



April 23, 2021

Jennifer Hofmeister, AICP  
City of Fort Pierce  
Planning Director  
100 N. U.S. Highway 1  
Fort Pierce, FL 34950  
(772) 567-8000

**Re: Oleander Oaks- Planned Development Zoning Request**

Dear Ms. Hofmeister:

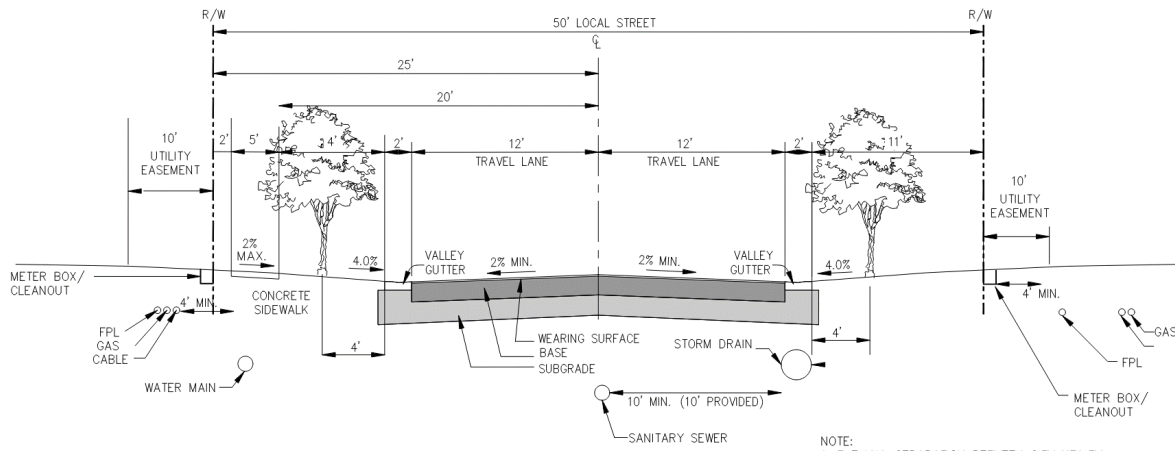
We are proposing fifty (50) single family homes on approximately 12.92 acres of land on Oleander Avenue (Parcel ID # 2433-144-0002-000-3). Currently the site is a vacant wooded lot that has single family zoning to the west and south with commercial zoning to the north. The layout of the site consists of a divide entrance off of Oleander Avenue with a looped road throughout the development. There is a proposed wet pond in the middle of the looped road that will be used for stormwater storage but also act as an amenity for the neighborhood. An amenity parcel is proposed north of the wet pond which will give the residents an open space area with views of the wet pond.

We are requesting a Zoning Atlas Map change from Medium Density Residential (R-4) to Planned Development Zone (PD). The sole purpose of this request is to provide a right-of-way of the interior road to be 50' instead of the code required 60' as well as a 15' front setback on the lots. Below are the zoning requirements for R-4 and below are the proposed zoning requirements for the PD. Regulations that are requested changes are in bold in the PD table. Proposed setbacks and density are shown on the table to show where the R-4 requirements will be exceeded.

<b>Zoning</b>	<b>R-4</b>	<b>PD</b>
Min. Lot Size	5,000 SF	5,000 SF
Min. Lot Width	60'	60'
Min. Lot Depth	70'	70' (82' proposed)
Min. Road Frontage	25'	25'
Max. Lot Coverage	40%	40%
Building Height	45'	45'
Max Gross Density (DU/Ac.)	12 DU/Ac.	12 DU/Ac. (3.87 DU/Ac. proposed)
Min. Setbacks		

Front	25'	15'
Side (Interior)	6'	6' (10' proposed)
Side (Corner)	15'	15' (10' proposed)
Rear	15'	15'

Below is the proposed 50'-right-of-way in lieu of the 60' right-of-way per code.

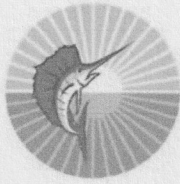


Very truly yours,

**KIMLEY-HORN AND ASSOCIATES, INC.**

Very truly yours,

Blaine Bergstresser, P.E.



## Application for Zoning Atlas Map Amendment

### Application submission shall include the following:

- **TRC (\*Initial Submission):** One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.
- **Planning Board:** One (1) original and (16) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.
- **City Commission:** One (1) original and (11) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

### In addition to a complete application, packets shall include:

- Warranty Deed & Legal Description
- St. Lucie County Property Record Card
- Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- Current Survey
- Environmental Study
- Traffic Impact Report
- \*\*\* Capacity Analysis-Separate Form
- Drainage Analysis
- Historical Report
- 1 CD of all documents submitted in PDF
- Other \_\_\_\_\_

1. Property Address/Location: 0 Oleander Avenue, Fort Pierce, FL
2. Property Tax ID(s): 2433-144-0002-000-3
3. Total Acreage: 13.18 Acres
4. Existing Future Land Use Designation: RM - Medium Density Residential
5. Existing Zoning Classification: RM-4 Single Family
6. Proposed Zoning Classification: PD
7. Other applications being submitted concurrent with this application, if any: \_\_\_\_\_

8. Describe the existing uses, improvements and structures on the amendment lands: \_\_\_\_\_  
**Currently a vacant site, proposing to develop into a Single Family Site.**
9. Are there any identified or possible historical structures on the amendment lands? **No**
10. The reason for making this request: Currently the site is Zoned RM 4 with a Future Land Use of RM (Medium Density Residential)

## 11. CAPACITY ANALYSIS

### I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Vacant Commercial	General Commercial	Fort Pierce, General Commercial
South	Sing Family Residential	Medium Density Residential	Fort Pierce, Medium Density
East	Single Family Residential	Low Density Residential and High Density Residential	Fort Pierce - Medium Density and SLC - RM -11
West	Single Family Residential	Single Family Residential	SLC - RS-3

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	RM	RS-4-Single Family	6.5-12 DU/AC	12.92	X
Proposed	PD	PD	3.87 DU/AC	12.92	N/A

### II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6 = persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 40,000
Proposed Zoning	Total gallons per day 40,000
Change in Demand	<b>Total gallons per day 0</b>

<b>B. Wastewater:</b>	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day 40,000
Proposed Zoning	Total gallons per day 40,000
Change in Demand	Total gallons per day 0

<b>C. Parks and Recreation (Residential Classifications Only):</b> (Du x 2.6 = persons + 44,227 = population /LOS)				
Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	8	8	0
Urban District	5 acres per 1,000 people	2	2	0
Community	2.5 acres per 1,000 people	1	1	0
Neighborhood	1.36 acres per 1,000 people	.55	.55	0

<b>D. Public Schools (Residential Classifications Only):</b> Single Family: (du x 0.405 = students/70% K-8/30% High) Multi-family: (du x 0.207 = students/70% K-8/30% High)		
		N/A
	<b>K-8</b>	<b>High</b>
School Name	Savanna Ridge Elementary	Port St. Lucie High
City	Port St. Lucie	Port St. Lucie, FL
Distance	4 Miles	8 Miles
Current Zoning Enrollment Demand	44	19
Proposed Zoning Enrollment Demand	44	19
Change in Demand	0	0

<b>E. Solid Waste:</b> 2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units	
Demand Analysis	Maximum
Current Zoning	20 Yards
Proposed Zoning	20 Yard
Change in Demand	0

**F. Stormwater:**  
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year - 1 day storm event)

<b>Impact</b>	The impervious area will be increased but the 25 year 3 day will be less in the post development than it is in the pre development
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**III. Transportation Analysis**

<b>G. Traffic</b>		
Most recent ITE Code for use; HCM Roadway Capacity		
	<b>AADT</b>	<b>AM/PM Peak Hour Trips</b>
<b>Demand Analysis</b>	Maximum	Maximum
<b>Current Zoning</b>	680	50/65
<b>Proposed Zoning</b>	680	50/65
<b>Change in Demand</b>	Trips 0	Trips 0
<b>Impact to Capacity</b>	No change to overall capacity	

12. Name of Owner(s): Alva Stone Group LLC  
 Mailing Address: 591 Evernia St #1603  
 City West Palm Beach State FL Zip 33401  
 Phone # 954-850-0618  
 E-mail: pedro@alvastonegroup.com

13. Name of Applicant: Diego Quijada, Alva Stone Group  
 Mailing Address: 2030 S Ocean Dr #2221  
 City Hallandale Beach State FL Zip 33009  
 Phone # 954-850-0619 Fax # \_\_\_\_\_  
 E-mail: diego@alvastonegroup.com

14. Name of Representative: Blaine Bergstresser, P.E.  
 Mailing Address: 445 24th Street, Suite 200  
 City Vero Beach State FL Zip 32960  
 Phone # 772-794-4061 Fax # \_\_\_\_\_  
 E-mail: Blaine.Bergstresser@Kimley-Horn.com

**15. Applicant Acknowledgements (Owner's signature must be notarized)**

I certify that: (Check One)

I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.

Applicant's Signature

Date

2030 S Ocean Drive, #2221

FL

33009

Address

State

Zip

954-850-0619

diego@alvastonegroup.com

Phone

Fax

E-mail Address

16. **Property Owners Acknowledgements:** - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Diego Quijada

954-850-0618

Property Owner's Name (Please Print)

Phone

591 Evernia Street #1603, West Palm Beach FL

33401

Address

State

Zip

*Diego Quijada*

4/28/21


Property Owner's Signature

Date

STATE OF FLORIDA)  
ST LUCIE COUNTY)

The foregoing instrument was acknowledged before me this 28 day of April, 2021, by Diego Quijada who is personally known to me or has produced \_\_\_\_\_ as id

Maria Renom  
Signature of Notary

(seal)  Maria Renom  
Notary Public  
State of Florida  
Comm# HH014256  
Expires 6/24/2024

<b>OFFICE USE:</b>		
DATE RECEIVED: _____	Signed: _____	
File Number: _____	Check No: _____	Receipt No: _____
TRC Review: _____	Planning Board Review: _____	City Commission: _____
Ordinance No: _____	Date Approved: _____	



## Design Review

Property address or Location 0 Oleander Avenue, Fort Pierce FL

Parcel ID #(s) 2433-144-0002-000-3

Project Description Single Family Residential Development

Alva Stone Group LLC  
Property Owner(s)

591 Evernia Street #1603  
Street Address

West Palm Beach FL 33401  
City State Zip

954-850-0618  
Phone Number

pedro@alvastonegroup.com  
Email Address

Diego Quijada, Alva Stone Group  
Applicant/Representative, Title, Company

2030 S Ocean Dr #2221  
Street Address

Hallandale Beach FL 33009  
City State Zip

954-850-0619  
Phone Number

Diego@Alvastonegroup.com  
Email Address

**Property Owner(s) Acknowledgements:** - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Application (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein.

Diego Quijada  
Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY  
The foregoing instrument was acknowledged before me this 21 day of April, 2021, by

Diego Quijada who is personally known to me or has produced  
as identification.

J. R. Lemm  
Signature of Notary



Marina Rencor  
Notary Public  
State of Florida  
Comm# H0014236  
Expires 6/24/2024

### TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic Districts	Historic Designation

Pre-Application Meeting Date \_\_\_\_\_ Fees \_\_\_\_\_ Control # \_\_\_\_\_ B. Permit \_\_\_\_\_

Intake Planner \_\_\_\_\_

Planner Assigned \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

Comments \_\_\_\_\_

Intake Date Stamp

# **Design Review Application Checklist**

## **(City Code of Ordinances 22-59)**

### Submittal for Administrative Approval

- a. A survey (1" = 30' minimum scale) of property lines, existing topography and the location of trees meeting the tree protection regulations of section 22-194, location of bordering streets and, if applicable, wetlands and beaches.
- b. A site analysis study to include a discussion of specimen trees and other natural vegetation, access, significant topography, wetlands, buffers, setbacks, views, orientation, the surrounding built environment and other site features that may influence design elements.
- c. A draft written narrative describing the design intent of the project, its goals and objectives and how it reflects the site analysis study results.
- d. Context photographs of neighboring uses and architectural styles.
- e. Photographs and/or drawings of architectural buildings or objects that serve as a precedent for the proposed building design. Models should be taken from local exemplary buildings, either existing or demolished. Documentation of such buildings is available in the city's planning department.
- f. Photographs of all existing structures located on the property. If existing structures on the property are more than fifty (50) years of age, documentation of these structures with data from the Florida Master Site File form is also required.
- g. Conceptual site plan (to scale) showing proposed location of all buildings, structures, parking areas, signs and landscaping.
- h. Landscape plan, at the same scale as the site plan. The planning director or designee may request enlarged plans of detailed planting areas. Planting schedule with sizes of proposed plantings must be included.
- i. Accurate color rendering of proposed signs showing dimensions, type of lettering, materials and actual color samples that demonstrates cohesiveness with the project design.
- j. Exterior elevations showing architectural character, external architectural features and streetscape of the proposed development, including materials, colors, shadow lines and landscaping. The street elevation shall encompass the entire proposed project and generally identify the major elements of the adjacent two (2) properties on either side of the site. If the adjacent properties are vacant or underutilized, a diagram shall be provided that identifies the mass and form that is allowable under current zoning. If the street elevation must be drawn at such a scale as to render architectural details of the building unreadable, drawings of individual buildings at a larger scale should be provided as well.
- k. Design review concurrent with conceptual development plan procedure according to subsection 22-58(e) is also available.

### Submittal for Board Approval

- a. A written narrative describing how the project conforms to administrative approval and design review guidelines of this section.
- b. A final site plan meeting the requirements of section 22-58
- c. A final site lighting plan that meets the requirements of subsection 22-58(d)(8).
- d. A final landscape plan that meets the requirements of Article XII, Landscaping and Trees.
- e. Final floor plans and elevation drawings (1/8" = 1'-0" minimum scale), as detailed under administrative approval, showing exterior building materials and colors with architectural sections and details to adequately describe the project.
- f. A color board (11"x17" maximum) containing actual color samples of all exterior finishes, keyed to the elevations, and indicating the manufacturer's name and color designation.



**DEVELOPMENT REVIEW**

Property address or Location 0 Oleander Avenue, Fort Pierce FL  
 Parcel ID #(s) 2433-144-0002-000-3  
 Project description Single Family Residential Development

Alva Stone Group LLC  
 Property Owner(s)  
591 Evernia Street #1603  
 Street Address  
West Palm Beach FL 33401  
 City State Zip  
954-850-0618  
 Phone Number  
Pedro@Alvastonegroup.com  
 Email Address

Diego Quijada, Alva Stone Group  
 Applicant/Representative, Title, Company  
2030 S Ocean Dr #2221  
 Street Address  
Hallandale FL 33009  
 City State Zip  
954-850-0619  
 Phone Number  
Diego@Alvastonegroup.com  
 Email Address

*Property Owner(s) Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.*

*Diego Quijada*  
 Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY  
 The foregoing instrument was acknowledged before me this 21 day of April, 2021, by  
Diego Quijada who is personally known to me or has produced

*J. R. Rasmussen*  
 Signature of Notary

Marina Rendon  
 Notary Public  
 State of Florida  
 Comm# HH014256  
 Expires 6/24/2024

**INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729**

**TO BE COMPLETED BY STAFF**

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation
				Contributing Individual Non-Contributing None

Pre-Application Meeting Date \_\_\_\_\_ Fees \_\_\_\_\_ Control # \_\_\_\_\_ B. Permit # \_\_\_\_\_  
 Intake Planner \_\_\_\_\_  
 Planner Assigned \_\_\_\_\_  
 Approved By \_\_\_\_\_ Date \_\_\_\_\_  
 Comments \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Intake Date Stamp



# DEVELOPMENT REVIEW

### General Information

- Incomplete application packets cannot be accepted.
- Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

### Choose Application Type:

Application Type			
<input checked="" type="checkbox"/> Site Plan	<input type="checkbox"/> Conditional Use with New Const.	<input type="checkbox"/> Major Amendment	
<input type="checkbox"/> Conceptual Development Plan		<input type="checkbox"/> Minor Amendment	

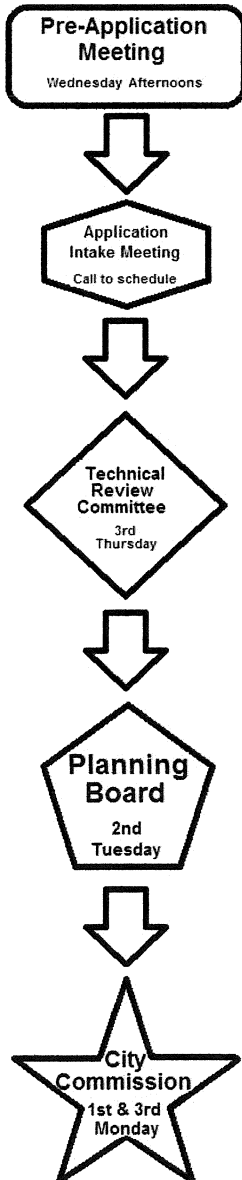
### Site Information:

Non-Residential: Proposed Sq. Ft.: \_\_\_\_\_ Residential: Proposed Units: **50**

Surrounding Uses: (i.e. single family home, retail, industrial, etc.)

North	South	East	West
VACANT INDUSTRIAL	SINGE FAMILY RES	SINGLE FAMILY RES	SINGLE FAMILY RES

### Application Outlook



### Site Plan submittal requirements:

**Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.**

- Complete notarized application
- Warranty Deed
- SLC Property Record Card
- Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- General location map (see Section 22-58.d.2)
- Survey (see Section 22-58.d.3)
- Site Plan (see Section 22-58.d.4)
- Landscaping Plan (see Section 22-187)
- Storm Drainage Plan (see Section 22-58.d.6)
- Environmental Impact Report
- Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- Lighting Plan (see Section 22-58.d.8)
- Design Review submittals (see Design Review application)
- Traffic Impact Report
- Concurrency Review submittals (see Concurrency Review application)

AGENT AUTHORIZATION FORM

Date: June 17, 2021

I, Diego Quijada, President for Oleander Oaks Development, LLC, owner of the subject property, hereby authorize Kimley-Horn and Associates, Inc., to submit applications and plans for permitting and representation of the project at St. Lucie County Parcel ID 2433-144-0002-000-3, Fort Pierce Jurisdiction.

*Diego Quijada*

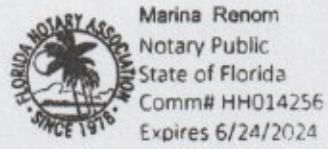
Diego Quijada, President  
Oleander Oaks Development LLC  
591 Evernia St #1603  
West Palm Beach, FL 33401  
(954) 850-0619

The foregoing instrument was acknowledged before me this 17 day of June, 2021 by Diego Quijada for Oleander Oaks, LLC, a Florida limited partnership, who is (personally known to me) or who has produced FL/DL, as identification and who did not take an oath.

NOTARY PUBLIC:  
*Marina Renom*  
Signature

My Commission Expires:  
6/24/2024

Print Name: Marina Renom



### Property Identification

Site Address: OLEANDER AVE  
 Sec/Town/Range: 33/35S/40E  
 Parcel ID: 2433-144-0002-000-3  
 Jurisdiction: Fort Pierce

Use Type: 0000  
 Account #: 185292  
 Map ID: 24/33S  
 Zoning: RM-9 Count

### Ownership

Oleander Oaks LLC  
 5801 S US Highway 1  
 Fort Pierce, FL 34982-3946

### Legal Description

33 35 40 E 1/2 OF NE 1/4 OF SE 1/4 - LESS S 630 FT AND LESS RD AND CANAL RS/W - AND THAT PART OF SE 1/4 OF SE 1/4 OF NE 1/4 LYG S OF CANAL NO. 15 (13.18 AC - 574,121 SF) (OR 3988 - 1547; 3994 - 1479; 3995 - 2451; 4050 - 2327)

### Current Values

Just/Market Value: \$480,800  
 Assessed Value: \$480,800  
 Exemptions: \$0  
 Taxable Value: \$480,800



### Total Areas

Finished/Under Air (SF): 0  
 Gross Sketched Area (SF): 0  
 Land Size (acres): 13.18  
 Land Size (SF): 574,121

**Property taxes are subject to change upon change of ownership.**

- Past taxes are not a reliable projection of future taxes.
- The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.

Taxes for this parcel: [SLC Tax Collector's Office](#)  
 Download TRIM for this parcel: [Download PDF](#)

### Building Design Wind Speed

Occupancy Category	I	II	III & IV
Speed	140	160	160

Sources/links:

### Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Oct 5, 2017	4050 / 2327	0111	QC	MJT Holdings Inc	\$100

### Building Information (1 of 1)

Finished Area: 0 SF

Gross Sketched Area: 0 SF

#### Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type:	Year Built: N/A	Frame:
Grade:	Effective Year: N/A	Primary Wall:
Story Height:	No. Units: 0	Secondary Wall:

#### Interior Data

Bedrooms: 0	Electric:	Primary Int Wall:
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Full Baths: 0  
 Half Baths: 0  
 A/C %: 0%

Heat Type:  
 Heat Fuel:  
 Heated %: N/A%

Avg Hgt/Floor: 0  
 Primary Floors:  
 Sprinkled %: 0%



Image  
 or  
 Sketch  
 unavailable  
 for display

**Sketch Area Legend**

Sub Area Description Area Fin. Area Perimeter

**Special Features and Yard Items**

Type Qty Units Year Blt

**Current Year Values**


Current Values Breakdown

Building: \$0  
 Land: \$480,800  
 Just/Market: \$480,800  
 Ag Credit: \$0  
 Save Our Homes or 10% Cap: \$0  
 Assessed: \$480,800  
 Exemption(s): \$0  
 Taxable: \$480,800

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2019	0054	13.18	North St. Lucie Water Management District	\$243.83
Start Year	AssessCode	Units	Description	Amount
2019	0041	35.9	Fort Pierce Stormwater Charge	\$2,477.10

This does not necessarily represent the total Special Assessments that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

### Historical Values

Year	Just/Market	Assessed	Exemptions	Taxable
2020	\$480,800	\$480,800	\$0	\$480,800
2019	\$527,200	\$527,200	\$0	\$527,200

### Permits

Number	Issue Date	Description	Amount	Fee
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Notice: This does not necessarily represent all the permits for this property.

Click the following link to check for additional permit data in Fort Pierce

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All information is believed to be correct at this time, but is subject to change and is provided without any warranty.

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**Prepared By and Return To:**

Global Closing Company LLC  
Attn: Benjamin Bell  
1056 Willa Springs Drive  
Winter Springs, FL 32708

Order No.: 1526-18FL-0330

Property Appraiser's Parcel I.D. (folio) Number:  
243314400020003

**WARRANTY DEED**

THIS WARRANTY DEED dated March 19, 2021, by Oleander Oaks LLC, a Florida limited liability company, existing under the laws of Florida, and having its principal place of business at 5801 S US Highway 1, Fort Pierce, Florida 34982 (the "Grantor"), to Alva Stone Group LLC, a Florida Limited Liability Company, whose post office address is 591 Evernia Street Apt 1603, West Palm Beach, Florida 33401 (the "Grantee").

(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH: That the Grantor, for and in consideration of the sum of Ten And No/100 Dollars (\$10.00) and other valuable consideration, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys, and confirms unto the Grantee, all that certain land situated in County of Saint Lucie, State of Florida, viz:

A portion of the East One Half of the Northeast One Quarter of the Southeast One Quarter of Section 33, Township 35 South, Range 40 East and the Southeast One Quarter of the Southeast One Quarter of the Northeast One Quarter of Section 33, Township 35 South, Range 40 East, being more particularly described as follows:

Commence at the East One Quarter corner of said Section 33, thence South 89 degrees 46 minutes 13 seconds West, a distance of 90.00 feet to the Point of Beginning; thence continue South 89 degrees 46 minutes 13 seconds West, a distance of 32.00 feet; thence South 00 degrees 17 minutes 01 seconds West, along the West line of the North Saint Lucie River Water Control District Canal 14, a distance of 701.78 feet, said canal 14 being shown and described in that certain fee simple deed of donation, as recorded in Official Records Book 4480, Page 2690 of the Public Records of Saint Lucie County. Said West line being parallel to and 62.00 feet West of as measured at right angles to the West right of way line of Oleander Avenue, Also Known As State Road 605, as shown on that certain Florida Department of Transportation right of way Map Section 9456, dated June 19, 1952. Said West right of way line being parallel to and 60.00 feet West of as measured at right angles to the centerline of said Oleander Avenue; thence South 89 degrees 47 minutes 15 seconds West, along a line parallel to and 630.00 feet North of as measured at right angles to the South line of the said East One Half of the Northeast One Quarter of the Southeast One Quarter of Section 33, a distance of 548.98 feet, said South line also being the centerline of Tumblin King Road; thence North 00 degrees 21 minutes 03

seconds West, along the West line of said East One Half a distance of 701.59 feet to the North line of the said East One Half, said West line also being the East line of the Revised Plat of "The Tropics Pete Robinson Subdivision, according to the plat thereof as recorded in Plat Book 6, Page 21 of the Public Records of Saint Lucie County; thence North 89 degrees 46 minutes 13 seconds East along the North line of said East One Half, a distance of 12.40 feet; thence North 00 degrees 00 minutes 21 seconds West, along a livestock fence 0.3 feet to the West of the West line of the said Southeast One Quarter of the Southeast One Quarter of the Northeast One Quarter of Section 33, a distance of 275.98 feet to the South top of bank of the North Saint Lucie River Water Control District Canal 15, Also Known As Platts Branch; thence meandering along the South top of bank of said Platts Branch, the following Ten courses, North 83 degrees 47 minutes 48 seconds East, a distance of 43.46 feet; thence North 86 degrees 49 minutes 25 seconds East, a distance of 72.02 feet; thence South 85 degrees 07 minutes 47 seconds East, a distance of 48.47 feet; thence North 74 degrees 57 minutes 21 seconds East, a distance of 44.51 feet; thence North 80 degrees 24 minutes 14 seconds East, a distance of 92.67 feet, thence North 82 degrees 38 minutes 55 seconds East, a distance of 67.53 feet; thence North 85 degrees 47 minutes 34 seconds East, a distance of 117.62 feet; thence North 85 degrees 35 minutes 04 seconds East, a distance of 70.14 feet; thence North 73 degrees 25 minutes 57 seconds East a distance of 15.73 feet; thence North 55 degrees 26 minutes 14 seconds East, a distance of 12.85 feet to the West line of said canal 14, said West line being parallel to and 30.000 feet West of the West right of way line of said State Road 605, said West right of way line being parallel to and 60.000 feet West of as measured at right angles to the East line of said Northeast One Quarter of Section 33; thence South 00 degrees 12 minutes 46 seconds West, along the West line of said canal 14 a distance of 339.69 feet to the Point of Beginning.

Said lands lying in Saint Lucie County, Florida.

Subject to easements, restrictions, reservations and limitations of record, if any.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in Fee Simple forever.

AND the Grantor hereby covenants with said Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to: 2020.

Signed, sealed and delivered in presence of:

Oleander Oaks LLC, a Florida limited liability company

BY: [Signature] MANAGER  
Michael J Bradley, JR  
Manager

BY: \_\_\_\_\_

[Signature]  
Witness Signature

CANDY QUINTALL  
Printed Name of First Witness

[Signature]  
Witness Signature

PETER QUINTALL  
Printed Name of Second Witness

**Grantor Address:**  
632 SE Starflower Avenue  
Port Saint Lucie, FL 34983

STATE OF FLORIDA  
COUNTY OF ST LucIE

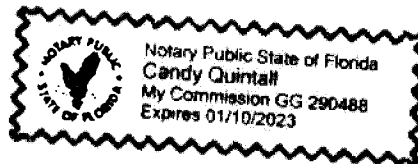
The foregoing instrument was acknowledged before me by means of  physical presence or \_\_\_\_\_ online notarization, this 19th of March, 2021 by Oleander Oaks LLC, a Florida limited liability company, who is personally known to me or who has produced drivers license as identification.

Witness my hand and official seal, this the 19th of March, 2021.

[Signature]  
Notary Public

My Commission Expires: 01/10/2023

(SEAL)



AGENT AUTHORIZATION FORM

Date: June 17, 2021

I, Diego Quijada, President for Oleander Oaks Development, LLC, owner of the subject property, hereby authorize Kimley-Horn and Associates, Inc., to submit applications and plans for permitting and representation of the project at St. Lucie County Parcel ID 2433-144-0002-000-3, Fort Pierce Jurisdiction.

Diego Quijada

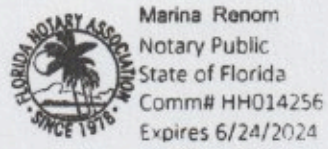
Diego Quijada, President  
Oleander Oaks Development LLC  
591 Evernia St #1603  
West Palm Beach, FL 33401  
(954) 850-0619

The foregoing instrument was acknowledged before me this 17 day of June, 2021 by Diego Quijada for Oleander Oaks, LLC, a Florida limited partnership, who is (personally known to me) or who has produced FL/DL, as identification and who did not take an oath.

NOTARY PUBLIC:  
Marina Renom  
Signature

My Commission Expires:  
6/24/2024

Print Name: Marina Renom





April 23, 2021

Jennifer Hofmeister, AICP  
City of Fort Pierce  
Planning Director  
100 N. U.S. Highway 1  
Fort Pierce, FL 34950  
(772) 567-8000

**Re: Oleander Oaks- Planned Development Zoning Request**

Dear Ms. Hofmeister:

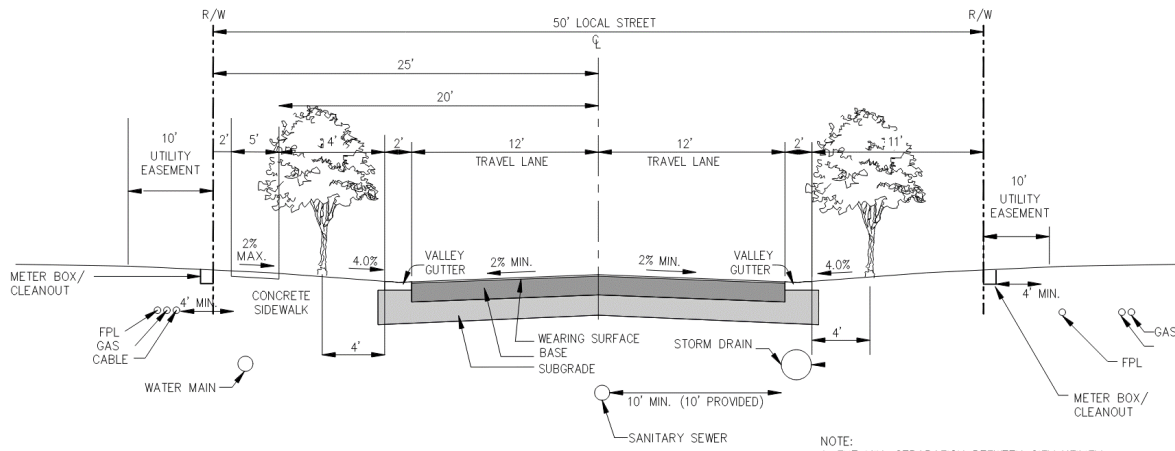
We are proposing fifty (50) single family homes on approximately 12.92 acres of land on Oleander Avenue (Parcel ID # 2433-144-0002-000-3). Currently the site is a vacant wooded lot that has single family zoning to the west and south with commercial zoning to the north. The layout of the site consists of a divide entrance off of Oleander Avenue with a looped road throughout the development. There is a proposed wet pond in the middle of the looped road that will be used for stormwater storage but also act as an amenity for the neighborhood. An amenity parcel is proposed north of the wet pond which will give the residents an open space area with views of the wet pond.

We are requesting a Zoning Atlas Map change from Medium Density Residential (R-4) to Planned Development Zone (PD). The sole purpose of this request is to provide a right-of-way of the interior road to be 50' instead of the code required 60' as well as a 15' front setback on the lots. Below are the zoning requirements for R-4 and below are the proposed zoning requirements for the PD. Regulations that are requested changes are in bold in the PD table. Proposed setbacks and density are shown on the table to show where the R-4 requirements will be exceeded.

<b>Zoning</b>	<b>R-4</b>	<b>PD</b>
Min. Lot Size	5,000 SF	5,000 SF
Min. Lot Width	60'	60'
Min. Lot Depth	70'	70' (82' proposed)
Min. Road Frontage	25'	25'
Max. Lot Coverage	40%	40%
Building Height	45'	45'
Max Gross Density (DU/Ac.)	12 DU/Ac.	12 DU/Ac. (3.87 DU/Ac. proposed)
Min. Setbacks		

Front	25'	15'
Side (Interior)	6'	6' (10' proposed)
Side (Corner)	15'	15' (10' proposed)
Rear	15'	15'

Below is the proposed 50'-right-of-way in lieu of the 60' right-of-way per code.



Very truly yours,

**KIMLEY-HORN AND ASSOCIATES, INC.**

Very truly yours,

Blaine Bergstresser, P.E.

K:\VRB\_LDEV\147811000 - Oleander Oaks\PERMITTING\APPLICATIONS\City of Fort Pierce\Project Narrative.doc



## CONCURRENCY CAPACITY ANALYSIS

### I. Site Data:

	Existing Use	Future Land Use	Zoning
North			
South			
East			
West			

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current					
**Proposed					N/A

### II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

<b>B. Wastewater:</b>	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

<b>C. Parks and Recreation (Residential Classifications Only):</b> (Du x 2.6 = persons + 44,227 = population /LOS)				
Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people			
Urban District	5 acres per 1,000 people			
Community	2.5 acres per 1,000 people			
Neighborhood	1.36 acres per 1,000 people			

<b>D. Public Schools (Residential Classifications Only):</b> Single Family: (du x 0.405 = students/70% K-8/30% High) Multi-family: (du x 0.207 = students/70% K-8/30% High)		
	<b>K-8</b>	<b>High</b>
School Name		
City		
Distance		
Current Zoning/FLU	Enrollment	
**Proposed Zoning/FLU	Enrollment	
**Change in Demand		

<b>E. Solid Waste: Residential</b> (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
Current Zoning/FLU	
**Proposed Zoning/FLU	
*Change in Demand	

**F. Stormwater:**  
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

<b>Impact</b>	
---------------	--

**III. Transportation Analysis: Complete ITE Trip Generation Form (Attached)**

<b>G. Transportation Analysis: Complete ITE Trip Generation Data Form</b>		
Most recent ITE Code for use; HCM Roadway Capacity		
	<b>AADT</b>	<b>AM/PM Peak Hour Trips</b>
<b>Demand Analysis</b>	Maximum	Maximum
<b>Current Zoning/FLU</b>		
<b>**Proposed Zoning/FLU</b>		
<b>*Change in Demand</b>	Trips	Trips
<b>Impact to Capacity</b>		

**IV. Project Description**

<b>PHASING</b>	
Is this project (phase) part of a larger project? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.	
Total Project: Residential Units:                      Single Family:                      Multifamily:	
Non-residential (square footage):	
Mixed-use (describe use):	
(If this is a single phase project, name it Phase I – Total)	

<b>RESIDENTIAL DATA</b>					
<b>Type</b>	<b>Phase</b>	<b>Number of Units</b>	<b>Acres</b>	<b>Expected beginning date</b>	<b>Expected completion date</b>
Single-family, detached					
Single-family, attached					
Multi-family					
Other (specify)					

<b>NON-RESIDENTIAL DATA</b>					
<b>Type(s) specify</b>	<b>Phase</b>	<b>Square footage</b>	<b>Acres</b>	<b>Expecting beginning date</b>	<b>Expected completion date</b>

- A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated.  Yes  No
- B. 1. Does this application involve demolition or re-use of any structure(s)?  Yes  No  
If yes, what is the size of the structure(s) to be demolished or re-used? \_\_\_\_\_
2. What is the current use of the structure to be demolished or re-used? \_\_\_\_\_
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site?  Yes  No  
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

\*\* Complete section if requesting a change in zoning, future land use, or expanding



PLANNED DEVELOPMENT  
GUIDELINES

For

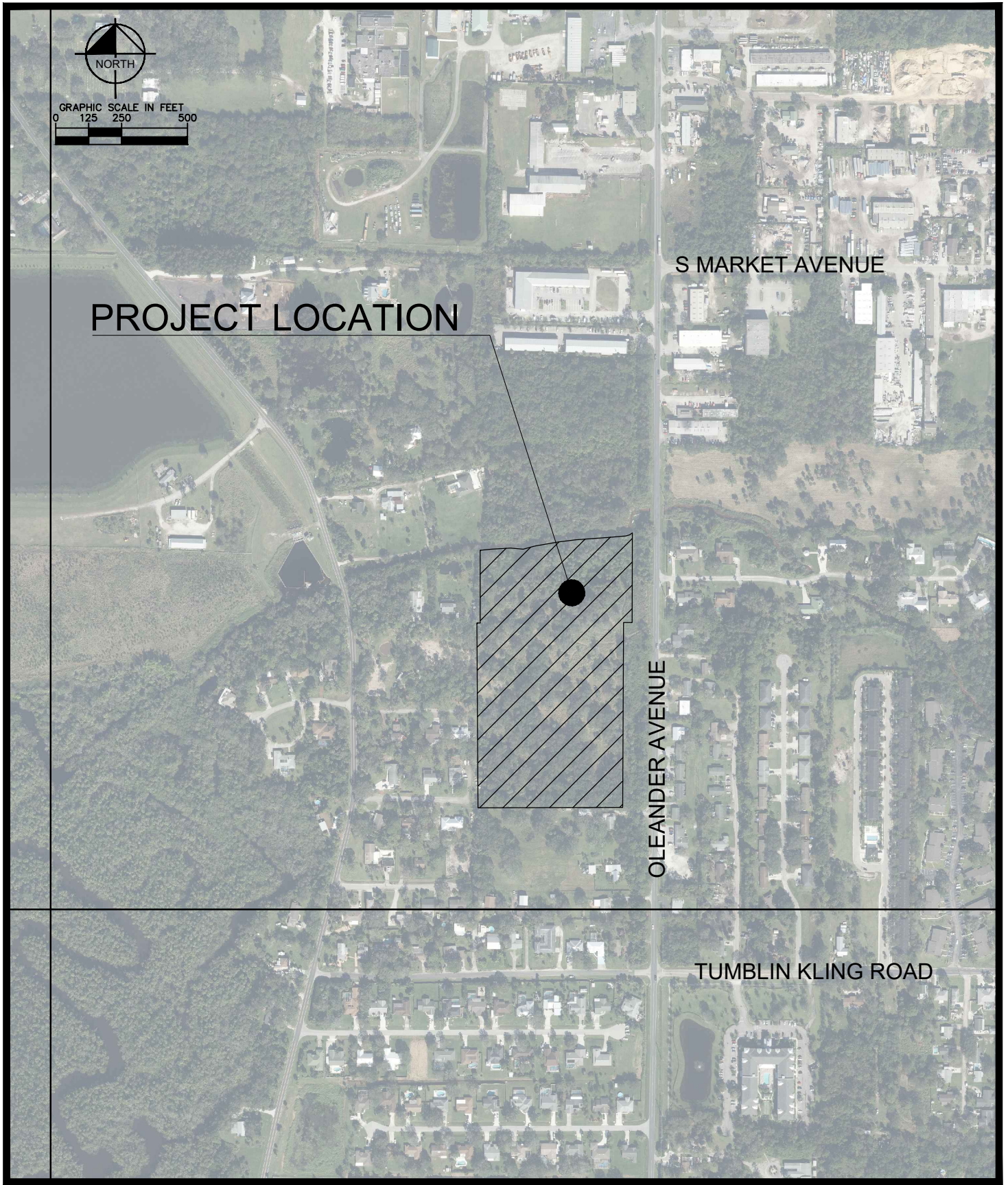
*Oleander Oaks*

A PROPOSED

*Single-Family Community*

# *LOCATION EXHIBIT*

Plotted By: Enright, Tyler Sheet Set: Kha Layout: Layout1 April 28, 2021 11:24:56am Drawing2.dwg  
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



# Kimley»Horn

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445 24TH STREET, SUITE 200, VERO BEACH, FL 32960  
PHONE: 772-794-4100  
WWW.KIMLEY-HORN.COM CA 0000696

OLEANDER OAKS

LOCATION MAP

SHEET NUMBER

1 OF 1

## *LEGAL DESCRIPTION*

LEGAL DESCRIPTION PER OFFICIAL RECORDS BOOK 4050, PAGE 2327

PARCEL ONE:

ALL OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LYING NORTH OF LAND OWNED BY MRS. HARRY E KESLER ON THE 7TH DAY OF MARCH 1956, LESS LAND FOR ROADS AND DRAINAGE CANALS. THE SAID LAND IS ALSO DESCRIBED AS THE EAST 1/2 OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LESS THE SOUTH 630 FEET THEREOF.

PARCEL TWO: THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 33, TOWNSHIP 35 SOUTH, RANGE 40 EAST, LESS AND EXCEPTING THEREFROM ALL RIGHTS OF WAY AND EASEMENTS FOR PUBLIC ROAD AND DRAINAGE CANALS.

General Site Data

**Parcel ID Number:** 2433-144-0002-000-3

**General Location:** Northwesterly of the interchange of W. Midway Rd. and I-95 lying in Section 02 and 03, Town 36S, Range 39E.

**Overall Site Area:** 12.92 acres

**Existing Zoning:** Medium Density Residential (R-4)

**Proposed Zoning:** Planned Development (PD)

**Future Land Use:** Medium Density Residential (RM)

**Maximum Allowable Residential Density:** 4 Dwelling Units per Acre

**Surrounding Zoning, Future Land Use and Existing Use:**

	Existing Use	Future Land Use	Zoning
<b>North</b>	Vacant Commercial	General Commercial	General Commercial
<b>South</b>	Single Family Residential	Medium Density Residential	Medium Density
<b>East</b>	Single Family Residential	Low Density Residential & High Density Residential	Medium Density and SLC RM-11
<b>West</b>	Single Family Residential	SLC Single Family Residential	SLC RS-3

## Design and Development Guidelines

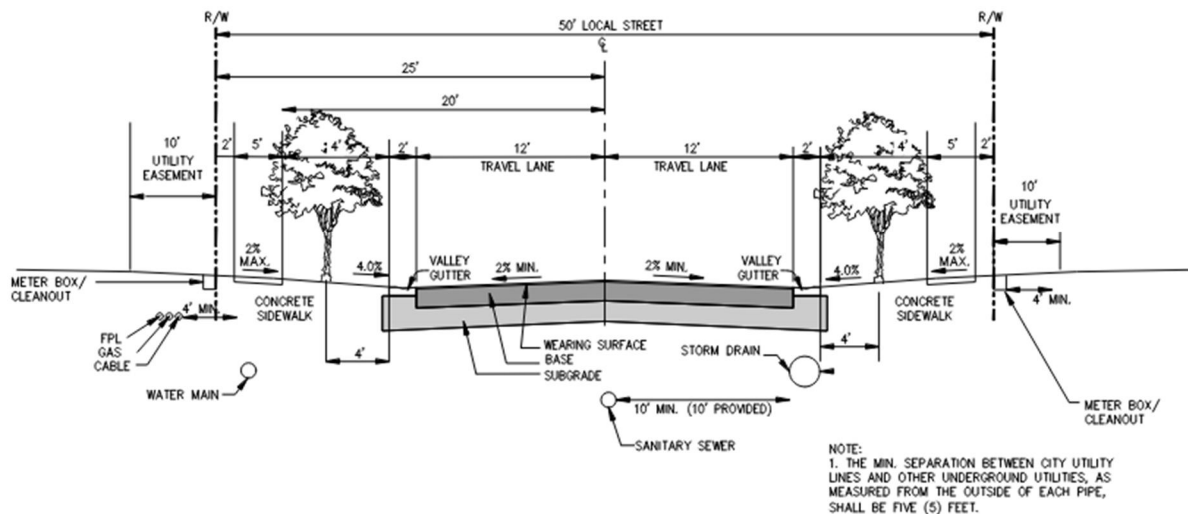
Lot Type	Maximum Gross Density (DU/Ac.)	Min. Lot Size	Min. Lot Width	Min. Road Frontage	Minimum Yard				Max. Bldg. Height	Max Lot Coverage
					Front	Rear	Side	Garage		
Single-Family Detached	4 Du/Ac	5,000 sf	60'	25'	15'	15'	5'	20'	One story (45')	40%

## Permitted Uses

Single-Family detached dwellings are the only permitted use. No vacation rentals are permitted. No pools, sheds, or screened enclosures are permitted on any individual lot. Air conditioner units or any other accessory use will require a 5' side yard setback and 5' rear yard setback

## Private Street Sections

A 50' right-of-way will be utilized for the private street.



# OLEANDER OAKS - AERIAL RENDERING

JULY 2021





Alva Stone Group

# OLEANDER OAKS HOMES

---

*ARCHITECTURAL ELEVATIONS*

*JULY - 2021*

---

**ALVA STONE GROUP LLC**  
591 Evernia Street  
West Palm Beach, FL 33401



Alva Stone Group

**ELEVATION A - 3 BEDROOM | 2 BATH**



**ELEVATION B - 3 BEDROOM | 2 BATH**



---

**ALVA STONE GROUP LLC**  
591 Evernia Street  
West Palm Beach, FL 33401



Alva Stone Group

**ELEVATION C - 3 BEDROOM | 2 BATH**



**ELEVATION D - 3 BEDROOM | 2 BATH**



---

**ALVA STONE GROUP LLC**  
591 Evernia Street  
West Palm Beach, FL 33401



## *Natural Resource Assessment*

# Oleander Oaks

## St. Lucie County, Florida

### *Prepared for:*

Alva Stone Group  
591 Evernia Street, #1603  
West Palm Beach, FL 33401

147811000  
February 2021  
© Kimley-Horn & Associates, Inc. 2021  
445 24th Street, Suite 200  
Vero Beach, FL 32960

**Kimley»Horn**

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SNAKE  
APPENDIX C – SHPO FLORIDA MASTER SITE FILE REPORT

**Natural Resource Assessment  
Technical Memorandum**

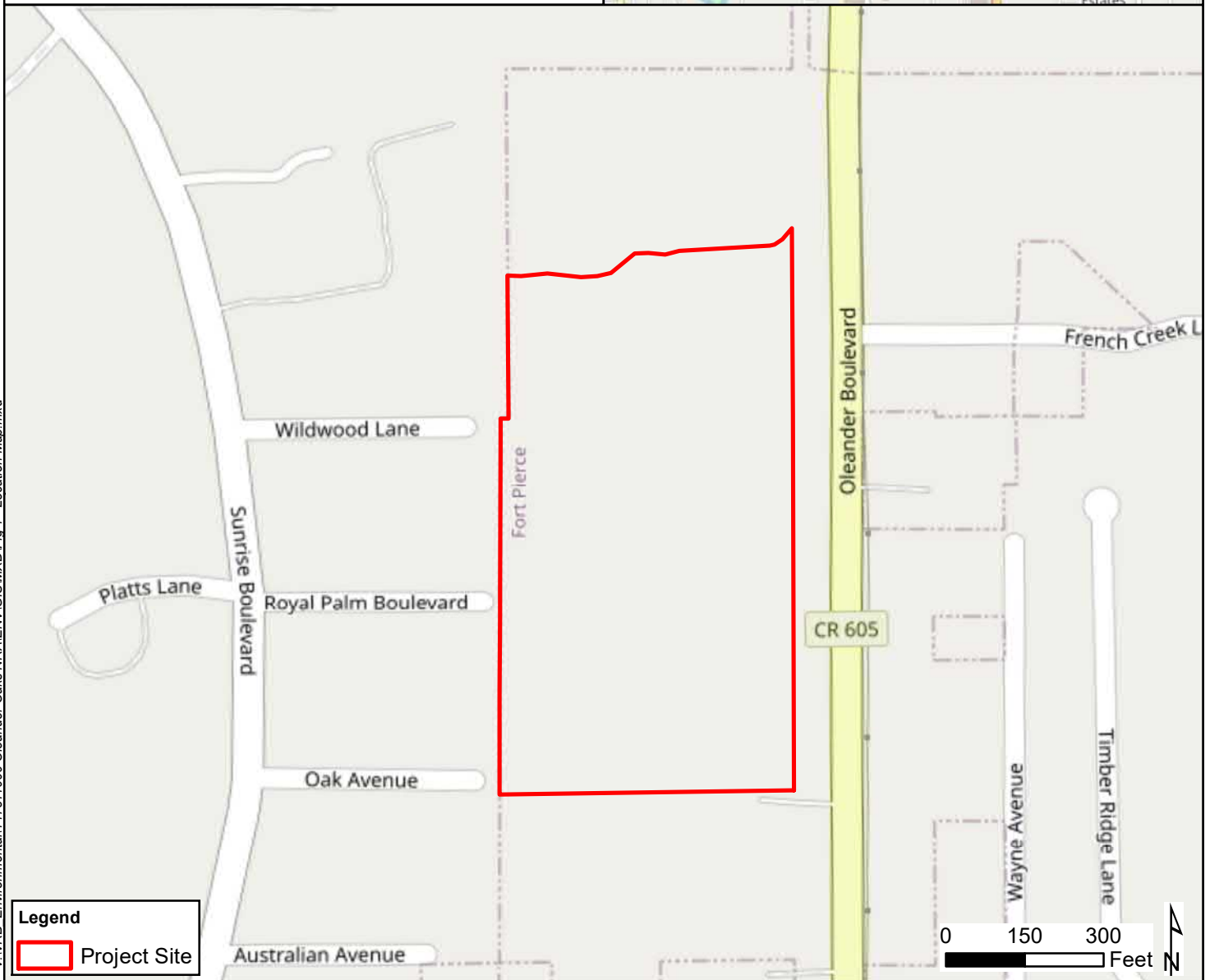
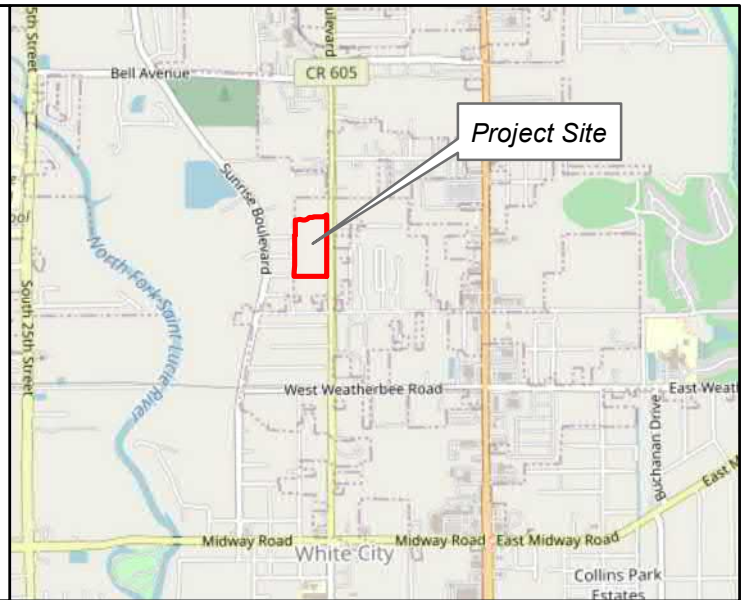
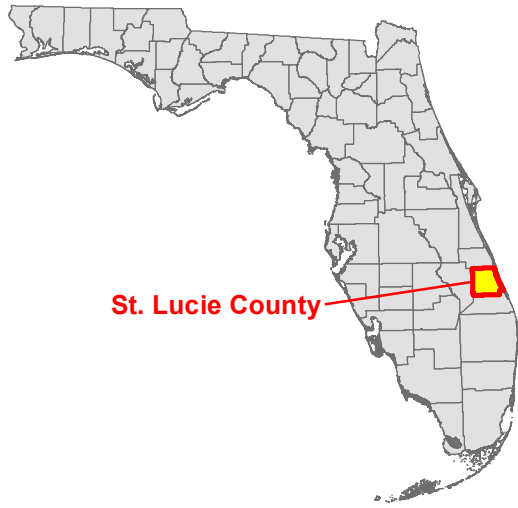
**Oleander Oaks  
St. Lucie County, Florida**

**1.0 INTRODUCTION**

The following technical memorandum summarizes a review of readily available documentation and the results of field reconnaissance conducted at the project site. The purpose of this Natural Resource Assessment was to characterize the existing conditions of the above-referenced project site relative to threatened and endangered species and their habitat, ecological communities, land cover and vegetation, wetlands, soils, hydrology, archaeological and historical resources, and floodplains.

The scope of this assessment included field reconnaissance to determine habitat present and to determine environmental regulatory constraints for this project site.

The project site is approximately 13 acres and is located in Fort Pierce, near the northwest corner of Tumblin Kling Road and Oleander Avenue in Section 33, Township 35 South, Range 40 East, St. Lucie County, Florida. A location map is attached as **Figure 1**. A portion of the U.S. Geological Service (USGS) 7.5-Minute Providence, Florida quadrangle map depicting the location of the project site is attached as **Figure 2**. Based on review of the USGS quadrangle map, elevations on the project site range from approximately 5 to 10 feet.



V:\VRB\_Environmental\147811000 Oleander Oaks NRA\ENV\GIS\MXD\Fig 1 - Location Map.mxd



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 1920 Wekiva Way, STE 200, West Palm Beach, FL 33411  
 Phone (561) 845-0665  
 www.kimley-horn.com

**Project Location Map**

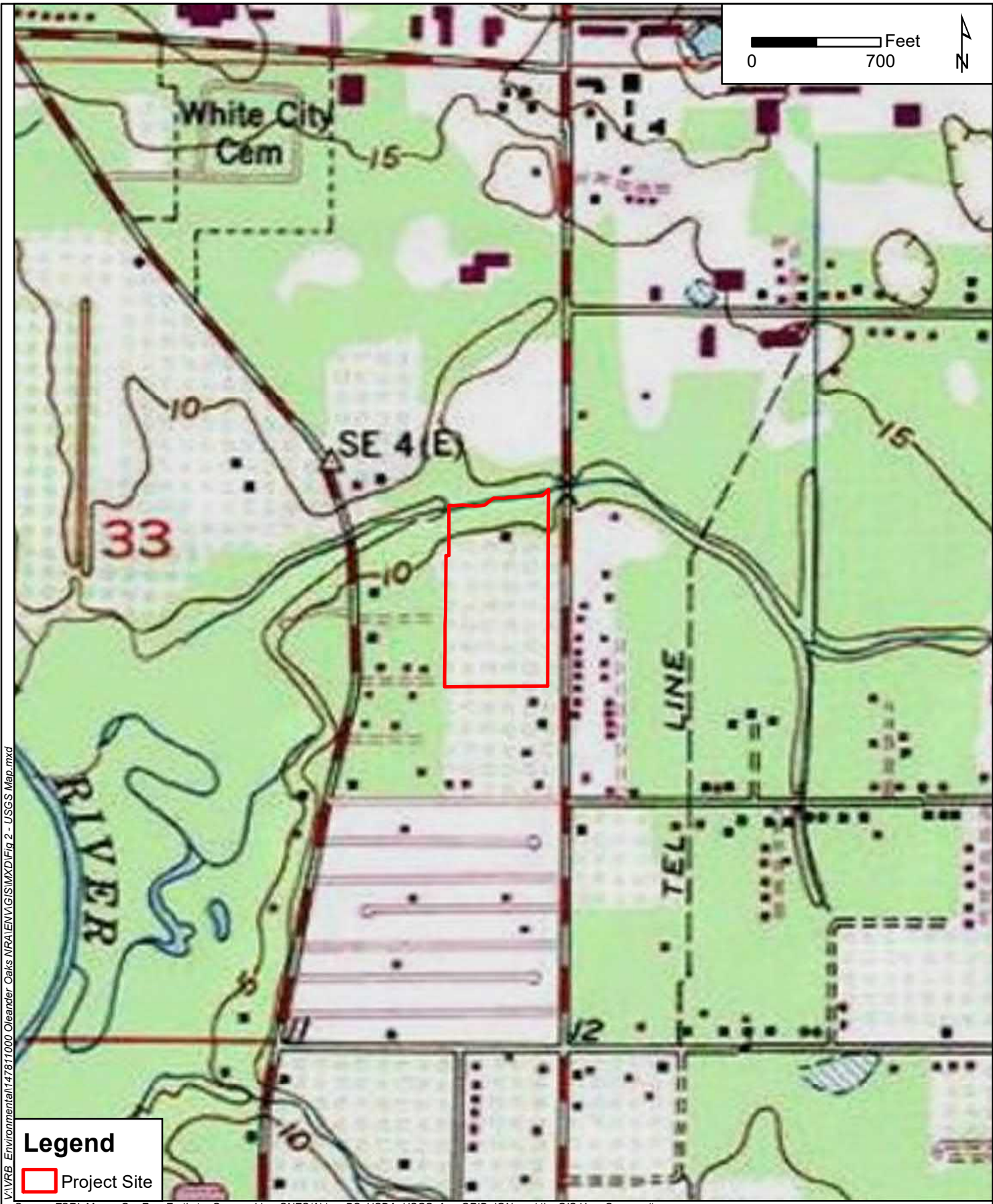
**Oleander Oaks Natural Resource Assessment  
 St. Lucie County, Florida**

1 inch = 300 feet

PROJECT NUMBER:147811000

FEBRUARY 2021

FIGURE 1



V:\VRB\_Environmental\147811000\_Oleander Oaks NRA\ENV\GIS\MXD\Fig 2 - USGS Map.mxd

**Legend**

Project Site

Source: ESRI, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

<p>© 2021 Kimley-Horn and Associates, Inc. 1920 Wekiva Way, STE 200, West Palm Beach, FL 33411 Phone (561) 845-0665 www.kimley-horn.com</p>	<b>USGS 7.5 Minute Quadrangle Map</b>			
	<b>Oleander Oaks Natural Resource Assessment St. Lucie County, Florida</b>			
1 inch = 700 feet	PROJECT NUMBER:147811000	FEBRUARY 2021	FIGURE 2	

## 2.0 METHODOLOGY

The methodology for this assessment included a review of the following resources:

- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix (<http://www.fnai.org/biointro.cfm>)
- Various Geographic Information System (GIS) data layers from the U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), Florida Fish and Wildlife Conservation Commission (FWC) [(<https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx>)]
- USFWS IPaC data [(<https://ecos.fws.gov/ipac/>)]
- U.S. Department of Agriculture (USDA)/Natural Resources Conservation Service (NRCS) Soil Survey of St. Lucie County, Florida (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)
- State Historic Preservation Officer (SHPO), Florida Master Site File (<http://www.flheritage.com/>)
- USFWS National Wetlands Inventory (NWI) Maps (Web-based maps available from <http://www.fws.gov/wetlands/Data/mapper.html>)
- Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (FIRM; Web-based maps available from <http://msc.fema.gov/>)
- United States Geological Survey (USGS) Quadrangle Maps, Land Boundary Information System (LABINS; <http://www.labins.org>)
- South Florida Water Management District Interactive GIS Map (SFWMD.gov)
- Florida Department of Environmental Protection (FDEP) MapDirect GIS (<https://floridadep.gov>)
- St. Lucie County Land Development Code

On February 3, 2021 a field review of the project limits was conducted by environmental scientists to document the existing habitat conditions and determine potential wildlife utilization. The field review also included a 15% gopher tortoise survey.

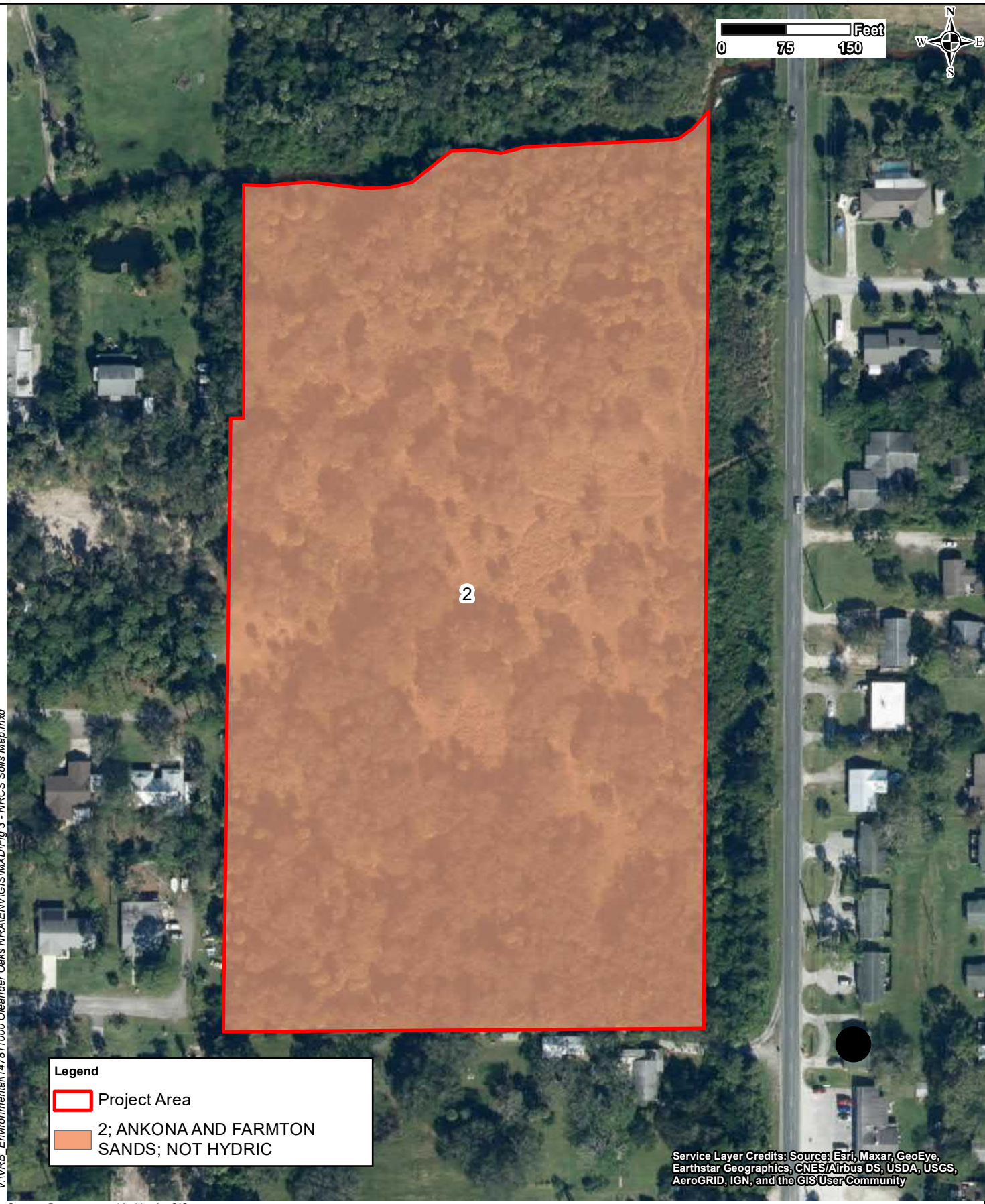
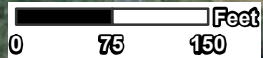
### 3.0 EXISTING CONDITIONS

#### 3.1 SOILS

The USDA/NRCS *Soil Survey of St. Lucie County, Florida*, maps the following soil on the property: (2) Ankona and Farmton Sands. A copy of the digital USDA/NRCS soils mapping data is illustrated in **Figure 3** and details regarding each soil are provided in **Table 1**.

Table 1 NRCS Soils Identified Within Study Area						
Soil ID Number <sup>1</sup>	Soil Name	Occurrence <sup>2</sup>	Characteristics	Drainage Class	Groundwater Depth	Hydric, Hydric Inclusions, or Non-hydric
2	Ankona and Farmton Sands	Broad flats and depressional areas	Very slow or slow permeability	Very poorly and poorly drained	6-18 inches	Non-hydric

<sup>1</sup> Reference: [https://www.nrcs.usda.gov/Internet/FSE\\_MANUSCRIPTS/florida/FL111/0/lucie.pdf](https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/florida/FL111/0/lucie.pdf)  
<sup>2</sup> Reference: [https://soilseries.sc.egov.usda.gov/OSD\\_Docs/A/ANKONA.html](https://soilseries.sc.egov.usda.gov/OSD_Docs/A/ANKONA.html)



**Legend**

- Project Area
- 2; ANKONA AND FARMTON SANDS; NOT HYDRIC

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: Basemap provided by ArcGIS

<h1 style="margin: 0;">Kimley &gt;&gt; Horn</h1> <p style="font-size: small; margin: 5px 0;">© 2021 Kimley-Horn and Associates, Inc. 1920 Wekiva Way, STE 200, West Palm Beach, FL 33411 Phone (561) 845-0665 <a href="http://www.kimley-horn.com">www.kimley-horn.com</a></p>	<b>NRCS Soils Map</b>			
	<b>Oleander Oaks Natural Resource Assessment St. Lucie County, Florida</b>			
1 inch = 150 feet	PROJECT NUMBER: 147811000	FEBRUARY 2021	FIGURE 3	

V:\VRB\_Environmental\147811000 Oleander Oaks NRA\ENVI\GIS\MXD\Fig 3 - NRCS Soils Map.mxd

### **3.2 LAND COVER AND NATURAL COMMUNITIES**

Vegetative communities on the project site were identified through pedestrian transects and aerial photograph interpretation. Vegetative communities were classified using the *Florida Land Use, Cover, and Forms Classification System* (FLUCFCS, Florida Department of Transportation, 1999). A FLUCFCS map of the project site is attached as **Figure 4**. The description of the upland land cover provided below characterizes dominant vegetation observed along random pedestrian transects and does not represent an all-inclusive vegetative inventory.

#### **FLUCFCS 310 – HERBACEOUS (DRY PRAIRIE)**

This cover type encompassed approximately 3.5 acres of the project site and was primarily made up of guinea grass (*Megathyrsus maximus*), broomsedge (*Andropogon virginicus*), Caesar's weed (*Urena lobate*), dogfennel (*Eupatorium capillifolium*), and beautyberry (*Callicarpa Americana*). Cabbage palm (*Sabal palmetto*), Brazilian pepper (*Schinus terebinthifolius*), wild grape (*Vitis spp.*), saw palmetto (*Serenoa repens*), and chapman's oak (*Quercus chapmanii*) were also observed throughout this landcover.

#### **FLUCFCS 420 – UPLAND HARDWOOD FOREST**

This cover type encompassed approximately 7.5 acres of the project site. The canopy was primarily made up of live oak (*Quercus virginiana*), laurel oak (*Quercus laurifolia*), and cabbage palm. The understory included Caesar's weed, Brazilian pepper, dogfennel, beautyberry, carrotwood (*Cupaniopsis anacardioides*), and chapman's oak.

### **3.3 WETLANDS, TIDAL WATERS AND OTHER SURFACE WATERS**

The presence of wetlands was evaluated based on the Florida unified wetland delineation methodologies in accordance with Chapter 62-340, Florida Administrative Code (FAC) and Chapter 62-331 FAC under the State 404 Program. These methods consider prevalence of wetland vegetation, hydric soil indicators, and wetland hydrology. Surface waters include both natural and manmade bodies of water, such as streams, lakes, ponds, canals, and ditches. Based on initial database review and subsequent assessment of the vegetative communities, hydrologic conditions, and soils observed during on-site reconnaissance, there appears to be approximately 1.8 acres of wetlands and surface waters on-site.

### **FLUCFCS 510 – STREAMS AND WATERWAYS**

This cover type encompassed approximately 0.1 acres of the project site and encompasses a small stream along the northern portion of the project area, which connects to the St. Lucie River just over half a mile to the west.

### **FLUCFCS 615 – STREAM AND LAKE SWAMPS (BOTTOMLAND)**

This cover type encompassed approximately 1.7 acres of the project site and was primarily made up of cabbage palm, Brazilian pepper, Virginia chain fern (*Woodwardia virginica*), lizard's tail (*Saururus cernuus*), and wild coffee (*Psychotria nervosa*).

### **3.4 WILDLIFE UTILIZATION**

Wildlife observed included the American robin (*Turdus migratorius*), downy woodpecker (*Dryobates pubescens*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*). Gopher tortoise (*Gopherus polyphemus*) burrows were also observed on-site.

### **3.5 ENDANGERED, THREATENED, AND SPECIES OF SPECIAL CONCERN**

A list of protected species potentially occurring within the project vicinity was generated using the databases described in Section 2.0 Methodology. Information regarding previously documented occurrences, on-site observations conducted as part of this assessment, and likelihood of occurrence is summarized below.

FNAI – The FNAI report includes data from FNAI Matrix Units 66369 and 66370 (**Appendix A**). Based on the FNAI report, there are no documented listed species within the vicinity of the site. FNAI lists wood storks (*Mycteria Americana*) as likely to occur in both matrix units.

FWC – There are no known wading bird colonies on, or within one mile of, the project site. Two species, the black skimmer (*Rynchops niger*) and least tern (*Sternula antillarum*), were documented approximately 1 mile southeast of the project site. Habitat for these species is not found on-site. No further coordination regarding the black skimmer or least tern is anticipated.

USFWS Consultation Areas – The project site is in the below-listed USFWS Consultation Areas. However, habitat for these species does not occur on-site, and thus no further coordination regarding these species is anticipated.

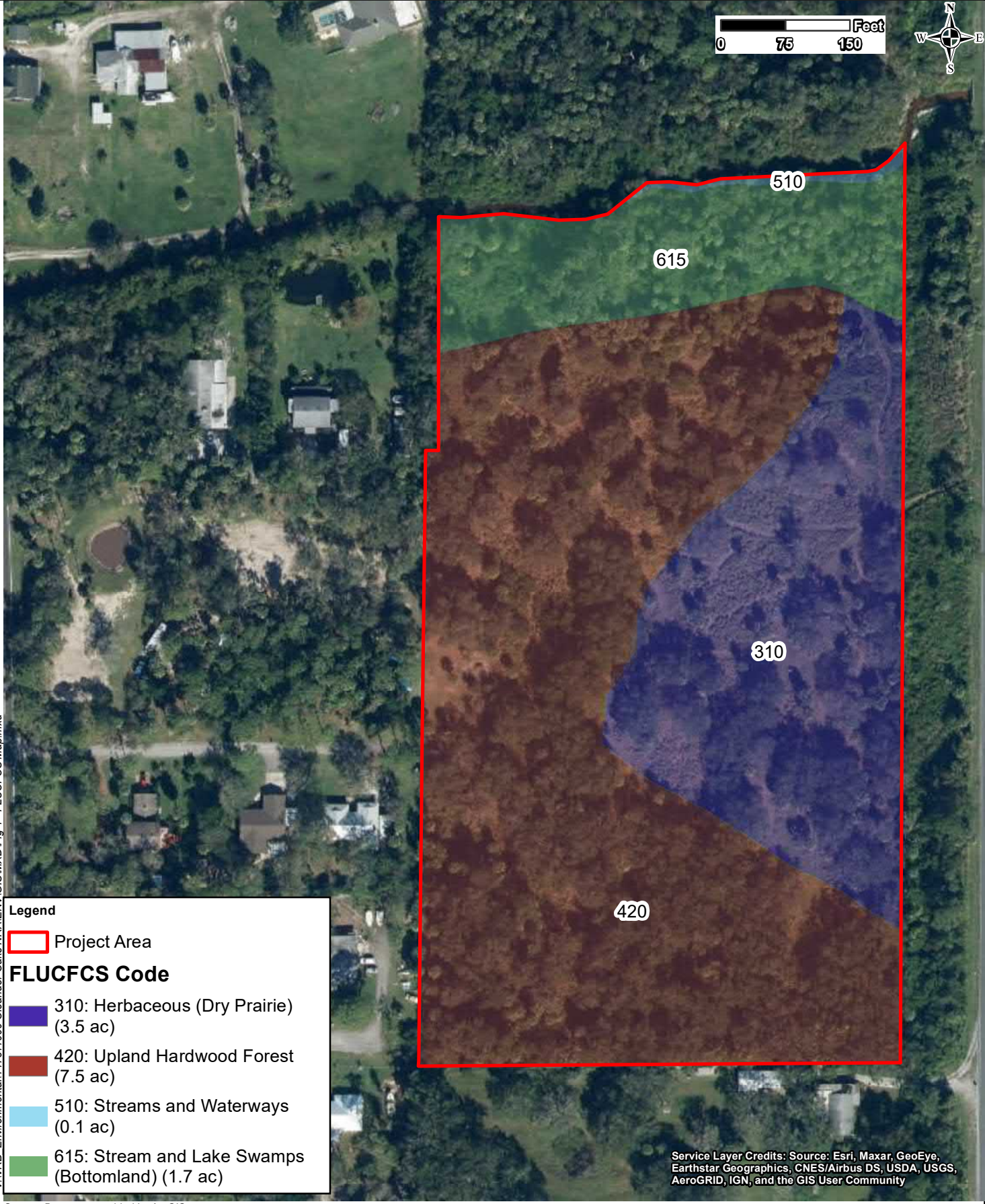
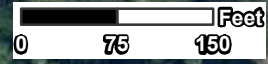
- Florida scrub-jay
- Audubon’s crested caracara
- Everglade snail kite
- Grasshopper sparrow

USFWS Wood Stork Colonies – The project site is within the core foraging area (CFA) of two known wood stork colonies, North Fork St. Lucie River and Sewal Point MC2 - Bird Island. The CFA for an active wood stork colony is defined as a circular area within an 18.6-mile radius from the wood stork colony. Potential wood stork foraging habitat exists within the stream on-site. More on this is discussed below.

USFWS IPaC Data – The IPaC Trust Resources includes historical data in their reporting, which results in some species findings that do not reflect current on-site conditions. The following species is listed in the data and has suitable habitat within the project site: wood stork. Species listed in the data that do not have suitable habitat on-site include: Audubon’s crested caracara, Everglade snail kite, Florida grasshopper sparrow, whooping crane, Florida scrub-jay, American alligator, Atlantic salt marsh snake, hawksbill sea turtle, leatherback sea turtle, loggerhead sea turtle, Miami blue butterfly, West Indian manatee, Florida panther, and southeastern beach mouse. This dataset confirmed that the project site is not within any USFWS designated Critical Habitat (**Appendix A**).

Based on field reconnaissance and database reviews, a list of state and federally listed species potentially occurring on, or within the immediate vicinity of, the project site has been compiled. **Table 2** lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on actual observation of the species, signs of the species (burrows, tracks, scat, etc.), observance of suitable habitat, or documented occurrences of the species within various databases.

Table 2						
Potential Listed Species Occurrence						
Common Name		Scientific Name	Federal Status	State Status	Comments	Likelihood of Occurrence
Birds	Wood Stork	<i>Mycteria americana</i>	T	FT	Observed On-site: No Observed in Proximity: No Habitat Present: Marginal Habitat Type: Foraging	Low
	Burrowing Owl	<i>Athene cunicularia</i>	NL	ST	Observed On-site: No Observed in Proximity: No Habitat Present: None Habitat Type: N/A	None
	American Kestrel	<i>Falco sparverius paulus</i>	NL	ST	Observed On-site: No Observed in Proximity: No Habitat Present: None Habitat Type: N/A	None
Reptiles	Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	T	FT	Observed On-site: No Observed in Proximity: No Habitat Present: Marginal Habitat Type: Nesting/foraging	Low
	<b>Gopher Tortoise</b>	<i>Gopherus polyphemus</i>	C	ST	Observed On-site: No Observed in Proximity: No Habitat Present: Yes Habitat Type: Burrowing/foraging	High
<p>*Species in bold were observed on-site. Federal Status: E = Endangered; T = Threatened; T(S/A) = Threatened due to Similarity of Appearance; C = Candidate Species; NL = Not Listed. State Status: FE- Federally Endangered; FT – Federally Threatened; FT(S/A) – Federally Threatened due to Similarity of Appearance; ST- State Threatened; SSC = Species of Special Concern. Note: Coordination is not required with FWC for Federally listed species.</p>						



**Legend**

Project Area

**FLUCFCS Code**

- 310: Herbaceous (Dry Prairie) (3.5 ac)
- 420: Upland Hardwood Forest (7.5 ac)
- 510: Streams and Waterways (0.1 ac)
- 615: Stream and Lake Swamps (Bottomland) (1.7 ac)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: Basemap provided by ArcGIS

V:\VRB\_Environmental\147811000\_Oleander Oaks NRA\ENVI\GIS\MXD\Fig 4 - FLUCFCS Map.mxd

**FLUCFCS Map**

**Oleander Oaks Natural Resource Assessment  
St. Lucie County, Florida**



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1 inch = 150 feet

PROJECT NUMBER: 147811000

FEBRUARY 2021

FIGURE 4

Based on the database review and field reconnaissance, the following species could occur on-site or require additional evaluation, survey, or permitting.

### ***Wood Stork***

The wood stork inhabits both fresh and saltwater habitats, such as fresh and saltwater marshes, tidal flats, wet prairies, cypress swamps, and drainage features. As part of the Effect Determination Key for the Wood Stork in South Florida, 18.6-mile core foraging area (CFA) buffers were established around known wood stork colonies. These buffers monitor proposed impacts to suitable foraging habitats (SFH) for the wood stork, which include shallow-water areas containing relatively open (<25% aquatic vegetation) water with a permanent or seasonal water depth between 2 and 15 inches. No wood storks were observed during field reconnaissance; however, the stream provides SFH for wood storks. Therefore, if impacts are anticipated for the on-site stream, coordination regarding the wood stork will be required with the SFWMD and a wood stork foraging assessment may be required. Further discussion is provided in Section 4.3 below.

### ***Eastern Indigo Snake***

The eastern indigo snake occurs in a range of habitats, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats. The snake requires large tracts of land to survive and often winters in burrows of gopher tortoises, armadillos, cotton rats, and land crabs (in coastal areas) and forages in hydric habitats. No individuals were observed during field reconnaissance; however, marginal habitat for the eastern indigo snake does exist on-site. Thus, per the Eastern Indigo Snake Effect Determination Key (August 13, 2013), if the USFWS *Standard Protection Measures for the Eastern Indigo Snake (Appendix B)* are implemented during construction, impacts to the Eastern indigo snake are not anticipated to occur, and no further action is anticipated.

### ***Gopher Tortoise***

The gopher tortoise is a burrowing tortoise that inhabits upland habitats such as pine flatwoods, xeric oak hammocks, and open sandy pastures, but can also often occur in disturbed areas. A 15% gopher tortoise burrow survey was conducted, and seven gopher tortoise burrows were observed (**Figure 5**). A 100% gopher tortoise survey will need to be completed no more than 90 days prior to construction. Impacts to or within 25 feet of gopher

tortoise burrows require a relocation permit from FWC. This permit authorizes gopher tortoises to be relocated by an authorized agent off the development property to a protected certified recipient area.

***Listed Plant Species***

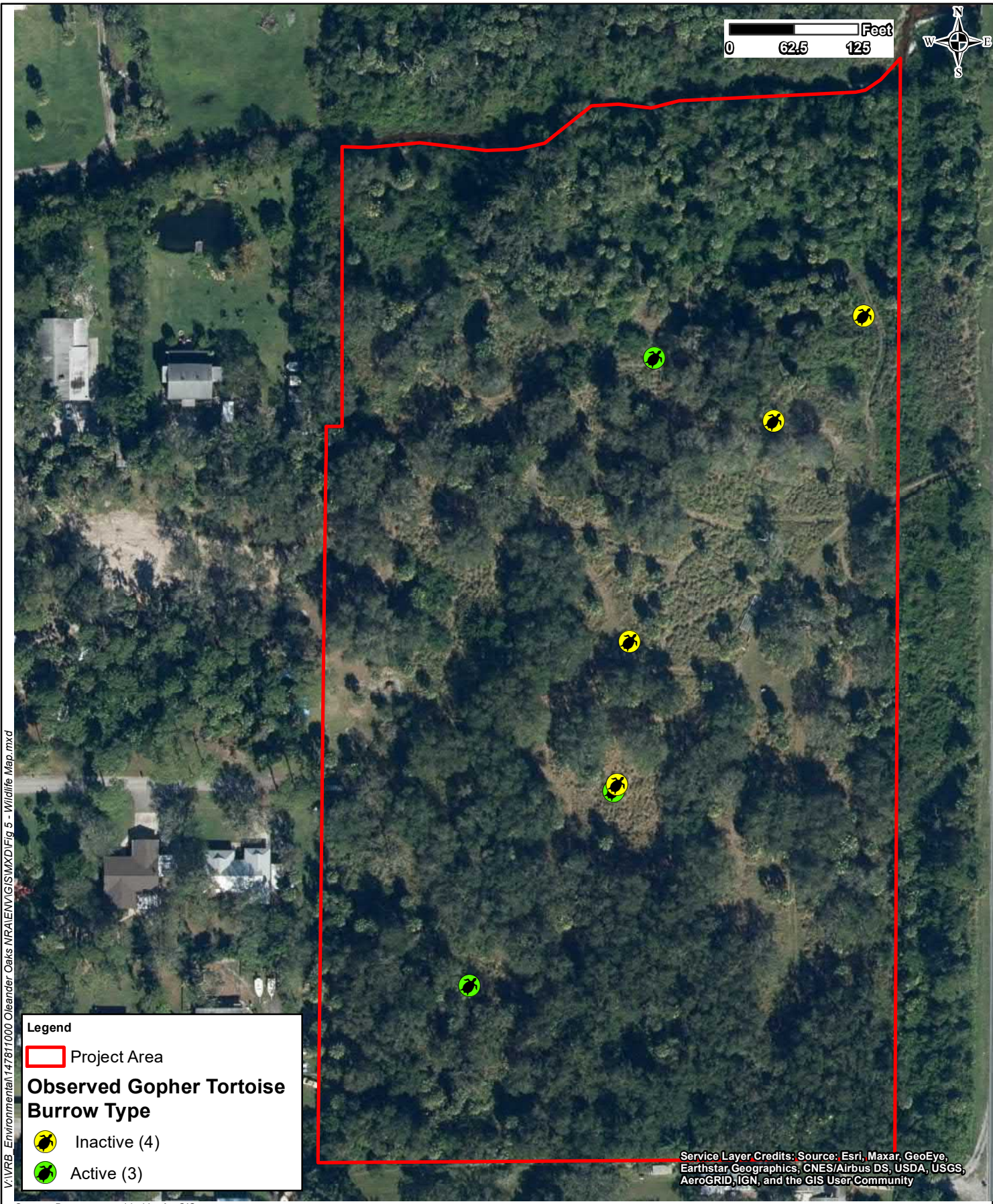
The Florida Department of Agriculture and Consumer Service's *Notes on Florida's Threatened and Endangered Plants*, and Richard Wunderlin's *Guide to Vascular Plants of Florida*, were consulted to assess habitat requirements for listed plant species. Although six state-listed plants were noted by FNAI as possibly occurring in this area, none were observed during field reconnaissance. No further action is required regarding listed plant species.

### **3.6 HISTORIC AND ARCHAEOLOGICAL RESOURCES**

Kimley-Horn requested an inquiry from the Department of State, State Historic Preservation Officer (SHPO) Division of Historical Resources Florida Master Site File (FMSF) regarding the presence of known historical or archaeological findings on the project site, or in the immediate vicinity (**Appendix C**). The FMSF lists three standing structures and two resource groups within a 0.25-mile radius of the project area, however, none are within the project site, thus no historic or archaeological resources are anticipated to be impacted by development of the project site.

### **3.7 FLOODPLAIN INFORMATION**

The FEMA FIRM panel [12061C0166E] indicates that approximately 10 acres of the project site are located within Flood Zone X – defined as areas determined to be outside of the special flood hazard area. Approximately 0.5 acres of the project area are located within Flood Zone X – within the 500-year floodplain, and 2 acres are within Flood Zone AE – within the 100-year floodplain. A FEMA flood zone map is attached as **Figure 6**. Additional engineering analysis will be required to address effects to floodplain, including design and construction of flood compensation areas. This topic will be evaluated during civil engineering design and permitting with the SFWMD.



V:\VRB\_Environmental\147811000 Oleander Oaks NRA\ENVI\GIS\MXD\Fig 5 - Wildlife Map.mxd

**Legend**

Project Area

**Observed Gopher Tortoise Burrow Type**

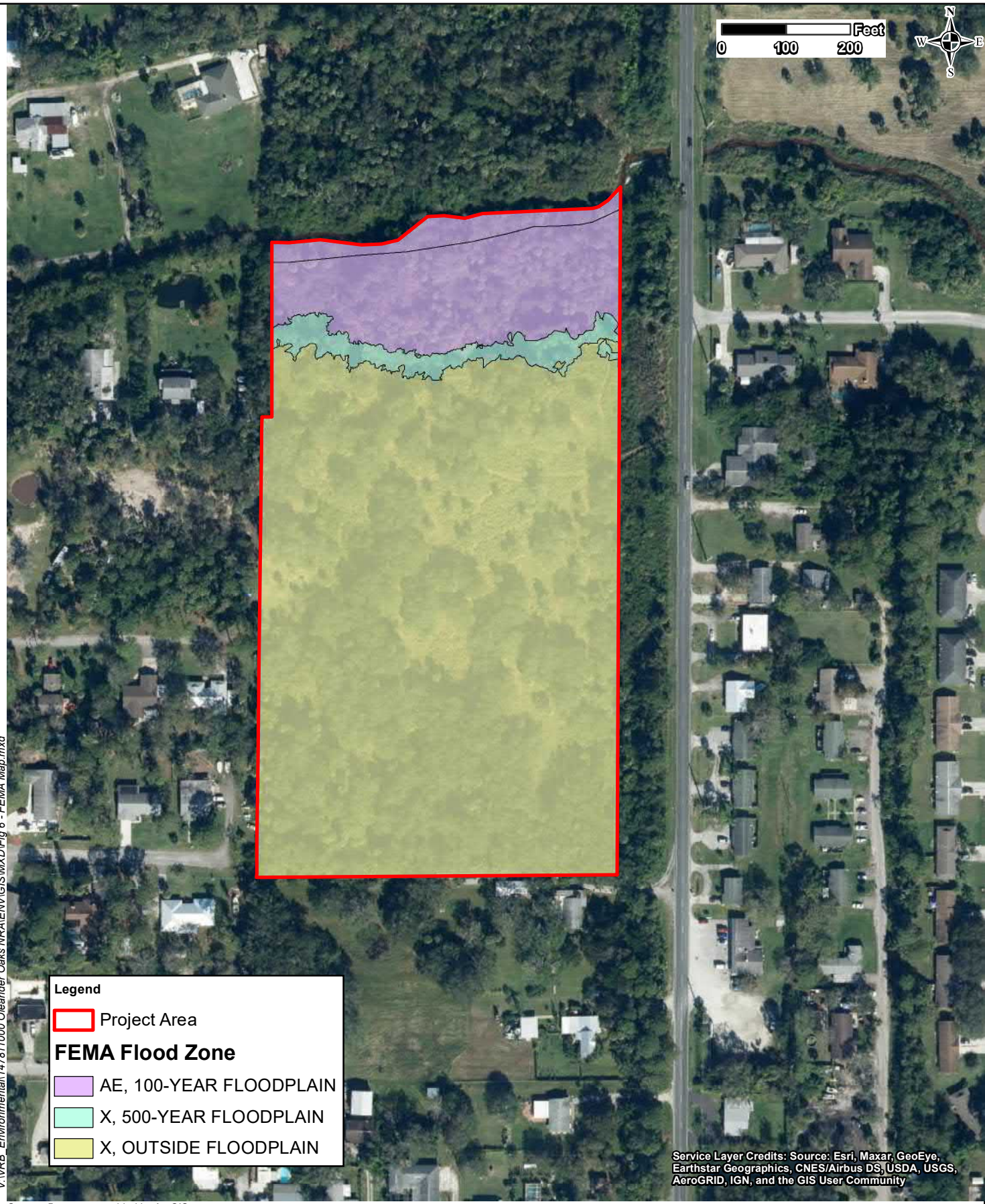
● Inactive (4)

● Active (3)

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar, Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: Basemap provided by ArcGIS

<h1 style="margin: 0;">Kimley  Horn</h1> <p style="font-size: small; margin: 5px 0;">© 2021 Kimley-Horn and Associates, Inc. 1920 Wekiva Way, STE 200, West Palm Beach, FL 33411 Phone (561) 845-0665 <a href="http://www.kimley-horn.com">www.kimley-horn.com</a></p>	<b>Wildlife Map</b>			
	<b>Oleander Oaks Natural Resource Assessment St. Lucie County, Florida</b>			
1 inch = 125 feet	PROJECT NUMBER: 147811000	FEBRUARY 2021	FIGURE 5	



**Legend**

- Project Area

**FEMA Flood Zone**

- AE, 100-YEAR FLOODPLAIN
- X, 500-YEAR FLOODPLAIN
- X, OUTSIDE FLOODPLAIN

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Source: Basemap provided by ArcGIS

**FEMA Floodplain Map**

**Oleander Oaks Natural Resource Assessment  
St. Lucie County, Florida**



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1 inch = 200 feet

PROJECT NUMBER: 147811000

FEBRUARY 2021

FIGURE 6

V:\VRB\_Environmental\147811000 Oleander Oaks NRA\ENVI\GIS\MXD\Fig 6 - FEMA Map.mxd

## **4.0 REGULATORY REQUIREMENTS**

### **4.1 LOCAL ENVIRONMENTAL ORDINANCES**

Based on a review of the municipal codes and ordinances for City of Fort Pierce and St. Lucie County, existing permitting requirements and regulations of state and federal regulatory agencies must be followed and applied. Additionally, per the Land Development Code of St. Lucie County, vegetation removal activities of native species in unincorporated areas requires a Vegetation Removal Permit from the Public Works Director. A tree survey will be required to determine status of trees on-site.

The St. Lucie County Land Development Code also gives St. Lucie County regulatory authority over all wetlands, however this authority is carried out via coordination with state and federal agencies. Thus, a state or federal permit required for construction, dredging, filling, or alteration within jurisdictional wetlands will supersede the county permitting mechanism. Mitigation must demonstrate no net losses due to impacts of these areas. Additionally, a minimum 10-foot buffer zone of native upland transitional vegetation is required around any isolated wetlands preserved on development sites.

### **4.2 STATE REGULATORY REQUIREMENTS**

#### **Environmental Resource Permit**

An Environmental Resource Permit (ERP) will be required for the project if impacts to the on-site wetland or stream is proposed. The ERP evaluates the project impacts to wetlands, surface waters, and stormwater management design including floodplain impacts. An ERP may also be required from the SFWMD if any stormwater improvements are proposed as part of this project. Drainage design and stormwater management is not discussed further in this report as the scope was limited to natural resources. SFWMD will also coordinate with the Florida Department of State Division of Historical Resources regarding potential impacts to historical or archaeological resources, and a site-specific cultural resource assessment survey may be required.

It should be noted that the FDEP has assumed administration of the Clean Water Act (CWA) Section 404 program. FDEP will process Section 404 permits within State-assumed Waters

of the US (WOTUS) rather than the US Army Corps of Engineers (USACE). Based on a preliminary review, there may be WOTUS present on-site, and therefore, authorization under Section 404 may be required.

### **Listed Species Permitting**

The following state-listed species may potentially occur on-site:

- Gopher tortoise

#### *Gopher Tortoise*

Gopher tortoise habitat is present on-site, and burrows were observed during field reconnaissance (see **Figure 5 – Wildlife Map**). Based on the presence of habitat and burrows, a 100% gopher tortoise burrow survey is required to be conducted within 90 days prior to construction commencement, and a gopher tortoise relocation permit will be required from FWC if any relocation is required.

## **4.3 FEDERAL REGULATORY REQUIREMENTS**

### **Section 404 Dredge and Fill Permitting**

Please refer to State Regulatory Requirements above. Based on a preliminary review, WOTUS appear to be present on-site, and therefore, authorization under Section 404 may be required. This project is not within 300 ft. of a USACE retained water, so permitting under Section 404 can be authorized under the DEP State 404 Program.

### **Federal Listed Species**

The following federally listed species were observed or potentially occur on-site:

- Wood Stork
- Eastern indigo snake

#### *Wood Stork*

The proposed project occurs within the CFA of two wood stork colonies. Foraging habitat is present in the stream on the northern boundary of the property. In accordance with USFWS's 2010 South Florida Programmatic Concurrence and Key, a wood stork foraging

analysis may be required if impacts to SFH are proposed. Mitigation requirements will be based on this analysis.

#### *Eastern Indigo Snake*

Per the Eastern Indigo Snake Effect Determination Key (August 13, 2013), if the USFWS Standard Protection Measures for the Eastern Indigo Snake (**Appendix B**) are implemented during construction, impacts to the Eastern indigo snake are not anticipated to occur, and no further action is anticipated to be required.

## **5.0 SUMMARY AND RECOMMENDATIONS**

- An ERP from SFWMD will be required to authorize stormwater improvements and any wetland or stream impacts as part of site development. Based on the FMSF, there were no historic or archaeological resources within the study area.
- Authorization under Section 404 may be required through a State 404 Program permit if impacts to WOTUS are expected.
- A tree survey and Vegetation Removal Permit from St. Lucie County may be required for tree removal prior to development.
- The following state and federally listed species were observed or potentially occur on-site: wood stork, gopher tortoise, and Eastern indigo snake. Additional surveys and permits may be required for the gopher tortoise and wood stork and implementation of the Standard Protection Measures is recommended for the eastern indigo snake.
- The project site is partially within a FEMA designated floodplain. Additional engineering analysis will be required to address effects to the floodplain, including design and construction of flood compensation areas. This topic will be evaluated during civil engineering design and permitting with the SFWMD.

**APPENDIX A**  
**FNAI BIODIVERSITY MATRIX**  
**IPaC Species List**



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850-224-8207  
850-681-9364 fax  
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## Florida Natural Areas Inventory

### Biodiversity Matrix Query Results

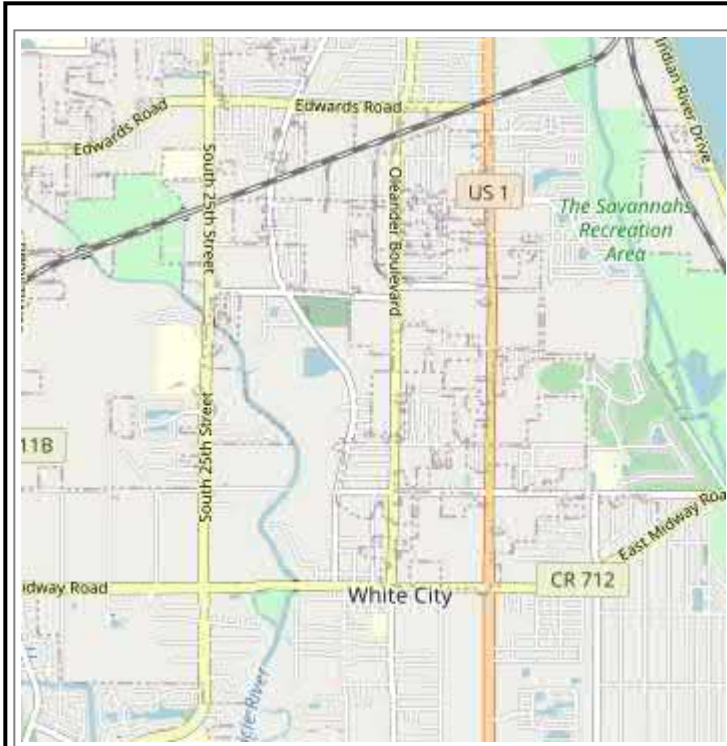
#### UNOFFICIAL REPORT

Created 2/8/2021

(Contact the FNAI Data Services Coordinator at 850.224.8207 or  
kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

### Report for 2 Matrix Units: 66369 , 66370



#### Descriptions

**DOCUMENTED** - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

**DOCUMENTED-HISTORIC** - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

**LIKELY** - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

**POTENTIAL** - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

#### **Matrix Unit ID: 66369**

0 Documented Elements Found

0 Documented-Historic Elements Found

3 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Blackwater stream</i>	G4	S3	N	N
<i>Mesic flatwoods</i>	G4	S4	N	N
<a href="#">Mycteria americana</a> Wood Stork	G4	S2	LT	FT

#### **Matrix Unit ID: 66370**

0 Documented Elements Found

## 0 Documented-Historic Elements Found

## 1 Likely Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<a href="#">Mycteria americana</a> Wood Stork	G4	S2	LT	FT

**Matrix Unit IDs: 66369, 66370**

## 17 Potential Elements Common to Any of the 2 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<a href="#">Athene cunicularia floridana</a> Florida Burrowing Owl	G4T3	S3	N	SSC
<a href="#">Coelorachis tuberculosa</a> Piedmont Jointgrass	G3	S3	N	T
<a href="#">Conradina grandiflora</a> Large-flowered Rosemary	G3	S3	N	T
<a href="#">Corynorhinus rafinesquii</a> Rafinesque's Big-eared Bat	G3G4	S2	N	N
<a href="#">Drymarchon couperi</a> Eastern Indigo Snake	G3	S3	LT	FT
<a href="#">Glandularia maritima</a> Coastal Vervain	G3	S3	N	E
<a href="#">Gopherus polyphemus</a> Gopher Tortoise	G3	S3	C	ST
<a href="#">Lechea cernua</a> Nodding Pinweed	G3	S3	N	T
<a href="#">Linum carteri var. smallii</a> Small's Flax	G2T2	S2	N	E
<a href="#">Nemastylis floridana</a> Celestial Lily	G2	S2	N	E
<a href="#">Pituophis melanoleucus mugitus</a> Florida Pine Snake	G4T3	S3	N	SSC
<a href="#">Polygala smallii</a> Tiny Polygala	G1	S1	LE	E
<a href="#">Pteroglossaspis ecristata</a> Giant Orchid	G2G3	S2	N	T
<a href="#">Rostrhamus sociabilis</a> Snail Kite	G4G5	S2	LE	N
<a href="#">Sceloporus woodi</a> Florida Scrub Lizard	G2G3	S2S3	N	N
<a href="#">Sciurus niger shermani</a> Sherman's Fox Squirrel	G5T3	S3	N	SSC
<a href="#">Trichechus manatus</a> West Indian Manatee	G2	S2	LE	FE

**Disclaimer**

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

**Unofficial Report**

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Field Office  
1339 20th Street  
Vero Beach, FL 32960-3559  
Phone: (772) 562-3909 Fax: (772) 562-4288  
<http://fws.gov/verobeach>

In Reply Refer To:

February 02, 2021

Consultation Code: 04EF2000-2021-SLI-0334

Event Code: 04EF2000-2021-E-00867

Project Name: Oleander

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

<http://>

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**South Florida Ecological Services Field Office**

1339 20th Street

Vero Beach, FL 32960-3559

(772) 562-3909

---

## Project Summary

Consultation Code: 04EF2000-2021-SLI-0334

Event Code: 04EF2000-2021-E-00867

Project Name: Oleander

Project Type: DEVELOPMENT

Project Description: Development

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@27.38836585,-80.33513419481258,14z>



Counties: St. Lucie County, Florida

---

## Endangered Species Act Species

There is a total of 17 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Florida Panther <i>Puma (=Felis) concolor coryi</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/1763">https://ecos.fws.gov/ecp/species/1763</a>	Endangered
Puma (=mountain Lion) <i>Puma (=Felis) concolor (all subsp. except coryi)</i> Population: FL No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6049">https://ecos.fws.gov/ecp/species/6049</a>	Similarity of Appearance (Threatened)
Southeastern Beach Mouse <i>Peromyscus polionotus niveiventris</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3951">https://ecos.fws.gov/ecp/species/3951</a>	Threatened

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## Birds

NAME	STATUS
Audubon's Crested Caracara <i>Polyborus plancus audubonii</i> Population: FL pop. No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8250">https://ecos.fws.gov/ecp/species/8250</a>	Threatened
Everglade Snail Kite <i>Rostrhamus sociabilis plumbeus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7713">https://ecos.fws.gov/ecp/species/7713</a>	Endangered
Florida Grasshopper Sparrow <i>Ammodramus savannarum floridanus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/32">https://ecos.fws.gov/ecp/species/32</a>	Endangered
Florida Scrub-jay <i>Aphelocoma coerulescens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6174">https://ecos.fws.gov/ecp/species/6174</a>	Threatened
Whooping Crane <i>Grus americana</i> Population: U.S.A. (CO, ID, FL, NM, UT, and the western half of Wyoming) No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/758">https://ecos.fws.gov/ecp/species/758</a>	Experimental Population, Non- Essential
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8477">https://ecos.fws.gov/ecp/species/8477</a>	Threatened

## Reptiles

NAME	STATUS
American Alligator <i>Alligator mississippiensis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/776">https://ecos.fws.gov/ecp/species/776</a>	Similarity of Appearance (Threatened)
Hawksbill Sea Turtle <i>Eretmochelys imbricata</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3656">https://ecos.fws.gov/ecp/species/3656</a>	Endangered
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1493">https://ecos.fws.gov/ecp/species/1493</a>	Endangered
Loggerhead Sea Turtle <i>Caretta caretta</i> Population: Northwest Atlantic Ocean DPS There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/1110">https://ecos.fws.gov/ecp/species/1110</a>	Threatened

## Insects

NAME	STATUS
Miami Blue Butterfly <i>Cyclargus (=Hemiargus) thomasi bethunebakeri</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3797">https://ecos.fws.gov/ecp/species/3797</a>	Endangered

## Flowering Plants

NAME	STATUS
Fragrant Prickly-apple <i>Cereus eriophorus var. fragrans</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/982">https://ecos.fws.gov/ecp/species/982</a>	Endangered
Lakela's Mint <i>Dicerandra immaculata</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/6390">https://ecos.fws.gov/ecp/species/6390</a>	Endangered
Tiny Polygala <i>Polygala smallii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/996">https://ecos.fws.gov/ecp/species/996</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

**APPENDIX B**  
**STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO**  
**SNAKE**

**STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE**  
**U.S. Fish and Wildlife Service**  
**August 12, 2013**

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: [jaxregs@fws.gov](mailto:jaxregs@fws.gov); South Florida Field Office: [verobeach@fws.gov](mailto:verobeach@fws.gov); Panama City Field Office: [panamacity@fws.gov](mailto:panamacity@fws.gov)). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

**POSTER INFORMATION**

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

**SIMILAR SNAKES:** The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

**LIFE HISTORY:** The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

**PROTECTION UNDER FEDERAL AND STATE LAW:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. “Taking” of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. “Take” is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

**IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

**IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

**Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida Field Office – (904) 731-3336**  
**Panama City Field Office – (850) 769-0552**  
**South Florida Field Office – (772) 562-3909**

## **PRE-CONSTRUCTION ACTIVITIES**

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

## **DURING CONSTRUCTION ACTIVITIES**

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

## **POST CONSTRUCTION ACTIVITIES**

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.



# **ATTENTION:**

## **THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!**

### **IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:**

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- Personnel must NOT attempt to touch or handle snake due to protected status.
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- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

### **IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

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### **USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida Field Office – (904) 731-3336**

**Panama City Field Office – (850) 769-0552**

**South Florida Field Office – (772) 562-3909**

### **Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.**

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

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**PROTECTION:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

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**USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida ES Office – (904) 731-3336**  
**Panama City ES Office – (850) 769-0552**  
**South Florida ES Office – (772) 562-3909**

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

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**Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.**

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**LEGAL STATUS:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. “Taking” of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. “Take” is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.



August 12, 2013

# **ATTENTION:**

## **THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!**



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

**APPENDIX C**  
**SHPO FLORIDA MASTER SITE FILE REPORT**



This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at [CompliancePermits@dos.MyFlorida.com](mailto:CompliancePermits@dos.MyFlorida.com) for project review information.

February 8, 2021

Chloe Gossett  
Kimley-Horn | 1920 Wekiva Way, Suite 200  
West Palm Beach, FL 33411  
Direct: 561 840 0217 | Mobile: 816 916 2233

In response to your request on February 8, 2021, the Florida Master Site File lists three standing structures and two resource groups recorded at designated property of South Lucy County, Florida.

When interpreting the results of our search, please consider the following information:

- **This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.**
- **Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.**
- **While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.**
- **Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at [CompliancePermits@dos.MyFlorida.com](mailto:CompliancePermits@dos.MyFlorida.com)**

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

A handwritten signature in black ink that reads "Eman M. Vovsi".

Eman M. Vovsi, Ph.D.  
Florida Master Site File  
[Eman.Vovsi@DOS.MyFlorida.com](mailto:Eman.Vovsi@DOS.MyFlorida.com)

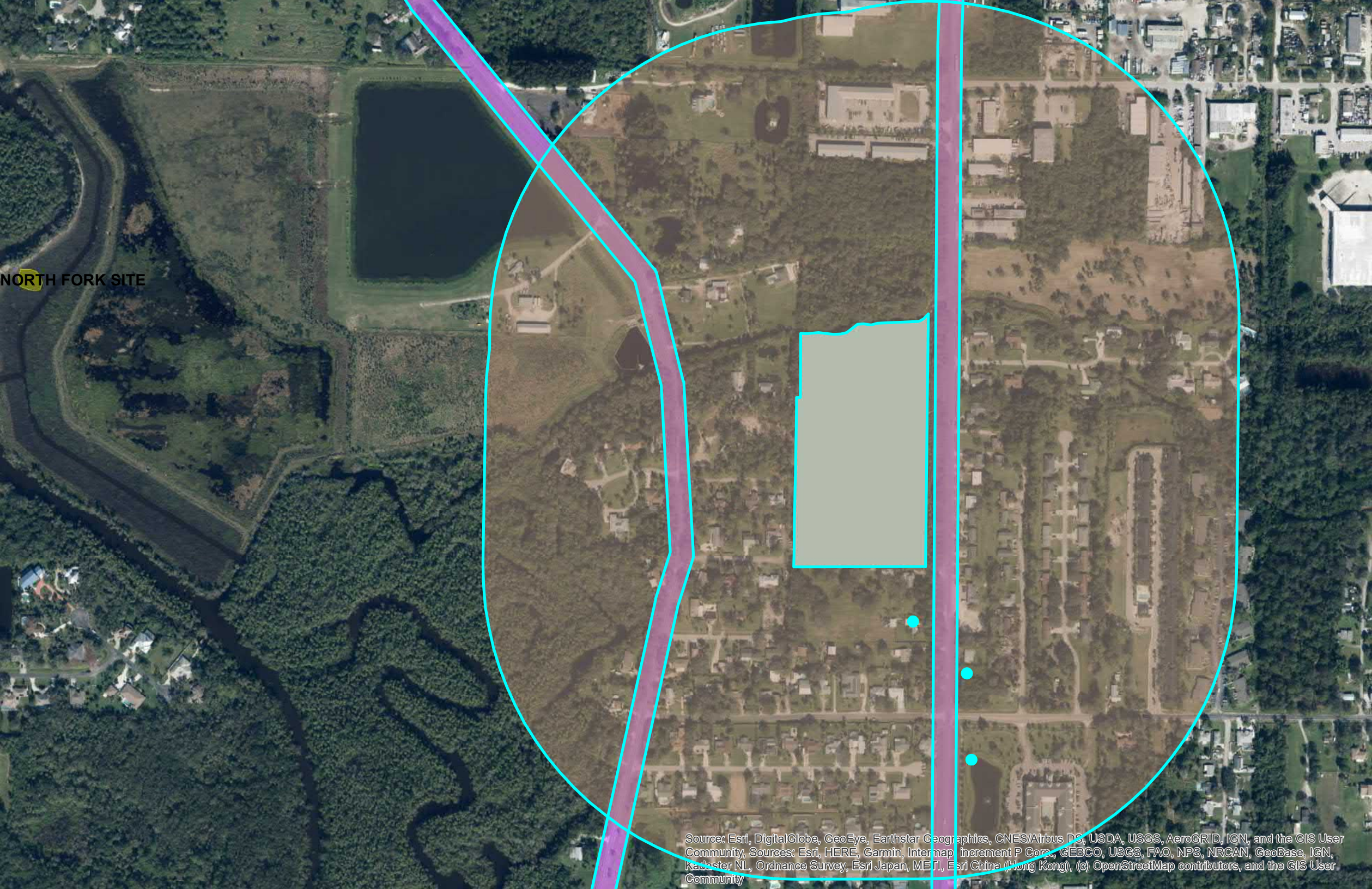


AR=0  
 SS=3  
 CM=0  
 RG=2  
 BR=0  
 Total=5

## Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
SL00179	SS	4111 OLEANDER AVENUE	4111 Oleander AVE, Fort Pierce G.V.	1915 Frame Vernacular		
SL00180	SS	4122 OLEANDER AVENUE		-RESOURCE DESTROYED- c1915 Frame Vernacular		
SL00181	SS	4200 OLEANDER AVENUE		-RESOURCE DESTROYED- c1915 Frame Vernacular		
SL01660	RG	Oleander Avenue	Fort Pierce	Linear Resource - 1 Contrib Resources	Not Eligible	
SL01662	RG	Sunrise Boulevard	Fort Pierce	Linear Resource - 1 Contrib Resources	Not Eligible	

NORTH FORK SITE



### Property Identification

Site Address: OLEANDER AVE  
 Sec/Town/Range: 33/35S/40E  
 Parcel ID: 2433-144-0002-000-3  
 Jurisdiction: Fort Pierce

Use Type: 0000  
 Account #: 185292  
 Map ID: 24/33S  
 Zoning: RM-9 Count

### Ownership

Oleander Oaks LLC  
 5801 S US Highway 1  
 Fort Pierce, FL 34982-3946

### Legal Description

33 35 40 E 1/2 OF NE 1/4 OF SE 1/4 - LESS S 630 FT AND LESS RD AND CANAL RS/W - AND THAT PART OF SE 1/4 OF SE 1/4 OF NE 1/4 LYG S OF CANAL NO. 15 (13.18 AC - 574,121 SF) (OR 3988 - 1547; 3994 - 1479; 3995 - 2451; 4050 - 2327)

### Current Values

Just/Market Value: \$480,800  
 Assessed Value: \$480,800  
 Exemptions: \$0  
 Taxable Value: \$480,800



### Total Areas

Finished/Under Air (SF): 0  
 Gross Sketched Area (SF): 0  
 Land Size (acres): 13.18  
 Land Size (SF): 574,121

**Property taxes are subject to change upon change of ownership.**

- Past taxes are not a reliable projection of future taxes.
- The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.

Taxes for this parcel: [SLC Tax Collector's Office](#)  
 Download TRIM for this parcel: [Download PDF](#)

### Building Design Wind Speed

Occupancy Category	I	II	III & IV
Speed	140	160	160

Sources/links:

### Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Oct 5, 2017	4050 / 2327	0111	QC	MJT Holdings Inc	\$100

### Building Information (1 of 1)

Finished Area: 0 SF

Gross Sketched Area: 0 SF

#### Exterior Data

View:	Roof Cover:	Roof Structure:
Building Type:	Year Built: N/A	Frame:
Grade:	Effective Year: N/A	Primary Wall:
Story Height:	No. Units: 0	Secondary Wall:

#### Interior Data

Bedrooms: 0	Electric:	Primary Int Wall:
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Full Baths: 0  
 Half Baths: 0  
 A/C %: 0%

Heat Type:  
 Heat Fuel:  
 Heated %: N/A%

Avg Hgt/Floor: 0  
 Primary Floors:  
 Sprinkled %: 0%



Image  
 or  
 Sketch  
 unavailable  
 for display

**Sketch Area Legend**

Sub Area Description Area Fin. Area Perimeter

**Special Features and Yard Items**

Type Qty Units Year Blt

**Current Year Values**


Current Values Breakdown

Building: \$0  
 Land: \$480,800  
 Just/Market: \$480,800  
 Ag Credit: \$0  
 Save Our Homes or 10% Cap: \$0  
 Assessed: \$480,800  
 Exemption(s): \$0  
 Taxable: \$480,800

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2019	0054	13.18	North St. Lucie Water Management District	\$243.83
Start Year	AssessCode	Units	Description	Amount
2019	0041	35.9	Fort Pierce Stormwater Charge	\$2,477.10

This does not necessarily represent the total Special Assessments that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

### Historical Values

Year	Just/Market	Assessed	Exemptions	Taxable
2020	\$480,800	\$480,800	\$0	\$480,800
2019	\$527,200	\$527,200	\$0	\$527,200

### Permits

Number	Issue Date	Description	Amount	Fee
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Notice: This does not necessarily represent all the permits for this property.

[Click the following link to check for additional permit data in Fort Pierce](#)

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All information is believed to be correct at this time, but is subject to change and is provided without any warranty.

© Copyright 2021 Saint Lucie County Property Appraiser. All rights reserved.



# **OLEANDER OAKS (Fort Pierce, FL)**

## Traffic Impact Study

April 2021

**Kimley»»Horn**

Decorative graphic elements in the bottom right corner consisting of overlapping geometric shapes: a grey triangle, a red trapezoid, and a blue trapezoid.

# TRAFFIC IMPACT STUDY

## Oleander Oaks

City of Fort Pierce, FL

*Prepared for:*

*Alva Stone Group*

*Prepared by:*

*Kimley-Horn and Associates, Inc.*

**April 2021**

**Blaine Bergstresser, P.E.**

**PE #84598**

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## 1.0 INTRODUCTION

Kimley-Horn has been retained by Alva Stone Group to analyze and document the traffic impacts associated with the development of Oleander Oaks in the City of Fort Pierce, Florida. The following is a Traffic Impact Study (TIS) that generally conforms to the policies and guidelines of the St. Lucie Transportation Planning Organization (TPO), St. Lucie County Land Development Code (LDC) Section 11.02.09, and the City of Fort Pierce LDC.

Oleander Oaks is a proposed single-family residential development generally located on the east side of Oleander Avenue, north of Kling Road in City of Fort Pierce, Florida. The project property is currently vacant. The development is proposed to consist of ±63 single-family dwelling units and anticipated to be built by Year 2026.

Access to the site will be provided via one full-access driveway onto Oleander Avenue. This access point is shown on the conceptual site plan provided in **Appendix A**.

## 2.0 STUDY AREA DETERMINATION

### 2.1 TRIP GENERATION

Trip generation for the proposed project was calculated per procedures published in the 10th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. The Land Use Code (LUC) used for the proposed site is:

- LUC 210, Single-Family Detached Housing

**Table 1** provides the Daily, AM peak hour, and PM peak hour trip generation summary for the project. Excerpts from the ITE Trip Generation Manual is included in **Appendix B**.

**Table 1: Trip Generation Summary**

DAILY	Land Use	ITE LUC	Size	Units	Trip Rate <sup>1</sup>	Daily Trip Generation				
						Total	In <sup>1</sup>		Out <sup>1</sup>	
	Single-Family Detached Housing	210	63	DU	10.79	680	50%	340	50%	340
<b>Total Generated Trips</b>						<b>680</b>	<b>340</b>	<b>340</b>		

AM PEAK HOUR	Land Use	ITE LUC	Size	Units	Trip Rate <sup>1</sup>	AM Peak Hour Trip Generation				
						Total	In <sup>1</sup>		Out <sup>1</sup>	
	Single-Family Detached Housing	210	63	DU	0.79	50	25%	13	75%	37
<b>Total Generated Trips</b>						<b>50</b>	<b>13</b>	<b>37</b>		

PM PEAK HOUR	Land Use	ITE LUC	Size	Units	Trip Rate <sup>1</sup>	PM Peak Hour Trip Generation				
						Total	In <sup>1</sup>		Out <sup>1</sup>	
	Single-Family Detached Housing	210	63	DU	1.03	65	63%	41	37%	24
<b>Total Generated Trips</b>						<b>65</b>	<b>41</b>	<b>24</b>		

<sup>1</sup> Vehicle trip rates and directional splits per data and procedures outlined in ITE Trip Generation, 10th Edition

## 2.2 TRIP DISTRIBUTION AND TRIP ASSIGNMENT

Projected traffic demand of project trips on study roadways was derived with use of the adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Greater Treasure Coast Regional Planning Model (GTCRPM) set and situated within the existing roadway network to appropriately represent project access. The model was used to assign trips for all trip purposes between allocated origin and destination pairs using project buildout year model data. Trip distribution for the project was extracted from the completed model assignment and reviewed for logic. The resulting model plots showing percent of daily project distribution are provided in **Appendix C**.

Daily model project distribution was referenced to manually assign project distribution at the study area intersections and driveways in general accordance with model output. **Figure 1** shows the intersection movement project distribution surrounding Oleander Oaks used in this TIS.

Project trip distribution percentages were used to assign anticipated project trips to the study area roadways and intersections. **Figure 2** shows the anticipated AM and PM peak hour project volumes at the study area intersections.

Figure 1: Project Trip Distribution

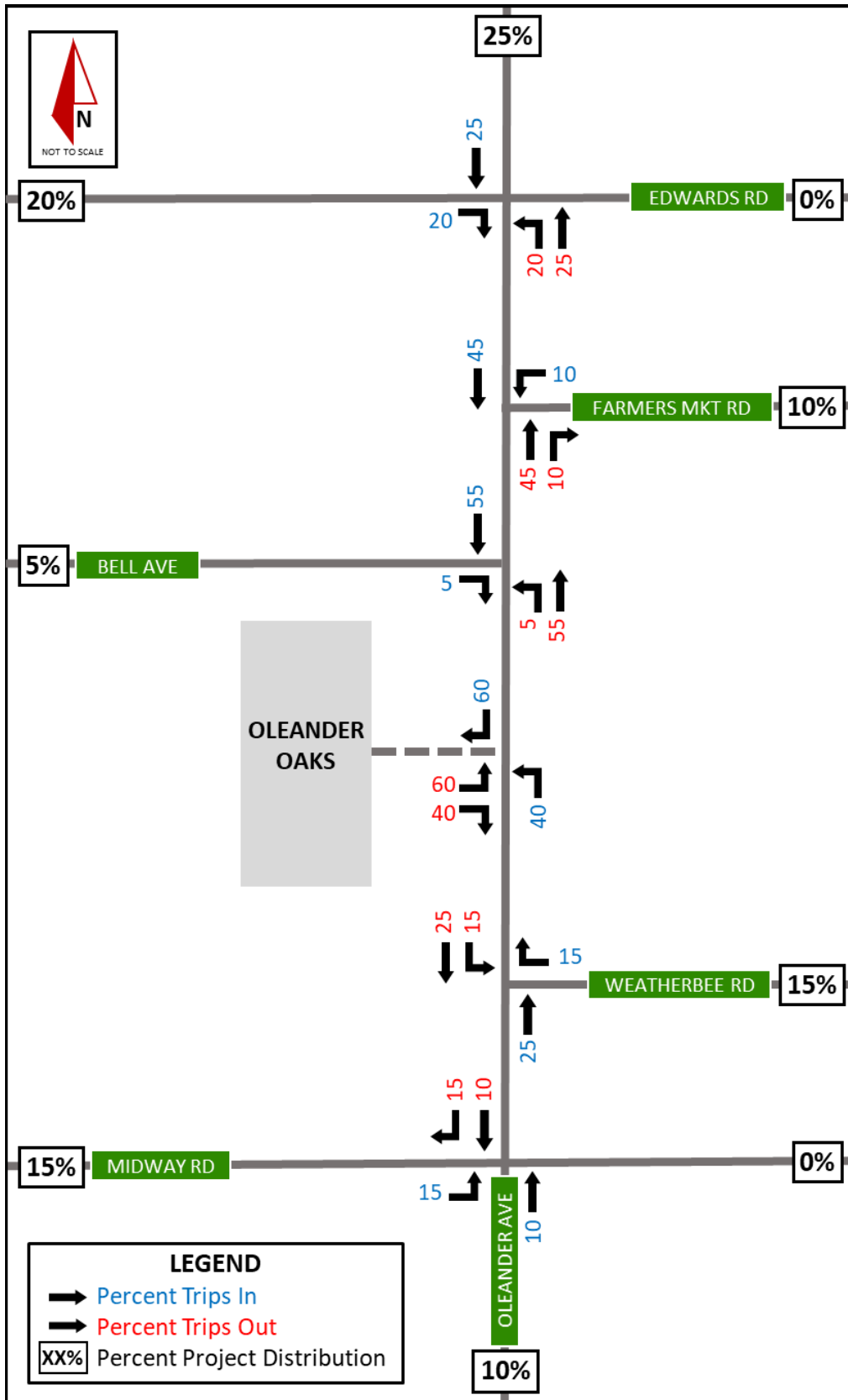
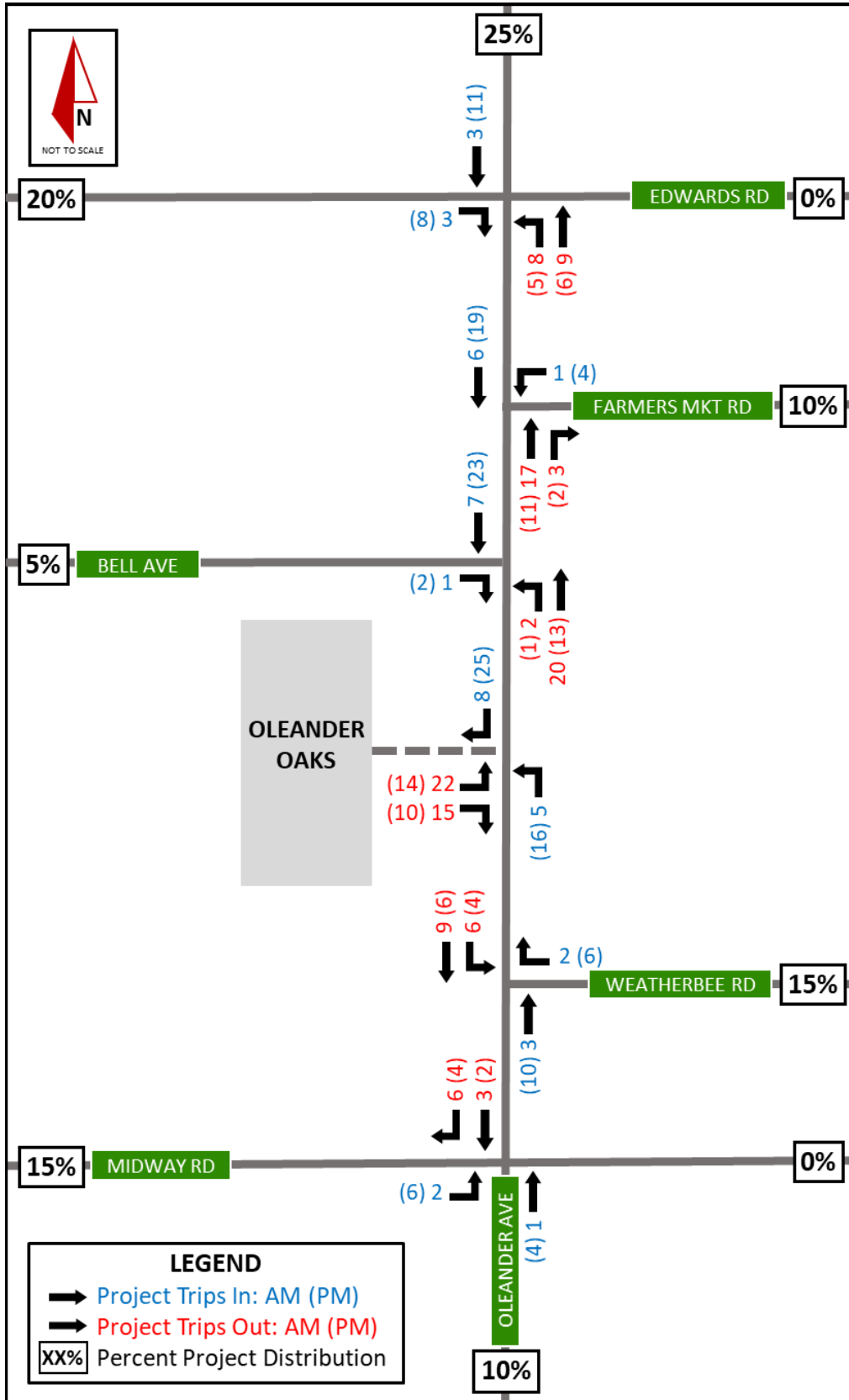


Figure 2: Project Trip Assignment



## 2.3 STUDY AREA

To determine roadway segments to be included in this TIA, a 1.0% significance test was performed for all major roadway segments within a 2-mile radius of the project site. The results of the 1.0% significance test are shown in **Table 2**. The percent significance for project trips was determined by comparing the maximum directional peak hour project trips to the directional peak hour service capacity as provided in the latest St. Lucie TPO Traffic Counts and Level of Service Report. Excerpts from the St. Lucie TPO traffic count report are included in **Appendix D**.

The resulting study area roadway segments are listed below and displayed on **Figure 3**:

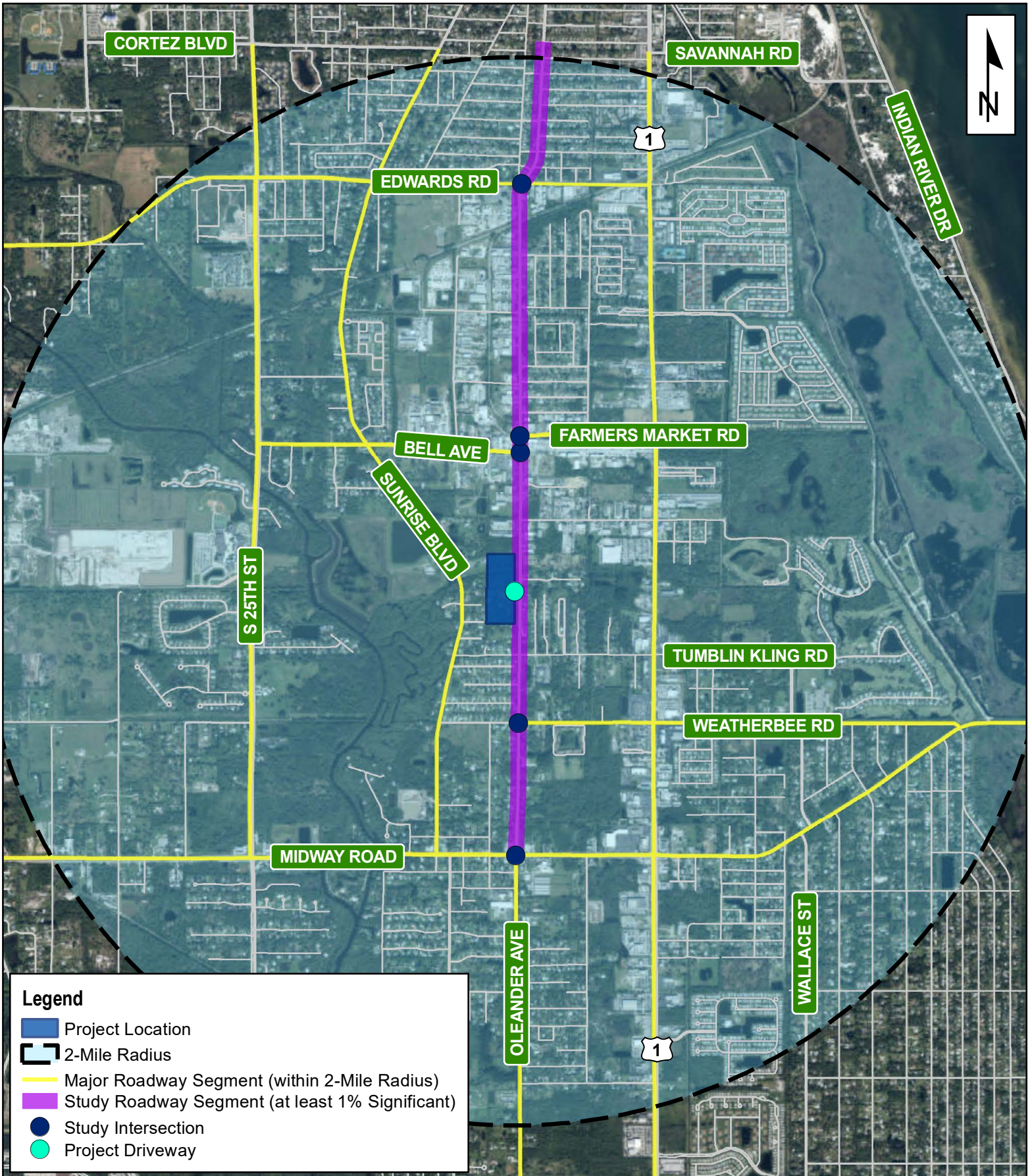
- Oleander Avenue, from Midway Road to Weatherbee Road
- Oleander Avenue, from Weatherbee Road to Bell Avenue
- Oleander Avenue, from Bell Avenue to Farmers Market Road
- Oleander Avenue, from Farmers Market Road to Edwards Road
- Oleander Avenue, from Edwards Road to Wisteria Avenue

The project driveway and intersections along study area roadway segments will be included in this TIA. The resulting study area intersections are listed below and displayed on **Figure 3**.

- Oleander Avenue & Midway Road
- Oleander Avenue & Weatherbee Road
- Oleander Avenue & Project Driveway
- Oleander Avenue & Bell Avenue
- Oleander Avenue & Farmers Market Road
- Oleander Avenue & Edwards Road

**Table 2: Roadway Segment Significance Test**

Roadway		Directional Peak Hour Service Capacity	% Project Distribution	% Project Significance
From	To			
<b>Bell Avenue</b>				
25th Street	Sunrise Boulevard	790	1%	0.1%
Sunrise Boulevard	Oleander Avenue	600	2%	0.1%
<b>Edwards Road</b>				
Selvitz Road	25th Street	880	6%	0.3%
25th Street	Sunrise Boulevard	1,630	19%	0.5%
Sunrise Boulevard	Oleander Avenue	1,630	19%	0.5%
Oleander Avenue	US 1	1,630	0%	0.0%
<b>Farmers Market Road</b>				
Oleander Avenue	US 1	750	6%	0.3%
<b>Midway Road</b>				
Selvitz Road	Christensen Road	920	7%	0.3%
Christensen Road	25th Street	790	7%	0.4%
25th Street	Sunrise Boulevard	790	14%	0.7%
Sunrise Boulevard	Oleander Avenue	790	15%	0.8%
Oleander Avenue	US 1	790	0%	0.0%
US 1	Wallace Street	790	3%	0.2%
Wallace Street	Weatherbee Road	920	3%	0.1%
Weatherbee Road	Indian River Drive	630	1%	0.1%
<b>Oleander Avenue</b>				
Kitterman Road	Midway Road	750	9%	0.5%
Midway Road	Weatherbee Road	750	26%	1.4%
Weatherbee Road	Bell Avenue	540	59%	4.5%
Bell Avenue	Farmers Market Road	540	55%	4.2%
Farmers Market Road	Edwards Road	750	49%	2.7%
Edwards Road	Wisteria Avenue	750	25%	1.4%
<b>Sunrise Boulevard</b>				
Midway Road	Bell Avenue	540	0%	0.0%
Bell Avenue	Edwards Road	750	1%	0.1%
Edwards Road	Cortez Boulevard	600	0%	0.0%
<b>US 1</b>				
Easy Street	Midway Road	3,170	8%	0.1%
Midway Road	Weatherbee Road	2,100	11%	0.2%
Weatherbee Road	Farmers Market Road	2,000	2%	0.0%
Farmers Market Road	Edwards Road	2,000	4%	0.1%
Edwards Road	Savannah Road	2,000	3%	0.1%
<b>Weatherbee Road</b>				
Oleander Avenue	US 1	750	15%	0.8%
US 1	Midway Road	750	3%	0.2%
<b>25th Street</b>				
Midway Road	Bell Avenue	2,100	1%	0.0%
Bell Avenue	Edwards Road	2,100	0%	0.0%
Edwards Road	Cortez Boulevard	2,000	13%	0.3%



**Legend**

- Project Location
- 2-Mile Radius
- Major Roadway Segment (within 2-Mile Radius)
- Study Roadway Segment (at least 1% Significant)
- Study Intersection
- Project Driveway

**Figure 3 - Project Location and Study Area Roadway Segments/Intersections**

## Oleander Oaks - Traffic Impact Study

## 3.0 EXISTING CONDITIONS ANALYSIS – YEAR 2021

### 3.1 EXISTING TRAFFIC

Turning movement counts (TMCs) were collected at the study intersections on Tuesday, April 6, 2021 and are provided in **Appendix E**. Data was collected during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods.

The existing turning movement volumes were adjusted to peak season using a 1.01 adjustment factor published by the Florida Department of Transportation (FDOT). The data referenced from FDOT's Florida Traffic Online 2019 Peak Season Factor Category Report is included in **Appendix F**. Adjusted turning movement volume worksheets for all intersections are included in **Appendix G**. The AM and PM peak hour intersection turning movement volumes at the study area intersections are illustrated on **Figures 4 and 5**, respectively.

### 3.2 EXISTING ROADWAY SEGMENT CONDITIONS

A roadway segment analysis was performed within the study area to determine existing AM and PM peak hour conditions. The analysis was conducted by comparing Year 2021 peak hour peak direction (PHPD) traffic volumes to the PHPD service capacities per the latest St. Lucie TPO Traffic Counts and Level of Service Report (excerpts included in **Appendix D**).

The existing roadway segment data is included in **Tables 3 and 4** for AM and PM peak hour roadway segment conditions, respectively. As shown in the tables, the analysis identifies an existing capacity deficiency for both scenarios at the following roadway segment:

- Oleander Avenue, from Bell Avenue to Farmers Market Road

**Table 3: Existing (2021) AM Peak Hour Roadway Segment Analysis**

Roadway Segment	Roadway Attributes <sup>1</sup>				PHPD Service Capacity <sup>2</sup>	2020 AM PHPD <sup>2</sup>	Annual Growth Rate	2021 Existing AM PHPD <sup>3</sup>	V/C Ratio	LOS
	Functional Classification	Area Type	Adopted LOS	Number of Lanes						
<b>Oleander Avenue</b>										
Midway Road to Weatherbee Road	Urban Minor Arterial	Urban	D	2U	750	388	1.55%	394	0.53	D
Weatherbee Road to Bell Avenue	Urban Minor Arterial	Urban	D	2U	540	388	1.55%	394	0.73	D
Bell Avenue to Farmers Market Road	Urban Minor Arterial	Urban	D	2U	540	671	1.55%	681	<b>1.26</b>	<b>F</b>
Farmers Market Road to Edwards Road	Urban Minor Arterial	Urban	D	2U	750	671	1.55%	681	0.91	D
Edwards Road to Wisteria Avenue	Urban Minor Arterial	Urban	D	2U	750	611	1.55%	620	0.83	D

1. Roadway attributes were obtained from the 2010 FDOT St. Lucie County Federal Functional Classification Map, St. Lucie County Transportation Element, and supplemented with the 2020 FDOT Quality/LOS Tables.

2. Obtained from the latest St. Lucie TPO Traffic Counts and Level of Service Report

3. 2020 PHPD values were grown annually by 1.55% to reach 2021 PM PHPD values.

**Table 4: Existing (2021) PM Peak Hour Roadway Segment Analysis**

Roadway Segment	Roadway Attributes <sup>1</sup>				PHPD Service Capacity <sup>2</sup>	2020 PM PHPD <sup>2</sup>	Annual Growth Rate	2021 Existing PM PHPD <sup>3</sup>	V/C Ratio	LOS
	Functional Classification	Area Type	Adopted LOS	Number of Lanes						
<b>Oleander Avenue</b>										
Midway Road to Weatherbee Road	Urban Minor Arterial	Urban	D	2U	750	421	1.55%	428	0.57	D
Weatherbee Road to Bell Avenue	Urban Minor Arterial	Urban	D	2U	540	421	1.55%	428	0.79	D
Bell Avenue to Farmers Market Road	Urban Minor Arterial	Urban	D	2U	540	647	1.55%	657	<b>1.22</b>	<b>F</b>
Farmers Market Road to Edwards Road	Urban Minor Arterial	Urban	D	2U	750	647	1.55%	657	0.88	D
Edwards Road to Wisteria Avenue	Urban Minor Arterial	Urban	D	2U	750	554	1.55%	563	0.75	D

1. Roadway attributes were obtained from the 2010 FDOT St. Lucie County Federal Functional Classification Map, St. Lucie County Transportation Element, and supplemented with the 2020 FDOT Quality/LOS Tables.

2. Obtained from the latest St. Lucie TPO Traffic Counts and Level of Service Report

3. 2020 PHPD values were grown annually by 1.55% to reach 2021 PM PHPD values.

### 3.3 EXISTING INTERSECTION CONDITIONS

Intersection operational analyses were performed for 2021 existing conditions in the AM and PM peak hour using procedures outlined in the *Highway Capacity Manual (2010)* with Synchro (v10) software. Signal timing and phasing plans were provided by St. Lucie County staff and are included in **Appendix H**. A summary of intersection level of service (LOS), delay, and maximum volume/capacity (v/c) ratios for AM and PM peak hour existing conditions are provided in **Tables 5 and 6**, respectively. Synchro outputs are provided in **Appendix I**.

As shown in the tables, the study area intersections operate at an acceptable LOS with turning movements demonstrating maximum v/c ratios of less than one (1.0) in both scenarios.

Table 5: Existing (2021) AM Peak Hour Intersection Conditions

Intersection	AM Peak Hour Existing Conditions		
	LOS	Delay (Sec)	Max V/C Ratio
Oleander Avenue & Midway Road	C	25.8	0.72
Oleander Avenue & Weatherbee Road	C	6.5	0.41
Oleander Avenue & Bell Avenue	C	4.3	0.40
Oleander Avenue & Farmers Market Road	C	1.9	0.20
Oleander Avenue & Edwards Road	C	22.4	0.76

Notes:

1. Intersection LOS and delay at unsignalized intersections are reported for the most critical stop-controlled approach only.

Table 6: Existing (2021) PM Peak Hour Intersection Conditions

Intersection	PM Peak Hour Existing Conditions		
	LOS	Delay (Sec)	Max V/C Ratio
<b>Oleander Avenue &amp; Midway Road</b>	C	27.0	0.71
<b>Oleander Avenue &amp; Weatherbee Road</b>	C	5.7	0.36
<b>Oleander Avenue &amp; Bell Avenue</b>	C	4.4	0.45
<b>Oleander Avenue &amp; Farmers Market Road</b>	C	2.5	0.32
<b>Oleander Avenue &amp; Edwards Road</b>	C	24.5	0.80

Notes:

1. Intersection LOS and delay at unsignalized intersections are reported for the most critical stop-controlled approach only.

## 4.0 BACKGROUND CONDITIONS ANALYSIS – YEAR 2026

### 4.1 BACKGROUND TRAFFIC

Background traffic conditions, without the impact of project trips on the roadway network, were evaluated for Year 2026. Background volumes on study area intersections and roadway segments were derived by applying an annual growth rate to existing traffic counts. Turning movement volume worksheets for all intersections are provided in **Appendix E**. The AM and PM peak hour intersection turning movement volumes at the study area intersections are illustrated on **Figures 4 and 5**, respectively.

### 4.2 BACKGROUND GROWTH RATE

The University of Florida’s Bureau of Economic and Business Research (BEBR) analyzes population growth trends in counties throughout the state, along with other statistical metrics. To determine a reasonable background growth rate for the study area, the medium BEBR growth rate for St. Lucie County was calculated.

As shown in **Table 7**, the medium BEBR growth rate for Year 2025 is approximately 1.55%. Therefore, a 1.55% annual background growth rate was used in this analysis to provide conservative results.

**Table 7: BEBR Growth Rate Calculation**

County	BEBR Pop Estimate April 1, 2019	BEBR Population Projections (April 1)		2025
		Range	2025	
St. Lucie	309,359	Low	319,300	0.46%
		Medium	342,900	<b>1.55%</b>
		High	364,600	2.55%

### 4.3 COMMITTED IMPROVEMENTS

Based on the St. Lucie TPO 2045 Long Range Transportation Plan (LRTP), the TPO's Transportation Improvement Program (TIP), and FDOT's 5-year work program, the following roadway improvement was located within the study area of the development:

- Midway Road, from 25<sup>th</sup> Street to US 1 – Add Lanes & Reconstruct (the improvement design is included in **Appendix J**)

This improvement was included in all intersection operational analyses (existing, background, and buildout scenarios).

### 4.4 BACKGROUND ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was performed within the study area to determine background AM and PM peak hour conditions. The analysis was conducted by comparing Year 2026 peak hour peak direction (PHPD) traffic volumes to the PHPD service capacities per the latest St. Lucie TPO Traffic Counts and Level of Service Report (excerpts included in **Appendix D**). Year 2026 PHPD volumes were derived by applying a 1.55% annual growth rate to Year 2021 PHPD volumes.

The background roadway segment data is included in **Tables 8 and 9** for AM and PM peak hour roadway segment conditions, respectively. As shown in the tables, the analysis identifies a background capacity deficiency (that is also identified in the existing Year 2021 scenario) for both scenarios at the following roadway segment:

- Oleander Avenue, from Bell Avenue to Farmers Market Road (existing Year 2021 deficiency)

**Table 8:** Background (2026) AM Peak Hour Roadway Segment Analysis

Roadway Segment	Adopted LOS	PHPD Service Capacity <sup>1</sup>	2021 Existing AM PHPD	Annual Growth Rate	2026 Bkgrd AM PHPD <sup>2</sup>	V/C Ratio	LOS
<b>Oleander Avenue</b>							
Midway Road to Weatherbee Road	D	750	394	1.55%	425	0.57	D
Weatherbee Road to Bell Avenue	D	540	394	1.55%	425	0.79	D
Bell Avenue to Farmers Market Road	D	540	681	1.55%	734	<b>1.36</b>	<b>F</b>
Farmers Market Road to Edwards Road	D	750	681	1.55%	734	0.98	D
Edwards Road to Wisteria Avenue	D	750	620	1.55%	668	0.89	D

1. Obtained from the latest St. Lucie TPO Traffic Counts and Level of Service Report
2. 2021 PHPD values were grown annually by 1.55% to reach 2026 PM PHPD values.

**Table 9:** Background (2026) PM Peak Hour Roadway Segment Analysis

Roadway Segment	Adopted LOS	PHPD Service Capacity <sup>1</sup>	2021 Existing PM PHPD	Annual Growth Rate	2026 Bkgrd PM PHPD <sup>2</sup>	V/C Ratio	LOS
<b>Oleander Avenue</b>							
Midway Road to Weatherbee Road	D	750	428	1.55%	461	0.61	D
Weatherbee Road to Bell Avenue	D	540	428	1.55%	461	0.85	D
Bell Avenue to Farmers Market Road	D	540	657	1.55%	708	<b>1.31</b>	<b>F</b>
Farmers Market Road to Edwards Road	D	750	657	1.55%	708	0.94	D
Edwards Road to Wisteria Avenue	D	750	563	1.55%	607	0.81	D

1. Obtained from the latest St. Lucie TPO Traffic Counts and Level of Service Report
2. 2021 PHPD values were grown annually by 1.55% to reach 2026 PM PHPD values.

## 4.5 BACKGROUND INTERSECTION ANALYSIS

Intersection operational analyses were performed for 2026 background conditions in the AM and PM peak hour using procedures outlined in the *Highway Capacity Manual (2010)* with Synchro (v10) software. Signal timing and phasing plans were provided by St. Lucie County staff and are included in **Appendix H**. A summary of intersection level of service (LOS), delay, and maximum volume/capacity (v/c) ratios for AM and PM peak hour existing conditions are provided in **Tables 10 and 11**, respectively. Synchro outputs are provided in **Appendix I**.

As shown in the tables, the study area intersections operate at an acceptable LOS with turning movements demonstrating maximum v/c ratios of less than one (1.0) in both scenarios.

Table 10: Background (2026) AM Peak Hour Intersection Conditions

Intersection	AM Peak Hour Background Conditions		
	LOS	Delay (Sec)	Max V/C Ratio
Oleander Avenue & Midway Road	C	26.9	0.74
Oleander Avenue & Weatherbee Road	C	7.3	0.48
Oleander Avenue & Bell Avenue	C	4.7	0.45
Oleander Avenue & Farmers Market Road	C	2.0	0.23
Oleander Avenue & Edwards Road	C	23.1	0.78

Notes:

1. Intersection LOS and delay at unsignalized intersections are reported for the most critical stop-controlled approach only.

Table 11: Background (2026) PM Peak Hour Intersection Conditions

Intersection	PM Peak Hour Background Conditions		
	LOS	Delay (Sec)	Max V/C Ratio
Oleander Avenue & Midway Road	C	28.1	0.73
Oleander Avenue & Weatherbee Road	C	6.5	0.43
Oleander Avenue & Bell Avenue	D	5.4	0.55
Oleander Avenue & Farmers Market Road	C	2.9	0.38
Oleander Avenue & Edwards Road	C	25.8	0.81

Notes:

1. Intersection LOS and delay at unsignalized intersections are reported for the most critical stop-controlled approach only.

## 5.0 BUILDOUT CONDITIONS ANALYSIS – YEAR 2026

### 5.1 BUILDOUT TRAFFIC

Buildout traffic conditions were evaluated for Year 2026. Buildout volumes were developed by adding anticipated project trips to background volumes. Turning movement volume worksheets for all intersections can be found in **Appendix G**.

### 5.2 BUILDOUT ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was performed within the study area to determine buildout AM and PM peak hour conditions. The analysis was conducted by comparing Year 2026 peak hour peak direction (PHPD) traffic volumes to the PHPD service capacities per the latest St. Lucie TPO Traffic Counts and Level of Service Report (excerpts included in **Appendix D**). Year 2026 PHPD volumes were derived by adding anticipated project trips to background volumes.

For the AM and PM peak hour buildout analyses, the LOS standard and corresponding peak hour service capacity for the segment of Oleander Avenue, from Farmers Market Road to Edwards Road was increased from LOS D to E as the St. Lucie County Comprehensive Plan Transportation Element (October 26, 2010) states the following:

*“The County wishes to maintain a LOS D or better for all roadways but recognizes that allowing a LOS E allows development to proceed while a minimum of LOS D might cause severe constraints on private development. However, a LOS D will be utilized for these roadways when establishing transportation impact fees.”*

The buildout roadway segment data is included in **Tables 12 and 13** for AM and PM peak hour roadway segment conditions, respectively. As shown in the tables, the analysis identifies a buildout capacity deficiency (that is also identified in the existing Year 2021 scenario) for both scenarios at the following roadway segment:

- Oleander Avenue, from Bell Avenue to Farmers Market Road (existing Year 2021 deficiency)

The roadway segment capacity deficiency for both the buildout scenario AM and PM peak hours are not due to the addition of project trips.

**Table 12: Buildout (2026) AM Peak Hour Roadway Segment Analysis**

Roadway Segment	Adopted LOS	PHPD Service Capacity <sup>1, 2</sup>	2026 Bkgrd AM PHPD	Project Dist.	Project Trips AM PHPD	2026 Buildout AM PHPD	V/C Ratio	LOS
<b>Oleander Avenue</b>								
Midway Road to Weatherbee Road	D	750	425	26%	10	435	0.58	D
Weatherbee Road to Bell Avenue	D	540	425	59%	22	447	0.83	D
Bell Avenue to Farmers Market Road	D	540	734	55%	20	754	<b>1.40</b>	<b>F</b>
Farmers Market Road to Edwards Road	E <sup>2</sup>	800	734	49%	18	752	0.94	D
Edwards Road to Wisteria Avenue	D	750	668	25%	9	677	0.90	D

1. Obtained from the latest St. Lucie TPO Traffic Counts and Level of Service Report

2. LOS standard and corresponding service capacity were increased per the St. Lucie County Comprehensive Plan (October 26, 2010)

**Table 13: Buildout (2026) PM Peak Hour Roadway Segment Analysis**

Roadway Segment	Adopted LOS	PHPD Service Capacity <sup>1, 2</sup>	2026 Bkgrd PM PHPD	Project Dist.	Project Trips PM PHPD	2026 Buildout PM PHPD	V/C Ratio	LOS
<b>Oleander Avenue</b>								
Midway Road to Weatherbee Road	D	750	461	26%	11	472	0.63	D
Weatherbee Road to Bell Avenue	D	540	461	59%	24	485	0.90	D
Bell Avenue to Farmers Market Road	D	540	708	55%	23	731	<b>1.35</b>	<b>F</b>
Farmers Market Road to Edwards Road	E <sup>2</sup>	800	708	49%	20	728	0.91	D
Edwards Road to Wisteria Avenue	D	750	607	25%	10	617	0.82	D

1. Obtained from the latest St. Lucie TPO Traffic Counts and Level of Service Report

2. LOS standard and corresponding service capacity were increased per the St. Lucie County Comprehensive Plan (October 26, 2010)

### 5.3 BUILDOUT INTERSECTION ANALYSIS

Intersection operational analyses were performed for 2026 buildout conditions in the AM and PM peak hour using procedures outlined in the *Highway Capacity Manual (2010)* with Synchro (v10) software. Signal timing and phasing plans were provided by St. Lucie County staff and are included in **Appendix H**. A summary of intersection level of service (LOS), delay, and maximum volume/capacity (v/c) ratios for AM and PM peak hour existing conditions are provided in **Tables 14 and 15**, respectively. Synchro outputs are provided in **Appendix I**.

As shown in the tables, the study area intersections operate at an acceptable LOS with turning movements demonstrating maximum v/c ratios of less than one (1.0) in both scenarios.

The AM and PM peak hour intersection turning movement volumes at buildout for the study area intersections are illustrated on **Figures 4 and 5**, respectively.

Table 14: Buildout (2026) AM Peak Hour Intersection Conditions

Intersection	AM Peak Hour Buildout Conditions		
	LOS	Delay (Sec)	Max V/C Ratio
Oleander Avenue & Midway Road	C	27.0	0.74
Oleander Avenue & Weatherbee Road	C	7.6	0.50
Oleander Avenue & Bell Avenue	C	4.8	0.47
Oleander Avenue & Farmers Market Road	C	2.1	0.25
Oleander Avenue & Edwards Road	C	23.2	0.78
Oleander Avenue & Project Driveway	B	0.7	0.09

Notes:

1. Intersection LOS and delay at unsignalized intersections are reported for the most critical stop-controlled approach only.

Table 15: Buildout (2026) PM Peak Hour Intersection Conditions

Intersection	PM Peak Hour Buildout Conditions		
	LOS	Delay (Sec)	Max V/C Ratio
Oleander Avenue & Midway Road	C	28.4	0.74
Oleander Avenue & Weatherbee Road	D	6.8	0.46
Oleander Avenue & Bell Avenue	D	5.8	0.59
Oleander Avenue & Farmers Market Road	C	3.1	0.41
Oleander Avenue & Edwards Road	C	26.1	0.82
Oleander Avenue & Project Driveway	B	0.6	0.07

Notes:

1. Intersection LOS and delay at unsignalized intersections are reported for the most critical stop-controlled approach only.

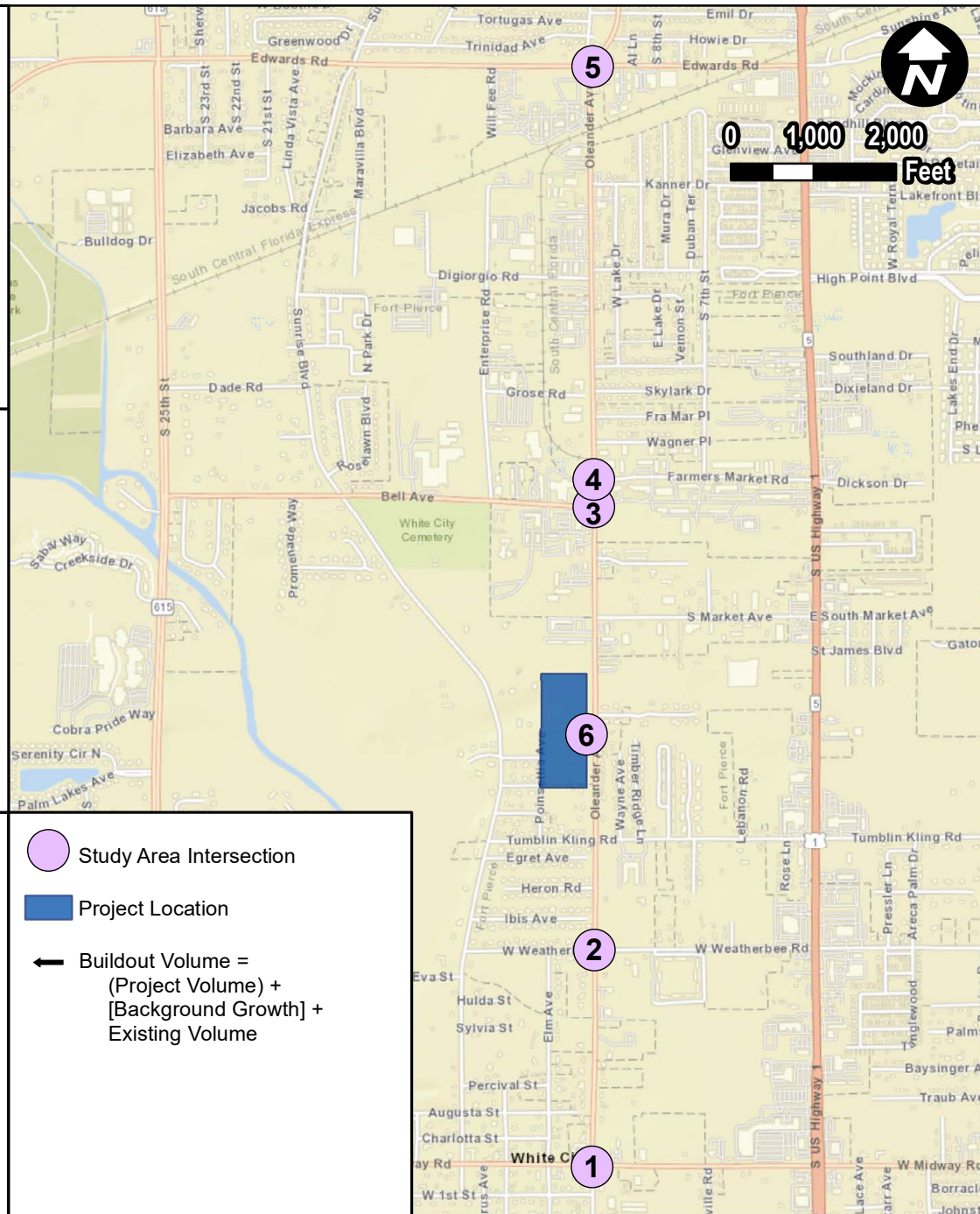
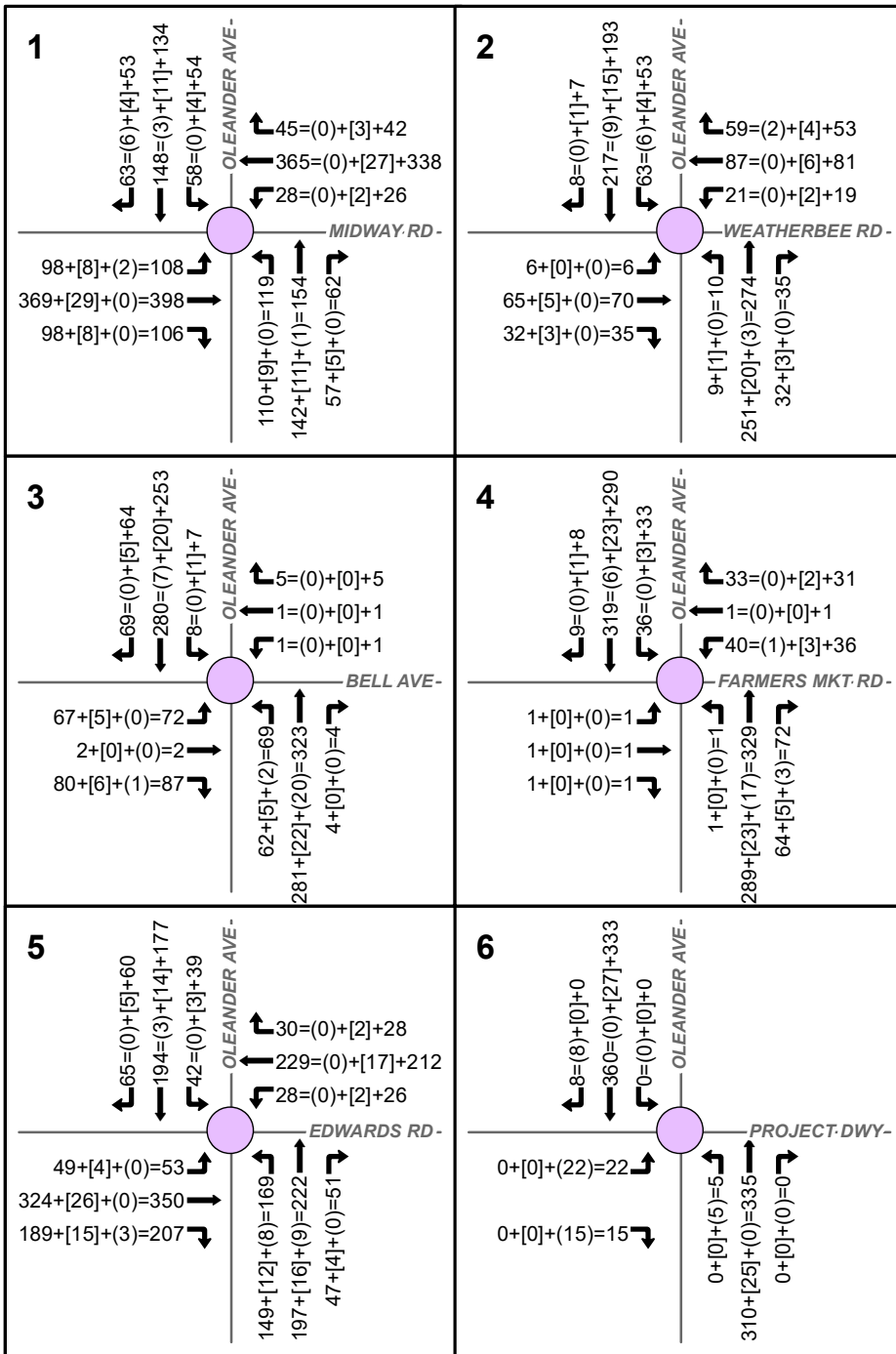
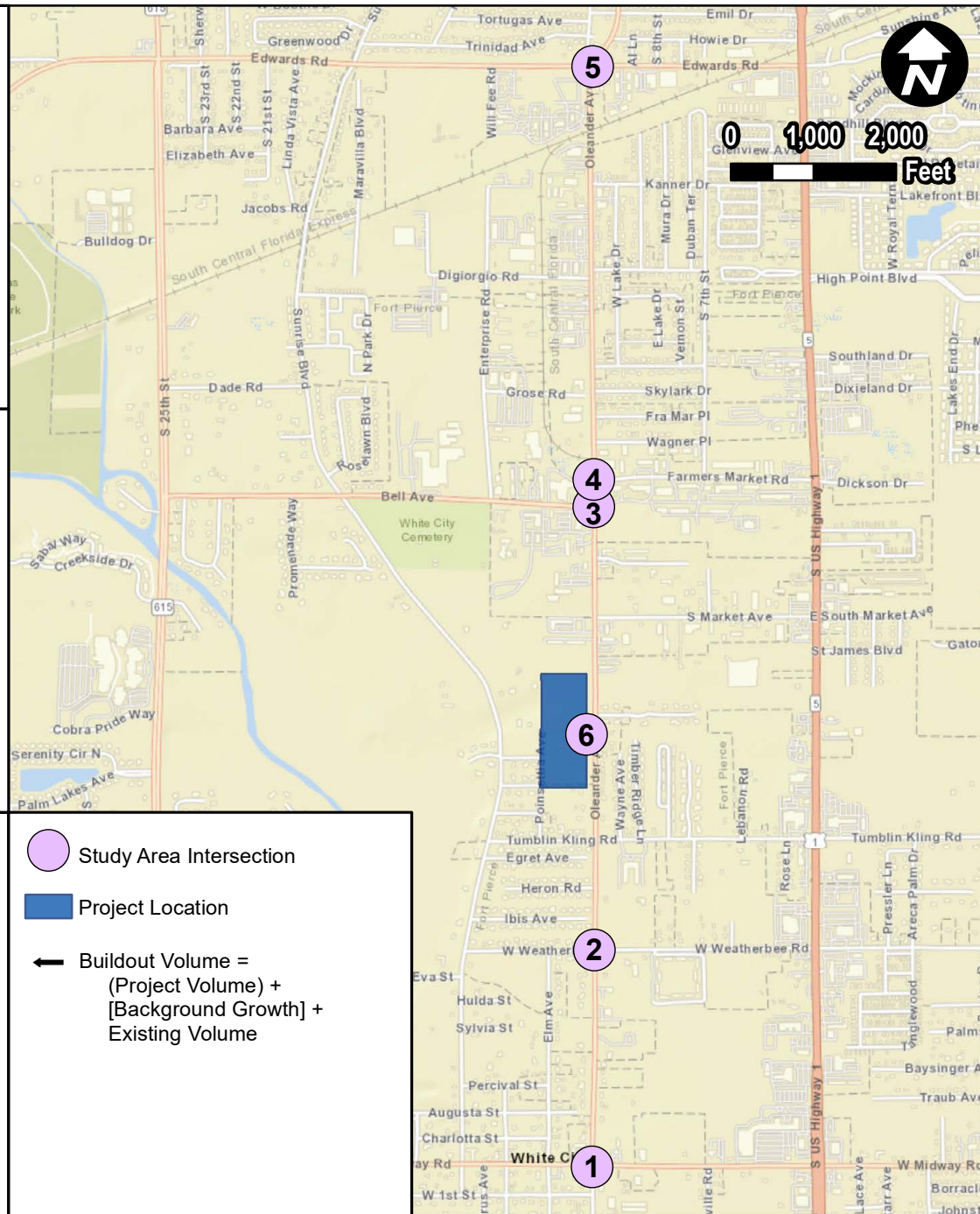
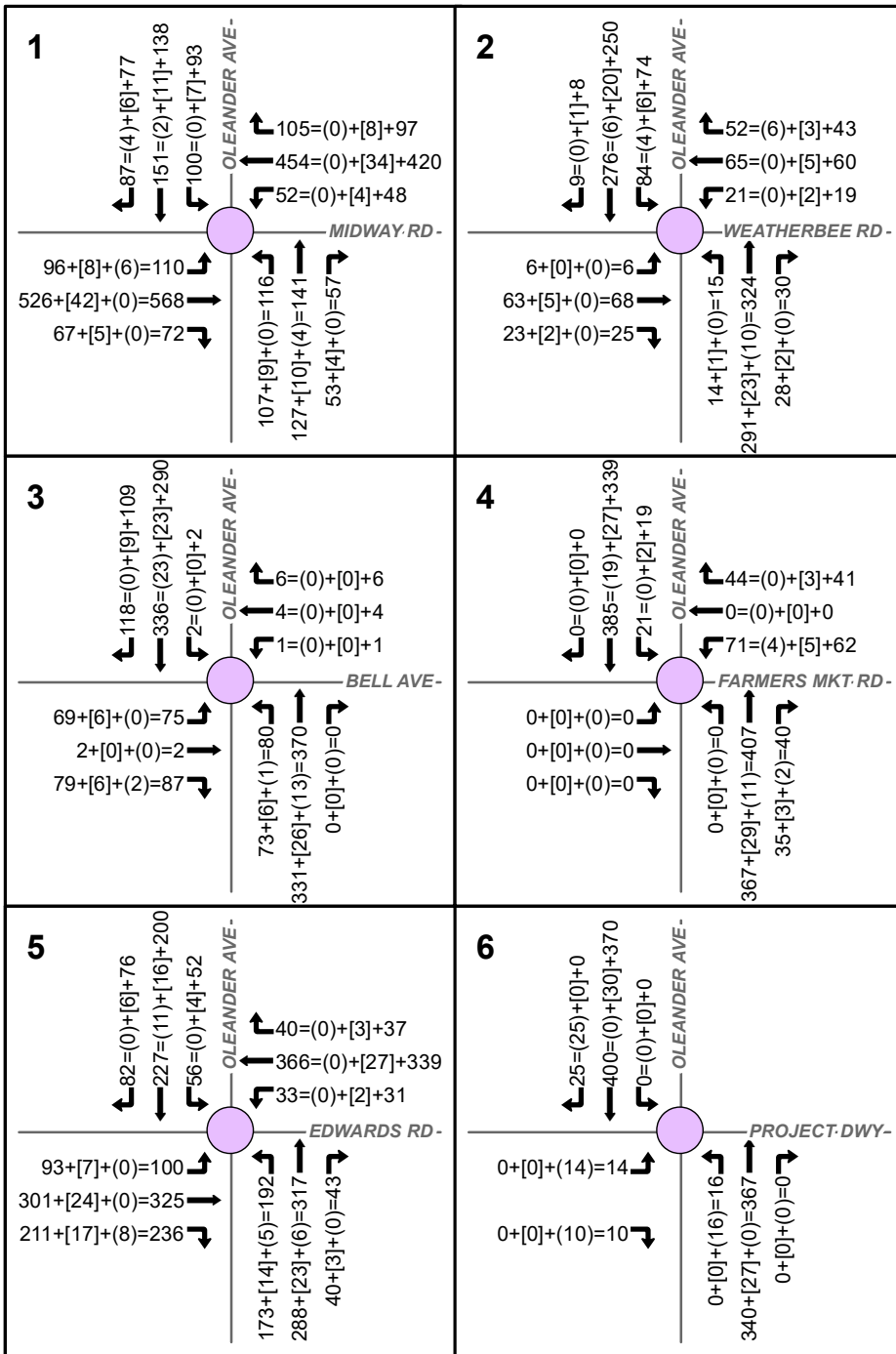


Figure 4: Buildout (2026) Traffic Volumes: AM Peak Hour  
 Oleander Oaks - Traffic Impact Study | City of Fort Pierce, FL

Project Number: 147811000  
 Date: April 2021

**Kimley»Horn**  
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 189 S Orange Ave, Suite 1000, Orlando FL 32801  
 Phone: (407) 898-1511



**Figure 5: Buildout (2026) Traffic Volumes: PM Peak Hour**  
**Oleander Oaks - Traffic Impact Study | City of Fort Pierce, FL**

Project Number: 147811000  
 Date: April 2021

## 6.0 SITE ACCESS ANALYSIS

Access to the site will be provided via one full-access driveway onto Oleander Avenue. The need for exclusive ingress turn lanes was evaluated at the proposed project driveway using National Cooperative of Highway Research Programs (NCHRP) Report 457 criteria.

The projected buildout year 2026 traffic volumes on Oleander Avenue, as well as the projected northbound ingress turning movement volumes at the proposed project driveway, were compared to the thresholds of the NCHRP Report 457 for determination of whether a major road left-turn lane is required at a stop-controlled minor street intersection. Report NCHRP 457 compares the major street speed, approach volume, opposing volume, and left-turning volume to determine whether a dedicated left-turn lane is warranted on the major street approach. Based on the low ingress left-turn volumes projected at the project driveway, and the low existing traffic volumes on Oleander Avenue during the AM and PM peak hours, an exclusive northbound left-turn lane at the project driveway is not warranted based on the criteria within the NCHRP 457 analysis.

The observed traffic volumes on Oleander Avenue, as well as the projected southbound ingress turning volumes at the proposed project driveway, were compared to the thresholds of the NCHRP Report 457 for determination of whether a major road right-turn lane is required at a stop-controlled minor street intersection. Report NCHRP 457 compares the major street speed, approach volume, and right-turning volume to determine whether a dedicated right-turn lane is warranted on the major street approach. Based on the low ingress right-turn volumes projected at the project driveway, and the low existing traffic volumes on Oleander Avenue during the AM and PM peak hours, an exclusive southbound right-turn lane at the project driveway is not warranted based on the criteria within the NCHRP 457 analysis.

The NCRHP Report 457 outputs for the northbound left-turn lane and southbound right-turn lane for the projected buildout AM and PM peak hour scenarios are provided in **Appendix K**.

## 7.0 CONCLUSION

This traffic impact study was performed to assess the transportation impacts of associated with the development of Oleander Oaks in the City of Fort Pierce, Florida. Oleander Oaks is a proposed single-family residential development generally located on the east side of Oleander Avenue, north of Kling Road in City of Fort Pierce, Florida. The development is proposed to consist of ±63 single-family dwelling units and anticipated to be built by Year 2026. Access to the site will be provided via one full-access driveway onto Oleander Avenue.

The project is expected to generate 50 (13 in, 37 out) new external vehicular trips in the AM peak hour and 65 (41 in, 24 out) new external vehicular trips in the PM peak hour based on ITE trip generation data and procedures. Project trips were distributed onto the surrounding roadway network using the latest adopted regional travel demand model and manual assignment at the study area intersections.

AM and PM peak hour roadway segment capacity analyses were performed for study area roadway segments for existing (2021), background (2026), and buildout (2026) conditions. The analyses identified one (1) deficient roadway segment in the existing condition AM and PM peak hours. All capacity deficiencies are present in the existing conditions and are not due to the addition of project trips. The deficient roadway segment was identified as:

- Oleander Avenue, from Bell Avenue to Farmers Market Road (existing Year 2021 deficiency)

AM and PM peak hour operational analyses for existing (2021), background (2026), and buildout (2026) conditions were performed at study area intersections. All study area intersections are projected operate at an acceptable LOS with overall v/c ratios of less than one (1.0) in the AM and PM peak hours for all analysis scenarios.

Based on the criteria within the NCHRP 457 analysis, neither an exclusive northbound left-turn lane or southbound right-turn lane are warranted at the project access driveway on Oleander Avenue.

The results within this report satisfy the requirements set forth by St. Lucie County for evaluating proposed development impacts.

**APPENDIX A**  
Conceptual Site Plan

Plot: K:\Projects\2021\04\30\28pm\K:\VRB\_LDEV\14781000 - Oleander Oaks\CAD Concepts\Concept\_1 - 60Wx85D.dwg  
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February 15, 2021 04:30:28pm  
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



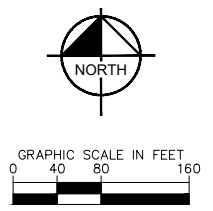
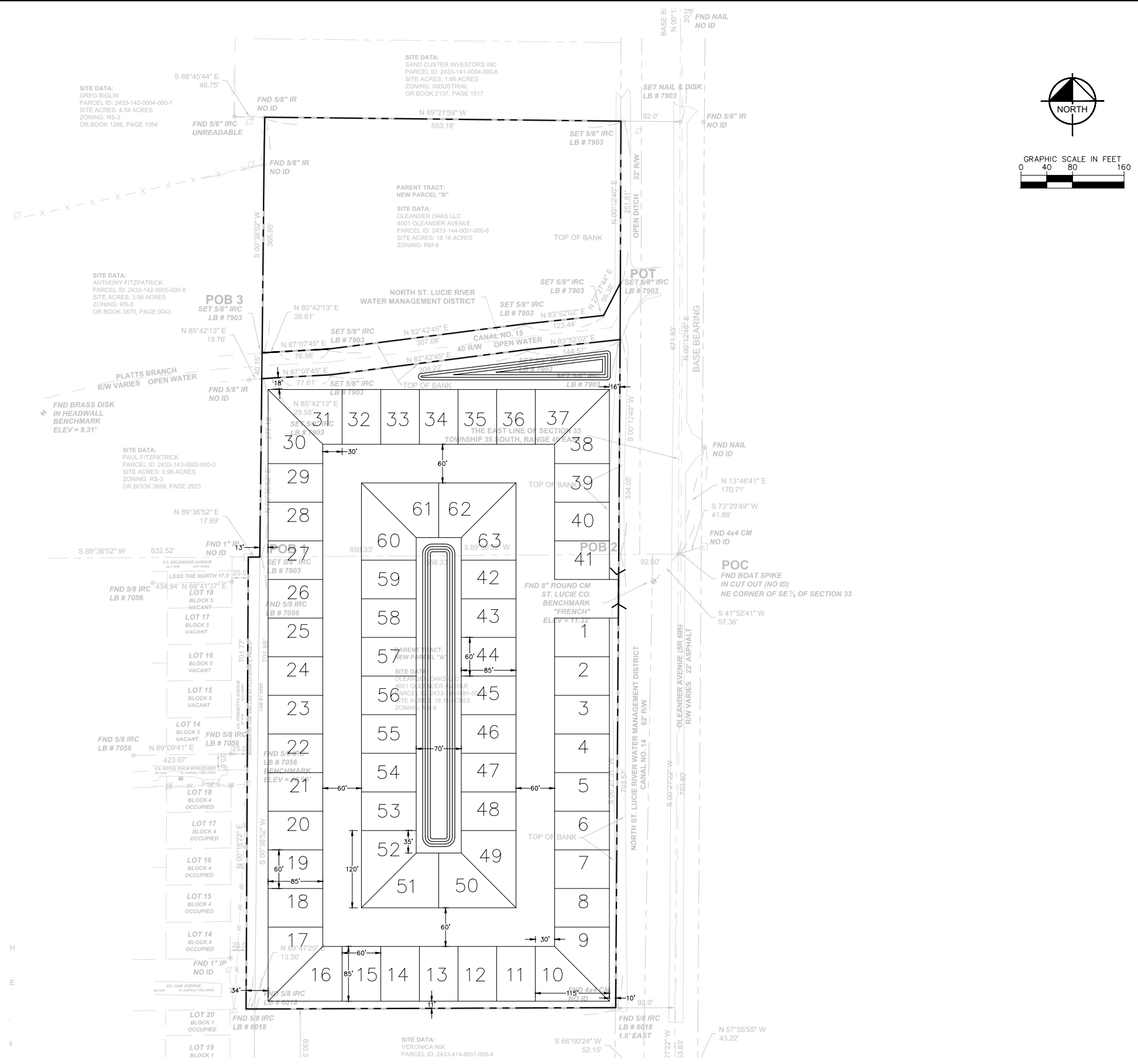
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445 24TH STREET, SUITE 200, VERO BEACH, FL 32960  
PHONE: 772-794-4100  
WWW.KIMLEY-HORN.COM CA 00000696

### OLEANDER OAKS

### CONCEPT SITE PLAN

SHEET NUMBER

CSP-1



## **APPENDIX B**

Excerpts from ITE Trip Generation Manual

# Single-Family Detached Housing (210)

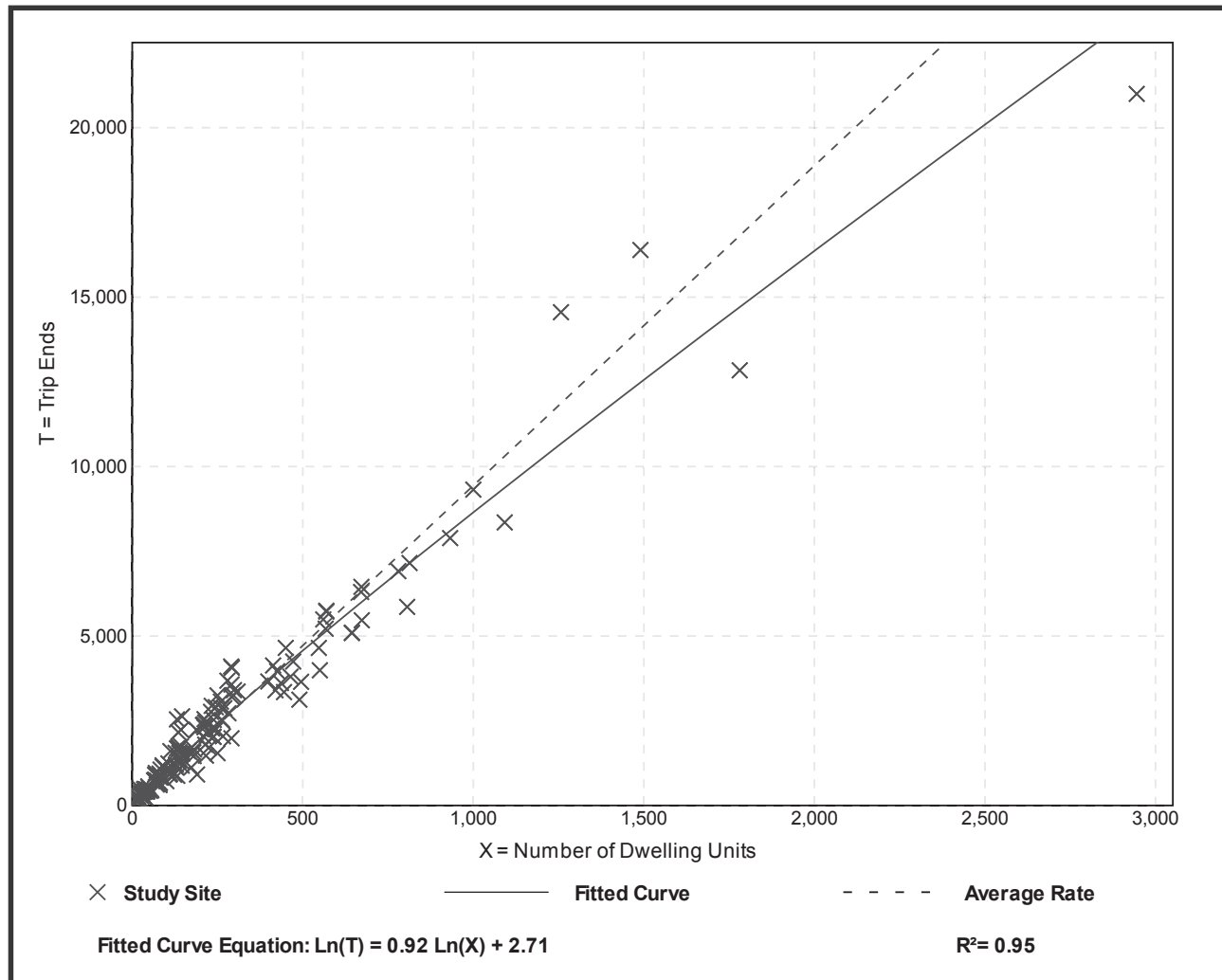
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

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



# 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

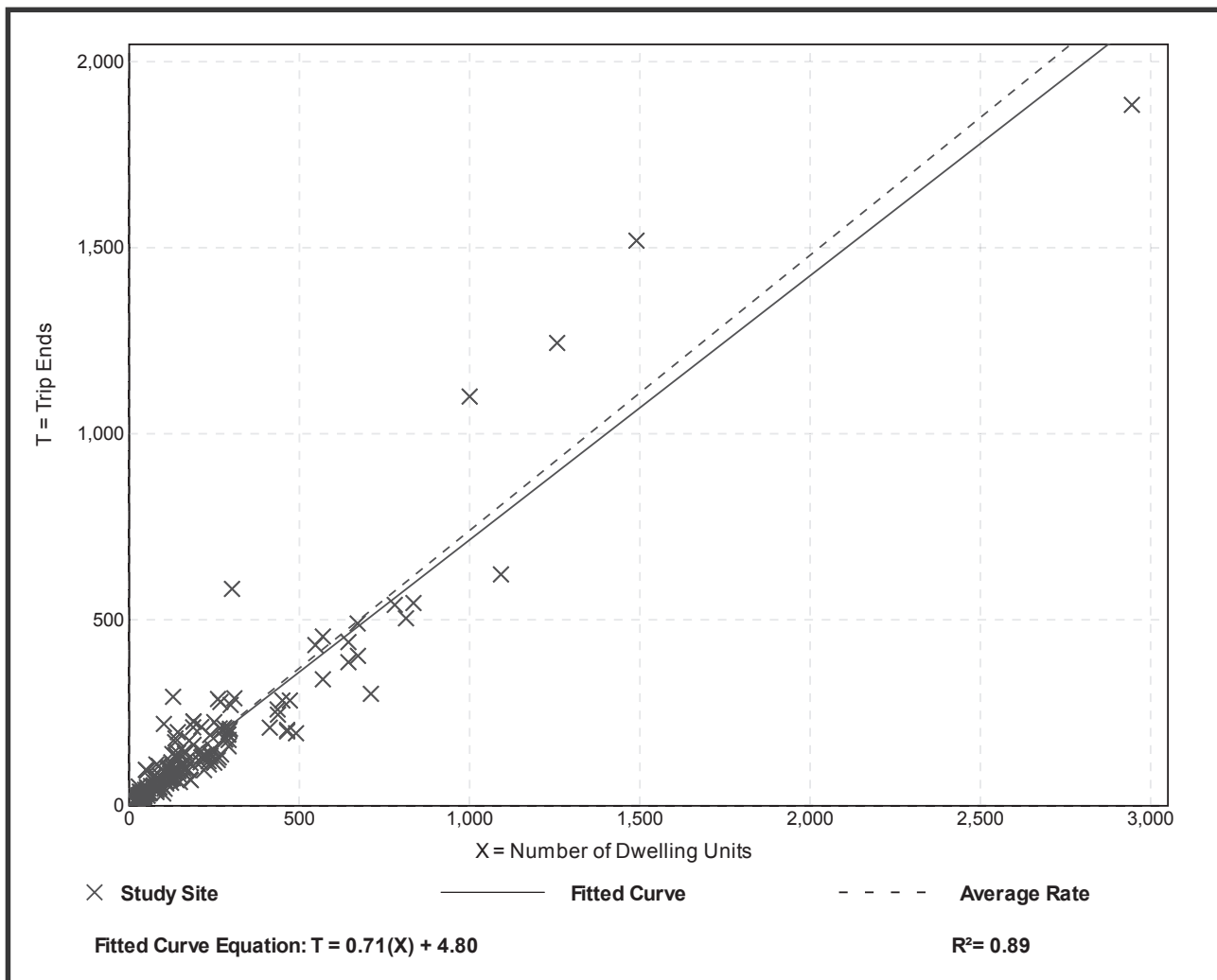
Avg. Num. of Dwelling Units: 219

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



# 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.**

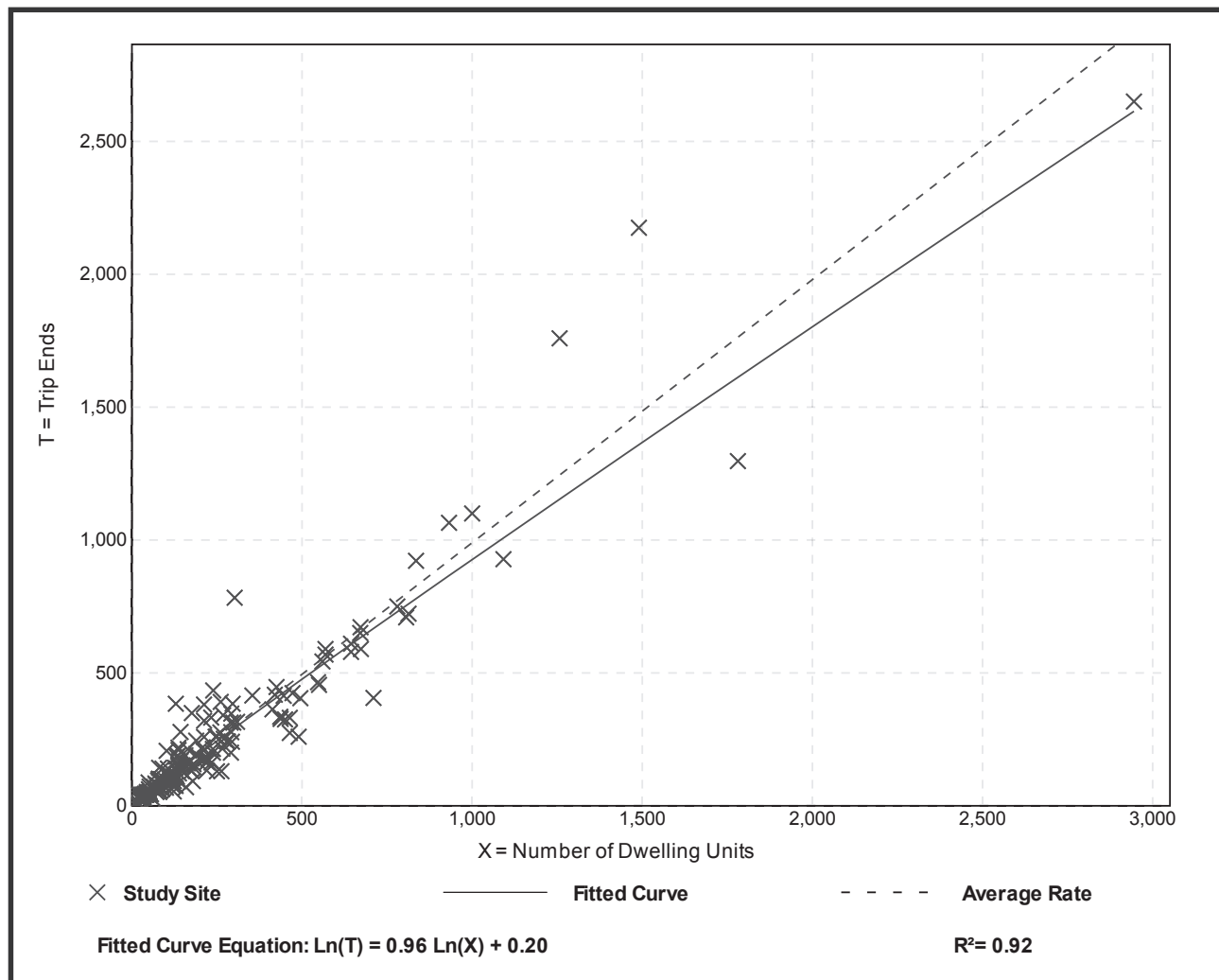
**Setting/Location: General Urban/Suburban**

Number of Studies: 190  
 Avg. Num. of Dwelling Units: 242  
 Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

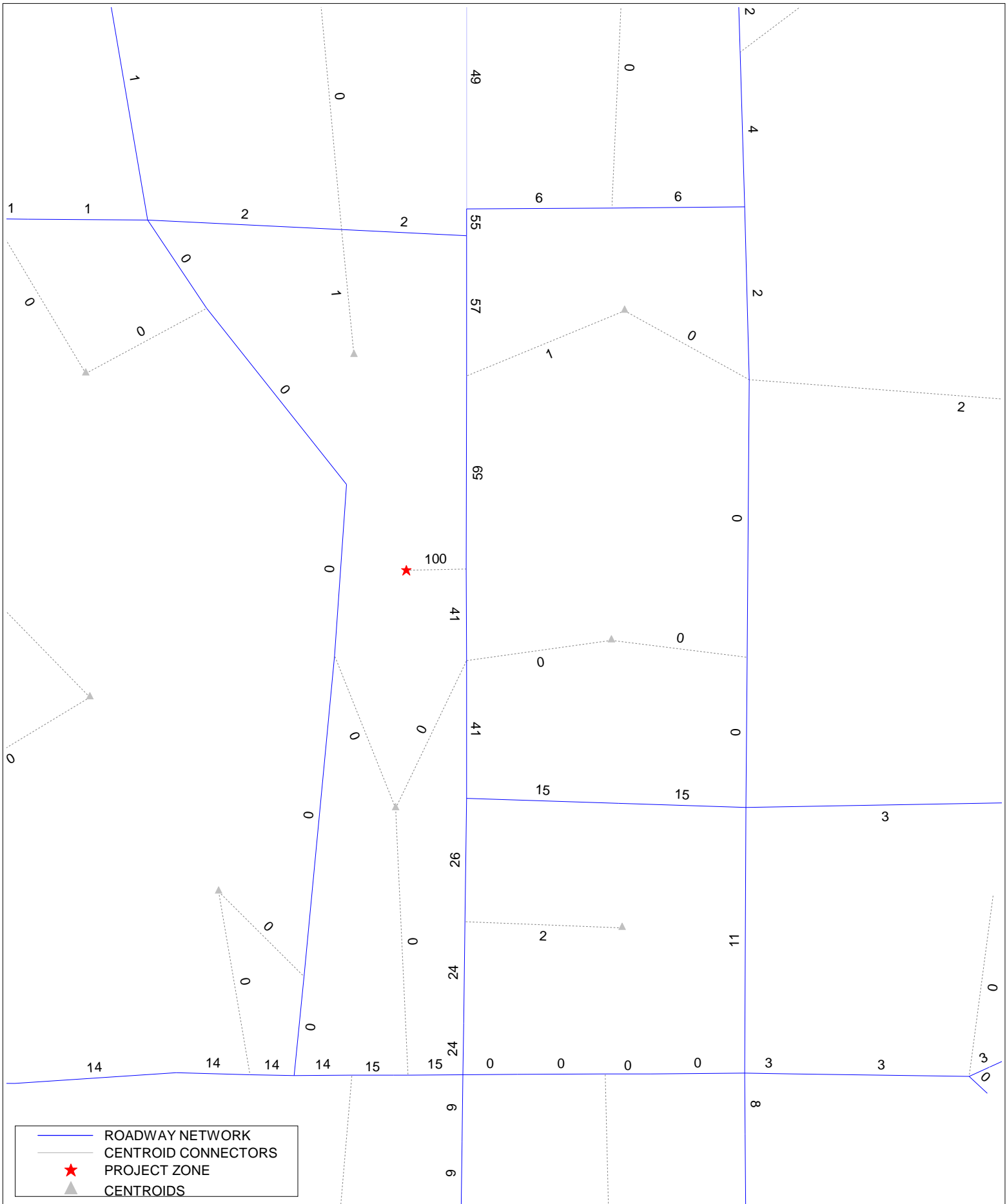
Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

## Data Plot and Equation



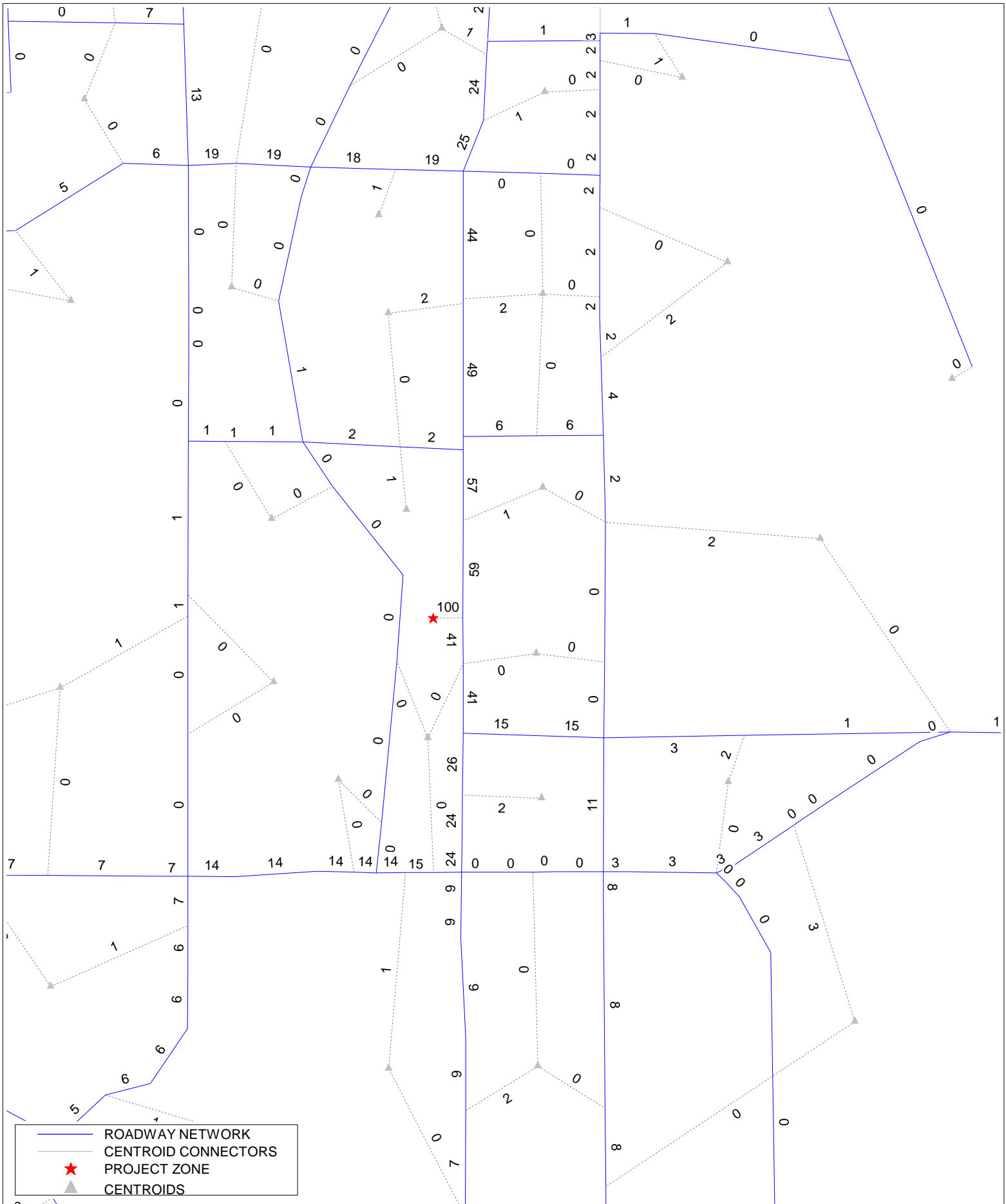
## **APPENDIX C**

### Greater Treasure Coast Regional Planning Model (GTCRPM) Model Plots



**MODEL RUN - OLEANDER OAKS**  
**TRAFFIC DISTRIBUTION (PERCENTAGES)**  
 2/16/2021

C:\FSUTMSID4\GTCRPM\NGTC33\Bases\minor mods\OUTPUT\FINAL\_LOADED\_A05.NET



**MODEL RUN - OLEANDER OAKS**  
**TRAFFIC DISTRIBUTION (PERCENTAGES)**  
 2/22/2021

C:\FSUTMSID4\GTCRPM\NGTC33\Base\minor mods\OUTPUT\FINAL\_LOADED\_A05.NET



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**APPENDIX D**

St. Lucie TPO

Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020 (Excerpts)



**Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020**

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
17TH ST	ORANGE AVE to AVENUE D	608	4,033	2016	750	236	C	0.638	225	C	0.608
17TH ST	AVENUE D to AVENUE Q	608	4,033	2016	750	236	C	0.638	225	C	0.608
25TH ST	MIDWAY RD to BELL AVE	940016	19,000	2019	2,100	1,362	C	0.678	1,270	C	0.632
25TH ST	BELL AVE to EDWARDS RD	159	19,040	2019	2,100	1,056	C	0.525	1,053	C	0.524
25TH ST	EDWARDS RD to CORTEZ BLVD	940021	21,500	2019	2,000	1,370	C	0.717	1,366	C	0.715
25TH ST	CORTEZ BLVD to VIRGINIA AVE	529	21,000	2020	2,000	1,182	C	0.619	1,261	C	0.660
25TH ST	VIRIGINIA AVE to NEBRASKA AVE	940015	23,000	2019	2,000	1,319	C	0.691	1,182	C	0.619
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	940015	23,000	2019	2,000	1,319	C	0.691	1,182	C	0.619
25TH ST	OKEECHOBEE RD to GEORGIA AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	GEORGIA AVE to DELAWARE AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	DELAWARE AVE to ORANGE AVE	940014	22,000	2019	1,630	1,145	D	0.702	1,139	D	0.699
25TH ST	ORANGE AVE to AVENUE D	610	19,000	2020	1,630	877	D	0.538	904	D	0.555
25TH ST	AVENUE D to AVENUE Q	940050	19,700	2019	1,630	1,037	D	0.636	1,008	D	0.618
25TH ST	AVENUE Q to JUANITA AVE	945152	18,000	2019	2,000	1,017	C	0.532	932	C	0.488
25TH ST	JUANITA AVE to ST LUCIE BLVD	940791	14,647	2013	2,100	794	C	0.395	745	C	0.371
25TH ST	ST LUCIE BLVD to US 1	945165	9,800	2019	2,100	563	C	0.280	628	C	0.312
33RD ST	OKEECHOBEE RD to DELAWARE AVE	611	7,000	2020	750	419	D	0.559	368	C	0.995
33RD ST	DELAWARE AVE to ORANGE AVE	948507	6,200	2019	790	286	C	0.773	286	C	0.773
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	612	6,300	2020	540	497	D	0.920	406	D	0.752
35TH ST	CORTEZ BLVD to VIRGINIA AVE	612	6,300	2020	790	497	D	0.629	406	D	0.514
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	613	4,600	2016	750	279	C	0.754	280	C	0.757
53RD ST	ANGLE RD to JUANITA AVE	614	2,767	2016	540	148	C	0.548	163	C	0.604
AE BACKUS AVE	7TH ST to US 1	632	1,033	2017	750	70	C	0.189	81	C	0.219
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423

- \* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
- \* Volumes shown were adjusted using FDOT Seasonal Factors
- \* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
- \* **Counts with an ID format of 6 digits have data extracted from FDOT count stations.**



**Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020**

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
AVENUE Q	17TH ST to 13TH ST	701	3,937	2016	540	281	D	0.520	314	D	0.581
AVENUE O	13TH ST to US 1	685	1,867	2017	540	105	C	0.389	108	C	0.400
AVENUE C	10TH ST to 7TH ST	631	350	2017	540	20	C	0.074	21	C	0.078
BAYSHORE BLVD	MOUNTWELL ST to PORT ST LUCIE BLVD	621	6,000	2019	830	373	C	0.478	324	C	0.415
BAYSHORE BLVD	PORT ST LUCIE BLVD to THORNHILL DR	309	28,260	2018	2,100	1,335	C	0.664	1,297	C	0.645
BAYSHORE BLVD	THORNHILL DR to CROSSTOWN PKWY	948508	20,100	2019	2,100	928	C	0.486	928	C	0.486
BAYSHORE BLVD	CROSSTOWN PKWY to PRIMA VISTA BLVD	307	27,000	2019	2,100	1,394	C	0.694	1,356	C	0.675
BAYSHORE BLVD	PRIMA VISTA BLVD to FLORESTA DR	305	17,500	2019	920	829	C	0.953	858	C	0.986
BAYSHORE BLVD	FLORESTA DR to SELVITZ RD	622	13,000	2019	790	707	C	0.943	623	C	0.831
BAYSHORE BLVD	SELVITZ RD to 25TH ST	622	13,000	2019	750	707	D	0.943	623	D	0.831
BEACH AVE	OLEANDER AVE to RIO MAR DR	623	3,500	2017	540	247	C	0.915	211	C	0.781
BECKER RD	VILLAGE PKWY to I-95	624	2,500	2017	3,170	196	C	0.063	178	C	0.058
BECKER RD	I-95 to SAVONA BLVD	625	21,000	2019	2,000	1,809	C	0.947	1,616	C	0.846
BECKER RD	SAVONA BLVD to PORT ST LUCIE BLVD	626	18,000	2019	2,100	1,142	C	0.568	1,083	C	0.539
BECKER RD	ALBACORE ST to DARWIN BLVD	302	13,500	2019	1,500	863	C	0.603	842	C	0.589
BECKER RD	PORT ST LUCIE BLVD to ALBACORE ST	302	13,500	2019	2,100	863	C	0.429	842	C	0.419
BECKER RD	ATHENA DR to FLORIDA'S TURNPIKE	627	15,000	2019	1,500	1,320	C	0.923	1,244	C	0.870
BECKER RD	DARWIN BLVD to ATHENA DR	627	15,000	2019	2,000	1,320	C	0.691	1,244	C	0.651
BECKER RD	FLORIDA'S TURNPIKE to SOUTHBEND BLVD	628	20,000	2019	2,100	1,333	C	0.663	1,657	C	0.824
BECKER RD	SOUTHBEND BLVD to GILSON RD	629	15,000	2019	920	956	F	1.039	1,182	F	1.285
<b>BELL AVE</b>	<b>25TH ST to SUNRISE BLVD</b>	<b>104</b>	<b>4,758</b>	<b>2019</b>	<b>790</b>	<b>313</b>	<b>C</b>	<b>0.803</b>	<b>326</b>	<b>C</b>	<b>0.836</b>
<b>BELL AVE</b>	<b>SUNRISE BLVD to OLEANDER AVE</b>	<b>102</b>	<b>3,854</b>	<b>2019</b>	<b>600</b>	<b>217</b>	<b>C</b>	<b>0.723</b>	<b>223</b>	<b>C</b>	<b>0.743</b>
CASHMERE BLVD	PEACOCK BLVD to TORINO PKWY	676	10,159	2018	630	714	F	1.133	589	C	0.982
CALIFORNIA BLVD	CAMEO BLVD to DEL RIO BLVD	633	7,813	2018	750	503	D	0.671	429	D	0.572
CALIFORNIA BLVD	DEL RIO BLVD to SAVONA BLVD	634	14,000	2019	920	774	C	0.890	771	C	0.886

- \* Note: A six digit number in the "STATION ID" column identifies segment counted by FDOT
- \* Volumes shown were adjusted using FDOT Seasonal Factors
- \* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)
- \* **Counts with an ID format of 6 digits have data extracted from FDOT count stations.**



**Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020**

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
EAST TORINO PKWY	TORINO PKWY to MIDWAY RD	237	14,500	2020	880	1,030	F	1.170	978	F	1.111
EASY ST	US 1 to BUCHANAN DR	106	8,029	2018	750	601	D	0.801	483	D	0.644
EASY ST	BUCHANAN DR to YUCCA DR	106	8,029	2018	540	601	F	1.036	483	D	0.894
EDWARDS RD	JENKINS RD to MCNEIL RD	174	11,500	2020	630	573	C	0.955	594	C	0.990
EDWARDS RD	MCNEIL RD to SELVITZ RD	174	11,500	2020	700	573	C	0.868	594	C	0.900
<b>EDWARDS RD</b>	<b>SELVITZ RD to 25TH ST</b>	<b>110</b>	<b>15,000</b>	<b>2020</b>	<b>880</b>	<b>755</b>	<b>C</b>	<b>0.910</b>	<b>771</b>	<b>C</b>	<b>0.929</b>
<b>EDWARDS RD</b>	<b>25TH ST to SUNRISE BLVD</b>	<b>108</b>	<b>16,697</b>	<b>2019</b>	<b>1,630</b>	<b>877</b>	<b>D</b>	<b>0.538</b>	<b>867</b>	<b>D</b>	<b>0.532</b>
<b>EDWARDS RD</b>	<b>SUNRISE BLVD to OLEANDER AVE</b>	<b>502</b>	<b>15,207</b>	<b>2019</b>	<b>1,630</b>	<b>754</b>	<b>D</b>	<b>0.463</b>	<b>735</b>	<b>D</b>	<b>0.451</b>
<b>EDWARDS RD</b>	<b>OLEANDER AVE to US 1</b>	<b>173</b>	<b>9,581</b>	<b>2019</b>	<b>1,630</b>	<b>527</b>	<b>C</b>	<b>0.722</b>	<b>460</b>	<b>C</b>	<b>0.630</b>
<b>FARMER'S MARKET RD</b>	<b>OLEANDER AVE to US 1</b>	<b>112</b>	<b>1,876</b>	<b>2019</b>	<b>750</b>	<b>130</b>	<b>C</b>	<b>0.351</b>	<b>127</b>	<b>C</b>	<b>0.343</b>
FLORESTA DR	OAKLYN ST to PORT ST LUCIE BLVD	317	13,000	2019	920	900	D	0.978	687	C	0.790
FLORESTA DR	THORNHILL DR to CROSSTOWN PKWY	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	PORT ST LUCIE BLVD to THORNHILL DR	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	CROSSTOWN PKWY to PRIMA VISTA BLVD	109	11,000	2019	920	671	C	0.771	576	C	0.662
FLORESTA DR	PRIMA VISTA BLVD to AIROSO BLVD	107	9,600	2019	920	559	C	0.643	601	C	0.691
FLORESTA DR	SELVITZ RD to BAYSHORE BLVD	313	4,467	2018	630	349	C	0.582	365	C	0.608
FLORESTA DR	AIROSO BLVD to SELVITZ RD	313	4,467	2018	880	349	C	0.420	365	C	0.440
FT PIERCE BLVD	INDRIO RD to EMERSON AVE	226	3,555	2019	540	267	C	0.989	273	D	0.506
GARDENIA AVE	OLEANDER AVE to US 1	666	2,817	2017	750	188	C	0.508	200	C	0.541
GATLIN BLVD	W OF I-95 to E OF I-95	945075	50,500	2019	3,170	3,800	F	1.199	3,098	D	0.977
GATLIN BLVD	E OF I-95 to SAVAGE BLVD	945075	50,500	2019	3,170	3,800	F	1.199	3,098	D	0.977
GATLIN BLVD	SAVAGE BLVD to ROSSER BLVD	945075	50,500	2019	3,170	3,800	F	1.199	3,098	D	0.977
GATLIN BLVD	ROSSER BLVD to SAVONA BLVD	945075	50,500	2019	3,170	3,800	F	1.199	3,098	D	0.977
GATLIN BLVD	SAVONA BLVD to PORT ST LUCIE BLVD	945075	50,500	2019	3,170	3,800	F	1.199	3,098	D	0.977
GEORGIA AVE	25TH ST to OKEECHOBEE RD	667	4,700	2020	600	290	C	0.967	262	C	0.873

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 \* **Counts with an ID format of 6 digits have data extracted from FDOT count stations.**



**Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020**

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
MCNEIL RD	OKEECHOBEE RD to KIRBY LOOP RD	682	4,600	2020	790	281	C	0.721	280	C	0.718
MCNEIL RD	KIRBY LOOP RD to EDWARDS RD	682	4,600	2020	540	281	D	0.520	280	D	0.519
MCCARTY RD	WILLIAMS RD to MIDWAY RD	680	375	2017	540	33	C	0.122	35	C	0.130
MCCARTY RD	MIDWAY RD to OKEECHOBEE RD	681	400	2020	540	34	C	0.126	35	C	0.130
MELALEUCA BLVD	LENNARD RD to GREEN RIVER PKWY	683	9,804	2018	920	648	C	0.745	584	C	0.671
MIDWAY RD	EAST TORINO PKWY to MILNER DR	134	22,500	2020	880	1,216	F	1.382	1,304	F	1.482
MIDWAY RD	MILNER DR to W OF SELVITZ RD	134	22,500	2020	790	1,216	F	1.539	1,304	F	1.651
MIDWAY RD	OKEECHOBEE RD to SHINN RD	940732	8,400	2019	760	485	C	0.724	617	C	0.921
MIDWAY RD	SHINN RD to MCCARTY RD	940732	8,400	2019	630	485	C	0.808	617	D	0.979
MIDWAY RD	MCCARTY RD to I-95	940732	8,400	2019	700	485	C	0.735	617	C	0.935
MIDWAY RD	I-95 to GLADES CUT-OFF RD	945140	21,000	2019	2,100	1,168	C	0.581	1,295	C	0.644
MIDWAY RD	GLADES CUT-OFF RD to EAST TORINO PKWY	228	21,500	2020	2,100	1,226	C	0.610	1,281	C	0.637
MIDWAY RD	W OF SELVITZ RD to SELVITZ RD	134	22,500	2020	920	1,216	F	1.322	1,304	F	1.417
MIDWAY RD	SELVITZ RD to CHRISTENSEN RD	132	18,500	2020	920	973	F	1.058	940	F	1.022
MIDWAY RD	CHRISTENSEN RD to 25TH ST	132	18,500	2020	790	973	F	1.158	940	F	1.119
MIDWAY RD	25TH ST to SUNRISE BLVD	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	SUNRISE BLVD to OLEANDER AVE	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	OLEANDER AVE to US 1	242	15,309	2016	790	808	E	0.962	800	E	0.952
MIDWAY RD	US 1 to WALLACE ST	940023	3,800	2019	790	294	C	0.754	325	C	0.833
MIDWAY RD	WALLACE ST to WEATHERBEE RD	940023	3,800	2019	920	294	C	0.338	325	C	0.374
MIDWAY RD	WEATHERBEE RD to INDIAN RIVER DR	940023	3,800	2019	630	294	C	0.490	325	C	0.542
MORNINGSIDE BLVD	WESTMORELAND BLVD to PORT ST LUCIE BLVD	333	2,654	2017	920	159	C	0.183	152	C	0.175
MORNINGSIDE BLVD	PORT ST LUCIE BLVD to LYGATE DR	331	2,900	2020	880	230	C	0.277	244	C	0.294
NEBRASKA AVE	25TH ST to 13TH ST	684	3,767	2017	1,710	234	C	0.304	197	C	0.256
OAKRIDGE DR	MOUNTWELL ST to OAKLYN ST	621	6,000	2019	700	373	C	0.565	324	C	0.491

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Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
OLD DIXIE HWY	ST LUCIE BLVD to INDRIO RD	227	2,041	2016	790	150	C	0.385	116	C	0.297
OLD DIXIE HWY	INDRIO RD to INDIAN RIVER C.L.	948523	1,350	2019	870	63	C	0.076	63	C	0.076
OLEANDER AVE	BEACH AVE to KITTERMAN RD	692	2,900	2017	540	175	C	0.648	193	C	0.715
OLEANDER AVE	KITTERMAN RD to MIDWAY RD	141	6,498	2017	750	406	D	0.541	426	D	0.568
OLEANDER AVE	MIDWAY RD to WEATHERBEE RD	139	7,100	2020	750	388	D	0.517	421	D	0.561
OLEANDER AVE	WEATHERBEE RD to BELL AVE	139	7,100	2020	540	388	D	0.719	421	D	0.780
OLEANDER AVE	BELL AVE to FARMER'S MARKET RD	240	12,500	2020	540	671	F	1.157	647	F	1.116
OLEANDER AVE	FARMER'S MARKET RD to EDWARDS RD	240	12,500	2020	750	671	D	0.895	647	D	0.863
OLEANDER AVE	EDWARDS RD to WISTERIA AVE	505	10,000	2020	750	611	D	0.815	554	D	0.739
OLEANDER AVE	WISTERIA AVE to GARDENIA AVE	505	10,000	2020	540	611	F	1.053	554	E	0.955
OLEANDER AVE	GARDENIA AVE to VIRGINIA AVE	505	10,000	2020	790	611	D	0.773	554	D	0.701
OLEANDER AVE	VIRGINIA AVE to SUNRISE BLVD	503	4,561	2019	600	259	C	0.863	270	C	0.900
ORANGE AVE	OKEECHOBEE C.L. to SNEED RD	144	4,780	2019	390	300	C	0.769	293	C	0.751
ORANGE AVE	SNEED RD to HEADER CANAL RD	144	4,780	2019	390	300	C	0.769	293	C	0.751
ORANGE AVE	SHINN RD to CAMPBELL RD	940144	2,689	2019	380	147	B	0.35	147	B	0.35
ORANGE AVE	CAMPBELL RD to KINGS HWY	940144	2,689	2019	1,070	147	B	0.35	147	B	0.35
ORANGE AVE	KINGS HWY to I-95	940041	19,800	2019	2,000	853	C	0.424	859	C	0.427
ORANGE AVE	I-95 to JENKINS RD	940035	15,300	2019	2,000	1,051	C	0.523	988	C	0.492
ORANGE AVE	JENKINS RD to HARTMAN RD	940028	15,000	2019	2,000	807	C	0.401	751	C	0.374
ORANGE AVE	HARTMAN RD to ANGLE RD	940028	15,000	2019	2,000	807	C	0.401	751	C	0.374
ORANGE AVE	ANGLE RD to 25TH ST	940151	10,749	2013	1,710	847	D	0.495	985	D	0.576
ORANGE AVE	25TH ST to 17TH ST	945040	12,300	2019	1,630	643	C	0.881	705	C	0.966
ORANGE AVE	17TH ST to 13TH ST	945040	12,300	2019	1,710	643	C	0.835	705	C	0.916
ORANGE AVE	13TH ST to 10TH ST	945040	12,300	2019	370	643	D	0.857	705	D	0.940
ORANGE AVE	10TH ST to 7TH ST	940155	9,600	2019	300	485	D	0.808	558	D	0.930

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**Traffic Counts and Level of Service Report  
Fall/Winter 2019/2020**

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
ST LUCIE WEST BLVD	CASHMERE BLVD to BAYSHORE BLVD	316	46,000	2019	3,170	2,446	C	0.792	2,308	C	0.747
SUNRISE BLVD	MIDWAY RD to BELL AVE	155	3,590	2016	540	249	C	0.922	233	C	0.863
SUNRISE BLVD	BELL AVE to EDWARDS RD	153	3,814	2016	750	253	C	0.684	286	C	0.773
SUNRISE BLVD	EDWARDS RD to CORTEZ BLVD	511	7,300	2020	600	647	F	1.011	515	D	0.858
SUNRISE BLVD	CORTEZ BLVD to VIRGINIA AVE	511	7,300	2020	750	647	D	0.863	515	D	0.687
SUNRISE BLVD	VIRGINIA AVE to OLEANDER AVE	509	5,300	2020	750	417	D	0.556	411	D	0.548
SUNRISE BLVD	OLEANDER AVE to 7TH ST	708	3,900	2017	1,540	243	C	0.352	282	C	0.409
SUNRISE BLVD	7TH ST to US 1	708	3,900	2017	1,710	243	C	0.316	282	C	0.366
TIFFANY AVE	US 1 to HILLMOOR DR	322	15,000	2019	2,100	855	C	0.425	862	C	0.429
TIFFANY AVE	HILLMOOR DR to VILLAGE GREEN DR	322	15,000	2019	2,100	855	C	0.425	862	C	0.429
TIFFANY AVE	VILLAGE GREEN DR to LENNARD RD	320	4,666	2017	2,100	242	C	0.120	261	C	0.130
TORINO PKWY	CASHMERE BLVD to CALIFORNIA BLVD	709	7,800	2018	630	404	C	0.673	443	C	0.738
TORINO PKWY	CALIFORNIA BLVD to EAST TORINO PKWY	238	4,314	2018	630	255	C	0.425	223	C	0.372
TRADITION PKWY	COMMUNITY BLVD to VILLAGE PKWY	711	8,367	2018	1,710	996	D	0.582	1,144	D	0.669
TRADITION PKWY	VILLAGE PKWY to W OF I-95	712	36,500	2019	3,170	2,021	C	0.654	1,924	C	0.623
TULIP BLVD	DARWIN BLVD to PORT ST LUCIE BLVD	713	8,200	2019	790	524	D	0.663	456	D	0.577
TULIP BLVD	PORT ST LUCIE BLVD to PAAR DR	714	9,133	2018	790	639	D	0.809	493	D	0.624
TULIP BLVD	PAAR DR to DARWIN BLVD	714	9,133	2018	790	639	D	0.809	493	D	0.624
TURNPIKE FEEDER RD	TURNPIKE FEEDER RD SB RAMP to US 1	940078	4,989	2015	660	653	C	0.989	653	C	0.989
TURNPIKE FEEDER RD	INDIAN PINES BLVD to TURNPIKE FEEDER RD SB R...	940269	11,200	2019	870	739	C	0.849	677	C	0.778
TURNPIKE FEEDER RD	INDRIO RD to INDIAN PINES BLVD	940745	13,200	2019	870	714	C	0.821	751	C	0.863
US 1	MARTIN C.L. to LENNARD RD	945071	59,500	2019	4,240	2,709	C	0.650	3,186	C	0.764
US 1	LENNARD RD to PORT ST LUCIE BLVD	945071	59,500	2019	4,040	2,709	C	0.682	3,186	C	0.803
US 1	PORT ST LUCIE BLVD to JENNINGS RD	945070	31,000	2019	3,020	1,488	C	0.506	1,580	C	0.537
US 1	JENNINGS RD to TIFFANY AVE	945070	31,000	2019	3,020	1,488	C	0.506	1,580	C	0.537

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						Volume	LOS	V/C	Volume	LOS	V/C
US 1	TIFFANY AVE to WALTON RD	945070	31,000	2019	3,020	1,488	C	0.506	1,580	C	0.537
US 1	WALTON RD to VILLAGE GREEN DR	945150	46,500	2019	3,020	2,519	C	0.857	2,258	C	0.768
US 1	VILLAGE GREEN DR to SPANISH LAKES BLVD	940265	52,500	2019	3,170	2,789	C	0.903	2,611	C	0.845
US 1	SPANISH LAKES BLVD to PRIMA VISTA BLVD	940265	52,500	2019	3,170	2,789	C	0.903	2,611	C	0.845
US 1	PRIMA VISTA BLVD to RIO MAR DR	940264	36,000	2019	3,170	1,665	C	0.539	1,639	C	0.530
US 1	RIO MAR DR to KITTERMAN RD	940266	35,000	2019	3,170	1,711	C	0.554	1,549	C	0.501
US 1	KITTERMAN RD to S OF SAEGER AVE	940266	35,000	2019	3,020	1,711	C	0.582	1,549	C	0.527
US 1	S OF SAEGER AVE to EASY ST	940266	35,000	2019	3,170	1,711	C	0.554	1,549	C	0.501
US 1	EASY ST to MIDWAY RD	945156	31,000	2019	3,170	1,445	C	0.468	1,405	C	0.455
US 1	MIDWAY RD to WEATHERBEE RD	940012	33,000	2019	2,100	1,551	C	0.772	1,569	C	0.781
US 1	WEATHERBEE RD to FARMER'S MARKET RD	940012	33,000	2019	2,000	1,551	C	0.812	1,569	C	0.821
US 1	FARMER'S MARKET RD to EDWARDS RD	940012	33,000	2019	2,000	1,551	C	0.812	1,569	C	0.821
US 1	EDWARDS RD to SAVANNAH RD	945002	30,000	2019	2,000	1,375	C	0.720	1,348	C	0.706
US 1	GARDENIA AVE to VIRGINIA AVE	945002	30,000	2019	2,000	1,375	C	0.720	1,348	C	0.706
US 1	SAVANNAH RD to GARDENIA AVE	945002	30,000	2019	2,000	1,375	C	0.720	1,348	C	0.706
US 1	VIRGINIA AVE to OHIO AVE	945003	28,500	2019	2,000	1,372	C	0.718	1,383	C	0.724
US 1	OHIO AVE to GEORGIA AVE	945003	28,500	2019	1,630	1,372	D	0.842	1,383	D	0.848
US 1	GEORGIA AVE to DELAWARE AVE	945008	36,500	2019	1,630	1,882	F	1.107	1,799	F	1.058
US 1	DELAWARE AVE to CITRUS AVE	945014	33,500	2019	1,630	1,697	E	0.998	1,654	E	0.973
US 1	CITRUS AVE to ORANGE AVE	940118	25,000	2019	1,630	1,244	D	0.763	1,122	D	0.688
US 1	ORANGE AVE to AVENUE A	945014	33,500	2019	1,630	1,697	E	0.998	1,654	E	0.973
US 1	AVENUE A to AE BACKUS AVE	945014	33,500	2019	1,630	1,697	E	0.998	1,654	E	0.973
US 1	AE BACKUS AVE to AVENUE D	945014	33,500	2019	1,630	1,697	E	0.998	1,654	E	0.973
US 1	AVENUE D to SR A1A SOUTH	945014	33,500	2019	1,630	1,697	E	0.998	1,654	E	0.973
US 1	SR A1A SOUTH to AVENUE H	715	33,500	2020	2,100	1,766	C	0.879	1,742	C	0.867

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**Traffic Counts and Level of Service Report  
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						Volume	LOS	V/C	Volume	LOS	V/C
VILLAGE PKWY	WESTCLIFFE LN to CROSSROADS PKWY	720	12,000	2019	1,540	640	C	0.928	634	C	0.919
WALTON RD	US 1 to VILLAGE GREEN DR	330	15,156	2019	1,710	915	D	0.535	841	D	0.492
WALTON RD	VILLAGE GREEN DR to LENNARD RD	328	13,000	2019	1,710	690	C	0.896	684	C	0.888
WALTON RD	LENNARD RD to GREEN RIVER PKWY	326	9,382	2018	880	569	C	0.686	627	C	0.755
WALTON RD	GREEN RIVER PKWY to INDIAN RIVER DR	324	5,402	2018	630	416	C	0.693	430	C	0.717
WESTCLIFFE LN	TREMONTE AVE to VILLAGE PKWY	722	6,267	2018	1,470	439	C	0.665	338	C	0.512
<b>WEATHERBEE RD</b>	<b>OLEANDER AVE to US 1</b>	<b>721</b>	<b>3,574</b>	<b>2019</b>	<b>750</b>	<b>265</b>	<b>C</b>	<b>0.716</b>	<b>242</b>	<b>C</b>	<b>0.654</b>
<b>WEATHERBEE RD</b>	<b>US 1 to MIDWAY RD</b>	<b>158</b>	<b>6,300</b>	<b>2020</b>	<b>750</b>	<b>431</b>	<b>D</b>	<b>0.575</b>	<b>461</b>	<b>D</b>	<b>0.615</b>
WESTMORELAND BLVD	MORNINGSIDE BLVD to PORT ST LUCIE BLVD	339	13,000	2019	920	685	C	0.787	729	C	0.838
WESTMORELAND BLVD	MARTIN C.L. to MORNINGSIDE BLVD	245	9,700	2019	920	540	C	0.621	598	C	0.687

Countywide Performance

Weighted V/C = **0.72**

% VMT below Standard = **6.66%**

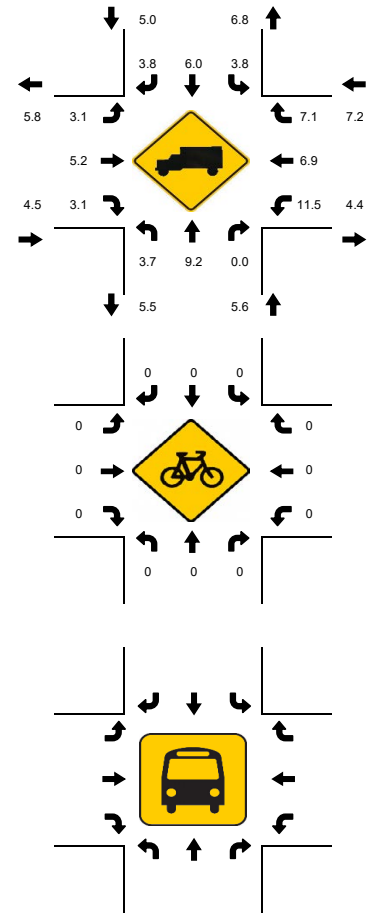
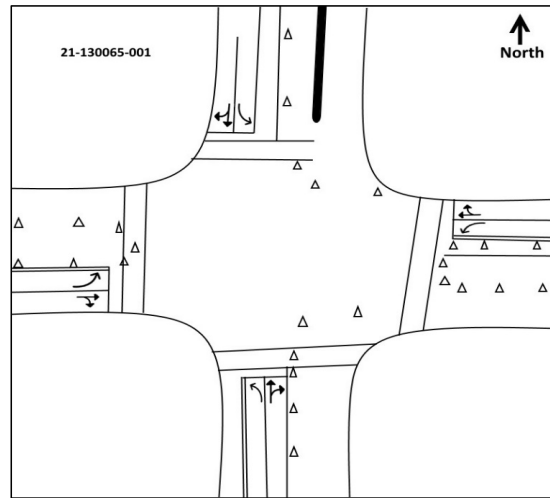
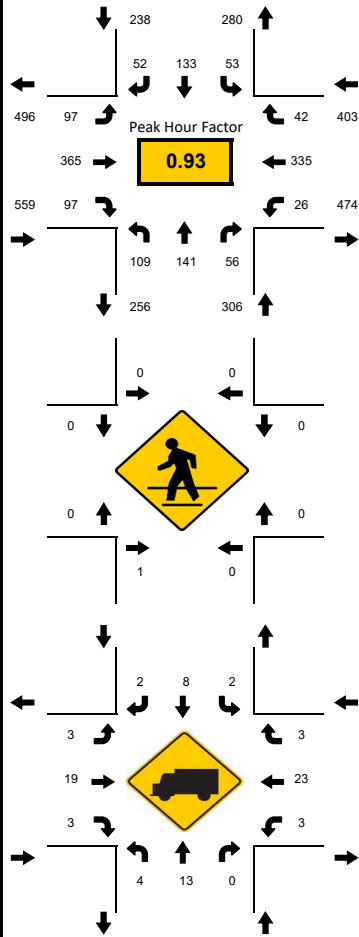
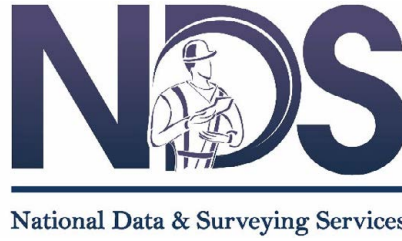
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**APPENDIX E**  
Turning Movement Counts

LOCATION: Oleander Ave & Midway Rd  
 CITY/STATE: Fort Pierce, FL

PROJECT ID: 21-130065-001  
 DATE: Tue, Apr 06, 2021

Peak-Hour: 08:00 AM - 09:00 AM  
 Peak 15-Minute: 08:45 AM - 09:00 AM



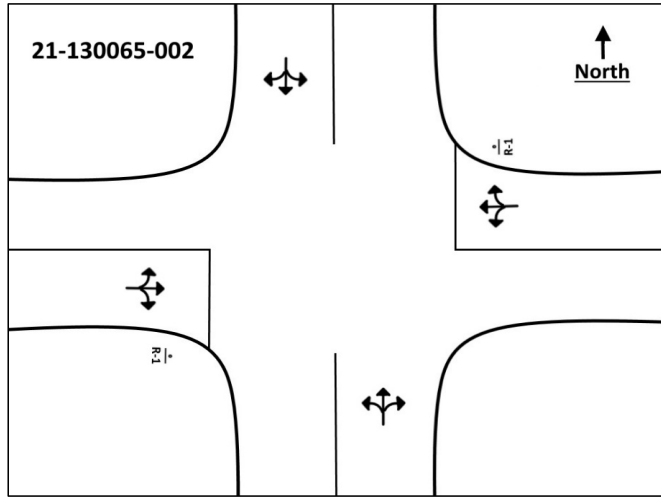
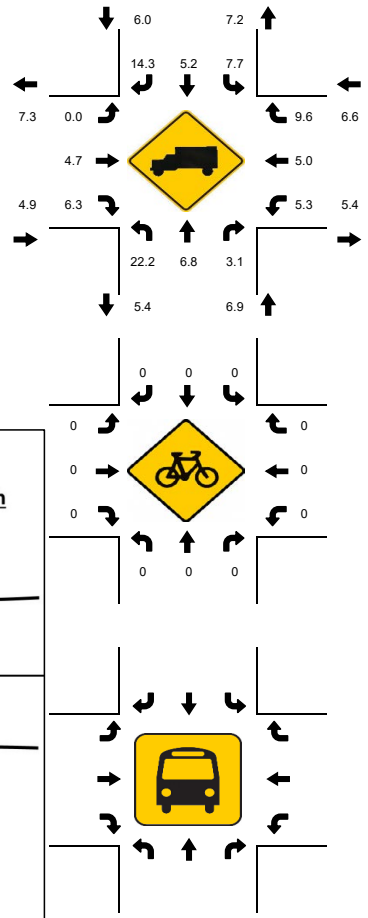
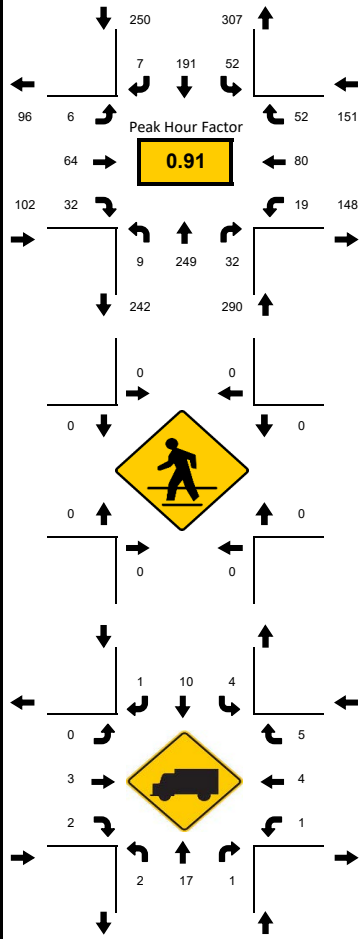
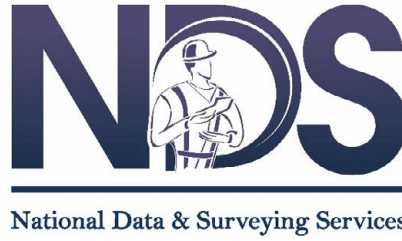
15-Min Count Period Beginning At	Oleander Ave Northbound					Oleander Ave Southbound					Midway Rd Eastbound					Midway Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	12	17	8	0		7	17	20	0		13	66	11	1		1	69	4	0		246	1247
07:15 AM	17	20	3	0		6	22	18	0		17	78	15	0		3	63	15	0		277	1354
07:30 AM	25	21	11	0		21	30	11	0		25	85	10	0		6	101	7	0		353	1432
07:45 AM	24	28	8	0		10	36	15	0		22	102	17	0		4	92	13	0		371	1471
08:00 AM	24	27	11	0		17	24	12	0		21	96	23	1		4	87	6	0		353	1506
08:15 AM	31	22	17	0		13	28	16	0		21	82	23	0		6	86	10	0		355	1153
08:30 AM	29	43	15	0		10	38	10	0		34	83	22	0		7	90	11	0		392	798
08:45 AM	25	49	13	0		13	43	14	0		20	104	29	0		9	72	15	0		406	406
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	124	196	68	0		68	172	64	0		136	416	116	4		36	360	60	0		1820	
Heavy Trucks	8	32	0	0		4	12	4	0		4	28	8	0		8	44	8	0		160	
Pedestrians		4					0					0					0				4	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	
Buses																						
Stopped Buses																						



LOCATION: Oleander Ave & Weatherbee Rd  
 CITY/STATE: Fort Pierce, FL

PROJECT ID: 21-130065-002  
 DATE: Tue, Apr 06, 2021

Peak-Hour: 08:00 AM - 09:00 AM  
 Peak 15-Minute: 08:45 AM - 09:00 AM



15-Min Count Period Beginning At	Oleander Ave Northbound				Oleander Ave Southbound				Weatherbee Rd Eastbound				Weatherbee Rd Westbound				Total	Hourly Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left			Thru
07:00 AM	4	27	4	0	10	33	4	0	3	15	2	0	3	18	13	0	136	652	
07:15 AM	7	42	7	0	16	47	1	0	1	15	3	0	4	19	12	0	174	696	
07:30 AM	0	46	6	0	11	45	0	0	0	5	8	0	2	17	9	0	149	717	
07:45 AM	2	54	5	0	14	55	1	0	1	18	9	0	5	13	16	0	193	768	
08:00 AM	1	55	10	0	13	40	1	0	2	23	8	0	1	19	7	0	180	793	
08:15 AM	1	43	5	0	21	55	2	0	1	11	5	0	7	27	17	0	195	613	
08:30 AM	3	63	10	0	10	48	3	0	2	18	7	0	1	16	19	0	200	418	
08:45 AM	4	88	7	0	8	48	1	0	1	12	12	0	10	18	9	0	218	218	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
All Vehicles	16	352	40	0	84	220	12	0	8	92	48	0	40	108	76	0	1096		
Heavy Trucks	8	40	4	0	8	20	4	0	0	12	4	0	4	8	16	0	128		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

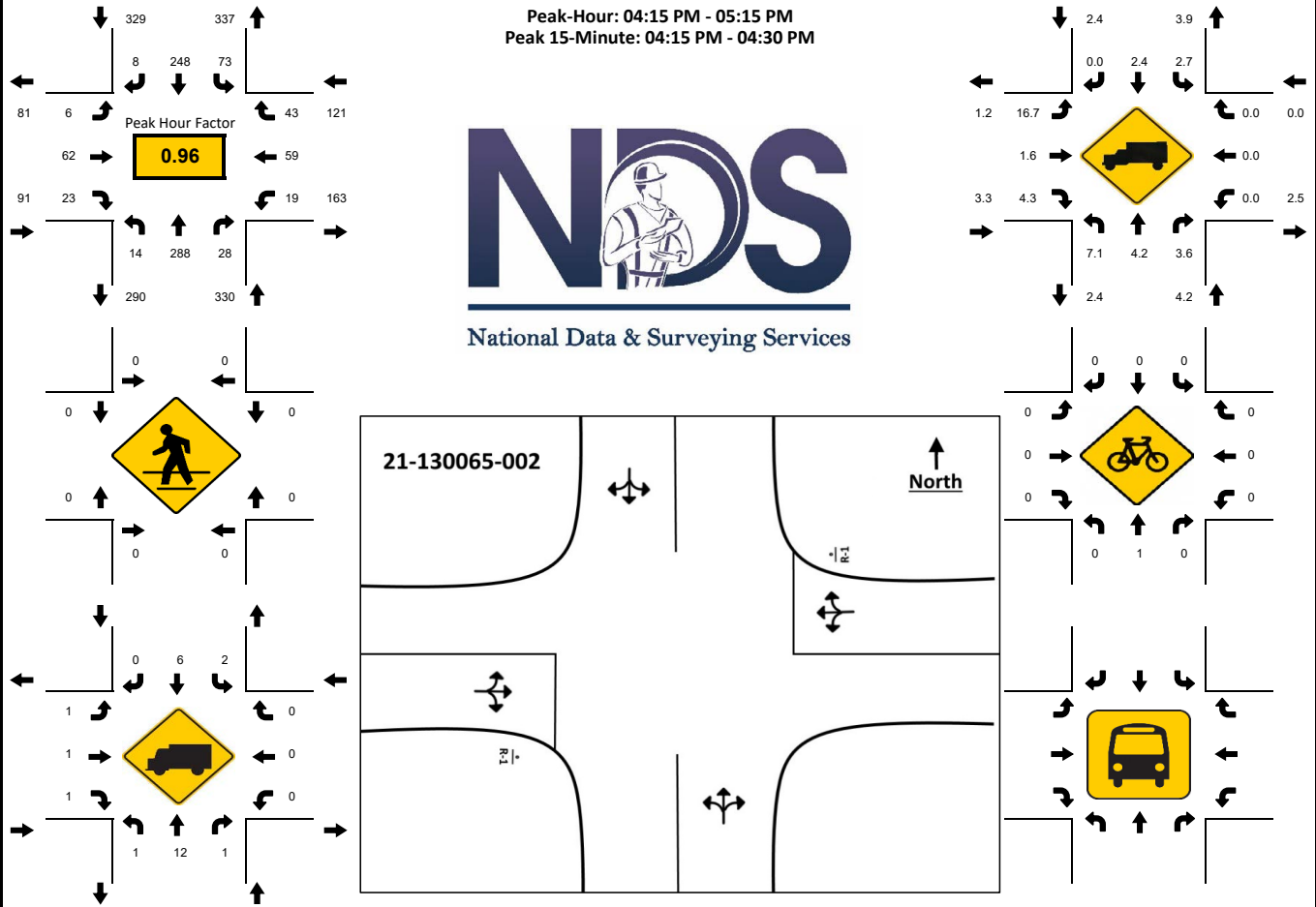
LOCATION: Oleander Ave & Weatherbee Rd  
 CITY/STATE: Fort Pierce, FL

PROJECT ID: 21-130065-002  
 DATE: Tue, Apr 06, 2021

Peak-Hour: 04:15 PM - 05:15 PM  
 Peak 15-Minute: 04:15 PM - 04:30 PM



National Data & Surveying Services



15-Min Count Period Beginning At	Oleander Ave Northbound					Oleander Ave Southbound					Weatherbee Rd Eastbound					Weatherbee Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	5	60	9	0		14	74	0	0		2	14	4	0		5	24	14	0		225	870
04:15 PM	7	79	8	0		22	60	0	0		1	13	6	0		3	12	17	0		228	871
04:30 PM	2	79	7	0		12	68	1	0		2	19	5	0		5	14	4	0		218	869
04:45 PM	4	60	6	0		17	56	3	0		3	13	6	0		4	16	11	0		199	848
05:00 PM	1	70	7	0		22	64	4	0		0	17	6	0		7	17	11	0		226	843
05:15 PM	4	67	9	0		13	81	1	0		1	14	4	0		4	14	14	0		226	617
05:30 PM	5	61	11	0		17	58	1	0		1	13	6	0		5	13	6	0		197	391
05:45 PM	1	48	13	0		16	55	2	0		1	12	4	0		9	22	11	0		194	194
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	28	316	32	0		88	272	16	0		12	76	24	0		28	68	68	0		1028	
Heavy Trucks	4	24	4	0		4	8	0	0		4	4	4	0		0	0	0	0		56	
Pedestrians		0					0					0					0				0	
Bicycles	0	4	0	0		0	0	0	0		0	0	0	0		0	0	0	0		4	
Buses																						
Stopped Buses																						

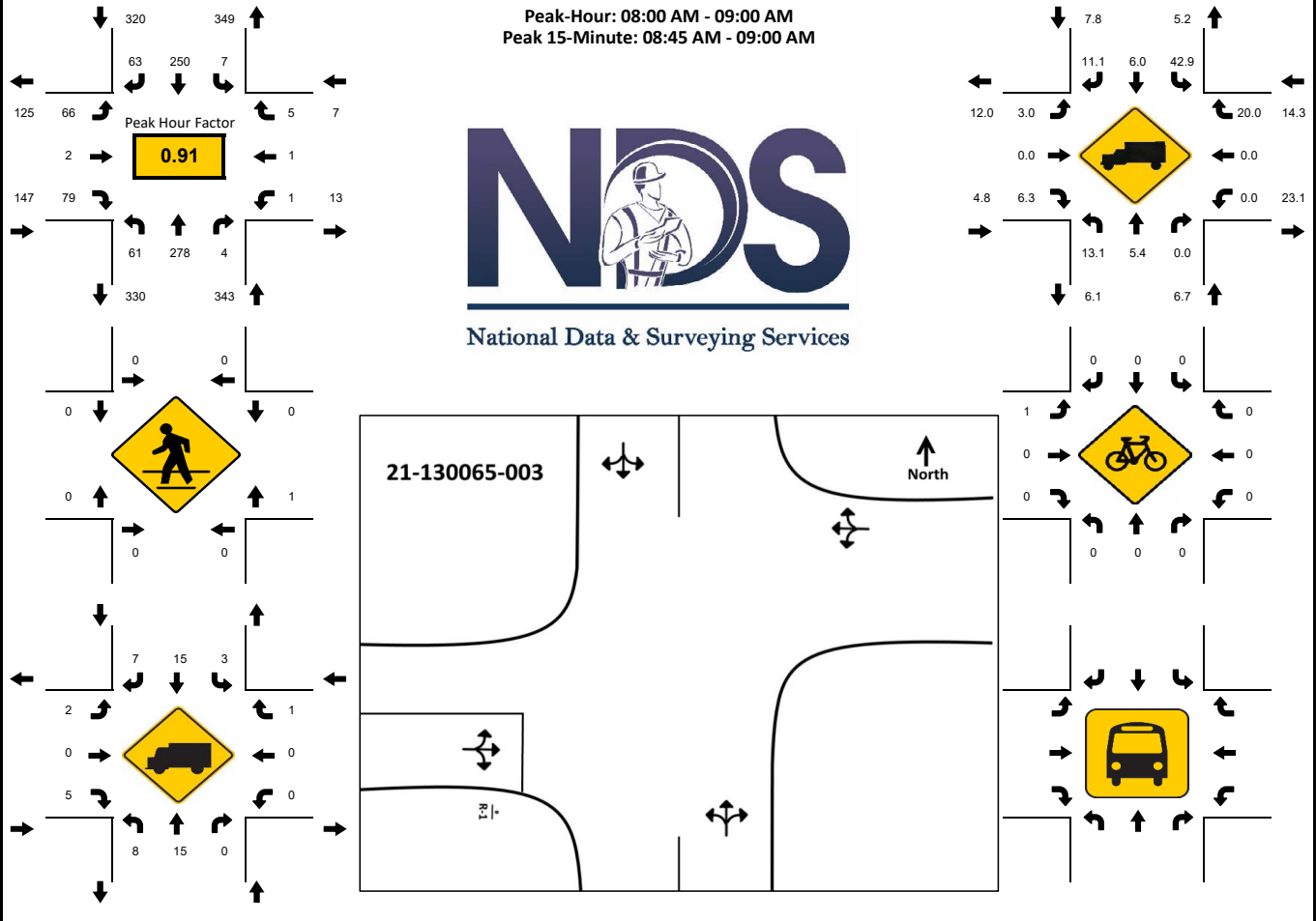
LOCATION: Oleander Ave & Bell Ave  
 CITY/STATE: Fort Pierce, FL

PROJECT ID: 21-130065-003  
 DATE: Tue, Apr 06, 2021

Peak-Hour: 08:00 AM - 09:00 AM  
 Peak 15-Minute: 08:45 AM - 09:00 AM



National Data & Surveying Services



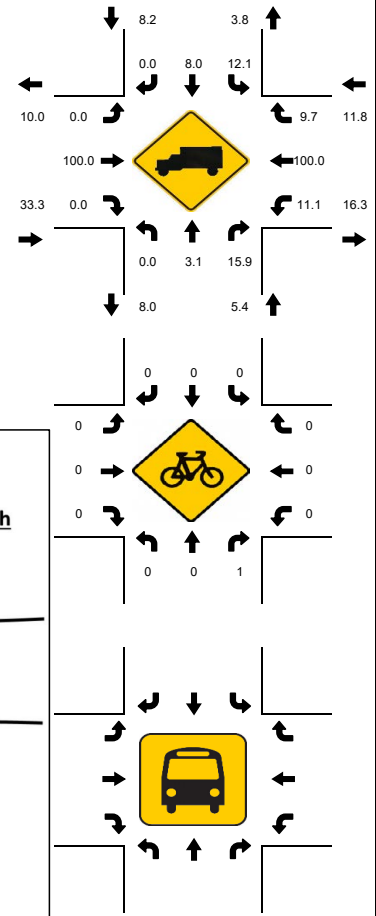
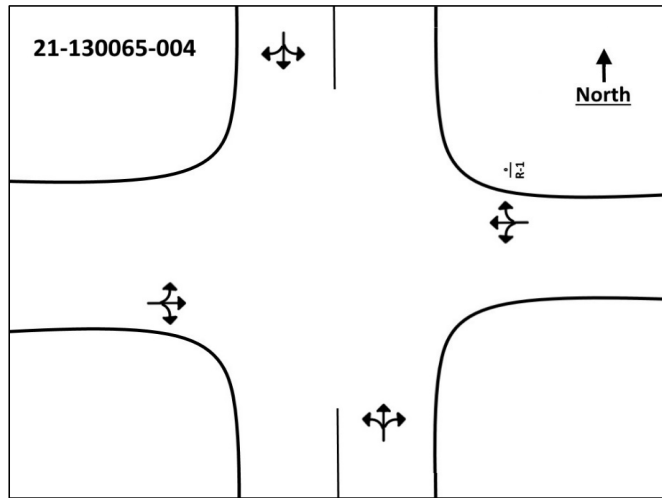
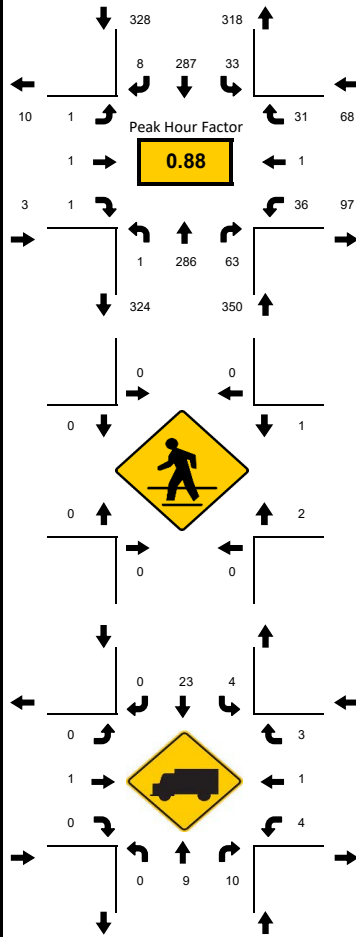
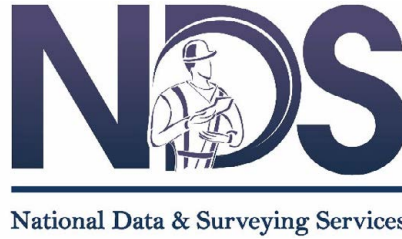
15-Min Count Period Beginning At	Oleander Ave Northbound					Oleander Ave Southbound					Bell Ave Eastbound					Bell Ave Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	18	39	2	1		2	37	20	0		14	3	12	0		1	2	7	0		158	722
07:15 AM	18	46	2	0		3	48	20	1		23	0	18	0		0	1	3	0		183	768
07:30 AM	10	46	1	0		4	63	17	0		19	0	23	0		0	0	0	0		183	772
07:45 AM	21	62	2	0		1	56	13	0		17	0	26	0		0	0	0	0		198	791
08:00 AM	12	64	3	0		2	59	15	0		21	1	24	0		1	1	1	0		204	817
08:15 AM	19	54	0	0		1	61	10	0		19	0	23	0		0	0	0	0		187	613
08:30 AM	13	69	0	0		2	63	20	0		16	0	19	0		0	0	0	0		202	426
08:45 AM	17	91	1	0		2	67	18	0		10	1	13	0		0	0	4	0		224	224
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	76	364	12	0		8	268	80	0		84	4	96	0		4	4	16	0			1016
Heavy Trucks	24	32	0	0		8	28	16	0		4	0	8	0		0	0	4	0		124	
Pedestrians	0	0	0	0		0	0	0	0		0	0	0	0		4	0	0	0		4	
Bicycles	0	0	0	0		0	0	0	0		4	0	0	0		0	0	0	0		4	
Buses																						
Stopped Buses																						



LOCATION: Oleander Ave & Farmers Market Rd  
 CITY/STATE: Fort Pierce, FL

PROJECT ID: 21-130065-004  
 DATE: Tue, Apr 06, 2021

Peak-Hour: 08:00 AM - 09:00 AM  
 Peak 15-Minute: 08:45 AM - 09:00 AM

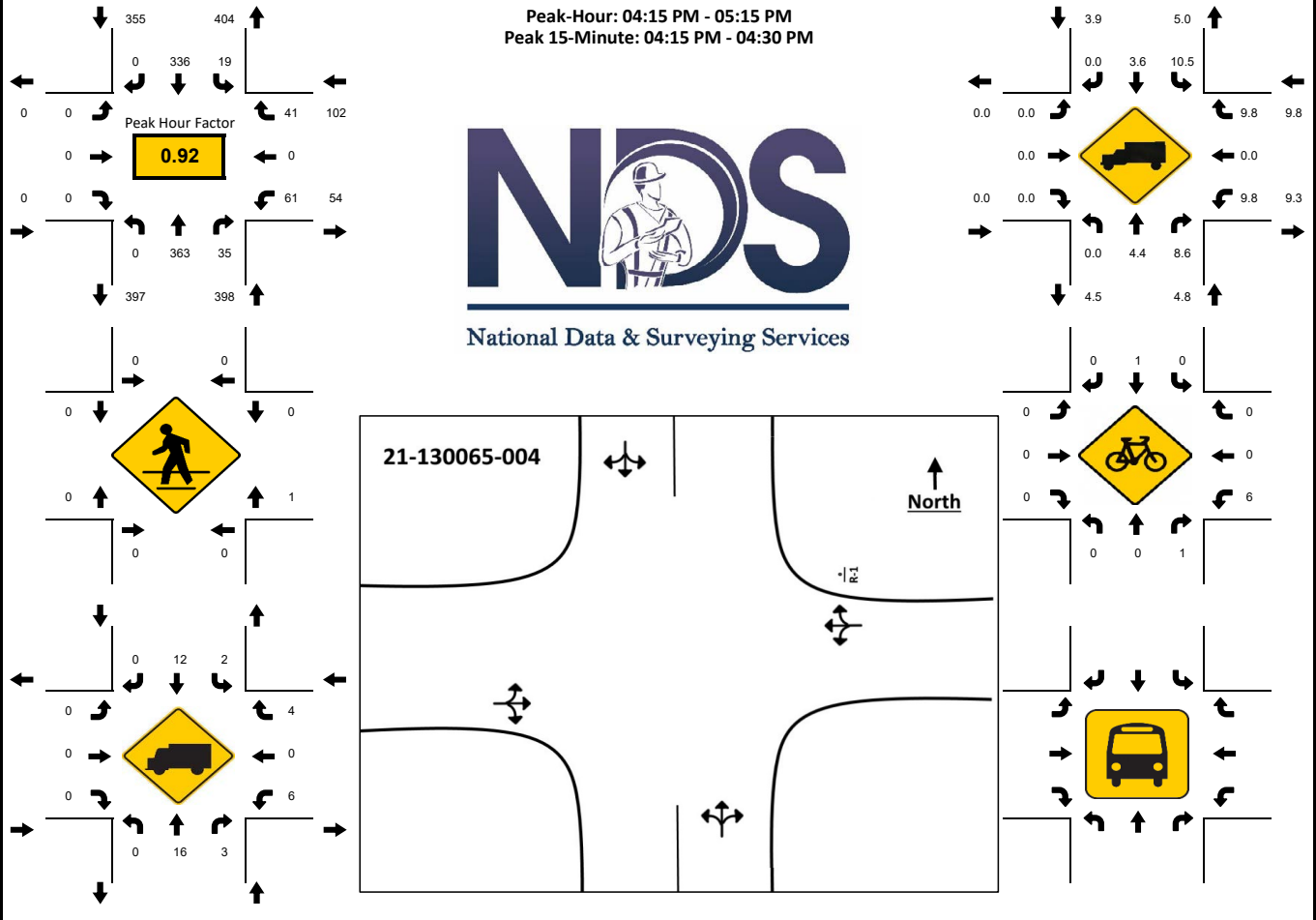


15-Min Count Period Beginning At	Oleander Ave Northbound					Oleander Ave Southbound					Farmers Market Rd Eastbound					Farmers Market Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	49	9	0		3	54	2	0		1	0	0	0		4	0	7	0		129	609
07:15 AM	0	59	17	0		5	67	1	0		0	0	1	0		7	0	7	0		164	665
07:30 AM	0	43	19	0		11	71	0	0		0	0	0	0		9	0	5	0		158	665
07:45 AM	0	68	12	0		7	61	1	0		1	0	0	0		6	0	2	0		158	694
08:00 AM	0	71	14	0		10	76	0	0		0	0	0	0		9	0	5	0		185	749
08:15 AM	0	62	13	0		8	63	0	0		0	0	0	0		7	0	10	1		164	564
08:30 AM	1	64	20	0		9	71	1	0		0	1	0	0		9	1	10	0		187	400
08:45 AM	0	89	16	0		6	77	7	0		1	0	1	0		10	0	6	0		213	213
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	4	356	80	0		40	308	28	0		4	4	4	0		40	4	40	4		916	
Heavy Trucks	0	12	32	0		8	28	0	0		0	4	0	0		4	4	4	4		96	
Pedestrians	0	0	0	0		0	0	0	0		0	0	0	0		8	0	0	0		8	
Bicycles	0	0	4	0		0	0	0	0		0	0	0	0		0	0	0	0		4	
Buses																						
Stopped Buses																						

Peak-Hour: 04:15 PM - 05:15 PM  
 Peak 15-Minute: 04:15 PM - 04:30 PM



National Data & Surveying Services

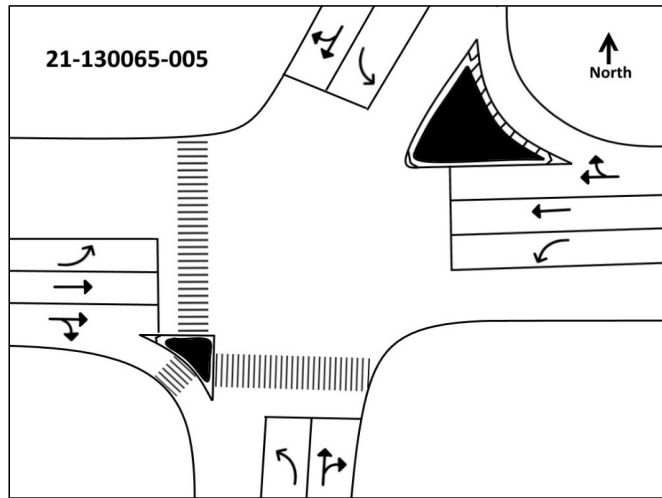
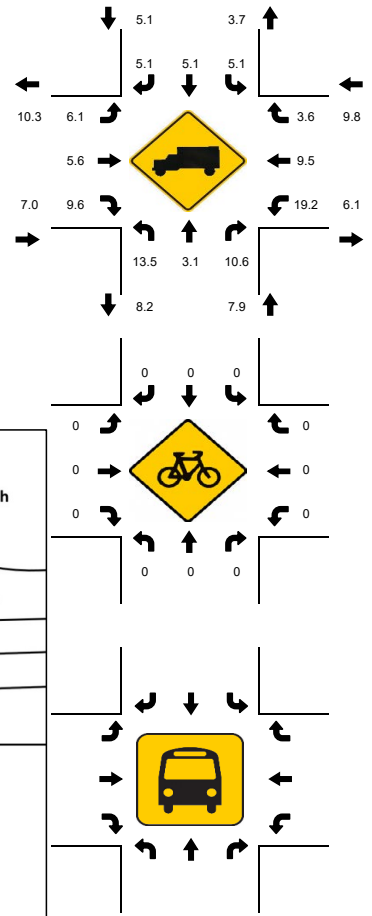
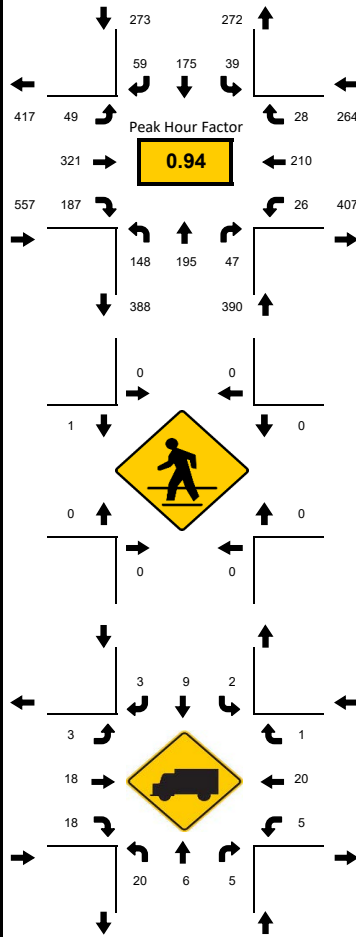
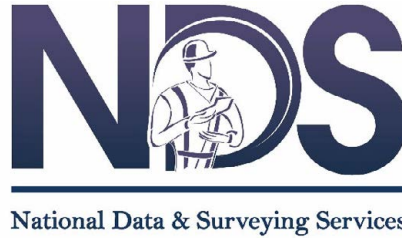


15-Min Count Period Beginning At	Oleander Ave Northbound					Oleander Ave Southbound					Farmers Market Rd Eastbound					Farmers Market Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	1	75	5	0		6	100	0	0		1	0	0	0		15	0	8	0		211	850
04:15 PM	0	107	8	0		6	87	0	0		0	0	0	0		14	0	10	0		232	855
04:30 PM	0	87	13	0		6	82	0	0		0	0	0	0		15	0	10	0		213	849
04:45 PM	0	84	6	0		5	74	0	0		0	0	0	0		15	0	10	0		194	824
05:00 PM	0	85	8	0		2	93	0	0		0	0	0	0		17	0	11	0		216	788
05:15 PM	0	93	6	0		8	94	0	0		0	0	0	0		13	0	12	0		226	572
05:30 PM	0	88	5	0		6	66	0	0		0	0	0	0		9	0	14	0		188	346
05:45 PM	0	63	7	0		6	70	0	0		0	0	0	0		7	0	5	0		158	158
<b>Peak 15-Min Flowrates</b>	<b>Northbound</b>					<b>Southbound</b>					<b>Eastbound</b>					<b>Westbound</b>					<b>Total</b>	
All Vehicles	0	428	52	0		24	372	0	0		0	0	0	0		68	0	44	0		988	
Heavy Trucks	0	28	8	0		4	28	0	0		0	0	0	0		12	0	8	0		88	
Pedestrians	0	0	0	0		0	0	0	0		0	0	0	0		4	0	0	0		4	
Bicycles	0	0	4	0		0	4	0	0		0	0	0	0		12	0	0	0		20	
Buses																						
Stopped Buses																						

LOCATION: Oleander Ave & Edwards Rd  
 CITY/STATE: Fort Pierce, FL

PROJECT ID: 21-130065-005  
 DATE: Tue, Apr 06, 2021

Peak-Hour: 08:00 AM - 09:00 AM  
 Peak 15-Minute: 08:45 AM - 09:00 AM



15-Min Count Period Beginning At	Oleander Ave Northbound					Oleander Ave Southbound					Edwards Rd Eastbound					Edwards Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	34	30	4	0		5	28	16	0		11	72	30	0		5	41	3	0		279	1349
07:15 AM	41	36	14	0		10	29	21	0		12	75	43	0		8	45	4	0		338	1430
07:30 AM	35	29	7	0		8	29	22	0		17	74	49	0		11	64	2	0		347	1431
07:45 AM	34	55	12	0		8	45	13	0		11	81	57	0		5	60	4	0		385	1475
08:00 AM	32	44	14	0		13	40	18	0		11	79	46	0		7	51	5	0		360	1484
08:15 AM	35	38	7	0		14	38	8	0		9	80	47	0		3	53	7	0		339	1124
08:30 AM	38	52	11	0		4	50	17	0		18	85	44	0		7	57	8	0		391	785
08:45 AM	43	61	15	0		8	47	16	0		11	77	50	0		9	49	8	0		394	394
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	172	244	60	0		56	200	72	0		72	340	200	0		36	228	32	0		1712	
Heavy Trucks	24	8	8	0		4	12	4	0		4	28	20	0		16	24	4	0		156	
Pedestrians	0	0	0	0		0	0	0	0		4	4	0	0		0	0	0	0		4	
Bicycles	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	
Buses																						
Stopped Buses																						



## **APPENDIX F**

# FDOT's Florida Traffic Online 2019 Peak Season Factor Category Report

2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 9400 EAST-A1A TO US1

WEEK	DATES	SF	MOCF: 0.88 PSCF
1	01/01/2019 - 01/05/2019	1.02	1.16
2	01/06/2019 - 01/12/2019	0.98	1.11
3	01/13/2019 - 01/19/2019	0.93	1.06
* 4	01/20/2019 - 01/26/2019	0.91	1.03
* 5	01/27/2019 - 02/02/2019	0.89	1.01
* 6	02/03/2019 - 02/09/2019	0.87	0.99
* 7	02/10/2019 - 02/16/2019	0.85	0.97
* 8	02/17/2019 - 02/23/2019	0.85	0.97
* 9	02/24/2019 - 03/02/2019	0.85	0.97
*10	03/03/2019 - 03/09/2019	0.85	0.97
*11	03/10/2019 - 03/16/2019	0.85	0.97
*12	03/17/2019 - 03/23/2019	0.87	0.99
*13	03/24/2019 - 03/30/2019	0.88	1.00
*14	03/31/2019 - 04/06/2019	0.89	1.01
*15	04/07/2019 - 04/13/2019	0.90	1.02
*16	04/14/2019 - 04/20/2019	0.92	1.05
17	04/21/2019 - 04/27/2019	0.94	1.07
18	04/28/2019 - 05/04/2019	0.96	1.09
19	05/05/2019 - 05/11/2019	0.99	1.13
20	05/12/2019 - 05/18/2019	1.01	1.15
21	05/19/2019 - 05/25/2019	1.03	1.17
22	05/26/2019 - 06/01/2019	1.04	1.18
23	06/02/2019 - 06/08/2019	1.06	1.20
24	06/09/2019 - 06/15/2019	1.08	1.23
25	06/16/2019 - 06/22/2019	1.08	1.23
26	06/23/2019 - 06/29/2019	1.08	1.23
27	06/30/2019 - 07/06/2019	1.08	1.23
28	07/07/2019 - 07/13/2019	1.08	1.23
29	07/14/2019 - 07/20/2019	1.08	1.23
30	07/21/2019 - 07/27/2019	1.09	1.24
31	07/28/2019 - 08/03/2019	1.11	1.26
32	08/04/2019 - 08/10/2019	1.12	1.27
33	08/11/2019 - 08/17/2019	1.14	1.30
34	08/18/2019 - 08/24/2019	1.15	1.31
35	08/25/2019 - 08/31/2019	1.17	1.33
36	09/01/2019 - 09/07/2019	1.19	1.35
37	09/08/2019 - 09/14/2019	1.20	1.36
38	09/15/2019 - 09/21/2019	1.22	1.39
39	09/22/2019 - 09/28/2019	1.18	1.34
40	09/29/2019 - 10/05/2019	1.15	1.31
41	10/06/2019 - 10/12/2019	1.11	1.26
42	10/13/2019 - 10/19/2019	1.08	1.23
43	10/20/2019 - 10/26/2019	1.07	1.22
44	10/27/2019 - 11/02/2019	1.05	1.19
45	11/03/2019 - 11/09/2019	1.04	1.18
46	11/10/2019 - 11/16/2019	1.03	1.17
47	11/17/2019 - 11/23/2019	1.03	1.17
48	11/24/2019 - 11/30/2019	1.03	1.17
49	12/01/2019 - 12/07/2019	1.02	1.16
50	12/08/2019 - 12/14/2019	1.02	1.16
51	12/15/2019 - 12/21/2019	1.02	1.16
52	12/22/2019 - 12/28/2019	0.98	1.11
53	12/29/2019 - 12/31/2019	0.93	1.06

\* PEAK SEASON

14-FEB-2020 15:39:28

830UPD

4\_9400\_PKSEASON.TXT

2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 9401 CEN.-W OF US1 TO I95

MOCF: 0.94

WEEK	DATES	SF	PSCF
1	01/01/2019 - 01/05/2019	1.01	1.07
2	01/06/2019 - 01/12/2019	0.99	1.05
3	01/13/2019 - 01/19/2019	0.96	1.02
* 4	01/20/2019 - 01/26/2019	0.95	1.01
* 5	01/27/2019 - 02/02/2019	0.94	1.00
* 6	02/03/2019 - 02/09/2019	0.93	0.99
* 7	02/10/2019 - 02/16/2019	0.92	0.98
* 8	02/17/2019 - 02/23/2019	0.92	0.98
* 9	02/24/2019 - 03/02/2019	0.93	0.99
*10	03/03/2019 - 03/09/2019	0.93	0.99
*11	03/10/2019 - 03/16/2019	0.93	0.99
*12	03/17/2019 - 03/23/2019	0.94	1.00
*13	03/24/2019 - 03/30/2019	0.94	1.00
*14	03/31/2019 - 04/06/2019	0.95	1.01
*15	04/07/2019 - 04/13/2019	0.95	1.01
*16	04/14/2019 - 04/20/2019	0.96	1.02
17	04/21/2019 - 04/27/2019	0.97	1.03
18	04/28/2019 - 05/04/2019	0.98	1.04
19	05/05/2019 - 05/11/2019	0.99	1.05
20	05/12/2019 - 05/18/2019	1.00	1.06
21	05/19/2019 - 05/25/2019	1.01	1.07
22	05/26/2019 - 06/01/2019	1.02	1.09
23	06/02/2019 - 06/08/2019	1.02	1.09
24	06/09/2019 - 06/15/2019	1.03	1.10
25	06/16/2019 - 06/22/2019	1.04	1.11
26	06/23/2019 - 06/29/2019	1.05	1.12
27	06/30/2019 - 07/06/2019	1.05	1.12
28	07/07/2019 - 07/13/2019	1.06	1.13
29	07/14/2019 - 07/20/2019	1.07	1.14
30	07/21/2019 - 07/27/2019	1.06	1.13
31	07/28/2019 - 08/03/2019	1.06	1.13
32	08/04/2019 - 08/10/2019	1.05	1.12
33	08/11/2019 - 08/17/2019	1.04	1.11
34	08/18/2019 - 08/24/2019	1.05	1.12
35	08/25/2019 - 08/31/2019	1.07	1.14
36	09/01/2019 - 09/07/2019	1.08	1.15
37	09/08/2019 - 09/14/2019	1.10	1.17
38	09/15/2019 - 09/21/2019	1.11	1.18
39	09/22/2019 - 09/28/2019	1.09	1.16
40	09/29/2019 - 10/05/2019	1.07	1.14
41	10/06/2019 - 10/12/2019	1.04	1.11
42	10/13/2019 - 10/19/2019	1.02	1.09
43	10/20/2019 - 10/26/2019	1.02	1.09
44	10/27/2019 - 11/02/2019	1.02	1.09
45	11/03/2019 - 11/09/2019	1.01	1.07
46	11/10/2019 - 11/16/2019	1.01	1.07
47	11/17/2019 - 11/23/2019	1.01	1.07
48	11/24/2019 - 11/30/2019	1.01	1.07
49	12/01/2019 - 12/07/2019	1.01	1.07
50	12/08/2019 - 12/14/2019	1.01	1.07
51	12/15/2019 - 12/21/2019	1.01	1.07
52	12/22/2019 - 12/28/2019	0.99	1.05
53	12/29/2019 - 12/31/2019	0.96	1.02

\* PEAK SEASON

14-FEB-2020 15:39:28

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2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 9402 WEST-W OF I95

WEEK	DATES	SF	MOCF: 0.92 PSCF
1	01/01/2019 - 01/05/2019	1.05	1.14
2	01/06/2019 - 01/12/2019	1.03	1.12
3	01/13/2019 - 01/19/2019	1.00	1.09
* 4	01/20/2019 - 01/26/2019	0.97	1.05
* 5	01/27/2019 - 02/02/2019	0.93	1.01
* 6	02/03/2019 - 02/09/2019	0.90	0.98
* 7	02/10/2019 - 02/16/2019	0.86	0.93
* 8	02/17/2019 - 02/23/2019	0.87	0.95
* 9	02/24/2019 - 03/02/2019	0.88	0.96
*10	03/03/2019 - 03/09/2019	0.89	0.97
*11	03/10/2019 - 03/16/2019	0.90	0.98
*12	03/17/2019 - 03/23/2019	0.91	0.99
*13	03/24/2019 - 03/30/2019	0.93	1.01
*14	03/31/2019 - 04/06/2019	0.94	1.02
*15	04/07/2019 - 04/13/2019	0.95	1.03
*16	04/14/2019 - 04/20/2019	0.97	1.05
17	04/21/2019 - 04/27/2019	0.99	1.08
18	04/28/2019 - 05/04/2019	1.00	1.09
19	05/05/2019 - 05/11/2019	1.02	1.11
20	05/12/2019 - 05/18/2019	1.04	1.13
21	05/19/2019 - 05/25/2019	1.06	1.15
22	05/26/2019 - 06/01/2019	1.07	1.16
23	06/02/2019 - 06/08/2019	1.09	1.18
24	06/09/2019 - 06/15/2019	1.10	1.20
25	06/16/2019 - 06/22/2019	1.11	1.21
26	06/23/2019 - 06/29/2019	1.12	1.22
27	06/30/2019 - 07/06/2019	1.12	1.22
28	07/07/2019 - 07/13/2019	1.13	1.23
29	07/14/2019 - 07/20/2019	1.14	1.24
30	07/21/2019 - 07/27/2019	1.13	1.23
31	07/28/2019 - 08/03/2019	1.13	1.23
32	08/04/2019 - 08/10/2019	1.12	1.22
33	08/11/2019 - 08/17/2019	1.12	1.22
34	08/18/2019 - 08/24/2019	1.11	1.21
35	08/25/2019 - 08/31/2019	1.10	1.20
36	09/01/2019 - 09/07/2019	1.09	1.18
37	09/08/2019 - 09/14/2019	1.08	1.17
38	09/15/2019 - 09/21/2019	1.08	1.17
39	09/22/2019 - 09/28/2019	1.05	1.14
40	09/29/2019 - 10/05/2019	1.03	1.12
41	10/06/2019 - 10/12/2019	1.00	1.09
42	10/13/2019 - 10/19/2019	0.98	1.07
43	10/20/2019 - 10/26/2019	0.97	1.05
44	10/27/2019 - 11/02/2019	0.96	1.04
45	11/03/2019 - 11/09/2019	0.94	1.02
46	11/10/2019 - 11/16/2019	0.93	1.01
47	11/17/2019 - 11/23/2019	0.95	1.03
48	11/24/2019 - 11/30/2019	0.98	1.07
49	12/01/2019 - 12/07/2019	1.00	1.09
50	12/08/2019 - 12/14/2019	1.02	1.11
51	12/15/2019 - 12/21/2019	1.05	1.14
52	12/22/2019 - 12/28/2019	1.03	1.12
53	12/29/2019 - 12/31/2019	1.00	1.09

\* PEAK SEASON

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2019 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 9495 ST LUCIE I95

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2019 - 01/05/2019	0.92	0.95
2	01/06/2019 - 01/12/2019	0.98	1.01
3	01/13/2019 - 01/19/2019	1.03	1.06
4	01/20/2019 - 01/26/2019	1.02	1.05
5	01/27/2019 - 02/02/2019	1.01	1.04
6	02/03/2019 - 02/09/2019	1.00	1.03
7	02/10/2019 - 02/16/2019	0.99	1.02
8	02/17/2019 - 02/23/2019	0.98	1.01
9	02/24/2019 - 03/02/2019	0.97	1.00
10	03/03/2019 - 03/09/2019	0.96	0.99
11	03/10/2019 - 03/16/2019	0.95	0.98
12	03/17/2019 - 03/23/2019	0.96	0.99
13	03/24/2019 - 03/30/2019	0.96	0.99
14	03/31/2019 - 04/06/2019	0.97	1.00
15	04/07/2019 - 04/13/2019	0.97	1.00
16	04/14/2019 - 04/20/2019	0.98	1.01
17	04/21/2019 - 04/27/2019	0.99	1.02
18	04/28/2019 - 05/04/2019	1.00	1.03
19	05/05/2019 - 05/11/2019	1.00	1.03
20	05/12/2019 - 05/18/2019	1.01	1.04
21	05/19/2019 - 05/25/2019	1.01	1.04
22	05/26/2019 - 06/01/2019	1.02	1.05
23	06/02/2019 - 06/08/2019	1.02	1.05
24	06/09/2019 - 06/15/2019	1.02	1.05
25	06/16/2019 - 06/22/2019	1.02	1.05
26	06/23/2019 - 06/29/2019	1.02	1.05
27	06/30/2019 - 07/06/2019	1.02	1.05
28	07/07/2019 - 07/13/2019	1.02	1.05
29	07/14/2019 - 07/20/2019	1.02	1.05
30	07/21/2019 - 07/27/2019	1.03	1.06
31	07/28/2019 - 08/03/2019	1.03	1.06
32	08/04/2019 - 08/10/2019	1.04	1.07
33	08/11/2019 - 08/17/2019	1.04	1.07
34	08/18/2019 - 08/24/2019	1.06	1.09
35	08/25/2019 - 08/31/2019	1.08	1.11
36	09/01/2019 - 09/07/2019	1.10	1.13
37	09/08/2019 - 09/14/2019	1.12	1.15
38	09/15/2019 - 09/21/2019	1.14	1.18
39	09/22/2019 - 09/28/2019	1.11	1.14
40	09/29/2019 - 10/05/2019	1.08	1.11
*41	10/06/2019 - 10/12/2019	1.04	1.07
*42	10/13/2019 - 10/19/2019	1.01	1.04
*43	10/20/2019 - 10/26/2019	1.00	1.03
*44	10/27/2019 - 11/02/2019	0.98	1.01
*45	11/03/2019 - 11/09/2019	0.97	1.00
*46	11/10/2019 - 11/16/2019	0.95	0.98
*47	11/17/2019 - 11/23/2019	0.94	0.97
*48	11/24/2019 - 11/30/2019	0.94	0.97
*49	12/01/2019 - 12/07/2019	0.93	0.96
*50	12/08/2019 - 12/14/2019	0.93	0.96
*51	12/15/2019 - 12/21/2019	0.92	0.95
*52	12/22/2019 - 12/28/2019	0.98	1.01
*53	12/29/2019 - 12/31/2019	1.03	1.06

\* PEAK SEASON

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## **APPENDIX G**

### Turning Movement Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

Oleander Avenue & Midway Road

WEEKDAY AM PEAK HOUR (8:00 AM to 9:00 AM)	Oleander Avenue			Oleander Avenue			Midway Road			Midway Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	109	141	56	53	133	52	97	365	97	26	335	42
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	110	142	57	54	134	53	98	369	98	26	338	42
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	9	11	5	4	11	4	8	29	8	2	27	3
Project Traffic % Assignment		10%			10%	15%	15%					
Project Traffic Direction		IN			OUT	OUT	IN					
Project Traffic		1			3	6	2					
2026 Background Traffic	119	153	62	58	145	57	106	398	106	28	365	45
2026 Total Traffic	119	154	62	58	148	63	108	398	106	28	365	45

WEEKDAY PM PEAK HOUR (4:30 PM to 5:30 PM)	Oleander Avenue			Oleander Avenue			Midway Road			Midway Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	106	126	52	92	137	76	95	521	66	48	416	96
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	107	127	53	93	138	77	96	526	67	48	420	97
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	9	10	4	7	11	6	8	42	5	4	34	8
Project Traffic % Assignment		10%			10%	15%	15%					
Project Traffic Direction		IN			OUT	OUT	IN					
Project Traffic		4			2	4	6					
2026 Background Traffic	116	137	57	100	149	83	104	568	72	52	454	105
2026 Total Traffic	116	141	57	100	151	87	110	568	72	52	454	105

INTERSECTION VOLUME DEVELOPMENT

Oleander Avenue & Weatherbee Road

WEEKDAY AM PEAK HOUR (8:00 AM to 9:00 AM)	Oleander Avenue			Oleander Avenue			Weatherbee Road			Weatherbee Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	9	249	32	52	191	7	6	64	32	19	80	52
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	9	251	32	53	193	7	6	65	32	19	81	53
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	1	20	3	4	15	1	0	5	3	2	6	4
Project Traffic % Assignment		25%		15%	25%							15%
Project Traffic Direction		IN		OUT	OUT							IN
Project Traffic		3		6	9							2
2026 Background Traffic	10	271	35	57	208	8	6	70	35	21	87	57
2026 Total Traffic	10	274	35	63	217	8	6	70	35	21	87	59

WEEKDAY PM PEAK HOUR (4:15 PM to 5:15 PM)	Oleander Avenue			Oleander Avenue			Weatherbee Road			Weatherbee Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	14	288	28	73	248	8	6	62	23	19	59	43
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	14	291	28	74	250	8	6	63	23	19	60	43
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	1	23	2	6	20	1	0	5	2	2	5	3
Project Traffic % Assignment		25%		15%	25%							15%
Project Traffic Direction		IN		OUT	OUT							IN
Project Traffic		10		4	6							6
2026 Background Traffic	15	314	30	80	270	9	6	68	25	21	65	46
2026 Total Traffic	15	324	30	84	276	9	6	68	25	21	65	52

INTERSECTION VOLUME DEVELOPMENT

Oleander Avenue & Bell Avenue

WEEKDAY AM PEAK HOUR (8:00 AM to 9:00 AM)	Oleander Avenue			Oleander Avenue			Bell Avenue			Driveway		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	61	278	4	7	250	63	66	2	79	1	1	5
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	62	281	4	7	253	64	67	2	80	1	1	5
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	5	22	0	1	20	5	5	0	6	0	0	0
Project Traffic % Assignment	5%	55%			55%				5%			
Project Traffic Direction	OUT	OUT			IN				IN			
Project Traffic	2	20			7				1			
2026 Background Traffic	67	303	4	8	273	69	72	2	86	1	1	5
2026 Total Traffic	69	323	4	8	280	69	72	2	87	1	1	5

WEEKDAY PM PEAK HOUR (4:15 PM to 5:15 PM)	Oleander Avenue			Oleander Avenue			Bell Avenue			Driveway		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	72	328	0	2	287	108	68	2	78	1	4	6
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	73	331	0	2	290	109	69	2	79	1	4	6
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	6	26	0	0	23	9	6	0	6	0	0	0
Project Traffic % Assignment	5%	55%			55%				5%			
Project Traffic Direction	OUT	OUT			IN				IN			
Project Traffic	1	13			23				2			
2026 Background Traffic	79	357	0	2	313	118	75	2	85	1	4	6
2026 Total Traffic	80	370	0	2	336	118	75	2	87	1	4	6

INTERSECTION VOLUME DEVELOPMENT

Oleander Avenue & Farmers Market Road

WEEKDAY AM PEAK HOUR (8:00 AM to 9:00 AM)	Oleander Avenue			Oleander Avenue			Driveway			Farmers Market Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	1	286	63	33	287	8	1	1	1	36	1	31
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	1	289	64	33	290	8	1	1	1	36	1	31
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	0	23	5	3	23	1	0	0	0	3	0	2
Project Traffic % Assignment		45%	10%		45%					10%		
Project Traffic Direction		OUT	OUT		IN					IN		
Project Traffic		17	3		6					1		
2026 Background Traffic	1	312	69	36	313	9	1	1	1	39	1	33
2026 Total Traffic	1	329	72	36	319	9	1	1	1	40	1	33

WEEKDAY PM PEAK HOUR (4:15 PM to 5:15 PM)	Oleander Avenue			Oleander Avenue			Driveway			Farmers Market Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	0	363	35	19	336	0	0	0	0	61	0	41
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	0	367	35	19	339	0	0	0	0	62	0	41
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	0	29	3	2	27	0	0	0	0	5	0	3
Project Traffic % Assignment		45%	10%		45%					10%		
Project Traffic Direction		OUT	OUT		IN					IN		
Project Traffic		11	2		19					4		
2026 Background Traffic	0	396	38	21	366	0	0	0	0	67	0	44
2026 Total Traffic	0	407	40	21	385	0	0	0	0	71	0	44

INTERSECTION VOLUME DEVELOPMENT

Oleander Avenue & Edwards Road

WEEKDAY AM PEAK HOUR (8:00 AM to 9:00 AM)	Oleander Avenue			Oleander Avenue			Edwards Road			Edwards Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	148	195	47	39	175	59	49	321	187	26	210	28
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	149	197	47	39	177	60	49	324	189	26	212	28
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	12	16	4	3	14	5	4	26	15	2	17	2
Project Traffic % Assignment	20%	25%			25%				20%			
Project Traffic Direction	OUT	OUT			IN				IN			
Project Traffic	8	9			3				3			
2026 Background Traffic	161	213	51	42	191	65	53	350	204	28	229	30
2026 Total Traffic	169	222	51	42	194	65	53	350	207	28	229	30

WEEKDAY PM PEAK HOUR (4:45 PM to 5:45 PM)	Oleander Avenue			Oleander Avenue			Edwards Road			Edwards Road		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Counted on 4/6/2021	171	285	40	51	198	75	92	298	209	31	336	37
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	173	288	40	52	200	76	93	301	211	31	339	37
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	14	23	3	4	16	6	7	24	17	2	27	3
Project Traffic % Assignment	20%	25%			25%				20%			
Project Traffic Direction	OUT	OUT			IN				IN			
Project Traffic	5	6			11				8			
2026 Background Traffic	187	311	43	56	216	82	100	325	228	33	366	40
2026 Total Traffic	192	317	43	56	227	82	100	325	236	33	366	40

INTERSECTION VOLUME DEVELOPMENT

Oleander Avenue & Project Driveway

WEEKDAY AM PEAK HOUR (8:00 AM to 9:00 AM)	Oleander Avenue			Oleander Avenue			Project Driveway			-		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	N/A	N/A	N/A
Counted on 4/6/2021	0	307	0	0	330	0	0	0	0	0	0	0
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	0	310	0	0	333	0	0	0	0	0	0	0
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	0	25	0	0	27	0	0	0	0	0	0	0
Project Traffic % Assignment	40%					60%	60%		40%			
Project Traffic Direction	IN					IN	OUT		OUT			
Project Traffic	5					8	22		15			
2026 Background Traffic	0	335	0	0	360	0	0	0	0	0	0	0
2026 Total Traffic	5	335	0	0	360	8	22	0	15	0	0	0

WEEKDAY PM PEAK HOUR (4:15 PM to 5:15 PM)	Oleander Avenue			Oleander Avenue			Project Driveway			-		
	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	N/A	N/A	N/A
Counted on 4/6/2021	0	337	0	0	366	0	0	0	0	0	0	0
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2021 Existing Traffic	0	340	0	0	370	0	0	0	0	0	0	0
Annual Growth Rate	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%	1.55%
2026 Background Growth	0	27	0	0	30	0	0	0	0	0	0	0
Project Traffic % Assignment	40%					60%	60%		40%			
Project Traffic Direction	IN					IN	OUT		OUT			
Project Traffic	16					25	14		10			
2026 Background Traffic	0	367	0	0	400	0	0	0	0	0	0	0
2026 Total Traffic	16	367	0	0	400	25	14	0	10	0	0	0

**APPENDIX H**  
Signal Timing/Phasing Plans

St. Lucie County



MOVING TRAFFIC FORWARD

00011 - EDWARDS RD @ OLEANDER AVE - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Q in use

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	8	10	6	10	8	10	6	10	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	15	0	19	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	3.0	3.0	4.0	3.0	3.0	3.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	10	30	10	30	10	30	10	30	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timing 10/18/16

Ø in Use 1-8

Ø to LS 1-8 to 1-8, 9-12 to 2-8P

Ø	1	2	3	4	5	6	7	8
Min	8	10	8	8	8	10	8	8
Walk		7		7		7		7
RedCL		25		30		25		30
Ext	3	4.5	3	3.5	3	4.5	3	3.5
Max	10	45	15	25	15	45	15	25
Yell	4	4	4	4	4	4	4	4
Red	3	3	3	3	3	3	3	3

Start / Flash

Pwr Start 2,6 Green

Ext start 2,6 Green

Entry 4,8

Exit 2,6

# **APPENDIX I**

## Synchro Outputs

Lanes, Volumes, Timings  
1: Oleander Ave & Midway Rd

2021 Existing Traffic Conditions  
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Traffic Volume (vph)	98	369	98	26	338	42	110	142	57	54	134	53
Future Volume (vph)	98	369	98	26	338	42	110	142	57	54	134	53
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	6%	6%	6%	5%	5%	5%
Adj. Flow (vph)	105	397	105	28	363	45	118	153	61	58	144	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	502	0	28	408	0	118	214	0	58	144	57
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0		8.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	15.0	17.5		15.0	17.5		15.0	15.0		15.0	15.0	15.0
Total Split (s)	15.0	45.0		15.0	45.0		15.0	45.0		15.0	45.0	45.0
Total Split (%)	12.5%	37.5%		12.5%	37.5%		12.5%	37.5%		12.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
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)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None		None	None	None
v/c Ratio	0.58	0.41		0.16	0.53		0.34	0.44		0.16	0.43	0.14
Control Delay	50.6	21.0		38.2	27.9		38.0	27.8		36.4	32.5	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	50.6	21.0		38.2	27.9		38.0	27.8		36.4	32.5	0.7
Queue Length 50th (ft)	48	76		12	87		26	84		12	59	0
Queue Length 95th (ft)	#142	172		42	143		61	171		35	124	0
Internal Link Dist (ft)		1626			1766			1811			2560	
Turn Bay Length (ft)	400			300			275			200		200
Base Capacity (vph)	182	1696		179	1679		351	874		354	913	857
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.58	0.30		0.16	0.24		0.34	0.24		0.16	0.16	0.07

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 76.7

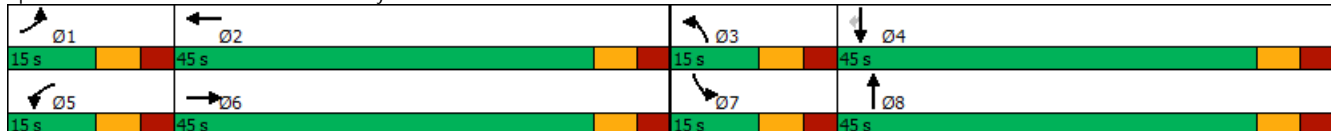
Natural Cycle: 65

Control Type: Actuated-Uncoordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Oleander Ave & Midway Rd



HCM 6th Signalized Intersection Summary  
1: Oleander Ave & Midway Rd

2021 Existing Traffic Conditions  
Timing Plan: AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	369	98	26	338	42	110	142	57	54	134	53
Future Volume (veh/h)	98	369	98	26	338	42	110	142	57	54	134	53
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	1826	1826	1826	1796	1796	1796	1811	1811	1811	1826	1826	1826
Adj Flow Rate, veh/h	105	397	105	28	363	45	118	153	61	58	144	57
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	7	7	7	6	6	6	5	5	5
Cap, veh/h	183	714	187	84	630	78	366	212	84	271	261	221
Arrive On Green	0.11	0.26	0.26	0.05	0.21	0.21	0.11	0.17	0.17	0.08	0.14	0.14
Sat Flow, veh/h	1739	2720	712	1711	3058	376	3346	1232	491	3374	1826	1547
Grp Volume(v), veh/h	105	252	250	28	201	207	118	0	214	58	144	57
Grp Sat Flow(s),veh/h/ln	1739	1735	1698	1711	1706	1728	1673	0	1723	1687	1826	1547
Q Serve(g_s), s	3.7	8.0	8.2	1.0	6.8	6.9	2.1	0.0	7.5	1.0	4.7	2.1
Cycle Q Clear(g_c), s	3.7	8.0	8.2	1.0	6.8	6.9	2.1	0.0	7.5	1.0	4.7	2.1
Prop In Lane	1.00		0.42	1.00		0.22	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	183	455	446	84	352	356	366	0	296	271	261	221
V/C Ratio(X)	0.57	0.55	0.56	0.33	0.57	0.58	0.32	0.00	0.72	0.21	0.55	0.26
Avail Cap(c_a), veh/h	217	1027	1005	213	1010	1023	417	0	1020	420	1081	916
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	20.4	20.5	29.5	22.9	23.0	26.4	0.0	25.1	27.6	25.6	24.5
Incr Delay (d2), s/veh	2.8	1.8	1.9	2.3	2.5	2.6	0.5	0.0	4.0	0.4	2.2	0.7
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	3.2	3.3	0.5	2.8	2.9	0.8	0.0	3.2	0.4	2.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	22.2	22.4	31.8	25.5	25.5	26.9	0.0	29.1	28.0	27.8	25.2
LnGrp LOS	C	C	C	C	C	C	C	A	C	C	C	C
Approach Vol, veh/h		607			436			332			259	
Approach Delay, s/veh		23.6			25.9			28.3			27.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.8	20.2	14.0	16.2	10.1	23.8	12.2	18.0				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	38.0	8.0	38.0	8.0	38.0	8.0	38.0				
Max Q Clear Time (g_c+I1), s	5.7	8.9	4.1	6.7	3.0	10.2	3.0	9.5				
Green Ext Time (p_c), s	0.0	4.3	0.1	1.2	0.0	5.4	0.0	1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				25.8								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings  
 2: Oleander Ave & Weatherbee Rd

2021 Existing Traffic Conditions  
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	65	32	19	81	53	9	251	32	53	193	7
Future Volume (vph)	6	65	32	19	81	53	9	251	32	53	193	7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	7%	7%	7%	6%	6%	6%
Adj. Flow (vph)	7	71	35	21	89	58	10	276	35	58	212	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	113	0	0	168	0	0	321	0	0	278	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		+			+			+			+	
Traffic Vol, veh/h	6	65	32	19	81	53	9	251	32	53	193	7
Future Vol, veh/h	6	65	32	19	81	53	9	251	32	53	193	7
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	7	7	7	7	7	7	6	6	6
Mvmt Flow	7	71	35	21	89	58	10	276	35	58	212	8
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	719	663	216	699	650	294	220	0	0	311	0	0
Stage 1	332	332	-	314	314	-	-	-	-	-	-	-
Stage 2	387	331	-	385	336	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.17	6.57	6.27	4.17	-	-	4.16	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.563	4.063	3.363	2.263	-	-	2.254	-	-
Pot Cap-1 Maneuver	340	378	816	348	382	734	1320	-	-	1227	-	-
Stage 1	675	639	-	686	647	-	-	-	-	-	-	-
Stage 2	631	640	-	628	633	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	241	354	816	268	358	734	1320	-	-	1227	-	-
Mov Cap-2 Maneuver	241	354	-	268	358	-	-	-	-	-	-	-
Stage 1	669	604	-	680	641	-	-	-	-	-	-	-
Stage 2	496	634	-	501	599	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	16.9		19.5			0.2			1.7			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1320	-	-	416	414	1227	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.272	0.406	0.047	-	-				
HCM Control Delay (s)	7.7	0	-	16.9	19.5	8.1	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.1	1.9	0.1	-	-				

Lanes, Volumes, Timings  
3: Oleander Ave & Bell Ave

2021 Existing Traffic Conditions  
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	67	5	80	1	1	5	62	281	4	7	253	64
Future Volume (vph)	67	5	80	1	1	5	62	281	4	7	253	64
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	14%	14%	14%	7%	7%	7%	8%	8%	8%
Adj. Flow (vph)	74	5	88	1	1	5	68	309	4	8	278	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	0	7	0	0	381	0	0	356	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

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	67	5	80	1	1	5	62	281	4	7	253	64
Future Vol, veh/h	67	5	80	1	1	5	62	281	4	7	253	64
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	14	14	14	7	7	7	8	8	8
Mvmt Flow	74	5	88	1	1	5	68	309	4	8	278	70

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	779	778	313	823	811	311	348	0	0	313	0	0
Stage 1	329	329	-	447	447	-	-	-	-	-	-	-
Stage 2	450	449	-	376	364	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.24	6.64	6.34	4.17	-	-	4.18	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.626	4.126	3.426	2.263	-	-	2.272	-	-
Pot Cap-1 Maneuver	310	324	720	279	300	702	1184	-	-	1214	-	-
Stage 1	678	641	-	568	554	-	-	-	-	-	-	-
Stage 2	583	567	-	622	603	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	289	299	720	227	277	702	1184	-	-	1214	-	-
Mov Cap-2 Maneuver	289	299	-	227	277	-	-	-	-	-	-	-
Stage 1	631	636	-	528	515	-	-	-	-	-	-	-
Stage 2	537	527	-	537	598	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19	12.9	1.5	0.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1184	-	-	423	462	1214	-	-
HCM Lane V/C Ratio	0.058	-	-	0.395	0.017	0.006	-	-
HCM Control Delay (s)	8.2	0	-	19	12.9	8	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.9	0.1	0	-	-

Lanes, Volumes, Timings  
 4: Oleander Ave & Farmers Market Rd

2021 Existing Traffic Conditions  
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	1	1	36	1	31	1	289	64	33	290	8
Future Volume (vph)	1	1	1	36	1	31	1	289	64	33	290	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	33%	33%	33%	12%	12%	12%	5%	5%	5%	8%	8%	8%
Adj. Flow (vph)	1	1	1	41	1	35	1	328	73	38	330	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	77	0	0	402	0	0	377	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	36	1	31	1	289	64	33	290	8
Future Vol, veh/h	1	1	1	36	1	31	1	289	64	33	290	8
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	33	33	33	12	12	12	5	5	5	8	8	8
Mvmt Flow	1	1	1	41	1	35	1	328	73	38	330	9

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	796	814	335	779	782	365	339	0	0	401	0	0
Stage 1	411	411	-	367	367	-	-	-	-	-	-	-
Stage 2	385	403	-	412	415	-	-	-	-	-	-	-
Critical Hdwy	7.43	6.83	6.53	7.22	6.62	6.32	4.15	-	-	4.18	-	-
Critical Hdwy Stg 1	6.43	5.83	-	6.22	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	5.83	-	6.22	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.297	3.597	3.608	4.108	3.408	2.245	-	-	2.272	-	-
Pot Cap-1 Maneuver	271	280	641	301	314	658	1204	-	-	1126	-	-
Stage 1	561	545	-	633	605	-	-	-	-	-	-	-
Stage 2	580	550	-	598	576	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	247	268	641	290	300	658	1204	-	-	1126	-	-
Mov Cap-2 Maneuver	247	268	-	290	300	-	-	-	-	-	-	-
Stage 1	560	522	-	632	604	-	-	-	-	-	-	-
Stage 2	547	549	-	571	552	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.3	16.5	0	0.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1204	-	-	321	389	1126	-	-
HCM Lane V/C Ratio	0.001	-	-	0.011	0.199	0.033	-	-
HCM Control Delay (s)	8	0	-	16.3	16.5	8.3	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.1	-	-

Lanes, Volumes, Timings  
5: Oleander Ave & Edwards Rd

2021 Existing Traffic Conditions  
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	321	187	26	210	28	148	195	47	39	175	59
Future Volume (vph)	49	321	187	26	210	28	148	195	47	39	175	59
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	7%	7%	10%	10%	10%	8%	8%	8%	5%	5%	5%
Adj. Flow (vph)	52	341	199	28	223	30	157	207	50	41	186	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	540	0	28	253	0	157	257	0	41	249	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		8.0	10.0		8.0	10.0	
Minimum Split (s)	13.0	17.0		13.0	17.0		15.0	17.0		15.0	17.0	
Total Split (s)	15.0	30.0		15.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	16.7%	33.3%		16.7%	33.3%		16.7%	33.3%		16.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.13	0.55		0.09	0.32		0.37	0.50		0.09	0.57	
Control Delay	16.2	19.8		16.0	24.0		17.9	27.1		14.9	30.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.2	19.8		16.0	24.0		17.9	27.1		14.9	30.0	
Queue Length 50th (ft)	14	66		8	48		40	96		10	90	
Queue Length 95th (ft)	39	161		25	90		98	201		33	190	
Internal Link Dist (ft)		2737			3439			4912			1451	
Turn Bay Length (ft)	295			350			150					
Base Capacity (vph)	408	1353		339	1280		419	700		447	697	
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	0.13	0.40		0.08	0.20		0.37	0.37		0.09	0.36	

Intersection Summary

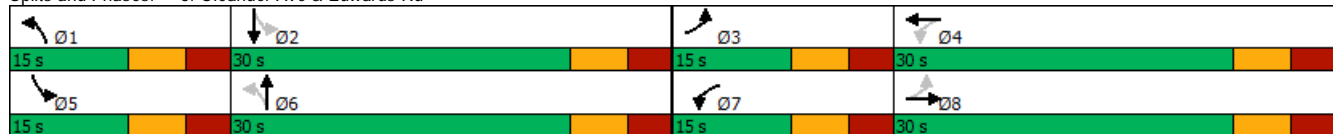
Cycle Length: 90

Actuated Cycle Length: 66

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Oleander Ave & Edwards Rd



HCM 6th Signalized Intersection Summary  
5: Oleander Ave & Edwards Rd

2021 Existing Traffic Conditions  
Timing Plan: AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	321	187	26	210	28	148	195	47	39	175	59
Future Volume (veh/h)	49	321	187	26	210	28	148	195	47	39	175	59
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	1796	1796	1796	1752	1752	1752	1781	1781	1781	1826	1826	1826
Adj Flow Rate, veh/h	52	341	0	28	223	0	157	207	50	41	186	63
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	10	10	10	8	8	8	5	5	5
Cap, veh/h	337	638		276	554		384	338	82	356	243	82
Arrive On Green	0.06	0.19	0.00	0.04	0.17	0.00	0.12	0.24	0.24	0.07	0.19	0.19
Sat Flow, veh/h	1711	3503	0	1668	3416	0	1697	1386	335	1739	1305	442
Grp Volume(v), veh/h	52	341	0	28	223	0	157	0	257	41	0	249
Grp Sat Flow(s), veh/h/ln	1711	1706	0	1668	1664	0	1697	0	1721	1739	0	1746
Q Serve(g_s), s	1.5	5.4	0.0	0.8	3.6	0.0	4.2	0.0	8.0	1.1	0.0	8.1
Cycle Q Clear(g_c), s	1.5	5.4	0.0	0.8	3.6	0.0	4.2	0.0	8.0	1.1	0.0	8.1
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.19	1.00		0.25
Lane Grp Cap(c), veh/h	337	638		276	554		384	0	420	356	0	326
V/C Ratio(X)	0.15	0.53		0.10	0.40		0.41	0.00	0.61	0.12	0.00	0.76
Avail Cap(c_a), veh/h	466	1306		436	1273		401	0	659	473	0	668
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.8	22.1	0.0	19.5	22.4	0.0	16.4	0.0	20.2	17.4	0.0	23.2
Incr Delay (d2), s/veh	0.2	1.0	0.0	0.2	0.7	0.0	0.7	0.0	1.4	0.1	0.0	3.7
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	2.1	0.0	0.3	1.3	0.0	1.5	0.0	3.0	0.4	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.0	23.1	0.0	19.7	23.1	0.0	17.1	0.0	21.6	17.5	0.0	26.9
LnGrp LOS	B	C		B	C		B	A	C	B	A	C
Approach Vol, veh/h		393	A		251	A		414			290	
Approach Delay, s/veh		22.5			22.7			19.9			25.6	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	18.2	10.5	17.0	11.0	21.7	9.2	18.2				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	23.0	8.0	23.0	8.0	23.0	8.0	23.0				
Max Q Clear Time (g_c+I1), s	6.2	10.1	3.5	5.6	3.1	10.0	2.8	7.4				
Green Ext Time (p_c), s	0.1	1.1	0.0	1.6	0.0	1.1	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings  
1: Oleander Ave & Midway Rd

2021 Existing Traffic Conditions  
Timing Plan: PM Peak Hour

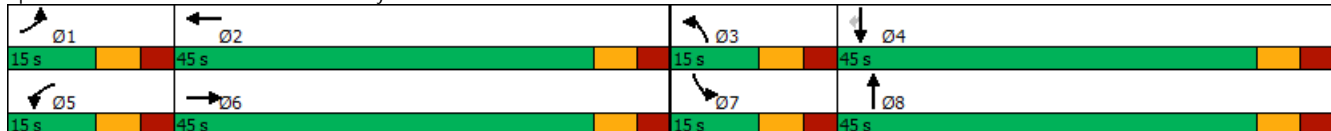


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	96	526	67	48	420	97	107	127	53	93	138	77
Future Volume (vph)	96	526	67	48	420	97	107	127	53	93	138	77
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	100	548	70	50	438	101	111	132	55	97	144	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	100	618	0	50	539	0	111	187	0	97	144	80
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0		8.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	15.0	17.5		15.0	17.5		15.0	15.0		15.0	15.0	15.0
Total Split (s)	15.0	45.0		15.0	45.0		15.0	45.0		15.0	45.0	45.0
Total Split (%)	12.5%	37.5%		12.5%	37.5%		12.5%	37.5%		12.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
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)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None		None	None	None
v/c Ratio	0.53	0.46		0.27	0.54		0.30	0.56		0.26	0.43	0.19
Control Delay	49.7	22.6		41.6	25.5		39.6	35.2		39.2	35.1	1.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	49.7	22.6		41.6	25.5		39.6	35.2		39.2	35.1	1.0
Queue Length 50th (ft)	49	138		24	115		27	79		23	66	0
Queue Length 95th (ft)	#137	212		66	180		60	158		54	132	0
Internal Link Dist (ft)		1626			1766			1811			2560	
Turn Bay Length (ft)	400			300			275			200		200
Base Capacity (vph)	190	1783		188	1752		369	918		369	952	889
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.53	0.35		0.27	0.31		0.30	0.20		0.26	0.15	0.09

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 77.7  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Oleander Ave & Midway Rd



HCM 6th Signalized Intersection Summary  
1: Oleander Ave & Midway Rd

2021 Existing Traffic Conditions  
Timing Plan: PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	526	67	48	420	97	107	127	53	93	138	77
Future Volume (veh/h)	96	526	67	48	420	97	107	127	53	93	138	77
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	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	548	70	50	438	101	111	132	55	97	144	80
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	176	880	112	126	713	163	353	185	77	338	268	227
Arrive On Green	0.10	0.28	0.28	0.07	0.25	0.25	0.10	0.15	0.15	0.10	0.14	0.14
Sat Flow, veh/h	1781	3171	404	1767	2849	652	3456	1254	522	3456	1870	1585
Grp Volume(v), veh/h	100	306	312	50	270	269	111	0	187	97	144	80
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1767	1763	1738	1728	0	1776	1728	1870	1585
Q Serve(g_s), s	3.7	10.4	10.5	1.9	9.4	9.5	2.1	0.0	6.9	1.8	4.9	3.1
Cycle Q Clear(g_c), s	3.7	10.4	10.5	1.9	9.4	9.5	2.1	0.0	6.9	1.8	4.9	3.1
Prop In Lane	1.00		0.22	1.00		0.38	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	176	493	499	126	441	435	353	0	262	338	268	227
V/C Ratio(X)	0.57	0.62	0.62	0.40	0.61	0.62	0.31	0.00	0.71	0.29	0.54	0.35
Avail Cap(c_a), veh/h	206	978	989	205	970	956	400	0	977	400	1029	872
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	21.8	21.8	30.6	22.9	23.0	28.8	0.0	28.0	28.9	27.4	26.7
Incr Delay (d2), s/veh	2.9	2.2	2.2	2.0	2.3	2.5	0.5	0.0	4.3	0.5	2.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.4	4.4	0.8	3.9	4.0	0.8	0.0	3.1	0.7	2.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	24.0	24.0	32.6	25.3	25.4	29.3	0.0	32.3	29.4	29.4	27.8
LnGrp LOS	C	C	C	C	C	C	C	A	C	C	C	C
Approach Vol, veh/h		718			589			298			321	
Approach Delay, s/veh		25.2			26.0			31.2			29.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.8	24.3	14.0	16.9	11.9	26.2	13.8	17.2				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	38.0	8.0	38.0	8.0	38.0	8.0	38.0				
Max Q Clear Time (g_c+I1), s	5.7	11.5	4.1	6.9	3.9	12.5	3.8	8.9				
Green Ext Time (p_c), s	0.0	5.8	0.1	1.3	0.0	6.6	0.1	1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				27.0								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings  
 2: Oleander Ave & Weatherbee Rd

2021 Existing Traffic Conditions  
 Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	63	23	19	60	43	14	291	28	74	250	8
Future Volume (vph)	6	63	23	19	60	43	14	291	28	74	250	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Adj. Flow (vph)	6	66	24	20	63	45	15	303	29	77	260	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	128	0	0	347	0	0	345	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

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	6	63	23	19	60	43	14	291	28	74	250	8
Future Vol, veh/h	6	63	23	19	60	43	14	291	28	74	250	8
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	2	2	2	4	4	4	2	2	2
Mvmt Flow	6	66	24	20	63	45	15	303	29	77	260	8

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	820	780	264	811	770	318	268	0	0	332	0	0
Stage 1	418	418	-	348	348	-	-	-	-	-	-	-
Stage 2	402	362	-	463	422	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	293	326	772	298	331	723	1284	-	-	1227	-	-
Stage 1	610	589	-	668	634	-	-	-	-	-	-	-
Stage 2	623	623	-	579	588	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	216	298	772	224	302	723	1284	-	-	1227	-	-
Mov Cap-2 Maneuver	216	298	-	224	302	-	-	-	-	-	-	-
Stage 1	601	545	-	659	625	-	-	-	-	-	-	-
Stage 2	519	614	-	457	544	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.6	20.6	0.3	1.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1284	-	-	342	356	1227	-	-
HCM Lane V/C Ratio	0.011	-	-	0.28	0.357	0.063	-	-
HCM Control Delay (s)	7.8	0	-	19.6	20.6	8.1	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.1	1.6	0.2	-	-

Lanes, Volumes, Timings  
3: Oleander Ave & Bell Ave

2021 Existing Traffic Conditions  
Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	68	2	78	1	4	6	72	328	0	2	287	108
Future Volume (vph)	68	2	78	1	4	6	72	328	0	2	287	108
Peak Hour Factor	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 (%)	5%	5%	5%	27%	27%	27%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	74	2	85	1	4	7	78	357	0	2	312	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	12	0	0	435	0	0	431	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	68	2	78	1	4	6	72	328	0	2	287	108
Future Vol, veh/h	68	2	78	1	4	6	72	328	0	2	287	108
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	5	5	5	27	27	27	4	4	4	4	4	4
Mvmt Flow	74	2	85	1	4	7	78	357	0	2	312	117

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	894	888	371	931	946	357	429	0	0	357	0	0
Stage 1	375	375	-	513	513	-	-	-	-	-	-	-
Stage 2	519	513	-	418	433	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.37	6.77	6.47	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.743	4.243	3.543	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	259	280	668	223	238	634	1120	-	-	1191	-	-
Stage 1	640	612	-	501	497	-	-	-	-	-	-	-
Stage 2	534	531	-	566	541	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	235	255	668	180	217	634	1120	-	-	1191	-	-
Mov Cap-2 Maneuver	235	255	-	180	217	-	-	-	-	-	-	-
Stage 1	584	611	-	457	454	-	-	-	-	-	-	-
Stage 2	478	485	-	491	540	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23	16.4	1.5	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1120	-	-	358	329	1191	-	-
HCM Lane V/C Ratio	0.07	-	-	0.449	0.036	0.002	-	-
HCM Control Delay (s)	8.5	0	-	23	16.4	8	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	2.2	0.1	0	-	-

Lanes, Volumes, Timings  
 4: Oleander Ave & Farmers Market Rd

2021 Existing Traffic Conditions  
 Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	0	62	0	41	0	367	35	19	339	0
Future Volume (vph)	0	0	0	62	0	41	0	367	35	19	339	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
Heavy Vehicles (%)	2%	2%	2%	10%	10%	10%	5%	5%	5%	4%	4%	4%
Adj. Flow (vph)	0	0	0	67	0	45	0	399	38	21	368	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	112	0	0	437	0	0	389	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

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	0	0	0	62	0	41	0	367	35	19	339	0
Future Vol, veh/h	0	0	0	62	0	41	0	367	35	19	339	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	10	10	10	5	5	5	4	4	4
Mvmt Flow	0	0	0	67	0	45	0	399	38	21	368	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	851	847	368	828	828	418	368	0	0	437	0	0
Stage 1	410	410	-	418	418	-	-	-	-	-	-	-
Stage 2	441	437	-	410	410	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.6	6.3	4.15	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.59	4.09	3.39	2.245	-	-	2.236	-	-
Pot Cap-1 Maneuver	280	299	677	281	298	618	1174	-	-	1112	-	-
Stage 1	619	595	-	597	577	-	-	-	-	-	-	-
Stage 2	595	579	-	603	582	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	255	292	677	276	291	618	1174	-	-	1112	-	-
Mov Cap-2 Maneuver	255	292	-	276	291	-	-	-	-	-	-	-
Stage 1	619	581	-	597	577	-	-	-	-	-	-	-
Stage 2	552	579	-	589	568	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	19.8	0	0.4
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1174	-	-	-	354	1112	-	-
HCM Lane V/C Ratio	-	-	-	-	0.316	0.019	-	-
HCM Control Delay (s)	0	-	-	0	19.8	8.3	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.3	0.1	-	-

Lanes, Volumes, Timings  
5: Oleander Ave & Edwards Rd

2021 Existing Traffic Conditions  
Timing Plan: PM Peak Hour

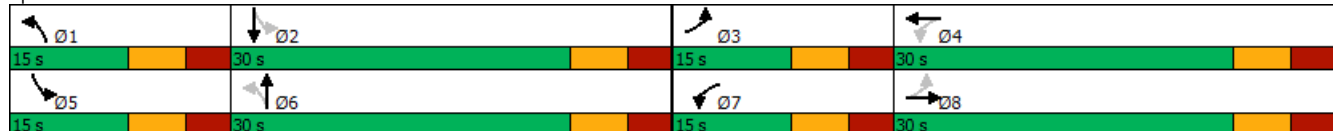


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	301	211	31	339	37	173	288	40	52	200	76
Future Volume (vph)	93	301	211	31	339	37	173	288	40	52	200	76
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	98	317	222	33	357	39	182	303	42	55	211	80
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	539	0	33	396	0	182	345	0	55	291	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		8.0	10.0		8.0	10.0	
Minimum Split (s)	13.0	17.0		13.0	17.0		15.0	17.0		15.0	17.0	
Total Split (s)	15.0	30.0		15.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	16.7%	33.3%		16.7%	33.3%		16.7%	33.3%		16.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.28	0.50		0.11	0.54		0.46	0.55		0.13	0.67	
Control Delay	18.5	17.0		16.7	29.7		19.8	29.0		15.3	33.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.5	17.0		16.7	29.7		19.8	29.0		15.3	33.8	
Queue Length 50th (ft)	31	61		10	91		54	153		15	118	
Queue Length 95th (ft)	65	141		28	140		111	#293		41	221	
Internal Link Dist (ft)		2737			3439			4912			1451	
Turn Bay Length (ft)	295			350			150					
Base Capacity (vph)	356	1268		336	1124		398	640		416	591	
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	0.43		0.10	0.35		0.46	0.54		0.13	0.49	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 74.6  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Oleander Ave & Edwards Rd



HCM 6th Signalized Intersection Summary  
5: Oleander Ave & Edwards Rd

2021 Existing Traffic Conditions  
Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	93	301	211	31	339	37	173	288	40	52	200	76
Future Volume (veh/h)	93	301	211	31	339	37	173	288	40	52	200	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	1841	1841	1841	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	317	0	33	357	0	182	303	42	55	211	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	3	3	3	2	2	2	2	2	2
Cap, veh/h	318	701		312	581		378	396	55	324	265	100
Arrive On Green	0.08	0.20	0.00	0.04	0.16	0.00	0.12	0.25	0.25	0.08	0.20	0.20
Sat Flow, veh/h	1753	3589	0	1767	3618	0	1781	1607	223	1781	1292	490
Grp Volume(v), veh/h	98	317	0	33	357	0	182	0	345	55	0	291
Grp Sat Flow(s),veh/h/ln	1753	1749	0	1767	1763	0	1781	0	1830	1781	0	1782
Q Serve(g_s), s	2.9	5.1	0.0	1.0	6.1	0.0	5.0	0.0	11.3	1.5	0.0	10.0
Cycle Q Clear(g_c), s	2.9	5.1	0.0	1.0	6.1	0.0	5.0	0.0	11.3	1.5	0.0	10.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.12	1.00		0.27
Lane Grp Cap(c), veh/h	318	701		312	581		378	0	451	324	0	365
V/C Ratio(X)	0.31	0.45		0.11	0.61		0.48	0.00	0.76	0.17	0.00	0.80
Avail Cap(c_a), veh/h	400	1247		458	1257		387	0	653	406	0	635
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	22.7	0.0	20.8	25.0	0.0	17.3	0.0	22.6	17.7	0.0	24.4
Incr Delay (d2), s/veh	0.5	0.7	0.0	0.1	1.5	0.0	1.0	0.0	3.3	0.2	0.0	4.0
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	1.1	2.0	0.0	0.4	2.5	0.0	1.9	0.0	4.8	0.6	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	23.3	0.0	20.9	26.5	0.0	18.3	0.0	25.9	18.0	0.0	28.4
LnGrp LOS	C	C		C	C		B	A	C	B	A	C
Approach Vol, veh/h		415	A		390	A		527			346	
Approach Delay, s/veh		22.7			26.1			23.2			26.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	20.2	12.0	17.6	12.0	22.9	9.7	19.9				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	23.0	8.0	23.0	8.0	23.0	8.0	23.0				
Max Q Clear Time (g_c+I1), s	7.0	12.0	4.9	8.1	3.5	13.3	3.0	7.1				
Green Ext Time (p_c), s	0.1	1.2	0.1	2.6	0.0	1.4	0.0	2.3				

Intersection Summary												
HCM 6th Ctrl Delay				24.5								
HCM 6th LOS				C								

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings  
1: Oleander Ave & Midway Rd

2026 Future Background Traffic Conditions  
Timing Plan: AM Peak Hour

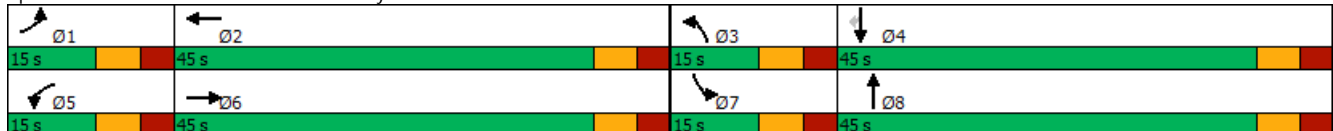


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	398	106	28	365	45	119	153	62	58	145	57
Future Volume (vph)	106	398	106	28	365	45	119	153	62	58	145	57
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	6%	6%	6%	5%	5%	5%
Adj. Flow (vph)	114	428	114	30	392	48	128	165	67	62	156	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	114	542	0	30	440	0	128	232	0	62	156	61
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0		8.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	15.0	17.5		15.0	17.5		15.0	15.0		15.0	15.0	15.0
Total Split (s)	15.0	45.0		15.0	45.0		15.0	45.0		15.0	45.0	45.0
Total Split (%)	12.5%	37.5%		12.5%	37.5%		12.5%	37.5%		12.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
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)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None		None	None	None
v/c Ratio	0.65	0.44		0.18	0.54		0.38	0.54		0.18	0.44	0.14
Control Delay	57.7	21.7		40.6	28.6		40.7	32.2		38.7	33.0	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	57.7	21.7		40.6	28.6		40.7	32.2		38.7	33.0	0.7
Queue Length 50th (ft)	54	86		14	97		30	95		14	66	0
Queue Length 95th (ft)	#167	192		47	158		70	192		39	138	0
Internal Link Dist (ft)		1626			1766			1811			2560	
Turn Bay Length (ft)	400			300			275			200		200
Base Capacity (vph)	175	1626		171	1613		336	839		339	876	829
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.65	0.33		0.18	0.27		0.38	0.28		0.18	0.18	0.07

Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 80.2  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Oleander Ave & Midway Rd



HCM 6th Signalized Intersection Summary  
1: Oleander Ave & Midway Rd

2026 Future Background Traffic Conditions  
Timing Plan: AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	106	398	106	28	365	45	119	153	62	58	145	57
Future Volume (veh/h)	106	398	106	28	365	45	119	153	62	58	145	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	1826	1826	1826	1796	1796	1796	1811	1811	1811	1826	1826	1826
Adj Flow Rate, veh/h	114	428	114	30	392	48	128	165	67	62	156	61
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	7	7	7	6	6	6	5	5	5
Cap, veh/h	182	730	193	87	659	80	362	222	90	275	283	240
Arrive On Green	0.10	0.27	0.27	0.05	0.22	0.22	0.11	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	1739	2715	717	1711	3063	373	3346	1224	497	3374	1826	1547
Grp Volume(v), veh/h	114	272	270	30	217	223	128	0	232	62	156	61
Grp Sat Flow(s),veh/h/ln	1739	1735	1697	1711	1706	1729	1673	0	1722	1687	1826	1547
Q Serve(g_s), s	4.2	9.1	9.3	1.1	7.7	7.8	2.4	0.0	8.6	1.2	5.3	2.3
Cycle Q Clear(g_c), s	4.2	9.1	9.3	1.1	7.7	7.8	2.4	0.0	8.6	1.2	5.3	2.3
Prop In Lane	1.00		0.42	1.00		0.22	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	182	466	456	87	367	372	362	0	313	275	283	240
V/C Ratio(X)	0.62	0.58	0.59	0.34	0.59	0.60	0.35	0.00	0.74	0.23	0.55	0.25
Avail Cap(c_a), veh/h	207	981	960	204	965	978	399	0	974	402	1033	875
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	21.3	21.3	30.8	23.7	23.8	27.8	0.0	26.0	28.9	26.2	25.0
Incr Delay (d2), s/veh	4.7	2.0	2.1	2.3	2.6	2.6	0.6	0.0	4.2	0.4	2.0	0.7
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	3.7	3.7	0.5	3.2	3.3	0.9	0.0	3.6	0.5	2.3	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	23.3	23.4	33.1	26.3	26.4	28.4	0.0	30.2	29.3	28.2	25.6
LnGrp LOS	C	C	C	C	C	C	C	A	C	C	C	C
Approach Vol, veh/h		656			470			360			279	
Approach Delay, s/veh		25.1			26.8			29.5			27.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	21.4	14.3	17.4	10.4	25.1	12.5	19.2				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	38.0	8.0	38.0	8.0	38.0	8.0	38.0				
Max Q Clear Time (g_c+I1), s	6.2	9.8	4.4	7.3	3.1	11.3	3.2	10.6				
Green Ext Time (p_c), s	0.0	4.7	0.1	1.3	0.0	5.9	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings  
 2: Oleander Ave & Weatherbee Rd

2026 Future Background Traffic Conditions  
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	70	35	21	87	57	10	271	35	57	208	8
Future Volume (vph)	6	70	35	21	87	57	10	271	35	57	208	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	7%	7%	7%	6%	6%	6%
Adj. Flow (vph)	7	77	38	23	96	63	11	298	38	63	229	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	182	0	0	347	0	0	301	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

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	6	70	35	21	87	57	10	271	35	57	208	8
Future Vol, veh/h	6	70	35	21	87	57	10	271	35	57	208	8
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	7	7	7	7	7	7	6	6	6
Mvmt Flow	7	77	38	23	96	63	11	298	38	63	229	9
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	779	718	234	756	703	317	238	0	0	336	0	0
Stage 1	360	360	-	339	339	-	-	-	-	-	-	-
Stage 2	419	358	-	417	364	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.17	6.57	6.27	4.17	-	-	4.16	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.563	4.063	3.363	2.263	-	-	2.254	-	-
Pot Cap-1 Maneuver	310	351	798	318	356	712	1300	-	-	1201	-	-
Stage 1	652	621	-	665	631	-	-	-	-	-	-	-
Stage 2	606	622	-	603	615	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	209	327	798	235	331	712	1300	-	-	1201	-	-
Mov Cap-2 Maneuver	209	327	-	235	331	-	-	-	-	-	-	-
Stage 1	645	584	-	658	625	-	-	-	-	-	-	-
Stage 2	463	616	-	468	578	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	18.5		22.7		0.2			1.7				
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1300	-	-	387	382	1201	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.315	0.475	0.052	-	-				
HCM Control Delay (s)	7.8	0	-	18.5	22.7	8.2	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.3	2.5	0.2	-	-				

Lanes, Volumes, Timings  
3: Oleander Ave & Bell Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	72	2	86	1	1	5	67	303	4	8	273	69
Future Volume (vph)	72	2	86	1	1	5	67	303	4	8	273	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	14%	14%	14%	7%	7%	7%	8%	8%	8%
Adj. Flow (vph)	79	2	95	1	1	5	74	333	4	9	300	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	0	0	7	0	0	411	0	0	385	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

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	72	2	86	1	1	5	67	303	4	8	273	69
Future Vol, veh/h	72	2	86	1	1	5	67	303	4	8	273	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	14	14	14	7	7	7	8	8	8
Mvmt Flow	79	2	95	1	1	5	74	333	4	9	300	76
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	842	841	338	888	877	335	376	0	0	337	0	0
Stage 1	356	356	-	483	483	-	-	-	-	-	-	-
Stage 2	486	485	-	405	394	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.24	6.64	6.34	4.17	-	-	4.18	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.626	4.126	3.426	2.263	-	-	2.272	-	-
Pot Cap-1 Maneuver	281	298	697	252	274	680	1156	-	-	1189	-	-
Stage 1	655	624	-	543	533	-	-	-	-	-	-	-
Stage 2	557	547	-	599	585	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	259	272	697	202	250	680	1156	-	-	1189	-	-
Mov Cap-2 Maneuver	259	272	-	202	250	-	-	-	-	-	-	-
Stage 1	603	618	-	500	491	-	-	-	-	-	-	-
Stage 2	508	504	-	511	579	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	21.5		13.5		1.5			0.2				
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1156	-	-	391	429	1189	-	-				
HCM Lane V/C Ratio	0.064	-	-	0.45	0.018	0.007	-	-				
HCM Control Delay (s)	8.3	0	-	21.5	13.5	8.1	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	2.3	0.1	0	-	-				

Lanes, Volumes, Timings  
 4: Oleander Ave & Farmers Market Rd

2026 Future Background Traffic Conditions  
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	1	1	39	1	33	1	312	69	36	313	9
Future Volume (vph)	1	1	1	39	1	33	1	312	69	36	313	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	33%	33%	33%	12%	12%	12%	5%	5%	5%	8%	8%	8%
Adj. Flow (vph)	1	1	1	44	1	38	1	355	78	41	356	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	83	0	0	434	0	0	407	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	1	1	39	1	33	1	312	69	36	313	9
Future Vol, veh/h	1	1	1	39	1	33	1	312	69	36	313	9
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	33	33	33	12	12	12	5	5	5	8	8	8
Mvmt Flow	1	1	1	44	1	38	1	355	78	41	356	10

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	859	878	361	840	844	394	366	0	0	433	0	0
Stage 1	443	443	-	396	396	-	-	-	-	-	-	-
Stage 2	416	435	-	444	448	-	-	-	-	-	-	-
Critical Hdwy	7.43	6.83	6.53	7.22	6.62	6.32	4.15	-	-	4.18	-	-
Critical Hdwy Stg 1	6.43	5.83	-	6.22	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	5.83	-	6.22	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.297	3.597	3.608	4.108	3.408	2.245	-	-	2.272	-	-
Pot Cap-1 Maneuver	245	256	619	274	289	634	1176	-	-	1095	-	-
Stage 1	538	526	-	610	587	-	-	-	-	-	-	-
Stage 2	557	531	-	574	556	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	221	244	619	262	275	634	1176	-	-	1095	-	-
Mov Cap-2 Maneuver	221	244	-	262	275	-	-	-	-	-	-	-
Stage 1	537	501	-	609	586	-	-	-	-	-	-	-
Stage 2	523	530	-	545	530	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.4	18.1	0	0.8
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1176	-	-	293	357	1095	-	-
HCM Lane V/C Ratio	0.001	-	-	0.012	0.232	0.037	-	-
HCM Control Delay (s)	8.1	0	-	17.4	18.1	8.4	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.9	0.1	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	350	204	28	229	30	161	213	51	42	191	65
Future Volume (vph)	53	350	204	28	229	30	161	213	51	42	191	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	7%	7%	10%	10%	10%	8%	8%	8%	5%	5%	5%
Adj. Flow (vph)	56	372	217	30	244	32	171	227	54	45	203	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	589	0	30	276	0	171	281	0	45	272	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		8.0	10.0		8.0	10.0	
Minimum Split (s)	13.0	17.0		13.0	17.0		15.0	17.0		15.0	17.0	
Total Split (s)	15.0	30.0		15.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	16.7%	33.3%		16.7%	33.3%		16.7%	33.3%		16.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.15	0.62		0.11	0.37		0.42	0.47		0.10	0.65	
Control Delay	16.7	22.1		16.5	25.1		18.9	26.5		15.0	32.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.7	22.1		16.5	25.1		18.9	26.5		15.0	32.9	
Queue Length 50th (ft)	16	78		8	55		45	109		11	102	
Queue Length 95th (ft)	42	181		26	98		106	221		35	209	
Internal Link Dist (ft)		2737			3439			4912			1451	
Turn Bay Length (ft)	295			350			150					
Base Capacity (vph)	378	1202		293	1116		403	637		452	609	
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	0.15	0.49		0.10	0.25		0.42	0.44		0.10	0.45	

Intersection Summary

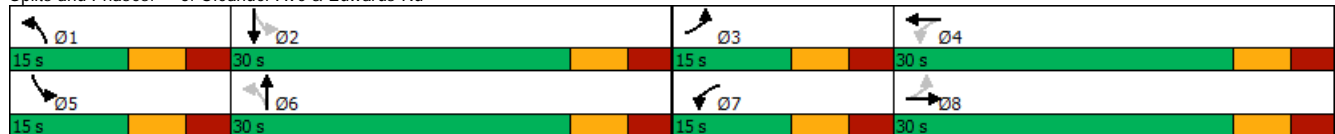
Cycle Length: 90

Actuated Cycle Length: 70.9

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Oleander Ave & Edwards Rd



HCM 6th Signalized Intersection Summary  
5: Oleander Ave & Edwards Rd

2026 Future Background Traffic Conditions  
Timing Plan: AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	350	204	28	229	30	161	213	51	42	191	65
Future Volume (veh/h)	53	350	204	28	229	30	161	213	51	42	191	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	1796	1796	1796	1752	1752	1752	1781	1781	1781	1826	1826	1826
Adj Flow Rate, veh/h	56	372	0	30	244	0	171	227	54	45	203	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	10	10	10	8	8	8	5	5	5
Cap, veh/h	325	626		261	541		380	351	84	353	260	88
Arrive On Green	0.06	0.18	0.00	0.04	0.16	0.00	0.12	0.25	0.25	0.07	0.20	0.20
Sat Flow, veh/h	1711	3503	0	1668	3416	0	1697	1391	331	1739	1303	443
Grp Volume(v), veh/h	56	372	0	30	244	0	171	0	281	45	0	272
Grp Sat Flow(s),veh/h/ln	1711	1706	0	1668	1664	0	1697	0	1722	1739	0	1746
Q Serve(g_s), s	1.6	6.1	0.0	0.9	4.1	0.0	4.7	0.0	9.0	1.2	0.0	9.1
Cycle Q Clear(g_c), s	1.6	6.1	0.0	0.9	4.1	0.0	4.7	0.0	9.0	1.2	0.0	9.1
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.19	1.00		0.25
Lane Grp Cap(c), veh/h	325	626		261	541		380	0	435	353	0	348
V/C Ratio(X)	0.17	0.59		0.11	0.45		0.45	0.00	0.65	0.13	0.00	0.78
Avail Cap(c_a), veh/h	445	1276		413	1244		392	0	644	458	0	653
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	23.0	0.0	20.2	23.3	0.0	16.5	0.0	20.5	17.2	0.0	23.4
Incr Delay (d2), s/veh	0.2	1.3	0.0	0.2	0.8	0.0	0.8	0.0	1.6	0.2	0.0	3.9
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	2.4	0.0	0.3	1.5	0.0	1.7	0.0	3.4	0.4	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	24.3	0.0	20.4	24.1	0.0	17.4	0.0	22.2	17.3	0.0	27.2
LnGrp LOS	B	C		C	C		B	A	C	B	A	C
Approach Vol, veh/h		428	A		274	A		452			317	
Approach Delay, s/veh		23.7			23.7			20.3			25.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	19.3	10.7	17.0	11.3	22.5	9.4	18.3				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	23.0	8.0	23.0	8.0	23.0	8.0	23.0				
Max Q Clear Time (g_c+I1), s	6.7	11.1	3.6	6.1	3.2	11.0	2.9	8.1				
Green Ext Time (p_c), s	0.1	1.2	0.0	1.8	0.0	1.2	0.0	2.7				

Intersection Summary												
HCM 6th Ctrl Delay			23.1									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings  
1: Oleander Ave & Midway Rd

2026 Future Background Traffic Conditions  
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	568	72	52	454	105	116	137	57	100	149	83
Future Volume (vph)	104	568	72	52	454	105	116	137	57	100	149	83
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	108	592	75	54	473	109	121	143	59	104	155	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	667	0	54	582	0	121	202	0	104	155	86
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0		8.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	15.0	17.5		15.0	17.5		15.0	15.0		15.0	15.0	15.0
Total Split (s)	15.0	45.0		15.0	45.0		15.0	45.0		15.0	45.0	45.0
Total Split (%)	12.5%	37.5%		12.5%	37.5%		12.5%	37.5%		12.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
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)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None		None	None	None
v/c Ratio	0.63	0.57		0.32	0.58		0.36	0.50		0.31	0.48	0.21
Control Delay	57.8	26.3		45.0	26.8		42.2	33.9		41.6	37.2	1.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	57.8	26.3		45.0	26.8		42.2	33.9		41.6	37.2	1.1
Queue Length 50th (ft)	55	155		27	129		30	89		26	74	0
Queue Length 95th (ft)	#160	235		73	199		68	177		60	145	0
Internal Link Dist (ft)		1626			1766			1811			2560	
Turn Bay Length (ft)	400			300			275			200		200
Base Capacity (vph)	172	1612		170	1585		333	832		333	859	819
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.63	0.41		0.32	0.37		0.36	0.24		0.31	0.18	0.11

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 83.8

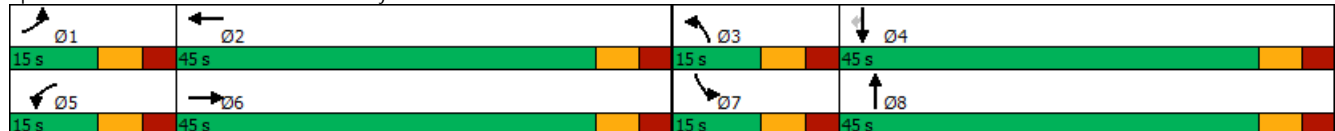
Natural Cycle: 65

Control Type: Actuated-Uncoordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Oleander Ave & Midway Rd



HCM 6th Signalized Intersection Summary  
1: Oleander Ave & Midway Rd

2026 Future Background Traffic Conditions  
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	568	72	52	454	105	116	137	57	100	149	83
Future Volume (veh/h)	104	568	72	52	454	105	116	137	57	100	149	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	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	108	592	75	54	473	109	121	143	59	104	155	86
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	174	917	116	129	753	172	348	195	80	334	283	240
Arrive On Green	0.10	0.29	0.29	0.07	0.26	0.26	0.10	0.16	0.16	0.10	0.15	0.15
Sat Flow, veh/h	1781	3174	401	1767	2849	652	3456	1258	519	3456	1870	1585
Grp Volume(v), veh/h	108	331	336	54	292	290	121	0	202	104	155	86
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1767	1763	1738	1728	0	1777	1728	1870	1585
Q Serve(g_s), s	4.2	11.8	11.9	2.1	10.6	10.7	2.4	0.0	7.9	2.0	5.6	3.5
Cycle Q Clear(g_c), s	4.2	11.8	11.9	2.1	10.6	10.7	2.4	0.0	7.9	2.0	5.6	3.5
Prop In Lane	1.00		0.22	1.00		0.38	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	174	513	520	129	466	459	348	0	276	334	283	240
V/C Ratio(X)	0.62	0.64	0.65	0.42	0.63	0.63	0.35	0.00	0.73	0.31	0.55	0.36
Avail Cap(c_a), veh/h	196	931	942	195	924	911	381	0	931	381	980	830
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	22.5	22.5	32.1	23.5	23.6	30.4	0.0	29.2	30.5	28.5	27.6
Incr Delay (d2), s/veh	4.8	2.3	2.3	2.1	2.4	2.5	0.6	0.0	4.5	0.5	2.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.0	5.1	1.0	4.5	4.5	1.0	0.0	3.5	0.8	2.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	24.9	24.9	34.3	25.9	26.0	31.0	0.0	33.7	31.0	30.5	28.7
LnGrp LOS	D	C	C	C	C	C	C	A	C	C	C	C
Approach Vol, veh/h		775			636			323			345	
Approach Delay, s/veh		26.4			26.7			32.7			30.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	26.2	14.3	18.0	12.3	28.0	14.0	18.2				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	38.0	8.0	38.0	8.0	38.0	8.0	38.0				
Max Q Clear Time (g_c+I1), s	6.2	12.7	4.4	7.6	4.1	13.9	4.0	9.9				
Green Ext Time (p_c), s	0.0	6.2	0.1	1.4	0.0	7.1	0.1	1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				28.1								
HCM 6th LOS				C								
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

Lanes, Volumes, Timings  
2: Oleander Ave & Weatherbee Rd

2026 Future Background Traffic Conditions  
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	68	25	21	65	46	15	314	30	80	270	9
Future Volume (vph)	6	68	25	21	65	46	15	314	30	80	270	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Adj. Flow (vph)	6	71	26	22	68	48	16	327	31	83	281	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	138	0	0	374	0	0	373	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	68	25	21	65	46	15	314	30	80	270	9
Future Vol, veh/h	6	68	25	21	65	46	15	314	30	80	270	9
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	2	2	2	4	4	4	2	2	2
Mvmt Flow	6	71	26	22	68	48	16	327	31	83	281	9
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	885	842	286	875	831	343	290	0	0	358	0	0
Stage 1	452	452	-	375	375	-	-	-	-	-	-	-
Stage 2	433	390	-	500	456	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	265	300	751	270	305	700	1260	-	-	1201	-	-
Stage 1	585	569	-	646	617	-	-	-	-	-	-	-
Stage 2	599	606	-	553	568	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	186	271	751	193	275	700	1260	-	-	1201	-	-
Mov Cap-2 Maneuver	186	271	-	193	275	-	-	-	-	-	-	-
Stage 1	576	522	-	636	607	-	-	-	-	-	-	-
Stage 2	488	596	-	423	521	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	22.1		24.4			0.3			1.8			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1260	-	-	313	321	1201	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.329	0.428	0.069	-	-				
HCM Control Delay (s)	7.9	0	-	22.1	24.4	8.2	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.4	2.1	0.2	-	-				

Lanes, Volumes, Timings  
3: Oleander Ave & Bell Ave

2026 Future Background Traffic Conditions  
AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	75	2	85	1	4	6	79	357	0	2	313	118
Future Volume (vph)	75	2	85	1	4	6	79	357	0	2	313	118
Peak Hour Factor	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 (%)	5%	5%	5%	27%	27%	27%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	82	2	92	1	4	7	86	388	0	2	340	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	0	0	12	0	0	474	0	0	470	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	75	2	85	1	4	6	79	357	0	2	313	118
Future Vol, veh/h	75	2	85	1	4	6	79	357	0	2	313	118
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	5	5	5	27	27	27	4	4	4	4	4	4
Mvmt Flow	82	2	92	1	4	7	86	388	0	2	340	128
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	974	968	404	1015	1032	388	468	0	0	388	0	0
Stage 1	408	408	-	560	560	-	-	-	-	-	-	-
Stage 2	566	560	-	455	472	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.37	6.77	6.47	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.743	4.243	3.543	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	228	251	640	195	211	609	1083	-	-	1160	-	-
Stage 1	614	592	-	471	472	-	-	-	-	-	-	-
Stage 2	504	506	-	540	519	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	204	225	640	153	189	609	1083	-	-	1160	-	-
Mov Cap-2 Maneuver	204	225	-	153	189	-	-	-	-	-	-	-
Stage 1	552	591	-	423	424	-	-	-	-	-	-	-
Stage 2	444	455	-	459	518	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	29.5		17.8			1.6			0			
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1083	-	-	318	293	1160	-	-				
HCM Lane V/C Ratio	0.079	-	-	0.554	0.041	0.002	-	-				
HCM Control Delay (s)	8.6	0	-	29.5	17.8	8.1	0	-				
HCM Lane LOS	A	A	-	D	C	A	A	-				
HCM 95th %tile Q(veh)	0.3	-	-	3.2	0.1	0	-	-				

Lanes, Volumes, Timings  
 4: Oleander Ave & Farmers Market Rd

2026 Future Background Traffic Conditions  
 AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	0	67	0	44	0	396	38	21	366	0
Future Volume (vph)	0	0	0	67	0	44	0	396	38	21	366	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
Heavy Vehicles (%)	2%	2%	2%	10%	10%	10%	5%	5%	5%	4%	4%	4%
Adj. Flow (vph)	0	0	0	73	0	48	0	430	41	23	398	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	121	0	0	471	0	0	421	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

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	0	0	67	0	44	0	396	38	21	366	0
Future Vol, veh/h	0	0	0	67	0	44	0	396	38	21	366	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	10	10	10	5	5	5	4	4	4
Mvmt Flow	0	0	0	73	0	48	0	430	41	23	398	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	919	915	398	895	895	451	398	0	0	471	0	0
Stage 1	444	444	-	451	451	-	-	-	-	-	-	-
Stage 2	475	471	-	444	444	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.6	6.3	4.15	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.59	4.09	3.39	2.245	-	-	2.236	-	-
Pot Cap-1 Maneuver	252	273	652	253	272	592	1144	-	-	1080	-	-
Stage 1	593	575	-	573	558	-	-	-	-	-	-	-
Stage 2	570	560	-	578	562	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	227	266	652	248	265	592	1144	-	-	1080	-	-
Mov Cap-2 Maneuver	227	266	-	248	265	-	-	-	-	-	-	-
Stage 1	593	559	-	573	558	-	-	-	-	-	-	-
Stage 2	524	560	-	562	547	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	22.7	0	0.5
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1144	-	-	-	322	1080	-	-
HCM Lane V/C Ratio	-	-	-	-	0.375	0.021	-	-
HCM Control Delay (s)	0	-	-	0	22.7	8.4	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.7	0.1	-	-

Lanes, Volumes, Timings  
5: Oleander Ave & Edwards Rd

2026 Future Background Traffic Conditions  
AM Peak Hour

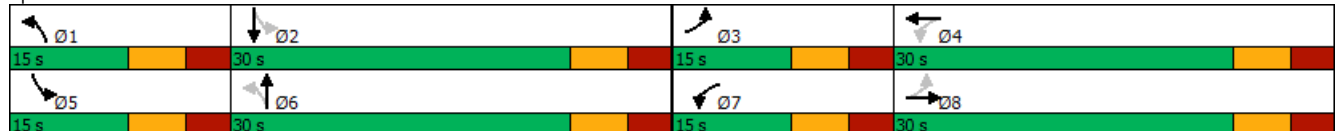


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	325	228	33	366	40	187	311	43	56	216	82
Future Volume (vph)	100	325	228	33	366	40	187	311	43	56	216	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	105	342	240	35	385	42	197	327	45	59	227	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	582	0	35	427	0	197	372	0	59	313	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		8.0	10.0		8.0	10.0	
Minimum Split (s)	13.0	17.0		13.0	17.0		15.0	17.0		15.0	17.0	
Total Split (s)	15.0	30.0		15.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	16.7%	33.3%		16.7%	33.3%		16.7%	33.3%		16.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.32	0.58		0.12	0.56		0.51	0.59		0.15	0.71	
Control Delay	19.1	20.2		17.0	30.2		21.7	30.6		15.8	36.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.1	20.2		17.0	30.2		21.7	30.6		15.8	36.0	
Queue Length 50th (ft)	35	97		11	103		62	175		17	135	
Queue Length 95th (ft)	69	156		29	151		120	#332		43	240	
Internal Link Dist (ft)		2737			3439			4912			1451	
Turn Bay Length (ft)	295			350			150					
Base Capacity (vph)	343	1206		310	1103		385	633		398	580	
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	0.48		0.11	0.39		0.51	0.59		0.15	0.54	

Intersection Summary

Cycle Length: 90  
 Actuated Cycle Length: 76.2  
 Natural Cycle: 65  
 Control Type: Actuated-Uncoordinated  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Oleander Ave & Edwards Rd



HCM 6th Signalized Intersection Summary  
5: Oleander Ave & Edwards Rd

2026 Future Background Traffic Conditions  
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	325	228	33	366	40	187	311	43	56	216	82
Future Volume (veh/h)	100	325	228	33	366	40	187	311	43	56	216	82
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	1841	1841	1841	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	342	0	35	385	0	197	327	45	59	227	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	3	3	3	2	2	2	2	2	2
Cap, veh/h	312	721		307	607		367	406	56	312	279	106
Arrive On Green	0.08	0.21	0.00	0.04	0.17	0.00	0.12	0.25	0.25	0.08	0.22	0.22
Sat Flow, veh/h	1753	3589	0	1767	3618	0	1781	1609	221	1781	1293	490
Grp Volume(v), veh/h	105	342	0	35	385	0	197	0	372	59	0	313
Grp Sat Flow(s),veh/h/ln	1753	1749	0	1767	1763	0	1781	0	1831	1781	0	1782
Q Serve(g_s), s	3.2	5.8	0.0	1.1	6.8	0.0	5.6	0.0	12.7	1.6	0.0	11.2
Cycle Q Clear(g_c), s	3.2	5.8	0.0	1.1	6.8	0.0	5.6	0.0	12.7	1.6	0.0	11.2
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.12	1.00		0.27
Lane Grp Cap(c), veh/h	312	721		307	607		367	0	462	312	0	384
V/C Ratio(X)	0.34	0.47		0.11	0.63		0.54	0.00	0.80	0.19	0.00	0.81
Avail Cap(c_a), veh/h	387	1203		443	1213		372	0	630	383	0	613
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.4	23.3	0.0	21.1	25.7	0.0	17.9	0.0	23.4	18.0	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.7	0.0	0.2	1.6	0.0	1.5	0.0	5.4	0.3	0.0	4.5
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	2.3	0.0	0.4	2.8	0.0	2.2	0.0	5.7	0.6	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	24.0	0.0	21.3	27.3	0.0	19.4	0.0	28.9	18.3	0.0	29.5
LnGrp LOS	C	C		C	C		B	A	C	B	A	C
Approach Vol, veh/h		447	A		420	A		569			372	
Approach Delay, s/veh		23.3			26.8			25.6			27.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	21.4	12.1	18.5	12.3	23.9	9.9	20.8				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	23.0	8.0	23.0	8.0	23.0	8.0	23.0				
Max Q Clear Time (g_c+I1), s	7.6	13.2	5.2	8.8	3.6	14.7	3.1	7.8				
Green Ext Time (p_c), s	0.0	1.2	0.1	2.7	0.0	1.4	0.0	2.5				

Intersection Summary												
HCM 6th Ctrl Delay				25.8								
HCM 6th LOS				C								

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings  
1: Oleander Ave & Midway Rd

2026 Buildout Traffic Conditions  
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	398	106	28	365	45	119	154	62	58	148	63
Future Volume (vph)	108	398	106	28	365	45	119	154	62	58	148	63
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	6%	6%	6%	5%	5%	5%
Adj. Flow (vph)	116	428	114	30	392	48	128	166	67	62	159	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	542	0	30	440	0	128	233	0	62	159	68
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0		8.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	15.0	17.5		15.0	17.5		15.0	15.0		15.0	15.0	15.0
Total Split (s)	15.0	45.0		15.0	45.0		15.0	45.0		15.0	45.0	45.0
Total Split (%)	12.5%	37.5%		12.5%	37.5%		12.5%	37.5%		12.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
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)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None		None	None	None
v/c Ratio	0.66	0.44		0.18	0.54		0.38	0.54		0.18	0.44	0.16
Control Delay	58.5	21.8		40.7	28.7		40.8	32.2		38.8	33.1	0.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	58.5	21.8		40.7	28.7		40.8	32.2		38.8	33.1	0.8
Queue Length 50th (ft)	55	87		14	97		30	95		14	67	0
Queue Length 95th (ft)	#171	192		47	158		70	193		39	141	0
Internal Link Dist (ft)		1626			1766			1811			2560	
Turn Bay Length (ft)	400			300			275			200		200
Base Capacity (vph)	175	1624		171	1611		336	838		339	875	828
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.66	0.33		0.18	0.27		0.38	0.28		0.18	0.18	0.08

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 80.2

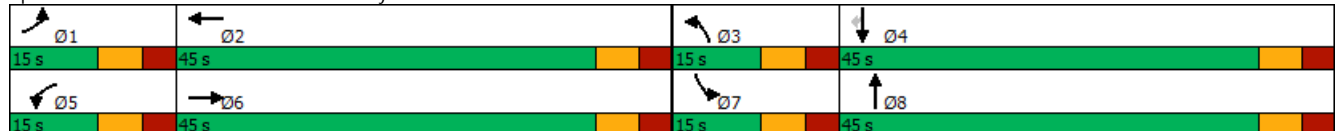
Natural Cycle: 65

Control Type: Actuated-Uncoordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Oleander Ave & Midway Rd



HCM 6th Signalized Intersection Summary  
1: Oleander Ave & Midway Rd

2026 Buildout Traffic Conditions  
Timing Plan: AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	108	398	106	28	365	45	119	154	62	58	148	63
Future Volume (veh/h)	108	398	106	28	365	45	119	154	62	58	148	63
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	1826	1826	1826	1796	1796	1796	1811	1811	1811	1826	1826	1826
Adj Flow Rate, veh/h	116	428	114	30	392	48	128	166	67	62	159	68
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	7	7	7	6	6	6	5	5	5
Cap, veh/h	183	731	193	87	658	80	361	223	90	275	284	241
Arrive On Green	0.11	0.27	0.27	0.05	0.21	0.21	0.11	0.18	0.18	0.08	0.16	0.16
Sat Flow, veh/h	1739	2715	717	1711	3063	373	3346	1227	495	3374	1826	1547
Grp Volume(v), veh/h	116	272	270	30	217	223	128	0	233	62	159	68
Grp Sat Flow(s),veh/h/ln	1739	1735	1697	1711	1706	1729	1673	0	1722	1687	1826	1547
Q Serve(g_s), s	4.3	9.1	9.3	1.1	7.7	7.8	2.4	0.0	8.6	1.2	5.4	2.6
Cycle Q Clear(g_c), s	4.3	9.1	9.3	1.1	7.7	7.8	2.4	0.0	8.6	1.2	5.4	2.6
Prop In Lane	1.00		0.42	1.00		0.22	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	183	467	457	87	367	372	361	0	314	275	284	241
V/C Ratio(X)	0.63	0.58	0.59	0.34	0.59	0.60	0.35	0.00	0.74	0.23	0.56	0.28
Avail Cap(c_a), veh/h	207	980	958	203	964	977	398	0	972	401	1031	874
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	21.3	21.4	30.8	23.8	23.8	27.8	0.0	26.0	28.9	26.3	25.1
Incr Delay (d2), s/veh	5.1	2.0	2.1	2.3	2.6	2.6	0.6	0.0	4.2	0.4	2.1	0.8
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	3.7	3.7	0.5	3.2	3.3	0.9	0.0	3.6	0.5	2.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	23.3	23.5	33.2	26.4	26.4	28.4	0.0	30.2	29.3	28.3	25.9
LnGrp LOS	C	C	C	C	C	C	C	A	C	C	C	C
Approach Vol, veh/h		658			470			361			289	
Approach Delay, s/veh		25.2			26.8			29.6			28.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	21.5	14.3	17.5	10.4	25.1	12.5	19.3				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	38.0	8.0	38.0	8.0	38.0	8.0	38.0				
Max Q Clear Time (g_c+I1), s	6.3	9.8	4.4	7.4	3.1	11.3	3.2	10.6				
Green Ext Time (p_c), s	0.0	4.7	0.1	1.3	0.0	5.9	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings  
 2: Oleander Ave & Weatherbee Rd

2026 Buildout Traffic Conditions  
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	70	35	21	87	59	10	274	35	63	217	8
Future Volume (vph)	6	70	35	21	87	59	10	274	35	63	217	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	7%	7%	7%	6%	6%	6%
Adj. Flow (vph)	7	77	38	23	96	65	11	301	38	69	238	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	184	0	0	350	0	0	316	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	70	35	21	87	59	10	274	35	63	217	8
Future Vol, veh/h	6	70	35	21	87	59	10	274	35	63	217	8
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	7	7	7	7	7	7	6	6	6
Mvmt Flow	7	77	38	23	96	65	11	301	38	69	238	9
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	804	742	243	780	727	320	247	0	0	339	0	0
Stage 1	381	381	-	342	342	-	-	-	-	-	-	-
Stage 2	423	361	-	438	385	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.17	6.57	6.27	4.17	-	-	4.16	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.563	4.063	3.363	2.263	-	-	2.254	-	-
Pot Cap-1 Maneuver	298	340	788	307	345	709	1290	-	-	1198	-	-
Stage 1	635	608	-	663	629	-	-	-	-	-	-	-
Stage 2	603	621	-	588	602	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	196	314	788	223	318	709	1290	-	-	1198	-	-
Mov Cap-2 Maneuver	196	314	-	223	318	-	-	-	-	-	-	-
Stage 1	628	567	-	656	622	-	-	-	-	-	-	-
Stage 2	459	614	-	451	562	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	19.3		23.9		0.2			1.8				
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1290	-	-	373	370	1198	-	-				
HCM Lane V/C Ratio	0.009	-	-	0.327	0.496	0.058	-	-				
HCM Control Delay (s)	7.8	0	-	19.3	23.9	8.2	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.4	2.7	0.2	-	-				

Lanes, Volumes, Timings  
3: Oleander Ave & Bell Ave

2026 Buildout Traffic Conditions  
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	72	2	87	1	1	5	69	323	4	8	280	69
Future Volume (vph)	72	2	87	1	1	5	69	323	4	8	280	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	14%	14%	14%	7%	7%	7%	8%	8%	8%
Adj. Flow (vph)	79	2	96	1	1	5	76	355	4	9	308	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	177	0	0	7	0	0	435	0	0	393	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	72	2	87	1	1	5	69	323	4	8	280	69
Future Vol, veh/h	72	2	87	1	1	5	69	323	4	8	280	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	14	14	14	7	7	7	8	8	8
Mvmt Flow	79	2	96	1	1	5	76	355	4	9	308	76
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	876	875	346	922	911	357	384	0	0	359	0	0
Stage 1	364	364	-	509	509	-	-	-	-	-	-	-
Stage 2	512	511	-	413	402	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.24	6.64	6.34	4.17	-	-	4.18	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.24	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.24	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.626	4.126	3.426	2.263	-	-	2.272	-	-
Pot Cap-1 Maneuver	266	285	690	239	262	661	1148	-	-	1167	-	-
Stage 1	649	619	-	525	519	-	-	-	-	-	-	-
Stage 2	539	532	-	593	580	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	244	259	690	190	238	661	1148	-	-	1167	-	-
Mov Cap-2 Maneuver	244	259	-	190	238	-	-	-	-	-	-	-
Stage 1	595	613	-	481	476	-	-	-	-	-	-	-
Stage 2	489	488	-	504	574	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	22.9		13.9		1.5			0.2				
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1148	-	-	375	411	1167	-	-				
HCM Lane V/C Ratio	0.066	-	-	0.472	0.019	0.008	-	-				
HCM Control Delay (s)	8.4	0	-	22.9	13.9	8.1	0	-				
HCM Lane LOS	A	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	2.4	0.1	0	-	-				

Lanes, Volumes, Timings  
 4: Oleander Ave & Farmers Market Rd

2026 Buildout Traffic Conditions  
 Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	1	1	1	40	1	33	1	329	72	36	319	9
Future Volume (vph)	1	1	1	40	1	33	1	329	72	36	319	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	33%	33%	33%	12%	12%	12%	5%	5%	5%	8%	8%	8%
Adj. Flow (vph)	1	1	1	45	1	38	1	374	82	41	363	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	84	0	0	457	0	0	414	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

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	1	1	1	40	1	33	1	329	72	36	319	9
Future Vol, veh/h	1	1	1	40	1	33	1	329	72	36	319	9
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	33	33	33	12	12	12	5	5	5	8	8	8
Mvmt Flow	1	1	1	45	1	38	1	374	82	41	363	10
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	887	908	368	868	872	415	373	0	0	456	0	0
Stage 1	450	450	-	417	417	-	-	-	-	-	-	-
Stage 2	437	458	-	451	455	-	-	-	-	-	-	-
Critical Hdwy	7.43	6.83	6.53	7.22	6.62	6.32	4.15	-	-	4.18	-	-
Critical Hdwy Stg 1	6.43	5.83	-	6.22	5.62	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.43	5.83	-	6.22	5.62	-	-	-	-	-	-	-
Follow-up Hdwy	3.797	4.297	3.597	3.608	4.108	3.408	2.245	-	-	2.272	-	-
Pot Cap-1 Maneuver	234	245	614	262	278	616	1169	-	-	1074	-	-
Stage 1	533	522	-	594	574	-	-	-	-	-	-	-
Stage 2	542	518	-	569	552	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	211	233	614	251	264	616	1169	-	-	1074	-	-
Mov Cap-2 Maneuver	211	233	-	251	264	-	-	-	-	-	-	-
Stage 1	532	497	-	593	573	-	-	-	-	-	-	-
Stage 2	507	517	-	539	526	-	-	-	-	-	-	-
Approach	EB	WB			NB			SB				
HCM Control Delay, s	18	19			0			0.8				
HCM LOS	C	C										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1169	-	-	281	341	1074	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.012	0.247	0.038	-	-				
HCM Control Delay (s)	8.1	0	-	18	19	8.5	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	1	0.1	-	-				

Lanes, Volumes, Timings  
5: Oleander Ave & Edwards Rd

2026 Buildout Traffic Conditions  
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	350	207	28	229	30	169	222	51	42	194	65
Future Volume (vph)	53	350	207	28	229	30	169	222	51	42	194	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	7%	7%	10%	10%	10%	8%	8%	8%	5%	5%	5%
Adj. Flow (vph)	56	372	220	30	244	32	180	236	54	45	206	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	56	592	0	30	276	0	180	290	0	45	275	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		8.0	10.0		8.0	10.0	
Minimum Split (s)	13.0	17.0		13.0	17.0		15.0	17.0		15.0	17.0	
Total Split (s)	15.0	30.0		15.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	16.7%	33.3%		16.7%	33.3%		16.7%	33.3%		16.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.15	0.62		0.11	0.37		0.45	0.48		0.10	0.65	
Control Delay	16.8	22.2		16.6	25.3		19.4	26.8		15.0	32.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.8	22.2		16.6	25.3		19.4	26.8		15.0	32.9	
Queue Length 50th (ft)	16	79		8	55		48	114		11	103	
Queue Length 95th (ft)	42	182		26	98		111	229		35	211	
Internal Link Dist (ft)		2737			3439			4912			1451	
Turn Bay Length (ft)	295			350			150					
Base Capacity (vph)	377	1200		291	1113		402	636		451	607	
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	0.15	0.49		0.10	0.25		0.45	0.46		0.10	0.45	

Intersection Summary

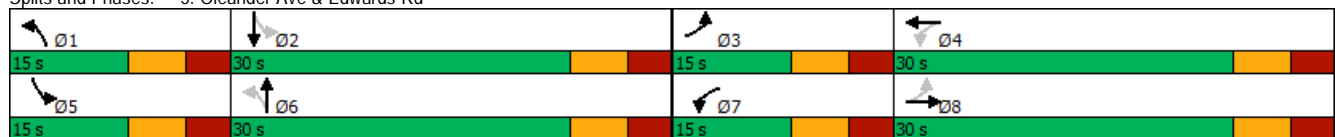
Cycle Length: 90

Actuated Cycle Length: 71.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Oleander Ave & Edwards Rd



HCM 6th Signalized Intersection Summary  
5: Oleander Ave & Edwards Rd

2026 Buildout Traffic Conditions  
Timing Plan: AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	350	207	28	229	30	169	222	51	42	194	65
Future Volume (veh/h)	53	350	207	28	229	30	169	222	51	42	194	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	1796	1796	1796	1752	1752	1752	1781	1781	1781	1826	1826	1826
Adj Flow Rate, veh/h	56	372	0	30	244	0	180	236	54	45	206	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	7	7	10	10	10	8	8	8	5	5	5
Cap, veh/h	324	624		260	539		381	357	82	348	263	88
Arrive On Green	0.06	0.18	0.00	0.04	0.16	0.00	0.12	0.25	0.25	0.07	0.20	0.20
Sat Flow, veh/h	1711	3503	0	1668	3416	0	1697	1403	321	1739	1309	438
Grp Volume(v), veh/h	56	372	0	30	244	0	180	0	290	45	0	275
Grp Sat Flow(s), veh/h/ln	1711	1706	0	1668	1664	0	1697	0	1724	1739	0	1747
Q Serve(g_s), s	1.6	6.2	0.0	0.9	4.1	0.0	4.9	0.0	9.3	1.2	0.0	9.2
Cycle Q Clear(g_c), s	1.6	6.2	0.0	0.9	4.1	0.0	4.9	0.0	9.3	1.2	0.0	9.2
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.19	1.00		0.25
Lane Grp Cap(c), veh/h	324	624		260	539		381	0	439	348	0	351
V/C Ratio(X)	0.17	0.60		0.12	0.45		0.47	0.00	0.66	0.13	0.00	0.78
Avail Cap(c_a), veh/h	443	1272		411	1240		391	0	642	453	0	651
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.5	23.1	0.0	20.3	23.4	0.0	16.6	0.0	20.6	17.2	0.0	23.4
Incr Delay (d2), s/veh	0.3	1.3	0.0	0.2	0.8	0.0	0.9	0.0	1.7	0.2	0.0	3.9
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	2.4	0.0	0.3	1.5	0.0	1.8	0.0	3.6	0.4	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	24.4	0.0	20.5	24.2	0.0	17.5	0.0	22.3	17.3	0.0	27.3
LnGrp LOS	B	C		C	C		B	A	C	B	A	C
Approach Vol, veh/h		428	A		274	A		470			320	
Approach Delay, s/veh		23.8			23.8			20.5			25.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	19.4	10.7	17.0	11.3	22.7	9.4	18.3				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	23.0	8.0	23.0	8.0	23.0	8.0	23.0				
Max Q Clear Time (g_c+I1), s	6.9	11.2	3.6	6.1	3.2	11.3	2.9	8.2				
Green Ext Time (p_c), s	0.1	1.2	0.0	1.8	0.0	1.2	0.0	2.7				

Intersection Summary												
HCM 6th Ctrl Delay				23.2								
HCM 6th LOS				C								

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings  
 6: Oleander Ave & Project Driveway



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	15	5	335	360	8
Future Volume (vph)	22	15	5	335	360	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	16	5	364	391	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	369	400	0
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Control Type: Unsignalized						

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑		↓
Traffic Vol, veh/h	22	15	5	335	360	8
Future Vol, veh/h	22	15	5	335	360	8
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	24	16	5	364	391	9

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	770	396	400	0	-	0
Stage 1	396	-	-	-	-	-
Stage 2	374	-	-	-	-	-
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	369	653	1159	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	367	653	1159	-	-	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1159	-	446	-	-
HCM Lane V/C Ratio	0.005	-	0.09	-	-
HCM Control Delay (s)	8.1	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lanes, Volumes, Timings  
1: Oleander Ave & Midway Rd

2026 Buildout Traffic Conditions  
Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	568	72	52	454	105	116	141	57	100	151	87
Future Volume (vph)	110	568	72	52	454	105	116	141	57	100	151	87
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	115	592	75	54	473	109	121	147	59	104	157	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	667	0	54	582	0	121	206	0	104	157	91
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases												4
Detector Phase	1	6		5	2		3	8		7	4	4
Switch Phase												
Minimum Initial (s)	8.0	10.0		8.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	15.0	17.5		15.0	17.5		15.0	15.0		15.0	15.0	15.0
Total Split (s)	15.0	45.0		15.0	45.0		15.0	45.0		15.0	45.0	45.0
Total Split (%)	12.5%	37.5%		12.5%	37.5%		12.5%	37.5%		12.5%	37.5%	37.5%
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
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)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min		None	Min		None	None		None	None	None
v/c Ratio	0.67	0.57		0.32	0.58		0.36	0.50		0.31	0.48	0.22
Control Delay	61.1	26.4		45.2	26.9		42.4	33.9		41.8	37.1	1.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	61.1	26.4		45.2	26.9		42.4	33.9		41.8	37.1	1.2
Queue Length 50th (ft)	59	156		27	130		31	91		26	75	0
Queue Length 95th (ft)	#174	236		73	200		68	179		60	148	2
Internal Link Dist (ft)		1626			1766			1811			2560	
Turn Bay Length (ft)	400			300			275			200		200
Base Capacity (vph)	171	1608		169	1581		332	830		332	857	817
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.67	0.41		0.32	0.37		0.36	0.25		0.31	0.18	0.11

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 84.1

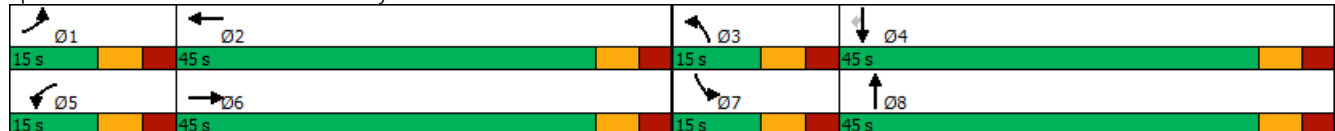
Natural Cycle: 65

Control Type: Actuated-Uncoordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Oleander Ave & Midway Rd



HCM 6th Signalized Intersection Summary  
1: Oleander Ave & Midway Rd

2026 Buildout Traffic Conditions  
Timing Plan: PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	110	568	72	52	454	105	116	141	57	100	151	87
Future Volume (veh/h)	110	568	72	52	454	105	116	141	57	100	151	87
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	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	592	75	54	473	109	121	147	59	104	157	91
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	3	3	3	2	2	2	2	2	2
Cap, veh/h	177	916	116	129	747	171	347	200	80	333	287	243
Arrive On Green	0.10	0.29	0.29	0.07	0.26	0.26	0.10	0.16	0.16	0.10	0.15	0.15
Sat Flow, veh/h	1781	3174	401	1767	2849	652	3456	1269	509	3456	1870	1585
Grp Volume(v), veh/h	115	331	336	54	292	290	121	0	206	104	157	91
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1767	1763	1738	1728	0	1779	1728	1870	1585
Q Serve(g_s), s	4.5	11.9	11.9	2.1	10.6	10.8	2.4	0.0	8.0	2.0	5.6	3.8
Cycle Q Clear(g_c), s	4.5	11.9	11.9	2.1	10.6	10.8	2.4	0.0	8.0	2.0	5.6	3.8
Prop In Lane	1.00		0.22	1.00		0.38	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	177	513	519	129	463	456	347	0	280	333	287	243
V/C Ratio(X)	0.65	0.65	0.65	0.42	0.63	0.64	0.35	0.00	0.74	0.31	0.55	0.37
Avail Cap(c_a), veh/h	196	928	939	194	920	907	380	0	928	380	976	827
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	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	22.6	22.7	32.3	23.7	23.8	30.5	0.0	29.2	30.6	28.5	27.7
Incr Delay (d2), s/veh	6.5	2.3	2.3	2.2	2.4	2.5	0.6	0.0	4.5	0.5	2.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	5.0	5.1	1.0	4.5	4.5	1.0	0.0	3.6	0.8	2.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	25.0	25.0	34.4	26.2	26.3	31.1	0.0	33.7	31.2	30.4	28.8
LnGrp LOS	D	C	C	C	C	C	C	A	C	C	C	C
Approach Vol, veh/h		782			636			327			352	
Approach Delay, s/veh		26.9			26.9			32.8			30.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	26.1	14.3	18.2	12.3	28.0	14.0	18.5				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	38.0	8.0	38.0	8.0	38.0	8.0	38.0				
Max Q Clear Time (g_c+I1), s	6.5	12.8	4.4	7.6	4.1	13.9	4.0	10.0				
Green Ext Time (p_c), s	0.0	6.2	0.1	1.4	0.0	7.1	0.1	1.4				

Intersection Summary

HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings  
 2: Oleander Ave & Weatherbee Rd

2026 Buildout Traffic Conditions  
 Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	6	68	25	21	65	52	15	324	30	84	276	9
Future Volume (vph)	6	68	25	21	65	52	15	324	30	84	276	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Adj. Flow (vph)	6	71	26	22	68	54	16	338	31	88	288	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	144	0	0	385	0	0	385	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	68	25	21	65	52	15	324	30	84	276	9
Future Vol, veh/h	6	68	25	21	65	52	15	324	30	84	276	9
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	2	2	2	4	4	4	2	2	2
Mvmt Flow	6	71	26	22	68	54	16	338	31	88	288	9
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	916	870	293	903	859	354	297	0	0	369	0	0
Stage 1	469	469	-	386	386	-	-	-	-	-	-	-
Stage 2	447	401	-	517	473	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.236	-	-	2.218	-	-
Pot Cap-1 Maneuver	252	289	744	258	294	690	1253	-	-	1190	-	-
Stage 1	573	559	-	637	610	-	-	-	-	-	-	-
Stage 2	589	599	-	541	558	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	172	259	744	182	263	690	1253	-	-	1190	-	-
Mov Cap-2 Maneuver	172	259	-	182	263	-	-	-	-	-	-	-
Stage 1	564	509	-	627	600	-	-	-	-	-	-	-
Stage 2	474	589	-	409	508	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	23.2		25.7		0.3			1.9				
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1253	-	-	299	315	1190	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.345	0.456	0.074	-	-				
HCM Control Delay (s)	7.9	0	-	23.2	25.7	8.3	0	-				
HCM Lane LOS	A	A	-	C	D	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.5	2.3	0.2	-	-				

Lanes, Volumes, Timings  
3: Oleander Ave & Bell Ave

2026 Buildout Traffic Conditions  
Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	75	2	87	1	4	6	80	370	0	2	336	118
Future Volume (vph)	75	2	87	1	4	6	80	370	0	2	336	118
Peak Hour Factor	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 (%)	5%	5%	5%	27%	27%	27%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	82	2	95	1	4	7	87	402	0	2	365	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	179	0	0	12	0	0	489	0	0	495	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	5.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	75	2	87	1	4	6	80	370	0	2	336	118
Future Vol, veh/h	75	2	87	1	4	6	80	370	0	2	336	118
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	5	5	5	27	27	27	4	4	4	4	4	4
Mvmt Flow	82	2	95	1	4	7	87	402	0	2	365	128
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1015	1009	429	1058	1073	402	493	0	0	402	0	0
Stage 1	433	433	-	576	576	-	-	-	-	-	-	-
Stage 2	582	576	-	482	497	-	-	-	-	-	-	-
Critical Hdwy	7.15	6.55	6.25	7.37	6.77	6.47	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.15	5.55	-	6.37	5.77	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.15	5.55	-	6.37	5.77	-	-	-	-	-	-	-
Follow-up Hdwy	3.545	4.045	3.345	3.743	4.243	3.543	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	214	237	620	182	199	597	1060	-	-	1146	-	-
Stage 1	595	577	-	461	464	-	-	-	-	-	-	-
Stage 2	494	497	-	521	505	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	191	211	620	141	178	597	1060	-	-	1146	-	-
Mov Cap-2 Maneuver	191	211	-	141	178	-	-	-	-	-	-	-
Stage 1	532	576	-	412	415	-	-	-	-	-	-	-
Stage 2	432	444	-	439	504	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	32.7		18.5			1.5			0			
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1060	-	-	302	278	1146	-	-				
HCM Lane V/C Ratio	0.082	-	-	0.59	0.043	0.002	-	-				
HCM Control Delay (s)	8.7	0	-	32.7	18.5	8.1	0	-				
HCM Lane LOS	A	A	-	D	C	A	A	-				
HCM 95th %tile Q(veh)	0.3	-	-	3.5	0.1	0	-	-				

Lanes, Volumes, Timings  
 4: Oleander Ave & Farmers Market Rd

2026 Buildout Traffic Conditions  
 Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	0	0	71	0	44	0	407	40	21	385	0
Future Volume (vph)	0	0	0	71	0	44	0	407	40	21	385	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
Heavy Vehicles (%)	2%	2%	2%	10%	10%	10%	5%	5%	5%	4%	4%	4%
Adj. Flow (vph)	0	0	0	77	0	48	0	442	43	23	418	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	125	0	0	485	0	0	441	0
Sign Control		Stop			Stop			Free			Free	

**Intersection Summary**

Control Type: Unsignalized

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	71	0	44	0	407	40	21	385	0
Future Vol, veh/h	0	0	0	71	0	44	0	407	40	21	385	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	10	10	10	5	5	5	4	4	4
Mvmt Flow	0	0	0	77	0	48	0	442	43	23	418	0
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	952	949	418	928	928	464	418	0	0	485	0	0
Stage 1	464	464	-	464	464	-	-	-	-	-	-	-
Stage 2	488	485	-	464	464	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.2	6.6	6.3	4.15	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.2	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.59	4.09	3.39	2.245	-	-	2.236	-	-
Pot Cap-1 Maneuver	239	260	635	240	260	582	1125	-	-	1068	-	-
Stage 1	578	564	-	563	550	-	-	-	-	-	-	-
Stage 2	561	552	-	563	550	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	215	253	635	235	253	582	1125	-	-	1068	-	-
Mov Cap-2 Maneuver	215	253	-	235	253	-	-	-	-	-	-	-
Stage 1	578	548	-	563	550	-	-	-	-	-	-	-
Stage 2	515	552	-	547	535	-	-	-	-	-	-	-
Approach	EB		WB		NB			SB				
HCM Control Delay, s	0		24.9		0			0.4				
HCM LOS	A		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1125	-	-	-	304	1068	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.411	0.021	-	-				
HCM Control Delay (s)	0	-	-	0	24.9	8.4	0	-				
HCM Lane LOS	A	-	-	A	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	1.9	0.1	-	-				

Lanes, Volumes, Timings  
5: Oleander Ave & Edwards Rd

2026 Buildout Traffic Conditions  
Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	325	236	33	366	40	192	317	43	56	227	82
Future Volume (vph)	100	325	236	33	366	40	192	317	43	56	227	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	105	342	248	35	385	42	202	334	45	59	239	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	105	590	0	35	427	0	202	379	0	59	325	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	10.0		6.0	10.0		8.0	10.0		8.0	10.0	
Minimum Split (s)	13.0	17.0		13.0	17.0		15.0	17.0		15.0	17.0	
Total Split (s)	15.0	30.0		15.0	30.0		15.0	30.0		15.0	30.0	
Total Split (%)	16.7%	33.3%		16.7%	33.3%		16.7%	33.3%		16.7%	33.3%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.32	0.59		0.13	0.56		0.54	0.60		0.15	0.73	
Control Delay	19.2	20.2		17.1	30.3		22.5	30.8		15.8	37.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.2	20.2		17.1	30.3		22.5	30.8		15.8	37.1	
Queue Length 50th (ft)	36	98		11	104		63	179		17	142	
Queue Length 95th (ft)	69	158		29	151		122	#342		43	252	
Internal Link Dist (ft)		2737			3439			4912			1451	
Turn Bay Length (ft)	295			350			150					
Base Capacity (vph)	342	1205		306	1099		376	634		394	578	
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	0.49		0.11	0.39		0.54	0.60		0.15	0.56	

Intersection Summary

Cycle Length: 90

Actuated Cycle Length: 76.5

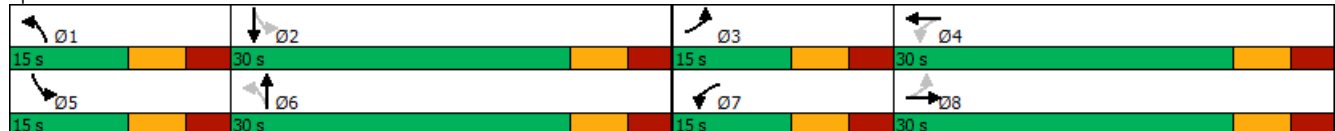
Natural Cycle: 65

Control Type: Actuated-Uncoordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: Oleander Ave & Edwards Rd



HCM 6th Signalized Intersection Summary  
5: Oleander Ave & Edwards Rd

2026 Buildout Traffic Conditions  
Timing Plan: PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	325	236	33	366	40	192	317	43	56	227	82
Future Volume (veh/h)	100	325	236	33	366	40	192	317	43	56	227	82
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	1841	1841	1841	1856	1856	1856	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	342	0	35	385	0	202	334	45	59	239	86
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	3	3	3	2	2	2	2	2	2
Cap, veh/h	309	718		305	604		364	416	56	313	291	105
Arrive On Green	0.08	0.21	0.00	0.04	0.17	0.00	0.12	0.26	0.26	0.08	0.22	0.22
Sat Flow, veh/h	1753	3589	0	1767	3618	0	1781	1614	217	1781	1313	472
Grp Volume(v), veh/h	105	342	0	35	385	0	202	0	379	59	0	325
Grp Sat Flow(s),veh/h/ln	1753	1749	0	1767	1763	0	1781	0	1831	1781	0	1785
Q Serve(g_s), s	3.2	5.8	0.0	1.1	6.9	0.0	5.7	0.0	13.1	1.6	0.0	11.7
Cycle Q Clear(g_c), s	3.2	5.8	0.0	1.1	6.9	0.0	5.7	0.0	13.1	1.6	0.0	11.7
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.12	1.00		0.26
Lane Grp Cap(c), veh/h	309	718		305	604		364	0	472	313	0	395
V/C Ratio(X)	0.34	0.48		0.11	0.64		0.56	0.00	0.80	0.19	0.00	0.82
Avail Cap(c_a), veh/h	383	1192		439	1201		369	0	624	382	0	608
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	23.6	0.0	21.4	26.0	0.0	18.0	0.0	23.4	18.0	0.0	25.0
Incr Delay (d2), s/veh	0.6	0.7	0.0	0.2	1.6	0.0	1.8	0.0	5.6	0.3	0.0	5.3
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	1.3	2.3	0.0	0.4	2.8	0.0	2.3	0.0	5.9	0.6	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	24.3	0.0	21.5	27.6	0.0	19.8	0.0	29.0	18.2	0.0	30.3
LnGrp LOS	C	C		C	C		B	A	C	B	A	C
Approach Vol, veh/h		447	A		420	A		581			384	
Approach Delay, s/veh		23.6			27.1			25.8			28.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	22.0	12.2	18.6	12.4	24.4	9.9	20.9				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	8.0	23.0	8.0	23.0	8.0	23.0	8.0	23.0				
Max Q Clear Time (g_c+I1), s	7.7	13.7	5.2	8.9	3.6	15.1	3.1	7.8				
Green Ext Time (p_c), s	0.0	1.3	0.1	2.7	0.0	1.4	0.0	2.5				

Intersection Summary												
HCM 6th Ctrl Delay				26.1								
HCM 6th LOS				C								

Notes

Unsignalized Delay for [EBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings  
 6: Oleander Ave & Project Driveway



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	14	10	16	367	400	25
Future Volume (vph)	14	10	16	367	400	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	11	17	399	435	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	0	416	462	0
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Control Type: Unsignalized						

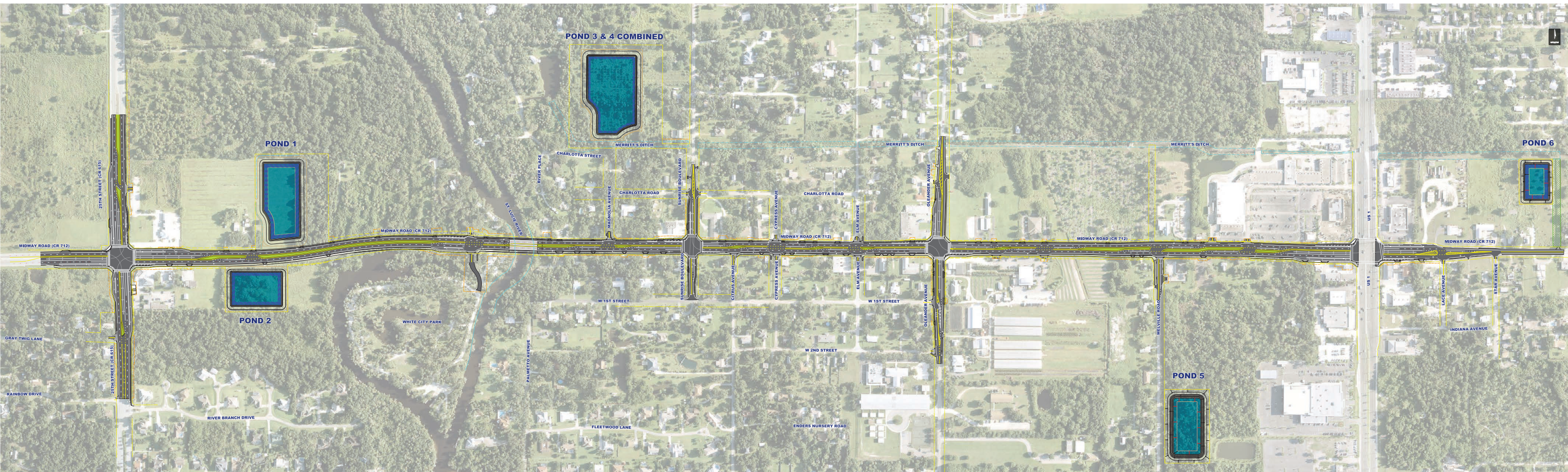
Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	14	10	16	367	400	25
Future Vol, veh/h	14	10	16	367	400	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage 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	15	11	17	399	435	27

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	882	449	462	0	0
Stage 1	449	-	-	-	-
Stage 2	433	-	-	-	-
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	317	610	1099	-	-
Stage 1	643	-	-	-	-
Stage 2	654	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	311	610	1099	-	-
Mov Cap-2 Maneuver	311	-	-	-	-
Stage 1	630	-	-	-	-
Stage 2	654	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1099	-	391	-	-
HCM Lane V/C Ratio	0.016	-	0.067	-	-
HCM Control Delay (s)	8.3	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

**APPENDIX J**  
Midway Road Improvement Design



POND 1

POND 3 & 4 COMBINED

POND 2

POND 5

POND 6

WHITE CITY PARK

MERRITT'S DITCH

MERRITT'S DITCH

MERRITT'S DITCH

INDIANA AVENUE

MIDWAY ROAD (CR 712)

MIDWAY ROAD (CR 712)

MIDWAY ROAD (CR 712)

MIDWAY ROAD (CR 712)

MIDWAY ROAD (CR 712)

W 1ST STREET

W 2ND STREET

RIVER PLACE

CHARLOTTA STREET

CHARLOTTA ROAD

CHARLOTTA ROAD

PALMETTO AVENUE

FLEETWOOD LANE

ENDERS NURSERY ROAD

SUNRISE BOULEVARD

CITRUS AVENUE

CYPRESS AVENUE

ELM AVENUE

DELANER AVENUE

MELVILLE ROAD

LACE AVENUE

STAR AVENUE

25TH STREET (CR 615)

25TH STREET (CR 615)

US 1

US 1



**APPENDIX K**  
NCHRP Report 457 Outputs

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

**2-lane roadway (English)**

INPUT

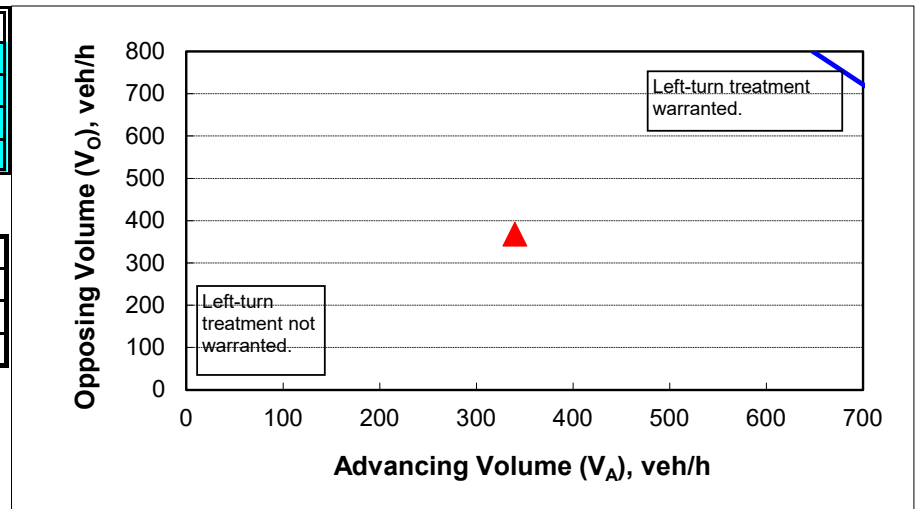
Variable	Value
85 <sup>th</sup> percentile speed, mph:	35
Percent of left-turns in advancing volume ( $V_A$ ), %:	1%
Advancing volume ( $V_A$ ), veh/h:	340
Opposing volume ( $V_O$ ), veh/h:	368

OUTPUT

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	1006
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9



Northbound Left-Turn Lane  
PM Peak Hour

**Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.**

**2-lane roadway (English)**

**INPUT**

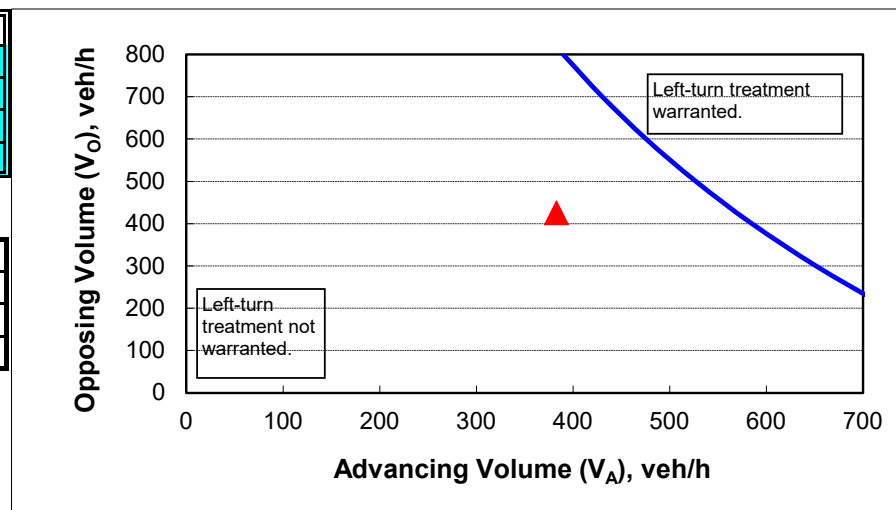
Variable	Value
85 <sup>th</sup> percentile speed, mph:	35
Percent of left-turns in advancing volume ( $V_A$ ), %:	4%
Advancing volume ( $V_A$ ), veh/h:	383
Opposing volume ( $V_O$ ), veh/h:	425

**OUTPUT**

Variable	Value
Limiting advancing volume ( $V_A$ ), veh/h:	570
<b>Guidance for determining the need for a major-road left-turn bay:</b>	
<b>Left-turn treatment NOT warranted.</b>	

**CALIBRATION CONSTANTS**

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9



Southbound Right-Turn Lane  
 AM Peak Hour

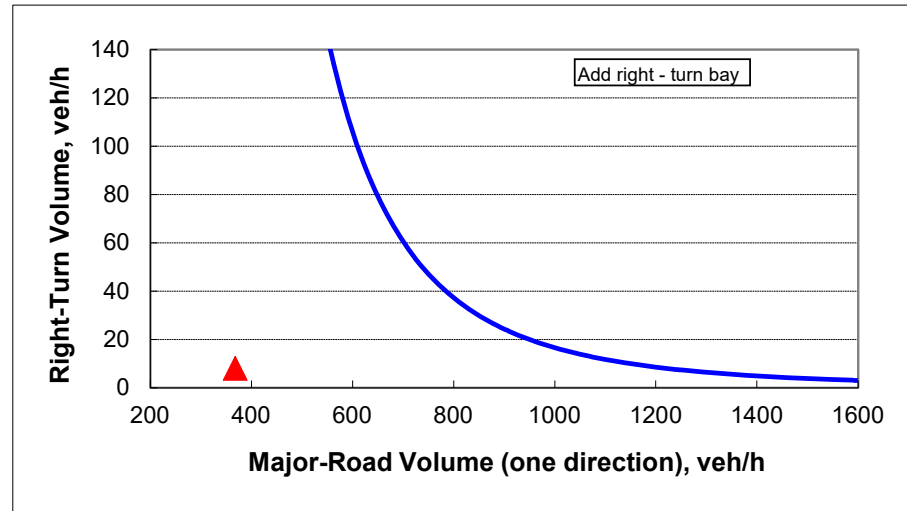
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**

INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	368
Right-turn volume, veh/h:	8

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	626
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
Do NOT add right-turn bay.	



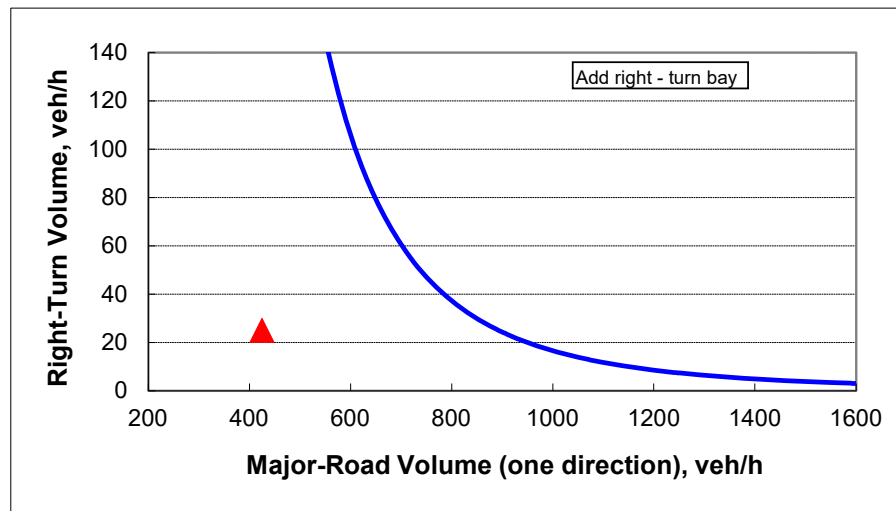
**Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.**


INPUT

Roadway geometry:	2-lane roadway
Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	425
Right-turn volume, veh/h:	25

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	371
<b>Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:</b>	
<b>Do NOT add right-turn bay.</b>	





# **Oleander Oaks Conceptual Drainage Report**

**Fort Pierce, FL**

Drainage Report

KHA No: 147811000

**Prepared For:**

SFWMD

NSLWCD

City of Fort Pierce

**Prepared By:**

Kimley-Horn and Associates, Inc.

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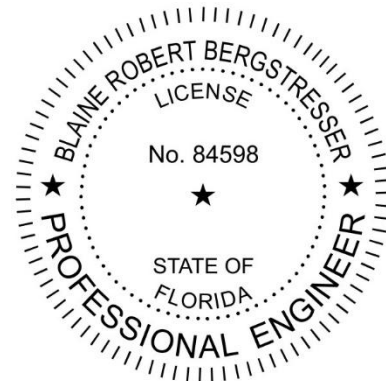
Vero Beach, Florida 32960

# **OLEANDER OAKS FORT PIERCE, FL DRAINAGE SUMMARY**

Prepared For:  
SFWMD  
NSLWCD  
City of Fort Pierce

Prepared By:  
Kimley-Horn and Associates, Inc.  
445 24<sup>st</sup> Street, Suite 200  
Vero Beach, Florida 32962

This item has been digitally signed and sealed by  
Blaine Bergstresser, P.E. on the date adjacent to the seal.  
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electronic copies.



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- Runoff Calculations
- Water Quality and Treatment Volume

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- Estimated Runoff Calculations

## Oleander Oaks Drainage Summary

### INTRODUCTION

The drainage report is prepared to present the design of the storm water management system to serve the proposed single-family site, Oleander Oaks, located in Fort Pierce, Florida.

The subject site consists of 562,732 square feet (approx. 12.92 acres) of undeveloped land. The site currently sits vacant and contains woodlands. The proposed development consists of approximately 50 single family lots, and amenity center, a 1 acre wet pond, a 0.35 acre dry pond as well as 1.42 acres of wetland area.

All elevations shown herein are shown in NAVD 88 unless otherwise noted.

### SITE LOCATION

The general location of the proposed project site in Section 33, Township 35 South, Range 40E East in the City of Fort Pierce, St. Lucie County, Florida. The site is located at the along Oleander Avenue on the west side. See **Appendix A** for General Location Map.

### EXISTING SITE DESCRIPTION

#### A. EXISTING SITE AREA SUMMARY

The subject site consists of 756,855 square feet (approx. 17.38 acres) of undeveloped land that contains woodlands and agricultural pastures.

Below is the summary of the pre-development impervious and pervious areas:

Table 1:

<b>Pre-Development Site:</b>	<b>Onsite</b>
Pavement	0.00 ac
<b>Total Impervious area (A)</b>	<b>0.00 ac</b>
Pervious Area	12.92 ac
<b>Total Pervious area (B)</b>	<b>12.92 ac</b>
<b>Total Site Area (A + B)</b>	<b>12.92 ac</b>
<b>% Total Impervious</b>	<b>0.00%</b>
<b>% Pervious</b>	<b>100.00%</b>

#### B. TOPOGRAPHY

Survey data shows average existing site grades range from approximately +/- 0.0 ft to +/- 18.0 ft. with an average existing site grade of approximately +/- 12.0 ft. The site consists of wetlands on the easternmost border which serves as the current outfall to the existing drainage patter. There is also an abandoned North St. Lucie River Water Control District (Canal No.14), located to the south of the site where the proposed entrance will be located.

## **C. CURVE NUMBER**

The site primarily contains Hydrologic Type “C/D” soil. A CN value of 80 was assumed for pervious areas and a CN value of 98 was assumed for impervious areas. Weighted CN values were calculated for each drainage basin as shown in Table 2 below. The CN calculations for the pre-development conditions can be found in **Appendix B**

## **D. FLOOD PLAIN COMPENSATION**

The site is in Flood Zone X per FEMA. Flood Zone X states that the area was determined to be outside the 0.2% annual chance floodplain.

## PROPOSED SITE DESCRIPTION

### A. PROPOSED SITE AREA SUMMARY

The proposed site shall consist of fifty (50) single family homes on approximately 12.92 acres of land on Oleander Avenue. The site will have a divide entrance off of Oleander Avenue with a looped roadway throughout the development. There is a proposed wet pond in the middle of the loop that will be used for stormwater storage as well as a dry pond in the southeast corner of the site. The site will ultimately discharge into the existing wetland structure located on the easter border of the site. The wet and dry ponds will both utilize control structures to limit the discharge rate to that of SFWMD and NSLWCD standards.

The post-development discharge rates for the proposed site will not exceed more than 2.0 inches of depth over the area served for any 24-hour period from the 10-year frequency, 72-hour duration rainfall event. For the proposed site, this comes out to 5.69 ac-ft in any 24-hour period. The criteria for the limited discharge rates was based on the drainage connection requirements set forth by North St. Lucie River Water Canal District.

Below are the estimates of the post-development impervious and pervious areas:

Table 4:

<b>Post-Development Site:</b>	<b>Onsite Basin</b>
Pavement	1.72 ac
Building	2.30 ac
Water Surface (Top of Bank)	1.00 ac
Wetland Area	1.42 ac
<b>Total Impervious Area (A)</b>	<b>6.44 ac</b>
Pervious Area	6.48 ac
<b>Total Pervious Area (B)</b>	<b>6.48 ac</b>
<b>Total Site Area (A+B)</b>	<b>12.92 ac</b>
<b>% Total Impervious</b>	<b>49.85%</b>
<b>% Pervious</b>	<b>50.15%</b>

**B. POST DEVELOPMENT BASINS**

The post development site can be described as having one distinct drainage basin. The existing basin pattern is consistent with the proposed post development drainage basin pattern, where the onsite runoff will discharge into the dry/wet ponds before ultimately discharging into the adjacent wetland located along the easternmost boundary.

**D. TIME OF CONCENTRATION**

Time of concentration (Tc) for the onsite area was determined using the TR-55 method. A maximum sheet flow of 300 feet and shallow concentrated flow were calculated to determine the time of concentration for the current site layout. The Tc value was less than the minimum allowable Tc, therefore a Tc value of 10 minutes was used for the onsite and offsite roadway.

**E. REQUIRED TREATMENT VOLUME (TV)**

The proposed system is to provide sufficient water quality treatment per the City of Fort Pierce and SFWMD ERP criteria. The proposed stormwater design is to provide storage for the greater of 1 inch of runoff for the total drainage area or 2.5 inches for the total impervious area. This was determined to be 1.077 ac-ft for the onsite basin based on an overall site basin area of 12.92 acres with an estimated 49.85% impervious area.

Per SFWMD OFW criteria, the design water quality retention volume is to be 150% of the required treatment volume, which gives the proposed site a total required treatment volume of 1.615 ac-ft for the onsite basin.

The site is also required to provide 0.50 inches of dry pre-treatment over the site area for commercial development per SFWMD. Based on a total site area of 12.92 acres and estimated wet pond area of 1.00 acres, 0.50 acres of dry pre-treatment will be required for the site.

Table 6:

<b>Post-Development:</b>	Required TV	150% of TV (OFW)
Onsite	2.511 ac-ft	3.767 ac-ft

**F. DISCHARGE RATES**

The post-development discharge rates for the proposed site will not exceed more than 2.0 inches of depth over the area served for any 24-hour period from the 10-year frequency, 72-hour duration rainfall. For the proposed site, this comes out to 5.69 acft in any 24-hour period. This limited discharge criteria are based on the drainage connection requirements set forth by North St. Lucie River Water Canal District and is what the closest permitted existing site was approved at.

**G. NSLWCD REQUIREMENTS**

The proposed system will be designed to meet the treatment and attenuation design criteria for the South Florida Water Management District (SFWMD), the North St. Lucie River Water Control District (NSLRWCD), and the City of Fort Pierce. This includes an additional 50% water quality and net improvement provisions for sites with discharge to the South Fork of the St Lucie River Basin (verified impaired).

## CONCLUSION

Post-development offsite discharge rates are limited by the NSLRWCD criteria of 2.0 inches of depth over the area served for any 24-hour period from the 10 year-72-hour storm event for allowable discharge in to the bordering NSLRWCD Canal 37. A limited discharge rate of 5.69 ac-ft is required for a 12.92-acre site.

The proposed development is to provide sufficient water quality treatment in accordance with all requirements set forth by City of Fort Pierce, North St. Lucie River Water Control District, and South Florida Water Management District. The total required treatment volume is to be an estimated 1.615 ac-ft for the overall onsite basin, with 0.50 acres of the required pre-treatment being dry pre-treatment.

The proposed development is designed to maintain and improve the currently existing pre-development drainage pattern and will have an ultimate outfall to existing wetland located along the eastern boundary of the site. All drainage design is to be in accordance with the requirements set forth by NSLRWCD, SFWMD, and the City of Fort Pierce.

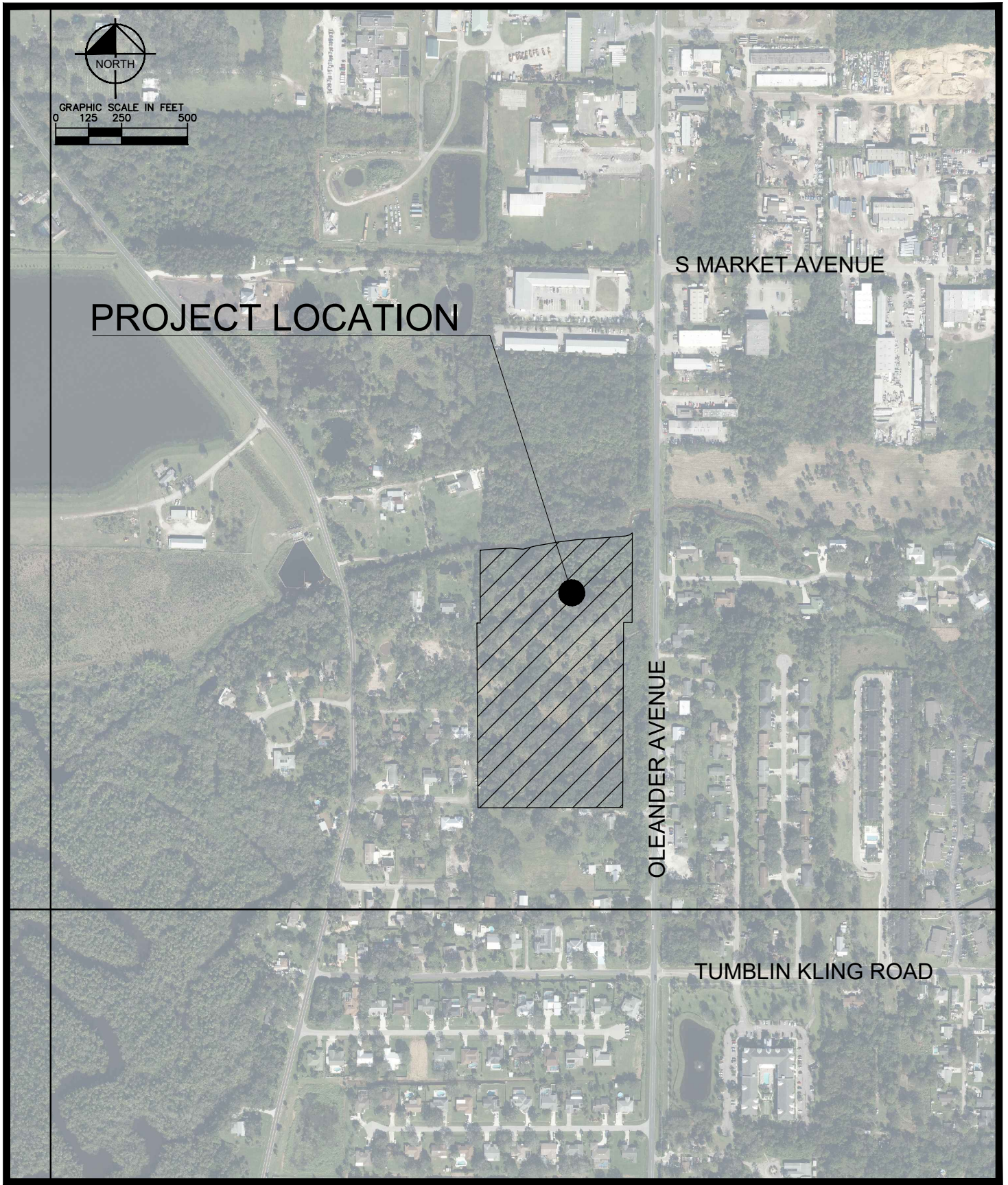
# APPENDICES

# APPENDIX A

## VICINITY MAPS

## Location Map

Plotted By: Enright, Tyler Sheet Set: Kha Layout: Layout1 April 28, 2021 11:24:56am Drawing2.dwg  
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OLEANDER OAKS

LOCATION MAP

SHEET NUMBER

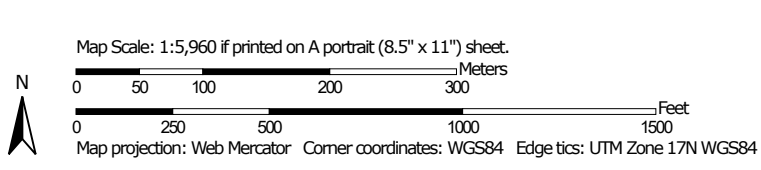
1 OF 1

NRCS Soil Resource Report for Fort Pierce,  
Florida

Soil Map—St. Lucie County, Florida




Soil Map may not be valid at this scale.





## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: St. Lucie County, Florida

Survey Area Data: Version 14, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 6, 2019—Mar 23, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

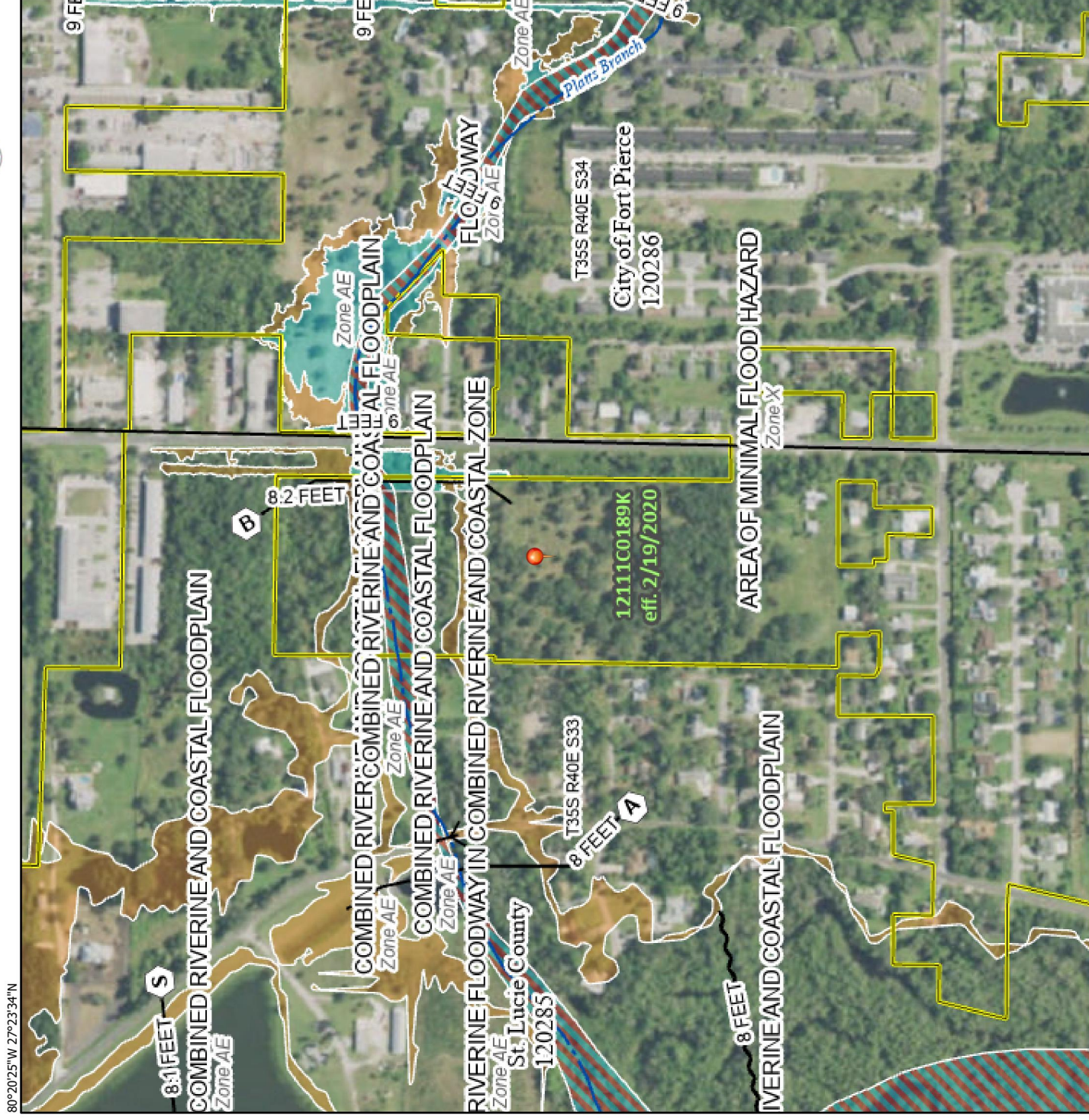
## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farnton sands	113.5	67.9%
4	Arents, 0 to 5 percent slopes	0.2	0.1%
14	Fluvaquents, frequently flooded	0.8	0.5%
25	Nettles and Oldsmar sands	4.4	2.6%
29	Pendarvis and Pomello sands, 0 to 5 percent slopes	0.1	0.0%
38	Riviera fine sand, 0 to 2 percent slopes	10.1	6.0%
43	Susanna and Wauchula sands	25.6	15.3%
44	Tantile and Pomona sands	4.5	2.7%
47	Urban land, 0 to 2 percent slopes	2.8	1.7%
48	Wabasso sand, 0 to 2 percent slopes	2.7	1.6%
55	Winder loamy sand	2.5	1.5%
99	Water	0.1	0.1%
<b>Totals for Area of Interest</b>		<b>167.2</b>	<b>100.0%</b>

## FEMA Floodplain Maps

# National Flood Hazard Layer FIRMette

80°20'25"W 27°23'34"N



Basemap: USGS National Map: Orthoimagery. Data refreshed October, 2020

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**

- Without Base Flood Elevation (BFE)  
*Zone A, V, A99*
- With BFE or Depth  
*Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile  
*Zone X*
- Future Conditions 1% Annual Chance Flood Hazard  
*Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes.  
*Zone X*
- Area with Flood Risk due to Levee  
*Zone D*

**OTHER AREAS**

- No Screen
- Area of Minimal Flood Hazard  
*Zone X*
- Effective LOMR
- Area of Undetermined Flood Hazard  
*Zone D*

**GENERAL STRUCTURES**

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**

- Digital Data Available
- No Digital Data Available
- Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/23/2021 at 5:31 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

## SFWMD Rainfall Maps

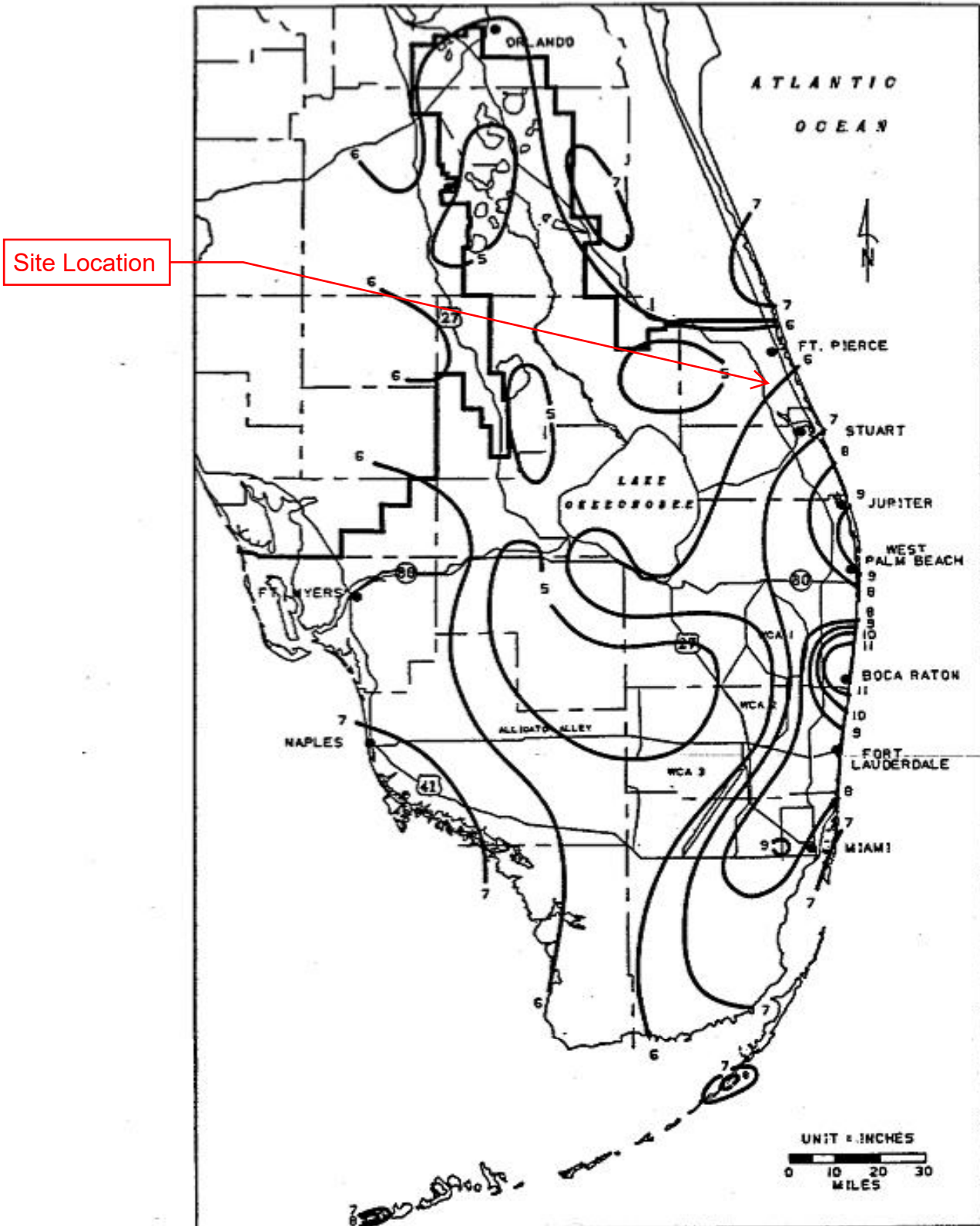


FIGURE C-4. 1-DAY RAINFALL: 10-YEAR RETURN PERIOD

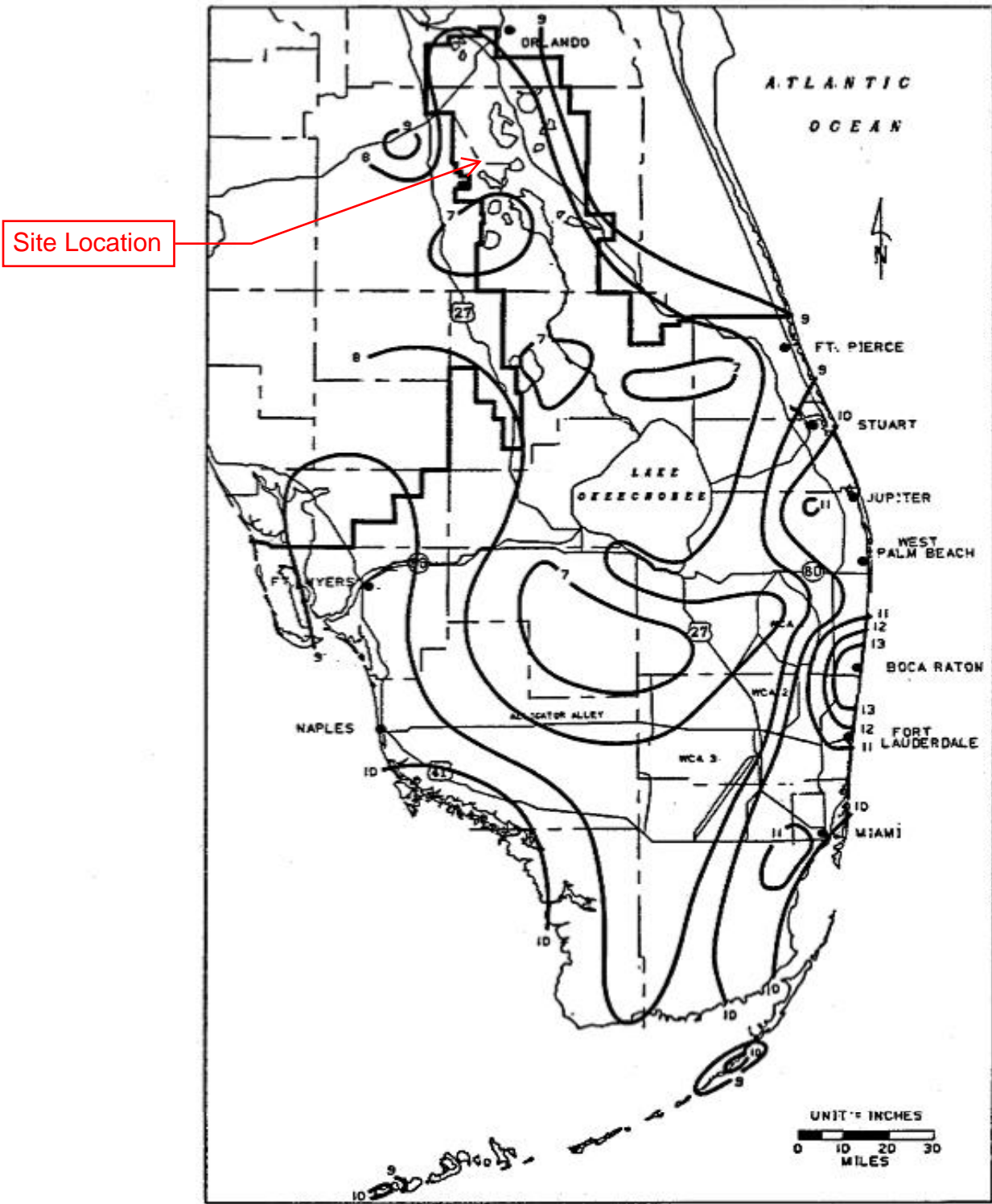


FIGURE C-7. 3-DAY RAINFALL: 10-YEAR RETURN PERIOD

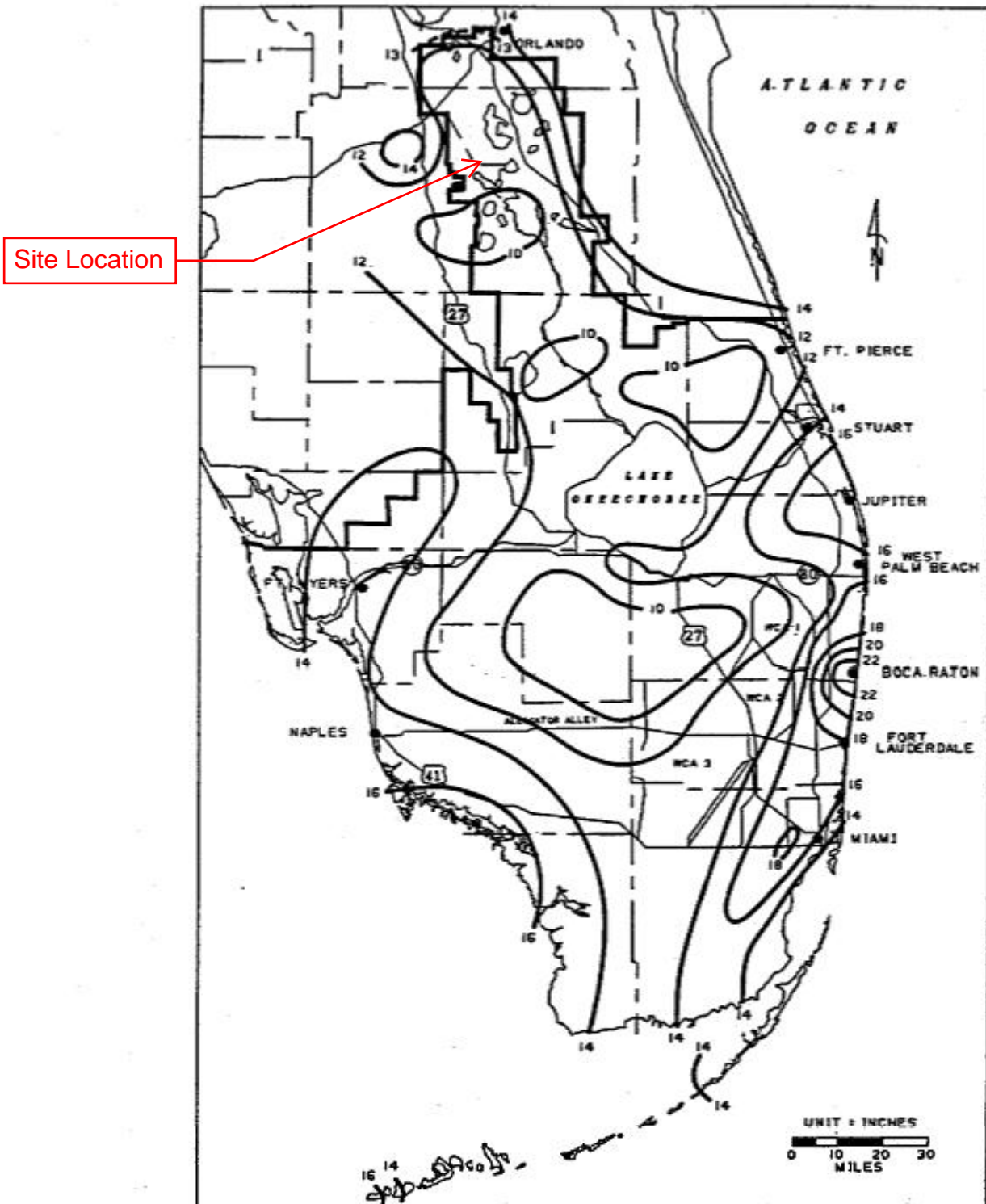


FIGURE C-9. 3-DAY RAINFALL: 100-YEAR RETURN PERIOD

# APPENDIX B

## Pre-Development Calculations

Pre-Development  
Curve Number Calculations

**Pre-Development Curve Number  
TR-55 Methodology - Pre-Conditions**

**Pre-Development  
Curve Number**

Project Name: Fort P Oleander Oaks

Calculated By: TJE

Calculated Date: 4/28/2021

Basin Name: Undeveloped Onsite

Site	Description	Area (SF)	Area (AC)	% of Total	Surface	CN	CN x
<b>Undeveloped Onsite</b>	<i>Impervious</i>						
	Pavement	0	0.00	0.00%		98	0.00
	Building	0	0.00	0.00%		98	0.00
		0	0.00	0.00%		98	0.00
	Water Surface (Top of Bank)		0.00	0.00%		98	0.00
	<i>Impervious Total =</i>	<i>0</i>	<i>0.00</i>				
	<i>Pervious</i>						
Group (D)		756,855	12.92	100.00%	Open, Good	80	80.00

**Total Basin Area = 756,855 12.92 100.00% CN = 80.00**

Pre-Development  
Time of Concentration Calculations

# Pre-Development

## Time of Concentration

Project Name: **Oleander Oaks**  
 Computed by: TJE  
 Date: 4/28/2021

Basin: **Onsite**

### Sheet Flow

1. Surface Description (Table 3-1)
2. Manning's roughness coeff., n (Table 3-1)
3. Flow Length, L (total <= 300 ft) (feet)
4. 2-year 24-hour rainfall, P<sub>2</sub> (inches)
5. Land slope, s (ft/ft)
6.  $T_t = (0.007 * (nL)^{0.8}) / ((P_2^{0.5}) * (s^{0.4}))$  (hr)

Segment ID		
1	-	
Unpaved	-	TR-55
0.4	-	TR-55
300	-	
4.80	-	FDOT Fig. 5-13
0.0067	-	<b>Sub-total</b>
1.09	-	1.09

### Shallow Concentrated Flow

7. Surface description (paved or unpaved)
8. Flow length, L (feet)
9. Watercourse slope, s (ft/ft)
10. Average velocity, V (TR-55 figure 3-1) (ft/s)
11.  $T_t = (L / (3600 * V))$  (hr)

Segment ID		
2	-	
unpaved	-	
200	-	
0.010	-	
1.61	-	<b>Sub-total</b>
0.03	-	0.03

### Channel Flow

12. Cross section flow area, a (ft<sup>2</sup>)
13. Wetted perimeter, Pw (ft)
14. Hydraulic radius, r = a/Pw (ft)
15. Channel slope, s (ft/ft)
16. Manning's roughness coeff., n
17.  $V = (1.49 * (r^{2/3}) * (s^{1/2})) / n$  (ft/s)
18. Flow length, L (ft)
19.  $T_t = (L / (3600 * V))$  (hr)

Segment ID		
3	-	
15.9	-	
16.4	-	
0.97	-	
0.001	-	
0.013	-	
2.94	-	
480	-	<b>Sub-total</b>
0.045	-	0.05

### Total

20. Total Tc (hr)
21. Total Tc (min)

Total	
1.17	hrs
70.18	mins

### Notes:

1. Methodology used in calculating Time of Concentration is as specified in US Department of Agriculture Technical Release 55, June 1986

Pre-Development  
Runoff Calculations

# Pre-Development Runoff Volume Calculator

Based on the Soil Conservation Service Technical Release 55  
Urban Hydrology for Small Watersheds, June 1986

Project Name: Oleander Oaks  
Calculated By: TJE  
Calculated 4/28/2021

10 Year 24 Hour - Minimum Parking Lot Design Storm Event  
10 Year 72 Hour - Allowable Discharge Design Storm Event  
25 Year 72 Hour - Perimeter Berm Design Storm Event  
100 Year 72 Hour - Finished Floor Elevation Design Storm Event

[Eq. 2-4]  $S = \frac{1000}{CN} - 10$

[Eq. 2-3]  $Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$

## SFWMD

### 10 Year 24 Hour

**INPUT:**

P = Rainfall Depth: 6.00 inches  
CN = Curve Number: 80.00  
A = Basin Area: 17.38 acres  
S = Potential Maximum  
Retention After Runoff Begins: 2.50  
Q = Runoff: 3.78 inches = 0.32 feet

**OUTPUT:**

**V = Runoff Volume: 5.47 acre-feet**

### 10 Year 72 Hour

**INPUT:**

P = Rainfall Depth: 8.50 inches  
CN = Curve Number: 80.00  
A = Basin Area: 17.38 acres  
S = Potential Maximum  
Retention After Runoff Begins: 2.50  
Q = Runoff: 6.10 inches = 0.51 feet

**OUTPUT:**

**V = Runoff Volume: 8.83 acre-feet**

### 25 Year 72 Hour

**INPUT:**

P = Rainfall Depth: 9.50 inches  
CN = Curve Number: 80.00  
A = Basin Area: 17.38 acres  
S = Potential Maximum  
Retention After Runoff Begins: 2.50  
Q = Runoff: 7.04 inches = 0.59 feet

**OUTPUT:**

**V = Runoff Volume: 10.20 acre-feet**

### 100 Year 72 Hour

**INPUT:**

P = Rainfall Depth: 12.23 inches  
CN = Curve Number: 80.00  
A = Basin Area: 17.38 acres  
S = Potential Maximum  
Retention After Runoff Begins: 2.50  
Q = Runoff: 9.67 inches = 0.81 feet

**OUTPUT:**

**V = Runoff Volume: 14.00 acre-feet**

# APPENDIX C

## Post-Development Calculations

## Estimated Post-Development Curve Number Calculations

**Post-Development Curve Number  
TR-55 Methodology - Post Conditions**

**Post-Development  
Estimated Curve Number**

Project Name: Oleander Oaks  
Calculated By: TJE  
Calculated Date: 4/28/2021

Basin Name: Onsite

Site	Description	Area (SF)	Area (AC)	% of Total	Surface	CN	CN x Area(%)
<i>Impervious</i>							
<b>Developed Onsite</b>	Pavement	74,923	1.720	13.31%		98	13.05
	Building	100,188	2.300	17.80%		98	17.45
	Wetland	61,855	1.420				
	Water Surface (Top of Bank)	43,560	1.000	7.74%		98	7.59
	<i>Impervious Total =</i>	<i>280,526</i>	<i>6.440</i>				
	<i>Pervious</i>						
	Group (C/D)	282,269	6.48	50.15%	Open, Good	80	40.12

**Total Area = 562,795 12.92 89.01% CN = 78.20**

	Area (SF)	Area (AC)	% of Total	CN	CN x Area(%)
<b>Total Pavement =</b>	<b>74,923</b>	1.72	<b>13.31%</b>	98	13.05
<b>Total Wetland =</b>	<b>61,855</b>	1.42	<b>10.99%</b>	99	10.88
<b>Total Building =</b>	<b>100,188</b>	2.30	<b>17.80%</b>	98	17.45
<b>Total Water Surface =</b>	<b>43,560</b>	1.00	<b>7.74%</b>	98	7.59
<b>Total Pervious =</b>	<b>282,269</b>	6.480	<b>50.15%</b>	80	40.12

**Total Project Area = 562,795 12.92 100.00% CN = 89.08**

# Estimated Post-Development Runoff Calculations

# Post-Development Runoff Volume Calculator

Based on the Soil Conservation Service Technical Release 55  
Urban Hydrology for Small Watersheds, June 1986

Project Name: Oleander Oaks  
Calculated By: TJE  
Calculatec 4/28/2021

10 Year 24 Hour - Minimum Parking Lot Design Storm Event  
10 Year 72 Hour - Minimum Pond Berm Design Storm Event  
- Off-site Discharge Rates Design Storm Event  
100 Year 72 Hour - Finished Floor Elevation Design Storm Event

$$[\text{Eq. 2-4}] \quad S = \frac{1000}{\text{CN}} - 10$$

$$[\text{Eq. 2-3}] \quad Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

## SFWMD

### 10 Year 24 Hour

**INPUT:**

P = Rainfall Depth: 6.00 inches  
CN = Curve Number: 95.00  
A = Basin Area: 19.00 acres  
S = Potential Maximum Retention After Runoff Begins: 0.53  
Q = Runoff: 5.41 inches = 0.45 feet

**OUTPUT:**

**V = Runoff Volume: 8.57 acre-feet**

### 10 Year 72 Hour

**INPUT:**

P = Rainfall Depth: 8.50 inches  
CN = Curve Number: 95.00  
A = Basin Area: 19.00 acres  
S = Potential Maximum Retention After Runoff Begins: 0.53  
Q = Runoff: 7.90 inches = 0.66 feet

**OUTPUT:**

**V = Runoff Volume: 12.51 acre-feet**

### 25 Year 72 Hour

**INPUT:**

P = Rainfall Depth: 9.50 inches  
CN = Curve Number: 95.00  
A = Basin Area: 19.00 acres  
S = Potential Maximum Retention After Runoff Begins: 0.53  
Q = Runoff: 8.90 inches = 0.74 feet

**OUTPUT:**

**V = Runoff Volume: 14.09 acre-feet**

### 100 Year 72 Hour

**INPUT:**

P = Rainfall Depth: 12.23 inches  
CN = Curve Number: 95.00  
A = Basin Area: 19.00 acres  
S = Potential Maximum Retention After Runoff Begins: 0.53  
Q = Runoff: 11.62 inches = 0.97 feet

**OUTPUT:**

**V = Runoff Volume: 18.40 acre-feet**

Estimated Post-Development  
Water Quality and Treatment Volume

# Post-Development

## Water Quality and Treatment Volume

Project Name: Oleander Oaks

Calculated By: TJE

Calculated Date: 4/28/2021

### **TREATMENT**

	Basin Area	Required Pre-Treatment (1.0 in over Site Area)	Provided Treatment	Type of Treatment Provided
	(ac)	(ac-ft)	(ac-ft)	
SITE	12.920	1.615	2.000	Wet Detention Pond

### **WATER QUALITY**

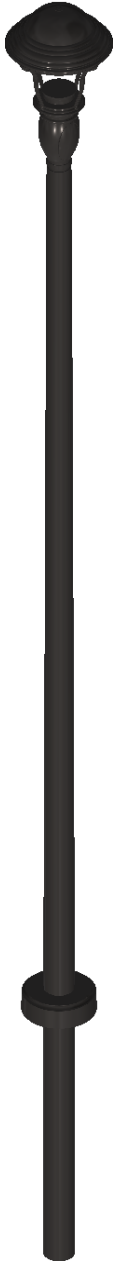
Site Area (ac)	12.920
Building Area* (ac)	2.300
Wet Detention Pond Area (ac)	1.000
Impervious Area (ac)	6.440
Pervious Area (ac)	6.480

Area Required for Dry Pretreatment (Total Site - Lake Area)	11.920
Required Dry Pretreatment (0.5" X Treatment Area)	0.497

Site Area for Water Quality = Site Area - Building Area - Pond	9.620
Site Area for Water Quality - Pervious =	3.140
Percentage Impervious for Water Quality =	32.6%

1" x Site Area (ac-ft)	1.077
2.5" x Percentage Impervious for Water Quality (ac-ft)	0.879
Treatment Required for Site (ac-ft)	1.077

Net Required Treatment (ac-ft) (150% for OFW)	1.615
Treatment Provided (ac-ft)	2.000



# SternbergLighting

ESTABLISHED 1923 / EMPLOYEE OWNED

555 Lawrence Avenue | Roselle, IL 60172 | p 847.588.3400 | www.sternberglighting.com

CONCEPTUAL ASSEMBLY DRAWING, SUBJECT TO ENGINEERING VERIFICATION BY THE FACTORY

### POST TOP FIXTURE: E350LED-UF

The E350 Euro Series is a medium scale, contemporary architectural fixture design. The E350 is offered with a flat or sag glass lens. The E350 has IP66 rated optic. All are provided with tool-less access for ease of maintenance.

Model: E350LED, Utility Fitter (E350LED-UF)

### POST TOP LIGHT SOURCE: -16L35T3-MDL14-FL

Array: 16L (16 LEDs, 56 Watts for MD\_10, 81 Watts for MD\_14) (16L)  
Color Temp: 3500K (35)  
Distribution: Type 3 (T3)  
Driver: Multi-Volt Dimmable Low-Range Driver-120-277V, 1400mA (MDL14)  
Lens: Flat Acrylic Lens (FL)

### POLE: 550T5-414-.250-DB/

The 12" diameter cast 356 aluminum alloy base and aluminum shaft shall be a one-piece construction. For fixtures using remote ballasts or drivers, the servicing of these components requires pulling the pole. The pole shall be U.L. or E.T.L. listed in U.S. and Canada. All pole heights to have a tolerance of  $\pm 2"$

Model: 550 Concord (550)  
Shaft Type: Smooth Tapered 5-4 Inch, 6063-T6 Aluminum Alloy (T5-4)  
Height: 14 Ft (14)  
Gauge: 0.250" (.250)  
Pole Anchoring Method: Direct Burial (Smooth Straight, Smooth Tapered, 5") (DB)

### FINISH: BK

Assembly shall be powder coated to Black Smooth finish. Prior to coating, the assembly shall be chemically cleaned and etched in a 5-stage washing system which includes alkaline cleaning, rinsing, phosphoric etching, reverse osmosis water rinsing, and non-chrome sealing to ensure corrosion resistance.

### Wind Load Evaluation

Consult Factory for direct burial poles

Wind Speed: 150 mph  
Gust Factor: 1.14

None

Access Door Orientation: 0°  
Street Side Orientation: 180°

Catalog Number: PT-E350LED-UF-16L35T3-MDL14-FL / 550T5-414-.250-DB / BK

Job Name:

Customer Signature:

Drawing #39361

Job Location:

Date:

1 of 2

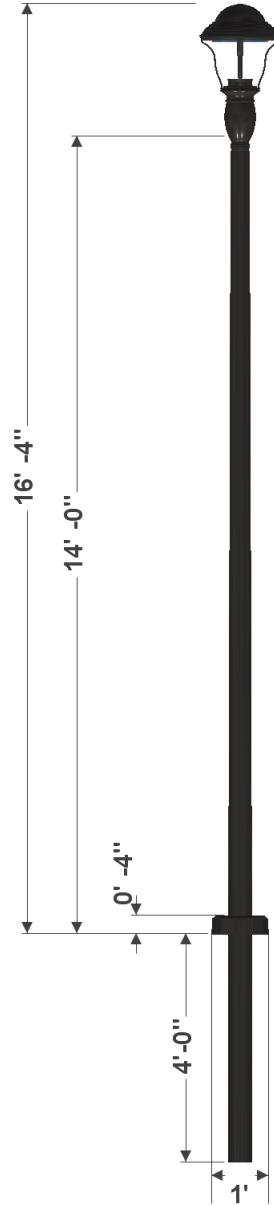
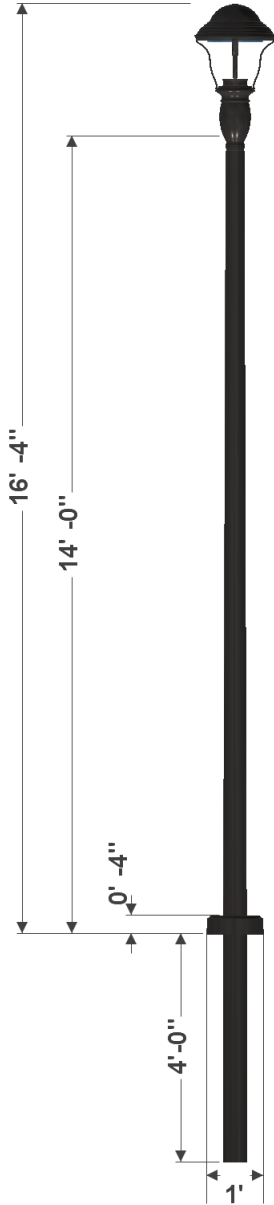


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Catalog Number: PT-E350LED-UF-16L35T3-MDL14-FL / 550T5-414-250-DB / BK

Job Name:

Customer Signature:

Drawing #39361

Job Location:

Date:

2 of 2

**Prepared By and Return To:**

Global Closing Company LLC  
Attn: Benjamin Bell  
1056 Willa Springs Drive  
Winter Springs, FL 32708

Order No.: 1526-18FL-0330

Property Appraiser's Parcel I.D. (folio) Number:  
243314400020003

**WARRANTY DEED**

THIS WARRANTY DEED dated March 19, 2021, by Oleander Oaks LLC, a Florida limited liability company, existing under the laws of Florida, and having its principal place of business at 5801 S US Highway 1, Fort Pierce, Florida 34982 (the "Grantor"), to Alva Stone Group LLC, a Florida Limited Liability Company, whose post office address is 591 Evernia Street Apt 1603, West Palm Beach, Florida 33401 (the "Grantee").

(Wherever used herein the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives and assigns of individuals, and the successors and assigns of corporations)

WITNESSETH: That the Grantor, for and in consideration of the sum of Ten And No/100 Dollars (\$10.00) and other valuable consideration, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys, and confirms unto the Grantee, all that certain land situated in County of Saint Lucie, State of Florida, viz:

A portion of the East One Half of the Northeast One Quarter of the Southeast One Quarter of Section 33, Township 35 South, Range 40 East and the Southeast One Quarter of the Southeast One Quarter of the Northeast One Quarter of Section 33, Township 35 South, Range 40 East, being more particularly described as follows:

Commence at the East One Quarter corner of said Section 33, thence South 89 degrees 46 minutes 13 seconds West, a distance of 90.00 feet to the Point of Beginning; thence continue South 89 degrees 46 minutes 13 seconds West, a distance of 32.00 feet; thence South 00 degrees 17 minutes 01 seconds West, along the West line of the North Saint Lucie River Water Control District Canal 14, a distance of 701.78 feet, said canal 14 being shown and described in that certain fee simple deed of donation, as recorded in Official Records Book 4480, Page 2690 of the Public Records of Saint Lucie County. Said West line being parallel to and 62.00 feet West of as measured at right angles to the West right of way line of Oleander Avenue, Also Known As State Road 605, as shown on that certain Florida Department of Transportation right of way Map Section 9456, dated June 19, 1952. Said West right of way line being parallel to and 60.00 feet West of as measured at right angles to the centerline of said Oleander Avenue; thence South 89 degrees 47 minutes 15 seconds West, along a line parallel to and 630.00 feet North of as measured at right angles to the South line of the said East One Half of the Northeast One Quarter of the Southeast One Quarter of Section 33, a distance of 548.98 feet, said South line also being the centerline of Tumblin King Road; thence North 00 degrees 21 minutes 03

seconds West, along the West line of said East One Half a distance of 701.59 feet to the North line of the said East One Half, said West line also being the East line of the Revised Plat of "The Tropics Pete Robinson Subdivision, according to the plat thereof as recorded in Plat Book 6, Page 21 of the Public Records of Saint Lucie County; thence North 89 degrees 46 minutes 13 seconds East along the North line of said East One Half, a distance of 12.40 feet; thence North 00 degrees 00 minutes 21 seconds West, along a livestock fence 0.3 feet to the West of the West line of the said Southeast One Quarter of the Southeast One Quarter of the Northeast One Quarter of Section 33, a distance of 275.98 feet to the South top of bank of the North Saint Lucie River Water Control District Canal 15, Also Known As Platts Branch; thence meandering along the South top of bank of said Platts Branch, the following Ten courses, North 83 degrees 47 minutes 48 seconds East, a distance of 43.46 feet; thence North 86 degrees 49 minutes 25 seconds East, a distance of 72.02 feet; thence South 85 degrees 07 minutes 47 seconds East, a distance of 48.47 feet; thence North 74 degrees 57 minutes 21 seconds East, a distance of 44.51 feet; thence North 80 degrees 24 minutes 14 seconds East, a distance of 92.67 feet, thence North 82 degrees 38 minutes 55 seconds East, a distance of 67.53 feet; thence North 85 degrees 47 minutes 34 seconds East, a distance of 117.62 feet; thence North 85 degrees 35 minutes 04 seconds East, a distance of 70.14 feet; thence North 73 degrees 25 minutes 57 seconds East a distance of 15.73 feet; thence North 55 degrees 26 minutes 14 seconds East, a distance of 12.85 feet to the West line of said canal 14, said West line being parallel to and 30.000 feet West of the West right of way line of said State Road 605, said West right of way line being parallel to and 60.000 feet West of as measured at right angles to the East line of said Northeast One Quarter of Section 33; thence South 00 degrees 12 minutes 46 seconds West, along the West line of said canal 14 a distance of 339.69 feet to the Point of Beginning.

Said lands lying in Saint Lucie County, Florida.

Subject to easements, restrictions, reservations and limitations of record, if any.

TOGETHER with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD the same in Fee Simple forever.

AND the Grantor hereby covenants with said Grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes accruing subsequent to: 2020.

Signed, sealed and delivered in presence of:

Oleander Oaks LLC, a Florida limited liability company

BY: [Signature] MANAGER  
Michael J Bradley, JR  
Manager

BY: \_\_\_\_\_

[Signature]  
Witness Signature

CANDY QUINTALL  
Printed Name of First Witness

[Signature]  
Witness Signature

PETER QUINTALL  
Printed Name of Second Witness

**Grantor Address:**  
632 SE Starflower Avenue  
Port Saint Lucie, FL 34983

STATE OF FLORIDA  
COUNTY OF ST LucIE

The foregoing instrument was acknowledged before me by means of  physical presence or \_\_\_\_\_ online notarization, this 19th of March, 2021 by Oleander Oaks LLC, a Florida limited liability company, who is personally known to me or who has produced drivers license as identification.

Witness my hand and official seal, this the 19th of March, 2021.

[Signature]  
Notary Public

My Commission Expires: 01/10/2023

(SEAL)

