Kimley»Horn

May 9, 2025

Kev Freeman
City of Ft. Pierce
Planning Department
100 North US Highway 1
Fort Pierce, FL 34950

RE: NED Ft. Pierce – Site Plan

Dear Mr. Freeman,

On behalf of Alcat Ft. Pierce, LLC., we are pleased to submit this application for Site Plan for NED Ft. Pierce.

The proposed development is a 12,500 SF shop and associated infrastructure to support the National Equipment Dealers ("NED") business, specializing in heavy equipment sales and rentals. The project is comprised of three parcels, all owned by Alcat Ft. Pierce, LLC, totaling 7.31 AC. Note that Alcat Ft. Pierce also owns the J.J. Taylor Distributing Florida, Inc. business to the immediate south (Folio: 2324-710-0011-000-1), thereby incentivizing the applicant to retain their portfolio of businesses adjacent to one another.

We are excited to share that the proposed business is anticipated to bring approximately 25 well paying jobs to the City of Ft. Pierce, offering $75,000 in annual income on average.

As part of the project, there is about +/- 3.65 acres of staging area that will be used to transiently retain equipment for sale/rent. The staging area is comprised of gravel stone to maintain a permeable but supportive surface.

Enclosed with this letter please find the following related materials:

1. Proof of Ownership – Warranty Deed
2. Site Plan with Conceptual Drainage Plan
3. Landscape and Tree Mitigation Plans
4. Lighting Plans
5. Traffic Memorandum
6. Natural Resources Assessment
7. Boundary Survey

Should you have any questions or need any additional information, please do not hesitate to contact me at 772-794-4129.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Jonathan Gomez, P.E

Kimley»Horn


HD HYUNDAI
CONSTRUCTION EQUIPMENT
NED
NATIONALEQUIPMENT
DEALERS

THE SUNRISE CITY
FORT PIERCE
PLANNING DEPARTMENT Florida

DEVELOPMENT REVIEW

Property Information

Property address or Location: 3021 Crossroads Pkwy, Fort Pierce, FL 34945

Parcel ID #(s): 2324-710-0008-000-7, 2324-710-0009-000-4, 2324-710-0010-000-4, 2324-710-0011-000-1

Project description: Please see written narrative attached to this application

Application Type

☐ Site Plan ☐ Minor Site Plan ☐ Innovative Residential Development

☐ Minor Amendment ☐ Major Amendment ■ Conditional Use w/New Construction

Site Information

Non-Residential: Proposed Sq. Ft.: 12,500 Site Acreage: +/- 7

Residential: Proposed Units: 0 Proposed Sq. Ft.: 0 Site Acreage: 0

Alcat Ft. Pierce, LLC	Kimley-Horn and Associates
Property Owner(s)	**Applicant/Representative, Title, Company**
655 N A1A	445 24th St. Suite 200
Street Address	Street Address
Jupiter FL 33477	Vero Beach FL 32960
City State Zip	City State Zip
401-200-1054	+1 772-794-4129
Phone Number	Phone Number
daniel_rensehausen@jjtaylor.com	Jonathan.Gomez@kimley-horn.com
Email Address	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.*

DocuSigned by:
Zack Kavanaugh
8B2C9C2482014BA...

Property Owner(s) Signature(s)

5/8/25

Date

APPOINTMENTS ARE REQUIRED FOR APPLICATION SUBMITTALS

CALL 772.467.3737 OR E-MAIL PLANNING@CITYOFFORTPIERCE.COM

For more information, please refer to the website:

https://www.cityoffortpierce.com/971/Application-Submittal-for-Technical-Revi

General Information

- **Incomplete application packets will not be accepted.**
- Appointments are required for application hard copy submittals.
- Site plan approval is valid for one (1) year following City Commission approval. To maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date.
- Fee Schedule - https://www.cityoffortpierce.com/DocumentCenter/View/2620/Fee-Schedule-
- Public Notice Fees - https://www.cityoffortpierce.com/DocumentCenter/View/8818/Public-Notice-Fees-

Site Plan submittal requirements:

Submit one (1) original, one (1) hard copy and one (1) Flash Drive of the following. Additional copies will be required of subsequent submittals.

- ❑ Complete application
- ❑ Warranty Deed
- ❑ SLC Property Record Card
- ❑ Detailed project description
- ❑ General location map (see Section 125-313)
- ❑ Survey (see Section 125-313)
- ❑ Site Plan (see Section 125-313)
- ❑ Landscaping Plan (see Section 123-37)
- ❑ Conceptual Drainage Plan (see Section 125-313)
- ❑ Environmental Impact Report
- ❑ Beach/Dune System protection plan, if applicable (see Section 125-313)
- ❑ Lighting Plan (see Section 125-313)
- ❑ Design Review submittals (see Design Review application)
- ❑ Traffic Impact Report
- ❑ Concurrency Review submittals (see Concurrency Review application)

MICHELLE R. MILLER, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4844300 OR BOOK 4586 PAGE 2908, Recorded 04/07/2021 03:29:29 PM Doc Tax: $3605.00

This Instrument Prepared by:
Robert F. Greene, Esq.
Greene Hamrick Quinlan & Schermer, P.A.
601 - 12th Street West,
Bradenton, FL 34205

Consideration	$515,000.00
Doc Stamp Tax	$3,605.00
Parcel ID#	2324-710-0008-000-7

SPECIAL WARRANTY DEED

THIS INDENTURE, made this 5th day of April, 2021, between **CONE & GRAHAM, INC.**, a Florida corporation ("Grantor"), whose post office address is P.O. Box 310167, Tampa, Florida 33680 and **ALCAT FT. PIERCE, LLC**, a Delaware limited liability company ("Grantee"), whose post office address is 655 North A1A, Jupiter, Florida 33477.

WITNESSETH, That said Grantor, for and in consideration of the sum of Ten and no/100 ($10.00) Dollars and other valuable consideration, to said Grantor in hand paid by said Grantee, the receipt whereof is hereby acknowledged, hereby grants, bargains and sells to the said Grantee and Grantee's successors and assigns forever, the following described land, situate, lying and being in St. Lucie County, Florida ("Property") to wit:

> Lot 2, CROSSROADS PARK OF COMMERCE PHASE I, according to the map or plat thereof, as recorded in Plat Book 30, Page(s) 11, of the Public Records of St. Lucie County, Florida.

Together with all improvements and fixtures located on the Property and all easements, tenements, hereditaments, and other interests and rights of Grantor which are appurtenant to the Property.

Subject to easements, restrictions and reservations of record, none or which are hereby reimposed, and taxes and assessments for the year 2021 and subsequent years.

Grantor does hereby warrant the title to the land described above and will defend the title to the land described above against the lawful claims of all persons claiming directly through or under Grantor, but against none other.

{SIGNATURES TO FOLLOW ON NEXT PAGE}

IN WITNESS WHEREOF, Grantor signed and sealed this deed the day and year first above written.

Signed, sealed and delivered
in the presence of:

Pamela A Moore
Signature – Witness No. 1

PAMELA A Moore
Printed Name

Michelle Pudder
Signature – Witness No. 2

Michelle Pudder
Printed Name

CONE & GRAHAM, INC.,
a Florida corporation

By: _____
Name: Robert G. Graham
Title: President

STATE OF FLORIDA
COUNTY OF HILLSBOROUGH

The foregoing instrument was acknowledged before me by means of ☒ physical presence, or ☐ online notarization, this 30th day of ~~April~~ March, 2021, by Robert G. Graham, as President of Cone & Graham, Inc., a Florida corporation, on behalf of the corporation, who ☐ is personally known to me, or who ☐ has produced the following as identification: NA.

My Commission Expires:

Pamela A Jenkins
Notary Public
Printed Name: PAMELA A Jenkins

PAMELA A. JENKINS
MY COMMISSION # GG 987105
EXPIRES: September 11, 2024
Bonded Thru Notary Public Underwriters

MICHELLE R. MILLER, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
FILE # 4835332 OR BOOK 4575 PAGE 2455, Recorded 03/22/2021 10:09:19 AM Doc Tax: $7070.00

Prepared by and return to:

Nason, Yeager, Gerson, Harris & Fumero, P.A.
3001 PGA Boulevard Suite 305
Palm Beach Gardens, FL 33410
Attention: Alan Armour, Esq.

Parcel Identification No. 2324-710-0010-000-4 and2324-710-0009-000-4

[Space Above This Line For Recording Data]

Warranty Deed
(STATUTORY FORM - SECTION 689.02, F.S.)

This Indenture made this 18th day of March, 2021 between Pierce Management, L.L.C., a Florida limited liability company whose post office address is 4900 N. Ocean Blvd., Apt. 220, Lauderdale by the Sea, Florida 33308, grantor*, and Alcat Ft. Pierce, LLC, a Delaware limited liability company whose post office address is 655 North A1A, Jupiter, Florida 33477, grantee*,

Witnesseth that said grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other good and valuable considerations to said grantor in hand paid by said grantee, the receipt whereof is hereby acknowledged, has granted, bargained, and sold to the said grantee, and grantee's heirs and assigns forever, the following described land, situate, lying and being in Saint Lucie County, Florida, to-wit:

> Lots 3 and 4, CROSSROADS PARK OF COMMERCE, PHASE 1, according to the plat thereof as recorded in Plat Book 30, Page 11, Public Records of St. Lucie County, Florida.

and said grantor does hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever and that said land is free of all encumbrances, except taxes accruing subsequent to December 31, 2020, conditions, restrictions, limitations, easements, reservations, zoning ordinances and other matters of record, if any, none of which are hereby reimposed.

* "Grantor" and "Grantee" are used for singular or plural, as context requires.

(See signature page attached hereto.)

In Witness Whereof, grantor has hereunto set grantor's hand and seal the day and year first above written.

Signed, sealed and delivered in our presence:

Signed, sealed and delivered
in the presence of:

Samuel Weiss
(Print Name: Samuel Weiss)

(Print Name: Richard S Sauer)

GRANTOR:

Pierce Management, L.L.C.,
a Florida limited liability company

Patrick Marzano, Manager

STATE OF FLORIDA)
) SS:
COUNTY OF Broward)

The foregoing Warranty Deed was acknowledged before me by means of ☐ physical presence or ☐ online notarization, this 10th day of March, 2021, by Patrick Marzano, as Manager of Pierce Management, L.L.C., a Florida limited liability company, on behalf of the company, ☒ who is personally known to me OR ( ) who produced _____ as identification.

Nicole Hashagen
Notary Signature
Nicole Hashagen
Print Notary Name

NOTARY PUBLIC
State of Florida at Large

Notary Public State of Florida
Nicole C Hashagen
My Commission GG 968006
Expires 03/10/2024

My Commission Expires: 3/10/2024

\\NYGW-PBG-FS01\Docs\12633\12633-27353\1030830.rtf/djb

(Signature page to Warranty Deed)

Property Identification

Site Address: 2835 REYNOLDS DR
Sec/Town/Range: 24/35S/39E
Parcel ID: 2324-710-0008-000-7
Jurisdiction: Fort Pierce

Use Type: 4000
Account #: 132781
Map ID: 23/24S
Zoning: Comm Parkw

Ownership

Alcat Ft Pierce LLC

655 N Highway A1A
Jupiter, FL 33477-4579

Legal Description

CROSSROADS PARK OF COMMERCE PHASE I LOT 2 (3.38 AC)

Current Values

Just/Market Value:	$552,100
Assessed Value:	$510,180
Exemptions:	$0
Taxable Value:	$510,180

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

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	3.38
Land Size (SF):	147,232

Building Design Wind Speed

Occupancy Category	I	II	III
Speed	140	150	160

Sources/links:

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Mar 30, 2021	4586 / 2908	0002	SPWD	Cone And Graham Inc	$515,000
Oct 16, 2017	4055 / 0315	0112	SPWD	FCB Treasure Coast LLC	$345,000
Sep 5, 2013	3567 / 0972	0112	WD	Bonvie Richard E	$695,700
Apr 22, 2004	1972 / 0192	XX03	WD	Bonvie FP Development Inc	$1,100,000
Sep 5, 2002	1579 / 0449	XX03	WD	Reynolds Metals Development Co	$1,058,500
Jan 1, 1900					$0

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:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	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 and SFYI:	$0
Land:	$552,100
Just/Market:	$552,100
Ag Credit:	$0
Save Our Homes or 10% Cap:	$41,920
Assessed:	$510,180
Exemption(s):	$0
Taxable:	$510,180

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
1999	0041	9.2	Fort Pierce Stormwater Charge	$634.80
Start Year	AssessCode	Units	Description	Amount
2013	0054	3.37998	North St. Lucie Water Management District	$81.12

This does not necessarily represent the total Special Assessements 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
2024	$552,100	$510,180	$0	$510,180
2023	$463,800	$463,800	$0	$463,800
2022	$437,750	$437,750	$0	$437,750
2021	$441,700	$441,700	$0	$441,700

Permits

Number	Issue Date	Description	Amount	Fee

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

Property Identification

Site Address: CROSSROADS PKWY
Sec/Town/Range: 25/35S/39E
Parcel ID: 2324-710-0009-000-4
Jurisdiction: Fort Pierce

Use Type: 4000
Account #: 132782
Map ID: 23/25N
Zoning: Comm Parkw

Ownership

Alcat Ft Pierce LLC

655 N Highway A1A
Jupiter, FL 33477-4579

Legal Description

CROSSROADS PARK OF COMMERCE PHASE I LOT 3 (2.02 AC)

Current Values

Just/Market Value:	$330,000
Assessed Value:	$304,920
Exemptions:	$0
Taxable Value:	$304,920

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

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	2.02
Land Size (SF):	87,991.2

Building Design Wind Speed

Occupancy Category	I	II	III
Speed	140	150	160

Sources/links:

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Mar 16, 2021	4575 / 2455	0205	WD	Pierce Management Llc	$1,010,000
Feb 23, 2004	1908 / 0708	XX02	WD	Treasure Coast Enterprises Llc	$1,399,300
Nov 16, 2001	1457 / 0785	XX02	WD	Reynolds Metals Development Co	$645,800
Jan 1, 1900					$0

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:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	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 and SFYI:	$0
Land:	$330,000
Just/Market:	$330,000
Ag Credit:	$0
Save Our Homes or 10% Cap:	$25,080
Assessed:	$304,920
Exemption(s):	$0
Taxable:	$304,920

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
1999	0041	5.6	Fort Pierce Stormwater Charge	$386.40

Start Year	AssessCode	Units	Description	Amount
2013	0054	2.02	North St. Lucie Water Management District	$48.48

This does not necessarily represent the total Special Assessements 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
2024	$330,000	$304,920	$0	$304,920
2023	$277,200	$277,200	$0	$277,200
2022	$277,200	$277,200	$0	$277,200
2021	$264,000	$264,000	$0	$264,000

Permits

Number	Issue Date	Description	Amount	Fee

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

Property Identification

Site Address: CROSSROADS PKWY
Sec/Town/Range: 25/35S/39E
Parcel ID: 2324-710-0010-000-4
Jurisdiction: Fort Pierce

Use Type: 4000
Account #: 132783
Map ID: 23/25N
Zoning: Comm Parkw

Ownership

Alcat Ft Pierce LLC

655 N Highway A1A
Jupiter, FL 33477-4579

Legal Description

CROSSROADS PARK OF COMMERCE PHASE I LOT 4 (1.91 AC)

Current Values

Just/Market Value:	$312,000
Assessed Value:	$288,310
Exemptions:	$0
Taxable Value:	$288,310

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

Total Areas

Finished/Under Air (SF):	0
Gross Sketched Area (SF):	0
Land Size (acres):	1.91
Land Size (SF):	83,199.6

Building Design Wind Speed

Occupancy Category	I	II	III
Speed	140	150	160

Sources/links:

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Mar 16, 2021	4575 / 2455	0205	WD	Pierce Management Llc	$1,010,000
Feb 23, 2004	1908 / 0708	XX02	WD	Treasure Coast Enterprises Llc	$1,399,300
Nov 16, 2001	1457 / 0785	XX02	WD	Reynolds Metals Development Co	$645,800
Jan 1, 1900					$0

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:
Full Baths: 0	Heat Type:	Avg Hgt/Floor: 0
Half Baths: 0	Heat Fuel:	Primary Floors:
A/C %: 0%	Heated %: N/A%	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 and SFYI:	$0
Land:	$312,000
Just/Market:	$312,000
Ag Credit:	$0
Save Our Homes or 10% Cap:	$23,690
Assessed:	$288,310
Exemption(s):	$0
Taxable:	$288,310

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
1999	0041	0.3	Fort Pierce Stormwater Charge	$20.70
Start Year	AssessCode	Units	Description	Amount
2013	0054	1.91	North St. Lucie Water Management District	$45.84

This does not necessarily represent the total Special Assessements 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
2024	$312,000	$288,310	$0	$288,310
2023	$262,100	$262,100	$0	$262,100
2022	$262,100	$262,100	$0	$262,100
2021	$249,600	$249,600	$0	$249,600

Permits

Number	Issue Date	Description	Amount	Fee

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

Property Identification

Site Address: 3021 CROSSROADS PKWY
Sec/Town/Range: 25/35S/39E
Parcel ID: 2324-710-0011-000-1
Jurisdiction: Fort Pierce

Use Type: 4800
Account #: 132784
Map ID: 23/25N
Zoning: Comm Parkw

Ownership

Alcat Ft Pierce LLC

655 N Highway A1A
Jupiter, FL 33477-4579

Legal Description

CROSSROADS PARK OF COMMERCE PHASE I LOTS 5, 6 AND 7 (5.95 AC) (OR 3044-410)

Current Values

Just/Market Value:	$2,746,100
Assessed Value:	$2,746,100
Exemptions:	$0
Taxable Value:	$2,746,100

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

Total Areas

Finished/Under Air (SF):	24,352
Gross Sketched Area (SF):	27,541
Land Size (acres):	5.95
Land Size (SF):	259,182

Building Design Wind Speed

Occupancy Category	I	II	III
Speed	140	150	160

Sources/links:

Sale History

Date	Book/Page	Sale Code	Deed	Grantor	Price
Dec 16, 2008	3044 / 0410	XX00	WD	Pierce Management Llc	$2,199,400
Feb 23, 2004	1908 / 0708	XX02	WD	Treasure Coast Enterprises Llc	$1,399,300
Nov 16, 2001	1457 / 0785	XX02	WD	Reynolds Metals Development Co	$645,800
Jan 1, 1900					$0

Building Information (1 of 1)

Finished Area: 24,352 SF

Gross Sketched Area: 27,541 SF

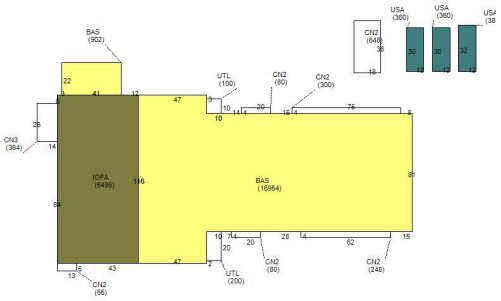
Exterior Data

View:	Roof Cover: Mod Bitimun	Roof Structure: BarJst/Rigid
Building Type: REF WHSE	Year Built: 2010	Frame:
Grade: Y_D	Effective Year: 2010	Primary Wall: Reinf Conc

Story Height: 12 Ft Add Ht | No. Units: 1 | Secondary Wall:

Interior Data

Bedrooms: 0 | Electric: AVERAGE | Primary Int Wall:
Full Baths: 0 | Heat Type: | Avg Hgt/Floor: 0
Half Baths: 0 | Heat Fuel: | Primary Floors: Polished Concrete
A/C %: 26% | Heated %: 26% | Sprinkled %: 100%



Sketch Area Legend

Sub Area	Description	Area	Fin. Area	Perimeter
BAS	BASE AREA	17856	17856	736
CN2	CANOPY	1421	0	530
CN3	CANOPY	364	0	80
IOFA	INTERIOR OFFICE AVERAGE QUALITY	6496	6496	344
USA	Utility Shed Average	1104	0	256
UTL	UTILITY ROOM	300	0	100

Special Features and Yard Items

Type	Qty	Units	Year Blt
CONCRET HIGH	1	19200	2010
CONCRETE LOW	1	1867	2010
CONCRET RAMP	1	240	2010
CHAINLINK 6'	1	2180	2010
BARB WIRE	1	2180	2010
ASP1 HIGH	1	88447	2010
DOUBLE LIGHT	14	36	2010
DOUBLE LIGHT	1	36	2010

Current Year Values

Current Values Breakdown

Building and SFYI:	$1,774,200
Land:	$971,900
Just/Market:	$2,746,100
Ag Credit:	$0
Save Our Homes or 10% Cap:	$0
Assessed:	$2,746,100
Exemption(s):	$0
Taxable:	$2,746,100

Current Year Exemption Value Breakdown

Current Year Special Assessment Breakdown

Start Year	AssessCode	Units	Description	Amount
2011	0041	68.2	Fort Pierce Stormwater Charge	$4,705.80

Start Year	AssessCode	Units	Description	Amount
2013	0054	5.95	North St. Lucie Water Management District	$142.80

This does not necessarily represent the total Special Assessements 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
2024	$2,746,100	$2,746,100	$0	$2,746,100
2023	$2,715,600	$2,715,600	$0	$2,715,600
2022	$2,568,700	$2,539,350	$0	$2,539,350
2021	$2,308,500	$2,308,500	$0	$2,308,500

Permits

Number	Issue Date	Description	Amount	Fee
BP10-0509	May 26, 2010	Alterations/Remodeling	$12,680	$127
BP10-0353	Mar 1, 2010	Alterations/Remodeling	$40,000	$420
BP10-0354	Mar 1, 2010	Alterations/Remodeling	$40,000	$400
BP10-1420	Jun 15, 2010	Alterations/Remodeling	$5,703	$150
bp09-979	Nov 3, 2009	Commercial New Construction	$2,300,000	$62,678
BP09-2172	Jan 12, 2010	Trailer	$0	$157
BP09-0978	Sep 17, 2009	Alterations/Remodeling	$0	$150
BP09-2081	Apr 9, 2010	Fence	$46,000	$238
BP15-0303	Apr 7, 2015	Shed	$6,000	$130
BP18-0652	Mar 8, 2018	Shed	$3,800	$0
BP18-0653	Mar 8, 2018	Shed	$0	$0
BP19-0262	Feb 25, 2019	Carport	$5,130	$0
BP19-3680	Sep 12, 2020	Air Conditioning Only	$19,225	$0

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

Date: 5/8/2025

Jonathan Gomez, P.E.
Kimley-Horn and Associates, Inc.
445 24th Street, Suite 200
Vero Beach, FL 32960

RE: NED Ft. Pierce (3021 Crossroads Pkwy, Fort Pierce, FL 34945
Parcel ID# 2324-710-0008-000-7, 2324-710-0009-000-4, 2324-710-0010-000-4, 2324-710-0011-000-1
Agent Authorization for Permits and Approvals

To Whom It May Concern,

This letter authorizes Kimley-Horn and Associates, Inc., and its appointed agents, to act as authorized representatives for **Alcat Ft. Pierce, LLC** in the application for all required permits or approvals for the above property.

If there are any questions or comments, please contact me below:

DocuSigned by:
Name: Zack Kavanaugh
8B2C9C2482014BA...

Position: Manager

Email: zack_kavanaugh@jjtaylor.com

Phone: 561-323-0128

Sworn to (or affirmed) and subscribed before me this 15 day of May, 2025 by Zack Kavanaugh who is personally known or produced _____ as identification.

ANGELA CALDERON
Notary Public - State of Florida
Commission # HH 632229
My Comm. Expires Feb 17, 2029
Bonded through National Notary Assn.

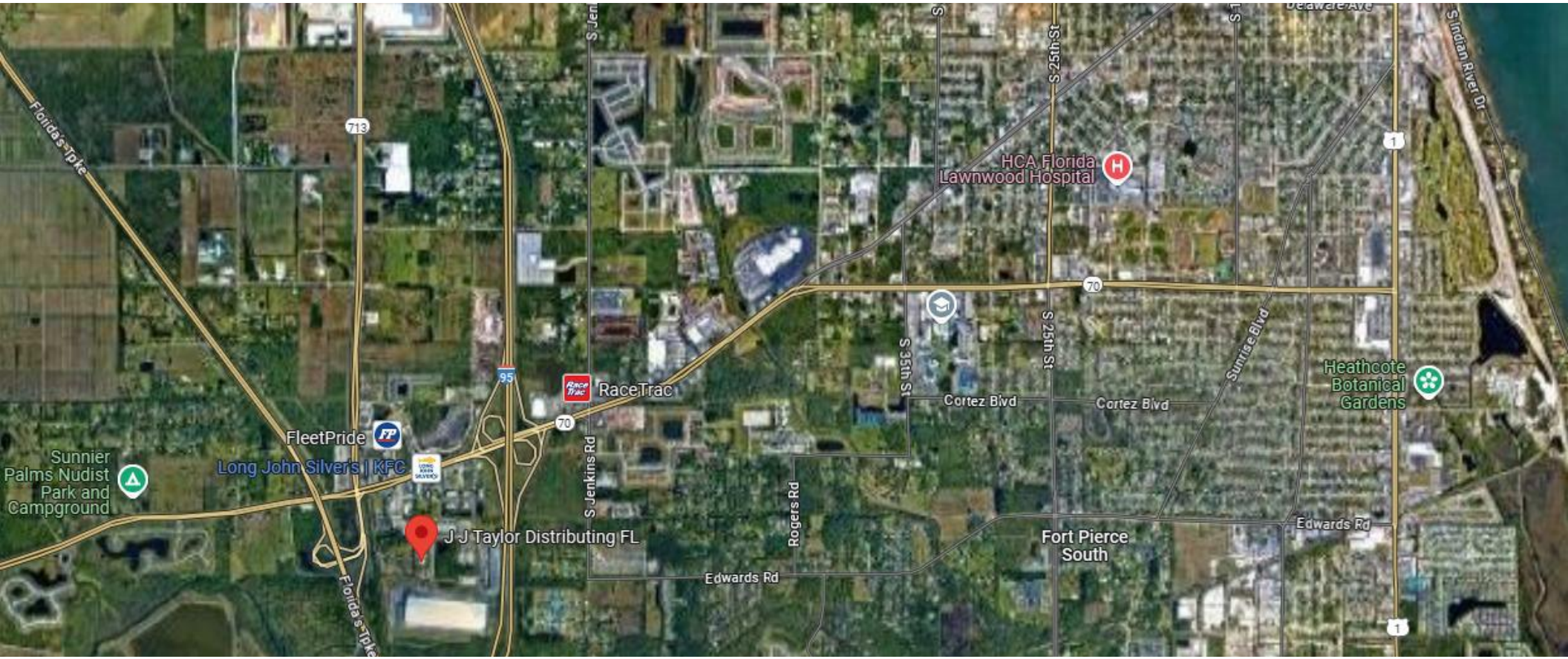
(seal)

Exp. Date: February 17, 2029

Commission Number: HH 632229

Signature of Notary Public: Angela G

Name (print) of Notary Public: Angela Calderon


Florida's Tpke
713
S Jen
S 25th St
Delaware Ave
S Indian River Dr
HCA Florida
Lawnwood Hospital
1
70
95
RaceTrac
S 35th St
S 25th St
Cortez Blvd
Cortez Blvd
Sunrise Blvd
Heathcote
Botanical
Gardens
FleetPride
Long John Silver's | KFC
Sunnier
Palms Nudist
Park and
Campground
S Jenkins Rd
Rogers Rd
J J Taylor Distributing FL
Edwards Rd
Fort Pierce
South
Edwards Rd
Florida's Tpke
1

Kimley»Horn

May 19, 2025

Written Narrative

On behalf of Alcat Ft. Pierce, LLC., we are pleased to submit this application for Site Plan for NED Ft. Pierce.

The proposed development is a 12,500 SF shop and associated infrastructure to support the National Equipment Dealers ("NED") business, specializing in heavy equipment sales and rentals. The project is comprised of three parcels, all owned by Alcat Ft. Pierce, LLC, totaling 7.31 AC. Note that Alcat Ft. Pierce also owns the J.J. Taylor Distributing Florida, Inc. business to the immediate south (Folio: 2324-710-0011-000-1), thereby incentivizing the applicant to retain their portfolio of businesses adjacent to one another.

We are excited to share that the proposed business is anticipated to bring approximately 25 well paying jobs to the City of Ft. Pierce, offering $75,000 in annual income on average.

As part of the project, there is about +/- 3.65 acres of staging area that will be used to transiently retain equipment for sale/rent. The staging area is comprised of gravel stone to maintain a permeable but supportive surface.

Enclosed with this letter please find the following related materials:

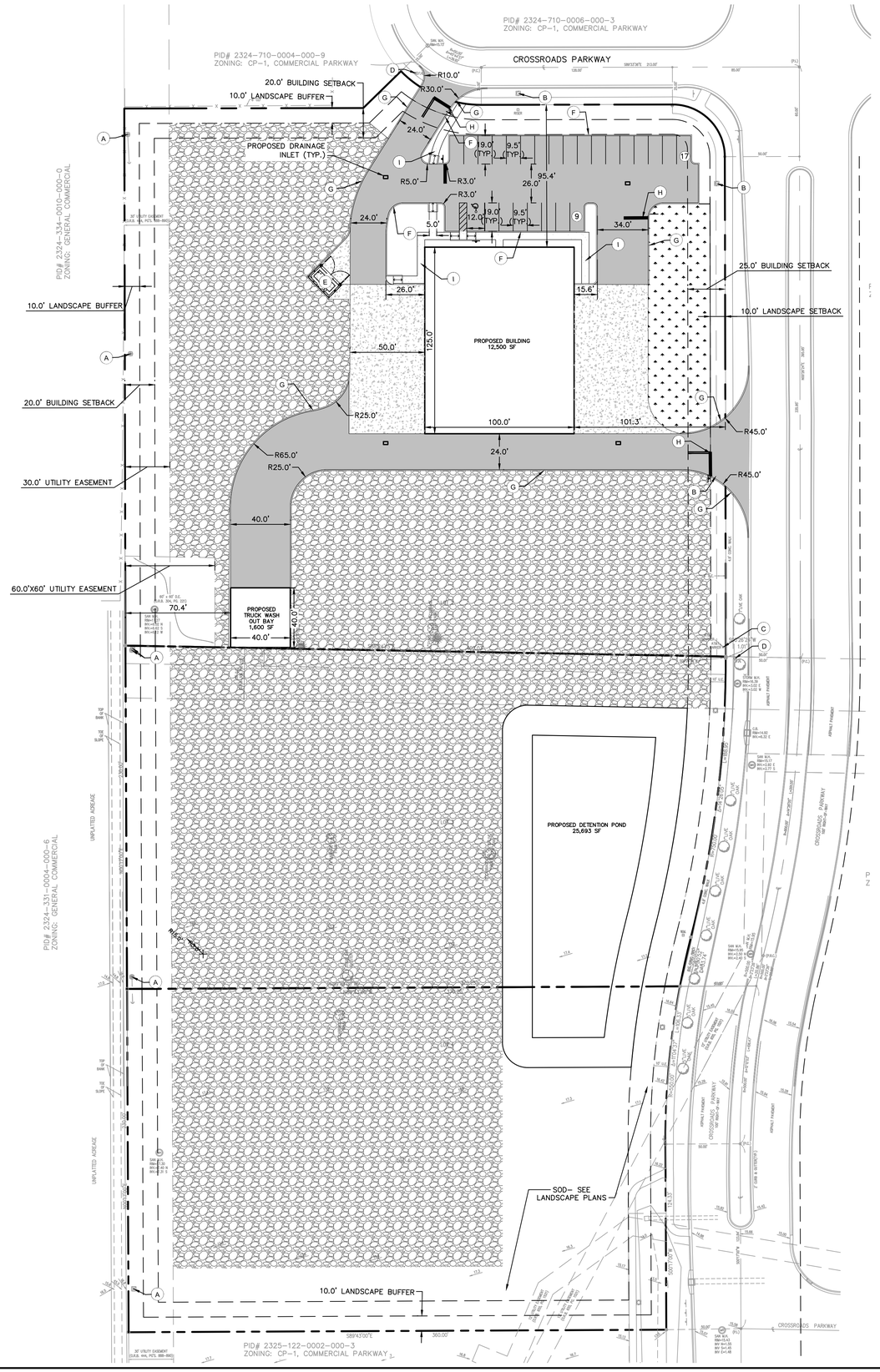
1. Proof of Ownership – Warranty Deed
2. Site Plan with Conceptual Drainage Plan
3. Landscape and Tree Mitigation Plans
4. Lighting Plans
5. Traffic Memorandum
6. Natural Resources Assessment
7. Boundary Survey

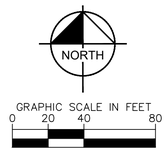
Should you have any questions or need any additional information, please do not hesitate to contact me at 772-794-4129.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Jonathan Gomez, P.E





LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- PROPOSED CONCRETE SIDEWALK (SEE SHEET C-001 FOR DETAIL)
- PROPOSED 6" CLEAN 57 STONE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED SOD (EQUIPMENT STAGING AREA)

KEYNOTES

- (A) EXISTING POWER POLE
- (B) EXISTING LIGHT POLE
- (C) EXISTING FIBER OPTIC MARKER
- (D) EXISTING FIRE HYDRANT
- (E) PROPOSED DUMPSTER ENCLOSURE
- (F) D-CURB (SEE SHEET C-001 FOR DETAIL)
- (G) FLUSH HEADER CURB (SEE SHEET C-001 FOR DETAIL)
- (H) 24" WHITE STOP BAR AND SIGN (R1-1)
- (I) PROPOSED CONCRETE SIDEWALK
- (J) ACCESSIBLE PARKING SIGN (SEE SHEET C-001 FOR DETAIL)

SITE DATA

FOLIO:	2324-710-0009-000-4, 2324-710-0008-000-7 2324-710-0010-000-4
SITE AREA:	7.31 AC
ZONING:	CP-1 (COMMERCIAL PARKWAY)
LAND USE:	GC, GENERAL COMMERCIAL
FLOOD ZONE:	ZONE X, MAP # 12111C0167J, 2/16/2012
MAXIMUM BUILDING HEIGHT:	65 FEET OVERALL

BUILDING SETBACKS	REQURED	PROVIDED
FRONT:	25'	101.3'
SIDE YARD-STREET:	20'	95.4'
REAR YARD:	20'	70.4'
LANDSCAPE BUFFER:	10'	10.0'

BUILDING AREA:	12,500 SF
WASH OUT BAY:	1,600 SF
IMPERVIOUS AREA:	41,394SF
TOTAL STAGING/DISPLAY AREA:	159,165SF
PERVIOUS AREA:	129,458SF
DETENTION AREA	25,693SF
TOTAL:	318,424 SF

PARKING REQUIREMENTS
CODE REQUIREMENTS: SEC. 125-315 - OFF STREET PARKING AND LOADING:

WHOLE SALE (10,000 SF)	1 SP PER 600 SF (GFA) = 17 SPACES
OFFICE (2,500 SF)	1 SP PER 300 SF (GFA) = 9 SPACES
REQUIRED PARKING	26 SPACES
PROVIDED PARKING	26 SPACES

No.	REVISIONS	DATE	BY

Kimley»Horn
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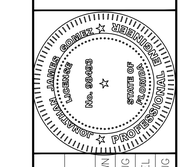
445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106



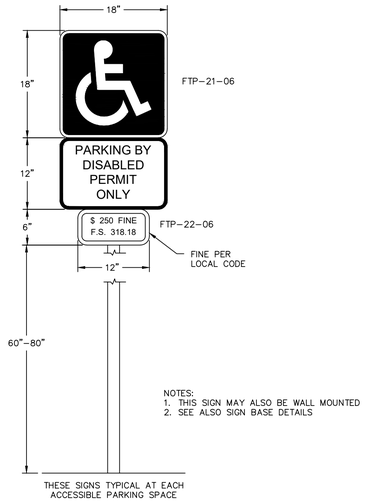
KHA PROJECT 147992001
DATE 12/11/2024
SCALE AS SHOWN
DESIGNED BY JG
DRAWN BY EL
CHECKED BY JG

SITE PLAN

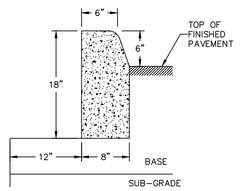
NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC

FT. PIERCE FL

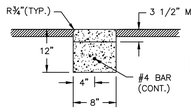
SHEET NUMBER
C-100



ACCESSIBLE PARKING SIGN
N.T.S

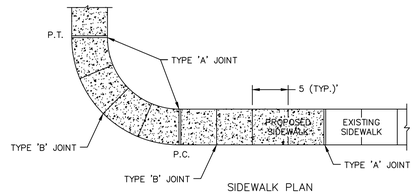


TYPE "D" CURB
N.T.S

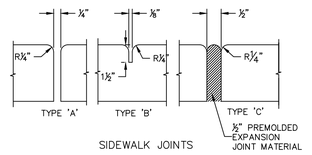


NOTE: #4 BAR MAY BE OMITTED IN ALL SECTIONS OF HEADER CURB THAT DOES NOT CROSS A VEHICULAR TRAVEL LANE

8" HEADER CURB
N.T.S

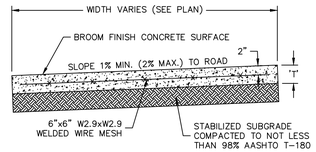


SIDEWALK PLAN



SIDEWALK JOINTS

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
'A'	100' MAX. SPACING, P.C./P.T. OF CURVES, JUNCTION OF EXISTING AND NEW SIDEWALKS.
'B'	5'-0" CENTER TO CENTER
'C'	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS AND SIMILAR STRUCTURES.

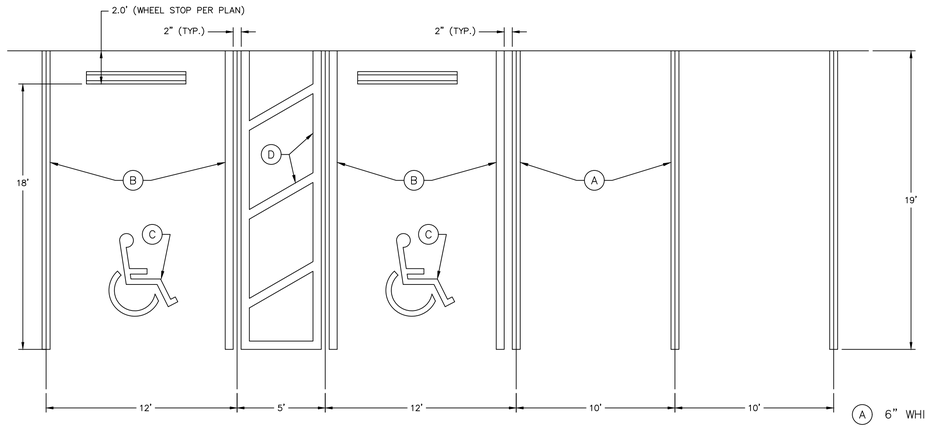


STANDARD CROSS SECTION

TABLE OF SIDEWALK THICKNESS	
LOCATION	'T'
PEDESTRIAN ONLY AREAS	4"
DRIVEWAYS AND OTHER TRAFFIC AREAS	6"

NOTE:
ALL SIDEWALK STREET CROSSINGS MUST MEET THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT (ADA) COMPLIANCE GUIDE. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

CONCRETE SIDEWALK
N.T.S



(A) 6" WHITE
(B) 6" BLUE
(C) 4" WHITE
(D) 6" WHITE @ 60° (EQUALLY SPACED)

ALL PARKING STALL WIDTHS SHALL BE DIMENSIONED FROM THE CENTERLINE TO THE CENTERLINE OF THE WHITE STRIPES.

NO.	REVISIONS	DATE	BY

Kimley»Horn
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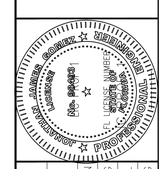
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106



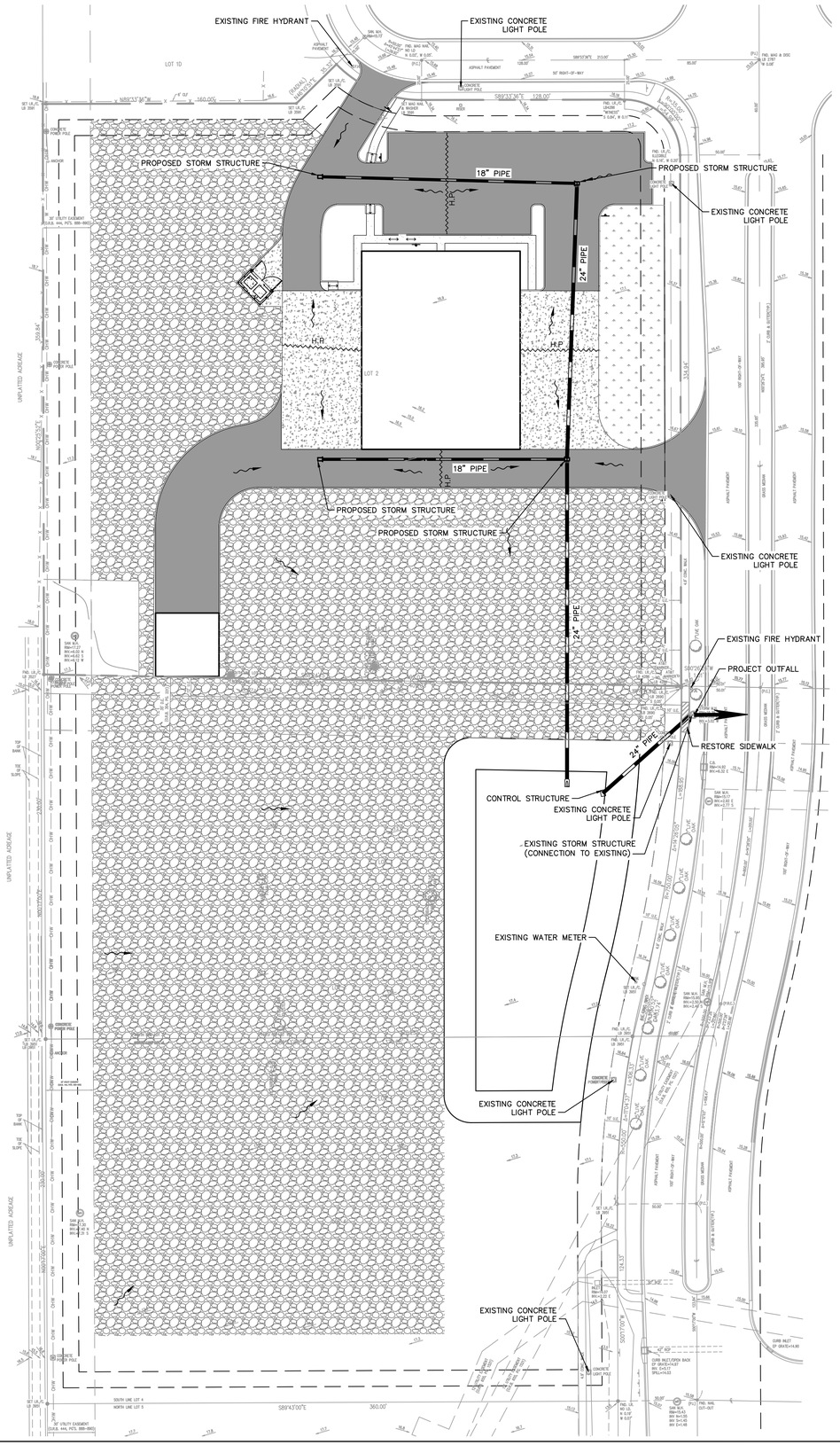
KHA PROJECT 147992001
DATE 12/11/2024
SCALE AS SHOWN
DESIGNED BY JG
DRAWN BY EL
CHECKED BY JG

SITE DETAILS

NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC

FT. PIERCE FL

SHEET NUMBER
C-101



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

- PROPERTY LINE
- SETBACK LINE
- EASEMENT LINE
- PROPOSED SIDEWALK
- PROPOSED CLEAN 57 STONE
- PROPOSED ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED SOD (EQUIPMENT STAGING AREA)
- H.P — HIGH POINT
- FLOW ARROW

No.	REVISIONS	DATE	BY

Kimley»Horn
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445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

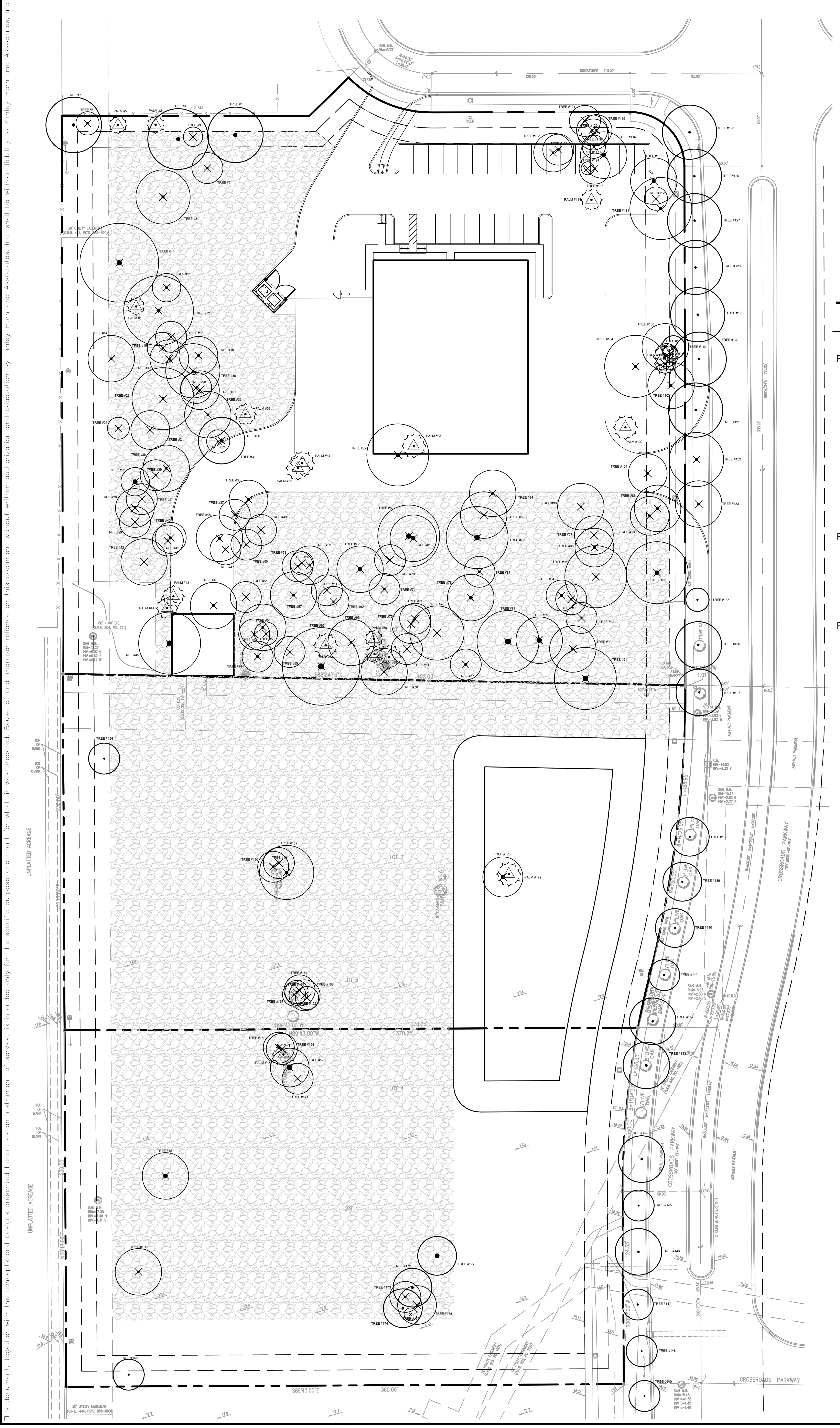
KHA PROJECT 147992001
DATE 12/11/2024
SCALE AS SHOWN
DESIGNED BY JG
DRAWN BY EL
CHECKED BY JG

CONCEPTUAL DRAINAGE PLAN

NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC

FT. PIERCE FL

SHEET NUMBER
C-200



TREE REMOVAL AND TREE TO REMAIN PRUNING SPECIFICATIONS

PART 1 - DEFINITIONS

A. Natural Resource - Existing trees or palms.
B. Critical Root Zone - The minimum volume of roots necessary to have for tree health and stability.
C. DBH - Diameter Breast High - Indicates the location on the trunk, approximately 4.5' above ground, to measure the diameter of a tree.
D. Preserved Trees - Trees that are to be saved/remain in place.
E. Owner's Representative - A representative, hired and paid for by the owner, that supervises the construction of the procedures shown on the tree disposition plans.
F. Tree Protection Zone (TPZ) - The area surrounding a tree defined by a specified distance, which excavation and other construction related activities should be avoided. The TPZ is variable depending on species, factors, age and health of the plant, soil conditions, and proposed construction.
G. Contractor's Certified Arborist - an independent ISA Certified Arborist, hired and paid for by the contractor, that supervises the construction of the procedures shown on the tree disposition plans.

PART 2 - TREE BARRIER

A. Tree Protector Barrier Material.
1. Six (6) foot tall wire mesh construction fence supported by eight (8) foot tall metal T-Bar Posts and Post Caps.
2. The tree protector barrier shall have a two (2) foot by two (2) foot "tree protection zone" sign affixed to the fence every twenty (20) feet placed in such a manner to be clearly visible to the construction workers. The sign must be made up of weather resistant material.
3. The eight (8) foot tall metal T-Bar Post and Post Cap shall be placed a maximum of six (6) foot intervals.

PART 3 - EXECUTION

A. If hazards are determined by qualified certified arborist in an individual tree then those hazards can be mitigated according to the specifications given by the Qualified Certified Arborist.
1. The tree disposition list. This item is to be coordinated by the Qualified Certified Arborist with the Owner's Representative.
2. All pruning shall be done in accordance with ANSI A300 (Part 1) Pruning and best management practices.
3. The Contractor's Certified Arborist shall be present during all pruning operations.

B. Root Pruning - Refer to Arborist Report
1. Trenching locations shall be approved in the field by the Owner's Representative and the Contractor's Certified Arborist.
2. All roots shall be cut by hand.
3. The trench shall be backfilled minus debris and large rocks, as directed by the Contractor's Certified Arborist.
4. Phased root pruning timeframes vary by species. Contractor's certified arborist shall direct pruning schedule.

C. Tree Protector Barrier
1. See detail in this sheet.
2. Tree Protector Barrier shall be placed by the Contractor around each tree to remain as directed by the Contractor's Certified Arborist.

D. Tree Removals
1. Contractor shall remove and discard all trees shown as "Remove" on the Tree Disposition Plan and the Tree Disposition List. Tree stump shall be ground below grade. Care shall be taken to not damage the existing trees marked to remain and their critical root zones shall not be compacted by equipment.
2. If Tree Protector Barrier is damaged, repair shall be performed immediately.
3. Contractor shall remove and haul away from the job site all wood generated from tree removals, including stumps, the same day the removal happens.
4. Burn pits are not allowed.

PART 4 - PENALTIES

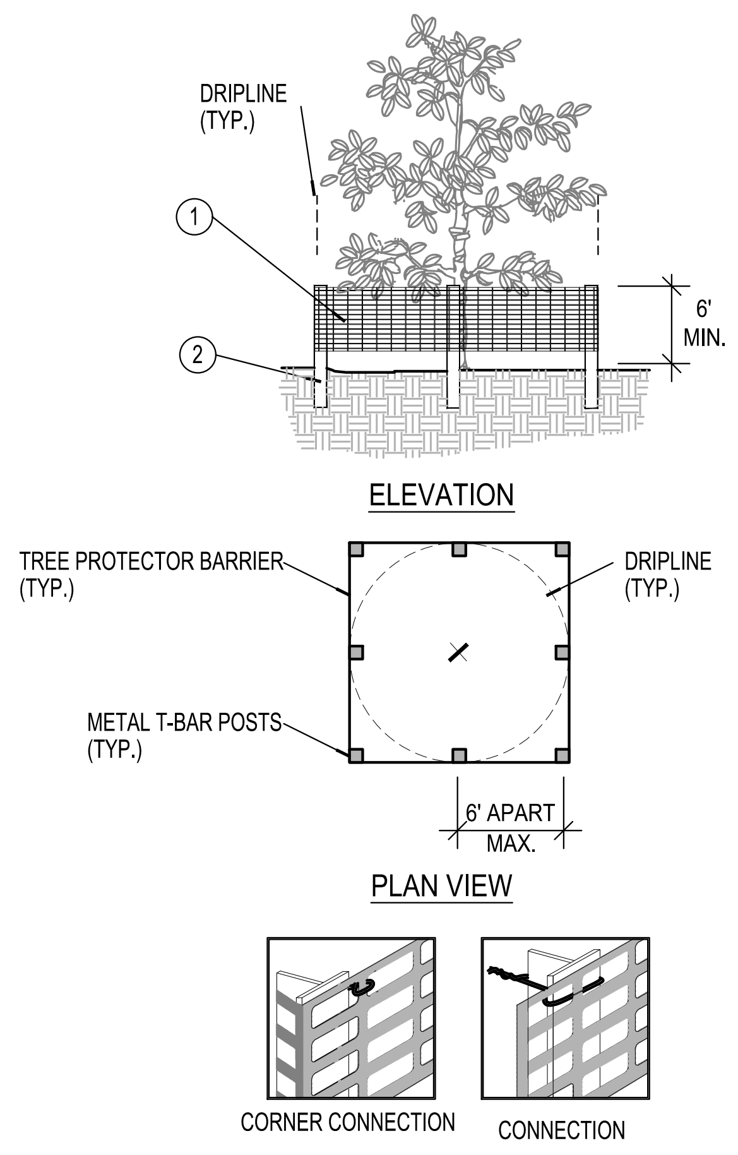
A. Repair of Damaged Trees To Remain
1. If any damage to trees to remain or other natural resources should occur by accident or negligence during the construction period, shall be immediately inspected by Qualified Certified Arborist who shall determine the prescription of care at the Contractor's expense.

PART 5 - TREE PROTECTION

A. Contractor's Certified Arborist to determine the location of the Tree Protector Barrier around each tree to remain based on his/her analysis of each existing tree to remain that is adjacent to construction improvements such as utility installation, pavement addition and/or restoration, etc.
B. Contractor shall maintain and repair the Tree Protector Barrier during site construction operations.
C. Contractor's access to the fenced tree protection areas will be permitted only with approval of Owner's Representative and Contractor's Certified Arborist's written directive.
D. There shall no be change in grade within the critical root zone as per ANSI Standards.
E. Contractor shall clear by hand all vegetation to grade within the critical root zones of trees to remain.
F. Contractor shall not install conduit, sprinklers, or any utility line in any critical root zone areas without the approval of the Contractor's Certified Arborist and Owner's Representative.

PART 6 - IRRIGATION

A. Contractor shall irrigate trees as specified by Landscape Architect and Qualified Certified Arborist.
B. On a monthly basis an irrigation audit shall be conducted by an irrigation specialist for review by Landscape Architect or Qualified Certified Arborist.



① SIX (6) FOOT TALL WIRE MESH CONSTRUCTION FENCE BY EIGHT (8) FOOT TALL METAL T-BAR POSTS AND POST CAPS. SUBMIT PRODUCT INFORMATION FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

② WEATHER RESISTANT MATERIAL 2' X 2' "TREE PROTECTION ZONE" SIGN. SUBMIT PRODUCT INFORMATION FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

③ EIGHT (8) FOOT TALL METAL T-BAR POSTS, 24" MINIMUM BURIAL BELOW GRADE OR AS REQUIRED TO CREATE A SAFE CONDITION, WHICHEVER GREATEST. SUBMIT PRODUCT INFORMATION FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

B. POSTS SHALL BE DRIVEN INTO THE GROUND TO A DEPTH OF TWO (2) FEET MINIMUM OR AS REQUIRED TO ENSURE A SAFE CONDITION. SPACE POSTS 6' MAXIMUM ON CENTER.

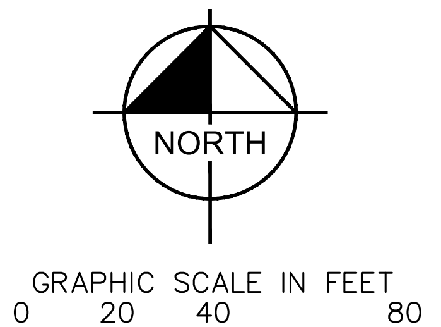
C. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH PROTECTOR BARRIER. WIRE MAY DAMAGE PROTECTOR BARRIER OVER TIME.

A TREE/SHRUB PROTECTOR

Barrier Detail

NTS



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KYLER DURHAM, PLA ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Know what's below. Call before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
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445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KYLER DURHAM
No LA6667668
DATE: 5/8/2025

KHA PROJECT	147992001
DATE	5/8/2025
SCALE	AS SHOWN
DESIGNED BY	JC
DRAWN BY	JC
CHECKED BY	KD

TREE MITIGATION
PLAN

NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC
FT. PIERCE FL

SHEET NUMBER
L-000

NED FT. PIERCE

TREE DISPOSITION and MITIGATION LIST

KHA TREE NO.	SCIENTIFIC NAME	COMMON NAME	DBH (In.)	SPREAD(ft)	HEIGHT(FT)	CONDITION	Disposition
1	*Quercus laurifolia*	Laurel Oak	25	36'	45'	Good	Remain
2	*Sabal Palmeto*	Cabbage Palm	12	16'	35'	Fair	Relocate
3	*Quercus laurifolia*	Laurel Oak	0	0	0	Dead	Remove
4	*Quercus laurifolia*	Laurel Oak	25	39	40	Good	Remain
5	*Sabal Palmeto*	Cabbage Palm	12	16	20	Poor	Relocate
6	*Schefflera actinophylla*	Umbrella Plant	0	15	40	Poor	Remove
7	*Quercus laurifolia*	Laurel Oak	18	36	30	Poor	Remain
8	*Pinus elliotti*	Slash Pine	20	35	40	Good	Remove
9	*Pinus elliotti*	Slash Pine	14	20	35	Fair	Remove
10	*Quercus laurifolia*	Laurel Oak	35	51	45	Good	Remove
11	*Pinus elliotti*	Slash Pine	14	18	35	Poor	Remove
12	*Quercus laurifolia*	Laurel Oak	25	45	35	Fair	Remove
13	*Sabal Palmeto*	Cabbage Palm	16	18	30	Fair	Relocate
14	*Pinus elliotti*	Slash Pine	15	30	40	Fair	Remove
15	*Quercus laurifolia*	Laurel Oak	12	20	35	Poor	Remove
16	*Pinus elliotti*	Slash Pine	0	20	45	Poor	Remove
17	*Quercus laurifolia*	Laurel Oak	17	25	30	Poor	Remove
18	*Pinus elliotti*	Slash Pine	16	25	35	Poor	Remove
19	*Pinus elliotti*	Slash Pine	10	35	35	Poor	Remove
20	*Pinus elliotti*	Slash Pine	16	20	40	Fair	Remove
21	*Pinus elliotti*	Slash Pine	12	25	50	Fair	Remove
22	*Quercus laurifolia*	Laurel Oak	14	30	30	Fair	Remove
23	*Pinus elliotti*	Slash Pine	17	40	35	Fair	Remove
24	*Pinus elliotti*	Slash Pine	14	25	30	Fair	Remove
25	*Pinus elliotti*	Slash Pine	12	14	20	Fair	Remove
26	*Quercus laurifolia*	Laurel Oak	31	18	31	Fair	Remove
27	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
28	*Pinus elliotti*	Slash Pine	14	25	4	Fair	Remove
29	*Pinus elliotti*	Slash Pine	13	20	35	Poor	Remove
30	*Pinus elliotti*	Slash Pine	16	30	30	Poor	Remove
31	*Pinus elliotti*	Slash Pine	20	30	35	Fair	Remove
32	*Pinus elliotti*	Slash Pine	10	15	35	Fair	Remove
33	*Sabal Palmeto*	Cabbage Palm	10	14	25	Fair	Relocate
34	*Sabal Palmeto*	Cabbage Palm	12	16	20	Fair	Relocate
35	*Sabal Palmeto*	Cabbage Palm	12	16	20	Fair	Relocate
36	*Pinus elliotti*	Slash Pine	16	25	35	Poor	Remove
37	*Pinus elliotti*	Slash Pine	14	20	40	Poor	Remove
38	*Quercus laurifolia*	Laurel Oak	14	30	30	Poor	Remove
39	*Pinus elliotti*	Slash Pine	10	20	30	Poor	Remove
40	*Pinus elliotti*	Slash Pine	16	20	35	Poor	Remove
41	*Pinus elliotti*	Slash Pine	12	20	35	Poor	Remove
42	*Pinus elliotti*	Slash Pine	12	30	35	Fair	Remove
43	*Sabal Palmeto*	Cabbage Palm	12	14	25	Fair	Relocate
44	*Sabal Palmeto*	Cabbage Palm	14	14	25	Fair	Relocate
45	*Quercus laurifolia*	Laurel Oak	36	40	35	Fair	Remove
46	*Pinus elliotti*	Slash Pine	16	30	30	Fair	Remove
47	*Pinus elliotti*	Slash Pine	10	20	40	Poor	Remove
48	*Pinus elliotti*	Slash Pine	20	30	40	Fair	Remove
49	*Pinus elliotti*	Slash Pine	12	20	35	Poor	Remove
50	*Pinus elliotti*	Slash Pine	10	20	35	Fair	Remove
51	*Pinus elliotti*	Slash Pine	10	20	40	Fair	Remove
52	*Pinus elliotti*	Slash Pine	10	20	30	Poor	Remove
53	*Pinus elliotti*	Slash Pine	12	15	30	Poor	Remove
54	*Pinus elliotti*	Slash Pine	16	30	40	Poor	Remove
55	*Pinus elliotti*	Slash Pine	10	20	35	Poor	Remove
56	*Pinus elliotti*	Slash Pine	14	20	40	Good	Remove
57	*Pinus elliotti*	Slash Pine	16	30	40	Fair	Remove
58	*Pinus elliotti*	Slash Pine	10	20	35	Poor	Remove
59	*Pinus elliotti*	Slash Pine	11	15	35	Poor	Remove
60	*Pinus elliotti*	Slash Pine	12	15	35	Poor	Remove
61	*Pinus elliotti*	Slash Pine	10	20	35	Poor	Remove
62	*Pinus elliotti*	Slash Pine	12	20	35	Poor	Remove
63	*Sabal Palmeto*	Cabbage Palm	12	16	25	Fair	Relocate
64	*Pinus elliotti*	Slash Pine	10	20	40	Poor	Remove
65	*Quercus laurifolia*	Laurel Oak	42	50	35	Fair	Remove
66	*Pinus elliotti*	Slash Pine	14	30	30	Fair	Remove
67	*Sabal Palmeto*	Cabbage Palm	12	12	30	Fair	Relocate
68	*Sabal Palmeto*	Cabbage Palm	12	16	30	Fair	Relocate
69	*Sabal Palmeto*	Cabbage Palm	14	16	20	Fair	Relocate
70	*Pinus elliotti*	Slash Pine	14	30	36	Fair	Remove
71	*Pinus elliotti*	Slash Pine	14	20	35	Poor	Remove
72	*Pinus elliotti*	Slash Pine	28	30	35	Fair	Remove
73	*Pinus elliotti*	Slash Pine	14	20	35	Fair	Remove
74	*Quercus laurifolia*	Laurel Oak	15	20	20	Poor	Remove
75	*Pinus elliotti*	Slash Pine	14	25	35	Fair	Remove
76	*Quercus laurifolia*	Laurel Oak	16	35	35	Fair	Remove
77	*Quercus laurifolia*	Laurel Oak	16	20	25	Poor	Remove
78	*Quercus laurifolia*	Laurel Oak	24	3	35	Poor	Remove
79	*Quercus laurifolia*	Laurel Oak	36	40	40	Fair	Remove
80	*Quercus laurifolia*	Laurel Oak	36	40	35	Fair	Remove
81	*Quercus laurifolia*	Laurel Oak	28	30	35	Poor	Remove
82	*Quercus virginiana*	Live Oak	28	40	40	Fair	Remove
83	*Sabal Palmeto*	Cabbage Palm	14	16	35	Fair	Relocate
84	*Pinus elliotti*	Slash Pine	16	30	40	Fair	Remove
85	*Quercus laurifolia*	Laurel Oak	12	30	35	Poor	Remove
86	*Pinus elliotti*	Slash Pine	18	30	35	Fair	Remove
87	*Quercus laurifolia*	Laurel Oak	14	20	30	Poor	Remove
88	*Quercus laurifolia*	Laurel Oak	40	40	40	Fair	Remove
89	*Quercus laurifolia*	Laurel Oak	36	30	35	Fair	Remove
90	*Quercus laurifolia*	Laurel Oak	18	30	35	Poor	Remove
91	*Quercus laurifolia*	Laurel Oak	36	40	35	Poor	Remove
92	*Pinus elliotti*	Slash Pine	12	20	35	Fair	Remove
93	*Pinus elliotti*	Slash Pine	14	20	40	Poor	Remove
94	*Pinus elliotti*	Slash Pine	18	20	40	Poor	Remove
95	*Quercus laurifolia*	Laurel Oak	14	40	35	Fair	Remove
96	*Pinus elliotti*	Slash Pine	16	25	35	Poor	Remove
97	*Pinus elliotti*	Slash Pine	12	25	35	Fair	Remove
98	*Pinus elliotti*	Slash Pine	12	30	35	Fair	Remove
99	*Quercus laurifolia*	Laurel Oak	30	40	35	Fair	Remove
100	*Pinus elliotti*	Slash Pine	16	25	40	Fair	Remove

NED FT. PIERCE

TREE DISPOSITION and MITIGATION LIST (cont'd)

KHA TREE NO.	SCIENTIFIC NAME	COMMON NAME	DBH (In.)	SPREAD(ft)	HEIGHT(FT)	CONDITION	Disposition
101	*Pinus elliotti*	Slash Pine	16	25	35	Fair	Remove
102	*Sabal Palmeto*	Cabbage Palm	14	14	25	Good	Remain
103	*Pinus elliotti*	Slash Pine	12	30	35	Fair	Remove
104	*Quercus laurifolia*	Laurel Oak	44	40	40	Poor	Remove
105	*Sabal Palmeto*	Cabbage Palm	0	0	0	Dead	Remove
106	*Quercus laurifolia*	Laurel Oak	14	30	30	Poor	Remove
107	*Sabal Palmeto*	Cabbage Palm	10	14	25	Fair	Relocate
108	*Pinus elliotti*	Slash Pine	10	15	30	Poor	Remove
109	*Pinus elliotti*	Slash Pine	8	10	25	Poor	Remove
110	*Pinus elliotti*	Slash Pine	8	15	20	Poor	Remove
111	*Pinus elliotti*	Slash Pine	22	40	36	Fair	Remove
112	*Pinus elliotti*	Slash Pine	10	15	26	Poor	Remove
113	*Pinus elliotti*	Slash Pine	24	30	40	Fair	Remove
114	*Sabal Palmeto*	Cabbage Palm	10	14	25	Good	Relocate
115	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
116	*Pinus elliotti*	Slash Pine	29	30	40	Fair	Remove
117	*Pinus elliotti*	Slash Pine	10	15	30	Poor	Remove
118	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
119	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
120	*Pinus elliotti*	Slash Pine	14	20	25	Poor	Remove
121	*Pinus elliotti*	Slash Pine	10	20	35	Fair	Remove
122	*Pinus elliotti*	Slash Pine	16	20	35	Fair	Remove
123	*Pinus elliotti*	Slash Pine	14	25	30	Fair	Remove
124	*Pinus elliotti*	Slash Pine	6	8	20	Poor	Remove
125	*Quercus virginiana*	Live Oak	12	35	35	Good	Remain
126	*Quercus virginiana*	Live Oak	12	35	35	Good	Remain
127	*Quercus virginiana*	Live Oak	12	35	35	Good	Remain
128	*Quercus virginiana*	Live Oak	12	35	35	Good	Remain
129	*Quercus virginiana*	Live Oak	12	35	35	Good	Remain
130	*Quercus virginiana*	Live Oak	10	35	30	Good	Remain
131	*Quercus virginiana*	Live Oak	12	35	30	Good	Remain
132	*Quercus virginiana*	Live Oak	12	35	30	Good	Remove
133	*Quercus virginiana*	Live Oak	12	30	25	Fair	Remove
135	*Quercus virginiana*	Live Oak	10	15	25	Poor	Remain
136	*Quercus virginiana*	Live Oak	12	30	30	Good	Remain
137	*Quercus virginiana*	Live Oak	10	30	30	Good	Remain
138	*Quercus virginiana*	Live Oak	10	25	25	Good	Remain
139	*Quercus virginiana*	Live Oak	10	25	25	Good	Remain
140	*Quercus virginiana*	Live Oak	10	25	25	Good	Remain
141	*Quercus virginiana*	Live Oak	10	20	25	Good	Remain
142	*Quercus virginiana*	Live Oak	12	30	30	Good	Remain
143	*Quercus virginiana*	Live Oak	14	30	30	Good	Remain
144	*Quercus virginiana*	Live Oak	12	30	24	Poor	Remain
145	*Quercus virginiana*	Live Oak	8	20	20	Poor	Remain
146	*Quercus virginiana*	Live Oak	12	30	30	Fair	Remain
147	*Quercus virginiana*	Live Oak	10	20	20	Fair	Remain
148	*Quercus virginiana*	Live Oak	8	20	20	Fair	Remain
149	*Quercus virginiana*	Live Oak	8	20	20	Poor	Remain
155	*Quercus laurifolia*	Laurel Oak	9	20	25	Fair	Remain
156	*Quercus laurifolia*	Laurel Oak	14	30	30	Fair	Remove
157	*Pinus elliotti*	Slash Pine	30	30	35	Fair	Remove
158	*Quercus laurifolia*	Laurel Oak	9	20	20	Good	Remain
159	*Quercus laurifolia*	Laurel Oak	18	35	25	Poor	Remove
160	*Quercus laurifolia*	Laurel Oak	16	20	25	Poor	Remove
161	*Quercus laurifolia*	Laurel Oak	18	20	25	Poor	Remove
162	*Quercus laurifolia*	Laurel Oak	7	15	20	Poor	Remove
163	*Quercus laurifolia*	Laurel Oak	8	20	20	Poor	Remove
164	*Quercus laurifolia*	Laurel Oak	9	20	20	Poor	Remove
165	*Sabal Palmeto*	Cabbage Palm	10	15	20	Poor	Remove
166	*Quercus laurifolia*	Laurel Oak	10	15	25	Poor	Remove
167	*Quercus laurifolia*	Laurel Oak	10	15	25	Poor	Remove
168	*Quercus laurifolia*	Laurel Oak	16	20	25	Poor	Remove
169	*Quercus virginiana*	Live Oak (Leaning)	16	20	15	Poor	Remove
170	*Quercus laurifolia*	Laurel Oak (Cluster)	36	25	30	Poor	Remove
171	*Quercus laurifolia*	Laurel Oak	8	20	15	Poor	Remove
172	*Quercus laurifolia*	Laurel Oak	13	25	0	Poor	Remain
173	*Quercus laurifolia*	Laurel Oak	14	20	35	Poor	Remain
174	*Quercus laurifolia*	Laurel Oak	14	25	30	Poor	Remove
175	*Quercus laurifolia*	Laurel Oak	16	25	30	Poor	Remain
176	*Quercus laurifolia*	Laurel Oak	6	8	15	Poor	Remove
177	*Pinus elliotti*	Slash Pine	30	25	35	Good	Remain
178	*Quercus laurifolia*	Laurel Oak	24	26	35	Poor	Remain
179	*Sabal Palmeto*	Cabbage Palm	14	16	25	Poor	Remain

N.I.S. = Not in Scope

Total Pine DBH In. Removed	1053
Total Pine DBH In. Remaining	30
Total Pine Mitigation Cost*	**$ 102,300.00**
Total Hardwood DBH In. Removed	913
Total Hardwood DBH In. Remaining	391
Total Hardwood Mitigation Cost*	**$ 104,400.00**
Total Mitigation Cost*	**$ 206,700.00**

* Mitigation Cost is approximate and calculated based upon the St. Lucie County Tree Preservation Fund Standard Fee. Cost is approximate and is subject to change. Pine Trees = $100.00 / In. DBH; Hardwood Trees = $200.00 / In. DBH

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

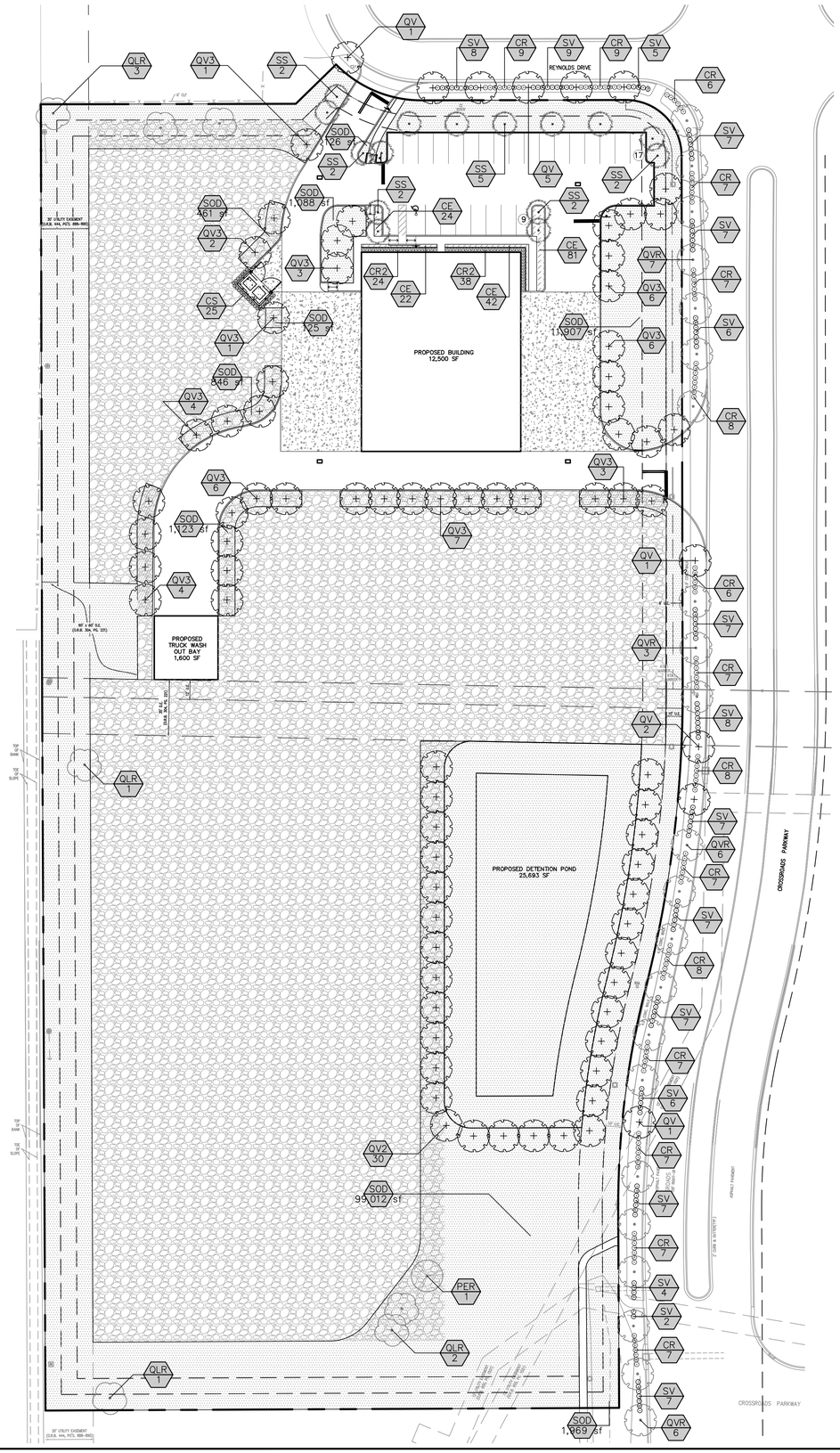
KYLER R. DURHAM ★ No. LA6667668 ★ LICENSED ★ DATE: 5/8/2025 ★ STATE OF FLORIDA ★ PROFESSIONAL LANDSCAPE ★ ARCHITECT

KHA PROJECT	147992001
DATE	5/8/2025
SCALE	AS SHOWN
DESIGNED BY	JC
DRAWN BY	JC
CHECKED BY	KD

TREE MITIGATION TABLE

NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC
FT. PIERCE FL

SHEET NUMBER
L-001



PLANT KEY

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME
EXISTING TREES TO REMAIN				
	PER	1	SLASH PINE	PINUS ELLIOTTII
	QLR	7	LAUREL-LEAVED OAK	QUERCUS LAURIFOLIA
	QVR	22	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA
LANDSCAPE STRIP TREES				
	QV	10	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA
RELOCATED TREES/PALMS				
	SS	15	CABBAGE PALMETTO	SABAL PALMETTO
RETENTION/DETENTION LANDSCAPE TREES				
	QV2	30	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA
VUA TREES				
	QV3	43	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA
SHRUBS				
	CR2	62	RED TIP COCO PLUM	CHRYSOBALANUS ICACO 'RED TIP'
	CS	25	SMALL LEAF CLUSIA	CLUSIA GUTTIFERA
HEDGES				
	CR	125	RED TIP COCO PLUM	CHRYSOBALANUS ICACO 'RED TIP'
	SV	105	DWARF VARIEGATED SCHEFFLERA	SCHEFFLERA ARBORICOLA 'VARIEGATA'
SHRUB AREAS				
	CE	169	EMERALD BLANKET NATAL PLUM	CARISSA MACROCARPA 'EMERALD BLANKET'
GROUND COVERS				
	SOD	119,283 SF	ST. AUGUSTINE GRASS	STENOTAPHRUM SECUNDATUM

PLANTING NOTES:

1. CONTRACTOR SHALL REFER TO THE LANDSCAPE PLANTING DETAILS, PLANT LIST, GENERAL NOTES AND ALL CONTRACT DOCUMENTS FOR FURTHER AND COMPLETE INSTRUCTIONS.
2. PLANT LIST QUANTITIES ARE PROVIDED FOR CONVENIENCE. IN THE EVENT OF QUANTITY DISCREPANCIES THE DRAWING SHALL TAKE PRECEDENCE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BIDDING.
3. PLANT SIZES LISTED ARE THE MINIMUM SIZE THAT WILL BE ACCEPTED FOR THAT PLANT.
4. ANY SUBSTITUTION IN SIZE AND/OR PLANT MATERIAL MUST BE APPROVED BY THE LANDSCAPE ARCHITECT IN WRITING. ALL PLANTS WILL BE SUBJECT TO APPROVAL BY LANDSCAPE ARCHITECT AND/OR OWNERS REPRESENTATIVE BEFORE PLANTING CAN BEGIN.
5. CONTRACTOR SHALL FIELD ADJUST LOCATION OF PLANT MATERIAL AS NECESSARY TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES AND/OR INTERFERE WITH EXISTING ABOVE GROUND ELEMENTS. ALL CHANGES REQUIRED SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AND THE LANDSCAPE ARCHITECT.
6. THE CONTRACTOR SHALL BEAR ALL COSTS OF TESTING OF SOILS, AMENDMENTS, ETC. ASSOCIATED WITH THE WORK AND INCLUDED IN THE SPECIFICATIONS.
7. CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE LIMITS OF WORK AND EXISTING CONDITIONS AND VERIFY ALL INFORMATION. IF DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IN WRITING WITHIN SEVEN CALENDAR DAYS OF NOTICE TO PROCEED.
8. ALL NEW AND TRANSPLANTED PLANT MATERIAL SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. IRRIGATION DESIGN TO BE SUBMITTED AT THE TIME OF CONSTRUCTION PLANS.
9. LANDSCAPE CONTRACTOR SHALL NOTIFY SUNSHINE ONE CALL OF FLORIDA, INC. AT 1-800-432-4770 A MINIMUM OF TWO FULL BUSINESS DAYS PRIOR TO DIGGING. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR AVOIDING DAMAGE TO UTILITIES FROM PLANT INSTALLATION.
10. ALL PLANTING MUST FOLLOW PLANTING SPECIFICATIONS AND DETAILS SHOWN ON THE PLAN.
11. SUBSTITUTIONS OF PLANT SPECIES OR SPECIFICATIONS MUST BE APPROVED IN WRITING BY LANDSCAPE ARCHITECT AND VENICE, FL PRIOR TO USE.
12. ALL PLANT MATERIAL PLANTED PER THIS LANDSCAPE PLAN SHALL BE FLORIDA GRADE #1 OR BETTER, AS SPECIFIED IN THE CURRENT EDITION OF THE FLORIDA DEPARTMENT OF AGRICULTURE'S GRADE AND STANDARDS FOR NURSERY PLANTS. DAMAGED PLANT MATERIAL SHALL BE REJECTED AND REPLACED PRIOR TO INSTALLATION.
13. ALL SIZES SHOWN FOR PLANT MATERIAL ARE TO BE CONSIDERED MINIMUMS.
14. ALL NEW PLANT MATERIAL SHALL BE WARRANTED FOR A MINIMUM PERIOD OF ONE YEAR. THE WARRANTEE PERIOD SHALL BEGIN AFTER ACCEPTANCE OF THE PLANTS BY THE CITY LANDSCAPE INSPECTOR.
15. ALL PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE CITY FOR MINIMAL MATERIAL SIZES, COVERAGE, AND QUALITY.
16. PLANT BEDS TO BE TREATED WITH PRE-EMERGENT HERBICIDE PRIOR TO PLANTING.
17. ALL TREE AND PALM STAKING AND SUPPORTS SHALL BE REMOVED ONE YEAR AFTER INSTALLATION.
18. NO FERTILIZER SHALL BE APPLIED TO NEWLY PLANTED TREES AND PALMS.
19. ALL LANDSCAPE MATERIAL SHALL BE THOROUGHLY WATERED AT THE TIME OF PLANTING, NO DRY PLANTING PERMITTED.
20. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY WATER PROVISIONS UNTIL SUCH TIME AS THE IRRIGATION SYSTEM IS OPERATIONAL.
21. ALL WIRE GUYS AND/OR FABRIC SHALL BE FLAGGED WITH FLORESCENT COLORED TAPE.
22. MULCHING:
    A. ALL LANDSCAPE AREAS NOT COVERED BY SOD SHALL BE COVERED BY A MINIMUM 3-INCH LAYER OF MULCH.
    B. A MULCH RING WITH A MINIMUM RADIUS OF 24 INCHES (48 INCH DIAMETER), IS REQUIRED AROUND NEWLY INSTALLED TREES AND PALMS.
    C. CYPRESS MULCH SHALL NOT BE USED.
    D. NO MULCH SHALL BE PLACED TOUCHING OR WITHIN SIX INCHES OF THE TRUNK OF A TREE OR PALM.

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KYLER DURHAM, PE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Know what's **below.** **Call** before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KYLER R. DURHAM ★ No. L46667668 ★ STATE OF FLORIDA ★ PROFESSIONAL LANDSCAPE ARCHITECT ★ DATE: 5/8/2025

KHA PROJECT	147992001
DATE	5/8/2025
SCALE	AS SHOWN
DESIGNED BY	JC
DRAWN BY	JC
CHECKED BY	KD

LANDSCAPE PLANTING PLAN

NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC

FL
FT. PIERCE

SHEET NUMBER
L-100

Plotted By:Clemons, Jake Sheet Set:NED FT. PIERCE Layout:LANDSCAPE PLAN May 08, 2025 09:07:08am K:\VRB_DEV\ned ft pierce\CAD\plansheets\Landscape\L-100_LANDSCAPE.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, 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.

Code Minimum Landscape Requirements - City of Fort Pierce, Florida

Project Site Information	Site Location:	SW Corner - Crossroads Parkway & Reynolds Drive, Fort Pierce, Florida, 34945
	Site Zoning:	Commercial Parkway (CP-1)

Section 123-37(4). - Landscape Strip Standards

Between street rights-of-way and vehicular use, building and retention/detention areas, the shall be a landscaped strip of land, except where driveways are located.

Section 123-37(4)a. - Landscape Strip Minimum Width

The strip shall be at least six feet wide for lots under 10,000 square feet in size and at least ten feet wide for lots 10,000 square feet or larger.

Lot Size (sq.ft.)	Minimum Landscape Strip Width (ft)	Landscape Strip Width Provided (ft)
318450	10	10

Section 123-37(4)b. - Landscape Strip Tree Requirement

The landscape strip shall include an average of at least one tree for each 300 square feet of required landscaped area. The remainder of the required landscaped area shall be completely covered with grass, ground cover or other landscaped treatment and shall additionally contain a screen of landscaping which shall be installed and maintained so as to form a 36-inch or higher continuous, unbroken, solid, visual screen within a maximum of one year after the landscaping takes place, except in clear vision areas required in section 125-308.

Required Landscape Strip Area (sq.ft.)	No. of Landscape Strip Trees Required	No. of Landscape Strip Trees Provided
9379	32	32

Section 123-37(6). - Retention/ Detention abutting other Property Landscape Requirement

Required Landscape Strip Area (sq.ft.)	No. of Landscape Strip Trees Required	No. of Retention/Detention Area Landscape Strip Trees Provided
5863	30	30

Section 123-37(6)a. - Vehicle Use Area Landscape Strip Requirement

Where a vehicular use area does not abut a street right-of-way but abuts other property, there will be a landscaped strip of land which is at least ten feet wide. When a property line abuts a building, another structure, a joint driveway or joint parking area, such landscaped strip shall not be required.

Total Vehicle Use Area Landscape Strip Area (sqft):	9598

Does a proposed VUA meet the aforementioned criteria?	Minimum VUA Landscape Strip Width Requirement (ft)	Provided VUA Landscape Strip Width (ft)
Yes	10	10

Section 123-37(6)a. - Vehicle Use Area Landscape Strip Tree Requirement

-- Refer to Description Above --

Does a proposed VUA require a landscaping strip based on Section 123-27(6)a?	No. of Landscape Strip Trees Required	No. of Landscape Strip Trees Provided
Yes	48	48

Section 123-37(7). - Vehicle Use Area Interior Landscape Standards

The following are standards relating to landscaping of interior vehicular use areas:

Vehicle Use Area Total Square Footage:	37052

Section 123-37(7)a. - Vehicle Use Area Interior Landscape Area Requirement

Lots with vehicular use areas that are 4,000 or more square feet in size shall have at least one square foot of interior landscaping for each 15 square feet of vehicular use area, except that areas in an I-1 or I-2 zone shall only be required to have at least one square foot of interior landscaping for each 30 square feet of vehicular use area. Each separate landscaped area shall be curbed and contain a minimum of 100 square feet of area and shall be at least ten feet wide and ten feet deep exclusive of curbing in all locations.

Does the proposed site have 4,000 square feet or more of Vehicle Use Area?	Minimum Square Footage of Interior Landscape Area Required	Square Footage of Interior Landscape Area Provided
Yes	2471	2098

Section 123-37(7)b. - Vehicle Use Area Interior Landscape Area Tree Requirement

Interior landscaping shall include an average of at least one tree for each 100 square feet of required landscaped area. The remainder of the required landscaped area shall be landscaped with grass, ground cover or other landscaped treatment. Such landscaped areas shall be located in such a manner as to divide and break up the expanse of paving and at strategic points to guide traffic flow and direction.

Does the proposed site's VUA meet the criteria set forth in Section 123-27(7)a.?	Minimum No. of Interior Landscape Area Trees Required	Minimum No. of Interior Landscape Area Trees Provided
Yes	25	5

Section 123-37(10). - Screening of Resuse Collection Areas Design Standards

Refuse and recycling dumpsters utilized by multifamily residential complexes, in commercial, industrial and institutional facilities shall be screened from view on all sides and shall be gated. Gates may be left open only on scheduled pick up days and must be closed following pick up. Such screening shall consist of a six-foot-high masonry wall or wooden fence. In addition, when feasible, one shrub or hedge shall be planted at two-foot centers along the outside perimeter of the screen. Dumpsters shall be located in an area that minimizes public view.

Refuse Collection Area Perimeter Length (excluding gated side; Linear Feet)	Minimum No. of Required Screening Hedges	No. of Screening Hedges Provided
44	22	25

PLANT SCHEDULE

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONTAINER	CAL	HT	NATIVE
EXISTING TREES TO REMAIN								
	PER	1	SLASH PINE	PINUS ELLIOTTII	EXISTING TREE: REFER TO TREE DISPOSITION PLAN	EXISTING TREE: REFER TO TREE DISPOSITION PLAN	EXISTING TREE: REFER TO TREE	
	QLR	7	LAUREL-LEAVED OAK	QUERCUS LAURIFOLIA	EXISTING TREE: REFER TO TREE DISPOSITION PLAN	EXISTING TREE: REFER TO TREE DISPOSITION PLAN	EXISTING TREE: REFER TO TREE	
	QVR	22	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	EXISTING TREE: REFER TO TREE DISPOSITION PLAN	EXISTING TREE: REFER TO TREE DISPOSITION PLAN	EXISTING TREE: REFER TO TREE	
LANDSCAPE STRIP TREES								
	QV	10	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	F.G.	2.5" DBH MIN,	12' HT. MIN	YES
RELOCATED TREES/PALMS								
	SS	15	CABBAGE PALMETTO CONTRACTOR TO RELOCATE ON SITE; VARYING HEIGHT	SABAL PALMETTO	RELOCATED	VARIES; 10" - 16"	VARIES; 20' - 35'	YES
RETENTION/DETENTION LANDSCAPE TREES								
	QV2	30	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	F.G.	2.5" DBH MIN,	12' HT. MIN	YES
VUA TREES								
	QV3	43	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	F.G.	2.5" DBH MIN,	12' HT. MIN	YES

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	SPACING	SIZE	NATIVE
SHRUBS								
	CR2	62	RED TIP COCO PLUM	CHRYSOBALANUS ICACO 'RED TIP'	CONT.	24" O.C.	24" HT. MIN	YES
	CS	25	SMALL LEAF CLUSIA	CLUSIA GUTTIFERA	CONT.	24" O.C.	24" HT. MIN	YES
HEDGES								
	CR	111	RED TIP COCO PLUM	CHRYSOBALANUS ICACO 'RED TIP'	CONT.	36" O.C.	36" HT MIN	YES
	SV	105	DWARF VARIEGATED SCHEFFLERA	SCHEFFLERA ARBORICOLA 'VARIEGATA'	CONT.	36" O.C.	36" HT MIN	YES
SHRUB AREAS								
	CE	169	EMERALD BLANKET NATAL PLUM	CARISSA MACROCARPA 'EMERALD BLANKET'	CONT.	24" O.C.	24" HT MIN	YES

SYMBOL	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	O.C.	SIZE	NATIVE
GROUND COVERS								
	SOD	119,283 SF	ST. AUGUSTINE GRASS	STENOTAPHRUM SECUNDATUM	SOD	SOD	SOD	YES

811 Know what's **below.** **Call** before you dig.

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KYLER R. DURHAM — No. LA6667668 — STATE OF FLORIDA — PROFESSIONAL LANDSCAPE ARCHITECT — DATE: 5/8/2025

KHA PROJECT	147992001
DATE	5/8/2025
SCALE	AS SHOWN
DESIGNED BY	JC
DRAWN BY	JC
CHECKED BY	KD

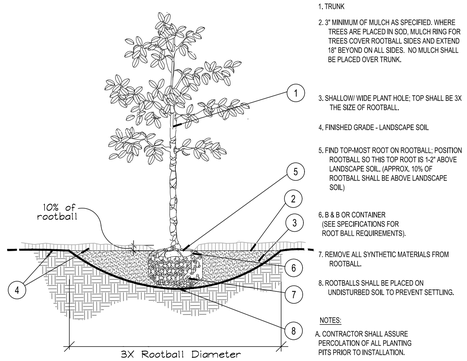
LANDSCAPE CODE MIN. REQ. & PLANT SCHEDULE

NED FT. PIERCE

PREPARED FOR
ALCAT FT PIERCE LLC

FT. PIERCE FL

SHEET NUMBER
L-101



1. TRUNK
2. 3" MINIMUM OF MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW WIDE PLANT HOLE: TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. B & B OR CONTAINER (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
7. REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL.
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

NOTES:

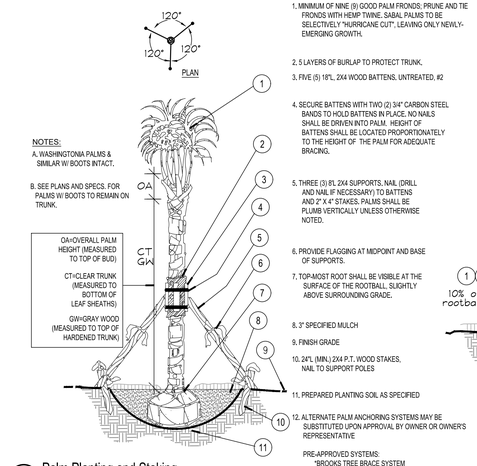
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

A Tree Planting
SECTION NTS



NOTES:

A. WASHINGTONIA PALMS & SIMILAR W/ BOOTS INTACT.

B. SEE PLANS AND SPECS. FOR PALMS W/ BOOTS TO REMAIN ON TRUNK.

OA=OVERALL PALM HEIGHT (MEASURED TO TOP OF BUD)

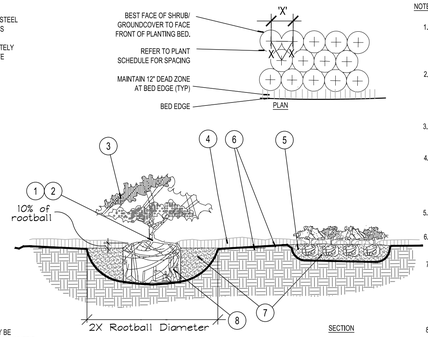
CT=CLEAR TRUNK (MEASURED TO BOTTOM OF LEAF SHEATHS)

GW=GRAY WOOD (MEASURED TO TOP OF HARDENED TRUNK)

1. MINIMUM OF NINE (9) GOOD PALM FRONDS; PRUNE AND TIE FRONDS WITH HEMP TWINE. SABAL PALMS TO BE SELECTIVELY "HURRICANE CUT", LEAVING ONLY NEWLY-EMERGING GROWTH.
2. 5 LAYERS OF BURLAP TO PROTECT TRUNK.
3. FIVE (5) 18"L. 2X4 WOOD BATTENS, UNTREATED, #2
4. SECURE BATTENS WITH TWO (2) 3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED PROPORTIONATELY TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
5. THREE (3) 8'L 2X4 SUPPORTS, NAIL (DRILL AND NAIL IF NECESSARY) TO BATTENS AND 2" X 4" STAKES. PALMS SHALL BE PLUMB VERTICALLY UNLESS OTHERWISE NOTED.
6. PROVIDE FLAGGING AT MIDPOINT AND BASE OF SUPPORTS.
7. TOP-MOST ROOT SHALL BE VISIBLE AT THE SURFACE OF THE ROOTBALL. SLIGHTLY ABOVE SURROUNDING GRADE.
8. 3" SPECIFIED MULCH
9. FINISH GRADE
10. 24"L (MIN.) 2X4 P.T. WOOD STAKES, NAIL TO SUPPORT POLES
11. PREPARED PLANTING SOIL AS SPECIFIED
12. ALTERNATE PALM ANCHORING SYSTEMS MAY BE SUBSTITUTED UPON APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE

PRE-APPROVED SYSTEMS:
*BROOKS TREE BRACE SYSTEM
*ARBOR TIE TREE BRACING

B Palm Planting and Staking
SECTION NTS

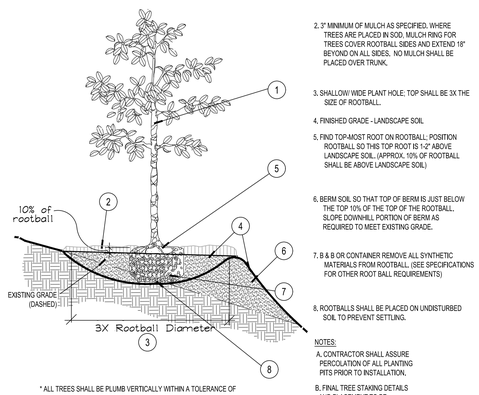


NOTES:

1. FIND POINT WHERE TOPMOST ROOT EMERGES FROM TRUNK WITHIN 2" OF SURFACE. CLEAR EXCESS SOIL IF NECESSARY.
2. TOP 10% OF SHRUB AND GROUNDCOVER ROOTBALLS TO BE PLANTED ABOVE THE LANDSCAPE GRADE. DO NOT COVER EXPOSED 10% ON SIDES WITH SOIL.
3. PRUNE ALL LIKE SHRUBS WITHIN A PLANTED MASS TO ACHIEVE A UNIFORM MASS/HEIGHT.
4. 3" MINIMUM MULCH AS SPECIFIED - DO NOT COVER ENTIRE SHRUB ROOTBALL OR CREATE 'WATER RINGS' ONLY COVER SIDES OF ROOTBALL WITH MULCH
5. EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
6. FINISHED GRADE (SEE GRADING PLAN).
7. PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
8. SCARIFY ROOTBALL SIDES AND BOTTOM.

* ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

C Shrub / Groundcover Planting
PLAN/SECTION NTS



1. TREES, PALMS, AND LARGE SHRUBS (15 GAL OR GREATER) SHALL BE PLANTED IN SIMILAR MANNER
2. 3" MINIMUM OF MULCH AS SPECIFIED, WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES COVER ROOTBALL SIDES AND EXTEND 18" BEYOND ON ALL SIDES. NO MULCH SHALL BE PLACED OVER TRUNK.
3. SHALLOW / WIDE PLANT HOLE: TOP SHALL BE 3X THE SIZE OF ROOTBALL.
4. FINISHED GRADE - LANDSCAPE SOIL
5. FIND TOP-MOST ROOT ON ROOTBALL; POSITION ROOTBALL SO THIS TOP ROOT IS 1-2" ABOVE LANDSCAPE SOIL. (APPROX. 10% OF ROOTBALL SHALL BE ABOVE LANDSCAPE SOIL)
6. BERM SOIL SO THAT TOP OF BERM IS JUST BELOW THE TOP 10% OF THE TOP OF THE ROOTBALL, SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE.
7. B & B OR CONTAINER REMOVE ALL SYNTHETIC MATERIALS FROM ROOTBALL. (SEE SPECIFICATIONS FOR OTHER ROOT BALL REQUIREMENTS)
8. ROOTBALLS SHALL BE PLACED ON UNDISTURBED SOIL TO PREVENT SETTLING.

NOTES:

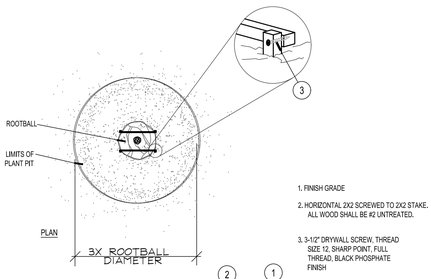
A. CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

B. FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.

C. SEE PRE-APPROVED STAKING METHODS, THIS SHEET

* ALL TREES SHALL BE PLUMB VERTICALLY WITHIN A TOLERANCE OF THREE DEGREES, UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE.

D Planting on a Slope
SECTION NTS



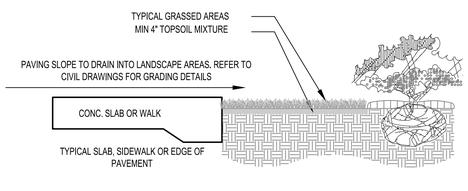
1. FINISH GRADE
2. HORIZONTAL 2X2 SCREWED TO 2X2 STAKE. ALL WOOD SHALL BE #2 UNTREATED.
3. 3-1/2" DRYWALL SCREW, THREAD SIZE 12, SHARP POINT, FULL THREAD, BLACK PHOSPHATE FINISH
4. VERTICAL STAKES SHALL ABUT SIDE OF ROOTBALL
5. STAKES TO EXTEND INTO NATIVE SOIL BY 1-1/2 X THE ROOTBALL DEPTH MIN.

NOTE:

IF SPATIAL REQUIREMENTS PRECLUDE STAKING WITH THIS METHOD, SUBMIT ALTERNATE FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLING PLANT.

* Refer to details B and D for planting

E Staking - up to 65 gal. or B&B to 3-1/2" Cal.
PLAN/SECTION NTS



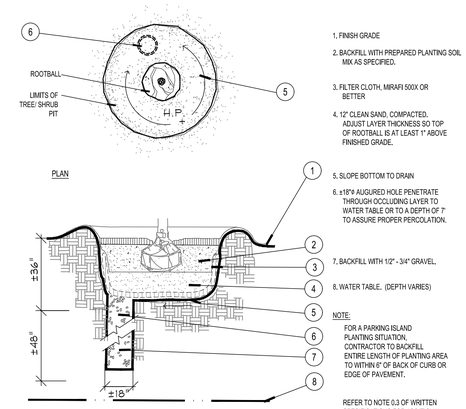
SOD NOTES:

1. TYPICAL SOLID SOD LAID LEVEL WITH TIGHT JOINTS SET ADJACENT TO EDGE OF PAVEMENT SUCH THAT THE TOP OF SOD WHEN FRESHLY MOWED IS FLUSH WITH TOP OF PAVEMENT IN ORDER NOT TO IMPEDE THE FLOW OF RUNOFF INTO LANDSCAPE AREAS AND TO APPEAR NEAT AND WELL MAINTAINED.
2. ALL SOD LAID ADJACENT TO THE SHRUB OR GROUNDCOVER PLANTING AREAS SHALL HAVE WELL DEFINED BEDLINES, AND SHALL BE INSTALLED A DISTANCE BACK FROM THE FACE EDGE OF PLANT MATERIALS TO ALLOW FOR GROWTH OF THE PLANTS. THE TOP OF THE SOD AND THE FINISHED GRADE OF THE 3" MULCH COVER SHALL BE FLUSH AND LEVEL.
3. SOD SET ON PREPARED GRADE WHICH IS LEVEL OR GRADED TO MEET THE REQUIREMENTS OF THE ENGINEERED SITE DRAINAGE PLANS.

TOP SOIL NOTES:

1. PLANTING SOIL SHALL CONSIST OF 70% CLEAN, SHARP, SILICA SAND AND 30% EVERGLADES MUCK, MIXED WITH THE NATIVE, EXCAVATED SOIL IN A 1:1 RATIO (50/50).
2. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 6.5 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
3. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

F SOD
SECTION NTS



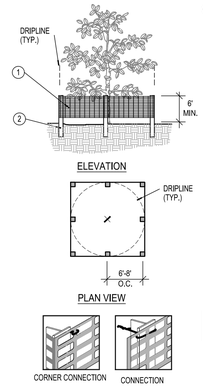
1. FINISH GRADE
2. BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
3. FILTER CLOTH, MIRAFI 500X OR BETTER
4. 12" CLEAN SAND, COMPACTED. ADJUST LAYER THICKNESS SO TOP OF ROOTBALL IS AT LEAST 1" ABOVE FINISHED GRADE.
5. SLOPE BOTTOM TO DRAIN
6. ±18"Ø AUGURED HOLE PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
7. BACKFILL WITH 1/2" - 3/4" GRAVEL.
8. WATER TABLE. (DEPTH VARIES)

NOTE:

FOR A PARKING ISLAND PLANTING SITUATION, CONTRACTOR TO BACKFILL ENTIRE LENGTH OF PLANTING AREA TO WITHIN 6" OF BACK OF CURB OR EDGE OF PAVEMENT.

REFER TO NOTE 0.3 OF WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

G Poor Drainage Condition
PLAN/SECTION NTS



1. 6'H "PERIMETER PLUS" CONSTRUCTION FENCE BY CONWED PLASTICS OR OWNER'S REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
2. 8' TALL METAL "T" POSTS OR 2" x 2" X 8' PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

A. POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.

B. POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/4 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 8' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.

C. SPACE POSTS EVERY 6' (MIN.) TO 8' (MAX.).

D. SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONWED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.

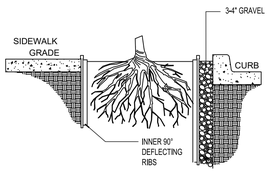
H Tree/Shrub Protector
Barrier Detail NTS

ROOT BARRIER BY: Century Root Barrier (714)632-7083
(or) DeepRoot (800)458-7668

SIZE: 36" D, OR AS NOTED ON PLAN

MATERIAL: POLYETHYLENE WITH ULTRAVIOLET INHIBITORS

THICKNESS: .085 IN. (min.)

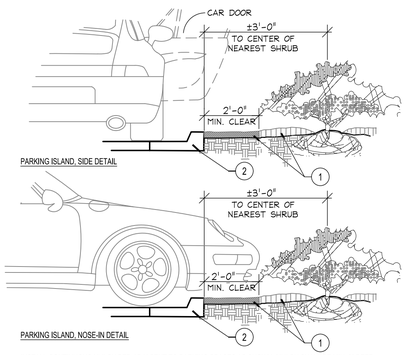


LINEAR APPLICATION

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. CENTURY ROOT BARRIER OR APPROVED EQUAL.
4. ROOT BARRIER TO BE INSTALLED FOR ALL TREES WITHIN 5 FEET OF A SIDEWALK OR UTILITY.

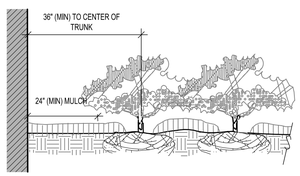
I Root Barrier
Barrier Detail NTS



1. INSTALL CONTINUOUS MULCH BED ADJACENT TO PARKING SPACES AS SHOWN. MULCH SHALL BE MIN. 3" DEEP.

   NO POP-UP IRRIGATION HEADS SHALL BE LOCATED WITHIN 24" OF A PARKING SPACE ON ANY SIDE
2. CURB OR PARKING LOT EDGE, BY OTHERS

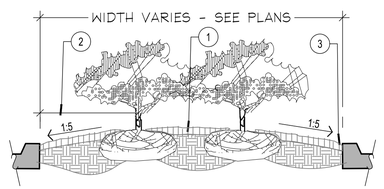
J Parking Space/Curb Planting
SECTION NTS



NOTES

* CLEAR ZONE: 36" MIN. FROM BUILDING TO CENTER OF NEAREST SHRUB.

K Plantings Adjacent to Buildings
SECTION NTS

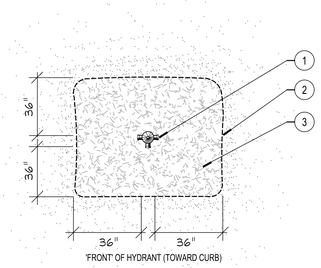


PLANTER ISLAND NOTES

1. CROWN ISLANDS @ 5:1 SLOPES (OR AS SPECIFIED ON THE LANDSCAPE PLANS).
2. CLEAR ZONE: 36" MIN. FROM BACK OF CURB TO CENTER OF NEAREST SHRUB. CLEAR ZONE SHALL CONTAIN 3" CONTINUOUS MULCH OR TURF, SEE PLANS. SEE DETAIL 'I' FOR PLANTER MEDIANS ADJACENT TO PARKING SPACES.
3. 1" MIN VERTICAL CLEARANCE, TOP OF CURB TO TOP OF MULCH.

- EXCAVATE CONTINUOUS 36" DEEP (FROM TOP OF CURB) FOR ENTIRE LENGTH AND WIDTH OF ISLAND & BACKFILL WITH APPROVED PLANTING MIX.
- PROTECT AND RETAIN ALL CURBS AND BASE. COMPACTED SUBGRADE TO REMAIN FOR STRUCTURAL SUPPORT OF CURB SYSTEM (TYP).
- ALL ISLANDS SHALL UTILIZE POOR DRAINAGE DETAIL WHEN PERCOLATION RATES ARE 2" PER HOUR OR LESS.

L Planted Parking Lot Islands / Medians
SECTION NTS



1. FIRE HYDRANT
2. NO TREES SHALL BE PLACED WITHIN SHOWN RADIUS OF ALL PROPOSED OR EXISTING FIRE HYDRANTS. CONTRACTOR SHALL ADJUST PLANT MATERIAL SO THAT NO CONFLICTS WITH FIRE HYDRANTS OCCUR ON SITE.
3. PROVIDE A MULCH, 3" DEPTH MIN., SURROUNDING AREA INDICATED.

M Fire Hydrant Clear Zone
PLAN NTS

Know what's below. Call before you dig.

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KYLER DURHAM, PLA ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

No.	REVISIONS	DATE	BY

Kimley»Horn
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PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KYLER R. DURHAM LICENSE No. LA6667668 STATE OF FLORIDA PROFESSIONAL LANDSCAPE ARCHITECT DATE: 5/8/2025

KHA PROJECT 147992001
DATE 5/8/2025
SCALE AS SHOWN
DESIGNED BY JC
DRAWN BY JC
CHECKED BY KD

LANDSCAPE PLANTING DETAILS

NED FT. PIERCE
PREPARED FOR
ALCAT FT PIERCE LLC

FL
FT. PIERCE

SHEET NUMBER
L-102

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

A. SCOPE OF WORK

1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.

2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED WHERE HEAT WILL DAMAGE ANY PLANT. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/ OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

D. MATERIALS

1. GENERAL

MATERIALS LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL. UPON SUBMITTALS' APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SUBMITTAL
MULCH	PRODUCT DATA
TOPSOIL MIX	AMENDMENT MIX/ PRODUCT DATA/ TEST RESULTS
PLANTS	PHOTOGRAPHS OF ONE (1) OF EACH SPECIES (OR TAGGED IN NURSERY) INDICATE SIZES (HEIGHT/WIDTH) AND QUALITY PER SPEC. CLIENT-REQUESTED TAGGING MAY SUBSTITUTE PHOTOS.
FERTILIZER	PRODUCT DATA
INNOCULANT	PRODUCT DATA
HERBICIDE	PRODUCT DATA

2. PLANT MATERIALS

A. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE

B. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

C. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, MIX)

1. SOIL MIXTURE SHALL CONSIST OF 70% COARSE SAND, 30% FLORIDA PEAT AS DESCRIBED BELOW.
2. SOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING SHALL BE FERTILE, FRIABLE, AND REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEED AND OTHER LITTER, FREE OF ROOTS, STUMPS, STONE LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL HAVE A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
3. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE ORTONA MINED SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TEST FOR PEAT AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL.
4. CONTRACTOR SHALL SUBMIT SAMPLES OF SOIL MIXTURE FOR LANDSCAPE ARCHITECT REVIEW UNDER FORMAL SUBMITTAL AND SUBSEQUENTLY TO OWNER'S REPRESENTATIVE THEREAFTER FOR APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.
5. FLORIDA MUCK / FLORIDA MUCKY PEAT MAY BE PROVIDED AS A SUBSTITUTE FOR THE 30% FLORIDA PEAT, CONTINGENT UPON PRELIMINARY TEST RESULTS AND AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING THE SUBMITTAL PROCESS. ANY CHANGES IN THE PERCENTAGES OR PARENT MATERIALS REQUIRED TO PROVIDE THE SPECIFIED MIXTURE AS DETERMINED BY THE LANDSCAPE ARCHITECT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
6. CONTRACTOR SHALL PROVIDE PH TEST RESULTS FOR ALL MIX COMPONENTS AND FINAL MIX.
7. CONTRACTOR SHALL PROVIDE PENETROMETER ON-SITE AT ALL TIMES FOR COMPACTION INSPECTION AT THE DISCRETION OF THE LANDSCAPE ARCHITECT.
8. PENETROMETER CRITERIA / SPECIFICATIONS SHALL RANGE FROM APPROX. 75 PSI TO LESS THAN 300 PSI OR AS DETERMINED BY THE LANDSCAPE ARCHITECT.
9. FINAL MIX SHALL BE TESTED TO HAVE A SATURATED WEIGHT OF NO MORE THAN 85 POUNDS PER CUBIC FOOT WHEN COMPACTED TO 85% STANDARD PROCTOR. FERTILIZER PRODUCT DATA AND RATE SCHEDULE SHALL BE SUBMITTED CONCURRENTLY WITH THE SOIL SUBMITTAL FOR EVALUATION BY THE LANDSCAPE ARCHITECT.
10. SOIL SHALL BE SUPPLIED BY ATLAS PEAT & SOIL INC. 9621 STATE ROAD, BOYNTON BEACH, FLORIDA 33472 PHONE: 561-734-7300.

F. WATER

WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

*WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

G. FERTILIZER

CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

*FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

H. ROCK MULCH

ROCK MULCH MATERIAL SHALL BE TWO (2) TO THREE (3) INCHES DIAMETER CHATTAHOOCHEE ROCK (OR APPROVED EQUAL) AT A MINIMUM DEPTH OF THREE (3) INCHES IN ALL LANDSCAPE SHRUB AND GROUNDCOVER AREAS. THE ROCK MULCH SHALL CONFINE TO THE LANDSCAPE BED LINES ESTABLISHED BY ADJACENT SOD AREAS, HARDSCAPE AREAS, AND CURBS. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE).

I. DIGGING AND HANDLING

1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.
3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS, COMPLYING WITH FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS, CURRENT EDITION. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB- BASES.

J. CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION, FLORIDA #1 OR BETTER.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.
4. SUBSTITUTION OF NON-CONTAINER GROWN MATERIAL FOR MATERIAL EXPLICITLY SPECIFIED TO BE CONTAINER GROWN WILL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL IS OBTAINED FROM THE OWNER OR OWNER'S REPRESENTATIVE.

K. COLLECTED STOCK

WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.

L. NATIVE STOCK

PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.

M. MATERIALS LIST

QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE

N. FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. THIS CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES.

O. PLANTING PROCEDURES

1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL NATIONAL ONE CALL - 811 - TO LOCATE UTILITIES.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36". CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND ADEQUATE PERCOLATION CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE , PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES, METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK Z60.1. UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACKFILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER PERCOLATION. IF POOR PERCOLATION EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACKFILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE, ONLY WITH MULCH. ALL BURLAP, ROPE, WIRES, BASKETS, ETC., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. PRUNING: TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY LICENSED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6", REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" TO ACHEIVE SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. MULCHING: PROVIDE A THREE INCH (MINIMUM) LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT PLANTED UNDER THIS CONTRACT.
17. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)

P. LAWN SODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE. IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.
3. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.
4. SODDING
   A. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
   B. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.
   C. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED - REFER TO DETAILS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE:
   A. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
   B. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

Q. CLEANUP

UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

R. PLANT MATERIAL MAINTENANCE

ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF 90 CALENDAR DAYS COMMENCING AFTER ACCEPTANCE.

S. MAINTENANCE (ALTERNATE BID ITEM)

CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR MAINTENANCE FOLLOWING THE INITIAL 90-DAY MAINTENANCE PERIOD ON A COST-PER-MONTH BASIS.

T. FINAL INSPECTION AND ACCEPTANCE OF WORK

FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

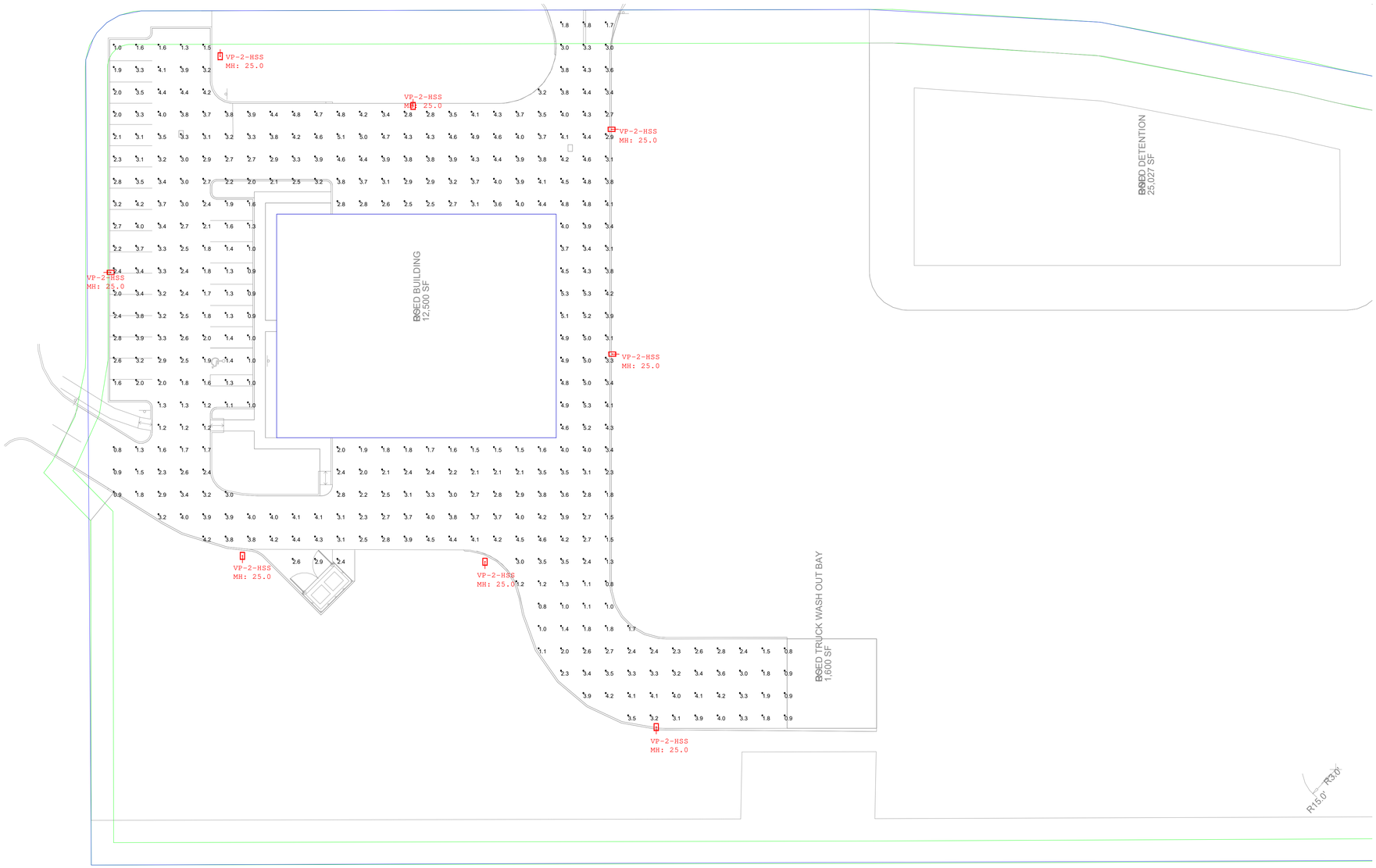
U. WARRANTY

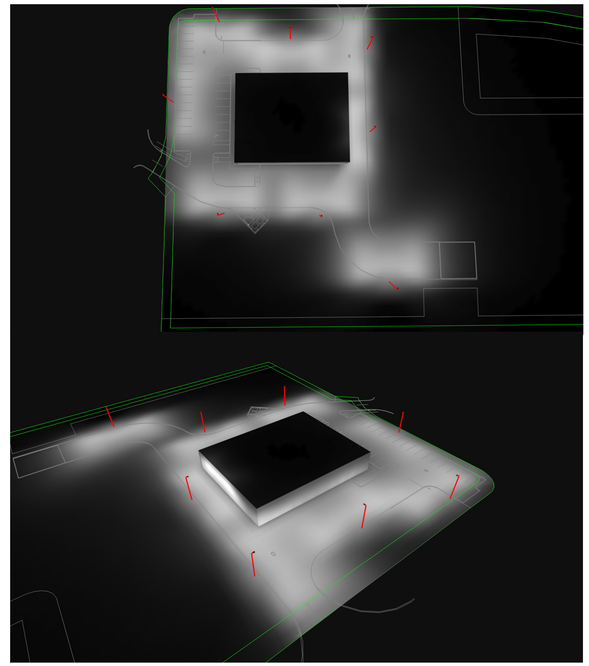
1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.
2. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED UNDER "PLANTING", AT NO ADDITIONAL COST TO THE OWNER.
3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE

NOTES:

1. THE FOOTCANDLE LEVELS AS SHOWN ARE BASED ON THE FOLLOWING CRITERIA. ANY SUBSTITUTIONS IN SPECIFIED FIXTURES OR CHANGES TO LAYOUT WILL AFFECT LIGHTING LEVELS SHOWN AND WILL NOT BE THE RESPONSIBILITY OF SECURITY LIGHTING.

2. DISTANCE BETWEEN READINGS 10'





Pole Fixtures Are Full Cutoff
Tilt=0
Calculation Grids Are At Grade
Pole Light Mounting Height=25ft
(22' Pole + 3' Base)

Lightug Ord
Min Avg 2FC
Uniformity Avg/Min 4/1

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Paved Surface Areas	Illuminance	Fc	3.01	5.3	0.8	3.76	6.63

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	LLF	Description	Lum. Watts	EPA	Mtg Height
	8	VP-2-HSS	Single	0.850	VP-2-320L-185--5K7-4W-HSS-90-B	191.4	0.607	25

1. THIS LIGHTING DESIGN IS BASED ON INFORMATION SUPPLIED BY OTHERS TO SECURITY LIGHTING SYSTEMS. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AID. FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.

2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.

3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

4. THIS LAYOUT MAY NOT MEET TITLE 24 OR LOCAL ENERGY REQUIREMENTS. IF THIS LAYOUT NEEDS TO E COMPLIANT WITH TITLE 24 OR OTHER ENERGY REQUIREMENTS, PLEASE CONSULT FACTORY WITH SPECIFIC DETAILS REGARDING PROJECT REQUIREMENTS SO THAT REVISIONS MAY BE MADE TO THE DRAWING.

SECURITY LIGHTING™

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES

SCALE 1"=25' 0"

DRAWN BY CLB

POINT-BY-POINT FOOTCANDLE PLOT FOR

Alcat Ft Pierce LLC
2835 Reynolds Dr, Ft. Pierce FL

DATE 3/24/2025

DRAWING NUMBER A250557B.AGI

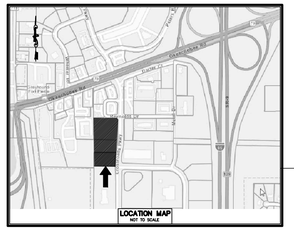
Kimley»Horn

A color board is not required for the submission. Please see the architectural generation below.

Sign renderings are not available/ required at this point.

TREE SURVEY

UNPLATTED ACREAGE



NORTH

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
INTENDED DISPLAY SCALE
1 INCH = 30 FEET

N00°17'00"E 230.00'

N00°17'00"E 230.00'

N00°25'52"E 359.84'

LOT 4
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

LOT 5
CROSSROADS PARK OF COMMERCE
PHASE 1
(PB 30, PG 11)

LOT 3
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

LOT 2
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

LOT 1D
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

S89°43'00"E 360.00'

N89°43'00"W 370.25'

S89°24'15"E 402.03'

N89°33'36"W 160.00'

S89°33'36"E 128.00'

R=461.07'
(RADIAL)
35.33'

R=700.00'
Δ=2°53'27"
L=35.33'

REYNOLDS DRIVE
25' RIGHT-OF-WAY
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

S00°17'00"W 124.33'

R=550.00'
Δ=11°04'37"
L=106.33'

R=550.00'
Δ=3°30'52"
L=33.74'

R=750.00'
Δ=14°26'05"
L=188.95'

S00°26'24"W
1.01'

N00°26'24"E 334.94'

R=35.00'
Δ=89°30'35"
L=54.68'

CROSSROADS PARKWAY
50' RIGHT-OF-WAY
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

CROSSROADS PARKWAY
50' RIGHT-OF-WAY
CROSSROADS PARK OF COMMERCE PHASE 1
(PB 30, PG 11)

SYMBOLS:

○ = LOCATED TREE
(X) = TREE TAG NUMBER IDENTIFIED IN FIELD
(XX) = TREE TAG NUMBER IDENTIFIED IN FIELD
(XXX) = TREE TAG NUMBER IDENTIFIED IN FIELD
● = PROPERTY CORNER PROVIDED BY CLIENT(NOT LOCATED IN FEILD)

NOTES:

1. SURVEY MAP OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR.

2. THIS IS A SPECIFIC PURPOSE SURVEY, THE PUROPOSE OF THIS SURVEY IS TO IDENITIFY LOCATIONS OF TREES ON LOTS 2, 3 & 4 "CROSSROADS PARK OF COMMERCE PHASE I", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 30, PAGE 11 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

3. THIS IS A TREE SURVEY.

4. THE LAND BOUNDARY, BEARINGS AND DISTANCES SHOWN HEREON ARE ABSTRACTED FROM A BOUNDARY SURVEY PROVIDED BY KIMLEY HORN, DATED 03-11-2021.

5. LOCATIONS OF ALL TREES WERE OBTAINED USING REAL TIME KINEMATIC GPS METHODOLOGIES WITH BROADCAST CORRECTIONS FROM THE L-NET VIRTUAL REFERENCE NETWORK AND HAVE HORIZONTAL ACCURACIES TO 0.04'.

6. TREE'S WERE TAGGED AND IDENTIFIED BY ENVIRONMENTAL CONSULTANT, INFORMATION IN TABLES WERE PROVIDED BY CLIENT.

CERTIFIED:

I HEREBY CERTIFY THAT THE ATTACHED TREE SURVEY OF THE HEREON DESCRIBED PROPERTY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION ON MARCH 5, 2025. I FURTHER CERTIFY THAT THIS BOUNDARY SURVEY MEETS THE STANDARDS OF PRACTICE SET FORTH IN CHAPTER 5J-17.050, 5J-17.051, FLORIDA ADMINISTRATIVE CODE, ADOPTED BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS, PURSUANT TO FLORIDA STATUTES 472.027, AS AMENDED AND CHAPTERS 177.041 AND 177.061, FLORIDA STATUTES.
THE FIELDWORK WAS COMPLETED ON FEBRUARY 20, 2025.

_____
DAVID P. LINDLEY, P.L.S.
REG. LAND SURVEYOR #5005
STATE OF FLORIDA – LB #3591

REVISIONS	DATE	BY
FILE NAME 11331-TREE-SURVEY	03/05/2025	BP

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

CROSSROADS PARK OF COMMERCE PHASE 1
LOT 2, LOT 3 & LOT 4
TREE SURVEY

DATE 03/05/2025
DRAWN BY BP
F.B./ PG. ELECT
SCALE AS SHOWN

JOB # 11331
SHT.NO. 1
OF 2 SHEETS

TREE SURVEY TABLE

NED FT. PIERCE

TREE DISPOSITION
and
MITIGATION LIST

KHA TREE NO.	SCIENTIFIC NAME	COMMON NAME	DBH (In.)	SPREAD(ft)	HEIGHT(FT)	CONDITION	DISPOSITION
1	*Quercus laurifolia*	Laurel Oak	25	36'	45'	Good	Remain
2	*Sabal Palmeto*	Cabbage Palm	12	16'	35'	Fair	Remain
3	*Quercus laurifolia*	Laurel Oak				DEAD	Remain
4	*Quercus laurifolia*	Laurel Oak	25	39	40	Good	Remain
5	*Sabal Palmeto*	Cabbage Palm	12	16	20	Poor	Remain
6	*Schefflera actinophylla*	Umbrella Plant	Multi	15	40	Poot	Remain
7	*Quercus laurifolia*	Laurel Oak	18	36	30	Poor	Remain
8	*Pinus elliotti*	Slash Pine	20	35	40	Good	Remove
9	*Pinus elliotti*	Slash Pine	14	20	35	Fair	Remove
10	*Quercus laurifolia*	Laurel Oak	35	51	45	Good	Remove
11	*Pinus elliotti*	Slash Pine	14	18	35	Poor	Remove
12	*Quercus laurifolia*	Laurel Oak	25	45	35	Fair	Remove
13	*Sabal Palmeto*	Cabbage Palm	16	18	30	Fair	Remove
14	*Pinus elliotti*	Slash Pine	15	30	40	Fair	Remove
15	*Quercus laurifolia*	Laurel Oak	12	20	35	Poor	Remove
16	*Pinus elliotti*	Slash Pine	0	20	45	Poor	Remove
17	*Quercus laurifolia*	Laurel Oak	17	25	30	Poor	Remove
18	*Pinus elliotti*	Slash Pine	16	25	35	Poor	Remove
19	*Pinus elliotti*	Slash Pine	10	35	35	Poor	Remove
20	*Pinus elliotti*	Slash Pine	16	20	40	Fair	Remove
21	*Pinus elliotti*	Slash Pine	12	25	50	Fair	Remove
22	*Quercus laurifolia*	Laurel Oak	14	30	30	Fair	Remove
23	*Pinus elliotti*	Slash Pine	17	40	35	Fair	Remove
24	*Pinus elliotti*	Slash Pine	14	25	30	Fair	Remove
25	*Pinus elliotti*	Slash Pine	12	14	20	Fair	Remove
26	*Quercus laurifolia*	Laurel Oak	31	18	31	Fair	Remove
27	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
28	*Pinus elliotti*	Slash Pine	14	25	4	Fair	Remove
29	*Pinus elliotti*	Slash Pine	13	20	35	Poor	Remove
30	*Pinus elliotti*	Slash Pine	16	30	30	Poor	Remove
31	*Pinus elliotti*	Slash Pine	20	30	35	Fair	Remove
32	*Pinus elliotti*	Slash Pine	10	15	35	Fair	Remove
33	*Sabal Palmeto*	Cabbage Palm	10	14	25	Fair	Remove
34	*Sabal Palmeto*	Cabbage Palm	12	16	20	Fair	Remove
35	*Sabal Palmeto*	Cabbage Palm	12	16	20	Fair	
36	*Pinus elliotti*	Slash Pine	16	25	35	Poor	Remain
37	*Pinus elliotti*	Slash Pine	14	20	40	Poor	Remain
38	*Quercus laurifolia*	Laurel Oak	14	30	30	Poor	Remain
39	*Pinus elliotti*	Slash Pine	10	20	30	Poor	Remove
40	*Pinus elliotti*	Slash Pine	16	20	35	Poor	Remain
41	*Pinus elliotti*	Slash Pine	12	20	35	Poor	Remain
42	*Pinus elliotti*	Slash Pine	12	30	35	Fair	Remain
43	*Sabal Palmeto*	Cabbage Palm	12	14	25	Fair	Remain
44	*Sabal Palmeto*	Cabbage Palm	14	14	25	Fair	Remain
45	*Quercus laurifolia*	Laurel Oak	36	40	35	Fair	Remove
46	*Pinus elliotti*	Slash Pine	16	30	30	Fair	Remove
47	*Pinus elliotti*	Slash Pine	10	20	40	Poor	Remove
48	*Pinus elliotti*	Slash Pine	20	30	40	Fair	Remove
49	*Pinus elliotti*	Slash Pine	12	20	35	Poor	Remove
50	*Pinus elliotti*	Slash Pine	10	20	35	Fair	Remove
51	*Pinus elliotti*	Slash Pine	10	20	40	Fair	Remove
52	*Pinus elliotti*	Slash Pine	10	20	30	Poor	Remove
53	*Pinus elliotti*	Slash Pine	12	15	30	Poor	Remove
54	*Pinus elliotti*	Slash Pine	16	30	40	Poor	Remove
55	*Pinus elliotti*	Slash Pine	10	20	35	Poor	Remove
56	*Pinus elliotti*	Slash Pine	14	20	40	Good	Remove
57	*Pinus elliotti*	Slash Pine	16	30	40	Fair	Remove
58	*Pinus elliotti*	Slash Pine	10	20	35	Poor	Remove
59	*Pinus elliotti*	Slash Pine	11	15	35	Poor	Remove
60	*Pinus elliotti*	Slash Pine	12	15	35	Poor	Remove

NED FT. PIERCE

TREE DISPOSITION
and
MITIGATION LIST

KHA TREE NO.	SCIENTIFIC NAME	COMMON NAME	DBH (In.)	SPREAD(ft)	HEIGHT(FT)	CONDITION	DISPOSITION
61	*Pinus elliotti*	Slash Pine	10	20	35	Poor	Remove
62	*Pinus elliotti*	Slash Pine	12	20	35	Poor	Remove
63	*Sabal Palmeto*	Cabbage Palm	12	16	25	Fair	Remove
64	*Pinus elliotti*	Slash Pine	10	20	40	Poor	Remove
65	*Quercus laurifolia*	Laurel Oak	42	50	35	Fair	Remove
66	*Pinus elliotti*	Slash Pine	14	30	30	Fair	Remove
67	*Sabal Palmeto*	Cabbage Palm	12	12	30	Fair	Remove
68	*Sabal Palmeto*	Cabbage Palm	12	16	30	Fair	Remove
69	*Sabal Palmeto*	Cabbage Palm	14	16	20	Fair	Remove
70	*Pinus elliotti*	Slash Pine	14	30	36	Fair	Remove
71	*Pinus elliotti*	Slash Pine	14	20	35	Poor	Remove
72	*Pinus elliotti*	Slash Pine	28	30	35	Fair	Remove
73	*Pinus elliotti*	Slash Pine	14	20	35	Fair	Remove
74	*Quercus laurifolia*	Laurel Oak	15	20	20	Poor	Remove
75	*Pinus elliotti*	Slash Pine	14	25	35	Fair	Remove
76	*Quercus laurifolia*	Laurel Oak	16	35	35	Fair	Remove
77	*Quercus laurifolia*	Laurel Oak	16	20	25	Poor	Remove
78	*Quercus laurifolia*	Laurel Oak	24	3	35	Poor	Remove
79	*Quercus laurifolia*	Laurel Oak	36	40	40	Fair	Remove
80	*Quercus laurifolia*	Laurel Oak	36	40	35	Fair	Remove
81	*Quercus laurifolia*	Laurel Oak	28	30	35	Poor	Remove
82	*Quercus virginiana*	Live Oak	28	40	40	Fair	Remove
83	*Sabal Palmeto*	Cabbage Palm	14	16	35	Fair	Remove
84	*Pinus elliotti*	Slash Pine	16	30	40	Fair	Remove
85	*Quercus laurifolia*	Laurel Oak	12	30	35	Poor	Remove
86	*Pinus elliotti*	Slash Pine	18	30	35	Fair	Remove
87	*Quercus laurifolia*	Laurel Oak	14	20	30	Poor	Remove
88	*Quercus laurifolia*	Laurel Oak	40	40	40	Fair	Remove
89	*Quercus laurifolia*	Laurel Oak	36	30	35	Fair	Remove
90	*Quercus laurifolia*	Laurel Oak	18	30	35	Poor	Remove
91	*Quercus laurifolia*	Laurel Oak	36	40	35	Poor	Remove
92	*Pinus elliotti*	Slash Pine	12	20	35	Fair	Remove
93	*Pinus elliotti*	Slash Pine	14	20	40	Poor	Remove
94	*Pinus elliotti*	Slash Pine	18	20	40	Poor	Remove
95	*Quercus laurifolia*	Laurel Oak	14	40	35	Fair	Remove
96	*Pinus elliotti*	Slash Pine	16	25	35	Poor	Remove
97	*Pinus elliotti*	Slash Pine	12	25	35	Fair	Remove
98	*Pinus elliotti*	Slash Pine	12	30	35	Fair	Remove
99	*Quercus laurifolia*	Laurel Oak	30	40	35	Fair	Remove
100	*Pinus elliotti*	Slash Pine	16	25	40	Fair	Remove
101	*Pinus elliotti*	Slash Pine	16	25	35	Fair	Remove
102	*Sabal Palmeto*	Cabbage Palm	14	14	25	Good	Remove
103	*Pinus elliotti*	Slash Pine	12	30	35	Fair	Remove
104	*Quercus laurifolia*	Laurel Oak	44	40	40	Poor	Remove
105	*Sabal Palmeto*	Cabbage Palm				Dead	Remove
106	*Quercus laurifolia*	Laurel Oak	14	30	30	Poor	Remove
107	*Sabal Palmeto*	Cabbage Palm	10	14	25	Fair	Remove
108	*Pinus elliotti*	Slash Pine	10	15	30	Poor	Remove
109	*Pinus elliotti*	Slash Pine	8	10	25	Poor	Remove
110	*Pinus elliotti*	Slash Pine	8	15	20	Poor	Remove
111	*Pinus elliotti*	Slash Pine	22	40	36	Fair	Remove
112	*Pinus elliotti*	Slash Pine	10	15	26	Poor	Remain
113	*Pinus elliotti*	Slash Pine	24	30	40	Fair	Remain
114	*Sabal Palmeto*	CabbagePalm	.	14	25	Good	Remain
115	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
116	*Pinus elliotti*	Slash Pine	29	30	40	Fair	Remove
117	*Pinus elliotti*	Slash Pine	10	15	30	Poor	Remain
118	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remain
119	*Pinus elliotti*	Slash Pine	12	20	30	Poor	Remove
120	*Pinus elliotti*	Slash Pine	14	20	25	Poor	

NED FT. PIERCE

TREE DISPOSITION
and
MITIGATION LIST

KHA TREE NO.	SCIENTIFIC NAME	COMMON NAME	DBH (In.)	SPREAD(ft)	HEIGHT(FT)	CONDITION	DISPOSITION
121	*Pinus elliotti*	Slash Pine	10	20	35	Fair	Remove
122	*Pinus elliotti*	Slash Pine	16	20	35	Fair	Remove
123	*Pinus elliotti*	Slash Pine	14	25	30	Fair	Remove
124	*Pinus elliotti*	Slash Pine	6	8	20	Poor	Remove
125	*Quercus virginiana*	Live Oak	12	35	35	Good	Remove
126	*Quercus virginiana*	Live Oak	12	35	35	Good	Remove
127	*Quercus virginiana*	Live Oak	12	35	35	Good	Remove
128	*Quercus virginiana*	Live Oak	12	35	35	Good	Remove
129	*Quercus virginiana*	Live Oak	12	35	35	Good	Remove
130	*Quercus virginiana*	Live Oak	10	35	30	Good	Remove
131	*Quercus virginiana*	Live Oak	12	35	30	Good	Remove
132	*Quercus virginiana*	Live Oak	12	35	30	Good	Remove
133	*Quercus virginiana*	Live Oak	12	30	25	Fair	Remove
134	*Quercus virginiana*	Live Oak	12	25	25	Poor	Remove
135	*Quercus virginiana*	Live Oak	10 (multi)	15	25	Poor	Remove
136	*Quercus virginiana*	Live Oak	12	30	30	Good	Remove
137	*Quercus virginiana*	Live Oak	10	30	30	Good	Remove
138	*Quercus virginiana*	Live Oak	10	25	25	Good	Remove
139	*Quercus virginiana*	Live Oak	10	25	25	Good	Remove
140	*Quercus virginiana*	Live Oak	10	25	25	Good	Remove
141	*Quercus virginiana*	Live Oak	10	20	25	Good	Remove
142	*Quercus virginiana*	Live Oak	12	30	30	Good	Remove
143	*Quercus virginiana*	Live Oak	14	30	30	Good	Remove
144	*Quercus virginiana*	Live Oak	12	30	24	Poor	Remove
145	*Quercus virginiana*	Live Oak	8	20	20	Poor	Remove
146	*Quercus virginiana*	Live Oak	12	30	30	Fair	Remove
147	*Quercus virginiana*	Live Oak	10	20	20	Fair	Remove
148	*Quercus virginiana*	Live Oak	8	20	20	Fair	Remove
149	*Quercus virginiana*	Live Oak	8	20	20	Poor	Remove
150	*Quercus virginiana*	Live Oak	10	20	20	Poor	Remove
151	*Quercus virginiana*	Live Oak	8	15	15	Poor	Remove
152	*Quercus virginiana*	Live Oak	8 (multi)	15	15	Poor	Remove
153	*Pinus elliotti*	Slash Pine	36	40	35	Good	Remove
154	*Pinus elliotti*	Slash Pine	24	30	30	Good	Remove
155	*Quercus laurifolia*	Laurel Oak	9	20	25	Fair	Remove
156	*Quercus laurifolia*	Laurel Oak	14	30	30	Fair	Remove
157	*Pinus elliotti*	Slash Pine	30	30	35	Fair	Remove
158	*Quercus laurifolia*	Laurel Oak	9	20	20	Good	Remain
159	*Quercus laurifolia*	Laurel Oak	18 (total)	35	25	Poor	Remain
160	*Quercus laurifolia*	Laurel Oak	16 (total)	20	25	Poor	Remain
161	*Quercus laurifolia*	Laurel Oak	18 (total)	20	25	Poor	Remain
162	*Quercus laurifolia*	Laurel Oak	7	15	20	Poor	Remain
163	*Quercus laurifolia*	Laurel Oak	8	20	20	Poor	Remain
164	*Quercus laurifolia*	Laurel Oak	9	20	20	Poor	Remain
165	*Sabal Palmeto*	Cabbage Palm	10	15	20	Poor	Remain
166	*Quercus laurifolia*	Laurel Oak	10	15	25	Poor	Remain
167	*Quercus laurifolia*	Laurel Oak	10	15	25	Poor	Remain
168	*Quercus laurifolia*	Laurel Oak	16	20	25	Poor	Remain
169	*Quercus virginiana*	Live Oak (Leaning)	16	20	15	Poor	Remain
170	*Quercus laurifolia*	Laurel Oak (Cluster)	36 (tyotal)	25	30	Poor	Remain
171	*Quercus laurifolia*	Laurel Oak	8	20	15	Poor	Remain
172	*Quercus laurifolia*	Laurel Oak	13	25	0	Poor	Remain
173	*Quercus laurifolia*	Laurel Oak	14	20	35	Poor	Remain
174	*Quercus laurifolia*	Laurel Oak	14	25	30	Poor	Remove
175	*Quercus laurifolia*	Laurel Oak	16	25	30	Poor	Remain
176	*Quercus laurifolia*	Laurel Oak	6	8	15	Poor	Remain
177	*Pinus elliotti*	Slash Pine	30	25	35	Good	Remain
178	*Quercus laurifolia (split at 5')*	Laurel Oak	24	26	35	Poor	Remain
179	*Sabal Palmeto*	Cabbage Palm	14	16	25	Poor	Remain
N.I.S. = Not in Scope							**TOTAL PALMS REMOVED (EA.)**

REVISIONS	DATE	BY
	03/05/2025	BP

FILE NAME 11331-TREE-SURVEY

CAULFIELD & WHEELER, INC.
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE - SURVEYING
7900 GLADES ROAD - SUITE 100
BOCA RATON, FLORIDA 33434
PHONE (561)-392-1991 / FAX (561)-750-1452

CROSSROADS PARK OF COMMERCE PHASE 1
LOT 2, LOT 3 & LOT 4
TREE SURVEY

DATE 03/05/2025
DRAWN BY BP
F.B./ PG. ELECT
SCALE AS SHOWN

JOB # 11331
SHT.NO.
2
OF 2 SHEETS

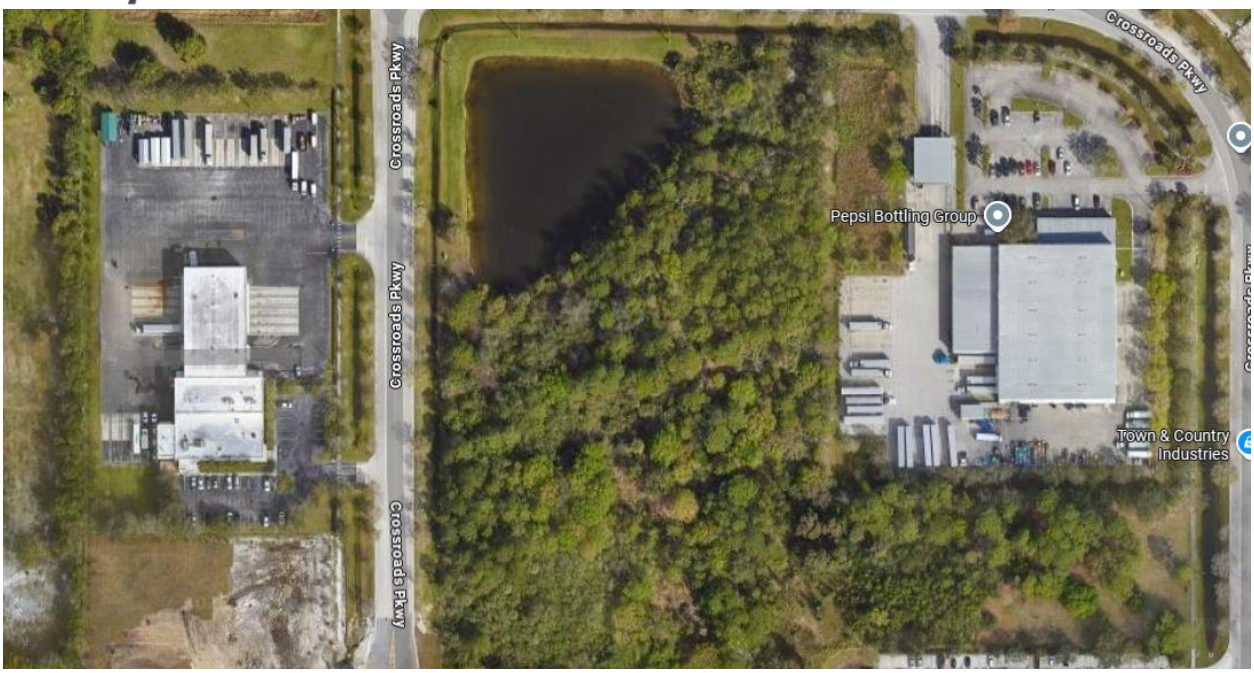


Figure 1: Aerial showing nearby commercial/ industrial uses

Figure 2: Southern manufacturing facility

Figure 3: Southern manufacturing facility

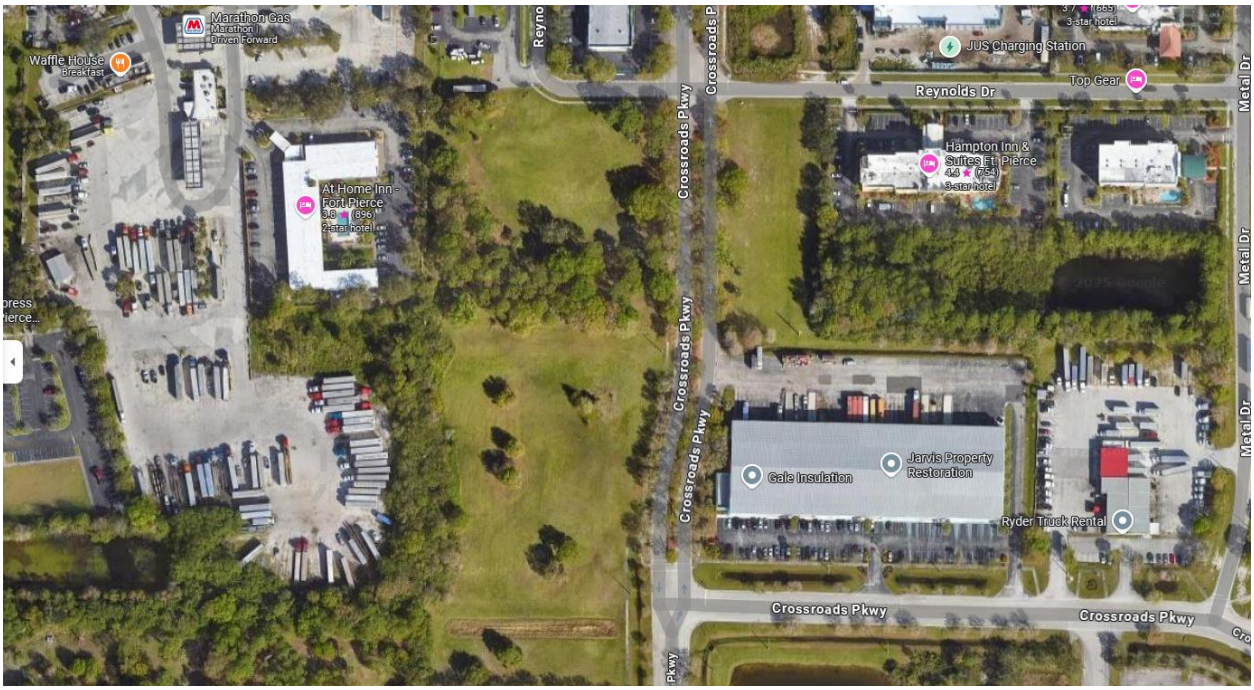


Figure 4: Aerial showing project site and nearby commercial/ industrial uses

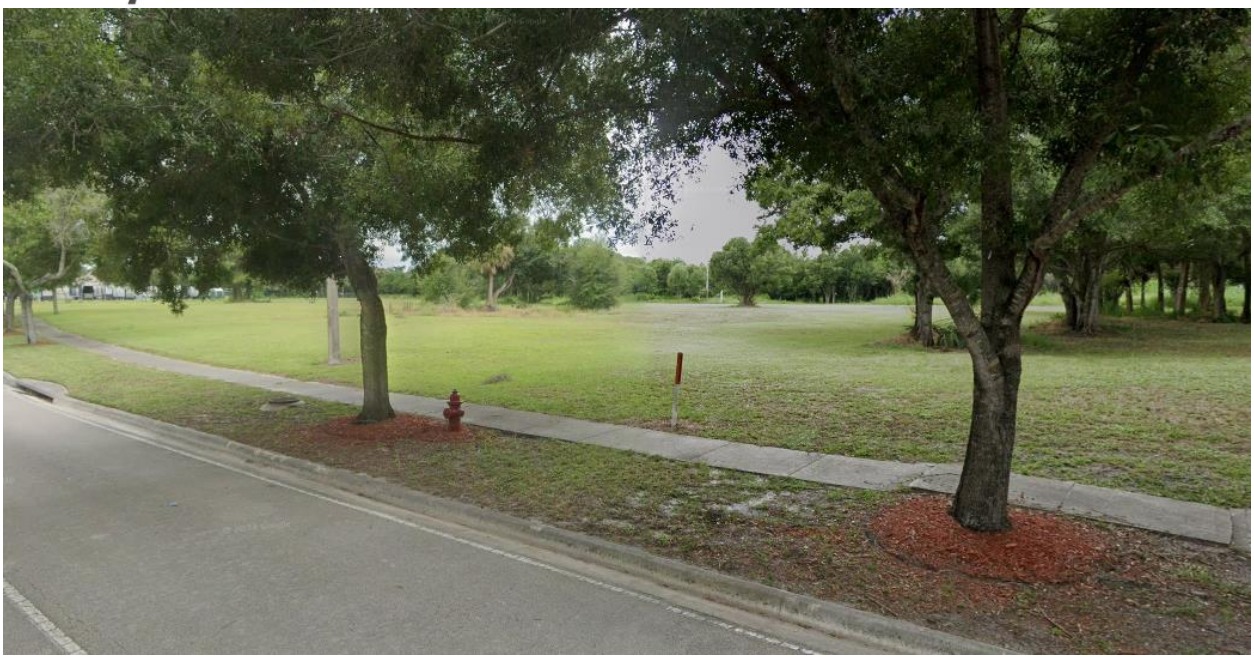


Figure 5:Project site existing conditions

Figure 6: Western truck yard

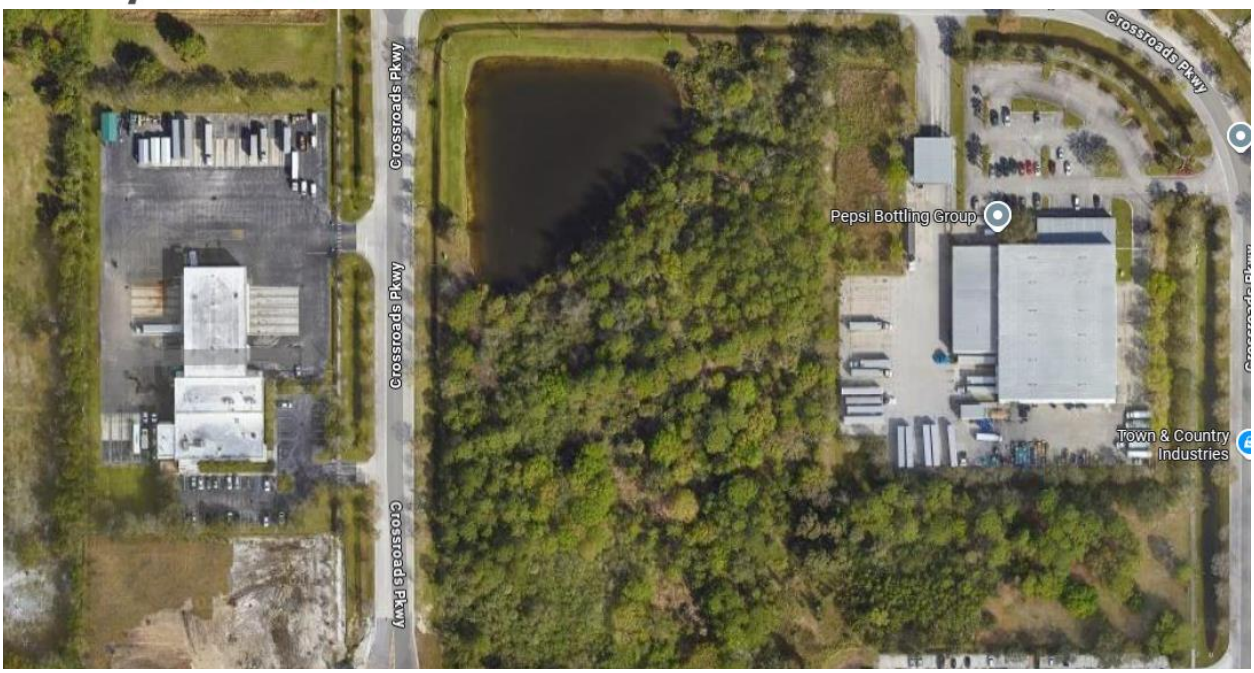


Figure 1: Aerial showing nearby commercial/ industrial uses

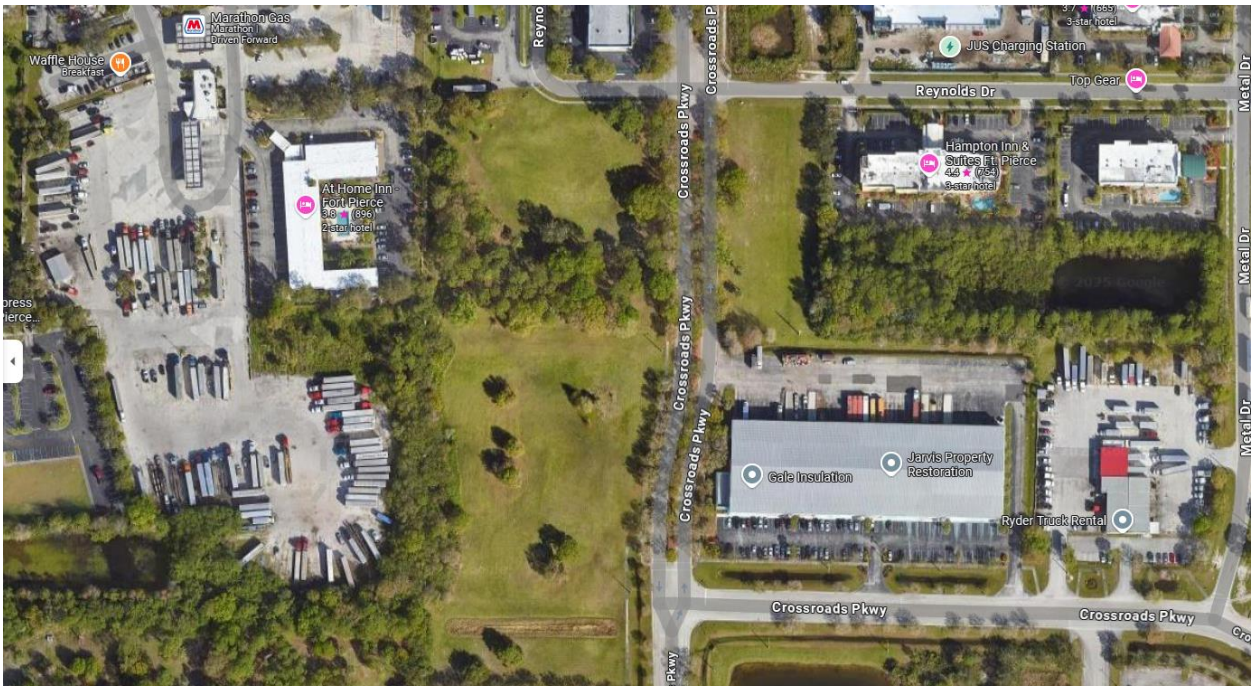


Figure 2: Aerial showing project site and nearby commercial/ industrial uses

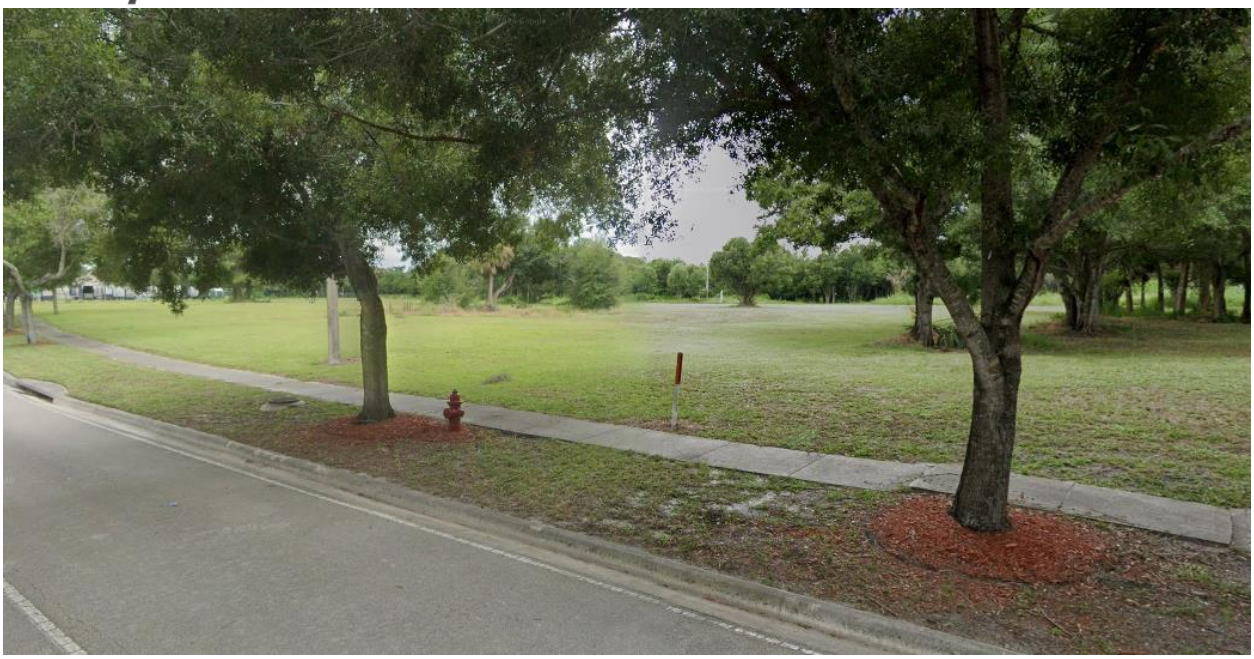


Figure 3:Project site existing conditions

Figure 4: Project site existing conditions

Natural Resource Assessment

National Equipment Dealers (NED) Ft. Pierce

St. Lucie County, Florida

Prepared for:
Alcat Ft. Pierce, LLC.
655 North A1A
Jupiter, FL 33477

147992001
March 2025

445 24th St, Suite 200
Vero Beach, FL 32960
772-794-4100

Kimley»Horn

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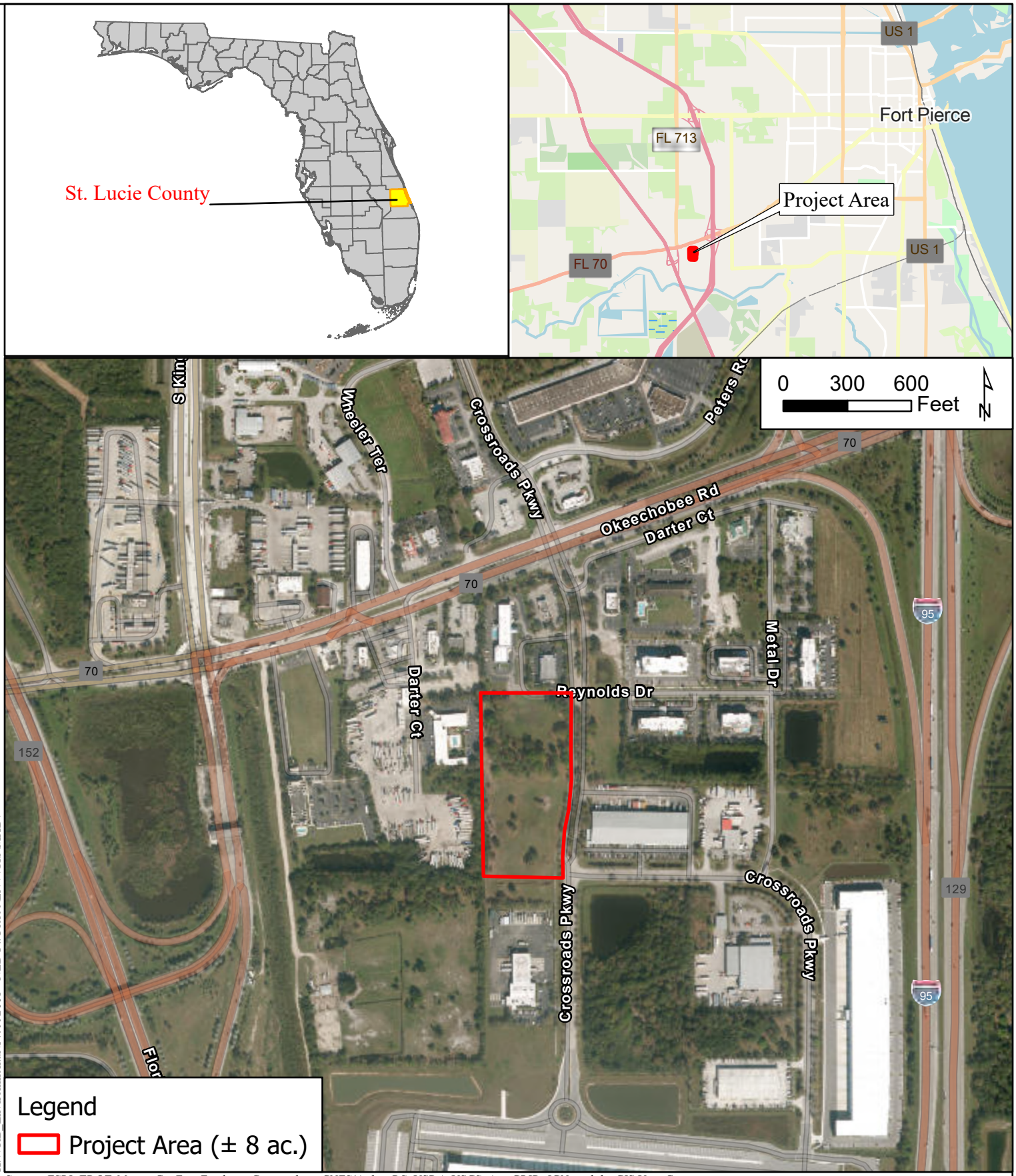
Technical Memorandum

NED Ft. Pierce
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 within the project site. This Natural Resource Assessment (NRA) aims to characterize the existing property conditions 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 the habitats present and to determine environmental constraints for the project site. The project site comprises approximately 8 acres of undeveloped lands south of Okeechobee Road, east of Florida's Turnpike, and west of Interstate 95 in Ft. Pierce, Section 24 Township 35 South, and Range 39 East in St. Lucie County, Florida. A location map is attached as ***Figure 1*** and a U.S. Geological Service (USGS) 7.5-Minute quadrangle map depicting the location of the project site is attached as ***Figure 2***. Based on a review of the USGS quadrangle map, the elevation within the project site range is approximately 15 feet.



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

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Project Location Map

NED Fort Pierce
St. Lucie County, Florida

1 inch = 600 feet	PROJECT NUMBER: 147992001	FEBRUARY 2025	FIGURE 1

K:\VRB_Environmental\147992001 - NED Ft. Pierce\ENV\GIS\MXD\

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

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USGS Topographic Map

NED Fort Pierce
St. Lucie County, Florida

1 inch = 1,000 feet	PROJECT NUMBER: 147992001	FEBRUARY 2025	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), USGS, Florida Fish and Wildlife Conservation Commission (FWC) [(https://myfwc.com/wildlifehabitats/wildlife/) and (https://cbop.audubon.org/conservation/about-eaglewatch-program)]
- 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/)
- USGS Quadrangle Maps, Land Boundary Information System (LABINS; http://www.labins.org)
- South Florida Water Management District (SFWMD) Interactive GIS Map
- Florida Department of Environmental Protection (FDEP) MapDirect GIS
- City of Ft. Pierce Land Development Code
- Chapter 62-340, Florida Administrative Code (FAC) and the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual

A field review of the project site was conducted by environmental scientists in February 2025, to document the existing habitat conditions and determine potential wildlife utilization.

3.0 EXISTING CONDITIONS

3.1 SOILS

The USDA / NRCS *Soil Survey of Marion County, Florida,* maps the following soil on the property: (25) nettles and Oldsmar sand. This soil type is non-hydric. A copy of the digital USDA/NRCS soils data is attached as ***Figure 3.***

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 study area is attached as ***Figure 4***. A description of the upland land cover, included below, characterizes dominant vegetation observed along random pedestrian transects and does not represent an all-inclusive vegetative inventory.

FLUCFCS 190 – OPEN LAND (± 6.2 ac.)

This land use type is found throughout the project site. The majority of this area was dominated by herbaceous groundcover including bahia grass (*Paspalum notatum*), Mexican clover (*Richardia grandiflora*), pennywort (*hydrocolyte sp*.), tassel flower (*Emilia sonchifolia*), and Spanish needles (*Bidens frondosa*). The southwestern edge of this land use type is unmaintained and has a sub canopy of Brazilian pepper (*Schinus terebinthifolia*), wax myrtle (*Myrica cerifera*), and umbrella tree (*Schefflera actinophylla*). Additional groundcover species found in this area included wild coffee (*Psychotria nervosa*), Caesar weed (*Urena lobata*), dog fennel (*Eupatorium capillifolium*), wire grass (*Aristida stricta*), and big cordgrass (*Sporobolus cynosuroides*).

FLUCFCS 438 – MIXED HARDWOODS (± 1.6 ac.)

This land use type bisects the site. This area is characterized by a canopy of mature trees and an open midstory due to the groundcover being mowed and maintained. Canopy species in this area include slash pine (*Pinus elliottii*), laurel oak (*Quercus laurifolia*), sand live oak (*Quercus geminata*), and cabbage palm (*sabal palmetto*). Groundcover is similar to that of the open land area, and includes bahia grass, Mexican clover, tassel flower, and smilax (*Smilax sp*.).

3.3 WETLANDS, TIDAL WATERS AND OTHER SURFACE WATERS

The presence of wetlands and other surface waters was evaluated based on the Florida unified wetland delineation methodologies by Chapter 62-340, Florida Administrative Code (FAC), and *USACE Wetland Delineation Manual* (January 1987). These methods consider the 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.

FLUCFCS 640 – VEGETATED NON-FORESTED WETLANDS (± 0.3 ac.)

This land use type was found in four locations throughout the project site. The majority of the vegetation in these wetlands are herbaceous species, however, each wetland hosted a few trees including water oak (*Quercus nigra*), Brazilian pepper, cypress (*Cupressus sp*.), and cabbage palm. The herbaceous layer present in this area consists of juncus (*Juncus sp*.), penny wort, torpedo grass (*Panicum repens L*.), pickerel weed (*Pontederia cordata*), Mexican primrose willow (*Ludwigia octovalvis*), Caesar weed, cogon grass (*Imperata cylindrica*), creeping oxeyes (*Sphagneticola trilobata*), Mexican clover, sword fern (*Polystichum munitum*), and wire grass.

3.4 WILDLIFE UTILIZATION

Wildlife, or evidence of, observed on the project site included blue jay (*Cyanocitta cristata*), boat tailed grackle (*Quiscalus major*), northern mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), and zebra longwing (*Heliconius charithonia*).

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.

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

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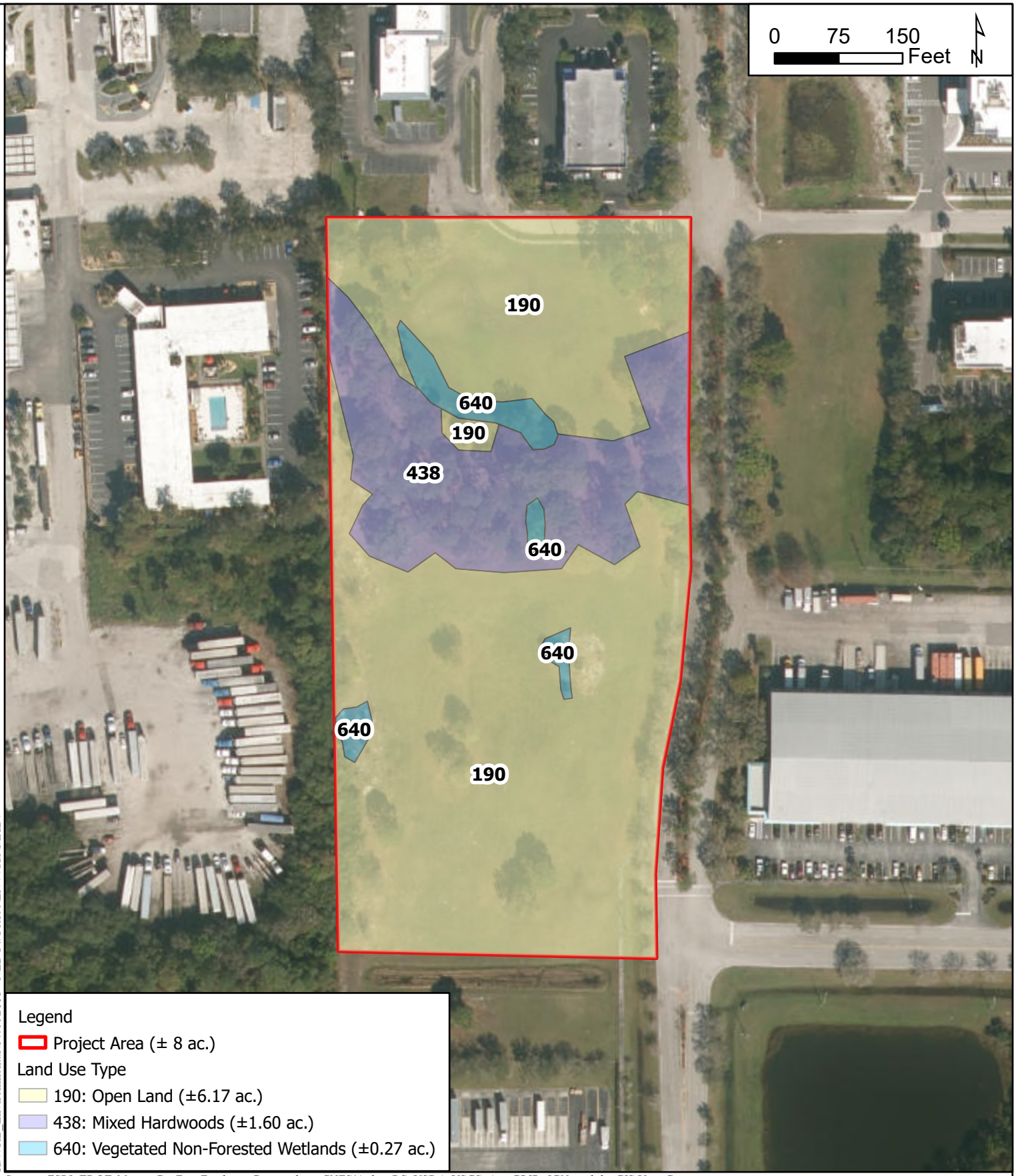
NRCS Soils Map

NED Fort Pierce
St. Lucie County, Florida

1 inch = 150 feet	PROJECT NUMBER: 147992001	FEBRUARY 2025	FIGURE 3



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

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Land Use (FLUCFCS) Map

NED Fort Pierce
St. Lucie County, Florida

1 inch = 150 feet	PROJECT NUMBER: 147992001	FEBRUARY 2025	FIGURE 4

K:\VRB_Environmental\147992001 - NED Ft. Pierce\ENV\GIS\MXD\

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

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Wetland & Surface Water Location Map

NED Fort Pierce
St. Lucie County, Florida

1 inch = 150 feet	PROJECT NUMBER: 147992001	FEBRUARY 2025	FIGURE 5

FNAI – The FNAI report includes Matrix Units 65562 (***Appendix A***). Based on the FNAI report, there are no documented species recorded.

FWC – No known bald eagle (*Haliaeetus leucocephalus*) nests or wading bird rookeries were observed on or within one (1) mile of the project site.

USFWS Consultation Areas – The project site falls within the USFWS Consultation Area for the Florida scrub-jay (*Aphelocoma coerulescens*), Audubon's crested caracara (*Caracara plancus audubonii*), and Everglade snail kite (*Rostrhamus sociabilis plumbeus*). No habitat for any of the species occur on site and will therefore not be discussed further.

USFWS Wood Stork Colonies – The project site is within the core foraging area (CFA) of two known wood stork (*Mycteria americana*) colonies (Cypress Creek Bluefield Road and North Fork St. Lucie River). The CFA for the project site is defined as 18.6 miles from an active wood stork colony. While wetlands are present on the project site, they do not have the characteristics suitable for wood stork foraging. No further action is required regarding the wood stork.

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. No species listed in the IPaC report have suitable habitat within the project site. The project site is not within any USFWS-designated Critical Habitat (***Appendix A***).

Based on field reconnaissance and database reviews, a listing of the state and federally listed species potentially occurring within the immediate vicinity of the project site has been compiled. ***Table 1*** lists species that may occur and their likelihood of occurrence. The 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 1 Potential Listed Species Occurrence						
Common Name		**Scientific Name**	**Federal Status**	**State Status**	**Comments**	**Likelihood of Occurrence**
BIRDS	Sandhill Crane	*Grus canadensis*	NL	ST	Observed On site: No Observed in Proximity: No Habitat present: Marginal Habitat Type: Nesting/Foraging	Low
	Wood Stork	*Mycteria americana*	T	FT	Observed On site: No Observed in Proximity: No Habitat present: No Habitat Type: None	None
	Burrowing Owl	*Athene cunicularia*	NL	ST	Observed On site: No Observed in Proximity: No Habitat present: Marginal Habitat Type: Burrowing/foraging	Low
REPTILES	Eastern Indigo Snake	*Drymarchon couperi*	T	FT	Observed On site: No Observed in Proximity: No Habitat present: Marginal Habitat Type: Foraging	Low
	Gopher Tortoise	*Gopherus polyphemus*	NL	ST	Observed On site: No Observed in Proximity: No Habitat present: MarginalHabitat Type: Burrowing/Foraging	Low

[1] Based on *Florida's Endangered and Threatened Species* updated December 2022 available on http://myfwc.com/wildlifehabitats/imperiled/.

Federal Status: E = Endangered; T = Threatened; NL = Not Listed.; State Status: FE = Federally Endangered; FT = Federally Threatened; ST = State Threatened.

Based on the database review and field reconnaissance the following species have the potential to occur on site and/or require additional evaluation, survey, or permitting.

Sandhill Crane

The sandhill crane is typically seen in freshwater marshes, pastures, farmlands, prairies, and is often seen along roadsides and lawns throughout Florida. There is marginal foraging habitat for the sandhill crane on site, however, no individuals were observed during field reconnaissance. There is minimal suitable nesting habitat for this species on site and no sandhill cranes or nests were observed within the project site. If no sandhill crane nests are found within the project site, no further action should be required.

Wood Stork

Wood stork foraging habitat is typically found in marshes, cypress swamps, and mangrove swamps, but they also forage in artificial ponds, seasonally flooded roadside or agricultural ditches, and managed impoundments. This project site is within the core foraging area of two known wood stork rookeries (Cypress Creek Bluefield Road and North Fork St. Lucie River), however, field reconnaissance revealed that the wetlands on site do not have suitable water depth for wood stork

foraging. As such, no wood stork foraging impacts are anticipated and therefore, no further action is anticipated to be required.

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 and minimal habitat for the eastern indigo snake exists on site. With the implementation of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* (***Appendix B***) during construction, impacts to the eastern indigo snake are not expected and no further action should be required.

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. During the 15% gopher tortoise survey conducted during field reconnaissance, no gopher tortoise burrows were observed. However, habitat is present on-site for the gopher tortoise. As such, a 100% gopher tortoise survey of the project site is required no more than 90 days before construction. If they are found, a gopher tortoise relocation permit will be required from FWC for all on-site potentially occupied gopher tortoise burrows.

Florida Burrowing Owl

Burrowing owls inhabit open prairies in Florida that have little understory vegetation. These areas include golf courses, airports, pastures, agriculture fields, and vacant lots. Marginal habitat was observed on the project site but no burrowing owls or their burrows were observed during site reconnaissance. Though no species observations were made, a survey is recommended concurrently with the 100% gopher tortoise survey. If a Florida burrowing owl or burrow is observed before or during development, an Incidental Take Permit (ITP) may be required from FWC.

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. Eight state-listed plants and two federally-listed

plants were noted by IPaC and FNAI as possibly occurring in this area. None were noted during field reconnaissance, and no habitat is present on site for these 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***). Five resource groups were noted within a 0.25-mile radius of the project site, however, all were listed as not eligible for SHPO evaluation and none were found on the project site. SHPO is a commenting agency during the Environmental Resource Permit (ERP) permitting process, should further information be needed regarding cultural resources, it will be requested at that time.

3.7 FLOODPLAIN INFORMATION

The Federal Emergency Management Agency (FEMA) lists the following flood zones within the project site: X: Area of Minimal Flood Hazard and X: 0.2% Annual Chance of Flood Hazard. A FEMA flood zone map is attached as ***Figure 6***.

4.0 REGULATORY REQUIREMENTS

Below is a summary of applicable regulations and the opinion of Kimley-Horn regarding the jurisdictional status and regulatory requirements of the environmental constraints reviewed in this assessment. All opinions are made solely based on information known to us, the limited research we conducted, and the current status of regulations. We did not consult with any regulatory agencies. Kimley-Horn has no control over the actions of regulatory agencies or other parties, and we do not guarantee that the jurisdictional status and regulatory requirements will not vary from our preliminary opinion.

4.1 LOCAL ENVIRONMENTAL ORDINANCES

The project site is located within the city of Ft. Pierce; therefore, the site must adhere to the city Code of Ordinances. Per Section 123-64, removal of any protected tree will require a tree removal permit to be submitted to the Building Department of the City. Before any land clearing or building, a land clearing permit must be obtained from the Building Department of the City per Section 123-64. It is expected that mitigation will be required for the removal of on site tree species.

K:\VRB_Environmental\000000000 - NED Ft. Pierce\ENV\GIS\MXD\

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

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FEMA Flood Zone Map

NED Fort Pierce
St. Lucie County, Florida

1 inch = 150 feet	PROJECT NUMBER: 147992001	FEBRUARY 2025	FIGURE 6

4.2 STATE REGULATORY REQUIREMENTS

Environmental Resource Permit

The ERP evaluates the project impacts to wetlands, surface waters, and stormwater management design including floodplain impacts. Wetlands are present on site. Any impacts to the on site wetlands will require South Florida Water Management District (SFWMD) permitting and impact approval, however, due to the size of the wetlands, mitigation for impacts is not anticipated to be required. A discussion of avoidance and minimization of wetland impacts will be required, thus, designing the site to minimize wetland impacts where possible is recommended. A formal wetland delineation is recommended to determine the exact extent of on site wetlands ahead of project design and permitting.

State Listed Species

The following state-listed species or species otherwise managed by FWC may potentially occur on site:

- Gopher tortoise - A 100% gopher tortoise survey will be required no more than 90 days before development to identify any burrows on site. Any gopher tortoises found will need to be relocated ahead of site development.
- Burrowing owl – a survey for burrowing owls is recommended during the gopher tortoise survey to confirm the continued absence of this species.

4.3 FEDERAL REGULATORY REQUIREMENTS

Dredge and Fill Permitting

Based on site history and current observations, Waters of the U.S. (WOTUS) do not exist on site. As such, permitting with the U.S. Army Corps of Engineers (USACE) is not anticipated to be required.

Federally Listed Species

The following federally listed species potentially occur on site:

- Eastern Indigo Snake – The implementation of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* (***Appendix B***) will is recommended during construction.

5.0 SUMMARY AND RECOMMENDATIONS

- The city of Ft Pierce will require a tree removal permit, mitigation, and a land clearing permit ahead of the removal of on site trees.
- The project site is located within FEMA flood zone X (***Figure 6).***
- Eastern Indigo Snake - Implementation of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* (***Appendix B***) is recommended during construction.
- Gopher tortoise - A 100% gopher tortoise survey is recommended 90 days ahead of site development. If any burrows are found, gopher tortoise permitting and relocation will be required.
- Burrowing owl - due to the presence of marginal burrowing owl habitat, a survey for this species is recommended concurrently with the gopher tortoise survey to confirm their continued absence. If found, an ITP from FWC will likely be required.
- Based on the FMSF, there are five known cultural resources within the project area, however, none are within the project site.
- Wetlands are present on-site, thus, an ERP from SFWMD will be required for any on site wetland impacts. A formal wetland determination is recommended to determine the exact extent of on site wetlands ahead of project design and permitting.
- Waters of the U.S. (WOTUS) do not exist on site. As such, permitting with the U.S. Army Corps of Engineers (USACE) is not required.

APPENDIX A

FNAI BIODIVERSITY MATRIX REPORT

IPAC REPORT

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

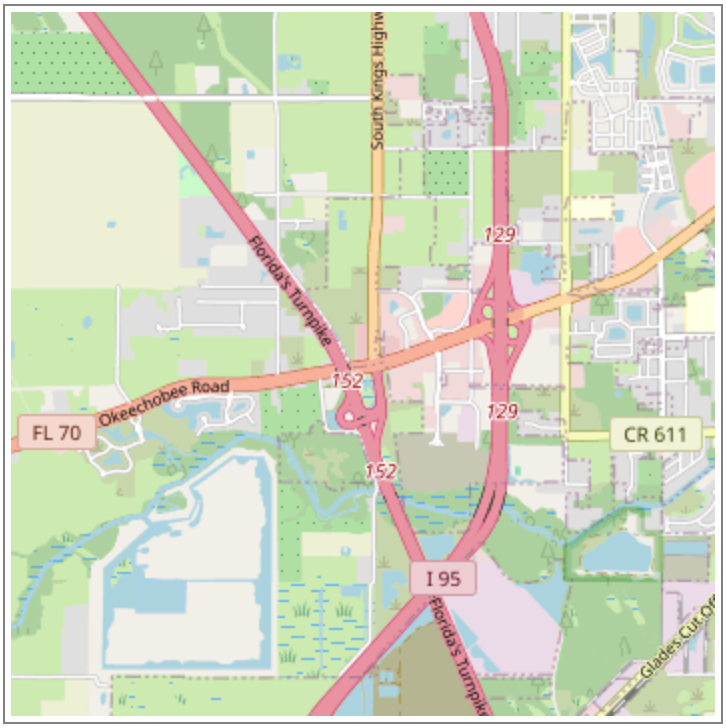
UNOFFICIAL REPORT

Created 2/5/2025

(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 1 Matrix Unit: 65562



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: 65562

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
Eudocimus albus White Ibis	G5	S4	N	N
Mesic flatwoods	G4	S4	N	N
Mycteria americana Wood Stork	G4	S2	T	FT

Matrix Unit ID: 65562

14 **Potential** Elements for Matrix Unit 65562

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Athene cunicularia floridana Florida Burrowing Owl	G4T3	S3	N	ST
Coelorachis tuberculosa Piedmont jointgrass	G3	S3	N	T
Conradina grandiflora large-flowered rosemary	G3	S3	N	T
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Glandularia maritima coastal vervain	G3	S3	N	E
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Lechea cernua nodding pinweed	G3	S3	N	T
Linum carteri var. smallii Small's flax	G2T2	S2	N	E
Nemastylis floridana celestial lily	G2	S2	N	E
Polygala smallii tiny polygala	G1	S1	E	E
Pteroglossaspis ecristata giant orchid	G2G3	S2	N	T
Sceloporus woodi Florida Scrub Lizard	G2G3	S2S3	N	N
Sciurus niger niger Southeastern Fox Squirrel	G5T5	S3	N	N
Zephyranthes simpsonii redmargin zephyrlily	G2G3	S2S3	N	T

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
Florida Ecological Services Field Office
777 37th St
Suite D-101
Vero Beach, FL 32960-3559
Phone: (352) 448-9151 Fax: (772) 562-4288
Email Address: fw4flesregs@fws.gov
https://www.fws.gov/office/florida-ecological-services

In Reply Refer To: 02/12/2025 15:58:30 UTC
Project Code: 2025-0055397
Project Name: NED Ft. Pierce

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. 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 include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project.** 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 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 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:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

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 Code 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
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

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:

Florida Ecological Services Field Office
777 37th St
Suite D-101
Vero Beach, FL 32960-3559
(352) 448-9151

PROJECT SUMMARY

Project Code: 2025-0055397
Project Name: NED Ft. Pierce
Project Type: Acquisition of Lands
Project Description: Land acquisition
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@27.4110595,-80.39440320974744,14z

Counties: St. Lucie County, Florida

ENDANGERED SPECIES ACT SPECIES

There is a total of 14 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[1], 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.

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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 *Puma (=Felis) concolor coryi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1763 General project design guidelines: https://ipac.ecosphere.fws.gov/project/XBODXALRSRGYXKF6IQHBQ7WWF4/documents/generated/7123.pdf	Endangered
Puma (=mountain Lion) *Puma (=Felis) concolor (all subsp. except coryi)* Population: FL No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6049	Similarity of Appearance (Threatened)
Southeastern Beach Mouse *Peromyscus polionotus niveiventris* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3951	Threatened

BIRDS

NAME	STATUS
Crested Caracara (audubon""s) [fl Dps] *Caracara plancus audubonii* Population: FL DPS No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8250	Threatened
Eastern Black Rail *Laterallus jamaicensis ssp. jamaicensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite *Rostrhamus sociabilis plumbeus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7713	Endangered
Wood Stork *Mycteria americana* Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477 General project design guidelines: https://ipac.ecosphere.fws.gov/project/XBODXALRSRGYXKF6IQHBQ7WWF4/documents/generated/6954.pdf	Threatened

REPTILES

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)
Eastern Indigo Snake *Drymarchon couperi*	Threatened

NAME	STATUS
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/646	
Green Sea Turtle *Chelonia mydas* Population: North Atlantic DPS There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Hawksbill Sea Turtle *Eretmochelys imbricata* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3656	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Fragrant Prickly-apple *Cereus eriophorus var. fragrans* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/982	Endangered
Tiny Polygala *Polygala smallii* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/996	Endangered

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

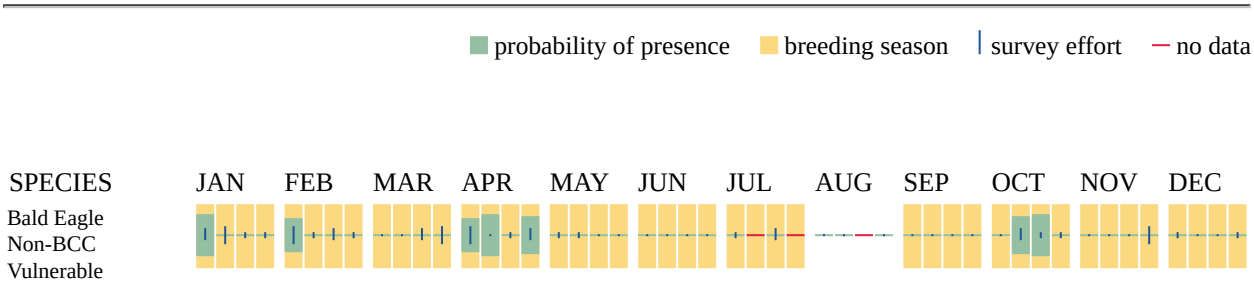
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel *Falco sparverius paulus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bachman's Sparrow *Peucaea aestivalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25

NAME	BREEDING SEASON
Great Blue Heron *Ardea herodias occidentalis* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/10590	Breeds Jan 1 to Dec 31
Least Tern *Sternula antillarum antillarum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/11919	Breeds Apr 25 to Sep 5
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting *Passerina ciris* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9511	Breeds Apr 25 to Aug 15
Prairie Warbler *Setophaga discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Reddish Egret *Egretta rufescens* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7617	Breeds Mar 1 to Sep 15
Swallow-tailed Kite *Elanoides forficatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Worthington's Marsh Wren *Cistothorus palustris griseus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9560	Breeds Apr 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

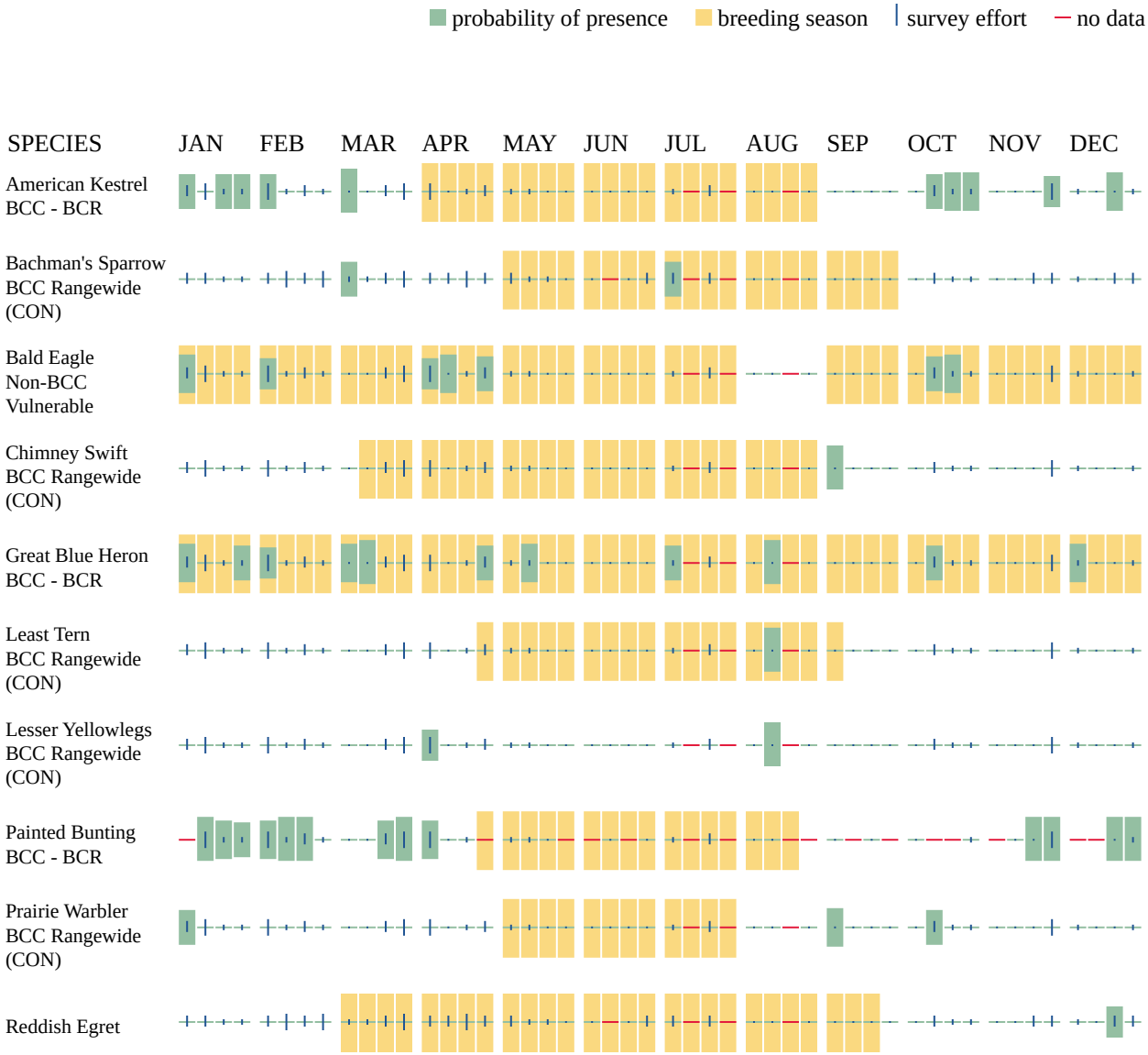
Probability of Presence (■)

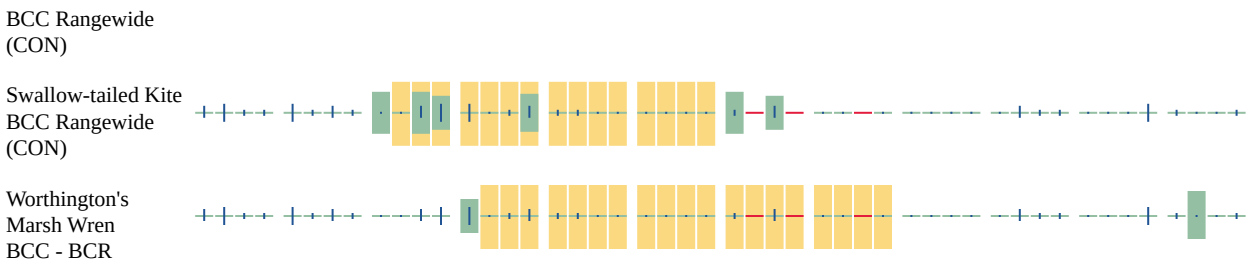
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency:	Kimley Horn and Associates
Name:	Laura Norton
Address:	455 24th ST
Address Line 2:	SUT 200
City:	Vero Beach
State:	FL
Zip:	32960
Email	laura.norton@kimley-horn.com
Phone:	7727944100

APPENDIX B

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

U.S. Fish and Wildlife Service

May 2024

The Standard Protection Measures for the Eastern Indigo Snake (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida and Georgia for use by project proponents and their construction personnel help minimize adverse impacts to eastern indigo snakes. However, implementation of this Plan does not replace any state of federal consultation or regulatory requirements. At least 30 days prior to any land disturbance activities, the project proponent shall notify the appropriate USFWS Field Office (see Field Office contact information) via e-mail that the Plan will be implemented as described below.

As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the approved poster and pamphlet (USFWS Eastern Indigo Snake Conservation webpage), no further written confirmation or approval from the USFWS is needed regarding use of this Plan as a component of the project.

If the project proponent 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. The project proponent 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.

STANDARD PROTECTION MEASURES

BEFORE AND DURING CONSTRUCTION ACTIVITIES:

- All Project personnel shall be notified about the potential presence and appearance of the federally protected eastern indigo snake (*Drymarchon couperi*).
- All personnel shall be advised that there are civil and criminal penalties for harassing, harming, pursuing, hunting, shooting, wounding, killing, capturing, or collecting the species, in knowing violation of the Endangered Species Act of 1973.
- The project proponent or designated agent will post educational posters in the construction office and throughout the construction site. The posters must be clearly visible to all construction staff and shall be posted in a conspicuous location in the

Project field office until such time that Project construction has been completed and time charges have stopped.

- Prior to the onset of construction activities, the project proponent or 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 pamphlet 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. Photos of eastern indigo snakes may be accessed on USFWS, Florida Fish and Wildlife Conservation Commission and/or Georgia Department of Natural Resources websites.
- Each day, prior to the commencement of maintenance or construction activities, the Contractor shall perform a thorough inspection for the species of all worksite equipment.
- If an eastern indigo snake (alive, dead or skin shed) 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 Office. The contact information for the USFWS is provided below and on the referenced posters and pamphlets.
- During initial site clearing activities, an onsite observer is recommended 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).
- Periodically during construction activities, the project area should be visited 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.
- For erosion control use biodegradable, 100% natural fiber, net-free rolled erosion control blankets to avoid wildlife entanglement.

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 (See USFWS Field Office Contact Information).

USFWS FIELD OFFICE CONTACT INFORMATION

Georgia Field Office: Phone: (706) 613-9493, email: gaes_assistance@fws.gov
Florida Field Office: Phone: (352) 448-9151, email: fw4flesregs@fws.gov

POSTER & PAMPHLET INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (final posters for Plan compliance are available on our website in English and Spanish and should be printed on 11 x 17in or larger paper and laminated (USFWS Eastern Indigo Snake Conservation webpage). Pamphlets are also available on our webpage and should be printed on 8.5 x 11in paper and folded, and available and distributed to staff working on the site.

POSTER CONTENT (ENGLISH):

ATTENTION

Federally-Threatened Eastern Indigo Snakes may be present on this site!

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

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

• Stop land disturbing activities and allow the snake time to move away from the site without interference. Do NOT attempt to touch or handle the snake.

• Take photographs of the snake, if possible, for identification and documentation purposes.

• Immediately notify supervisor/agent, and a U.S. Fish and Wildlife Service (USFWS) Ecological Services Field Office, with the location information and condition of the snake.

• If the snake is located near clearing or construction activities that will cause harm to the snake, the activities must pause until a representative of the USFWS returns the call (within one day) with further guidance.

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

• Stop land disturbing activities and immediately notify supervisor/applicant, and a USFWS Ecological Services Field 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.

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, reaching up to 8 ft long. Named for the glossy, blue-black scales above and slate blue below, they often have orange to reddish color (cream color in some cases)

in the throat area. They are not typically aggressive.

SIMILAR SPECIES: The black racer resembles the eastern indigo snake. However, black racers have a white or cream chin, and thinner bodies.

LIFE HISTORY: Eastern indigo snakes live in a variety of terrestrial habitat types. Although they prefer uplands, they also use wetlands and agricultural areas. They will shelter inside gopher tortoise burrows, other animal burrows, stumps, roots, and debris piles. Females may lay from 4 to 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTED STATUS: The eastern indigo snake is protected by the USFWS, Florida Fish and Wildlife Conservation Commission, and Georgia Department of Natural Resources. Any attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage eastern indigo snakes is prohibited by the U.S. Endangered Species Act. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses. Only authorized individuals with a permit (or an Incidental Take Statement associated with a USFWS Biological Opinion) may handle an eastern indigo snake.

Please contact your nearest USFWS Ecological Services Field Office if a live or dead eastern indigo snake is encountered:

Florida Office: (352) 448-9151

Georgia Office: (706) 613-9493

POSTER CONTENT (SPANISH):

ATENCIÓN

¡Especie amenazada, la culebra Índigo del Este, puede ocupar el área!

Matar, herir o hostigar culebras Índigo del Este es estrictamente prohibido bajo la Ley Federal.

SI VES UNA CULEBRA ÍNDIGO DEL ESTE O UNA CULEBRA NEGRA VIVA EN EL ÁREA:

• Pare excavación y permite el movimiento de la culebra fuera del área sin interferir. NO atentes tocar o recoger la culebra.

• Fotografié la culebra si es posible para identificación y documentación.

• Notifique supervisor/agente, y la Oficina de Campo de Servicios Ecológicos del Servicio Federal de Pesca y Vida Silvestre (USFWS) apropiada con información acerca del sitio y condición de la culebra.

• Si la culebra está cerca de un área de construcción que le pueda causar daño, las actividades deben parar hasta un representante del USFWS regrese la llamada (dentro de un día) con más orientación.

SI VES UNA CULEBRA ÍNDIGO DEL ESTE MUERTA EN EL ÁREA:

• Pare excavación. Notifique supervisor/aplicante, y la Oficina de Campo de Servicios Ecológicos apropiada con información acerca del sitio y condición de la culebra.

• Fotografié la culebra si es posible para identificación y documentación.

• Emerge completamente la culebra en agua y congele la especie hasta que personal apropiado de la agencia de vida silvestre la recoja.

DESCRIPCIÓN. La culebra Índigo del Este es una de las serpientes sin veneno más grande en Norte América, alcanzando hasta 8 pies de largo. Su nombre proviene del color azul-negro brilloso de sus escamas, pero pueden tener un color anaranjado-rojizo (color crema en algunos casos) en su mandíbula inferior. No tienden a ser agresivas.

SERPIENTES PARECIDAS. La corredora negra, que es de color negro sólido, es la única otra serpiente que se asemeja a la Índigo del Este. La corredora negra se diferencia por una mandíbula inferior color blanca o crema y un cuerpo más delgado.

HÁBITATS Y ECOLOGÍA. La culebra Índigo del Este vive en una variedad de hábitats, incluyendo tierras secas, humedales, y áreas de agricultura. Ellas buscan refugio en agujeros o huecos de tierra, en especial madrigueras de tortugas de tierra. Las hembras ponen 4 hasta 12 huevos blancos entre abril y junio, y la cría emergen entre julio y octubre.

PROTECCIÓN LEGAL. La culebra Índigo del Este es clasificada como especie amenazada por el USFWS, la Comisión de Conservación de Pesca y Vida Silvestre de Florida y el Departamento de Recursos Naturales de Georgia. Intento de matar, hostigar, herir, lastimar, perseguir, cazar, disparar, capturar, colectar o conducta parecida hacia las culebras Índigo del Este es prohibido por la Ley Federal de Especies en Peligro de Extinción. Penalidades incluyen un máximo de $25,000 por violaciones civiles y $50,000 y/o encarcelamiento por actos criminales. Solos individuales autorizados con un permiso o Determinación de toma incidental (Incidental Take Statement) asociado con una Opinión Biológico del USFWS pueden recoger una Índigo del Este.

Por favor de contactar tu Oficina de Campo de Servicios Ecológicos más cercana si encuentras una culebra Índigo del Este viva o muerta:

Oficina de Florida: (352) 448-9151

Oficina de Georgia: (706) 613-9493


Credit: Dirk Stevenson

ATTENTION

Federally-Threatened Eastern Indigo Snakes may be present on this site!

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

If you see a LIVE eastern indigo snake on the site:

- Stop land disturbing activities and allow the snake time to move away from the site without interference. Do NOT attempt to touch or handle the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor/agent, and a U.S. Fish and Wildlife Service (USFWS) Ecological Services Field Office, with the location information and condition of the snake.
- If the snake is located near clearing or construction activities that will cause harm to the snake, the activities must pause until a representative of the USFWS returns the call (within one day) with further guidance.

If you see a DEAD eastern indigo snake on the site:

- Stop land disturbing activities and immediately notify supervisor/applicant, and a USFWS Ecological Services Field 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.

Eastern indigo snake. Credit: Dirk Stevenson

DESCRIPTION. The eastern indigo snake is one of the largest non-venomous snakes in North America, reaching up to 8 ft long. Named for the glossy, blue-black scales above and slate blue below, they often have orange to reddish color (cream color in some cases) in the throat area. They are not typically aggressive.

SIMILAR SPECIES. The black racer resembles the eastern indigo snake. However, black racers have a white or cream chin, and thinner bodies.

Gopher tortoise and burrow. Credit: James Hunt

LIFE HISTORY. Eastern indigo snakes live in a variety of terrestrial habitat types. Although they prefer uplands, they also use wetlands and agricultural areas. They will shelter inside gopher tortoise burrows, other animal burrows, stumps, roots, and debris piles. Females may lay from 4 to 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTED STATUS. The eastern indigo snake is protected by the USFWS, Florida Fish and Wildlife Conservation Commission, and Georgia Department of Natural Resources. Any attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage eastern indigo snakes is prohibited by the U.S. Endangered Species Act. Penalties include a maximum fine of $25,000 for civil violations and up to $50,000 and/or imprisonment for criminal offenses. Only authorized individuals with a permit (or an Incidental Take Statement associated with a USFWS Biological Opinion) may handle an eastern indigo snake.

Please contact your nearest USFWS Ecological Services Field Office if a live or dead eastern indigo snake is encountered:

Florida Office: (352) 448-9151
Georgia Office: (706) 613-9493

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 ComplianceService@dos.MyFlorida.com for project review information.

February 13, 2025

Laura Norton, M.Sc.
Kimley-Horn | 445 24th Street, Suite 200, Vero Beach, FL 32960
Direct: 772-794-4021

In response to your inquiry of February 12, 2025, the Florida Master Site File inventory shows four resource groups, and one standing structure recorded, within 0.25-miles buffer, for the designated parcel of property in Fort Pierce, St. Lucie County- NED, Fla.

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.

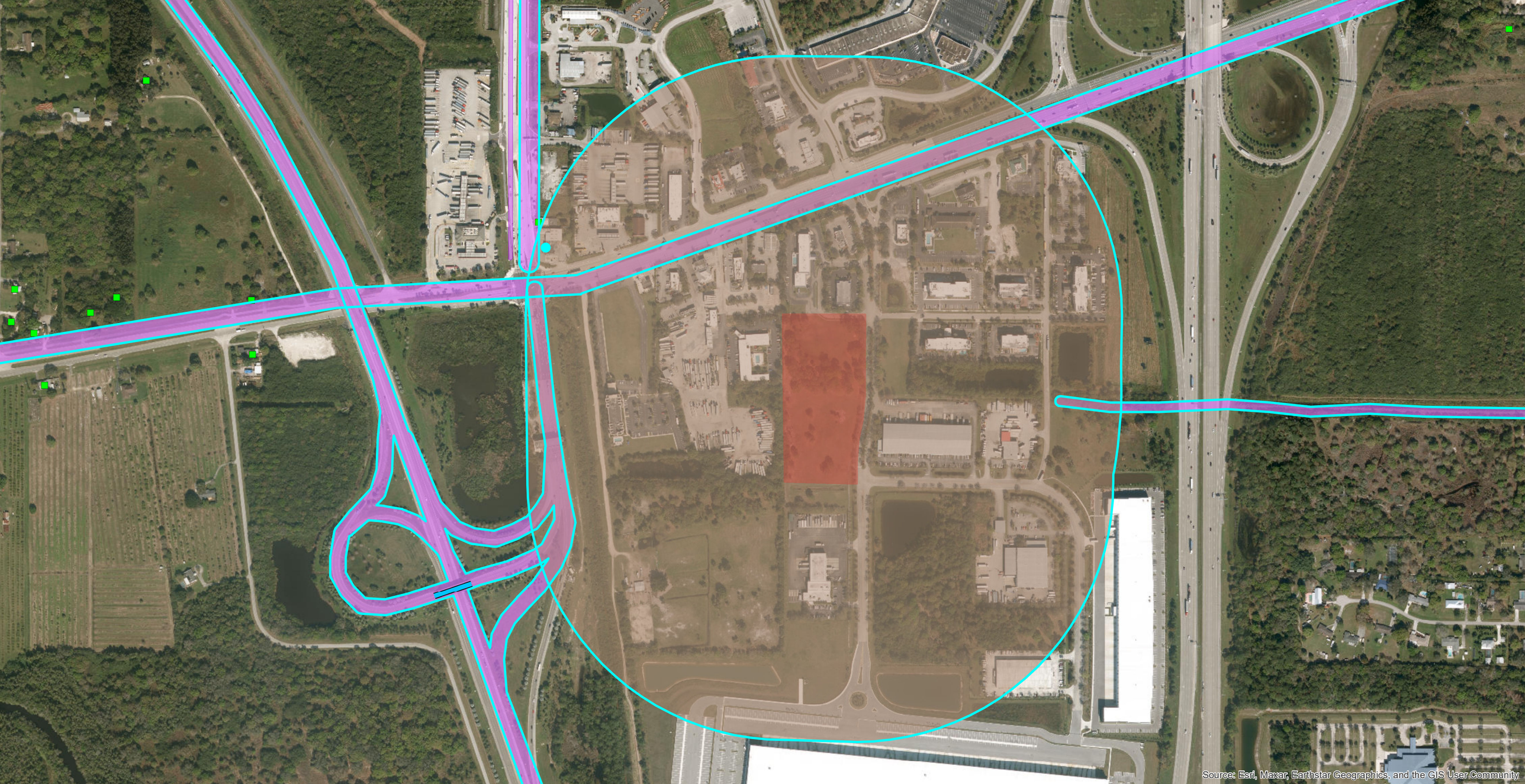
- While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.

- 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 ComplianceService@dos.MyFlorida.com.

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

Sincerely,

Eman M. Vovsi, Ph.D.
Data Base Analyst/Records Specialist
Florida Master Site File
Eman.Vovsi@dos.state.fl.us


Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

AR=0
SS=1
CM=0
RG=4
BR=0
Total=5

Cultural Resource Roster

SiteID	Type	Site Name	Address	Additional Info	SHPO Eval	NR Status
SL01658	RG	Okeechobee Road	Fort Pierce	Linear Resource	Not Eligible	
SL01788	SS	Exxon Station	2898 S Kings HWY, Fort Pierce	1957 Masonry Vernacular	Not Eligible	
SL01789	RG	Florida Turnpike		Linear Resource - 1 Contrib Resources	Not Eligible	
SL03114	RG	Kings Highway	Fort Pierce	Linear Resource - 1 Contrib Resources	Not Eligible	
SL03142	RG	Canal No. 39	Fort Pierce	Linear Resource - 1 Contrib Resources	Not Eligible	

NED Ft. Pierce

Traffic Impact Analysis

City of Fort Pierce, FL

May 2025

Kimley»Horn

NED Ft. Pierce

Traffic Impact Analysis

City of Fort Pierce, FL

Prepared by:

Kimley-Horn and Associates, Inc.

May 2025

Alex Memering, P.E.

PE #91501

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TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

Kimley-Horn has been retained to analyze and document the traffic impacts associated with the development of NED Ft. Pierce in St. Lucie County, Florida. The following is a Traffic Impact Analysis (TIA) that generally conforms to the policies and guidelines of the City of Fort Pierce Land Development Code and the St. Lucie Transportation Planning Organization (TPO) Standardized Traffic Impact Studies (TIS) Methodology and Procedures. The proposed heavy equipment sales and rental business development will include the following uses:

- Construction Equipment Rental Store: ±12,500 square feet (SF)
- Equipment Storage and Display: ±192,970 square feet (SF)

The site is generally located in the southwest quadrant of the intersection of Crossroads Parkway & Reynolds Drive in Fort Pierce, Florida. The site is currently vacant.

The development is anticipated to be built by Year 2028 and is proposed to consist of approximately ±12,500 SF of construction equipment rental store and ±192,970 SF of equipment storage and display. Access to the site will be provided via one (1) full access driveway on Reynolds Drive and one (1) right-in/right-out driveway on Crossroads Parkway. These access points are shown on the conceptual site plan provided in **Appendix A**.

1.1 STUDY AREA INTERSECTIONS

The study area includes an operational analysis at the project driveways and the following intersections, as shown in **Figure 1**:

- SR 70 & Crossroads Parkway (Signalized)
- Crossroads Parkway & Reynolds Drive (Unsignalized)

Study intersections were determined based on the St. Lucie TPO Standardized TIS Methodology and Procedures document. Major intersections that are part of impacted roadways were included.

1.2 STUDY AREA ROADWAY SEGMENTS

To determine roadway segments to be included in this TIA, a significance test was performed for all major roadway segments within a 2-mile radius of the project site. The study area includes any road segment to which development traffic makes its first connection to the major road network, provided the development traffic consumes one percent or more of the existing or committed two-way peak-hour service capacity, and any major road segment on which the two-way peak-hour traffic consumes 5% or more of the existing or committed two-way peak-hour service capacity. The results of the significance test are shown in **Table 1**. 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 B**.

- **Crossroads Parkway** from Okeechobee Road to Southern Terminus

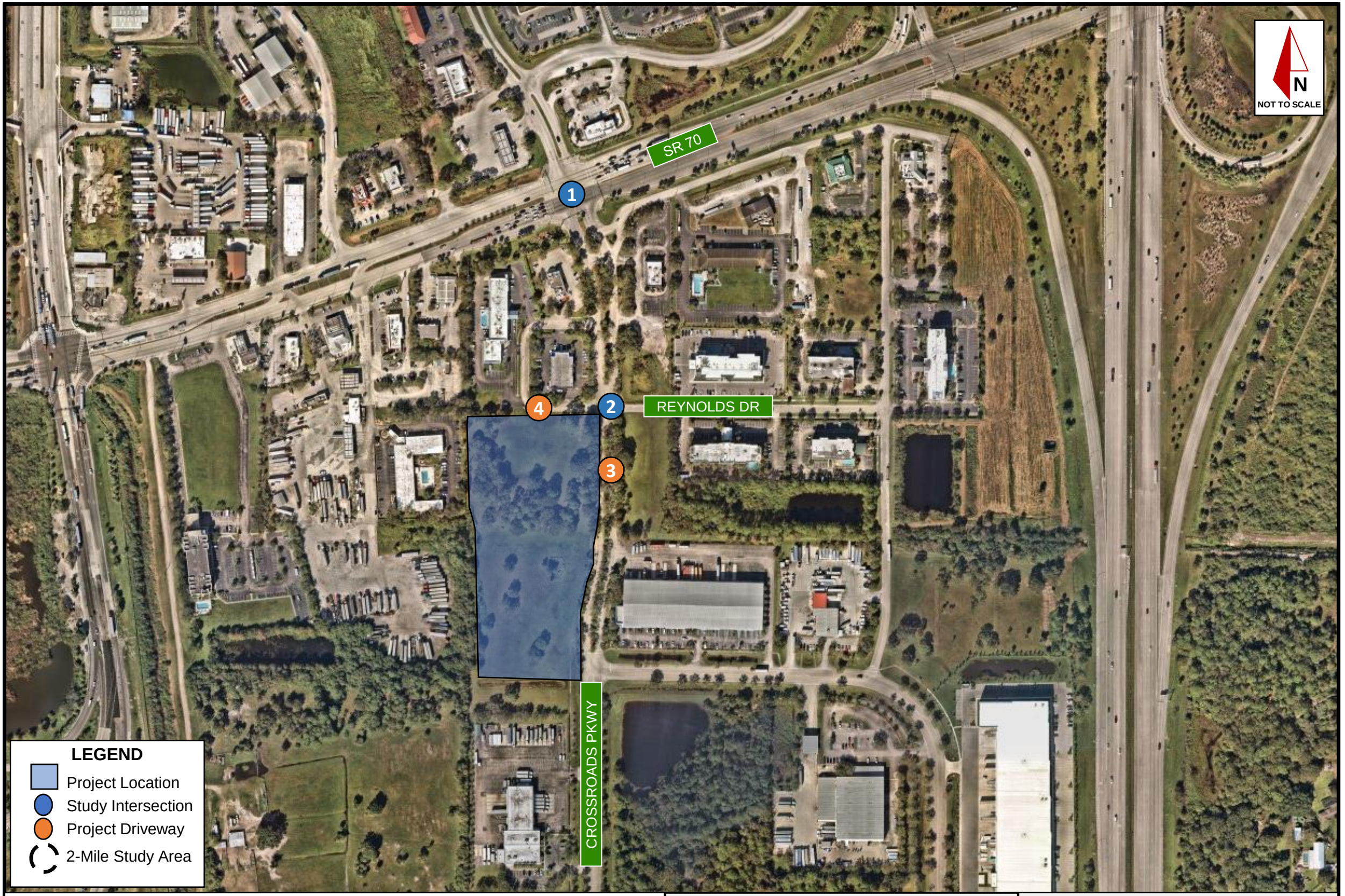


Figure 1: Project Location

NED Ft. Pierce | St. Lucie County, Florida

Project No: 147992001

April 2025

Kimley»Horn

6876 Marwick Lane, Suite 350, Orlando, FL, 32827
Phone: (407)-536-4440

Table 1: Significance Test

Roadway		AADT[1]	Directional Peak Hour Service Capacity[2]	AM Peak Hour Directional[3]			PM Peak Hour Directional[3]			% Project Distribution	Max Directional Peak Hour Project Trips	% Project Significance
From	To			Volume	LOS	V/C	Volume	LOS	V/C			
Okeechobee Road												
Mccarty Rd	Florida's Turnpike	10,118	1,943	514	C	0.26	514	C	0.26	3%	1	0.1%
Florida's Turnpike	Kings Hwy	10,118	1,996	514	C	0.26	514	C	0.26	3%	1	0.1%
Kings Hwy	Crossroads Pkwy	24,489	2,955	1,179	C	0.40	1,179	C	0.40	23%	6	0.2%
Crossroads Pkwy	I-95	26,459	2,955	1,274	C	0.43	1,274	C	0.43	73%	18	0.6%
I-95	Jenkins Rd	33,776	2,955	1,569	C	0.53	1,569	C	0.53	53%	13	0.4%
Jenkins Rd	Mcneil Rd	33,776	2,955	1,569	C	0.53	1,569	C	0.53	32%	8	0.3%
Mcneil Rd	Virginia Ave	32,311	2,955	1,501	C	0.51	1,501	C	0.51	20%	5	0.2%
Crossroads Pkwy												
Kings Hwy	Okeechobee Rd	2,204	790	115	C	0.15	122	C	0.15	2%	0	0.0%
Okeechobee Rd	End of Rd	2,204	790	115	C	0.15	122	C	0.15	98%	24	3.0%
Kings Hwy												
Okeechobee Rd	Crossroads Pkwy	9,104	1,901	438	C	0.23	438	C	0.23	17%	4	0.2%
Crossroads Pkwy	Graham Rd	9,104	3,056	438	C	0.14	438	C	0.14	17%	4	0.1%
Graham Rd	Picos Rd	9,104	3,056	438	C	0.14	438	C	0.14	16%	4	0.1%
I-95												
Midway Rd	Okeechobee Rd	81,653	4,910	4,542	C	0.92	4,542	C	0.92	12%	3	0.1%
Okeechobee Rd	Orange Ave	72,427	4,650	3,377	B	0.73	3,377	B	0.73	4%	1	0.0%
Florida's Turnpike												
Port St Lucie Blvd	Okeechobee Rd	55,700	6,870	2,832	B	0.41	2,832	B	0.41	3%	1	0.0%
Okeechobee Rd	Indian River C.L.	43,433	6,470	2,481	B	0.38	2,481	B	0.38	3%	1	0.0%
Jenkins Rd												
Edwards Rd	Okeechobee Rd	12,000	880	729	C	0.83	740	C	0.84	6%	1	0.1%
Okeechobee Rd	Graham Rd	11,500	920	612	C	0.67	614	C	0.67	1%	0	0.0%
Graham Rd	Peterson Rd	6,500	630	357	C	0.57	352	C	0.45	0%	0	0.0%
Mcneil Rd												
Okeechobee Rd	Kirby Loop Rd	5,510	790	345	C	0.44	336	C	0.43	0%	0	0.0%
Kirby Loop Rd	Edwards Rd	5,510	540	345	C	0.64	336	C	0.62	0%	0	0.0%
Edwards Rd												
Mcneil Rd	Selvitz Rd	14,000	700	742	F	1.06	718	F	1.03	6%	1	0.1%
Selvitz Rd	25th St	13,500	880	711	C	0.81	702	C	0.80	3%	1	0.1%

Notes:

(1) Obtained from St. Lucie Transporation Planning Organization *Traffic Counts and Level of Service Report 2024*

(2) Data obtained from FDOT's QLOS Handbook as the SLTPO *Traffic Counts and Level of Service Report 2024* omitted this segment's traffic volumes

(3) Data obtained from FDOT's Florida Traffic Online as the SLTPO *Traffic Counts and Level of Service Report 2024* omitted this segment's traffic volumes

2.0 EXISTING CONDITIONS ANALYSIS – YEAR 2025

2.1 EXISTING TRAFFIC

Turning movement counts (TMCs) were collected at the study intersections on Thursday, March 13th, 2025 and are provided in **Appendix C**. Data was collected during both the AM (7:00AM to 9:00AM) and PM (4:00 PM to 6:00 PM) peak periods.

The existing turning movement volumes were adjusted by applying a seasonal factor (SF) published by the Florida Department of Transportation (FDOT). The data referenced from FDOT's Florida Traffic Online 2024 Peak Season Factor Category Report is included in **Appendix D**. Turning movement volume worksheets for all intersections are included in **Appendix E**.

2.2 EXISTING INTERSECTION CONDITIONS

Intersection operational analyses were performed for existing conditions during the AM and PM peak hours using procedures outlined in the *Highway Capacity Manual 7th Edition* with Synchro (v12) software. Signal timing and phasing plans were provided by St. Lucie County staff and are included in **Appendix F**. A summary of intersection level of service (LOS), delay, and maximum volume/capacity (V/C) ratios for the AM and PM peak hour existing conditions are provided in **Tables 2 and 3**, respectively. Synchro outputs are provided in **Appendix G**.

As shown in **Tables 2 and 3**, all the study area intersections are expected to operate at an acceptable LOS overall in the 2025 existing conditions.

Table 2: Existing (2025) AM Peak Hour Intersection Conditions

Exisitng Condition - 2025					
Intersection	Control Type	Approach	AM Peak Hour		
			Approach LOS	Max V/C Movement	Max V/C
Crossroads Pkwy & SR 70	Signalized	EB	B	EBL	0.80
		WB	B	WBL	0.62
		NB	E	NBR	0.54
		SB	D	SBL/R	0.29
		Overall	B (15.0 sec)	EBL	0.80
Crossroads Pkwy & Reynolds Dr	TWSC	EB	B	EBL/T/R	0.02
		WB	A	WBL/T/R	0.08
		NB	A	NBL	0.00
		SB	A	SBL	0.03
		Overall	-	WBL/T/R	0.08

Table 3: Existing (2025) PM Peak Hour Intersection Conditions

Exisitng Condition - 2025					
Intersection	Control Type	Approach	PM Peak Hour		
			Approach LOS	Max V/C Movement	Max V/C
Crossroads Pkwy & SR 70	Signalized	EB	B	EBL	0.79
		WB	B	WBR	0.70
		NB	D	NBR	0.55
		SB	D	SBL	0.46
		Overall	B (19.3 sec)	EBL	0.79
Crossroads Pkwy & Reynolds Dr	TWSC	EB	B	EBL/T/R	0.02
		WB	A	WBL/T/R	0.05
		NB	A	NBL	0.00
		SB	A	SBL	0.06
		Overall	-	SBL	0.06

2.3 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 2025 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 provided within **Appendix B**.

The existing roadway segment data is included in **Tables 4 and 5** for AM and PM peak hour roadway segment conditions, respectively. As shown in the tables, the study area roadway segment is expected to operate acceptably during 2025 AM and PM peak hour existing traffic conditions.

Table 4: Existing (2025) AM Peak Hour Roadway Segment Analysis

Roadway		Roadway Characteristics				Most Recent PHPD Volumes[3]				Growth Rate	Existing PHPD Conditions - 2025			
		Functional Classification[1]	Adopted LOS[2]	Number of Lanes	PHPD MSV[2]	Year of Count	PM PHPD	NB/EB	SB/WB		2025 Volumes[3]		V/C Ratio	Deficient?
From	To										NB/EB	SB/WB		
Crossroads Pkwy														
Okeechobee Road	End of Road	Collector	D	4	2,961	2024	S	44	78	1.00%	44	79	0.03	No

Notes:
1. Obtained from City of Port St Lucie Road Function Classification GIS web app.
2. Data obtained from St Lucie County's Comprehensive Plan.
3. If field collected traffic counts are not available, data was obtained from the St Lucie TPO Traffic Data Management System GIS Web App.

Table 5: Existing (2025) PM Peak Hour Roadway Segment Analysis

		Roadway Characteristics				Most Recent PHPD Volumes[3]				Growth Rate	Existing PHPD Conditions - 2025			
		Functional Classification[1]	Adopted LOS[2]	Number of Lanes	PHPD MSV[2]	Year of Count	PM PHPD	NB/EB	SB/WB		2025 Volumes[3]		V/C Ratio	Deficient?
From	To										NB/EB	SB/WB		
Crossroads Pkwy														
Okeechobee Road	End of Road	Collector	D	4	2,961	2024	S	60	105	1.00%	61	106	0.04	No

Notes:
1. Obtained from City of Port St Lucie Road Function Classification GIS web app.
2. Data obtained from St Lucie County's Comprehensive Plan.
3. If field collected traffic counts are not available, data was obtained from the St Lucie TPO Traffic Data Management System GIS Web App.

3.0 DEVELOPMENT TRAFFIC

3.1 TRIP GENERATION

Trip generation for the proposed project was calculated per procedures published in the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. Land use codes (LUC) 811 – Construction Equipment Rental Store and LUC 151 – Mini-Warehouse were referenced to determine the appropriate trip rates for the project. The mini-warehouse LUC was utilized to represent the equipment storage and display portion of the site.

Table 6 provides the Daily, AM peak hour, and PM peak hour trip generation summary for the project. Relevant excerpts from the ITE *Trip Generation Manual* are included in **Appendix H**.

Table 6: Trip Generation Summary

Land Use	Intensity	Daily Trips	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street		
			Total	In	Out	Total	In	Out
Proposed Development								
Construction Equipment Rental Store	12.5 KSF	120	7	5	2	12	3	9
Mini-Warehouse	192.97 KSF	280	17	10	7	29	14	15
	Subtotal	*400*	*24*	*15*	*9*	*41*	*17*	*24*
TOTAL NET NEW TRIPS		400	24	15	9	41	17	24

Note 1: Trip Generation was calculated using the data from ITE's Trip Generation Manual, 11th Edition.

Construction Equipment Rental Store [ITE 811]

Daily	T = 9.57*(X); (X is KSF)
AM Peak Hour of Adjacent Street	T = 0.59*(X); (X is KSF); (72% in/ 28% out)
PM Peak Hour of Adjacent Street	T = 0.99*(X); (X is KSF); (28% in/ 72% out)

Mini-Warehouse [ITE 151]

Daily	T = 1.45*(X); (X is KSF)
AM Peak Hour of Adjacent Street	T = 0.09*(X); (X is KSF); (59% in/ 41% out)
PM Peak Hour of Adjacent Street	T = 0.15*(X); (X is KSF); (47% in/ 53% out)

3.2 TRIP DISTRIBUTION AND TRIP ASSIGNMENT

Projected traffic demand of project trips on study roadways was derived with the 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 Treasure Coast Regional Planning Model (TCRPM) 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 the percent of daily project distribution are provided in **Appendix I**.

Daily model project distribution was referenced to manually assign project distribution at the study area intersections and driveways in general accordance with model outputs as shown in **Figure 2**.

Project trip distribution percentages were used to assign anticipated project trips to the study area roadways and intersections. **Figure 3** shows the anticipated AM and PM peak hour project volumes at the study area intersections.

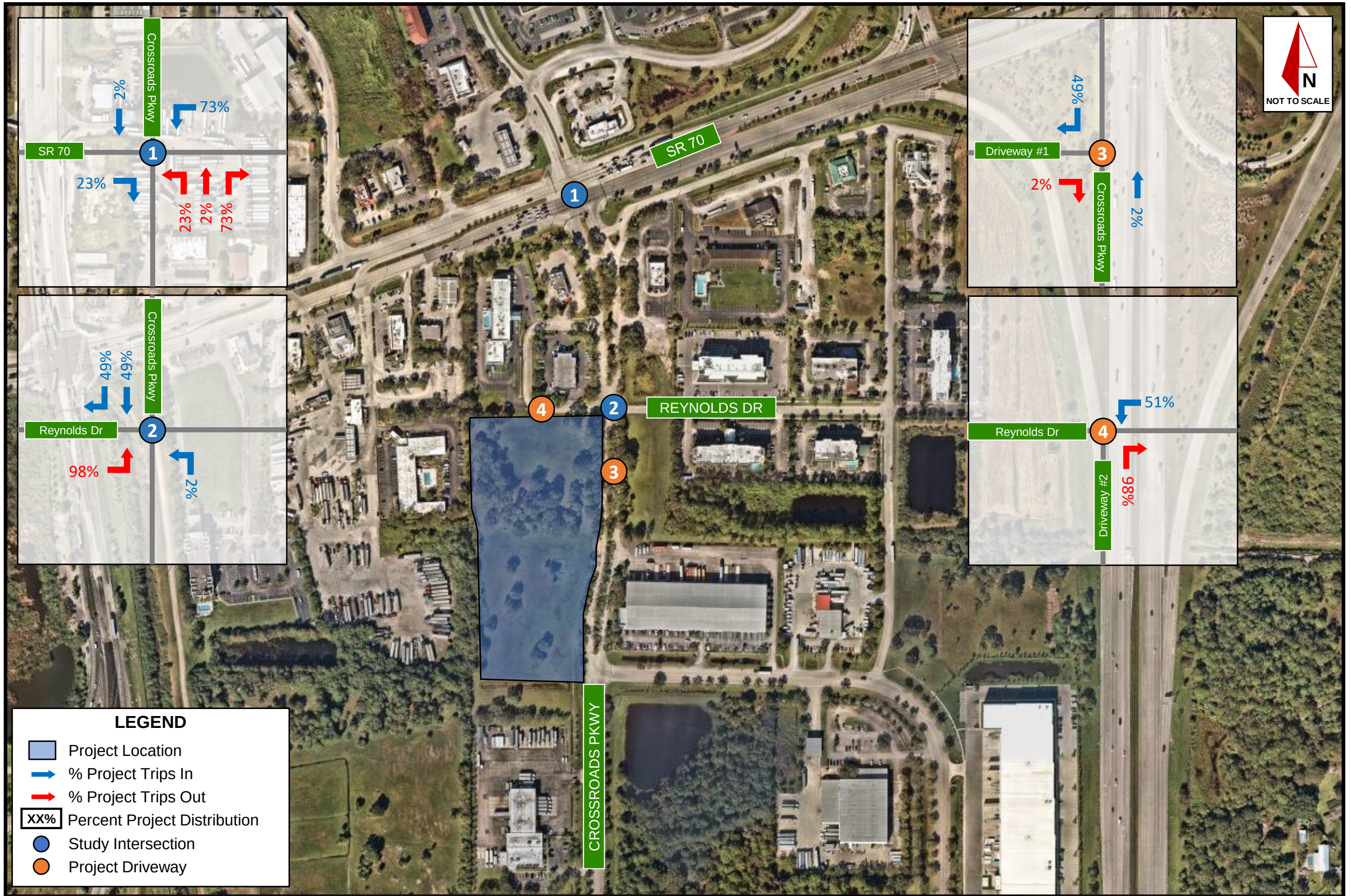


Figure 2: Project Trip Distribution

NED Ft. Pierce | St. Lucie County, Florida

Project No: 147992001

April 2025

Kimley»Horn

6876 Marwick Lane, Suite 350, Orlando, FL, 32827
Phone: (407)-536-4440

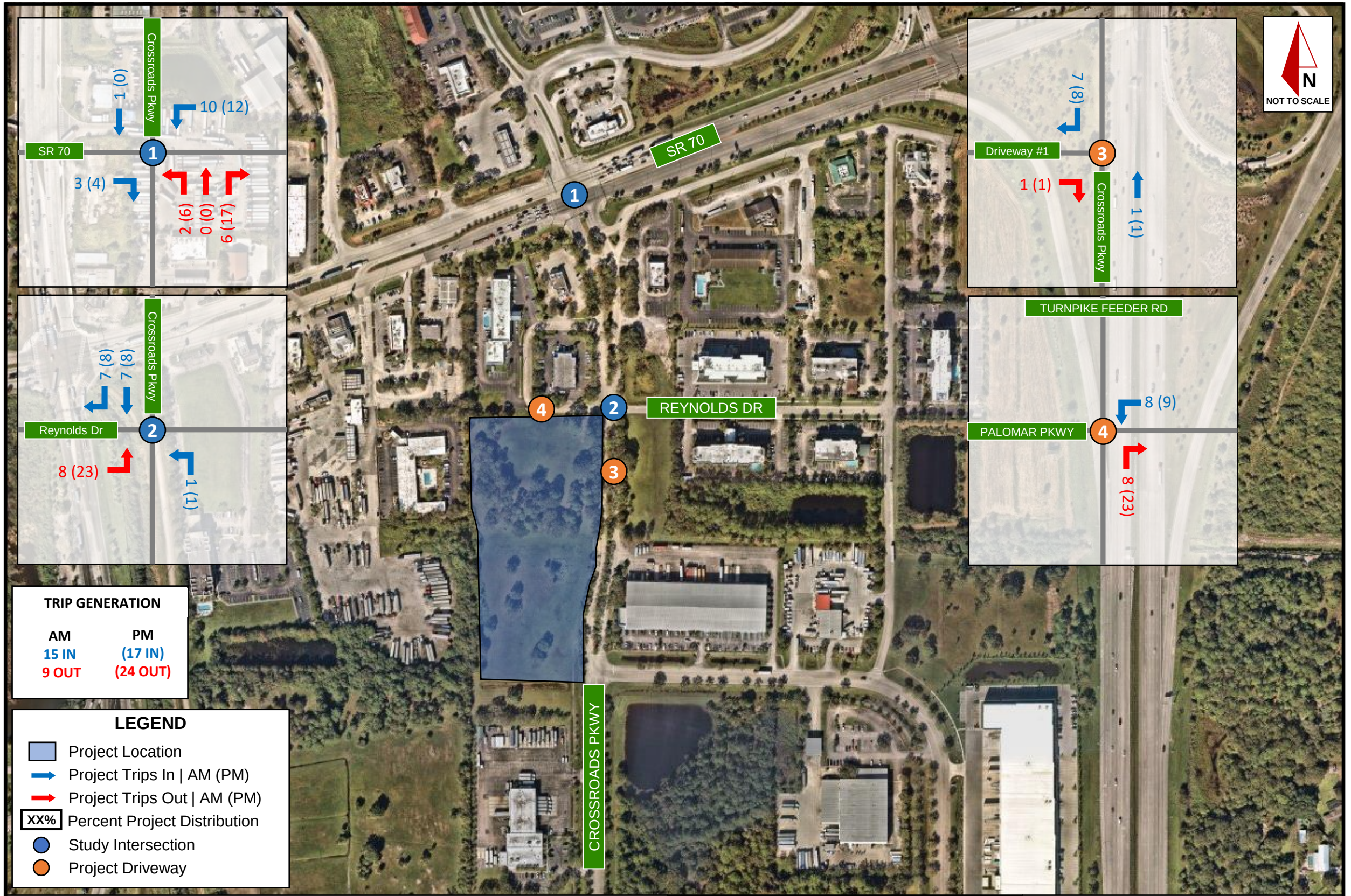


Figure 3: Project Trip Assignment

NED Ft. Pierce | St. Lucie County, Florida

Project No: 147992001

April 2025

Kimley»Horn

6876 Marwick Lane, Suite 350, Orlando, FL, 32827
Phone: (407)-536-4440

4.0 BACKGROUND CONDITIONS ANALYSIS – YEAR 2028

4.1 BACKGROUND TRAFFIC

Background traffic conditions, without the impact of project trips on the roadway network, were evaluated for Year 2028. Historical growth rate calculations were performed; however, the average growth rate is calculated to be less than 1.0%. Therefore, the minimum growth rate of 1.0% was used. Background volumes were developed by applying a 1.0% growth rate to seasonally adjusted existing TMCs over a three (3) year period to obtain 2028 volumes. The growth rate calculations are provided in **Appendix J**. Turning movement volume worksheets for all intersections are provided in **Appendix E**.

4.2 COMMITTED IMPROVEMENTS

After review of roadway and/or intersection improvements funded for construction, no transportation improvements were identified near the study intersection by developers or within the latest St. Lucie County Transportation Planning Organization (TPO) Transportation Improvements Program (TIP), St. Lucie County 2045 Long Range Transportation Plan (LRTP), and Florida Department of Transportation's (FDOT) Five-Year Work Program.

4.3 BACKGROUND INTERSECTION ANALYSIS

Intersection operational analyses were performed for Year 2028 background conditions during the AM and PM peak hours using procedures outlined in the *Highway Capacity Manual 7th Edition* with Synchro (v12) software. Signal timing and phasing plans were provided by St. Lucie County staff and are included in **Appendix F**. A summary of intersection level of service (LOS), delay, and maximum volume/capacity (V/C) ratios for AM and PM peak hour background conditions is provided in **Tables 7 and 8.** Synchro outputs are provided in **Appendix G**.

As shown in **Tables 7 and 8**, all study area intersections are anticipated to operate acceptably during 2028 future background traffic conditions.

Table 7: Background (2028) AM Peak Hour Intersection Conditions

Background Condition - 2028					
Intersection	Control Type	Approach	AM Peak Hour		
			Approach LOS	Max V/C Movement	Max V/C
Crossroads Pkwy & SR 70	Signalized	EB	B	EBL	0.80
		WB	B	WBL	0.63
		NB	E	NBR	0.55
		SB	D	SBL/R	0.29
		Overall	B (15.1 sec)	EBL	0.80
Crossroads Pkwy & Reynolds Dr	TWSC	EB	B	EBL/T/R	0.02
		WB	A	WBL/T/R	0.09
		NB	A	NBL	0.00
		SB	A	SBL	0.03
		Overall	-	WBL/T/R	0.09

Table 8: Background (2028) PM Peak Hour Intersection Conditions

Background Condition - 2028					
Intersection	Control Type	Approach	PM Peak Hour		
			Approach LOS	Max V/C Movement	Max V/C
Crossroads Pkwy & SR 70	Signalized	EB	B	EBL	0.79
		WB	B	WBL	0.70
		NB	D	NBR	0.55
		SB	D	SBL	0.46
		Overall	B (19.6 sec)	EBL	0.79
Crossroads Pkwy & Reynolds Dr	TWSC	EB	B	EBL/T/R	0.02
		WB	A	WBL/T/R	0.05
		NB	A	NBL	0.00
		SB	A	SBL	0.06
		Overall	-	SBL	0.06

4.6 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 2028 peak hour peak direction (PHPD) traffic volumes to the PHPD service capacities (excerpt included in **Appendix B**).

Year 2028 PHPD volumes were derived by applying a 1.0% annual growth rate to Year 2025 PHPD volumes. AM and PM peak hour background roadway segment conditions are shown within **Tables 9 and 10**, respectively. All study area roadway segments are expected to operate acceptably during 2028 background traffic conditions.

Table 9: Background (2028) AM Peak Hour Roadway Segment Analysis

Roadway		Roadway Characteristics			Applied Growth Rate [2]	Background PHPD Conditions - 2028			
		PHPD MSV [1]	2025 Volumes			2028 Volumes[3]		V/C Ratio	Deficient?
From	To		NB/EB	SB/WB		NB/EB	SB/WB		
Crossroads Pkwy									
Okeechobee Road	End of Road	2,961	44	79	1.00%	45	81	0.03	No

Notes:
1. Obtained from St Lucie TPO Traffic Counts and Level of Service Report (2024).
2. Background volumes obtained by applying a 1.0% growth rate.
3. Future non-project traffic volumes are the summation of the existing peak season volumes and background growth.

Table 10: Background (2028) PM Peak Hour Roadway Segment Analysis

Roadway		Roadway Characteristics			Applied Growth Rate [2]	Background PHPD Conditions - 2028			
		PHPD MSV[1]	2025 Volumes			2028 Volumes[3]		V/C Ratio	Deficient?
From	To		NB/EB	SB/WB		NB/EB	SB/WB		
Crossroads Pkwy									
Okeechobee Road	End of Road	2,961	61	106	1.00%	63	109	0.04	No

Notes:
1. Obtained from St Lucie TPO Traffic Counts and Level of Service Report (2024).
2. Background volumes obtained by applying a 1.0% growth rate.
3. Future non-project traffic volumes are the summation of the existing peak season volumes and background growth.

5.0 BUILDOUT CONDITIONS ANALYSIS – YEAR 2028

5.1 BUILDOUT TRAFFIC

Buildout traffic conditions were evaluated for Year 2028. Buildout volumes were developed by adding anticipated project trips to background volumes. Turning movement volume worksheets for all intersections are included in **Appendix E**.

5.2 BUILDOUT INTERSECTION ANALYSIS

Intersection operational analyses were performed for 2028 buildout conditions in the AM and PM peak hours using procedures outlined in the *Highway Capacity Manual 7th Edition* with Synchro (v12) software. Signal timing and phasing plans were provided by St. Lucie County staff and are included in **Appendix F**. A summary of intersection level of service (LOS), delay, and maximum volume/capacity (V/C) ratios for AM and PM peak hour buildout conditions are provided in **Tables 11 and 12**, respectively. Synchro outputs are provided in **Appendix G**.

As shown in **Tables 11 and 12**, all the study area intersections are expected to operate at an acceptable LOS overall in the 2028 buildout AM and PM peak hour traffic conditions. AM and PM peak hour intersection turning movement volumes under buildout conditions for the study area intersections are illustrated in **Figures 4 and 5**.

Table 11: Buildout (2028) AM Peak Hour Intersection Conditions

Buildout Condition - 2028					
Intersection	Control Type	Approach	AM Peak Hour		
			Approach LOS	Max V/C Movement	Max V/C
Crossroads Pkwy & SR 70	Signalized	EB	B	EBL	0.80
		WB	B	WBL	0.65
		NB	E	NBR	0.55
		SB	D	SBL	0.29
		Overall	B (15.7 sec)	EBL	0.80
Crossroads Pkwy & Reynolds Dr	TWSC	EB	B	EBL/T/R	0.03
		WB	A	WBL/T/R	0.09
		NB	A	NBL	0.00
		SB	A	SBL	0.03
		Overall	-	WBL/T/R	0.09
Crossroads Pkwy & Driveway #1	TWSC	EB	A	EBR	0.001
		WB	-	-	-
		NB	-	-	-
		SB	-	-	-
		Overall	-	EBR	0.001
Reynolds Dr & Driveway #2	TWSC	EB	-	-	-
		WB	A	WBL	0.01
		NB	A	NBL/R	0.01
		SB	-	-	-
		Overall	-	NBL/R	0.01

Table 12: Buildout (2028) PM Peak Hour Intersection Conditions

Buildout Condition - 2028					
Intersection	Control Type	Approach	PM Peak Hour		
			Approach LOS	Max V/C Movement	Max V/C
Crossroads Pkwy & SR 70	Signalized	EB	B	EBL	0.79
		WB	B	WBL	0.72
		NB	D	NBR	0.58
		SB	D	SBL	0.45
		Overall	C (20.4 sec)	EBL	0.79
Crossroads Pkwy & Reynolds Dr	TWSC	EB	B	EBL/T/R	0.06
		WB	A	WBL/T/R	0.05
		NB	A	NBL	0.00
		SB	A	SBL	0.06
		Overall	-	EBL/T/R	0.06
Crossroads Pkwy & Driveway #1	TWSC	EB	A	EBR	0.001
		WB	-	-	-
		NB	-	-	-
		SB	-	-	-
		Overall	-	EBR	0.001
Reynolds Dr & Driveway #2	TWSC	EB	-	-	-
		WB	A	WBL	0.01
		NB	A	NBL/R	0.02
		SB	-	-	-
		Overall	-	NBL/R	0.02

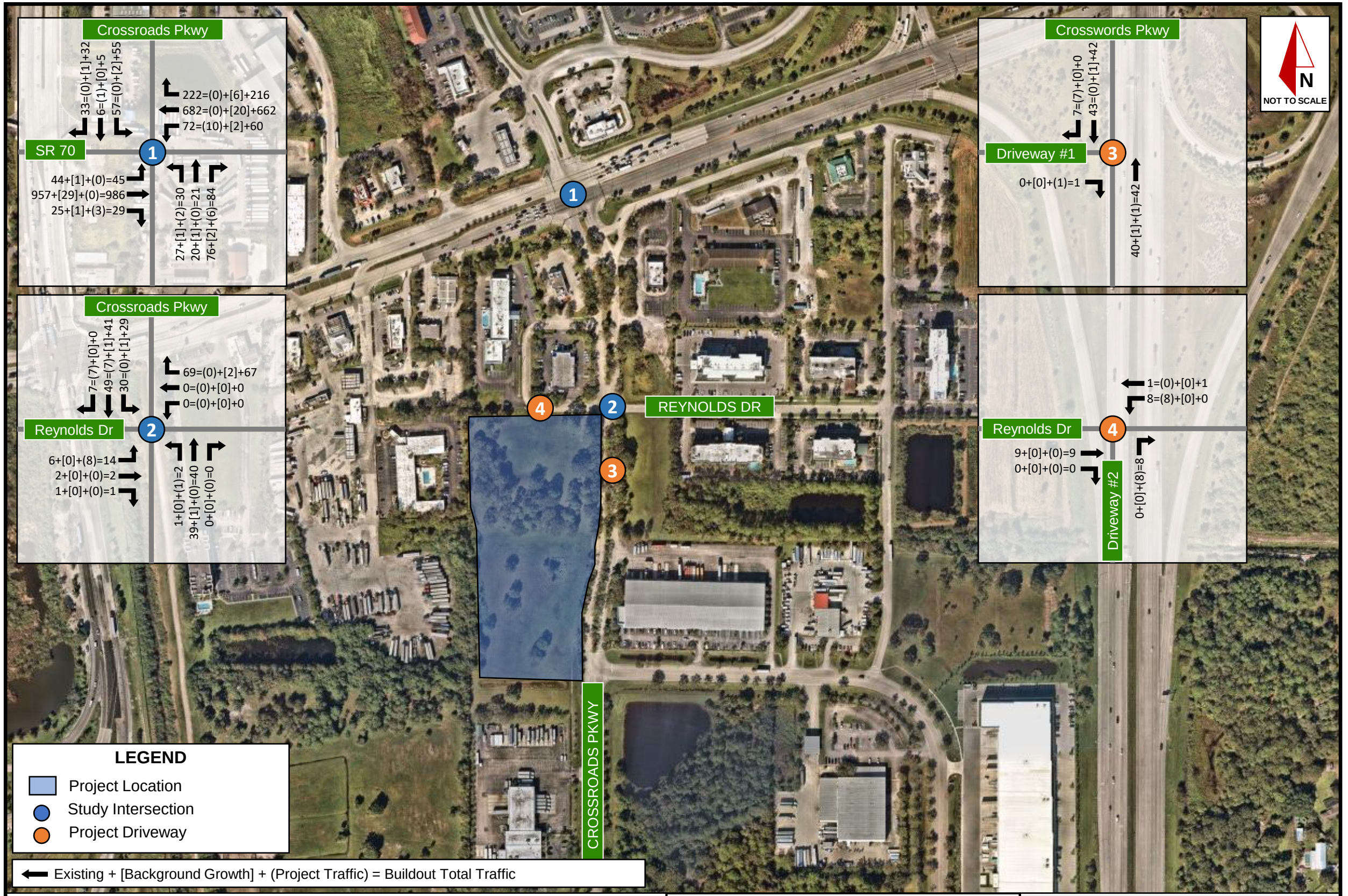


Figure 4: Buildout AM Peak Hour Intersection Volumes

NED Ft. Pierce | St. Lucie County, Florida

Project No: 147992001

April 2025

Kimley»Horn

6876 Marwick Lane, Suite 350, Orlando, FL, 32827
Phone: (407)-536-4440

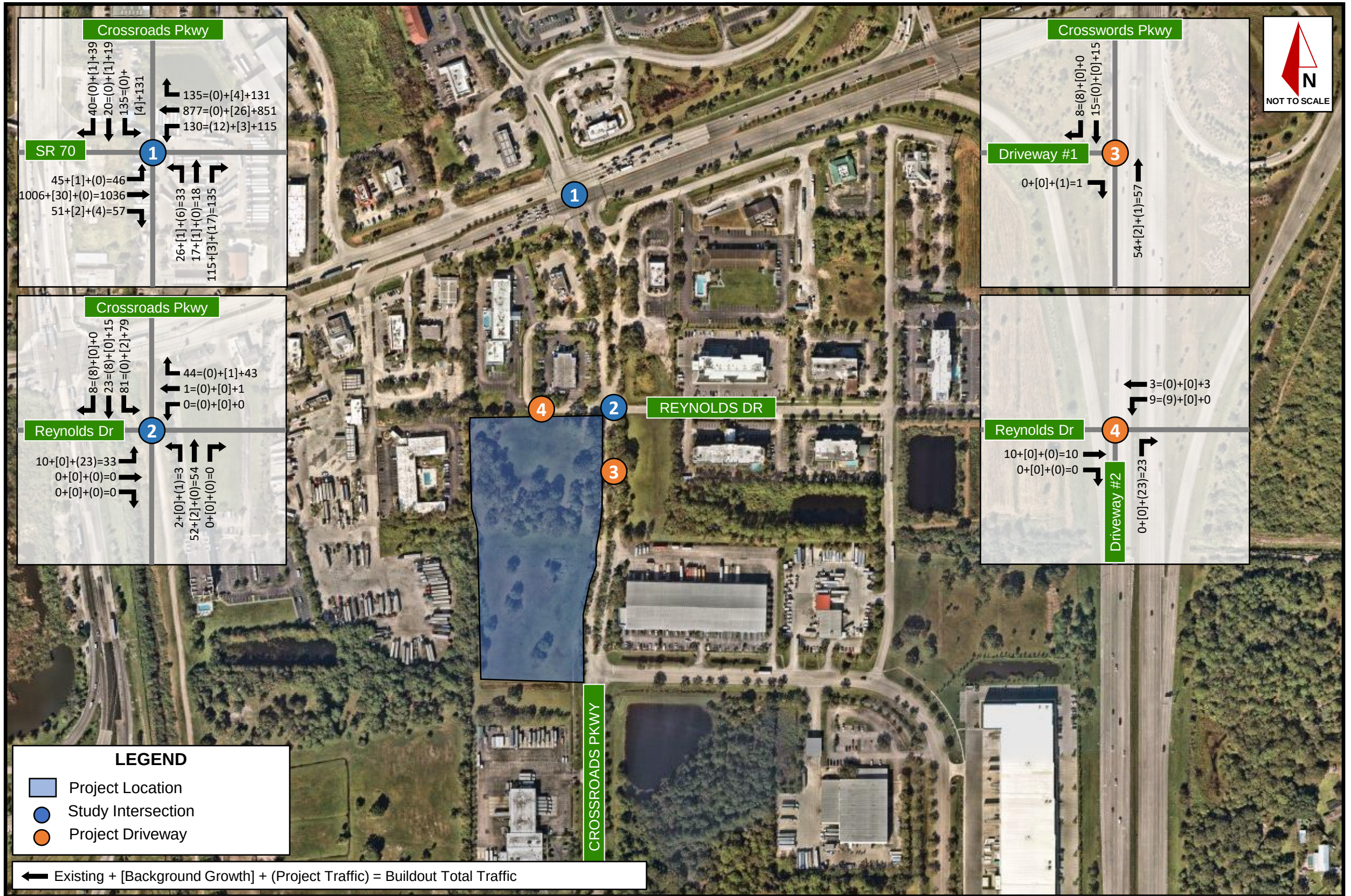


Figure 5: Buildout PM Peak Hour Intersection Volumes

NED Ft. Pierce | St. Lucie County, Florida

Project No: 147992001

April 2025

Kimley»Horn

6876 Marwick Lane, Suite 350, Orlando, FL, 32827
Phone: (407)-536-4440

5.3 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 2028 peak hour peak direction (PHPD) traffic volumes to the PHPD service capacities (excerpt included in **Appendix B**). Year 2028 PHPD volumes were derived by adding anticipated project trips to background volumes.

AM and PM peak hour buildout roadway segment conditions are shown within **Tables 13 and 14**, respectively. All study area roadway segments are expected to operate acceptably. No deficiencies were identified as a result of project traffic.

Table 13: Buildout (2028) AM Peak Hour Roadway Segment Analysis

Roadway		PHPD MSV [1]	Peak Hour Trips = 24			Buildout Conditions			
			% Assign [2]	Project Trips		Volumes [3]		V/C Ratio	Deficient?
From	To			NB/EB	SB/WB	NB/EB	SB/WB		
Crossroads Pkwy									
Okeechobee Road	End of Road	2,961	98%	9	15	54	96	0.03	No

Notes:

1. Peak hour peak directional service volumes were obtained from the St Lucie TPO Traffic Counts and Level of Service Report (2024).
2. The percent project traffic is the maximum across the segment.
3. Buildout project traffic volumes are the summation of future non-project traffic and project traffic.

Table 14: Buildout (2028) PM Peak Hour Roadway Segment Analysis

Roadway		PHPD MSV [1]	Peak Hour Trips = 41			Buildout Conditions			
			% Assign [2]	NB/EB	SB/WB	Volumes [3]		V/C Ratio	Deficient?
From	To					NB/EB	SB/WB		
Crossroads Pkwy									
Okeechobee Road	End of Road	2,961	98%	24	17	87	126	0.04	No

Notes:

1. Peak hour peak directional service volumes were obtained from the St Lucie TPO Traffic Counts and Level of Service Report (2024).
2. The percent project traffic is the maximum across the segment.
3. Buildout project traffic volumes are the summation of future non-project traffic and project traffic.

6.0 EXISTING TURN LANE ANALYSIS

Turn lane criteria provided in the latest FDOT Design Manual (FDM) was reviewed against future conditions to determine turn lane requirements at study area intersections.

Existing turn lanes at the study area intersections were evaluated to determine if sufficient deceleration and storage is provided to accommodate buildout project traffic volume projections. The total turn lane length is required to accommodate the minimum deceleration required in the 2025 FDOT Design Manual, Exhibit 212-1 and the expected 95th percentile queue as calculated using Synchro (v12).

As shown within **Tables 15, 16 and 17**, most of the turn lanes at the intersection of SR 70 & Crossroads Parkway do not have sufficient storage to accommodate project traffic upon buildout of the development. It should be noted that the eastbound and northbound right-turn storage lengths are deficient during existing traffic conditions and therefore not deficient due to project traffic.

Table 15: 2025 Existing Traffic Conditions Turn Lane Summary

Intersection	Existing Total Turn Lane Length (ft)	Required Deceleration (ft) [1]	95th Percentile Queue Length (ft) [2]	Existing Storage Length Sufficient? (Y/N) [3]	Required Additional Queue Length (ft)
SR 70 & Crossroads Pkwy					
Westbound Left-Turn Lane	525	290	100	Y	
Eastbound Right-Turn Lane	280	290	25	N	35
Northbound Left-Turn Lane	175	145	50	N	20
Northbound Right-Turn Lane	115	145	175	N	205

Notes:

1. Based on the 2025 FDOT Design Manual.
2. Based on the 95th percentile back of queue length as reported in Synchro 12. Queue length was rounded up to the nearest 25 ft to accommodate for the average length of one vehicle.
3. The existing storage length was determined to be sufficient if the turn lane could accommodate the addition of the required deceleration length and 95th percentile queue length.

Table 16: 2028 Background Traffic Conditions Turn Lane Summary

Intersection	Existing Total Turn Lane Length (ft)	Required Deceleration (ft) [1]	95th Percentile Queue Length (ft) [2]	Existing Storage Length Sufficient? (Y/N) [3]	Required Additional Queue Length (ft)
SR 70 & Crossroads Pkwy					
Westbound Left-Turn Lane	525	290	100	Y	
Eastbound Right-Turn Lane	280	290	25	N	35
Northbound Left-Turn Lane	175	145	50	N	20
Northbound Right-Turn Lane	115	145	175	N	205

Notes:
1. Based on the 2025 FDOT Design Manual.
2. Based on the 95th percentile back of queue length as reported in Synchro 11. Queue length was rounded up to the nearest 25 ft to accommodate for the average length of one vehicle.
3. The existing storage length was determined to be sufficient if the turn lane could accommodate the addition of the required deceleration length and 95th percentile queue length.

Table 17: 2028 Buildout Traffic Conditions Turn Lane Summary

Intersection	Existing Total Turn Lane Length (ft)	Required Deceleration (ft) [1]	95th Percentile Queue Length (ft) [2]	Existing Storage Length Sufficient? (Y/N) [3]	Required Additional Queue Length (ft)
SR 70 & Crossroads Pkwy					
Westbound Left-Turn Lane	525	290	100	Y	
Eastbound Right-Turn Lane	280	290	25	N	35
Northbound Left-Turn Lane	175	145	50	N	20
Northbound Right-Turn Lane	115	145	200	N	230

Notes:
1. Based on the 2025 FDOT Design Manual.
2. Based on the 95tn percentile back of queue length as reported in Synchro 11. Queue length was rounded up to the nearest 25 ft to accommodate for the average length of one vehicle.
3. The existing storage length was determined to be sufficient if the turn lane could accommodate the addition of the required deceleration length and 95th percentile queue length.

7.0 SITE ACCESS ANALYSIS

Access to the site will be provided via one (1) right-in/right-out access driveway on Crossroads Parkway and one (1) full access driveway on Reynolds Drive. Driveway turn lane criteria provided in FDOT's Access Management Guidebook and National Cooperative of Highway Research Programs (NCHRP) Report 457 were reviewed under future traffic conditions to determine turn lane requirements at project access points. NCHRP outputs are provided in **Appendix K**.

The projected ingress turning volumes at the proposed project driveways 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 ingress left-turn volumes projected at the project driveways during the AM and PM peak hours, an exclusive westbound left-turn lane is not warranted at the driveway connection (Project Driveway 2) on Reynolds Drive.

The projected ingress turning volumes at the proposed project driveways 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 driveways, and existing traffic volumes on Crossroads Parkway and Reynolds Drive during the AM and PM peak hours, exclusive right-turn lanes at the project driveways are not warranted.

8.0 CONCLUSION

This TIA was completed to assess the transportation impacts associated with the development of NED Ft. Pierce in the City of Fort Pierce, Florida. The site is generally located in the southwest quadrant of the intersection of Crossroads Parkway & Reynolds Drive. The site is currently vacant. The development is anticipated to be built by Year 2028 and is proposed to consist of approximately ±12,500 SF of construction equipment rental store and ±192,970 SF of equipment storage and display.

The development is expected to generate 400 daily new external vehicular trips, 24 (15 in/9 out) new AM peak hour external trips, and 41 (17 in/24 out) new PM peak hour external trips 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 (2025), background (2028), and buildout (2028) conditions. All study area roadway segments are expected to operate acceptably during 2025 existing traffic conditions. Upon review, no transportation improvements were identified near the study intersection by developers or within the latest St. Lucie County Transportation Planning Organization (TPO) Transportation Improvements Program (TIP), St. Lucie County 2045 Long Range Transportation Plan (LRTP), and Florida Department of Transportation's (FDOT) Five-Year Work Program.

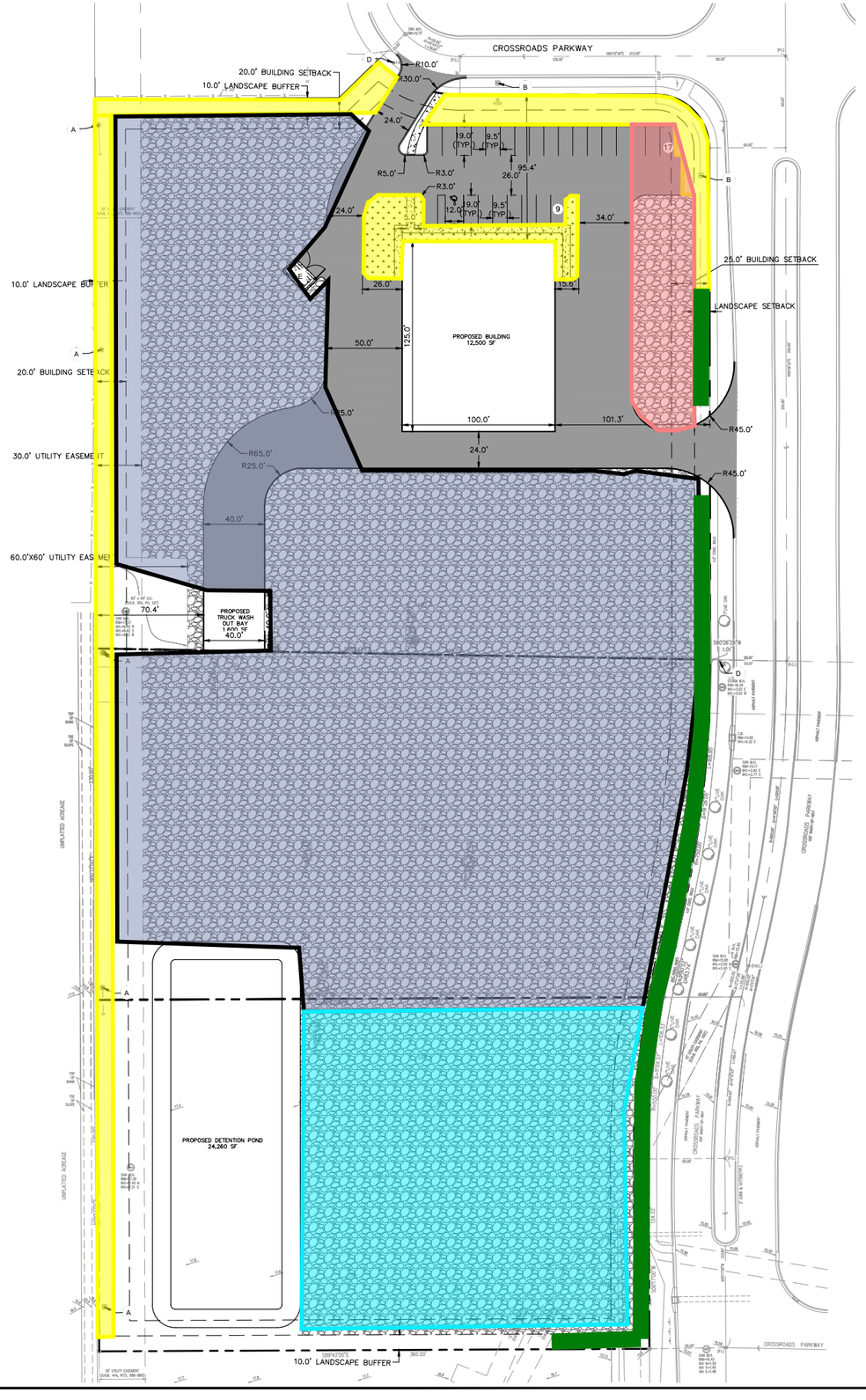
AM and PM peak hour operational analyses for existing (2025), background (2028), and buildout (2028) conditions were performed at the study area intersections. The analyses identified no deficiencies due to project traffic.

Access to the site will be provided via one (1) right-in/right-out driveway on Crossroads Parkway and one (1) full access driveway on Reynolds Drive. Turn lane criteria provided in NCHRP Report 457 was reviewed against future conditions to determine turn lane requirements at project driveways. Based on NCHRP Report 457 output, no additional ingress turn lanes are warranted at the proposed driveway connections on Crossroads Parkway and Reynolds Drive.

Existing turn lanes at the study area intersections were evaluated to determine if sufficient deceleration and storage is provided to accommodate buildout project traffic volume projections. Most of the existing turn lanes at the intersection of SR 70 & Crossroads Parkway do not have sufficient storage to accommodate project traffic upon buildout of the development. It should be noted that the turn lanes are deficient during existing traffic conditions and therefore not deficient due to project traffic.

The results within this report satisfy the requirements set forth by the City of Fort Pierce for evaluating proposed development impacts.

APPENDIX A
Conceptual Site Plan



Sod

Landscaped Screening (If needed)

Stabilized sod

Concrete

Undisturbed

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND

PROPERTY LINE

NE

INE

PROPOSED SIDEWALK

PROPOSED GRAVEL AREA

PROPOSED ASPHALT AREA

PROPOSED HEAVY DUTY CONCRETE AREA

PROPOSED PERVIOUS GRASS AREA

KEYNOTES

(A) EXISTING POWER POLE
(B) EXISTING LIGHT POLE
(C) EXISTING FIBER OPTIC MARKER
(D) EXISTING FIRE HYDRANT
(E) PROPOSED DUMPSTER ENCLOSURE

SITE DATA

FOLIO: 2324-710-0009-000-4, 2324-710-0008-000-7
2324-710-0010-000-4

SITE AREA: 7.31 AC

ZONING: CP-1 (COMMERCIAL PARKWAY)

MAXIMUM HEIGHT: 65 FEET OVERALL

BUILDING SETBACKS	REQUIRED	PROVIDED
FRONT:	25'	101.3'
SIDE YARD-STREET:	20'	95.4'
REAR YARD:	20'	70.4'

TOTAL STORAGE/ DISPLAY AREA: 4.43 AC

BUILDING A: 12,500 SF
STRUCTURE A: 1,600 SF
TOTAL: 14,100 SF

REQUIREMENTS: SEC. 125-315 - OFF STREET PARKING AND LOADING

PARKING

WHOLE SALE (10,000 SF)	1 SP PER 600 SF (GFA) = 17 SPACES
OFFICE (2,500 SF)	1 SP PER 300 SF (GFA) = 9 SPACES
REQUIRED PARKING	26 SPACES
PROVIDED PARKING	26 SPACES

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
445 24TH STREET, SUITE 200, VERO BEACH, FL 32960
PHONE: 772-794-4100
WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

STATE OF FLORIDA
No. 86463
PROFESSIONAL ENGINEER

KHA PROJECT 147992001
DATE 12/11/2024
SCALE AS SHOWN
DESIGNED BY JG
DRAWN BY EL
CHECKED BY JG

SITE PLAN

NED FT. PIERCE

PREPARED FOR
ALCAT FT PIERCE LLC

FT. PIERCE FL

SHEET NUMBER
C-100

APPENDIX B

Excerpts from St. Lucie TPO Traffic Counts and Level of Service Report & St. Lucie County's Comprehensive Plan

St. Lucie Transportation Planning Organization

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Traffic Counts and Level of Service Report
2024

Roadway Name	Location	STATION ID	2024 AADT *	Last Physical Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
COUNTRY CLUB DR	ST LUCIE WEST BLVD to CALIFORNIA BLVD	725	7,310	2023	1,710	529	C	0.31	500	C	0.29
CROSSTOWN PKWY	COMMERCE CENTER DR to I-95	650	18,982	2021	3,170	903	C	0.28	966	C	0.30
CROSSTOWN PKWY	I-95 to CALIFORNIA BLVD	651	44,500	2024	3,170	2,625	C	0.83	2,512	C	0.79
CROSSTOWN PKWY	CALIFORNIA BLVD to CASHMERE BLVD	652	39,500	2024	3,170	2,239	C	0.71	2,303	C	0.73
CROSSTOWN PKWY	CASHMERE BLVD to CAMEO BLVD	653	36,000	2024	3,170	2,016	C	0.64	1,935	C	0.61
CROSSTOWN PKWY	CAMEO BLVD to BAYSHORE BLVD	654	46,000	2024	3,170	2,385	C	0.75	2,367	C	0.75
CROSSTOWN PKWY	BAYSHORE BLVD to AIROSO BLVD	655	35,000	2024	3,170	1,920	C	0.61	1,855	C	0.59
CROSSTOWN PKWY	AIROSO BLVD to SANDIA DR	656	17,705	2021	3,170	857	C	0.27	919	C	0.29
CROSSTOWN PKWY	SANDIA DR to MANTH LN	657	21,986	2021	3,170	1,123	C	0.35	1,102	C	0.35
CROSSTOWN PKWY	FLORESTA DR to US 1	66	34,500	2024	3,170	2,331	C	0.74	2,070	C	0.65
CROSSROADS PKWY	OKEECHOBEE RD to KINGS HWY	649	2,204	2022	790	115	C	0.15	122	C	0.15
CROSSTOWN PKWY	VILLAGE PKWY to COMMERCE CENTER DR	733	27,500	2024	2,100	1,550	C	0.74	1,498	C	0.71
DARWIN BLVD	BECKER RD to PAAR DR	235	9,400	2024	630	812	F	1.29	715	F	1.13
DARWIN BLVD	PAAR DR to TULIP BLVD	235	9,400	2024	920	812	C	0.88	715	C	0.78
DARWIN BLVD	TULIP BLVD to PORT ST LUCIE BLVD	659	11,043	2023	920	582	C	0.63	542	C	0.59
DEL RIO BLVD	PORT ST LUCIE BLVD to CALIFORNIA BLVD	311	9,825	2022	920	585	C	0.64	518	C	0.56
DEL RIO BLVD	CALIFORNIA BLVD to CASHMERE BLVD	660	5,707	2022	880	336	C	0.38	357	C	0.41
DEL RIO BLVD	CASHMERE BLVD to CALIFORNIA BLVD	661	5,196	2021	880	276	C	0.31	280	C	0.32
DELAWARE AVE	HARTMAN RD to 33RD ST	662	1,600	2022	600	313	D	0.52	241	C	0.40
DELAWARE AVE	33RD ST to 25TH ST	500	2,160	2022	1,710	161	C	0.09	168	C	0.10
DELAWARE AVE	25TH ST to OKEECHOBEE RD	948526	1,308	2023	1,220	60	C	0.05	60	C	0.05
DELAWARE AVE	OKEECHOBEE RD to 13TH ST	663	10,632	2023	790	597	D	0.76	567	D	0.72
DELAWARE AVE	13TH ST to 10TH ST	664	8,100	2024	750	469	D	0.63	435	D	0.58
DELAWARE AVE	10TH ST to 7TH ST	664	8,100	2024	600	469	D	0.78	435	D	0.73
DELAWARE AVE	7TH ST to US 1	665	6,552	2023	750	424	D	0.57	382	D	0.51
EAST TORINO PKWY	CASHMERE BLVD to TORINO PKWY	710	10,500	2024	830	651	C	0.78	669	C	0.81
EAST TORINO PKWY	TORINO PKWY to MIDWAY RD	237	16,000	2024	880	1,093	F	1.24	918	F	1.04
EASY ST	US 1 to BUCHANAN DR	106	7,204	2021	750	399	D	0.53	505	D	0.67
EASY ST	BUCHANAN DR to YUCCA DR	106	7,204	2021	540	399	D	0.74	505	D	0.94
EDWARDS RD	JENKINS RD to MCNEIL RD	174	14,000	2024	630	742	F	1.18	718	F	1.14
EDWARDS RD	MCNEIL RD to SELVITZ RD	174	14,000	2024	700	742	F	1.06	718	F	1.03
EDWARDS RD	SELVITZ RD to 25TH ST	110	13,500	2024	880	711	C	0.81	702	C	0.80

* **NOTE:** A six digit number in the "STATION ID" column identifies segment counted by FDOT. FDOT count stations use standard K and D factors to determine peak hour values.
Peak hour data is not available for locations on State roads due to differences in data availability, LOS Methodologies, and service level thresholds.
Please refer to FDOT sources for detailed data on FDOT traffic counts.

* Volumes shown were adjusted using FDOT Seasonal Factors
* AADT = Annual Average Daily Traffic (volumes for both directions where applicable)

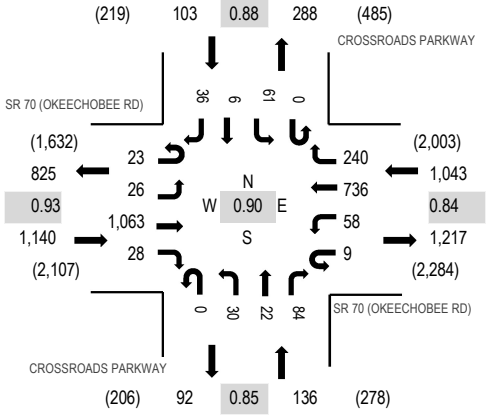
*** NOTE:** If the Last Count Year is older than the year of the report, the AADT is projected from historical traffic count data.

APPENDIX C
Turning Movement Counts

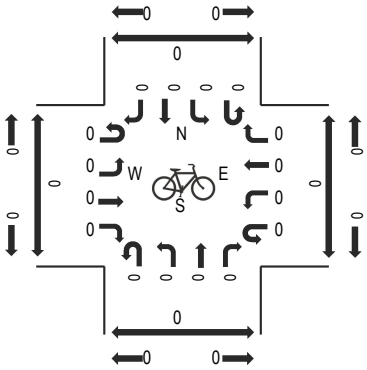
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 CROSSROADS PARKWAY & SR 70 (OKEECHOBEE RD) AM
Date: Thursday, March 13, 2025
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

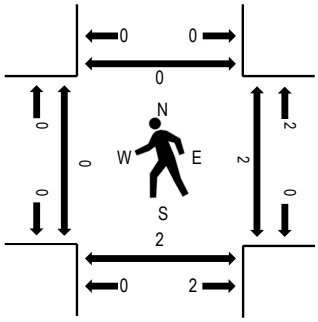
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SR 70 (OKEECHOBEE RD) Eastbound				SR 70 (OKEECHOBEE RD) Westbound				CROSSROADS PARKWAY Northbound				CROSSROADS PARKWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	4	7	197	5	2	13	162	58	0	10	7	14	1	17	3	4	504	2,355	0	0	0	0
7:15 AM	2	7	246	7	1	12	177	69	0	5	1	20	0	13	2	8	570	2,422	0	0	0	0
7:30 AM	2	5	289	8	2	8	170	54	0	11	10	21	0	11	1	13	605	2,407	0	0	0	0
7:45 AM	10	11	277	9	3	25	197	86	0	3	6	23	0	18	2	6	676	2,361	0	0	0	0
8:00 AM	9	3	251	4	3	13	192	31	0	11	5	20	0	19	1	9	571	2,252	0	2	2	0
8:15 AM	5	6	237	4	1	15	193	31	1	9	4	21	0	17	4	7	555		0	1	0	0
8:30 AM	3	5	232	11	5	13	191	37	0	6	2	25	0	20	1	8	559		1	0	0	1
8:45 AM	7	4	228	12	4	27	178	30	0	9	5	29	0	18	5	11	567		1	0	0	1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	2	1	88	5	0	1	89	2	0	2	0	0	0	1	0	1	192
Lights	21	22	897	16	9	53	594	230	0	24	20	69	0	58	5	30	2,048
Mediums	0	3	78	7	0	4	53	8	0	4	2	15	0	2	1	5	182
Total	23	26	1,063	28	9	58	736	240	0	30	22	84	0	61	6	36	2,422

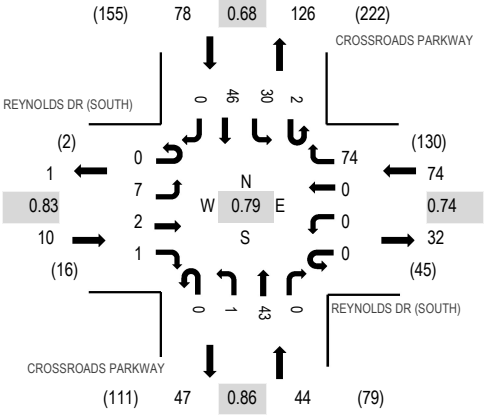
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		16.1%				15.1%				16.9%				9.7%			15.4%
Heavy Vehicle %	8.7%	15.4%	15.6%	42.9%	0.0%	8.6%	19.3%	4.2%	0.0%	20.0%	9.1%	17.9%	0.0%	4.9%	16.7%	16.7%	15.4%
Peak Hour Factor		0.93				0.84				0.85				0.88			0.90
Peak Hour Factor	0.68	0.68	0.92	0.65	0.65	0.63	0.98	0.78	0.25	0.80	0.63	0.82	0.25	0.93	0.55	0.69	0.90

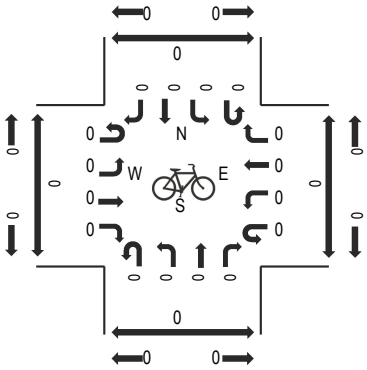
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 CROSSROADS PARKWAY & REYNOLDS DR (SOUTH) AM
Date: Thursday, March 13, 2025
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

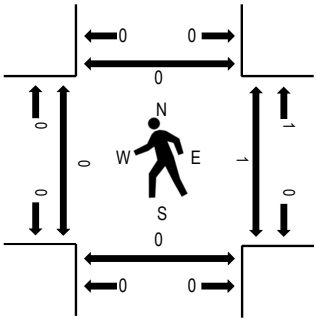
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	REYNOLDS DR (SOUTH) Eastbound				REYNOLDS DR (SOUTH) Westbound				CROSSROADS PARKWAY Northbound				CROSSROADS PARKWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	3	0	0	0	0	0	11	0	0	7	0	0	0	16	0	37	174	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	16	0	0	7	0	0	3	12	1	40	187	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	20	0	0	8	0	0	7	9	0	44	189	0	0	1	0
7:45 AM	0	2	0	0	0	1	0	8	0	0	13	0	0	3	26	0	53	194	0	0	1	0
8:00 AM	0	1	1	0	0	0	0	19	0	0	13	0	0	4	12	0	50	206	0	0	0	0
8:15 AM	0	3	0	0	0	0	0	16	0	0	8	0	1	4	10	0	42		0	0	0	0
8:30 AM	0	2	0	0	0	0	0	14	0	0	14	0	0	10	9	0	49		0	0	0	0
8:45 AM	0	1	1	1	0	0	0	25	0	1	8	0	1	12	15	0	65		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	2	0	0	5	0	0	0	3	0	10
Lights	0	6	1	1	0	0	0	72	0	1	30	0	1	29	39	0	180
Mediums	0	1	1	0	0	0	0	0	0	0	8	0	1	1	4	0	16
Total	0	7	2	1	0	0	0	74	0	1	43	0	2	30	46	0	206

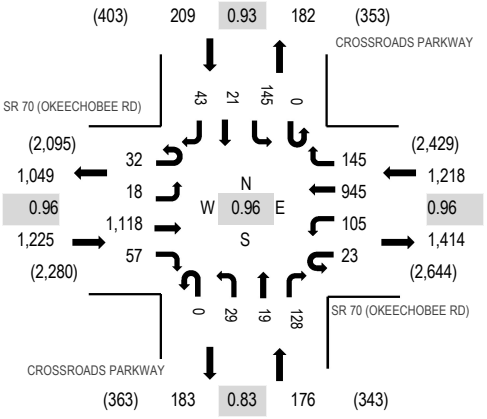
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		20.0%				2.7%				29.5%				11.5%			12.6%
Heavy Vehicle %	0.0%	14.3%	50.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	30.2%	0.0%	50.0%	3.3%	15.2%	0.0%	12.6%
Peak Hour Factor		0.83				0.74				0.86				0.68			0.79
Peak Hour Factor	0.00	0.67	0.50	0.25	0.00	0.25	0.00	0.74	0.00	0.25	0.86	0.00	0.50	0.63	0.61	0.25	0.79

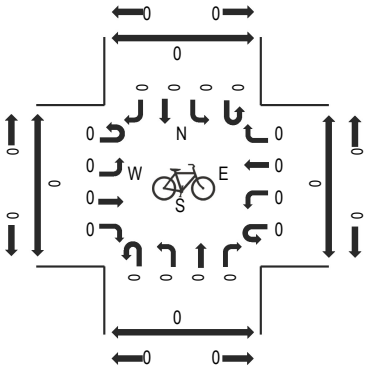
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 CROSSROADS PARKWAY & SR 70 (OKEECHOBEE RD) PM
Date: Thursday, March 13, 2025
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

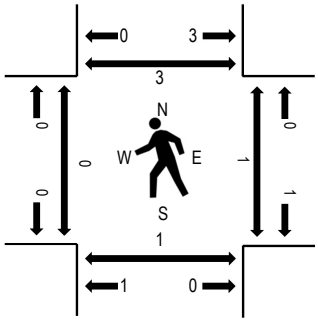
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SR 70 (OKEECHOBEE RD) Eastbound				SR 70 (OKEECHOBEE RD) Westbound				CROSSROADS PARKWAY Northbound				CROSSROADS PARKWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	7	8	236	9	4	24	251	28	1	5	2	23	1	32	3	16	650	2,627	0	0	0	0
4:15 PM	8	9	238	13	5	24	196	30	0	5	2	35	0	43	4	8	620	2,656	1	0	1	0
4:30 PM	8	5	228	16	10	28	248	35	0	12	4	37	0	34	1	9	675	2,743	0	0	0	0
4:45 PM	6	11	241	12	9	40	245	34	1	11	2	27	0	28	4	11	682	2,803	1	1	0	1
5:00 PM	8	0	267	7	5	34	227	36	0	4	5	30	0	40	2	14	679	2,828	0	1	0	1
5:15 PM	4	6	296	12	8	19	245	33	0	6	7	25	0	32	8	6	707		0	0	0	0
5:30 PM	14	6	280	20	8	23	245	38	0	7	1	38	0	36	6	13	735		0	0	1	0
5:45 PM	6	6	275	18	2	29	228	38	0	12	6	35	0	37	5	10	707		0	0	0	2

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	6	3	106	3	0	1	67	2	0	1	0	0	0	4	1	1	195
Lights	26	15	991	50	23	100	846	141	0	26	19	124	0	140	18	41	2,560
Mediums	0	0	21	4	0	4	32	2	0	2	0	4	0	1	2	1	73
Total	32	18	1,118	57	23	105	945	145	0	29	19	128	0	145	21	43	2,828

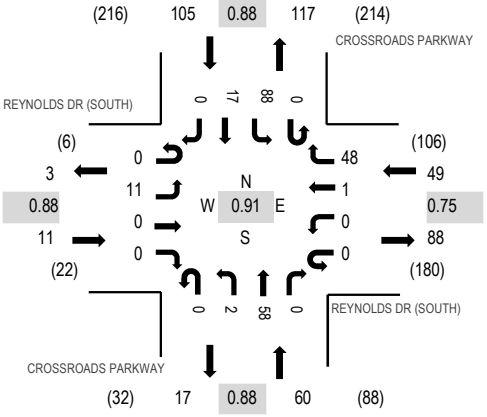
Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %			11.7%				8.9%				4.0%				4.8%		9.5%
Heavy Vehicle %	18.8%	16.7%	11.4%	12.3%	0.0%	4.8%	10.5%	2.8%	0.0%	10.3%	0.0%	3.1%	0.0%	3.4%	14.3%	4.7%	9.5%
Peak Hour Factor			0.96				0.96				0.83				0.93		0.96
Peak Hour Factor	0.57	0.75	0.94	0.71	0.80	0.79	0.97	0.95	0.50	0.69	0.68	0.87	0.25	0.84	0.66	0.69	0.96

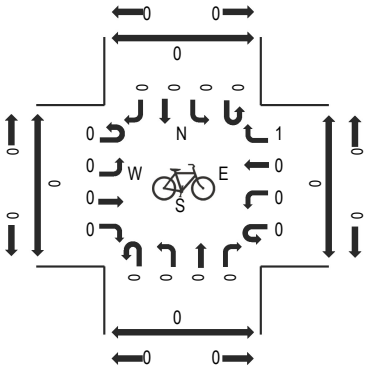
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 CROSSROADS PARKWAY & REYNOLDS DR (SOUTH) PM
Date: Thursday, March 13, 2025
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

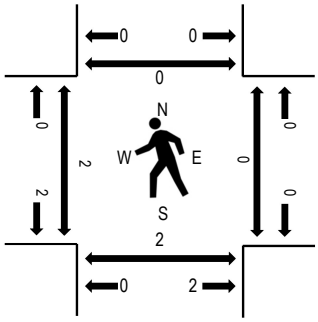
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	REYNOLDS DR (SOUTH) Eastbound				REYNOLDS DR (SOUTH) Westbound				CROSSROADS PARKWAY Northbound				CROSSROADS PARKWAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	0	0	0	0	0	10	0	1	14	0	0	19	4	0	49	225	2	0	2	0
4:15 PM	0	4	0	0	0	0	0	12	0	0	13	0	0	18	6	0	53	224	0	0	0	0
4:30 PM	0	4	0	0	0	0	0	14	0	1	16	0	0	22	4	0	61	217	0	0	0	0
4:45 PM	0	2	0	0	0	0	1	12	0	0	15	0	0	29	3	0	62	215	0	0	0	0
5:00 PM	0	3	1	0	0	0	0	9	0	0	12	1	1	17	3	1	48	207	0	0	0	0
5:15 PM	0	2	0	0	0	0	0	13	0	0	5	0	1	21	3	1	46		0	0	0	0
5:30 PM	0	3	0	0	0	0	0	19	0	0	5	0	0	26	6	0	59		1	0	1	0
5:45 PM	0	2	0	0	0	0	0	16	0	0	5	0	1	26	3	1	54		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	2	0	0	0	5	0	8
Lights	0	10	0	0	0	0	1	44	0	2	55	0	0	87	10	0	209
Mediums	0	1	0	0	0	0	0	3	0	0	1	0	0	1	2	0	8
Total	0	11	0	0	0	0	1	48	0	2	58	0	0	88	17	0	225

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		9.1%				8.2%				5.0%				7.6%			7.1%
Heavy Vehicle %	0.0%	9.1%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	0.0%	0.0%	5.2%	0.0%	0.0%	1.1%	41.2%	0.0%	7.1%
Peak Hour Factor		0.88				0.75				0.88				0.88			0.91
Peak Hour Factor	0.00	0.81	0.25	0.00	0.00	0.00	0.25	0.75	0.00	0.50	0.91	0.25	0.75	0.80	0.71	0.75	0.91

APPENDIX D

FDOT's Florida Traffic Online 2024 Peak Season Factor Category Report

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 9402 WEST-W OF I95

MOCF: 0.92

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.01	1.10
2	01/07/2024 - 01/13/2024	1.01	1.10
3	01/14/2024 - 01/20/2024	1.01	1.10
4	01/21/2024 - 01/27/2024	0.98	1.07
* 5	01/28/2024 - 02/03/2024	0.94	1.02
* 6	02/04/2024 - 02/10/2024	0.91	0.99
* 7	02/11/2024 - 02/17/2024	0.88	0.96
* 8	02/18/2024 - 02/24/2024	0.88	0.96
* 9	02/25/2024 - 03/02/2024	0.89	0.97
*10	03/03/2024 - 03/09/2024	0.89	0.97
*11	03/10/2024 - 03/16/2024	0.90	0.98
*12	03/17/2024 - 03/23/2024	0.91	0.99
*13	03/24/2024 - 03/30/2024	0.92	1.00
*14	03/31/2024 - 04/06/2024	0.93	1.01
*15	04/07/2024 - 04/13/2024	0.94	1.02
*16	04/14/2024 - 04/20/2024	0.95	1.03
*17	04/21/2024 - 04/27/2024	0.96	1.04
18	04/28/2024 - 05/04/2024	0.98	1.07
19	05/05/2024 - 05/11/2024	0.99	1.08
20	05/12/2024 - 05/18/2024	1.01	1.10
21	05/19/2024 - 05/25/2024	1.02	1.11
22	05/26/2024 - 06/01/2024	1.04	1.13
23	06/02/2024 - 06/08/2024	1.05	1.14
24	06/09/2024 - 06/15/2024	1.07	1.16
25	06/16/2024 - 06/22/2024	1.08	1.17
26	06/23/2024 - 06/29/2024	1.08	1.17
27	06/30/2024 - 07/06/2024	1.09	1.18
28	07/07/2024 - 07/13/2024	1.10	1.20
29	07/14/2024 - 07/20/2024	1.11	1.21
30	07/21/2024 - 07/27/2024	1.10	1.20
31	07/28/2024 - 08/03/2024	1.10	1.20
32	08/04/2024 - 08/10/2024	1.09	1.18
33	08/11/2024 - 08/17/2024	1.09	1.18
34	08/18/2024 - 08/24/2024	1.09	1.18
35	08/25/2024 - 08/31/2024	1.09	1.18
36	09/01/2024 - 09/07/2024	1.09	1.18
37	09/08/2024 - 09/14/2024	1.09	1.18
38	09/15/2024 - 09/21/2024	1.10	1.20
39	09/22/2024 - 09/28/2024	1.08	1.17
40	09/29/2024 - 10/05/2024	1.06	1.15
41	10/06/2024 - 10/12/2024	1.04	1.13
42	10/13/2024 - 10/19/2024	1.03	1.12
43	10/20/2024 - 10/26/2024	1.01	1.10
44	10/27/2024 - 11/02/2024	1.00	1.09
45	11/03/2024 - 11/09/2024	0.99	1.08
46	11/10/2024 - 11/16/2024	0.98	1.07
47	11/17/2024 - 11/23/2024	0.98	1.07
48	11/24/2024 - 11/30/2024	0.99	1.08
49	12/01/2024 - 12/07/2024	0.99	1.08
50	12/08/2024 - 12/14/2024	1.00	1.09
51	12/15/2024 - 12/21/2024	1.01	1.10
52	12/22/2024 - 12/28/2024	1.01	1.10
53	12/29/2024 - 12/31/2024	1.01	1.10

* PEAK SEASON

APPENDIX E
Turning Movement Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT
Crossroads Pkwy @ SR 70
AM Peak Hour

	Crossroads Pkwy Northbound			Crossroads Pkwy Southbound			SR 70 Eastbound			SR 70 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	30	22	84	61	6	36	49	1,063	28	67	736	240
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	27	20	76	55	5	32	44	957	25	60	662	216
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	28	21	78	57	5	33	45	986	26	62	682	222
Project Assignment	23.0%	2.0%	73.0%	0.0%	2.0%	0.0%	0.0%	0.0%	23.0%	73.0%	0.0%	0.0%
	OUT	OUT	OUT	--	IN	--	--	--	IN	IN	--	--
Project Traffic (Net New Trips)	2	0	6	0	1	0	0	0	3	10	0	0
Total Build-Out Volumes	30	21	84	57	6	33	45	986	29	72	682	222

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Crossroads Pkwy @ Reynolds Dr
AM Peak Hour

	Crossroads Pkwy Northbound			Crossroads Pkwy Southbound			Reynolds Dr Eastbound			Reynolds Dr Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	1	43	0	32	46	0	7	2	1	0	0	74
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	1	39	0	29	41	0	6	2	1	0	0	67
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	1	40	0	30	42	0	6	2	1	0	0	69
Project Assignment	2.0%	0.0%	0.0%	0.0%	49.0%	49.0%	98.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	IN	--	--	--	IN	IN	OUT	--	--	--	--	--
Project Traffic (Net New Trips)	1	0	0	0	7	7	8	0	0	0	0	0
Total Build-Out Volumes	2	40	0	30	49	7	14	2	1	0	0	69

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Crossroads Pkwy @ 0
AM Peak Hour

	Crossroads Pkwy Northbound			Crossroads Pkwy Southbound			Driveway #1 Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	0	44	0	0	47	0	0	0	0	0	0	0
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	0	40	0	0	42	0	0	0	0	0	0	0
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	0	41	0	0	43	0	0	0	0	0	0	0
Project Assignment	0.0%	2.0%	0.0%	0.0%	0.0%	49.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%
	--	IN	--	--	--	IN	--	--	OUT	--	--	--
Project Traffic (Net New Trips)	0	1	0	0	0	7	0	0	1	0	0	0
Total Build-Out Volumes	0	42	0	0	43	7	0	0	1	0	0	0

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Driveway #2 @ Reynolds Dr
AM Peak Hour

	Driveway #2 Northbound			0 Southbound			Reynolds Dr Eastbound			Reynolds Dr Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	0	0	0	0	0	0	0	10	0	0	1	0
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	0	0	0	0	0	0	0	9	0	0	1	0
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	0	0	0	0	0	0	0	9	0	0	1	0
Project Assignment	0.0%	0.0%	98.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.0%	0.0%	0.0%
	--	--	OUT	--	--	--	--	--	--	IN	--	--
Project Traffic (Net New Trips)	0	0	8	0	0	0	0	0	0	8	0	0
Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Build-Out Volumes	0	0	8	0	0	0	0	9	0	8	1	0

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Crossroads Pkwy @ SR 70
PM Peak Hour

	Crossroads Pkwy Northbound			Crossroads Pkwy Southbound			SR 70 Eastbound			SR 70 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	29	19	128	145	21	43	50	1,118	57	128	945	145
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	26	17	115	131	19	39	45	1,006	51	115	851	131
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	27	18	118	135	20	40	46	1,036	53	118	877	135
Project Assignment	23.0%	2.0%	73.0%	0.0%	2.0%	0.0%	0.0%	0.0%	23.0%	73.0%	0.0%	0.0%
	OUT	OUT	OUT	--	IN	--	--	--	IN	IN	--	--
Project Traffic (Net New Trips)	6	0	17	0	0	0	0	0	4	12	0	0
Total Build-Out Volumes	33	18	135	135	20	40	46	1,036	57	130	877	135

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Crossroads Pkwy @ Reynolds Dr
PM Peak Hour

	Crossroads Pkwy Northbound			Crossroads Pkwy Southbound			Reynolds Dr Eastbound			Reynolds Dr Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	2	58	0	88	17	0	11	0	0	0	1	48
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	2	52	0	79	15	0	10	0	0	0	1	43
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	2	54	0	81	15	0	10	0	0	0	1	44
Project Assignment	2.0%	0.0%	0.0%	0.0%	49.0%	49.0%	98.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	IN	--	--	--	IN	IN	OUT	--	--	--	--	--
Project Traffic (Net New Trips)	1	0	0	0	8	8	23	0	0	0	0	0
Total Build-Out Volumes	3	54	0	81	23	8	33	0	0	0	1	44

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Crossroads Pkwy @ 0
PM Peak Hour

	Crossroads Pkwy Northbound			Crossroads Pkwy Southbound			Driveway #1 Eastbound			0 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	0	60	0	0	17	0	0	0	0	0	0	0
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	0	54	0	0	15	0	0	0	0	0	0	0
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	0	56	0	0	15	0	0	0	0	0	0	0
Project Assignment	0.0%	2.0%	0.0%	0.0%	0.0%	49.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%
	--	IN	--	--	--	IN	--	--	OUT	--	--	--
Project Traffic (Net New Trips)	0	1	0	0	0	8	0	0	1	0	0	0
Total Build-Out Volumes	0	57	0	0	15	8	0	0	1	0	0	0

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 90.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

INTERSECTION VOLUME DEVELOPMENT
Driveway #2 @ Reynolds Dr
PM Peak Hour

	Driveway #2 Northbound			0 Southbound			Reynolds Dr Eastbound			Reynolds Dr Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3/13/25 Observed Volumes	0	0	0	0	0	0	0	11	0	0	3	0
Peak Season Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
2025 Peak Season Volumes	0	0	0	0	0	0	0	10	0	0	3	0
Growth Factor	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
2028 Peak Season Volumes	0	0	0	0	0	0	0	10	0	0	3	0
Project Assignment	0.0%	0.0%	98.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	51.0%	0.0%	0.0%
	--	--	OUT	--	--	--	--	--	--	IN	--	--
Project Traffic (Net New Trips)	0	0	23	0	0	0	0	0	0	9	0	0
Total Build-Out Volumes	0	0	23	0	0	0	0	10	0	9	3	0

Raw-To-Peak Season Factor: 0.90
Applied Growth Rate: 1.00%
Existing Year 2025
Build-Out Year: 2028
Growth Factor: 1.03

APPENDIX F
Signal Timing/Phasing Plans

Fort Pierce, FL

ECONOLITE

MOVING TRAFFIC FORWARD

SR70 & Crossroads/Peters Rd - ASC3 [redacted] - Econolite Type - ASC/3

Controller Timing Plan (MM) 2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	E	W	SE	N	W	E	NW	S								
Min Green	5	12	8	9	5	12	8	8	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	7	0	5	0	7	0	5	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	35	0	30	0	35	0	30	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	3.0	3.0	3.0	3.0	3.0	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	20	60	20	30	20	60	20	30	20	60	20	30	20	60	20	30
Max2	40	40	40	40	40	40	40	40	25	60	25	35	25	60	25	35
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	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.8	4.8	4.0	4.0	4.8	4.8	4.0	4.0
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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	2.0	2.0	2.0	2.0	2.0	2.0	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

Fort Pierce, FL

ECONOLITE

MOVING TRAFFIC FORWARD

SR70 & Crossroads/Peters Rd - ASC3 [redacted] - Econolite Type - ASC/3

Coordination Options

Options (MM) 3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	TBC	System Format	STD
Splits In	Seconds	Offsets In	Seconds
Transition	Smooth	Max Select	MAXINH
Dwell / Add Time	0		
Delay Coord Wk-LZ	No	Force Off	Fixed
Offset Reference	Yield	Use Ped Time	Yes
Ped Recall	No	Ped Reservice	No
Local Zero Override	No	FO Added Ini Green	No
Re-sync Count	0	Multisync	No

Auto Perm Minimum Green (Seconds) (MM) 3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM) 3-5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Demand 1																
Demand 2																

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

Fort Pierce, FL

ECONOLITE

MOVING TRAFFIC FORWARD

SR70 & Crossroads/Peters Rd - ASC3 [redacted] - Econolite Type - ASC/3

Coordination Pattern Data
Coordinator Pattern Data (MM) 3-2

Coordinator Pattern # 1

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits In	Seconds
Cycle	130	Std (COS)	9	Offsets In	Seconds
Offset Value	84s	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	1		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (Split Pat 1)	22	55	18	35	22	55	18	35	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	130s	130s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 2

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits In	Seconds
Cycle	130	Std (COS)	17	Offsets In	Seconds
Offset Value	33s	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	2		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (Split Pat 2)	17	57	20	36	17	57	20	36	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	130s	130s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 3

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits In	Seconds
Cycle	130	Std (COS)	25	Offsets In	Seconds
Offset Value	110s	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	3		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (Split Pat 3)	15	68	17	30	17	66	17	30	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	130s	130s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits In	Seconds
Cycle	100	Std (COS)	33	Offsets In	Seconds
Offset Value	6s	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	4		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (Split Pat 4)	15	45	15	25	15	45	15	25	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	100s	100s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Coordinator Pattern # 5

Split Pattern	5	TS2 (Pat-Off)	1-2	Splits In	Seconds
Cycle	120	Std (COS)	41	Offsets In	Seconds
Offset Value	96s	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	1		
Actuated Walk Rest	No	Sequence	1		
Phase Reservice	No	Action Plan	5		
Max Select	MAXINH	Force Off	Fixed		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (Split Pat 5)	17	61	17	25	17	61	17	25	0	0	0	0	0	0	0	0
Pref 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pref 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Displacement	-	0	0	0
Split Sum	120s	120s	0s	0s

Misc. Data

Veh Perm 1	0	Veh Perm 2	0	Veh Perm 2 Disp	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X
Special Funciton Outputs																

Fort Pierce, FL

ECONOLITE

MOVING TRAFFIC FORWARD

SR70 & Crossroads/Peters Rd - ASC3 [redacted] - Econolite Type - ASC/3

Coordination Split Pattern
Split Pattern Data (MM) 3-3

Split Pattern # 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Split (seconds)	22	55	18	35	22	55	18	35	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	130s	130s	0s	0s

Split Pattern # 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Split (seconds)	17	57	20	36	17	57	20	36	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	130s	130s	0s	0s

Split Pattern # 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Split (seconds)	15	68	17	30	17	66	17	30	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										

Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	130s	130s	0s	0s

Split Pattern # 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Split (seconds)	15	45	15	25	15	45	15	25	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100s	100s	0s	0s

Split Pattern # 5

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Split (seconds)	17	61	17	25	17	61	17	25	0	0	0	0	0	0	0	0
Coord Phase		X				X										
Vehicle Recall		X				X										
Pedestrian Recall																
Recall to Max. Time																
Omit Phase									X	X	X	X	X	X	X	X

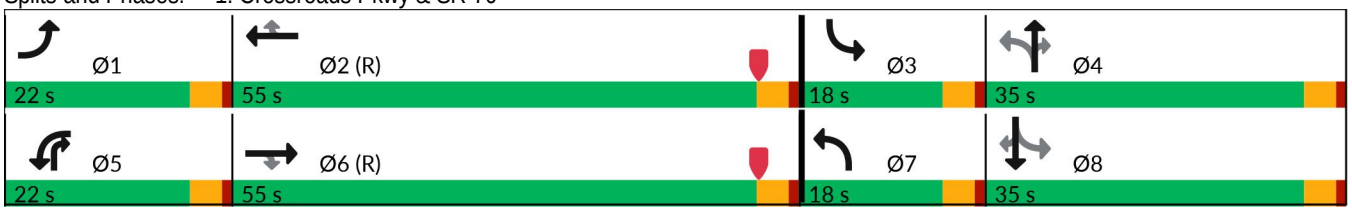
Ring	1	2	3	4
Split Sum	120s	120s	0s	0s

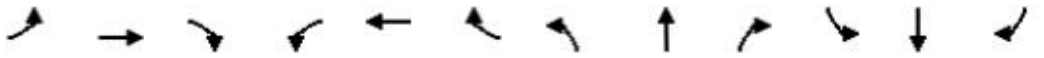
APPENDIX G
Synchro Outputs

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	957	25	60	662	216	27	20	76	55	5	32
Future Volume (vph)	44	957	25	60	662	216	27	20	76	55	5	32
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	9.0	5.0	8.0	8.0	8.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	12.5	22.5	9.5	12.5	22.5	22.5
Total Split (s)	22.0	55.0	55.0	22.0	55.0	55.0	18.0	35.0	22.0	18.0	35.0	35.0
Total Split (%)	16.9%	42.3%	42.3%	16.9%	42.3%	42.3%	13.8%	26.9%	16.9%	13.8%	26.9%	26.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.4	93.9	93.9	8.3	95.5	95.5	14.0	9.1	16.2	17.5	10.5	10.5
Actuated g/C Ratio	0.07	0.72	0.72	0.06	0.73	0.73	0.11	0.07	0.12	0.13	0.08	0.08
v/c Ratio	0.43	0.33	0.03	0.35	0.22	0.22	0.19	0.19	0.34	0.37	0.05	0.20
Control Delay (s/veh)	68.5	8.5	0.0	62.7	8.3	1.8	47.8	61.1	13.1	52.9	54.2	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.5	8.5	0.0	62.7	8.3	1.8	47.8	61.1	13.1	52.9	54.2	2.4
LOS	E	A	A	E	A	A	D	E	B	D	D	A
Approach Delay (s/veh)		10.9			10.3			28.5			35.3	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay (s/veh): 12.7	Intersection LOS: B
Intersection Capacity Utilization 42.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Crossroads Pkwy & SR 70





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	957	25	60	662	216	27	20	76	55	5	32
Future Volume (veh/h)	44	957	25	60	662	216	27	20	76	55	5	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	49	1063	28	67	736	240	30	22	84	61	6	36
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	61	3268	1014	109	3252	1010	211	124	155	214	147	125
Arrive On Green	0.04	0.71	0.71	0.04	0.71	0.71	0.04	0.07	0.07	0.05	0.09	0.09
Sat Flow, veh/h	1598	4580	1422	3100	4580	1422	1598	1678	1422	1598	1678	1422
Grp Volume(v), veh/h	49	1063	28	67	736	240	30	22	84	61	6	36
Grp Sat Flow(s),veh/h/ln	1598	1527	1422	1550	1527	1422	1598	1678	1422	1598	1678	1422
Q Serve(g_s), s	4.0	11.3	0.7	2.8	7.2	7.7	2.2	1.6	7.3	4.5	0.4	3.1
Cycle Q Clear(g_c), s	4.0	11.3	0.7	2.8	7.2	7.7	2.2	1.6	7.3	4.5	0.4	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	3268	1014	109	3252	1010	211	124	155	214	147	125
V/C Ratio(X)	0.80	0.33	0.03	0.62	0.23	0.24	0.14	0.18	0.54	0.29	0.04	0.29
Avail Cap(c_a), veh/h	221	3268	1014	429	3252	1010	318	400	389	298	400	339
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.0	7.0	5.4	61.9	6.5	6.6	52.0	56.5	54.9	51.3	54.3	55.5
Incr Delay (d2), s/veh	20.6	0.3	0.1	5.6	0.2	0.6	0.3	0.7	3.0	0.7	0.1	1.3
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(95%),veh/ln	3.5	5.8	0.4	2.1	3.7	4.2	1.6	1.3	4.9	3.3	0.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.6	7.2	5.5	67.4	6.7	7.1	52.3	57.2	57.8	52.1	54.4	56.8
LnGrp LOS	F	A	A	E	A	A	D	E	E	D	D	E
Approach Vol, veh/h		1140			1043			136			103	
Approach Delay, s/veh		10.4			10.7			56.5			53.8	
Approach LOS		B			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	96.3	11.1	13.6	8.6	96.7	9.3	15.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	51.0	14.0	31.0	18.0	51.0	14.0	31.0
Max Q Clear Time (g_c+I1), s	6.0	9.7	6.5	9.3	4.8	13.3	4.2	5.1
Green Ext Time (p_c), s	0.1	6.4	0.1	0.3	0.1	8.6	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	15.0
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	2	1	0	0	67	1	39	0	29	41	0
Future Vol, veh/h	6	2	1	0	0	67	1	39	0	29	41	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	-	-	-	-	-	-	-	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	8	3	1	0	0	85	1	49	0	37	52	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	153	177	26	153	177	25	52	0	0	49	0	0
Stage 1	125	125	-	52	52	-	-	-	-	-	-	-
Stage 2	27	52	-	101	125	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	7.76	6.76	7.16	4.36	-	-	4.36	-	-
Critical Hdwy Stg 1	6.76	5.76	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.63	4.13	3.43	2.33	-	-	2.33	-	-
Pot Cap-1 Maneuver	770	691	1009	770	691	1011	1475	-	-	1479	-	-
Stage 1	834	766	-	923	826	-	-	-	-	-	-	-
Stage 2	955	826	-	863	766	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	687	673	1009	747	673	1011	1475	-	-	1479	-	-
Mov Cap-2 Maneuver	687	673	-	747	673	-	-	-	-	-	-	-
Stage 1	814	747	-	923	826	-	-	-	-	-	-	-
Stage 2	874	826	-	838	747	-	-	-	-	-	-	-

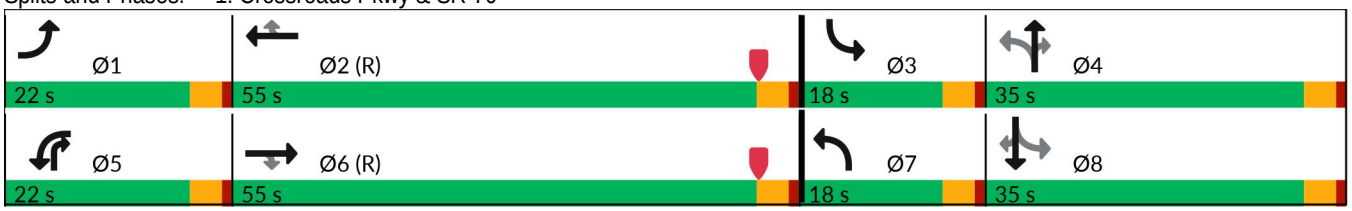
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.16	8.89	0.19	3.11
HCM LOS	B	A		

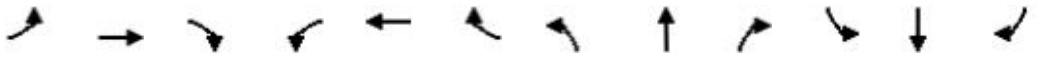
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	90	-	-	709	1011	1479	-	-
HCM Lane V/C Ratio	0.001	-	-	0.016	0.084	0.025	-	-
HCM Control Delay (s/veh)	7.4	0	-	10.2	8.9	7.5	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1006	51	115	851	131	26	17	115	131	19	39
Future Volume (vph)	45	1006	51	115	851	131	26	17	115	131	19	39
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	9.0	5.0	8.0	8.0	8.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	12.5	22.5	9.5	12.5	22.5	22.5
Total Split (s)	22.0	55.0	55.0	22.0	55.0	55.0	18.0	35.0	22.0	18.0	35.0	35.0
Total Split (%)	16.9%	42.3%	42.3%	16.9%	42.3%	42.3%	13.8%	26.9%	16.9%	13.8%	26.9%	26.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.1	88.3	88.3	10.3	91.3	91.3	11.9	9.0	15.5	19.5	11.9	11.9
Actuated g/C Ratio	0.07	0.68	0.68	0.08	0.70	0.70	0.09	0.07	0.12	0.15	0.09	0.09
v/c Ratio	0.41	0.33	0.05	0.48	0.27	0.13	0.18	0.15	0.43	0.63	0.13	0.20
Control Delay (s/veh)	67.6	10.0	1.1	63.3	8.8	2.0	49.4	60.1	12.3	62.8	55.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.6	10.0	1.1	63.3	8.8	2.0	49.4	60.1	12.3	62.8	55.5	4.3
LOS	E	A	A	E	A	A	D	E	B	E	E	A
Approach Delay (s/veh)		11.9			13.7			23.6			49.8	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay (s/veh): 16.2	Intersection LOS: B
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Crossroads Pkwy & SR 70





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1006	51	115	851	131	26	17	115	131	19	39
Future Volume (veh/h)	45	1006	51	115	851	131	26	17	115	131	19	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	47	1048	53	120	886	136	27	18	120	136	20	41
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	60	3079	956	171	3161	981	237	164	217	299	249	211
Arrive On Green	0.04	0.64	0.64	0.05	0.66	0.66	0.04	0.09	0.09	0.09	0.14	0.14
Sat Flow, veh/h	1668	4782	1485	3237	4782	1485	1668	1752	1485	1668	1752	1485
Grp Volume(v), veh/h	47	1048	53	120	886	136	27	18	120	136	20	41
Grp Sat Flow(s),veh/h/ln	1668	1594	1485	1618	1594	1485	1668	1752	1485	1668	1752	1485
Q Serve(g_s), s	3.6	13.0	1.7	4.7	10.0	4.4	1.9	1.2	9.8	9.3	1.3	3.2
Cycle Q Clear(g_c), s	3.6	13.0	1.7	4.7	10.0	4.4	1.9	1.2	9.8	9.3	1.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	3079	956	171	3161	981	237	164	217	299	249	211
V/C Ratio(X)	0.79	0.34	0.06	0.70	0.28	0.14	0.11	0.11	0.55	0.46	0.08	0.19
Avail Cap(c_a), veh/h	231	3079	956	448	3161	981	353	418	433	334	418	354
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	10.6	8.6	60.5	9.2	8.2	49.8	54.0	51.5	45.8	48.4	49.2
Incr Delay (d2), s/veh	20.1	0.3	0.1	5.1	0.2	0.3	0.2	0.3	2.2	1.1	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	7.6	1.0	3.7	5.8	2.7	1.4	1.0	6.8	7.1	1.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.3	10.9	8.7	65.7	9.4	8.5	50.0	54.3	53.7	46.9	48.5	49.7
LnGrp LOS	F	B	A	E	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1148			1142			165			197	
Approach Delay, s/veh		13.7			15.2			53.2			47.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	89.9	15.3	16.2	10.9	87.7	9.0	22.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	51.0	14.0	31.0	18.0	51.0	14.0	31.0
Max Q Clear Time (g_c+I1), s	5.6	12.0	11.3	11.8	6.7	15.0	3.9	5.2
Green Ext Time (p_c), s	0.1	7.2	0.1	0.4	0.2	8.4	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	19.3
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	0	0	1	43	2	52	0	79	15	0
Future Vol, veh/h	10	0	0	0	1	43	2	52	0	79	15	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	-	-	-	-	-	-	-	-	-	180	-	-
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, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	11	0	0	0	1	47	2	57	0	87	16	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	224	252	8	243	252	29	16	0	0	57	0	0
Stage 1	190	190	-	62	62	-	-	-	-	-	-	-
Stage 2	34	62	-	182	190	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.64	7.04	7.64	6.64	7.04	4.24	-	-	4.24	-	-
Critical Hdwy Stg 1	6.64	5.64	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.64	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4.07	3.37	3.57	4.07	3.37	2.27	-	-	2.27	-	-
Pot Cap-1 Maneuver	700	639	1055	677	639	1024	1564	-	-	1510	-	-
Stage 1	779	730	-	928	831	-	-	-	-	-	-	-
Stage 2	964	831	-	788	730	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	627	601	1055	637	601	1024	1564	-	-	1510	-	-
Mov Cap-2 Maneuver	627	601	-	637	601	-	-	-	-	-	-	-
Stage 1	734	688	-	927	830	-	-	-	-	-	-	-
Stage 2	917	830	-	743	688	-	-	-	-	-	-	-

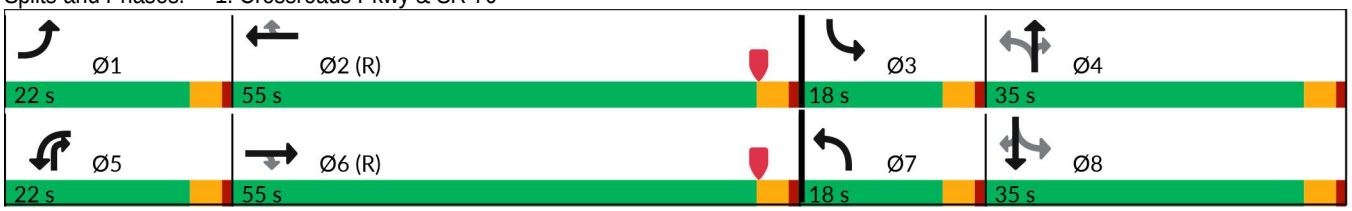
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.85	8.75	0.28	6.33
HCM LOS	B	A		

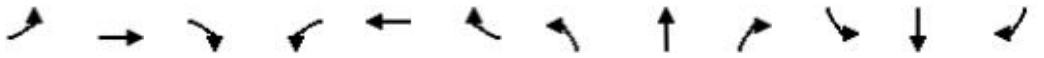
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	133	-	-	627	1008	1510	-	-
HCM Lane V/C Ratio	0.001	-	-	0.018	0.048	0.058	-	-
HCM Control Delay (s/veh)	7.3	0	-	10.8	8.8	7.5	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	986	26	62	682	222	28	21	78	57	5	33
Future Volume (vph)	45	986	26	62	682	222	28	21	78	57	5	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	9.0	5.0	8.0	8.0	8.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	12.5	22.5	9.5	12.5	22.5	22.5
Total Split (s)	22.0	55.0	55.0	22.0	55.0	55.0	18.0	35.0	22.0	18.0	35.0	35.0
Total Split (%)	16.9%	42.3%	42.3%	16.9%	42.3%	42.3%	13.8%	26.9%	16.9%	13.8%	26.9%	26.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.5	93.7	93.7	8.3	95.2	95.2	14.1	9.1	16.3	17.7	10.6	10.6
Actuated g/C Ratio	0.07	0.72	0.72	0.06	0.73	0.73	0.11	0.07	0.13	0.14	0.08	0.08
v/c Ratio	0.44	0.34	0.03	0.35	0.23	0.23	0.20	0.20	0.35	0.38	0.04	0.20
Control Delay (s/veh)	68.5	8.7	0.0	62.8	8.4	1.8	47.8	61.2	13.0	53.0	54.2	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.5	8.7	0.0	62.8	8.4	1.8	47.8	61.2	13.0	53.0	54.2	3.0
LOS	E	A	A	E	A	A	D	E	B	D	D	A
Approach Delay (s/veh)		11.1			10.4			28.5			35.6	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay (s/veh): 12.8	Intersection LOS: B
Intersection Capacity Utilization 43.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Crossroads Pkwy & SR 70





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	986	26	62	682	222	28	21	78	57	5	33
Future Volume (veh/h)	45	986	26	62	682	222	28	21	78	57	5	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	50	1096	29	69	758	247	31	23	87	63	6	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	63	3255	1010	109	3237	1005	214	127	158	216	150	127
Arrive On Green	0.04	0.71	0.71	0.04	0.71	0.71	0.04	0.08	0.08	0.06	0.09	0.09
Sat Flow, veh/h	1598	4580	1422	3100	4580	1422	1598	1678	1422	1598	1678	1422
Grp Volume(v), veh/h	50	1096	29	69	758	247	31	23	87	63	6	37
Grp Sat Flow(s),veh/h/ln	1598	1527	1422	1550	1527	1422	1598	1678	1422	1598	1678	1422
Q Serve(g_s), s	4.0	11.8	0.8	2.9	7.6	8.0	2.3	1.7	7.5	4.6	0.4	3.2
Cycle Q Clear(g_c), s	4.0	11.8	0.8	2.9	7.6	8.0	2.3	1.7	7.5	4.6	0.4	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	3255	1010	109	3237	1005	214	127	158	216	150	127
V/C Ratio(X)	0.80	0.34	0.03	0.63	0.23	0.25	0.14	0.18	0.55	0.29	0.04	0.29
Avail Cap(c_a), veh/h	221	3255	1010	429	3237	1005	320	400	389	300	400	339
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.9	7.2	5.6	61.9	6.7	6.8	51.7	56.3	54.7	51.1	54.1	55.3
Incr Delay (d2), s/veh	20.2	0.3	0.1	5.9	0.2	0.6	0.3	0.7	3.0	0.7	0.1	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	6.1	0.4	2.1	3.9	4.4	1.7	1.3	5.1	3.4	0.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.2	7.4	5.6	67.7	6.9	7.3	52.0	57.0	57.7	51.8	54.2	56.6
LnGrp LOS	F	A	A	E	A	A	D	E	E	D	D	E
Approach Vol, veh/h		1175			1074			141			106	
Approach Delay, s/veh		10.6			10.9			56.3			53.6	
Approach LOS		B			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	95.9	11.2	13.9	8.6	96.4	9.4	15.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	51.0	14.0	31.0	18.0	51.0	14.0	31.0
Max Q Clear Time (g_c+I1), s	6.0	10.0	6.6	9.5	4.9	13.8	4.3	5.2
Green Ext Time (p_c), s	0.1	6.6	0.1	0.3	0.1	8.9	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	15.1
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	2	1	0	0	69	1	40	0	30	42	0
Future Vol, veh/h	6	2	1	0	0	69	1	40	0	30	42	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	-	-	-	-	-	-	-	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	8	3	1	0	0	87	1	51	0	38	53	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	157	182	27	157	182	25	53	0	0	51	0	0
Stage 1	129	129	-	53	53	-	-	-	-	-	-	-
Stage 2	28	53	-	104	129	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	7.76	6.76	7.16	4.36	-	-	4.36	-	-
Critical Hdwy Stg 1	6.76	5.76	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.63	4.13	3.43	2.33	-	-	2.33	-	-
Pot Cap-1 Maneuver	764	686	1008	764	686	1010	1474	-	-	1477	-	-
Stage 1	830	763	-	922	825	-	-	-	-	-	-	-
Stage 2	954	825	-	860	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	680	668	1008	741	668	1010	1474	-	-	1477	-	-
Mov Cap-2 Maneuver	680	668	-	741	668	-	-	-	-	-	-	-
Stage 1	809	743	-	921	825	-	-	-	-	-	-	-
Stage 2	871	825	-	834	743	-	-	-	-	-	-	-

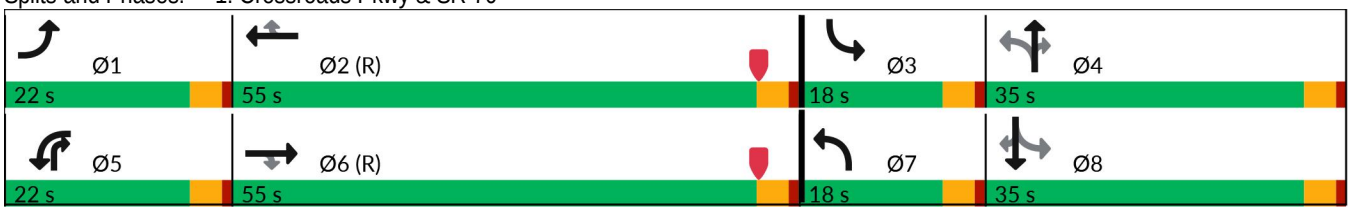
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.21	8.9	0.19	3.13
HCM LOS	B	A		

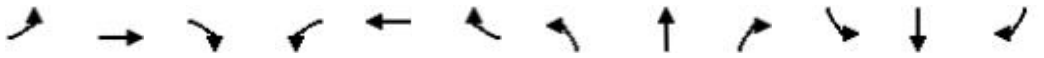
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	88	-	-	702	1010	1477	-	-
HCM Lane V/C Ratio	0.001	-	-	0.016	0.086	0.026	-	-
HCM Control Delay (s/veh)	7.4	0	-	10.2	8.9	7.5	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	1036	53	118	877	135	27	18	118	135	20	40
Future Volume (vph)	46	1036	53	118	877	135	27	18	118	135	20	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	9.0	5.0	8.0	8.0	8.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	12.5	22.5	9.5	12.5	22.5	22.5
Total Split (s)	22.0	55.0	55.0	22.0	55.0	55.0	18.0	35.0	22.0	18.0	35.0	35.0
Total Split (%)	16.9%	42.3%	42.3%	16.9%	42.3%	42.3%	13.8%	26.9%	16.9%	13.8%	26.9%	26.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.2	88.0	88.0	10.4	91.1	91.1	12.0	9.0	15.6	19.6	12.0	12.0
Actuated g/C Ratio	0.07	0.68	0.68	0.08	0.70	0.70	0.09	0.07	0.12	0.15	0.09	0.09
v/c Ratio	0.41	0.34	0.05	0.48	0.28	0.13	0.18	0.16	0.43	0.65	0.13	0.21
Control Delay (s/veh)	67.6	10.2	1.2	63.3	8.9	2.0	49.4	60.3	12.3	63.8	55.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.6	10.2	1.2	63.3	8.9	2.0	49.4	60.3	12.3	63.8	55.7	4.8
LOS	E	B	A	E	A	A	D	E	B	E	E	A
Approach Delay (s/veh)		12.1			13.8			23.8			50.8	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 16.4	Intersection LOS: B
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Crossroads Pkwy & SR 70





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1036	53	118	877	135	27	18	118	135	20	40
Future Volume (veh/h)	46	1036	53	118	877	135	27	18	118	135	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	48	1079	55	123	914	141	28	19	123	141	21	42
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	61	3053	948	175	3136	973	240	167	222	304	255	216
Arrive On Green	0.04	0.64	0.64	0.05	0.66	0.66	0.04	0.10	0.10	0.09	0.15	0.15
Sat Flow, veh/h	1668	4782	1485	3237	4782	1485	1668	1752	1485	1668	1752	1485
Grp Volume(v), veh/h	48	1079	55	123	914	141	28	19	123	141	21	42
Grp Sat Flow(s),veh/h/ln	1668	1594	1485	1618	1594	1485	1668	1752	1485	1668	1752	1485
Q Serve(g_s), s	3.7	13.7	1.8	4.9	10.6	4.7	1.9	1.3	10.0	9.6	1.3	3.2
Cycle Q Clear(g_c), s	3.7	13.7	1.8	4.9	10.6	4.7	1.9	1.3	10.0	9.6	1.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	3053	948	175	3136	973	240	167	222	304	255	216
V/C Ratio(X)	0.79	0.35	0.06	0.70	0.29	0.14	0.12	0.11	0.55	0.46	0.08	0.19
Avail Cap(c_a), veh/h	231	3053	948	448	3136	973	355	418	434	335	418	354
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	11.0	8.8	60.5	9.5	8.5	49.5	53.8	51.3	45.5	48.0	48.8
Incr Delay (d2), s/veh	19.7	0.3	0.1	5.1	0.2	0.3	0.2	0.3	2.2	1.1	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	8.0	1.1	3.7	6.1	2.8	1.5	1.1	7.0	7.4	1.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.8	11.3	8.9	65.6	9.8	8.8	49.7	54.1	53.4	46.6	48.2	49.3
LnGrp LOS	F	B	A	E	A	A	D	D	D	D	D	D
Approach Vol, veh/h		1182			1178			170			204	
Approach Delay, s/veh		14.1			15.5			52.9			47.3	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	89.2	15.6	16.4	11.0	87.0	9.1	22.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	51.0	14.0	31.0	18.0	51.0	14.0	31.0
Max Q Clear Time (g_c+I1), s	5.7	12.6	11.6	12.0	6.9	15.7	3.9	5.2
Green Ext Time (p_c), s	0.1	7.5	0.1	0.4	0.2	8.7	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	19.6
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	0	0	1	44	2	54	0	81	15	0
Future Vol, veh/h	10	0	0	0	1	44	2	54	0	81	15	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	-	-	-	-	-	-	-	-	-	180	-	-
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, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	11	0	0	0	1	48	2	59	0	89	16	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	229	258	8	250	258	30	16	0	0	59	0	0
Stage 1	195	195	-	64	64	-	-	-	-	-	-	-
Stage 2	35	64	-	186	195	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.64	7.04	7.64	6.64	7.04	4.24	-	-	4.24	-	-
Critical Hdwy Stg 1	6.64	5.64	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.64	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4.07	3.37	3.57	4.07	3.37	2.27	-	-	2.27	-	-
Pot Cap-1 Maneuver	693	633	1055	670	633	1022	1564	-	-	1507	-	-
Stage 1	775	727	-	925	830	-	-	-	-	-	-	-
Stage 2	962	830	-	783	727	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	619	595	1055	629	595	1022	1564	-	-	1507	-	-
Mov Cap-2 Maneuver	619	595	-	629	595	-	-	-	-	-	-	-
Stage 1	729	684	-	924	828	-	-	-	-	-	-	-
Stage 2	914	828	-	737	684	-	-	-	-	-	-	-

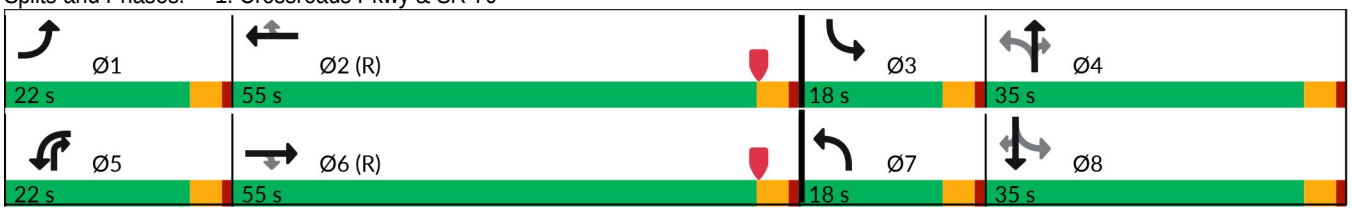
Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.92	8.76	0.27	6.36
HCM LOS	B	A		

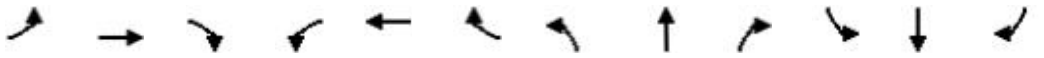
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	129	-	-	619	1006	1507	-	-
HCM Lane V/C Ratio	0.001	-	-	0.018	0.049	0.059	-	-
HCM Control Delay (s/veh)	7.3	0	-	10.9	8.8	7.5	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	986	29	72	682	222	30	21	84	57	6	33
Future Volume (vph)	45	986	29	72	682	222	30	21	84	57	6	33
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	9.0	5.0	8.0	8.0	8.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	12.5	22.5	9.5	12.5	22.5	22.5
Total Split (s)	22.0	55.0	55.0	22.0	55.0	55.0	18.0	35.0	22.0	18.0	35.0	35.0
Total Split (%)	16.9%	42.3%	42.3%	16.9%	42.3%	42.3%	13.8%	26.9%	16.9%	13.8%	26.9%	26.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.5	93.2	93.2	8.8	95.2	95.2	14.2	9.1	16.7	17.6	10.5	10.5
Actuated g/C Ratio	0.07	0.72	0.72	0.07	0.73	0.73	0.11	0.07	0.13	0.14	0.08	0.08
v/c Ratio	0.44	0.34	0.03	0.39	0.23	0.23	0.21	0.20	0.36	0.38	0.05	0.20
Control Delay (s/veh)	68.5	8.9	0.1	63.1	8.4	1.8	48.1	61.2	12.6	53.1	54.5	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.5	8.9	0.1	63.1	8.4	1.8	48.1	61.2	12.6	53.1	54.5	3.0
LOS	E	A	A	E	A	A	D	E	B	D	D	A
Approach Delay (s/veh)		11.2			10.9			28.0			35.9	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay (s/veh): 13.1	Intersection LOS: B
Intersection Capacity Utilization 43.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Crossroads Pkwy & SR 70





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	986	29	72	682	222	30	21	84	57	6	33
Future Volume (veh/h)	45	986	29	72	682	222	30	21	84	57	6	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	50	1096	32	80	758	247	33	23	93	63	7	37
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	63	3217	999	123	3219	999	221	134	170	220	154	131
Arrive On Green	0.04	0.70	0.70	0.04	0.70	0.70	0.04	0.08	0.08	0.06	0.09	0.09
Sat Flow, veh/h	1598	4580	1422	3100	4580	1422	1598	1678	1422	1598	1678	1422
Grp Volume(v), veh/h	50	1096	32	80	758	247	33	23	93	63	7	37
Grp Sat Flow(s),veh/h/ln	1598	1527	1422	1550	1527	1422	1598	1678	1422	1598	1678	1422
Q Serve(g_s), s	4.0	12.2	0.9	3.3	7.7	8.1	2.4	1.7	8.0	4.6	0.5	3.2
Cycle Q Clear(g_c), s	4.0	12.2	0.9	3.3	7.7	8.1	2.4	1.7	8.0	4.6	0.5	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	3217	999	123	3219	999	221	134	170	220	154	131
V/C Ratio(X)	0.80	0.34	0.03	0.65	0.24	0.25	0.15	0.17	0.55	0.29	0.05	0.28
Avail Cap(c_a), veh/h	221	3217	999	429	3219	999	325	400	395	304	400	339
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.9	7.6	5.9	61.5	6.9	6.9	51.1	55.8	53.9	50.7	53.8	55.0
Incr Delay (d2), s/veh	20.2	0.3	0.1	5.7	0.2	0.6	0.3	0.6	2.7	0.7	0.1	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	6.3	0.5	2.5	4.0	4.5	1.8	1.3	5.4	3.4	0.4	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.2	7.9	5.9	67.3	7.0	7.5	51.4	56.4	56.7	51.4	53.9	56.2
LnGrp LOS	F	A	A	E	A	A	D	E	E	D	D	E
Approach Vol, veh/h		1178			1085			149			107	
Approach Delay, s/veh		11.0			11.6			55.5			53.2	
Approach LOS		B			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	95.4	11.2	14.4	9.1	95.3	9.6	16.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	51.0	14.0	31.0	18.0	51.0	14.0	31.0
Max Q Clear Time (g_c+I1), s	6.0	10.1	6.6	10.0	5.3	14.2	4.4	5.2
Green Ext Time (p_c), s	0.1	6.6	0.1	0.4	0.1	8.9	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	15.7
HCM 7th LOS	B

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	14	2	1	0	0	69	2	40	0	30	49	7
Future Vol, veh/h	14	2	1	0	0	69	2	40	0	30	49	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	-	-	-	-	-	-	-	-	-	180	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	18	3	1	0	0	87	3	51	0	38	62	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	173	198	35	164	203	25	71	0	0	51	0	0
Stage 1	142	142	-	56	56	-	-	-	-	-	-	-
Stage 2	30	56	-	108	147	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	7.76	6.76	7.16	4.36	-	-	4.36	-	-
Critical Hdwy Stg 1	6.76	5.76	-	6.76	5.76	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	6.76	5.76	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.63	4.13	3.43	2.33	-	-	2.33	-	-
Pot Cap-1 Maneuver	745	672	995	756	668	1010	1451	-	-	1477	-	-
Stage 1	815	752	-	919	823	-	-	-	-	-	-	-
Stage 2	951	823	-	854	749	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	662	653	995	731	650	1010	1451	-	-	1477	-	-
Mov Cap-2 Maneuver	662	653	-	731	650	-	-	-	-	-	-	-
Stage 1	794	733	-	917	822	-	-	-	-	-	-	-
Stage 2	867	822	-	828	730	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.52	8.9	0.37	2.62
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	171	-	-	674	1010	1477	-	-
HCM Lane V/C Ratio	0.002	-	-	0.032	0.086	0.026	-	-
HCM Control Delay (s/veh)	7.5	0	-	10.5	8.9	7.5	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	42	43	7
Future Vol, veh/h	0	1	0	42	43	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	0	46	47	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	27	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	1042	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	1042	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.46	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1042	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s/veh)	-	8.5	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	0	8	1	0	8
Future Vol, veh/h	9	0	8	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	0	9	1	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	10	0	28	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1610	-	987	1072
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1610	-	981	1072
Mov Cap-2 Maneuver	-	-	-	-	981	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	999	-

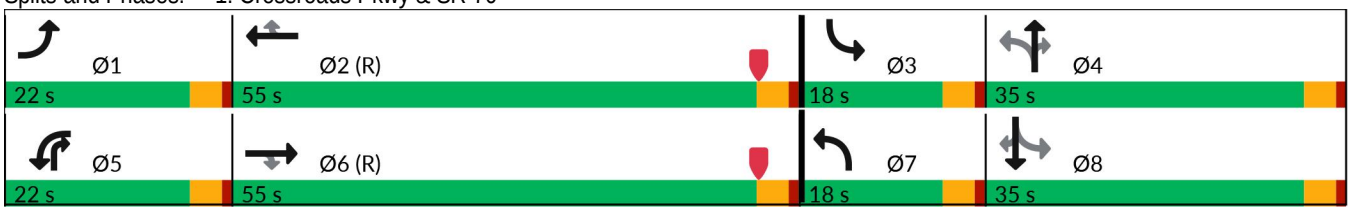
Approach	EB	WB	NB
HCM Control Delay, s/v	0	6.44	8.39
HCM LOS			A

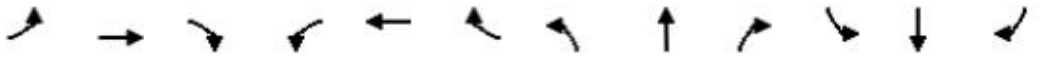
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1072	-	-	1600	-
HCM Lane V/C Ratio	0.008	-	-	0.005	-
HCM Control Delay (s/veh)	8.4	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	1036	57	130	877	135	33	18	135	135	20	40
Future Volume (vph)	46	1036	57	130	877	135	33	18	135	135	20	40
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4	5	3	8	
Permitted Phases			6			2	4		4	8		8
Detector Phase	1	6	6	5	2	2	7	4	5	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	12.0	8.0	9.0	5.0	8.0	8.0	8.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	12.5	22.5	9.5	12.5	22.5	22.5
Total Split (s)	22.0	55.0	55.0	22.0	55.0	55.0	18.0	35.0	22.0	18.0	35.0	35.0
Total Split (%)	16.9%	42.3%	42.3%	16.9%	42.3%	42.3%	13.8%	26.9%	16.9%	13.8%	26.9%	26.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.2	87.5	87.5	10.9	91.1	91.1	12.2	9.0	16.1	19.6	11.8	11.8
Actuated g/C Ratio	0.07	0.67	0.67	0.08	0.70	0.70	0.09	0.07	0.12	0.15	0.09	0.09
v/c Ratio	0.41	0.34	0.06	0.51	0.28	0.13	0.22	0.16	0.48	0.65	0.13	0.21
Control Delay (s/veh)	67.6	10.4	1.6	63.4	9.0	2.0	50.5	60.3	14.4	63.8	56.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.6	10.4	1.6	63.4	9.0	2.0	50.5	60.3	14.4	63.8	56.2	4.8
LOS	E	B	A	E	A	A	D	E	B	E	E	A
Approach Delay (s/veh)		12.3			14.3			25.2			50.8	
Approach LOS		B			B			C			D	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 84 (65%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay (s/veh): 16.9	Intersection LOS: B
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Crossroads Pkwy & SR 70





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1036	57	130	877	135	33	18	135	135	20	40
Future Volume (veh/h)	46	1036	57	130	877	135	33	18	135	135	20	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	48	1079	59	135	914	141	34	19	141	141	21	42
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	61	2984	926	188	3087	958	262	187	244	314	265	225
Arrive On Green	0.04	0.62	0.62	0.06	0.65	0.65	0.04	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1668	4782	1485	3237	4782	1485	1668	1752	1485	1668	1752	1485
Grp Volume(v), veh/h	48	1079	59	135	914	141	34	19	141	141	21	42
Grp Sat Flow(s),veh/h/ln	1668	1594	1485	1618	1594	1485	1668	1752	1485	1668	1752	1485
Q Serve(g_s), s	3.7	14.2	2.0	5.3	10.9	4.8	2.3	1.3	11.4	9.5	1.3	3.2
Cycle Q Clear(g_c), s	3.7	14.2	2.0	5.3	10.9	4.8	2.3	1.3	11.4	9.5	1.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	61	2984	926	188	3087	958	262	187	244	314	265	225
V/C Ratio(X)	0.79	0.36	0.06	0.72	0.30	0.15	0.13	0.10	0.58	0.45	0.08	0.19
Avail Cap(c_a), veh/h	231	2984	926	448	3087	958	369	418	440	346	418	354
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	11.9	9.6	60.2	10.1	9.0	47.9	52.4	50.1	44.3	47.4	48.2
Incr Delay (d2), s/veh	19.7	0.3	0.1	5.1	0.2	0.3	0.2	0.2	2.1	1.0	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	8.3	1.2	4.1	6.4	2.9	1.8	1.0	7.8	7.3	1.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	81.8	12.2	9.7	65.3	10.3	9.4	48.1	52.7	52.3	45.3	47.5	48.6
LnGrp LOS	F	B	A	E	B	A	D	D	D	D	D	D
Approach Vol, veh/h		1186			1190			194			204	
Approach Delay, s/veh		14.9			16.5			51.6			46.2	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	87.9	15.5	17.9	11.5	85.1	9.7	23.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	18.0	51.0	14.0	31.0	18.0	51.0	14.0	31.0
Max Q Clear Time (g_c+I1), s	5.7	12.9	11.5	13.4	7.3	16.2	4.3	5.2
Green Ext Time (p_c), s	0.1	7.5	0.1	0.5	0.3	8.7	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	20.4
HCM 7th LOS	C

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	33	0	0	0	1	44	3	54	0	81	23	8
Future Vol, veh/h	33	0	0	0	1	44	3	54	0	81	23	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	-	-	-	-	-	-	-	-	-	180	-	-
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, %	7	7	7	7	7	7	7	7	7	7	7	7
Mvmt Flow	36	0	0	0	1	48	3	59	0	89	25	9

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	245	274	17	257	278	30	34	0	0	59	0	0
Stage 1	208	208	-	66	66	-	-	-	-	-	-	-
Stage 2	37	66	-	191	212	-	-	-	-	-	-	-
Critical Hdwy	7.64	6.64	7.04	7.64	6.64	7.04	4.24	-	-	4.24	-	-
Critical Hdwy Stg 1	6.64	5.64	-	6.64	5.64	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.64	5.64	-	6.64	5.64	-	-	-	-	-	-	-
Follow-up Hdwy	3.57	4.07	3.37	3.57	4.07	3.37	2.27	-	-	2.27	-	-
Pot Cap-1 Maneuver	676	621	1042	663	617	1022	1540	-	-	1507	-	-
Stage 1	761	717	-	922	828	-	-	-	-	-	-	-
Stage 2	960	828	-	779	714	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	603	583	1042	622	580	1022	1540	-	-	1507	-	-
Mov Cap-2 Maneuver	603	583	-	622	580	-	-	-	-	-	-	-
Stage 1	716	674	-	920	826	-	-	-	-	-	-	-
Stage 2	911	826	-	733	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.35	8.77	0.4	5.45
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	189	-	-	603	1005	1507	-	-
HCM Lane V/C Ratio	0.002	-	-	0.06	0.049	0.059	-	-
HCM Control Delay (s/veh)	7.3	0	-	11.3	8.8	7.5	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.2	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1	0	57	15	8
Future Vol, veh/h	0	1	0	57	15	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	0	1	0	62	16	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	13	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	1065	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	1065	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.38	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	1065	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s/veh)	-	8.4	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	9	3	0	23
Future Vol, veh/h	10	0	9	3	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	0	10	3	0	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	34	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1608	-	980	1070
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1608	-	974	1070
Mov Cap-2 Maneuver	-	-	-	-	974	-
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	994	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.44	8.44
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1070	-	-	1350	-
HCM Lane V/C Ratio	0.023	-	-	0.006	-
HCM Control Delay (s/veh)	8.4	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

APPENDIX H

Excerpts from ITE Trip Generation Manual

Land Use: 151
Mini-Warehouse

Description

A mini-warehouse is a building in which a number of storage units or vaults are rented for the storage of goods. They are typically referred to as “self-storage” facilities. Each unit is physically separated from other units, and access is usually provided through an overhead door or other common access point.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Colorado, Massachusetts, Minnesota, Nevada, New Jersey, Texas, and Utah.

Source Numbers

212, 403, 551, 568, 642, 708, 724, 850, 868, 876, 1024, 1035

Mini-Warehouse
(151)

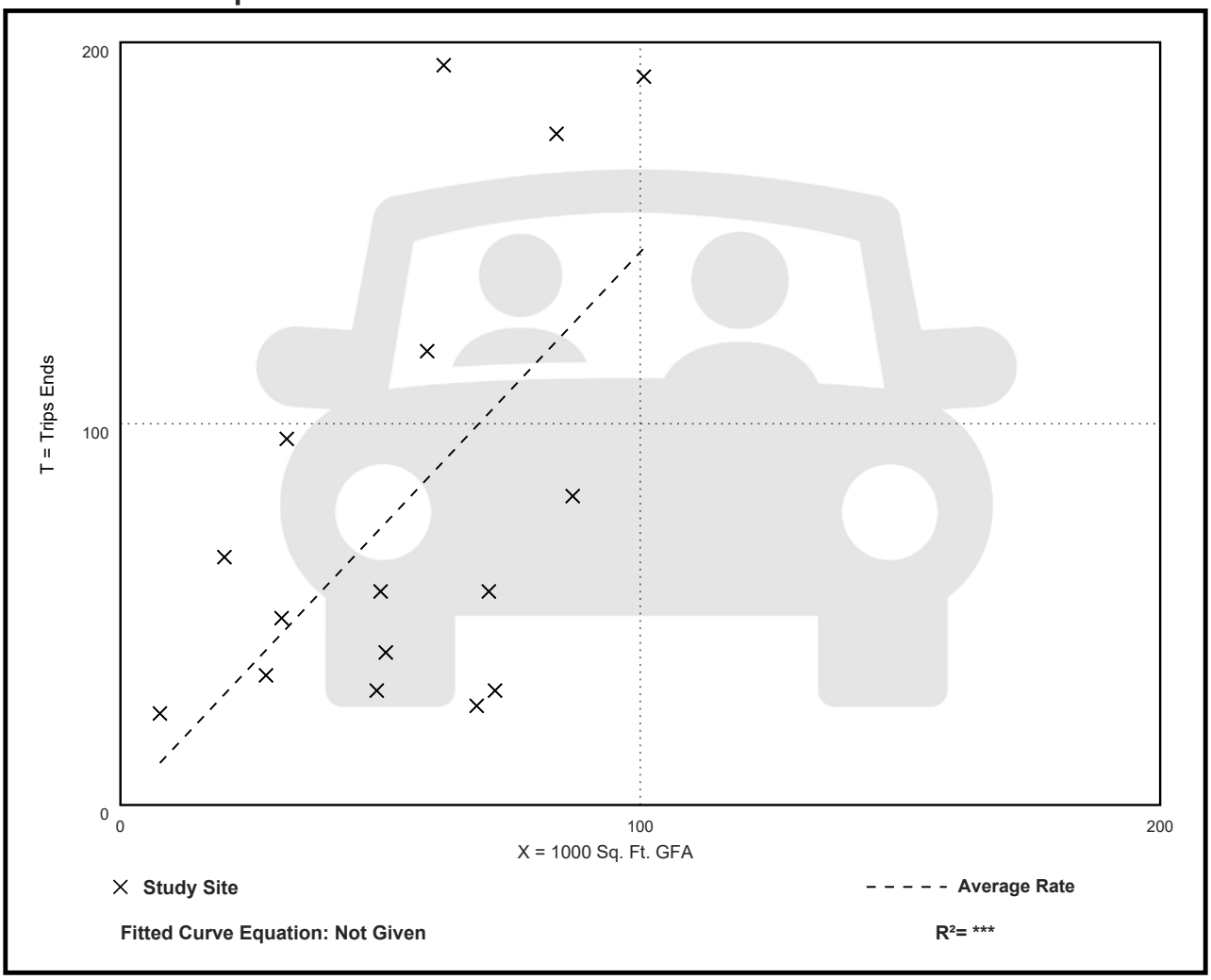
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 16
Avg. 1000 Sq. Ft. GFA: 55
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.45	0.38 - 3.25	0.92

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

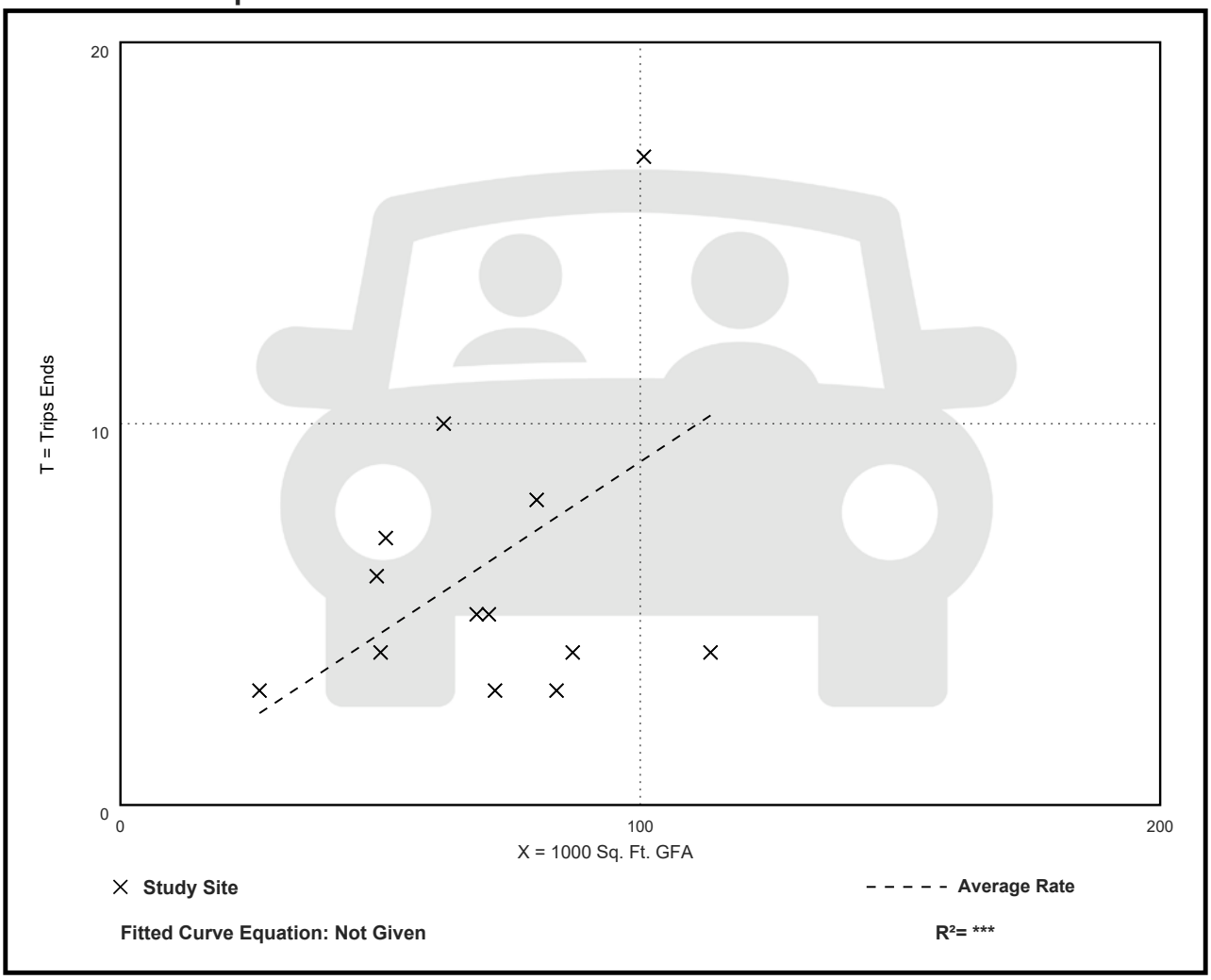
Mini-Warehouse
(151)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
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: 13
Avg. 1000 Sq. Ft. GFA: 70
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.09	0.04 - 0.17	0.05

Data Plot and Equation



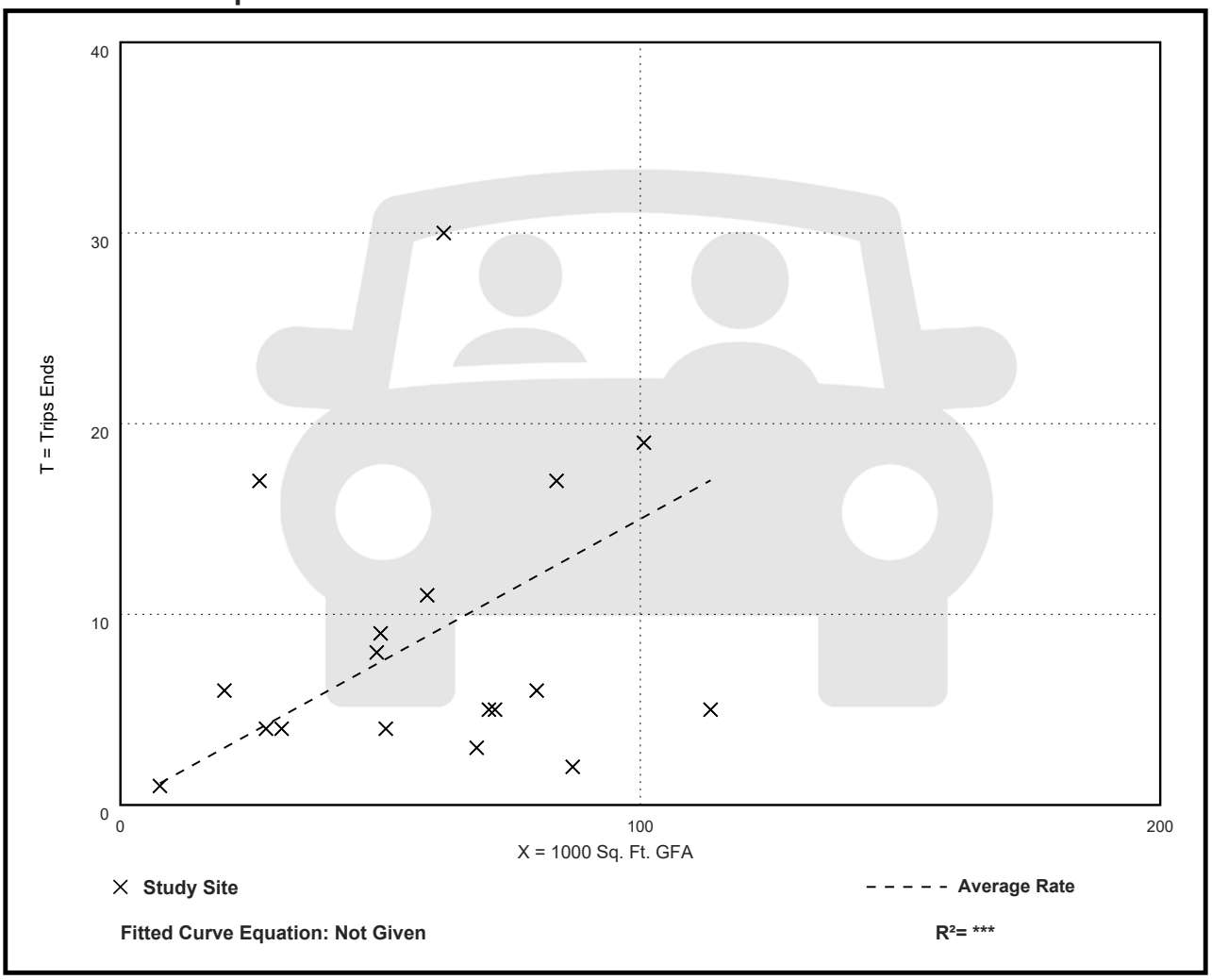
Mini-Warehouse
(151)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
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: 18
Avg. 1000 Sq. Ft. GFA: 59
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.15	0.02 - 0.64	0.14

Data Plot and Equation



Land Use: 811
Construction Equipment Rental Store

Description

A construction equipment rental store is a business that specializes in the rental of construction equipment tools and supplies including, but not limited to, electrical and industrial tools, pumps, lawn and garden equipment, paving and earthmoving equipment, and safety equipment.

Additional Data

An outside storage area is not included in the overall gross floor area measurements. However, if the storage area is located within the principal outside faces of the exterior walls, it is included in the overall gross floor area of the building.

The sites were surveyed in the 2000s in Alabama, Alaska, Alberta (CAN), Arkansas, and Florida.

Source Number

721

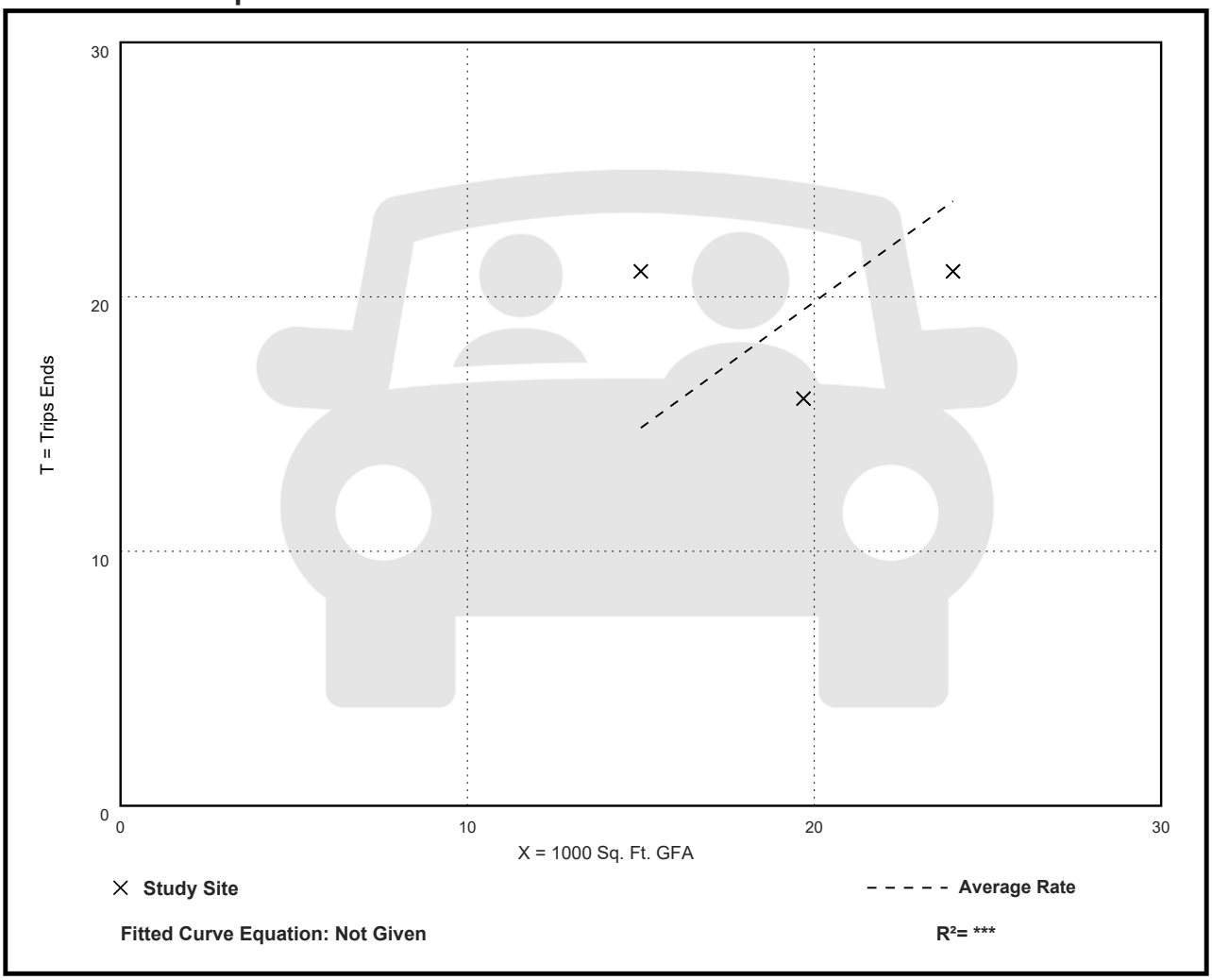
Construction Equipment Rental Store
(811)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
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: 3
Avg. 1000 Sq. Ft. GFA: 20
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.99	0.81 - 1.40	0.30

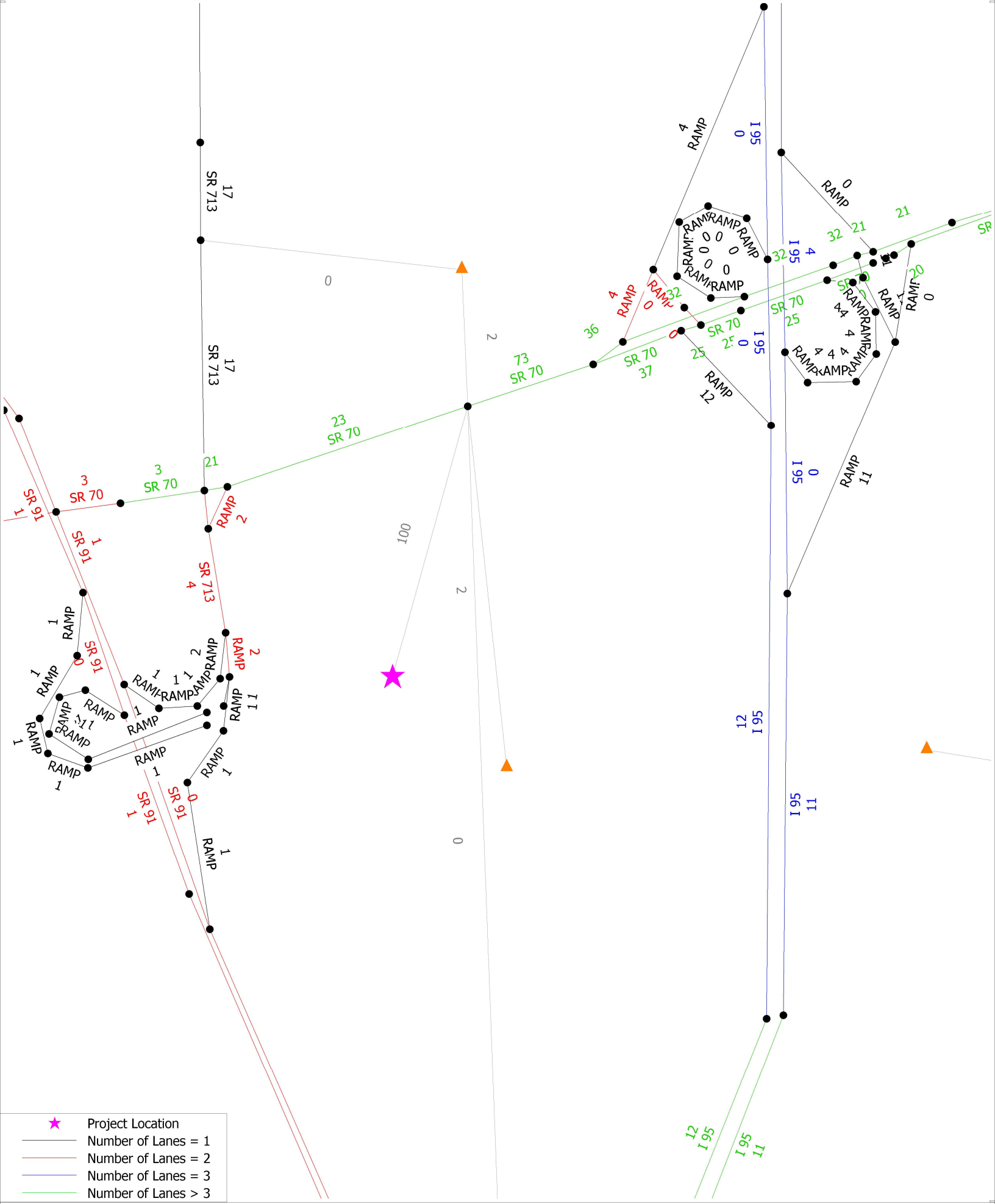
Data Plot and Equation



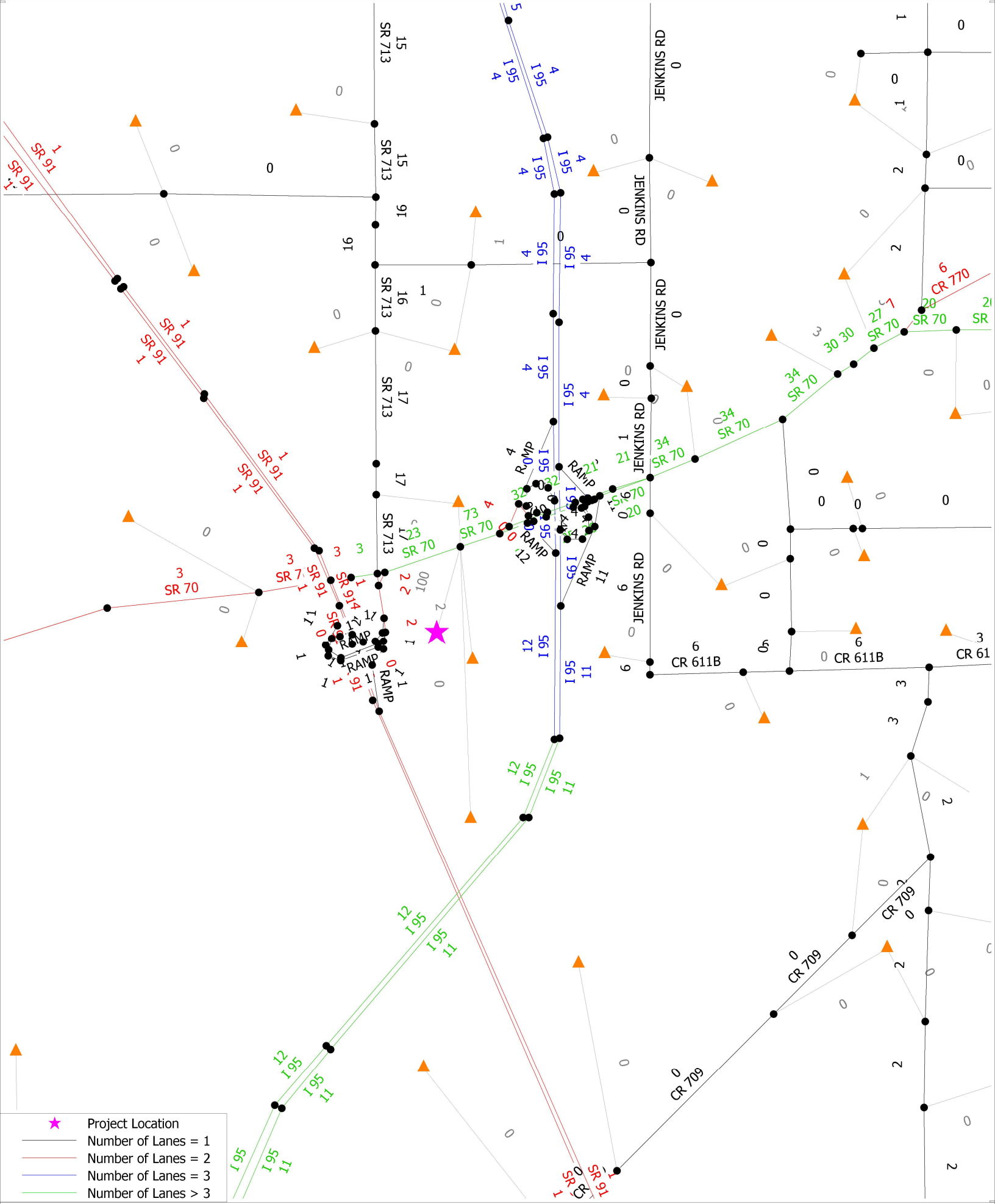
Fitted Curve Equation: Not Given

R^2= *

APPENDIX I
Treasure Coast Regional Planning Model (TCRPM)



NED Ft. Pierce
Project Distribution - April 2025
TCRPM v5.1 - 2025



NED Ft. Pierce
Project Distribution - April 2025
TCRPM v5.1 - 2025

APPENDIX J
Growth Rate Calculations

FDOT Station [1]	Road[1]	Description[1]	Year 2024 AADT[1]	Weight (based on AADT)	Trend Historical Growth Rate[2]
	Crossroads Pkwy	Okeechobee Rd to End of Rd	2,204	1.00000	-0.36%
			Normal Average		-0.36%
			Weighted Average[3]		-0.36%
			Growth Rate Used		**1.00%**

Notes:

1. Data obtained from FDOT's Florida Traffic Online (FTO) database or St Lucie TPO Traffic Count Data Management System.

2. Calculated using trend worksheets provided in ***Appendix H.***

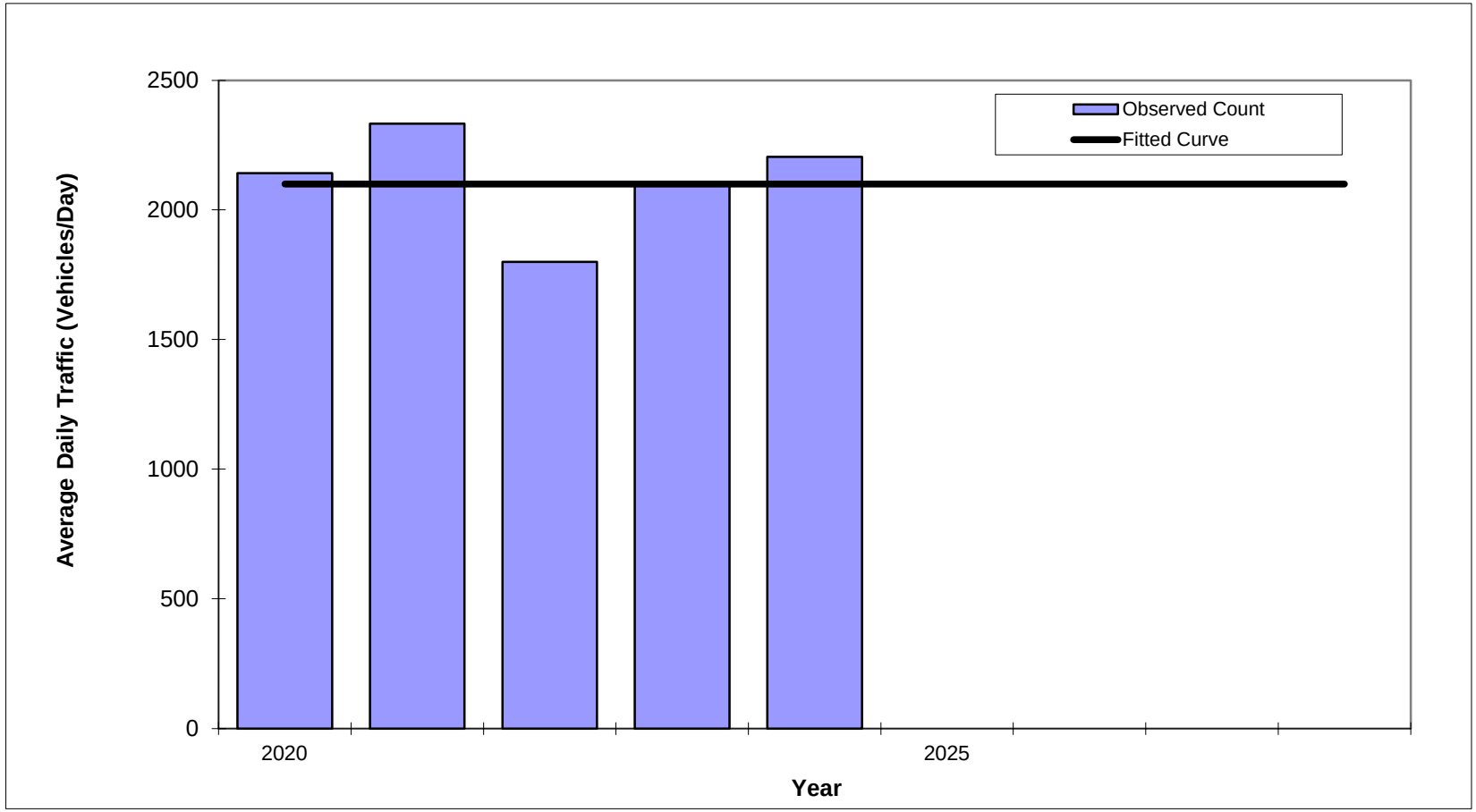
3. Weighted based on AADT.

Traffic Trends - V2023

Crossroads Pkwy -- Okeechobee Rd to End of Rd

FM #	**1234**
Location	**1**

County:	
Station #:	
Roadway:	



Annual Trend Decrease:	0
Trend R-squared:	0.00%
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2024 to Design Year)	0.00%
Printed:	4/29/2025

Linear Growth Option

St. Lucie (94)
940748
Crossroads Pkwy

Year	Traffic (ADT/AADT)	
	Count*	Trend
2020	2,142	2,100
2021	2,333	2,100
2022	1,800	2,100
2023	2,096	2,100
2024	2,204	2,100
2025 Opening Year Trend		
2025	N/A	2,100
2026 Interim Year Trend		
2026	N/A	2,100
2028 Design Year Trend		
2028	N/A	2,100
FSUTMS Forecasts/Trends		

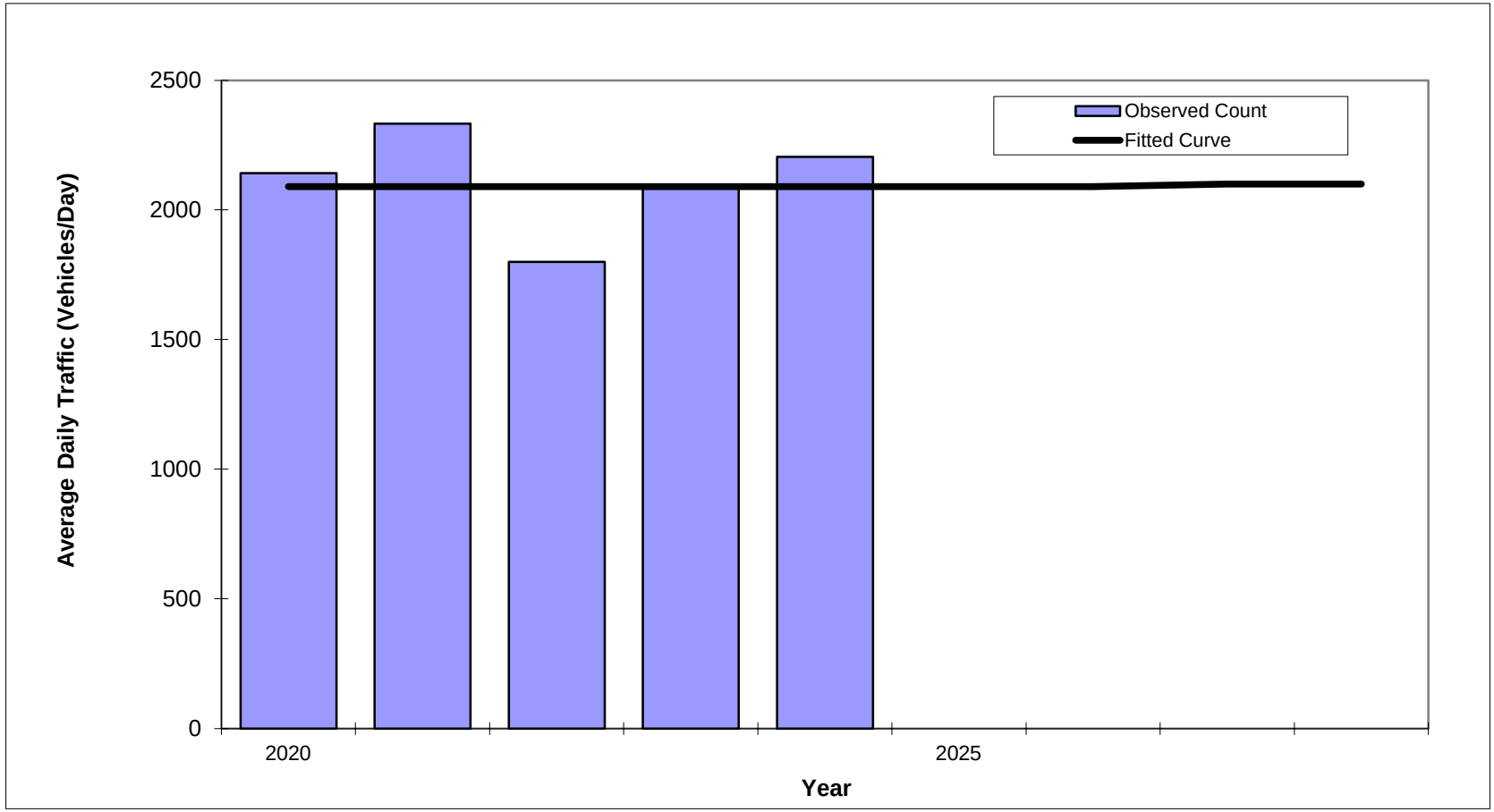
*Axle-Adjusted

Traffic Trends - V2023

Crossroads Pkwy -- Okeechobee Rd to End of Rd

FM #	**1234**
Location	**1**

County:	
Station #:	
Roadway:	



Trend R-squared:	0.00%
Compounded Annual Historic Growth Rate:	0.00%
Compounded Growth Rate (2024 to Design Year)	0.12%
Printed:	4/29/2025

Exponential Growth Option

St. Lucie (94)
940748
Crossroads Pkwy

Year	Traffic (ADT/AADT)	
	Count*	Trend
2020	2,142	2,090
2021	2,333	2,090
2022	1,800	2,090
2023	2,096	2,090
2024	2,204	2,090
2025 Opening Year Trend		
2025	N/A	2,090
2026 Interim Year Trend		
2026	N/A	2,090
2028 Design Year Trend		
2028	N/A	2,100
FSUTMS Forecasts/Trends		

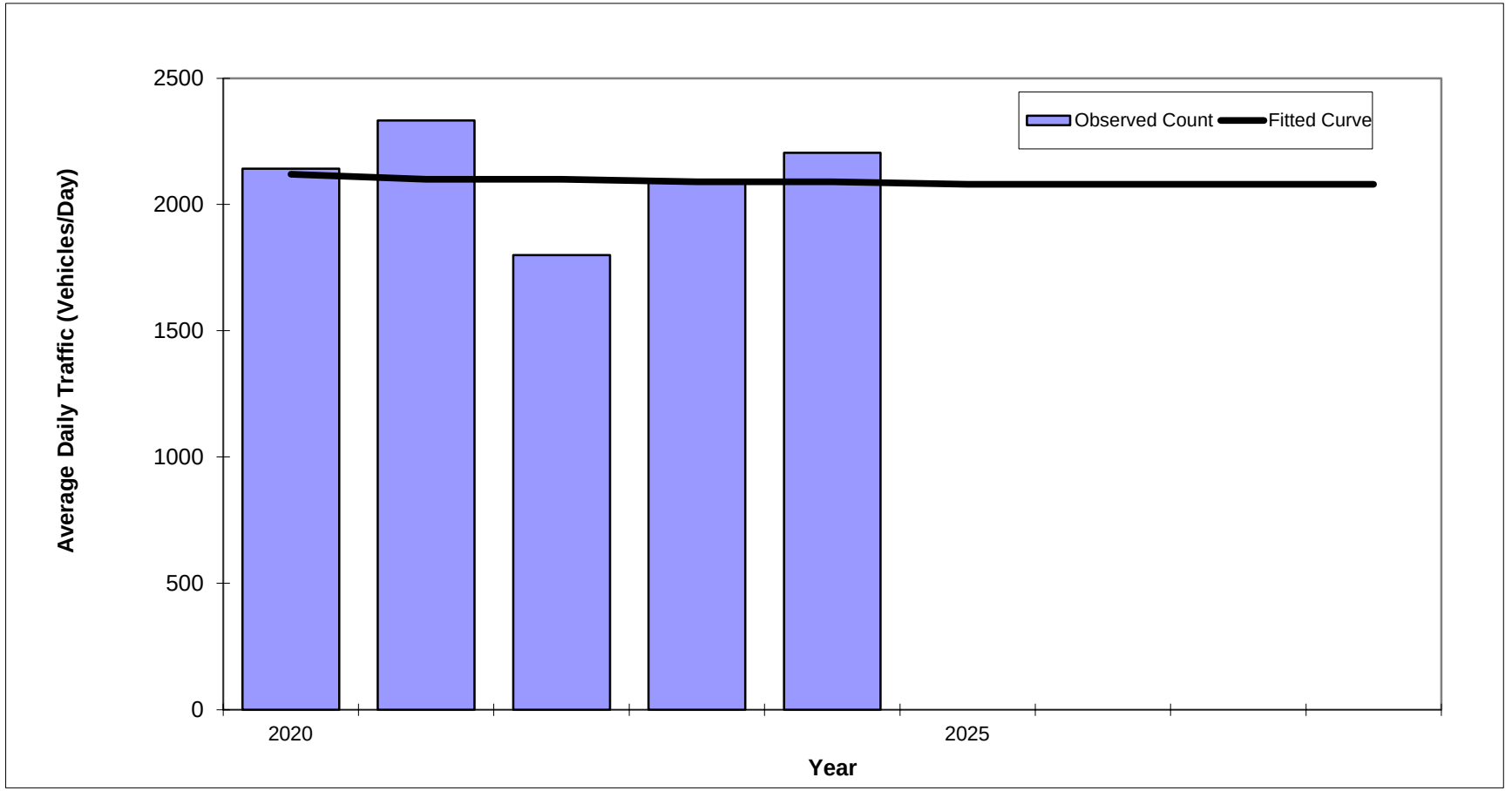
*Axle-Adjusted

Traffic Trends - V2023

Crossroads Pkwy -- Okeechobee Rd to End of Rd

FM #	**1234**
Location	**1**

County:	
Station #:	
Roadway:	



Trend R-squared:	0.40%
Compounded Annual Historic Growth Rate:	-0.36%
Compounded Growth Rate (2024 to Design Year)	-0.12%
Printed:	4/29/2025

Decaying Exponential Growth Option

St. Lucie (94)
940748
Crossroads Pkwy

Year	Traffic (ADT/AADT)	
	Count*	Trend
2020	2,142	2,120
2021	2,333	2,100
2022	1,800	2,100
2023	2,096	2,090
2024	2,204	2,090
2025 Opening Year Trend		
2025	N/A	2,080
2026 Interim Year Trend		
2026	N/A	2,080
2028 Design Year Trend		
2028	N/A	2,080
FSUTMS Forecasts/Trends		

*Axle-Adjusted

APPENDIX K
NCHRP Report 457 Outputs

Crossroads Parkway & Driveway #1
(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.

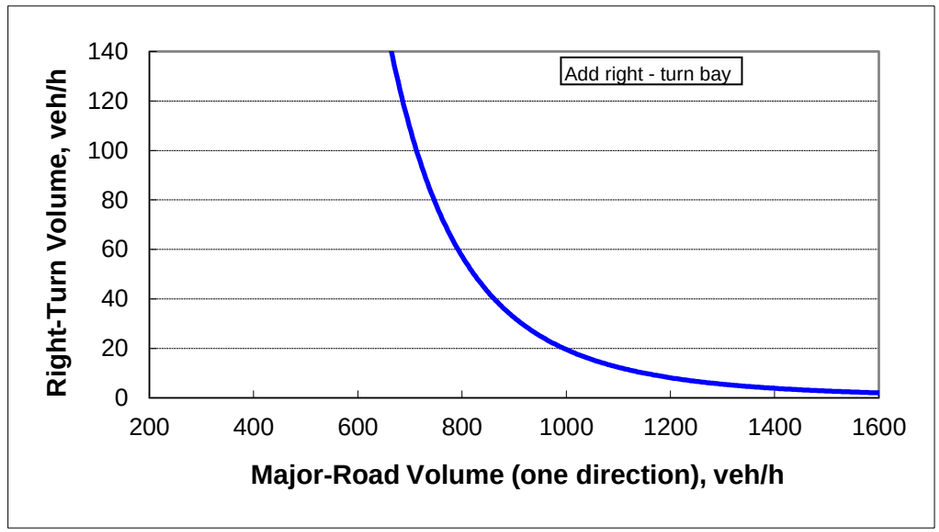
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	50
Right-turn volume, veh/h:	7

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	36357196
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Crossroads Parkway & Driveway #1
(PM Peak Hour)

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

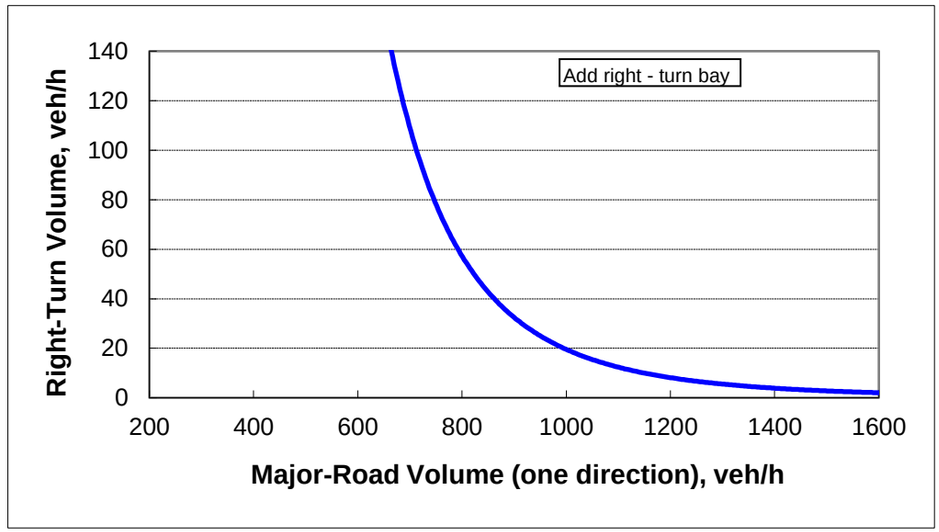
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	23
Right-turn volume, veh/h:	8

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1533805669
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	



Reynolds Drive & Driveway #2
(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.

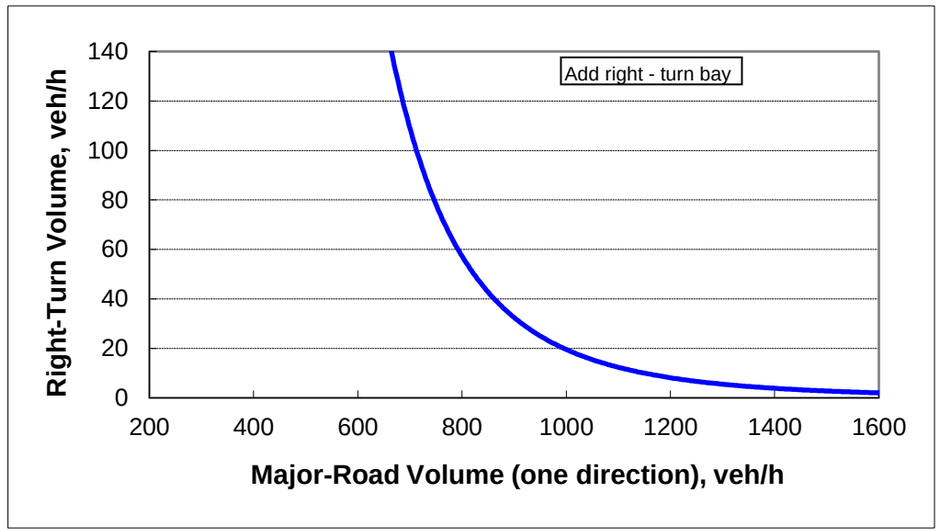
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	9
Right-turn volume, veh/h:	0

OUTPUT

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



Reynolds Drive & Driveway #2
(PM Peak Hour)

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

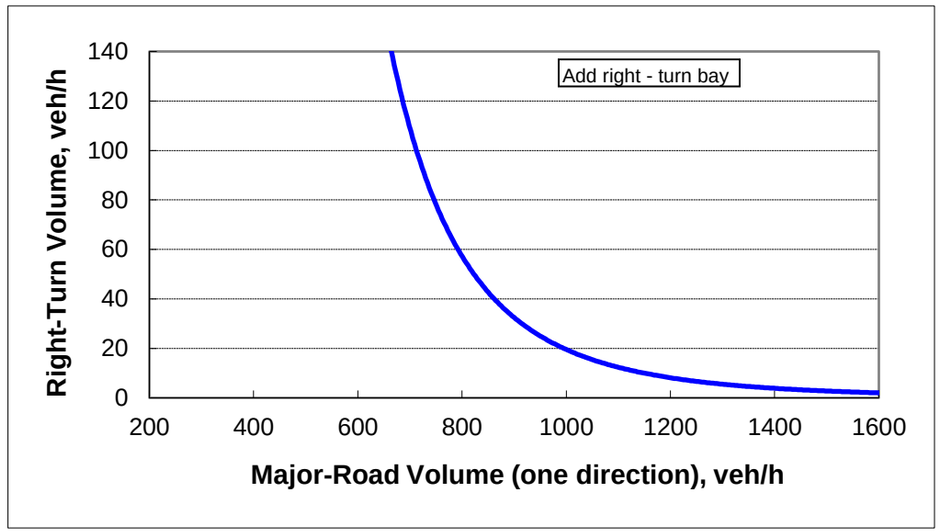
INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	10
Right-turn volume, veh/h:	0

OUTPUT

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



Reynolds Drive & Driveway #2
(AM Peak Hour)

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

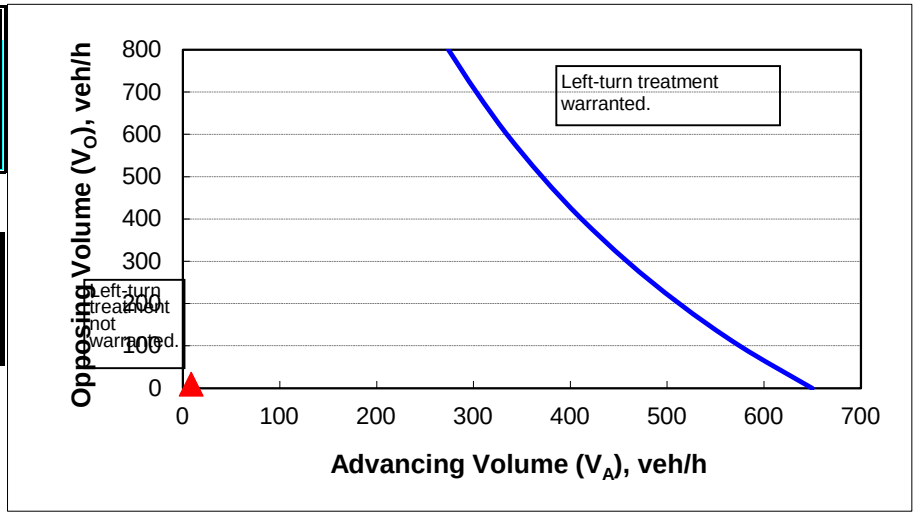
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	89%
Advancing volume (V_A), veh/h:	9
Opposing volume (V_O), veh/h:	9

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	642
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



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

Reynolds Drive & Driveway #2
(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.

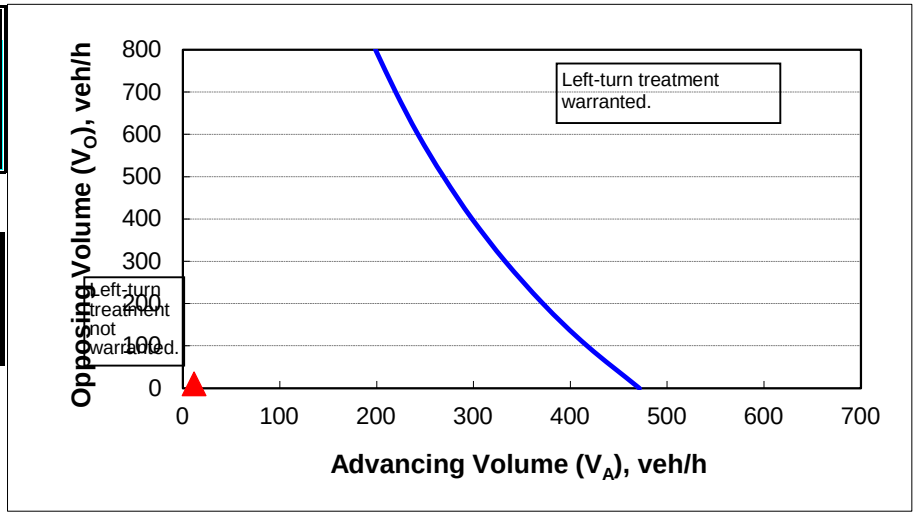
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	75%
Advancing volume (V_A), veh/h:	12
Opposing volume (V_O), veh/h:	10

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	466
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



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

Kimley»Horn

May 19, 2025

Justification Statement

On behalf of Alcat Ft. Pierce, LLC., we are pleased to submit this application for Site Plan for NED Ft. Pierce.

The proposed development is a 12,500 SF shop and associated infrastructure to support the National Equipment Dealers ("NED") business, specializing in heavy equipment sales and rentals. The project is comprised of three parcels, all owned by Alcat Ft. Pierce, LLC, totaling 7.31 AC. Note that Alcat Ft. Pierce also owns the J.J. Taylor Distributing Florida, Inc. business to the immediate south (Folio: 2324-710-0011-000-1), thereby incentivizing the applicant to retain their portfolio of businesses adjacent to one another.

We are excited to share that the proposed business is anticipated to bring approximately 25 well paying jobs to the City of Ft. Pierce, offering $75,000 in annual income on average.

As part of the project, there is about +/- 3.65 acres of staging area that will be used to transiently retain equipment for sale/rent. The staging area is comprised of gravel stone to maintain a permeable but supportive surface.

Enclosed with this letter please find the following related materials:

1. Proof of Ownership – Warranty Deed
2. Site Plan with Conceptual Drainage Plan
3. Landscape and Tree Mitigation Plans
4. Lighting Plans
5. Traffic Memorandum
6. Natural Resources Assessment
7. Boundary Survey

Should you have any questions or need any additional information, please do not hesitate to contact me at 772-794-4129.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Jonathan Gomez, P.E

Floorplans are not available/ required at this point.

This item is understood to not be required at this time.

This item is understood to not be required at this time.