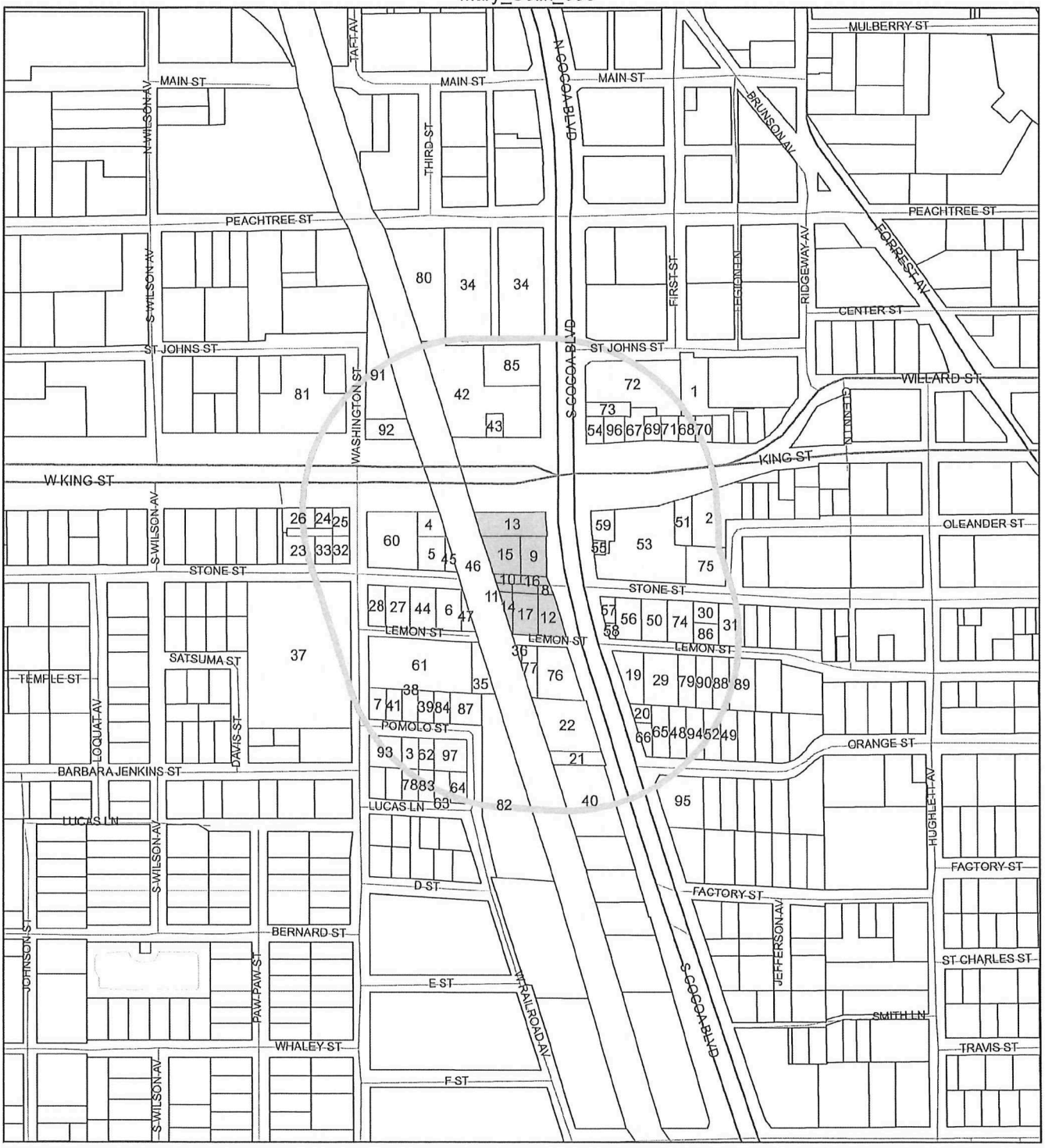
24-36-33-31-*-R.4

24-36-33-31-*-R.5

RADIUS MAP

BISCAYA COCOA HOLDINGS LLC

Mary_Solik_500



N

W E

S

1:4,800 or 1 inch = 400 feet

Buffer Distance: 500 feet

This map was compiled from recorded documents and does not reflect an actual survey. The Brevard County Board of County Commissioners does not assume responsibility for errors or omissions hereon.

Produced by BoCC - GIS Date: 12/7/2023

Buffer

Subject Property

Notify Property

Parcels

58-70 57TH ROAD REALTY LLC
33 MATINECOCK AVE
PORT WASHINGTON NY 11050-2102

ADRENALINE ARCHITECTS LLC
453 KING ST
COCOA FL 32922-7621

AS INVESTMENTS LLC
10549 MERE PKWY
ORLANDO FL 32832-6153

AUSTIN, DANIEL,JR
935 BOWING LN
ROCKLEDGE FL 32955-4015

AUSTIN, DANIEL,JR
1113 HICKORY LN
COCOA FL 32922-6719

BELL, CHRISTINE
360 POMOLO ST
COCOA FL 32922-7447

BISCAYA COCOA HOLDINGS LLC
325 S BISCAYNE BLVD, APT 3423
MIAMI FL 33131-2476

BREVARD STONE INC
403 S COCOA BLVD
COCOA FL 32922-

BROWN, GEORGE L JR TRUSTEE
555 KING ST W
COCOA FL 32922-

BROWN, GEORGE L,JR
555 W KING ST
COCOA FL 32922-7421

BRYANT, JANIE B
BRYANT, PURVETTE A
1139 TARPON DR
ROCKLEDGE FL 32955-

BRYANT, PURVETTE A
1820 BARRINGTON CIR
ROCKLEDGE FL 32955-3062

BZDUN, MIECZSLAW
1908 RANCH ESTATE DR
ORLANDO FL 32825-8407

CASITA ENTERPRISES LLC
750 GLENGARRY DR
MELBOURNE FL 32940-1866

CATCHINGS, MARY E
7107 CLAYMORE AVENUE
HYATTSVILLE MD 20782-

COCOA LODGE 55 F&AM
PO BOX 7
COCOA FL 32923-0007

COCOA LODGE NO 55 F & AM INC
C/O PHILLIP J WILISON
PO BOX 7
COCOA FL 32923-0007

COCOA, CITY OF
65 STONE STREET
COCOA FL 32922-

COWHAM, RAYMOND
14 PINE GLEN RD
HILLSBOROUGH NH 03244-4522

DAWSON, BEULAH J
PO BOX 341
COCOA FL 32923-0341

DRAKE, WILLIE LEE III
356 POLOMO ST
COCOA FL 32922-

EAST FLORIDA MOTOR SALES INC
4650 HIGHWAY 520
COCOA FL 32926-2333

EAST FLORIDA MOTORS SALES INC
4650 HIGHWAY 520
COCOA FL 32926-2333

EVERETT, ROBERT W
EVERETT, MAE E ET AL
16243 SW 107TH PLACE
MIAMI FL 33157-

FINK, MARK H
61 S BALDWIN AVE, UNIT 1162
SIERRA MADRE CA 91025-7055

FLORIDA EAST COAST RAILWAY LLC
7150 PHILIPS HWY
JACKSONVILLE FL 32256-6802

FLORIDA, STATE OF (DOT)
719 S WOODLAND BLVD
DELAND FL 32720-

GREENWOOD, ALECK J
640 BREVARD AVE #201
COCOA FL 32922-

GREENWOOD, ALECK J
PO BOX 1077
COCOA FL 32923-1077

HACIENDAS LLC
750 GLENGARRY DRIVE
MELBOURNE FL 32940-1866

IBRAHIM & HAROON REALESTATE INC
1910 ROCKLEDGE BLVD
ROCKLEDGE FL 32955-

JORDAN, JOHN A
1783 HAZELTON NW ST NW
PALM BAY FL 32907-7072

KABBOORD PROPERITES INC
3201 N ATLANTIC AVE
COCOA BCH FL 32931-

KABBOORD PROPERTIES II LLC
3201 N ATLANTIC AVE
COCOA BEACH FL 32931-3406

KABBOORD PROPERTIES INC
3201 N ATLANTIC AVE
COCOA BCH FL 32931-

KABBOORD, DAVID WAYNE
KABBOORD, JOHN JAMES
3201 N ATLANTIC AVE
COCOA BEACH FL 32931-3406

KABBOORD, JOHN J,JR
KABBOORD, DAVID W
3201 N ATLANTIC AVE
COCOA BEACH FL 32931-3406

KABBOORD, WILLIAM D
3201 N ATLANTIC AVE
COCOA BEACH FL 32931-3406

LEGEND REALTY DEVELOPMENT CORPORATION
543 PALM DR
HALLANDALE BEACH FL 33009-6533

LEVENSALER, TIMOTHY
LEVENSALER, ARLET
PO BOX 542349
MERRITT ISLAND FL 32954-2349

MAPP, DOUGLAS O'NEAL
BULLOCK, SYLVIA LEE
880 GLADIOLA CIR, APT 356
ROCKLEDGE FL 32955-6258

MARILYN A ARNOLD TRUST
1102 EGRET LAKE WAY
MELBOURNE FL 32940-6862

MAROTTO, JOHN
4370 COQUINA AVE
TITUSVILLE FL 32780-6524

METROPOLITAN BAPTIST CHURCH
474 KING ST
COCOA FL 32922-7622

METROPOLITAN BAPTIST CHURCH INC
474 KING ST
COCOA FL 32922-

METROPOLITAN BAPTIST CHURCH OF COCOA INC
474 KING ST
COCOA FL 32922-

METROPOLITAN BAPTIST CHURCH OF COCOA INC
PO BOX 758
COCOA FL 32923-0758

METROPOLITAN BAPTIST CHURCH OF COCOA INC
474 KINGS ST
COCOA FL 32922-

MOUNT MORIAH AFRICAN METHODIST EPISCOPAL CHURCH
223 OLEANDER ST
COCOA FL 32922-

MOUNT MORIAH AFRICAN METHODIST EPISCOPAL CHURCH OF COCOA INC
223 OLEANDER ST
COCOA FL 32922-7695

NEGRI PROPERTY LLC
401 S COCOA BLVD
COCOA FL 32922-7699

NEGRI, GERALD M
780 BUTTONWOOD DR
MERRITT ISLAND FL 32953-4611

NICOLE LEANN INVESTMENTS LLC
668 WING TER
DELTONA FL 32725-7038

NORBURY, VONNAY
1007 MONTCLAIR RD
COCOA FL 32922-6355

PRICE, THOMAS J JR
ABRUZZO-PRICE, THERESA TRUSTEES
1996 US HIGHWAY 1 S
ROCKLEDGE FL 32955-

R & R COCOA LLC
246 MCLEAN PT
WINTER HAVEN FL 33884-4135

RAILROAD AVENUE WAREHOUSE COMPLEX LLC
626 OLD DIXIE HWY SW
VERO BEACH FL 32962-4536

RICH, CHEVAYA D
704 GEORGIA AVE N
COCOA FL 32922-

RIVERA, MANUEL ANTONIO TORO
1456 FLEDGLING CT
ORLANDO FL 32837-8112

ROSCHMAN PARTNERS
6300 NE 1ST AVE STE 300
FORT LAUDERDALE FL 33334-

ROSSIELLO, DOMINIC
750 GLENGARRY DR
MELBOURNE FL 32940-1866

RUIZ, MANUEL C
6 WESTVIEW LN
COCOA BEACH FL 32931-2621

SANDS REVOCABLE TRUST
1370 WAR EAGLE BLVD
TITUSVILLE FL 32796-1530

SHAND, TANIA A
SHAND, ITSELDA M
1901 VERMONT AVE NW
WASHINGTON DC 20001-

STONE, JANORISE TRUSTEE
516 KING ST
COCOA FL 32922-4501

STONE, RICHARD E
STONE, DAISY
516 W KING ST
COCOA FL 32922-4501

TOWERBRIDGE INC
773 CITRUS COVE DR
WINTER GARDEN FL 34787-5221

TR CORP/GREATER ST PAUL BAPTIST
CHURCH OF COCOA FLORIDA INC
213 STONE ST
COCOA FL 32926-

WHEALY HOLDINGS LLC
2758 TRAILS AT HIDDEN HBR
MERRITT ISLAND FL 32952-4175

WILLIAM D KABBOORD TRUST
3201 N ATLANTIC AVE
COCOA BEACH FL 32931-3406

WILLIAMS, LASCELLE B
WILLIAMS, EVELYN M
345 POMOLO ST
COCOA FL 32922-7446

Ellis, Clerk of Courts, Brevard County Doc. D: $10500.00

This instrument prepared by
and after Recording return to:
Charles H. Ratner, Esq., President
Charles Ratner, P.A.,
605 Lincoln Road, Suite 210
Miami Beach, FL 33139

Folio No. 24-36-33-31-0000C.0-0002.00
Folio No. 24-36-33-31-0000C.0-0001.00
Folio No. 24-36-33-31-0000A.0-0005.00

(For Recorder's Use Only)

TRUSTEE'S WARRANTY DEED

(301 & 305 S. Cocoa Blvd., Cocoa, FL 32922)

THIS TRUSTEE'S WARRANTY DEED, dated as of March 10th, 2017, between **EVA IRENE CRUMB, AN UNMARRIED WIDOW, INDIVIDUALLY AND AS TRUSTEE OF THE EVA IRENE CRUMB REVOCABLE TRUST DATED JULY 17, 2014** both with an address of PO Box 8489, Cocoa FL 34942 (collectively "Grantor"), and **BISCAYA COCOA HOLDINGS, LLC**, a Florida limited liability company, with an address of 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantee").

Grantor, for and in consideration of the sum of $10.00 and other good and valuable consideration paid by Grantee, receipt of which is acknowledged, grants, bargains, sells and conveys to Grantee the real property situate, lying and being in Brevard County, Florida, located at **301 & 305 S. Cocoa Blvd., Cocoa, FL 32922** legally described as follows ("Property"):

SEE EXHIBIT "A" FOR LEGAL DESCRIPTION

TOGETHER WITH (i) any and all structures and improvements on the Property; (ii) all right, title, and interest, if any, of Grantor in any land lying in the bed of any street or highway, opened or proposed, in front of or adjoining the Property; and (iii) all easements, rights of way, privileges, licenses, appurtenances, and other rights and benefits belonging to, running with the owner of, or in any way related to the Property; any or all of the foregoing, if applicable.

TO HAVE AND TO HOLD, the same in fee simple forever.

SUBJECT TO: real estate taxes for 2017 and subsequent years, comprehensive land use plans, zoning and other restrictions, regulations and prohibitions imposed by governmental authorities, and conditions, restrictions, limitations, reservations, declarations, easements, dedications and agreements of record (collectively "Permitted Exceptions"), all without intent to reimpose the same.

And the GRANTOR does hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever.

[Signature Page to Follow]

SIGNATURE PAGE TO TRUSTEE'S WARRANTY DEED

(301 & 305 S. Cocoa Blvd., Cocoa, FL 32922)

Grantor has executed this Deed as of the date indicated above.

Signed, sealed and delivered
in the presence of:

Eva Irene Crumb

EVA IRENE CRUMB, INDIVIDUALLY AND AS TRUSTEE OF THE EVA IRENE CRUMB REVOCABLE TRUST DATED JULY 17, 2014

Sign Name: _____
Witness #1

Print Name: TIMOTHY PICKLES

Sign Name: Janet M. Meadows
Witness #2

Print Name: JANET M. MEADOWS

STATE OF FLORIDA)
) **SS:**
COUNTY OF BREVARD)

The foregoing instrument was acknowledged before me this 9th day of March 2017, by Eva Irene Crumb, individually and as Trustee of the Eva Irene Crumb Revocable Trust dated July 17, 2014. She is personally known to me or has produced _____ as identification *(strike one)*.

My Commission Expires:
[NOTARIAL SEAL]

Sign Name: _____

Print Name: _____
NOTARY PUBLIC

Serial No. (none, if blank): _____

NOTARY PUBLIC STATE OF FLORIDA
TIMOTHY R. PICKLES
MY COMMISSION # GG 001818
EXPIRES: July 16, 2020
Bonded Thru Budget Notary Services

EXHIBIT "A" LEGAL DESCRIPTION

The land referred to herein below is situated in the County of Brevard, State of Florida, and is described as follows:

PARCEL 1:

Lot 1, Block C, less road right-of-way, LAPHAM'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida.

PARCEL 2:

That part of Lots 5, 6 and 7, in Block A, LAPHAM'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida, together with the area formerly contained in Oleander Street, all as described in Official Records Book 441, Page 336 and Official Records Book 460, Page 589, all of the Public Records of Brevard County, Florida.

Also known as:
That portion of Lots 5, 6 and 7, Block "A", LAPHAM'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida, lying South of the road right of way of State Road No. 520 and East of the right of way line of the Florida East Coast Railway, together with the area formerly contained in Oleander Street, all as described in Official Records Book 441, Page 336 and Official Records Book 460, Page 589, all of the Public Records of Brevard County, Florida.

PARCEL 3:

Lot 2, Block C, LAPHAM'S SUBDIVISION, according to the plat thereof, recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida; excepting, however, all land adjoining said Lot on the North and embraced within the area of that portion of Oleander Street which has been vacated.

Also: Begin at the Southeast corner of Lot 3, Block C, LAPHAM'S SUBDIVISION, according to the plat thereof, recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida; thence run along the South line of said Lot West to the East side of the right-of-way of the Florida East Coast Railway, thence run the East side of said railroad right-of-way Northwesterly to the North line of said Lot 3, thence run the North line of said Lot 3 East to the Northeast corner thereof, thence run the East line of said Lot South to the point of beginning, excepting, however, all land adjoining said Lot on the North and embraced within the area of that portion of Oleander Street which has been vacated.

PARCEL 4:

A portion of vacated Stone Street as shown in City of Cocoa Resolution No. 2016-103, recorded in Official Record Book 7724, Page 150 in the Public Records of Brevard County, Florida, more particularly described as follows:

The North half of the following described parcel abutting said Parcels 1 and 3:

That portion of Stone Street (said street being an un-named 50 foot wide right-of-way dedicated by "LAPHAM'S SUBDIVISION", recorded in Plat Book 2, Page 6 and re-dedicated as Magnolia Street by "SUNNYSIDE ADDITION TO COCOA, FLORIDA", recorded in Plat Book 2, Page 34, both of the Public Records of Brevard County, Florida), which lies west of the west right-of-way line of U.S. Highway No. 1 and east of the east right-of-way line of the Florida East Coast Railway (a 100 foot wide right-of-way), more particularly described as follows: Begin at the Southeast corner of Lot 1, Block "C" of "LAPHAM'S SUBDIVISION" recorded in Plat Book 2, Page 6 of the Public Records of Brevard County, Florida, (said point being on the west right-of-way line of U.S. Highway No.1 as defined by Florida Department of Transportation Right of Way Maps, Section 70020, W.P.I. 5110519, F.P. 237592-1, dated 7/30/04), thence run west, along the north right-of-way line of Stone Street, a distance of 156 feet, more or less, to a point on the east right-of-way line of the Florida East Coast Railway; thence southeasterly, along said east right-of-way line, a distance of 53.5 Feet, more or less, to a point on the south right-of-way line of said Stone Street; thence east, along said south right-of-way, a distance of 160 FEET, more or less, to an intersection with the west right-of-way line of U.S. Highway No. 1 (a variable width right-of-way) as defined by the aforesaid Florida Department of Transportation Right of Way Maps; thence northwesterly, a distance of 55 Feet, more or less to the Point of Beginning.

Ellis, Clerk of Courts, Brevard County Doc. D: $0.70

This instrument prepared by:
And after recording return to
Charles H. Ratner, Esq., President
Charles Ratner, P.A.,
200 S. Biscayne Boulevard
Suite 3200
Miami FL 33131

Folio No. 24-36-33-31-0000D.0-0012.00

(For Recorder's Use Only)

MEMBER'S DISTRIBUTION GENERAL WARRANTY DEED

(BISCAYA STONE STREET 2, LLC)

THIS GENERAL WARRANTY DEED, dated as of May 23, 2016 between **BISCAYA STONE STREET 2, LLC**, a Florida limited liability company, with an address at 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantor") and **BISCAYA COCOA HOLDINGS, LLC**, a Florida limited liability company, its sole Member, with an address at 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantee").

Grantor, for and in consideration of the sum of $10.00 and other good and valuable consideration paid by Grantee, receipt of which is acknowledged, distributes, grants, bargains, and conveys to Grantee the real property situate, lying and being in Brevard County, Florida, located at **341 Stone Street, Cocoa, FL 32922** legally described as follows ("Property"):

Lot 12, Block D of LAPHAM'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 2, Page 6, of the Public Records of Brevard County, Florida.

TOGETHER WITH (i) any and all structures and improvements on the Property; (ii) all right, title, and interest, if any, of Grantor in any land lying in the bed of any street or highway, opened or proposed, in front of or adjoining the Property; and (iii) all easements, rights of way, privileges, licenses, appurtenances, and other rights and benefits belonging to, running with the owner of, or in any way related to the Property; any or all of the foregoing, if applicable.

TO HAVE AND TO HOLD, the same in fee simple forever.

SUBJECT TO: real estate taxes for 2016 and subsequent years, comprehensive land use plans, zoning and other restrictions, regulations and prohibitions imposed by governmental authorities, all without intent to reimpose the same.

AND, Grantor covenants with Grantee that Grantor is lawfully seized of the Property in fee simple; that Grantor has good right and lawful authority to transfer and convey the Property and the Grantor does hereby fully warrant the title to said land and Property, and will defend the same against lawful claims of all persons whomsoever.

NOTE TO RECORDER AND TAX ASSESSOR: This is a Distribution General Warranty Deed of unencumbered real property from a single member Limited Liability Company to its sole member in the process of the Grantor LLC winding up its affairs, and is given for nominal consideration. The beneficial interest in and to the Grantee member and the Property remains the same before and after this Conveyance, and this Deed does not represent any change in the beneficial ownership of the Property. Accordingly, no documentary stamps other than nominal stamps are due in connection with this Deed.

SIGNATURE PAGE TO
MEMBER'S DISTRIBUTION GENERAL WARRANTY DEED
(BISCAYA STONE STREET 2, LLC)

Grantor has executed this Deed as of the date indicated above.

Signed, sealed and delivered in the presence of:
(as to both signatures)

BISCAYA STONE STREET 2, LLC,
a Florida limited liability company

BY: BISCAYA COCOA HOLDINGS, LLC,
a Florida limited liability company,
It's Manager and Sole Member

Sign Name: _____
Witness #1

Print Name: CHARLES H. RATNER
Witness #1

By: _____
Oded M. Kaiser, Manager

By: _____
Pablo A. Camposano, Manager

Sign Name: _____
Witness #2

Print Name: Karen Hamandi
Witness #2

STATE OF FLORIDA)
) **SS:**
COUNTY OF MIAMI-DADE)

The foregoing instrument was acknowledged before me this ___ day of May, 2016, by ODED M. KAISER and PABLO A. CAMPOSANO, as Managers of Biscaya Cocoa Holdings, LLC, a Florida limited liability company, the Manager and Sole Member of **BISCAYA STONE STREET 2, LLC**, a Florida limited liability company corporation, on behalf of such limited liability company. They are personally known to me or have produced _____ as identification *(strike one)*.

My Commission Expires:
[NOTARIAL SEAL]

Sign Name: _____

Print Name: CHARLES H. RATNER
NOTARY PUBLIC

Serial No. (none, if blank): _____

CHARLES H. RATNER
MY COMMISSION # FF 236739
EXPIRES: October 3, 2019
Bonded Thru Notary Public Underwriters

Ellis, Clerk of Courts, Brevard County Doc. D: $0.70

This instrument prepared by:
And after recording return to
Charles H. Ratner, Esq., President
Charles Ratner, P.A.,
200 S. Biscayne Boulevard
Suite 3200
Miami FL 33131

Folio No. 24-36-33-31-0000D.0-0013.00

(For Recorder's Use Only)

MEMBER'S DISTRIBUTION GENERAL WARRANTY DEED

(BISCAYA STONE STREET 3, LLC)

THIS GENERAL WARRANTY DEED, dated as of May 23, 2016 between **BISCAYA STONE STREET 3, LLC**, a Florida limited liability company, with an address at 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantor") and **BISCAYA COCOA HOLDINGS, LLC**, a Florida limited liability company, its sole Member, with an address at 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantee").

Grantor, for and in consideration of the sum of $10.00 and other good and valuable consideration paid by Grantee, receipt of which is acknowledged, distributes, grants, bargains, and conveys to Grantee the real property situate, lying and being in Brevard County, Florida, located at **347 Stone Street, Cocoa, FL 32922** legally described as follows ("Property"):

Lot 13, Block D of LAPHAM'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 2, Page 6, of the Public Records of Brevard County, Florida.

TOGETHER WITH (i) any and all structures and improvements on the Property; (ii) all right, title, and interest, if any, of Grantor in any land lying in the bed of any street or highway, opened or proposed, in front of or adjoining the Property; and (iii) all easements, rights of way, privileges, licenses, appurtenances, and other rights and benefits belonging to, running with the owner of, or in any way related to the Property; any or all of the foregoing, if applicable.

TO HAVE AND TO HOLD, the same in fee simple forever.

SUBJECT TO: real estate taxes for 2016 and subsequent years, comprehensive land use plans, zoning and other restrictions, regulations and prohibitions imposed by governmental authorities, all without intent to reimpose the same.

AND, Grantor covenants with Grantee that Grantor is lawfully seized of the Property in fee simple; that Grantor has good right and lawful authority to transfer and convey the Property and the Grantor does hereby fully warrant the title to said land and Property, and will defend the same against lawful claims of all persons whomsoever.

NOTE TO RECORDER AND TAX ASSESSOR: This is a Distribution General Warranty Deed of unencumbered real property from a single member Limited Liability Company to its sole member in the process of the Grantor LLC winding up its affairs, and is given for nominal consideration. The beneficial interest in and to the Grantee member and the Property remains the same before and after this Conveyance, and this Deed does not represent any change in the beneficial ownership of the Property. Accordingly, no documentary stamps other than nominal stamps are due in connection with this Deed.

SIGNATURE PAGE TO
MEMBER'S DISTRIBUTION GENERAL WARRANTY DEED
(BISCAYA STONE STREET 3, LLC)

Grantor has executed this Deed as of the date indicated above.

Signed, sealed and delivered in the presence of:
(as to both signatures)

BISCAYA STONE STREET 3, LLC,
a Florida limited liability company

BY: BISCAYA COCOA HOLDINGS, LLC,
a Florida limited liability company,
It's Manager and Sole Member

Sign Name: _____
Witness #1

CHARLES H. RATNER
Print Name: _____
Witness #1

By: _____
Oded M. Kaiser, Manager

Sign Name: _____
Witness #2

Karen Hamandi
Print Name: _____
Witness #2

By: _____
Pablo A. Camposano, Manager

STATE OF FLORIDA)
) **SS:**
COUNTY OF MIAMI-DADE)

The foregoing instrument was acknowledged before me this ____ day of May, 2016, by ODED M. KAISER and PABLO A. CAMPOSANO, as Managers of Biscaya Cocoa Holdings, LLC, a Florida limited liability company, the Manager and Sole Member of **BISCAYA STONE STREET 3, LLC**, a Florida limited liability company corporation, on behalf of such limited liability company. They are personally known to me or have produced _____ as identification *(strike one)*.

My Commission Expires:
[NOTARIAL SEAL]

Sign Name: _____

CHARLES H. RATNER
Print Name: _____
NOTARY PUBLIC
Serial No. (none, if blank): _____

CHARLES H. RATNER
MY COMMISSION # FF 236739
EXPIRES: October 3, 2019
Bonded Thru Notary Public Underwriters

Ellis, Clerk of Courts, Brevard County Doc. D: $0.70

This instrument prepared by:
And after recording return to
Charles H. Ratner, Esq., President
Charles Ratner, P.A.,
200 S. Biscayne Boulevard
Suite 3200
Miami FL 33131

Folio No. 24-36-33-31-0000D.0-0011.00

(For Recorder's Use Only)

MEMBER'S DISTRIBUTION GENERAL WARRANTY DEED

(BISCAYA STONE STREET 1, LLC)

THIS GENERAL WARRANTY DEED, dated as of May 23, 2016 between **BISCAYA STONE STREET 1, LLC**, a Florida limited liability company, with an address at 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantor") and **BISCAYA COCOA HOLDINGS, LLC**, a Florida limited liability company, its sole Member, with an address at 444 Brickell Avenue, Suite 417, Miami, FL 33131 ("Grantee").

Grantor, for and in consideration of the sum of $10.00 and other good and valuable consideration paid by Grantee, receipt of which is acknowledged, distributes, grants, bargains, and conveys to Grantee the real property situate, lying and being in Brevard County, Florida, located at **337 Stone Street, Cocoa, FL 32922** legally described as follows ("Property"):

Lot 11, Block D of LAPHAM'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 2, Page 6, of the Public Records of Brevard County, Florida, LESS road right-of-way.

TOGETHER WITH (i) any and all structures and improvements on the Property; (ii) all right, title, and interest, if any, of Grantor in any land lying in the bed of any street or highway, opened or proposed, in front of or adjoining the Property; and (iii) all easements, rights of way, privileges, licenses, appurtenances, and other rights and benefits belonging to, running with the owner of, or in any way related to the Property; any or all of the foregoing, if applicable.

TO HAVE AND TO HOLD, the same in fee simple forever.

SUBJECT TO: real estate taxes for 2016 and subsequent years, comprehensive land use plans, zoning and other restrictions, regulations and prohibitions imposed by governmental authorities, all without intent to reimpose the same.

AND, Grantor covenants with Grantee that Grantor is lawfully seized of the Property in fee simple; that Grantor has good right and lawful authority to transfer and convey the Property and the Grantor does hereby fully warrant the title to said land and Property, and will defend the same against lawful claims of all persons whomsoever.

NOTE TO RECORDER AND TAX ASSESSOR: This is a Distribution General Warranty Deed of unencumbered real property from a single member Limited Liability Company to its sole member in the process of the Grantor LLC winding up its affairs, and is given for nominal consideration. The beneficial interest in and to the Grantee member and the Property remains the same before and after this Conveyance, and this Deed does not represent any change in the beneficial ownership of the Property. Accordingly, no documentary stamps other than nominal stamps are due in connection with this Deed.

SIGNATURE PAGE TO
MEMBER'S DISTRIBUTION GENERAL WARRANTY DEED
(BISCAYA STONE STREET 1, LLC)

Grantor has executed this Deed as of the date indicated above.

Signed, sealed and delivered in the presence of:
(as to both signatures)

BISCAYA STONE STREET 1, LLC,
a Florida limited liability company

BY: BISCAYA COCOA HOLDINGS, LLC,
a Florida limited liability company,
It's Manager and Sole Member

Sign Name:_____
Witness #1

Print Name: CHARLES H. RATNER
Witness #1

By:_____
Oded M. Kaiser, Manager

By:_____
Pablo A. Camposano, Manager

Sign Name:_____
Witness #2

Print Name: Karen Hamandi
Witness #2

STATE OF FLORIDA)
) SS:
COUNTY OF MIAMI-DADE)

The foregoing instrument was acknowledged before me this ____ day of May, 2016, by ODED M. KAISER and PABLO A. CAMPOSANO, as Managers of Biscaya Cocoa Holdings, LLC, a Florida limited liability company, the Manager and Sole Member of **BISCAYA STONE STREET 1, LLC**, a Florida limited liability company corporation, on behalf of such limited liability company. They are personally known to me ~~or have produced~~ _____ as identification *(strike one)*.

My Commission Expires:
[NOTARIAL SEAL]

Sign Name:_____

Print Name: CHARLES H. RATNER

NOTARY PUBLIC

Serial No. (none, if blank): _____

CHARLES H. RATNER
MY COMMISSION # FF 236739
EXPIRES: October 3, 2019
Bonded Thru Notary Public Underwriters

PROPERTY OWNER
LETTER OF AUTHORIZATION

APPLICATION REQUEST:

Zoning Map Amendment

AFFECTED PROPERTY: List the Parcel/Tax IDs that are subject to this Letter of Authorization. If there are more than four Parcel/Tax IDs, complete additional Letters of Authorization containing the additional Parcels/Tax IDs.

SEE ATTACHED PARCEL LIST

☐☐-☐☐-☐☐-☐☐-☐☐☐☐☐.☐-☐☐☐☐.☐☐

☐☐-☐☐-☐☐-☐☐-☐☐☐☐☐.☐-☐☐☐☐.☐☐

☐☐-☐☐-☐☐-☐☐-☐☐☐☐☐.☐-☐☐☐☐.☐☐

☐☐-☐☐-☐☐-☐☐-☐☐☐☐☐.☐-☐☐☐☐.☐☐

STATE OF Florida COUNTY OF Miami - Dade

I, Oded M. Kaiser, Manager of Biscaya Cocoa Holdings, LLC being first duly sworn, depose and say that I am the fee simple owner of the above-described property, and I hereby authorize

Mary D. Solik of Doty Solik Law to serve as agent on my behalf for the purpose of making and executing this application request. Also, I fully understand that any representation(s) made on my behalf, by my authorized representative, shall be legally binding on me and my aforesaid property as if I myself had made said representation(s).

(OWNER SIGNATURE)

Personally Known ✓ OR Produced Identification ✓

Type of I.D. Produced _____

(Print, Type, or Stamp Commissioned Name of Notary Public)

Notary Public State of Florida
Blanca C Vega
My Commission HH 421283
Expires 7/13/2027

Blanca C. Vega

(NOTARY PUBLIC SIGNATURE)

STATE OF FLORIDA, COUNTY OF BREVARD

Sworn and subscribed to before me this 07 day of December, 20 23.

Rev. 4-30-09

BISCAYA COCOA HOLDINGS, LLC

Parcel List

24-36-33-31-A-5

24-36-33-31-C-1

24-36-33-31-D-11

24-36-33-31-D-12

24-36-33-31-D-13

24-36-33-31-C-2

24-36-33-31-*-R.1

24-36-33-31-*-R.2

24-36-33-31-*-R.3

24-36-33-31-*-R.4

24-36-33-31-*-R.5

Detail by Entity Name

Florida Limited Liability Company
BISCAYA COCOA HOLDINGS, LLC

Filing Information

Document Number	L15000184312
FEI/EIN Number	81-1824590
Date Filed	10/29/2015
Effective Date	10/29/2015
State	FL
Status	ACTIVE

Principal Address

325 S Biscayne Blvd
Unit-3423
Miami, FL 33131

Changed: 03/15/2021

Mailing Address

325 S Biscayne Blvd
Unit-3423
Miami, FL 33131

Changed: 03/15/2021

Registered Agent Name & Address

CHARLES RATNER, P.A.
605 LINCOLN ROAD
SUITE 210
MIAMI BEACH, FL 33139

Address Changed: 04/10/2017

Authorized Person(s) Detail

Name & Address

Title MGR

KAISER, ODED M
325 S Biscayne Blvd
Unit-3423
Miami, FL 33131

Title MGR

CAMPOSANO, PABLO A
8525 SW 54 CT
MIAMI, FL 33143

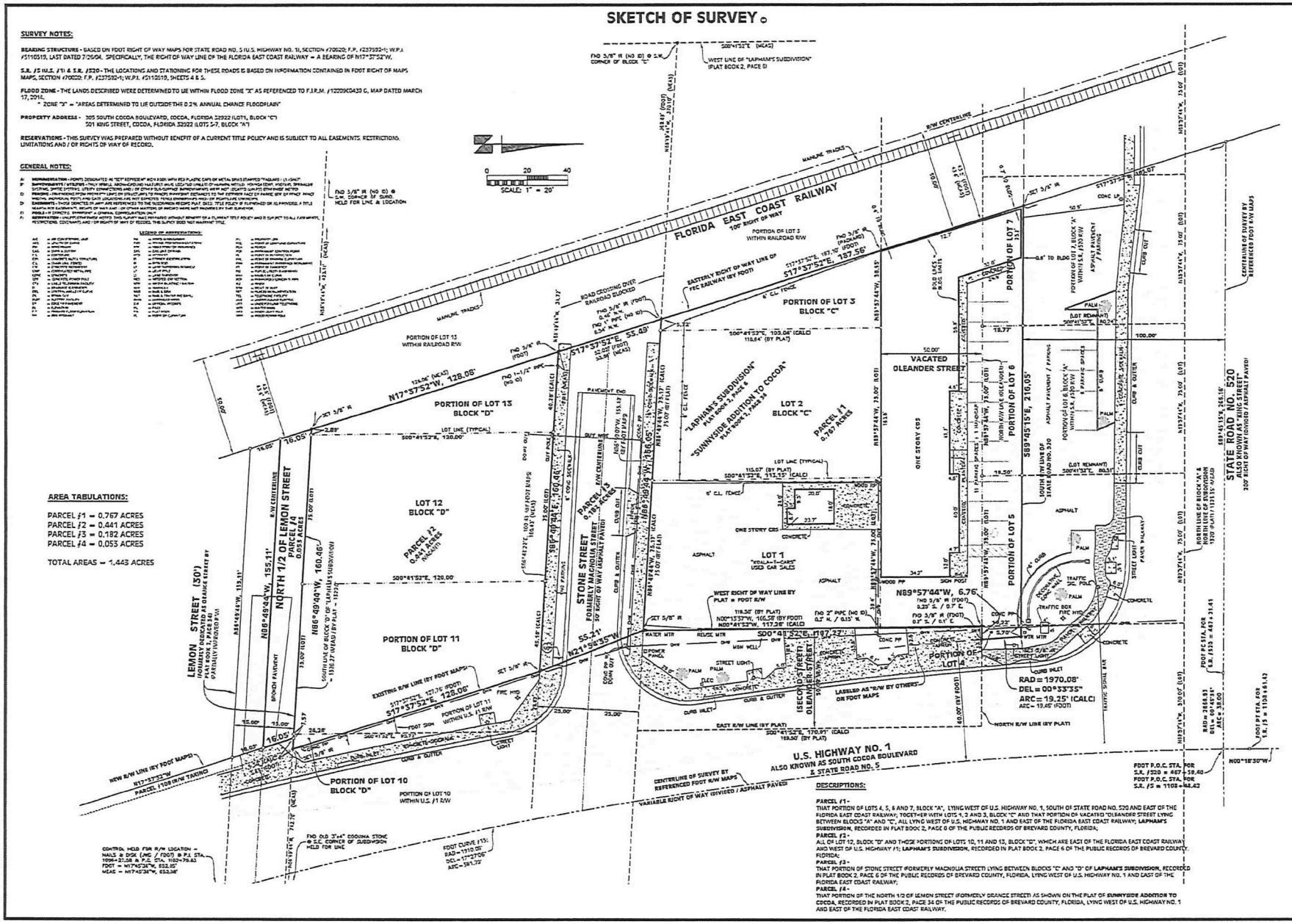
Annual Reports

Report Year	Filed Date
2021	03/15/2021
2022	01/27/2022
2023	03/30/2023

Document Images

03/30/2023 -- ANNUAL REPORT	View image in PDF format
01/27/2022 -- ANNUAL REPORT	View image in PDF format
03/15/2021 -- ANNUAL REPORT	View image in PDF format
02/21/2020 -- ANNUAL REPORT	View image in PDF format
04/30/2019 -- ANNUAL REPORT	View image in PDF format
04/03/2018 -- ANNUAL REPORT	View image in PDF format
04/10/2017 -- ANNUAL REPORT	View image in PDF format
03/30/2016 -- ANNUAL REPORT	View image in PDF format
10/29/2015 -- Florida Limited Liability	View image in PDF format

SKETCH OF SURVEY



SURVEY NOTES:

BEARING STRUCTURE - BASED ON FDOT RIGHT OF WAY MAPS FOR STATE ROAD NO. 5 (U.S. HIGHWAY NO. 1), SECTION #70020, F.P. #237592-1; W.P.I #5110519, LAST DATED 7/09/04. SPECIFICALLY, THE RIGHT OF WAY LINE OF THE FLORIDA EAST COAST RAILWAY = A BEARING OF N17°37'52"W.

S.R. #5 (U.S. #1) & S.R. #520 - THE LOCATIONS AND STATIONING FOR THESE ROADS IS BASED ON INFORMATION CONTAINED IN FDOT RIGHT OF WAYS MAPS, SECTION #70020: F.P. #237592-1; W.P.I. #5110519, SHEETS 4 & 5.

FLOOD ZONE - THE LANDS DESCRIBED WERE DETERMINED TO LIE WITHIN FLOOD ZONE "X" AS REFERENCED TO F.I.R.M. #12009C0433 G, MAP DATED MARCH 17, 2014.
* ZONE "X" = "AREAS DETERMINED TO LIE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN"

PROPERTY ADDRESS - 305 SOUTH COCOA BOULEVARD, COCOA, FLORIDA 32922 (LOT1, BLOCK "C")
201 KING STREET, COCOA, FLORIDA 32922 (LOTS 5-7, BLOCK "A")

RESERVATIONS - THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A CURRENT TITLE POLICY AND IS SUBJECT TO ALL EASEMENTS, RESTRICTIONS, LIMITATIONS AND / OR RIGHTS OF WAY OF RECORD.

GENERAL NOTES:

- A: MONUMENTATION - POINTS DESIGNATED AS "SET" REPRESENT INCH ROD WITH RED PLASTIC CAPS OR METAL DISK STAMPED "PACKARD / LS 6947"
- B: IMPROVEMENTS / UTILITIES - ONLY VISIBLE, ABOVE-GROUND NATURAL AND MAN-MADE OBJECTS OF HUMAN INTEREST, HOWEVER, SPRINKLER SYSTEMS, WATER SYSTEMS, UTILITY CONNECTIONS AND / OR OTHER SUBSURFACE IMPROVEMENTS, WERE NOT LOCATED UNLESS OTHERWISE NOTED.
- C: FENCING - DISTANCES FROM PROPERTY LINES OR STRUCTURES TO FENCES, PAVEMENT DISTANCES TO THE EXTERIOR FACE OF FENCE, SIDE OF FENCE, AND/OR WIDTHS, INDIVIDUAL POSTS, AND GATE LOCATIONS ARE NOT DEPICTED. FENCE OWNERSHIPS UNLESS OTHERWISE NOTED.
- D: EASEMENTS - UNLESS DIRECTED BY ANY INTERESTED TO THE CONTRARY BEFORE PLAT SALE, TITLE POLICY IF FURNISHED OR AS PROVIDED A TITLE COMMITMENT OR OPINION, REPORT OR DATA AND / OR OTHER MATTERS OF RECORD WERE NOT PROVIDED BY THE SURVEYOR.
- E: BOUNDARY LINES - DESCRIPTIONS AND/OR BOUNDARY LINES DEPICTED WITHOUT BENEFIT OF A CURRENT TITLE POLICY AND IS SUBJECT TO ALL EASEMENTS, RESTRICTIONS, COVENANTS AND / OR RIGHTS OF WAY OF RECORD. THE SURVEY DOES NOT WARRANT TITLE.

LEGEND OF ABBREVIATIONS:

A/C = AIR CONDITIONER UNIT	FIRM = FLOOD INSURANCE RATE MAP	PROP. = PROPERTY LINE
ASPH. = ASPHALT PAVEMENT	FIP = FOUND IRON PIPE	P.O.B. = POINT OF BEGINNING
BLDG. = BUILDING	FIR = FOUND IRON ROD	P.O.C. = POINT OF COMMENCEMENT
BM = BENCH MARK	FIRC = FOUND IRON ROD & CAP	P.R.M. = PERMANENT REFERENCE MONUMENT
C = CALCULATED	FND = FOUND	P.C.P. = PERMANENT CONTROL POINT
CALC = CALCULATED	FPC = FOUND PIPE & CAP	R = RADIUS
CATV = CABLE TV	FPK = FOUND PK NAIL	R/W = RIGHT OF WAY
CB = CATCH BASIN	FPKC = FOUND PK NAIL & CAP	RCP = REINFORCED CONCRETE PIPE
CBS = CONCRETE BLOCK STRUCTURE	FSIR = FOUND SET IRON ROD	RES. = RESIDENCE
CH = CHORD	FSIRC = FOUND SET IRON ROD & CAP	SEC. = SECTION
CL = CENTERLINE	GAR. = GARAGE	SIR = SET IRON ROD
CLF = CHAIN LINK FENCE	I.D. = IDENTIFICATION	SIRC = SET IRON ROD & CAP
CONC. = CONCRETE	INV. = INVERT	SPK = SET PK NAIL
CPP = CONCRETE POWER POLE	L = ARC LENGTH	SPKC = SET PK NAIL & CAP
D = DEED	LB = LICENSED BUSINESS	TEL. = TELEPHONE
DEL = DELTA ANGLE	M = MEASURED	TYP. = TYPICAL
DRIVE = DRIVEWAY	MAS = MASONRY	UP = UTILITY POLE
E = EAST	MB = MAP BOOK	W = WEST
EL. = ELEVATION	MES = MASONRY ENCLOSURE STRUCTURE	WM = WATER METER
ENCL. = ENCLOSURE	MH = MANHOLE	WV = WATER VALVE
EOP = EDGE OF PAVEMENT	N = NORTH	
EOW = EDGE OF WATER	NAD = NORTH AMERICAN DATUM	
FD = FOUND	NGVD = NATIONAL GEODETIC VERTICAL DATUM	
FDOT = FLORIDA DEPARTMENT OF TRANSPORTATION	NTS = NOT TO SCALE	
FF = FINISHED FLOOR	OHW = OVERHEAD WIRES	
FFE = FINISHED FLOOR ELEVATION	PB = PLAT BOOK	
FH = FIRE HYDRANT	PG = PAGE	

AREA TABULATIONS:

PARCEL #1 = 0.767 ACRES
PARCEL #2 = 0.441 ACRES
PARCEL #3 = 0.182 ACRES
PARCEL #4 = 0.053 ACRES

TOTAL AREAS = 1.443 ACRES

DESCRIPTIONS:

PARCEL #1 -
THAT PORTION OF LOTS 4, 5, 6 AND 7, BLOCK "A", LYING WEST OF U.S. HIGHWAY NO. 1, SOUTH OF STATE ROAD NO. 520 AND EAST OF THE FLORIDA EAST COAST RAILWAY; TOGETHER WITH LOTS 1, 2 AND 3, BLOCK "C" AND THAT PORTION OF VACATED "OLEANDER STREET LYING BETWEEN BLOCKS "A" AND "C", ALL LYING WEST OF U.S. HIGHWAY NO. 1 AND EAST OF THE FLORIDA EAST COAST RAILWAY; LAPHAM'S SUBDIVISION, RECORDED IN PLAT BOOK 2, PAGE 6 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA;

PARCEL #2 -
ALL OF LOT 12, BLOCK "D" AND THOSE PORTIONS OF LOTS 10, 11 AND 13, BLOCK "D", WHICH ARE EAST OF THE FLORIDA EAST COAST RAILWAY AND WEST OF U.S. HIGHWAY #1; LAPHAM'S SUBDIVISION, RECORDED IN PLAT BOOK 2, PAGE 6 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA;

PARCEL #3 -
THAT PORTION OF STONE STREET (FORMERLY MAGNOLIA STREET) LYING BETWEEN BLOCKS "C" AND "D" OF LAPHAM'S SUBDIVISION, RECORDED IN PLAT BOOK 2, PAGE 6 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, LYING WEST OF U.S. HIGHWAY NO. 1 AND EAST OF THE FLORIDA EAST COAST RAILWAY;

PARCEL #4 -
THAT PORTION OF THE NORTH 1/2 OF LEMON STREET (FORMERLY ORANGE STREET) AS SHOWN ON THE PLAT OF SUNNYSIDE ADDITION TO COCOA, RECORDED IN PLAT BOOK 2, PAGE 34 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, LYING WEST OF U.S. HIGHWAY NO. 1 AND EAST OF THE FLORIDA EAST COAST RAILWAY.

I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, F.A.C. PURSUANT TO SECTION 472.027, FLORIDA STATUTES. SUBJECT TO NOTES AND NOTATIONS SHOWN HEREON.

Date: 7/20/15

REVISIONS
ORIGINAL SURVEY DATE
MAP/BOUNDARY SURVEY

r.m. packard
SURVEYING & MAPPING, INC.
197 BOUGAINVILLEA DRIVE / SUITE "D"
ROCKLEDGE, FLORIDA 32955
TEL: (321) 639-4646 FAX: (321) 639-4952
WWW.RMPACKARD.COM

BOUNDARY SURVEY FOR:
BISCAYA COCOA HOLDINGS, LLC

DRAWN BY: RMP
CHK'D BY:
DATE: 7/20/15
DWG #: D-15-160
NOTES: FILES
JOB #: 15-160

SHEET 1 OF 1

LEGAL DESCRIPTION

The land referred to herein below is situated in the County of Brevard, State of Florida, and is described as follows:

PARCEL 1:

Lot 1, Block C, less road right-of-way, LAPHAM'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida.

PARCEL 2:

That part of Lots 5, 6 and 7, In Block A, LAPHAM'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida, together with the area formerly contained in Oleander Street, all as described in Official Records Book 441, Page 336 and Official Records Book 460, Page 589, all of the Public Records of Brevard County, Florida.

Also known as:
That portion of Lots 5, 6 and 7, Block "A", LAPHAM'S SUBDIVISION, according to the plat thereof as recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida, lying South of the road right of way of State Road No. 520 and East of the right of way line of the Florida East Coast Railway, together with the area formerly contained in Oleander Street, all as described in Official Records Book 441, Page 336 and Official Records Book 460, Page 589, all of the Public Records of Brevard County, Florida.

PARCEL 3:

Lot 2, Block C, LAPHAM'S SUBDIVISION, according to the plat thereof, recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida; excepting, however, all land adjoining said Lot on the North and embraced within the area of that portion of Oleander Street which has been vacated.

Also: Begin at the Southeast corner of Lot 3, Block C, LAPHAM'S SUBDIVISION, according to the plat thereof, recorded in Plat Book 2, Page 6, Public Records of Brevard County, Florida; thence run along the South line of said Lot West to the East side of the right-of-way of the Florida East Coast Railway, thence run the East side of said railroad right-of-way Northwesterly to the North line of said Lot 3, thence run the North line of said Lot 3 East to the Northeast corner thereof, thence run the East line of said Lot South to the point of beginning, excepting, however, all land adjoining said Lot on the North and embraced within the area of that portion of Oleander Street which has been vacated.

PARCEL 4:

A portion of vacated Stone Street as shown in City of Cocoa Resolution No. 2016-103, recorded in Official Record Book 7724, Page 150 in the Public Records of Brevard County, Florida, more particularly described as follows:

The North half of the following described parcel abutting said Parcels 1 and 3:

That portion of Stone Street (said street being an un-named 50 foot wide right-of-way dedicated by "LAPHAM'S SUBDIVISION", recorded in Plat Book 2, Page 6 and re-dedicated as Magnolia Street by "SUNNYSIDE ADDITION TO COCOA, FLORIDA", recorded in Plat Book 2, Page 34, both of the Public Records of Brevard County, Florida), which lies west of the west right-of-way line of U.S. Highway No. 1 and east of the east right-of-way line of the Florida East Coast Railway (a 100 foot wide right-of-way), more particularly described as follows: Begin at the Southeast corner of Lot 1, Block "C" of "LAPHAM'S SUBDIVISION" recorded in Plat Book 2, Page 6 of the Public Records of Brevard County, Florida, (said point being on the west right-of-way line of U.S. Highway No.1 as defined by Florida Department of Transportation Right of Way Maps, Section 70020, W.P.I. 5110519, F.P. 237592-1, dated 7/30/04), thence run west, along the north right-of-way line of Stone Street, a distance of 156 feet, more or less, to a point on the east right-of-way line of the Florida East Coast Railway; thence southeasterly, along said east right-of-way line, a distance of 53.5 Feet, more or less, to a point on the south right-of-way line of said Stone Street; thence east, along said south right-of-way, a distance of 160 FEET, more or less, to an intersection with the west right-of-way line of U.S. Highway No. 1 (a variable width right-of-way) as defined by the aforesaid Florida Department of Transportation Right of Way Maps; thence northwesterly, a distance of 55 Feet, more or less to the Point of Beginning.

Together with:

Lot 11, Block D of LAPHAM'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 2, Page 6, of the Public Records of Brevard County, Florida, LESS road right-of-way.

Lot 12, Block D of LAPHAM'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 2, Page 6, of the Public Records of Brevard County, Florida.

Lot 13, Block D of LAPHAM'S SUBDIVISION, according to the Plat thereof as recorded in Plat Book 2, Page 6, of the Public Records of Brevard County, Florida.