

RESOLUTION NO. 2018- 419

**A RESOLUTION BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, APPROVING THE TERMS, PROVISIONS, CONDITIONS, AND REQUIREMENTS OF A STIPULATION OF PARTIES FOR THE OPENING OF SR 313 FDOT CROSSING NUMBER 273276T RAILROAD-HIGHWAY GRADE CROSSING, ST. JOHNS COUNTY, FLORIDA AND AUTHORIZING THE COUNTY ADMINISTRATOR TO EXECUTE THE AGREEMENT ON BEHALF OF ST. JOHNS COUNTY.**

**WHEREAS**, St. Johns County, Florida, a political subdivision of the State of Florida, Florida East Coast Railway, L.L.C, a Florida Limited Liability Company, FDG Cordova Palms, L.L.C., a Delaware limited liability company, the Florida Department of Transportation District 2 Office, and the Florida Department of Transportation Central Office (collectively, "Parties") desire to enter into the Stipulation of Parties for the Opening of SR 313 FDOT Crossing Number 273276T Railroad-Highway Grade Crossing, St. Johns County, Florida (hereinafter, "Stipulation of Parties) in substantially the same form as attached to this Resolution; and

**WHEREAS**, the purpose of the Stipulation of Parties is to set out the duties, obligations, and understandings between the parties for the opening of SR 313 grade crossing; and

**WHEREAS**, the Parties desire to enter into the Stipulation of Parties to serve such purpose; and

**WHEREAS**, entering into the Stipulation of Parties will serve a public purpose.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY:**

**Section 1.** The above recitals are hereby incorporated into the body of this resolution and are adopted as findings of fact.

**Section 2.** The Board of County Commissioners approves the terms, provisions, conditions, and requirements of the attached Stipulation of Parties between the Parties and authorizes the Chair of the Board of County Commissioners, and County Administrator to execute the agreement on behalf of St. Johns County substantially in the same form as attached.

**Section 3.** If there are typographical or administrative errors or omissions that do not change the tone, tenor, or context of this resolution, this resolution may be revised without subsequent approval of the Board of County Commissioners.

Section 4. This resolution shall be effective upon adoption by the Board of County Commissioners.

**PASSED AND ADOPTED** by the Board of County Commissioners of St. Johns County, Florida, this 4 day of December, 2018.

Attest: Hunter S. Conrad, Clerk

*Hunter S. Conrad*

Deputy Clerk

BOARD OF COUNTY COMMISSIONERS OF  
ST. JOHNS COUNTY, FLORIDA

By:

*Paul M. Waldron*

Paul M. Waldron, Chair

RENDITION DATE 12/4/18



**STIPULATION OF PARTIES FOR THE  
OPENING OF SR 313  
FDOT CROSSING NUMBER 273276T RAILROAD-HIGHWAY GRADE CROSSING,  
ST JOHNS COUNTY, FLORIDA**

This Stipulation of Parties, effective as of the \_\_\_\_\_ day of \_\_\_\_\_, 2018, is between FLORIDA EAST COAST RAILWAY, L.L.C. (Address: 7150 Phillips Highway, Jacksonville, Florida 32256), a Florida Limited Liability Company, hereinafter called "**RAILROAD**" and ST. JOHNS COUNTY, a political subdivision of the State of Florida, hereinafter called "**COUNTY**", FDG.CORDOVA PALMS LLC, a Delaware limited liability company, or its successors and assigns, hereinafter called "**LAND OWNER**", and the FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 2 OFFICE, hereinafter called "**DISTRICT**", and the FLORIDA DEPARTMENT OF TRANSPORTATION CENTRAL OFFICE, hereinafter called "**DEPARTMENT**" agree to the following conditions;

1. The COUNTY has filed an application with the DEPARTMENT to open a public railroad-highway grade crossing at SR 313, FDOT Crossing Number 273276T. A copy of the application is attached as EXHIBIT "A".

2. The LAND OWNER, as the owner of the property referred to as "Cordova Palms" in EXHIBIT "A", has agreed to convey the property described on EXHIBIT "B" attached here to DISTRICT for public roadway use.

3. The DEPARTMENT has agreed to the opening of the at-grade crossing, and the RAILROAD has agreed to allow the at-grade crossing to be constructed upon and through the RAILROAD right of way.

4. There is one (1) track at the proposed SR 313 railroad-highway grade crossing, classified as a main line track, with approximately 14 freight train movements per day. The current maximum train speed is sixty (60) miles per hour at the proposed crossing location. The proposed crossing is located at RAILROAD's mainline milepost 29+2376', and the RAILROAD right-of-way at this location is 100' in width.

5. The Application is for a permit to open a four-lane, divided urban highway rail grade crossing, over the RAILROAD and is located in St. Johns County, Florida, as set

forth on the plans and maps attached hereto and made a part thereof as EXHIBIT "C".

6. The RAILROAD, at the LAND OWNER's expense, will provide, furnish or have furnished, all necessary materials and construct a concrete railroad grade crossing surface at SR 313, in compliance with the DEPARTMENT'S Standard Index Number 560, attached hereto and made a part hereof as EXHIBIT "D" (collectively, the "Project"). Prior to the RAILROAD performing any work related to the Project on RAILROAD's property and right-of-way, the LAND OWNER shall deposit with the RAILROAD a payment in the amount of the RAILROAD's written estimated cost to secure, approve and perform the work of the Project, plus a minimum 20 percent contingency of such estimated Project cost (the "Payment"). Following the RAILROAD'S completion of the Project work, the RAILROAD shall provide to the LANDOWNER a detailed accounting of the actual cost of the Project work. To the extent the Payment exceeded, the actual Project costs (such difference being hereinafter referred to as the "Overage"), the RAILROAD shall promptly return such Overage to the LANDOWNER. Conversely, to the extent the actual Project cost exceeded the Payment (such difference being hereinafter referred to as the "Shortfall"), the LANDOWNER shall promptly pay to the RAILROAD such Shortfall.

7. Upon completion of the crossing, the RAILROAD, at the DISTRICT'S expense, will be responsible for the maintenance of the crossing surface, including all track bed and rail components, plus the highway roadbed, for the width of the rail ties within the crossing area at the SR 313 railroad-highway grade crossing.

8. The RAILROAD, at the LAND OWNER's expense, will provide, furnish or have furnished, all necessary materials and install at SR 313 grade crossing, automated railroad grade crossing traffic control devices to include Type IV, Class III flashing lights, gates, and cantilevers in accordance with the DEPARTMENT'S Standard Index Number 17882, attached hereto and made a part thereof as EXHIBIT "E."

9. The RAILROAD, at the LAND OWNER's expense, will provide, furnish or have furnished, and install all necessary materials required for the synchronization of the grade crossing traffic control devices and proposed highway traffic signal devices.

10. The RAILROAD, at the DISTRICT's expense will maintain the automatic railroad crossing traffic control devices at the SR 313 railroad-highway grade crossing.

11. The LAND OWNER , at its expense, and to the extent depicted by the cross-hatch marks on EXHIBIT "F" attached hereto, will be responsible for the construction of the highway roadbed outside of the railway ties and the roadway up to the edge of the railroad crossing surface to include but not be limited to all pavement structure, pavement surface, shoulders, drainage, sidewalks, pavement striping, advanced pavement markings, erosion control, tree cutting, mowing, and advanced warning signs.

12. The DISTRICT, at the District's expense, will be responsible for the maintenance of the highway roadbed outside of the railway ties within the RAILROAD right of way up to the edge of the railroad crossing surface to include but not limited to all pavement structure, pavement surface, shoulders, drainage, sidewalks, pavement striping, advanced pavement markings, erosion control, tree cutting, mowing, and advanced warning signs

13. All work by all parties within the RAILROAD's right of way will be coordinated with the RAILROAD to ensure that all applicable railroad requirements, to include flagging and insurance, are met for the improvements referenced in this Stipulation of Parties.

14. All work by all parties will be consistent with current Manual of Uniform Traffic Control Devices (MUTCD), Federal Railroad Administration (FRA) Rules and Regulations, American Association of State Highway and Transportation Officials (AASHTO) Policy, the DEPARTMENT'S Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways (Florida's Green Book), RAILROAD, COUNTY, and DEPARTMENT's requirements.

15. DOT crossing number 273276T has been assigned to the SR 313 railroad-

highway grade crossing. The Florida Department of Transportation District 2 Rail Coordinator will complete the U.S. DOT Crossing Inventory Forms (OMB No. 2130-0017) for the opening of the SR 313 railroad-highway grade crossing. The completed forms, as provided in EXHIBIT "G," will be submitted to the DEPARTMENT for inventory data entry and submittal to the Federal Railroad Administration.

16. The DEPARTMENT agrees that the DISTRICT will perform a certified feasibility study, and make a good faith effort to program funds to construct an overhead bridge at this site, thus removing the at-grade highway rail grade crossing at SR 313, when annual average daily traffic reaches 30,000 vehicles per day.

17. The DISTRICT and the RAILROAD will execute the RAILROAD's standard grade crossing License Agreement for this new at-grade crossing incorporating the terms of this Stipulation regarding the Crossing, and the RAILROAD will provide to the DISTRICT a copy of the fully executed Agreement for the crossing and signals and reference the FDOT/AAR National Grade Crossing Number.

Upon execution of the RAILROAD'S standard grade crossing license agreement for SR 313 at grade crossing, the existing easement agreement dated July 25, 1996 located at Woodland, Florida, RAILROAD milepost 28+2749' more or less, will terminate and become null and void.

18. This Stipulation of Parties has been executed by all parties having an interest in this matter, and further, all parties of this stipulation waive hearing rights provided by Chapter 120, Florida Statutes, and request the DEPARTMENT to issue authority in accordance with Section 335.141(1), Florida Statutes and Rule 14-57.012, Florida Administrative Code, with this Stipulation of Parties for the opening of the SR 313 railroad-highway grade crossing. The terms of this Stipulation of Parties may not be changed, waived, discharged or terminated orally, but only by an instrument or instruments in writing, signed by the DEPARTMENT, the DISTRICT, the RAILROAD, LAND OWNER and the COUNTY.

19. This Stipulation of Parties is governed by, and shall be interpreted, and construed in accordance with the laws of the State of Florida.

20. Any failure of any party to insist upon the strict performance of any terms or provisions of this Stipulation of Parties is not deemed to be a waiver of the terms of this agreement.

21. As authorized by Section 335.141, Florida Statutes, and Rule Chapter 14-57, FAC, the DEPARTMENT permits the opening of the SR 313 railroad-highway grade crossing FDOT Crossing Number 273276T, as evidenced by this Stipulation of Parties, provided all conditions of this Stipulation are met and completed within 60 months of the execution of this agreement.

**(THIS CONCLUDES THE BODY OF THIS STIPULATION OF PARTIES)**

**FLORIDA EAST COAST RAILWAY, LLC (RAILROAD)**

By: \_\_\_\_\_  
Sr. Vice President

Date: \_\_\_\_\_

**ST. JOHNS COUNTY (COUNTY)**

By: \_\_\_\_\_  
Chair, County Commission

By: \_\_\_\_\_  
County Manager

Date: \_\_\_\_\_

Approved As To Form:

By: \_\_\_\_\_  
County Clerk

By: \_\_\_\_\_  
County Attorney

**FDG CORDOVA PALMS LLC (LAND OWNER)**

By: \_\_\_\_\_  
Vice President

Date: \_\_\_\_\_

**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
DISTRICT 2 OFFICE (DISTRICT)**

**LEGAL REVIEW (DISTRICT 2)**

By: \_\_\_\_\_  
Secretary, District 2

By: \_\_\_\_\_  
Attorney, FDOT District 2

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
CENTRAL OFFICE (DEPARTMENT)**

**LEGAL REVIEW (DEPARTMENT)**

By: \_\_\_\_\_  
FLP Programs Administrator

By: \_\_\_\_\_  
Attorney, FDOT

Date: \_\_\_\_\_

Date: \_\_\_\_\_





## St. Johns County Board of County Commissioners

Public Works | Engineering | Division

March 8, 2017

Laura Regalado  
Rail Crossing Opening/Closure Program  
Florida Department of Transportation  
Office of Freight, Logistics, and Passenger Operations  
605 Suwannee Street, Mail Station 25  
Tallahassee, FL 32399-0450

Re: SR 313 Railroad Crossing

Ms. Regalado:

Please find attached the at-grade railroad crossing application and supporting documents for the above referenced project. St. Johns County is submitting this application in cooperation with Florida East Coast Industries (FECI) and the Florida Department of Transportation (FDOT). FECI is developing plans for a project at the location shown on the attached location map. As part of this plan, FECI will construct a portion of the SR 313 roadway, including the at-grade crossing of the existing railroad.

FECI is currently in the process of conveying the SR 313 right-of-way to FDOT and this application is contingent on the final disposition of the actual real estate. Also, St. Johns County is in discussion with FDOT to establish the most efficient entity for maintenance of the constructed roadway and crossing, with the applicable agreement with the Railroad as applicable.

Please review the application and contact me with questions or comments.

Regards,

  
Jay Brawley, PE, AICP | County Engineer  
St. Johns County - Engineering Division

Enclosures

CC: Star Manso, FECI

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**RAILROAD GRADE CROSSING APPLICATION**

ROAD NAME OR NUMBER	COUNTY/CITY NAME
SR313	St. John's County

**A. IDENTIFICATION**

Submitted By:

Applicant: St. Johns County  
 Office: Public Works  
 Telephone: 904.209.0110  
 Address: 2740 Industry Center Rd.  
St. Augustine, FL 32084

Application For:

- Closing a public highway-rail grade crossing by:
  - roadway removal
  - rail removal
- Opening a public highway-rail grade crossing by:
  - new rail line construction
  - new roadway construction
  - conversion of private to public highway-rail grade crossing

**B. CROSSING LOCATION**

FDOT/AAR Crossing Number: \_\_\_\_\_  
 Jurisdiction for Street or Roadway by Authority of:  City  County  State  
 Local Popular Name of Street or Roadway: US1 and proposed SR 313  
 Railroad Company: Florida East Coast Railway (FECR)  
 Railroad Mile Post: Between MP29 and MP30

Submitted for the Applicant by:  DATE: 3/8/17  
 Name and Title  
Jay Brawley - County Engineer

Application FDOT Review by: \_\_\_\_\_ DATE: \_\_\_\_\_  
Central Rail Office

**REFERENCES:**  
 (Specific Legal Authority) 334.044 F.S., 120.57 F.S.  
 (Law Implemented) 335.141 F.S.  
 (Administrative Rule) 14-57.012 F.A.C.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**RAILROAD GRADE CROSSING APPLICATION**

## OPENING APPLICATION QUESTIONNAIRE

Design plans, maps, aerials, and supporting documentation must be provided with the application.

If all parties, Applicant, Railroad, and Department, fail to agree to the rail crossing opening through a Stipulation of Parties, the Applicant must establish the crossing meets the criteria found in Rule 14-57.012, Florida Administrative Code. This questionnaire will assist the Department in evaluating the criteria and is not intended to be an exclusive list of factors.

### Florida Administrative Code criteria:

#### A) Safety

- a-1. How will the proposed crossing affect safety to drivers, pedestrians, cyclists, and rail personnel?
- a-2. Has grade separation been considered in planning the crossing? If not, why?
- a-3. What crossings will be submitted for closure to offset the safety impacts of a new crossing opening?
- a-4. What safety measures are designed for the proposed crossing?
- a-5. What is the distance from the proposed crossing to the nearest intersection? Identify the street.
- a-6. Are there plans for any structures to be built near the crossing intersection?
- a-7. Identify all major traffic generators (i.e., businesses, shopping malls, recreational areas, special events, etc.) in this area. Specify type, location, and distance to proposed crossing.
- a-8. Provide a traffic operations and safety analysis, with traffic issues evaluated for the railroad crossing, train traffic movements, and railroad preemption. This analysis should include all proposed developments in the immediate vicinity and the increase in traffic predicted from the developments.

#### B) Necessity for rail and vehicle traffic

- b-1. Why is the crossing necessary?
- b-2. Provide excerpts from the Comprehensive Plan or any other transportation plans relative to the proposed crossing.
- b-3. Provide description of land use on each side of the rail crossing.
- b-4. Provide predicted Annual Average Daily Traffic (AADT) at the crossing.
- b-5. Provide level of service at the crossing.
- b-6. Provide anticipated AADT and level of service in 5 years.
- b-7. Provide predicted percentage of truck traffic and anticipated truck traffic 5 years out.
- b-8. Will trucks carry hazardous materials? If so, approximately how many trips per day or week?
- b-9. Will school buses use the crossing? If so, how many school buses will use the crossing per day or week?
- b-10. Will emergency rescue vehicles use the crossing? If so, approximately how many trips per day or week?
- b-11. What is the predicted number of pedestrians and bike riders that will use the proposed crossing? What is the predicted number of users 5 years out?
- b-12. Please provide any corridor studies or other preliminary traffic engineering studies that pertain to this crossing.

#### C) Alternate Routes

- c-1. Are there access roads available to property owners if the crossing is not there?
- c-2. Name routes currently used or intended for use if the crossing is not approved?
- c-3. Are there traffic signals on these routes?
- c-4. How does the proposed crossing, if built, affect the AADT at nearby public crossings? Provide estimated traffic count changes, if any.

#### D) Effect on rail operations and expenses

- d-1. Provide current number and type of rail tracks.
- d-2. Are there rail sidings or switches in the location of the proposed crossing?
- d-3. Is there a nearby rail yard? If so, what is the distance of the yard to the proposed crossing.
- d-4. Provide the current number of daily train movements (number of switching or thru trains; number of passenger or freight trains).
- d-5. Provide the approximate times during the day and evening that the crossing will be blocked.
- d-6. Provide the approximate length of time (i.e., minutes) that the crossing is blocked.
- d-7. Provide minimum and maximum train speeds at the proposed crossing.
- d-8. What is the anticipated expansion of tracks and/or train movements?

# EXHIBIT A

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**RAILROAD GRADE CROSSING APPLICATION**

- d-9. What is the distance from the proposed crossing to adjacent public crossings? (Identify adjacent crossings by road name and crossing number.)
- d-10. What are the estimated costs of the crossing installation and annual maintenance? Who will be responsible for the costs of installation and maintenance?
- E) Closure of one or more public crossings to offset opening a new crossing**
- e-1. Provide the names and crossing numbers of any crossing closure candidates that may offset the opening of the proposed crossing?
- F) Design of the grade crossing and road approaches**
- f-1. Submit design plans, inclusive of location of sidewalks, bike lanes, and traffic control devices, including pavement markings, signs, and highway traffic signals.
- f-2. What future changes are proposed (ex: phase one is a 2-lane roadway, left turn lane to be added in phase two)?
- f-3. What is the vehicular design speed at the proposed crossing?
- f-4. How many thru or turn lanes? Divided or undivided?
- G) Presence of multiple tracks and their effect upon railroad and highway operations**
- g-1. Please confirm the number of tracks at the location and identify each track.
- g-2. How many train movements occur on each track and the types of trains that run on each track (passenger, thru freight or switching freight, and the number of cars)?

**A) Safety**

1. **How will the proposed crossing affect safety to drivers, pedestrians, cyclists, and rail personnel?**
2. Has grade separation been considered in planning the crossing? No If not, why? Insufficient distance on the east side due to the adjacent parallel roadway (Dixie Hwy)
3. What crossings will be submitted for closure to offset the safety impacts of a new crossing opening?
4. What safety measures are designed for the proposed crossing? Active warning devices, including entrance gate, flashing lights, bells, signage and pavement markings as necessary.
5. What is the distance from the proposed crossing to the nearest intersection? Identify the street. Less than 80ft, Dixie Highway
6. Are there plans for any structures to be built near the crossing intersection? Signal bungalow max 10ft x 10ft
7. **Identify all major traffic generators (i.e., businesses, shopping malls, recreational areas, special events, etc.) in this area. Specify type, location, and distance to proposed crossing.**
8. Provide a traffic operations and safety analysis, with traffic issues evaluated for the railroad crossing, train traffic movements, and railroad preemption. This analysis should include all proposed developments in the immediate vicinity and the increase in traffic predicted from the developments. Traffic Analysis to be submitted

**B) Necessity for rail and vehicle traffic**

1. Why is the crossing necessary? Sole access to new development, no alternative egress and to create connectivity from SR 313 to US 1.
2. **Provide excerpts from the Comprehensive Plan or any other transportation plans relative to the proposed crossing.**
3. Provide description of land use on each side of the rail crossing. West side – proposed single family and retail; East side commercial and residential
4. Provide predicted Annual Average Daily Traffic (AADT) at the crossing. Traffic Analysis to be submitted
5. Provide level of service at the crossing. Local access road
6. Provide anticipated AADT and level of service in 5 years. Traffic Analysis to be submitted
7. Provide predicted percentage of truck traffic and anticipated truck traffic 5 years out. Traffic Analysis to be submitted
8. Will trucks carry hazardous materials? No If so, approximately how many trips per day or week?
9. Will school buses use the crossing? Yes If so, how many school buses will use the crossing per day or week? Traffic Analysis to be submitted
10. Will emergency rescue vehicles use the crossing? Yes If so, approximately how many trips per day or week? Traffic Analysis to be submitted
11. What is the predicted number of pedestrians and bike riders that will use the proposed crossing? What is the predicted number of users 5 years out? Traffic Analysis to be submitted
12. Please provide any corridor studies or other preliminary traffic engineering studies that pertain to this crossing. Traffic Analysis to be submitted

**C) Alternate Routes**

1. Are there access roads available to property owners if the crossing is not there? No
2. Name routes currently used or intended for use if the crossing is not approved? None identified
3. Are there traffic signals on these routes? No
4. How does the proposed crossing, if built, affect the AADT at nearby public crossings? Provide estimated traffic count changes, if any. Traffic Analysis to be submitted

**D) Effect on rail operations and expenses**

1. Provide current number and type of rail tracks. 1 mainline track
2. Are there rail sidings or switches in the location of the proposed crossing? no
3. Is there a nearby rail yard? Yes, Bowden Yard If so, what is the distance of the yard to the proposed crossing. More than 10 miles away
4. Provide the current number of daily train movements (number of switching or thru trains; number of passenger or freight trains). Approx 14 freights trains
5. Provide the approximate times during the day and evening that the crossing will be blocked. N/A  
No blocking expected
6. Provide the approximate length of time (i.e., minutes) that the crossing is blocked. N/A No blocking expected
7. Provide minimum and maximum train speeds at the proposed crossing. Max 60 mph
8. What is the anticipated expansion of tracks and/or train movements? No expansion presently planned
9. What is the distance from the proposed crossing to adjacent public crossings? (Identify adjacent crossings by road name and crossing number.) Big Oak Road 1.9 miles and International Gold Parkway 2.4 miles
10. What are the estimated costs of the crossing installation and annual maintenance? Who will be responsible for the costs of installation and maintenance?  
Installation  
\$500,000 approx  
Maintenance  
\$2700 Signal System  
\$100,000 Rehab Crossing

**E) Closure of one or more public crossings to offset opening a new crossing**

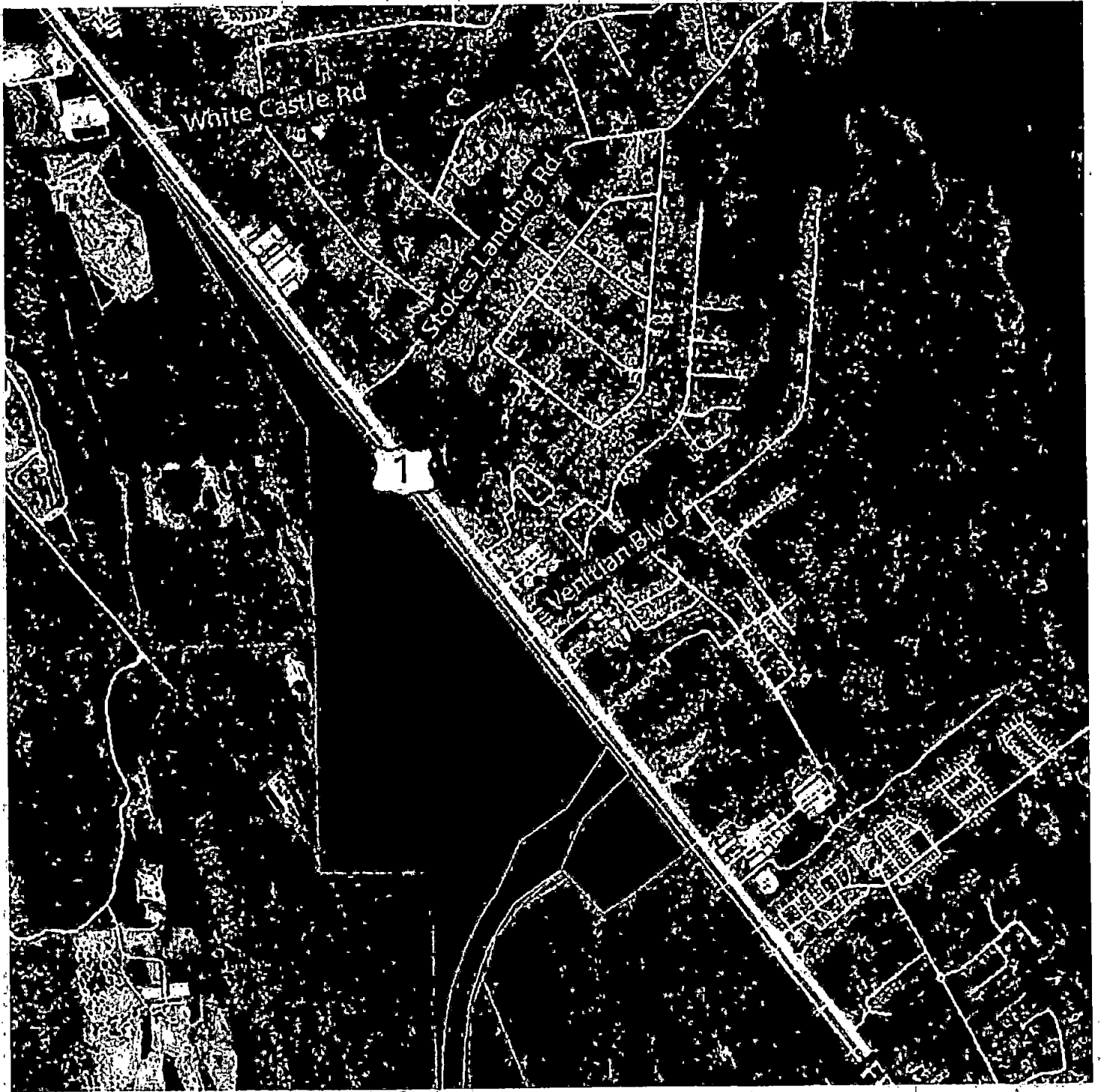
1. Provide the names and crossing numbers of any crossing closure candidates that may offset the opening of the proposed crossing? FECR has agreed that offset closure is not required

**F) Design of the grade crossing and road approaches.**

1. Submit design plans, inclusive of location of sidewalks, bike lanes, and traffic control devices, including pavement markings, signs, and highway traffic signals.
2. What future changes are proposed (ex: phase one is a 2-lane roadway, left turn lane to be added in phase two)?
3. What is the vehicular design speed at the proposed crossing? 30 mph
4. How many thru or turn lanes? Divided or undivided? 2 thru undivided lanes

**G) Presence of multiple tracks and their effect upon railroad and highway operations**

1. Please confirm the number of tracks at the location and identify each track. N/A
2. How many train movements occur on each track and the types of trains that run on each track (passenger, thru freight or switching freight, and the number of cars)? N/A



**EXHIBIT A**

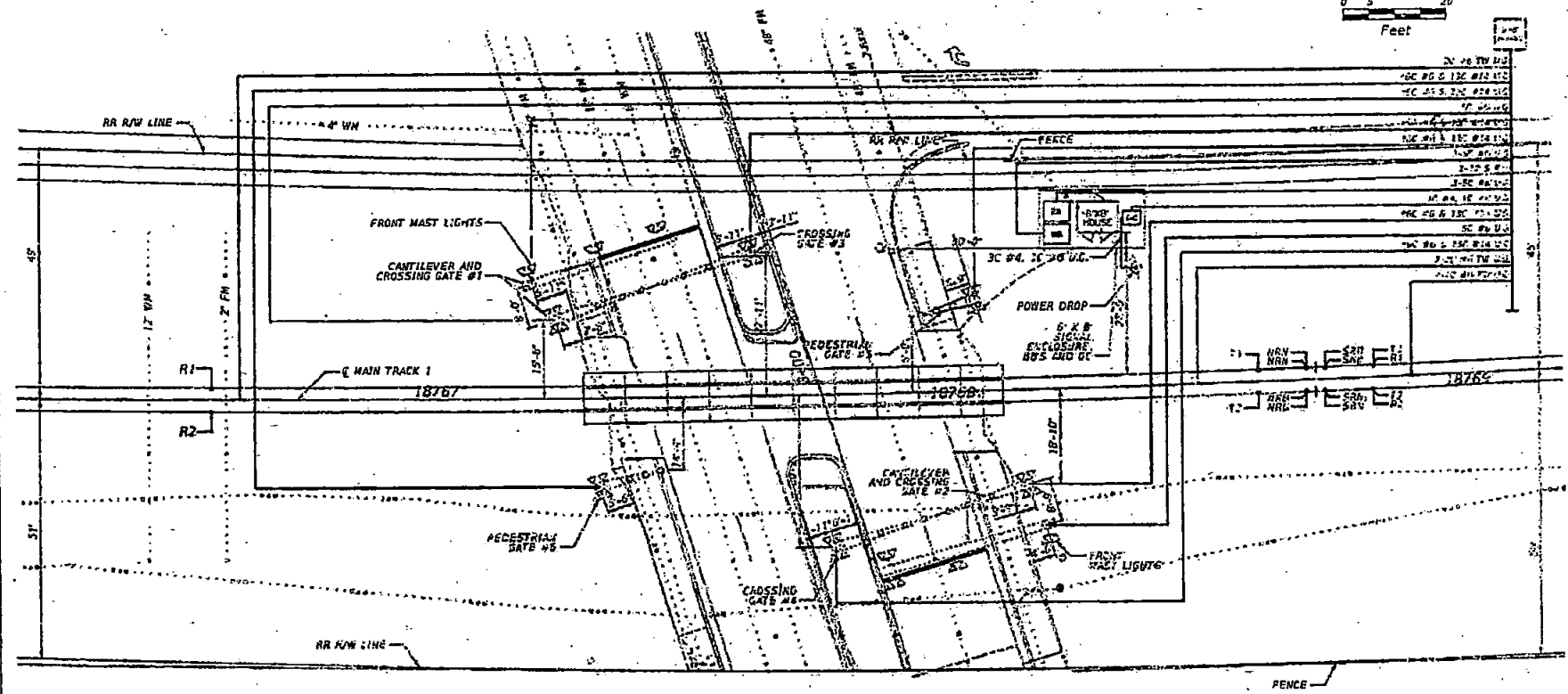




**EXHIBIT A**

NORTH TO JACKSONVILLE

SOUTH TO MIAMI



The operation of any circuits and equipment shown herein must be checked by point to point breakdown and complete operational testing of the system for sections of the system into which they are connected.

EXHIBIT A

# **Cordova Palms**

Land Development Traffic Assessment

Prepared For

***Flagler Development Corp.***

Prepared By

Jeffrey A. Crammond, PE, PTOE, PTP  
England, Thims & Miller, Inc.  
14775 St. Augustine Road  
Jacksonville, FL 32258  
(904) 642-8990

February 16, 2016

**EXHIBIT A**

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England, Thims & Miller, Inc. (CA – 00002584)  
Cube Voyager  
Northeast Regional Planning Model (NERPM), Version 4.2  
Synchro/Sim Traffic version 9

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Jeffrey A. Crammond, PE, PTOE, PTP  
Florida PE - 35761

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## **Introduction**

Cordova Palms is located in east central St Johns County on the west side of US-1 just north of the St. Augustine Airport. Figure 1 illustrates the location of the project. Cordova Palms will be developed in two phases and consist of 750 single family residential units and 150,000 square feet of retail space. Figure 2 illustrates the Preliminary Site Plan for the development. Table 1 presents the phasing schedule for Cordova Palms.

## **Inventory of Existing Conditions**

The study area for Cordova Palms was developed using the standards for residential and non-residential development. The non-residential portion of the project is expected to generate more than 300 gross trips, therefore the study area for the non-residential is limited to within four miles of the project's access (future SR-313) to US-1. The impact area for the residential portion of the project will also extend out four miles from the access to US-1. The significance threshold will be one percent of the adopted maximum service volume on the directly accessed link of US-1 for both the residential and non-residential portions of the project. The remaining links within the non-residential impact boundary will have a non-residential significance threshold of three percent and a residential significance threshold of one percent of the adopted maximum service volume. Figure 3 illustrates the impact area boundary for both the residential and non-residential portions of the project. Table 2 lists the roadway segments within the study area, their existing and committed traffic volume, number of lanes, area and facility type designations, lengths and approved maximum service volume.

## **Trip Generation Estimates**

Project traffic volume estimates were developed using the trip generation equations contained in the 9<sup>th</sup> edition of the Institute of Transportation's (ITE) *Trip Generation Manual*. Table 3 illustrates the calculation of the gross daily and pm peak hour traffic associated with Cordova Palms. Table 4 depicts the calculation of the net pm peak hour traffic entering and leaving the project. A graphic illustration of the internal capture calculations for Phase 1 and Buildout have been included in Appendix A of this report.



Engineered - Thermo & Hydrus, Inc.  
14711 Old St. Augustine Road  
Jacksonville, FL 32214  
Tel: (904) 444-0000  
Fax: (904) 444-0111  
CA - 9001294 LA - 8000116

Location Map

FIGURE 1

**EXHIBIT A**



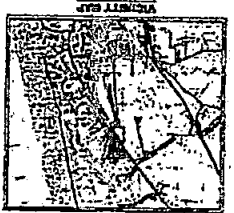
Figure 2

**LOCAL ZONE CATION**

The proposed development is located within the local zone cation of the County of Volusia, Florida. The local zone cation is defined by the County Ordinance No. 1989-1, which was adopted on May 18, 1989. The local zone cation is defined as the area within the County boundaries that is not within any other zone cation. The local zone cation is defined as the area within the County boundaries that is not within any other zone cation.

**GENERAL NOTES**

1. TEMPORARY CONSTRUCTION & SALES TRUCKS WILL BE PLACED ON SITE IN CONFORMANCE WITH COUNTY ORDINANCE NO. 1989-1, WHICH IS A PART OF THE LOCAL ZONE CATION. THE LOCATION OF TRUCKS SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER. THE LOCATION OF TRUCKS SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.
2. UPLAND BUFFERS ADJACENT TO WETLANDS SHALL BE MAINTAINED AND RESTORED TO ORIGINAL OR BETTER CONDITION. UPLAND BUFFERS SHALL BE MAINTAINED AND RESTORED TO ORIGINAL OR BETTER CONDITION.
3. THE APPLICANT AGREES TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS, AND TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS.
4. THE APPLICANT AGREES TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS, AND TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS.
5. THE APPLICANT AGREES TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS, AND TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS.
6. THE APPLICANT AGREES TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS, AND TO MAINTAIN THE RIGHT TO LOCATE HOODY BIRDS LOCATIONS.



**DEVELOPMENT SUMMARY**

1. DEVELOPMENT	150.00 SQ. FT.
SINGLE FAMILY	150.00 SQ. FT.
COMMERCIAL	0.00 SQ. FT.
2. AREA SURVEY	272.00 AC.
WETLANDS	272.00 AC.
TOTAL WETLANDS	272.00 AC.
WETLAND IMPACTS	12.00 AC.
WETLAND RESTORATION	12.00 AC.
WETLAND PRESERVATION	260.00 AC.
WETLAND BUFFER	12.00 AC.
3. BUFFER/RETAINING STRIP	2.00 AC.
AVERAGE UPLAND BUFFER	2.00 AC.
MINIMUM UPLAND BUFFER	2.00 AC.
4. OPEN SPACE (REQUIRED 25%)	67.50 AC.
5. PROTECT RESTRICTION SIGNAGE & MONITORING TOWER SHALL	67.50 AC.
6. MARK LOCATIONS SHALL BE SHOWN ON INSTRUMENTAL MAPS	67.50 AC.

**LEGEND**

27' AVERAGE UPLAND BUFFER	(Symbol)
10' MINIMUM UPLAND BUFFER	(Symbol)
25' AVERAGE UPLAND BUFFER	(Symbol)
POTENTIAL FACILITY LOCATION	(Symbol)
COMMUNITY FACILITY LOCATION	(Symbol)
LAND PRESERVATION	(Symbol)
WETLAND PRESERVATION	(Symbol)
WETLAND BUFFER	(Symbol)

REPRESENTATION OF THE PROPOSED PLAN OF RESTORATION AND PRESERVATION SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER. THE LOCATION OF TRUCKS SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY ENGINEER.

**FIGURE 2**  
**CONCEPTUAL SITE PLAN**  
**CORNOVA PALMS**  
**FOR 600 CORNOVA PALMS, LLC**  
**ST. JOHNS COUNTY, FLORIDA**

**ETM**  
 ENGINEERING TECHNOLOGICAL MANAGEMENT, INC.  
 1100 N. W. 11th Street, Suite 100  
 Ft. Lauderdale, FL 33304  
 Phone: (954) 561-1111  
 Fax: (954) 561-1112  
 Website: www.etm-inc.com

DATE: 11/15/2011  
 DRAWN BY: J.S.  
 CHECKED BY: J.S.  
 SCALE: AS SHOWN

1 OF 1

**Table 1**  
**Cordova Palms**  
**Development Schedule**

Land Use	ite Land Use Code	Quantity <sup>1</sup>	Units
<b><u>Phase 1 (2016)</u></b>			
Single Family Residential	210	300	DUs
Retail	820	100,000	Sq. Ft.
<b><u>Buildout (2018)</u></b>			
Single Family Residential	210	750	DUs
Retail	820	150,000	Sq. Ft.

<sup>1</sup> Cumulative by Phase



**ETM** Engineering & Technology, Inc.  
11775 DUSTY AVENUE ROAD  
INDIANAPOLIS, IN 46241  
TEL: (317) 552-1177  
FAX: (317) 552-1177  
CA - 606044 IN - 00000000

### Impact Area Map

FIGURE 3

# EXHIBIT A

**Table 2**  
**Cordova Palms**  
**Existing Conditions**

Link ID	Roadway	Segment	Area Type	Approved Roadway Classification	LOS Std.	Segment Length (mi)	Date of Count	Annual Growth Factor	PM Peak Hour Traffic (vph)	Exempt Development Traffic	Approved Concurrency Traffic	Total Committed PM Peak Hour Traffic	Peak Hour Maximum Service Volume (vph)
25.1	CR 16A (Lewis Spdwy)	SR 16 to Vareto Ave.	UZ	2UC	D	0.88	ADT15	2.00%	652	13	130	795	1,440
25.2	CR 16A (Lewis Spdwy)	Vareto Ave. to Woodlawn Rd	UZ	2UC	D	0.35	ADT15	2.00%	528	11	134	678	1,440
26	CR 16A (Lewis Spdwy)	Woodlawn Rd. to SR 5 (US 1)	UZ	2UC	D	1.07	ADT15	2.77%	917	26	182	1,134	1,440
74.2	International Golf Pkwy.	Parkland Trl/Center Place Way to St. Marks Pond Blvd.	TR	2MaC	D	3.29	ADT15	3.78%	823	23	405	1,051	1,480
74.3	International Golf Pkwy.	St. Marks Pond Blvd. To SR 5 (US 1)	TR	2MaC	D	0.81	ADT15	5.57%	678	49	306	1,233	1,480
122	SR 6 (US 1)	St. Ann, Limbs (N) to CR 16A (Lewis Spdwy)	UZ	4PA	D	0.8	ADT15	2.00%	2,048	41	404	2,490	4,480
123	SR 5 (US 1)	CR 16A (Lewis Spdwy) to Gun Club Rd.	UZ	4PA	D	2.43	ADT15	2.00%	2,231	45	497	2,773	4,480
124	SR 5 (US 1)	Gun Club Rd. to International Golf Pkwy.	UZ	4PA	D	3.69	ADT15	2.00%	1,939	39	702	2,680	4,310
125.1	SR 5 (US 1)	International Golf Pkwy. to Alternale CR 210	TR	4PA	D	5.30	ADT15	2.00%	2,255	45	555	2,855	3,550
149	Vareto Ave	SR 16 to Lewis Speedway (CR 16A)	UZ	2UC	D	0.77	ADT15	2.00%	328	7	26	358	1,150
151.1	Woodlawn Rd	SR 16 to Heritage Park Drive (N)	UZ	2UC	D	1.47	ADT15	4.30%	902	39	319	1,260	1,150
151.2	Woodlawn Rd	Heritage Park Dr. (N) to Lewis Speedway (CR 16A)	UZ	2UC	D	0.9	ADT15	8.17%	735	45	247	1,027	1,150

Table 2 Notes/References/Justification:  
 Reference: Transportation Analysis Spreadsheet, dated 8/18/15

**EXHIBIT A**

**Table 3**  
**Cordova Palms**  
**Project Trip Generation Estimates**

Land Use	ITE Land Use Code	Size (Number of Units)	Independent Variable (Units)	Daily Estimation Method (Rate or Equation)	Gross Daily Trip Ends	PM Peak Hour Estimation Method (Rate or Equation)	Gross P.M. Peak Hour Trip Ends
<b>Phase 1 (2016)</b>							
Single Family Residential	210	300	DUs	$\text{Ln}(T)=0.92*\text{Ln}(X)+2.72$	2,886	$\text{Ln}(T)=0.90*\text{Ln}(X)+0.51$	282
Shopping Center	820	100,000	Sq. Ft.	$\text{Ln}(T)=0.65*\text{Ln}(X)+5.83$	6,791	$\text{Ln}(T)=0.67*\text{Ln}(X)+3.31$	599
						<b>Total</b>	<b>881</b>
<b>Buildout (2018)</b>							
Single Family Residential	210	750	DUs	$\text{Ln}(T)=0.92*\text{Ln}(X)+2.72$	6,704	$\text{Ln}(T)=0.90*\text{Ln}(X)+0.51$	644
Shopping Center	820	150,000	Sq. Ft.	$\text{Ln}(T)=0.65*\text{Ln}(X)+5.83$	8,839	$\text{Ln}(T)=0.67*\text{Ln}(X)+3.31$	786
						<b>Total</b>	<b>1,430</b>

Table 3 Notes/References/Justification: 1) Landuse quantities are cululative.

Reference: ITE Trip Generation, 9<sup>th</sup> Edition, 2012.

**Table 4**  
**Cordova Palms**  
**Net New PM Peak Hour External Project Trip Calculations**

Land Use	ITE Land Use Code	Gross P.M. Peak Hour Trip Ends	External Trip Percentage	P.M. Peak Hour Net Trip Ends	New Trip Percentage	Total Net New P.M. Peak Hour External Trip Ends	P.M. Peak Hour External Trip End Distribution					
							Entering		Exiting		Total Trips	
							%	Trips	%	Trips		
<b>Phase 1 (2016)</b>												
Single Family Residential	210	282	61.0%	172	100.0%	172	63%	108	37%	64	172	
Shopping Center	820	599	81.6%	489	76.0%	372	48%	179	52%	193	372	
<b>Total Phase 1</b>		881		681		544		287		257	544	
<b>Buildout (2018)</b>												
Single Family Residential	210	644	93.4%	601	100.0%	601	63%	379	37%	222	601	
Shopping Center	820	786	93.1%	732	76.0%	556	48%	267	52%	289	556	
<b>Total Buildout</b>		1,430		1,333		1,157		646		511	1,157	

Table 4 Notes/References/Justification:

- 1) New trip percentage taken from the St. Johns County Land Development Code, except for Land Use Code 820 which is based on the formula contained in the edition of ITE's *Trip Generation Handbook*.
- 2) Pass-by trips capped at 10% of the estimated background traffic on US-1 adjacent to the project.

**EXHIBIT A**

### **Traffic Distribution and Assignment Methodology**

Total project traffic was assigned to the area roadway network using traffic distribution patterns developed using the 2025 existing plus committed data set from version 4.2 of the Northeast Regional Planning Model (NERPM v4.2). Several modifications were made to the base roadway network including the deletion of the First Coast Outer Beltway (FCOB) from SR-21 to I-95, the widening of I-95 from International Golf Parkway to I-295, CR-2209 south of CR-210 and SR-313 from SR-207 to US-1. Holmes Boulevard, Kenton Morrison, Varella Avenue and Woodlawn Drive were added to the base roadway network. In addition, the roadway modifications associated with the Nocatee DRI, Twin Creeks DRI and Bannon Lakes PUD were made to the roadway network. No changes to the socio-economic data were made except for adding the land use data for Cordova Palms. The model output assignments are contained in Appendix B. The distribution of residential and non-residential project traffic is illustrated in Figure 4. Table 5 illustrates the calculation of project traffic on each of the roadway segments contained in the impact area by development phase.

### **Area of Influence**

The areas of influence of this project are illustrated in Figure 3. The limits of this area for project traffic was defined by all roadway segments within a four-mile radius, on which the project is significant. Table 6 depicts the significance level calculations for the project.

### **Impacted Segments Traffic Volumes**

Background, project and total traffic volumes along with the level of service associated with the total traffic volume for the impacted roadways within the study area are also illustrated on Table 6. As shown, the total traffic volumes on all significantly impacted roadway segments will not exceed their maximum allowable service volume except for four roadway segments, Link 74.3 International Golf Parkway from St. Marks Pond Boulevard to US-1, Link 125.1 US-1 from International Golf Parkway to CR-210, Link 151.1 Woodlawn Road from SR-16 to Heritage Park Drive and Link 151.2 Woodlawn Road from Heritage Park Drive to Lewis Speedway. Table 7 illustrates the calculation of the proportionate fair share associated with Cordova Palms.



Enviroment-Thompson Inc.  
 14778 Old 01 Avenue Road  
 22145 North, Ft. Lauderdale  
 33308-1477  
 Palm Beach Gardens  
 FL 33418  
 561-465-1111

## Project Traffic Distribution

FIGURE 4

# EXHIBIT A



**Table 5**  
**Cordova Palms**  
**Net New P.M. Peak Hour External Project Trip Assignment**

Segment Number	Roadway Name	From / To	Residential Traffic Distribution	Commercial Traffic Distribution	Phase 1 P.M. Peak Hour External Project Trips		Buildout P.M. Peak Hour External Project Trips	
					Residential	Commercial	Residential	Commercial
<b>Total Net New P.M. Peak Hour External Trip Ends (Table 4) =</b>					<b>172</b>	<b>372</b>	<b>601</b>	<b>556</b>
25.1	CR 16A (Lewis Spdwy)	SR 16 to Varella Ave.	1.51%	0.85%	3	3	9	5
25.2	CR 16A (Lewis Spdwy)	Varella Ave. to Woodlawn Rd.	2.74%	1.91%	5	7	16	11
26	CR 16A (Lewis Spdwy)	Woodlawn Rd. to SR 5 (US 1)	8.11%	9.08%	14	34	49	50
74.2	International Golf Pkwy.	Parkland Trail/Center Place Way to St. Marks Pond Blvd.	6.03%	9.59%	14	36	49	53
74.3	International Golf Pkwy.	St. Marks Pond Blvd. To SR 5 (US 1)	8.09%	9.55%	14	36	48	53
122	SR 5 (US 1)	St. Aug. Limits (N) to CR 16A (Lewis Spdwy)	21.75%	28.60%	37	106	131	159
123	SR 5 (US 1)	CR 16A (Lewis Spdwy) to Gun Club Rd.	31.20%	39.77%	54	148	187	221
124	SR 5 (US 1)	Gun Club Rd. to Project Entrance	32.14%	40.89%	55	162	183	227
124	SR 5 (US 1)	Project Entrance to International Golf Pkwy.	62.29%	52.60%	107	196	374	292
125.1	SR 5 (US 1)	International Golf Pkwy. to Alternate CR 210	54.26%	43.02%	93	160	326	239
149	Varella Ave.	SR 16 to Lewis Speedway (CR 16A)	1.23%	1.08%	2	4	7	6
151.1	Woodlawn Rd.	SR 16 to Heritage Park Drive (N)	4.86%	6.56%	8	24	29	36
151.2	Woodlawn Rd.	Heritage Park Dr. (N) to Lewis Speedway (CR 16A)	4.86%	6.56%	8	24	29	36

Shading Indicates Directly Accessed Segment(s)

**Table 5 Notes/References/Justification:**

Distribution extracted from the 2025 data set of NERPM ver 4.2

**EXHIBIT A**

**Table 6**  
**Cordova Palms**  
**Phase 1 PM Peak Hour Roadway Status Calculations**

Segment Number	Roadway	From/To	2016 Peak Hour Committed Traffic (vph)	Residential Peak Hour Project Traffic (vph)	Commercial Peak Hour Project Traffic (vph)	Total Peak Hour Traffic (vph)	Approved Peak Hour Maximum Service Volume (vph)	Project Traffic as a Percentage of the Maximum Service Volume		Within 2 Miles Of Project Boundary	Within 4 Miles Of Project Boundary	Directly Accessed OR Impacted Segment? (Yes or No)	Total P.M. Peak Hour Volume As Percent of Approved Service Volume	Roadway Concurrency Status
								Residential Traffic	Commercial Traffic					
25.2	CR 18A (Lewis Spdwy)	Varilla Ave. to Woodlawn Rd.	686	5	7	698	1,440	0.35%	0.48%	No	Yes	No	48.47%	Not Significant
26.0	CR 18A (Lewis Spdwy)	Woodlawn Rd. to SR 5 (US 1)	1,168	14	34	1,218	1,440	0.97%	2.36%	No	Yes	No	84.24%	Not Significant
74.2	International Golf Pkwy.	Parkland Trail/Center Place Way to St. Marks Pond Blvd.	1,091	14	38	1,141	1,460	0.95%	2.47%	No	Yes	No	78.16%	Not Significant
74.3	International Golf Pkwy.	St. Marks Pond Blvd. to SR 5 (US 1)	1,392	14	38	1,452	1,450	0.96%	2.47%	No	Yes	No	92.69%	Not Significant
122.0	SR 5 (US 1)	St. Aug. Limits (N) to CR 18A (Lewis Spdwy)	2,540	37	706	2,883	4,490	0.82%	2.35%	No	Yes	No	59.76%	Not Significant
123.0	SR 5 (US 1)	CR 18A (Lewis Spdwy) to Gun Club Rd.	2,828	54	148	3,030	4,490	1.20%	3.30%	Yes	Yes	Yes	67.48%	Pass
124.0	SR 5 (US 1)	Gun Club Rd. to Project Entrance	2,794	55	152	2,941	4,310	1.28%	3.53%	Yes	Yes	Yes	68.24%	Pass
124.0	SR 5 (US 1)	Project Entrance to International Golf Pkwy.	2,794	107	186	3,037	4,310	2.48%	4.55%	Yes	Yes	Yes	70.46%	Pass
125.1	SR 5 (US 1)	International Golf Pkwy. to Altonista CR 210	2,912	83	100	3,165	3,550	2.62%	4.51%	No	Yes	Yes	69.15%	Pass
151.1	Woodlawn Rd.	SR 16 to Heritage Park Drive (N)	1,314	8	24	1,346	1,150	0.70%	2.05%	No	Yes	No	117.04%	Not Significant
151.2	Woodlawn Rd.	Heritage Park Dr. (N) to Lewis Speedway (CR 18A)	1,090	8	24	1,122	1,150	0.70%	2.05%	No	Yes	No	97.57%	Not Significant

**Bulldout PM Peak Hour Roadway Status Calculations**

Segment Number	Roadway	From/To	2016 Peak Hour Committed Traffic (vph)	Residential Peak Hour Project Traffic (vph)	Commercial Peak Hour Project Traffic (vph)	Total Peak Hour Traffic (vph)	Approved Peak Hour Maximum Service Volume (vph)	Project Traffic as a Percentage of the Maximum Service Volume		Within 2 Miles Of Project Boundary	Within 4 Miles Of Project Boundary	Directly Accessed OR Impacted Segment? (Yes or No)	Total P.M. Peak Hour Volume As Percent of Approved Service Volume	Roadway Concurrency Status
								Residential Traffic	Commercial Traffic					
25.1	CR 18A (Lewis Spdwy)	SR 16 to Varilla Ave.	844	9	5	858	1,440	0.63%	0.35%	No	Yes	No	59.56%	Not Significant
25.2	CR 18A (Lewis Spdwy)	Varilla Ave. to Woodlawn Rd.	714	16	11	741	1,440	1.11%	0.76%	No	Yes	Yes	51.46%	Pass
26.0	CR 18A (Lewis Spdwy)	Woodlawn Rd. to SR 5 (US 1)	1,231	49	50	1,330	1,440	3.40%	3.47%	No	Yes	Yes	92.36%	Pass Critical
74.2	International Golf Pkwy.	Parkland Trail/Center Place Way to St. Marks Pond Blvd.	1,174	48	53	1,275	1,460	3.25%	3.63%	No	Yes	Yes	87.33%	Pass
74.3	International Golf Pkwy.	St. Marks Pond Blvd. to SR 5 (US 1)	1,451	48	53	1,552	1,460	3.23%	3.63%	No	Yes	Yes	108.90%	Fail
122.0	SR 5 (US 1)	St. Aug. Limits (N) to CR 18A (Lewis Spdwy)	2,642	131	159	2,932	4,490	2.62%	3.54%	No	Yes	Yes	65.90%	Pass
123.0	SR 5 (US 1)	CR 18A (Lewis Spdwy) to Gun Club Rd.	2,843	187	221	3,251	4,490	4.13%	4.92%	Yes	Yes	Yes	74.63%	Pass
124.0	SR 5 (US 1)	Gun Club Rd. to Project Entrance	2,844	188	227	3,259	4,310	4.48%	5.27%	Yes	Yes	Yes	75.78%	Pass
124.0	SR 5 (US 1)	Project Entrance to International Golf Pkwy.	2,844	374	292	3,510	4,310	8.61%	16.07%	Yes	Yes	Yes	101.44%	Pass
125.1	SR 5 (US 1)	International Golf Pkwy. to Altonista CR 210	3,030	328	239	3,595	3,550	9.18%	8.73%	No	Yes	Yes	101.27%	Fail
149.0	Varilla Ave.	SR 16 to Lewis Speedway (CR 18A)	280	7	6	293	1,150	0.61%	0.52%	No	Yes	No	34.17%	Not Significant
151.1	Woodlawn Rd.	SR 16 to Heritage Park Drive (N)	1,430	29	36	1,495	1,150	2.52%	3.13%	No	Yes	Yes	150.05%	Fail
151.2	Woodlawn Rd.	Heritage Park Dr. (N) to Lewis Speedway (CR 18A)	1,229	29	36	1,294	1,150	2.52%	3.13%	No	Yes	Yes	112.52%	Fail

Shading Indicates Directly Accessed Segment(s)

Table 6 Notes/References/Justification:

EXHIBIT A

### **Roadway Needs**

As indicated above, three roadway segments on which Cordova Palms is significant will fail. These are International Golf Parkway between St. Marks Pond Boulevard, Link 125.1 US-1 from International Golf Parkway to CR-210, Link 151.1 Woodlawn Road from SR-16 to Heritage Park Drive and Link 151.2 Woodlawn Road from Heritage Park Drive to Lewis Speedway. Cordova Palms is proposing to mitigate these impacts by building a portion of SR-313 and providing the rights of way for SR-313 between Woodlawn Road and US-1. The segment of SR-313 proposed to be constructed is between the entrances to the residential and commercial portions of Cordova Palms and US-1. This segment will be constructed as a four lane divided facility and includes a right turn lane on US-1 and an at-grade crossing of the FEC Railroad tracks. The value of the mitigation plan is listed in Table 8. Figure 5 depicts the conceptual alignment of SR-313 while Figure 6 illustrates the proposed geometry of the portion of SR-313 to be constructed.

**Table 7  
Cordova Palms  
Buildout Proportionate Fair Share Calculations**

Link ID	Rightway	Terrain	Number of Lanes	Length (mi)	MSV	Project Traffic	Improvement Description	Improved MSV	Increase in MSV	Cost/Mi (Year 2018)	Traffic Signal Cost	2016 Total Const. Cost	19% R/W	60% Exp	2016 Total Cost	% Share	Proportionate 2016
74.3	International Golf Pkwy.	St. Marks Pond Blvd. To SR 5 (US 1)	2	0.81	1,460	101	Widen to 4-Lanes	3,200	1,740	\$ 2,656,932	\$318,876	2,470,791	450,480	1,130,564	4,078,803	5.80%	238,455
125.1	SR 5 (US 1)	International Golf Pkwy. to Alternate CR 210	4	2.39	3,520	563	Widen to 6-Lanes	5,850	1,810	\$ 2,380,634	\$318,876	13,150,817	2,488,617	6,049,284	21,693,518	31.22%	6,774,277
151.1	Woodawn Rd.	CR 18 to Heritage Park Drive (H)	2	1.47	1,150	63	Widen to 6-Lanes	3,200	2,050	\$ 2,380,634	\$318,876	3,618,296	725,476	1,750,416	6,300,188	3.17%	199,719
151.2	Woodawn Rd.	Heritage Park Dr. (H) to Lewis Speedway (CR 18A)	2	0.9	1,150	65	Widen to 6-Lanes	3,200	2,050	\$ 2,380,634	\$318,876	2,461,301	467,847	1,132,188	4,061,146	3.17%	128,738
<b>Total</b>																	<b>\$7,339,488</b>

Table 7 Notes/References/Justification:  
 FDOT lane mile costs, dated 12/27/2016  
 FDOT signalization costs, dated June 2014

**EXHIBIT A**

**Table 8**  
**Cordova Palms**  
**Mitigation Value**

Roadway	Termini	Length (mi)	Improvement Description	Cost/Mile (Year 2015)	Wildlife Crossing Cost	Traffic Signal Cost	Railroad Grade Crossing	2018 Total Const. Cost	19% R/W	46% Eng	2015 Total Improvement Cost	Concurrency Mitigation Value
SR 313	US-1 to N-S Spine Road	0.30	New 4 Lanes	\$4,060,788		\$318,678	\$750,000	\$2,286,912	\$434,513	\$1,251,856	\$3,973,281	\$3,973,281
SR 313	N-S Spine Road to Big Oak Rd	1.85	New 2 Lanes	\$2,044,323	\$225,760			\$4,007,748	\$1,470,259	\$4,235,893	\$9,713,899	\$1,470,259
SR 313	Big Oak Rd to Woodlawn Road	2.20	New 2 Lanes	\$2,044,323	\$225,750			\$4,723,261	\$1,740,301	\$5,013,889	\$11,477,451	\$1,740,301
Value of additional 50' of Right of Way (200' to 250')												\$1,148,400
Value of additional Right of Way for Interchange and Flyover												\$348,480
<b>Total</b>											<b>\$8,680,720</b>	

Right of way and Engineering Costs for the construction of 2 lanes of a 4-lane section is based on the cost to construct a 4-lane roadway.

FOOT lane Mile costs, dated 8/7/2015

FOOT signalization costs, dated June 2014

FOOT signalization costs, dated June 2014



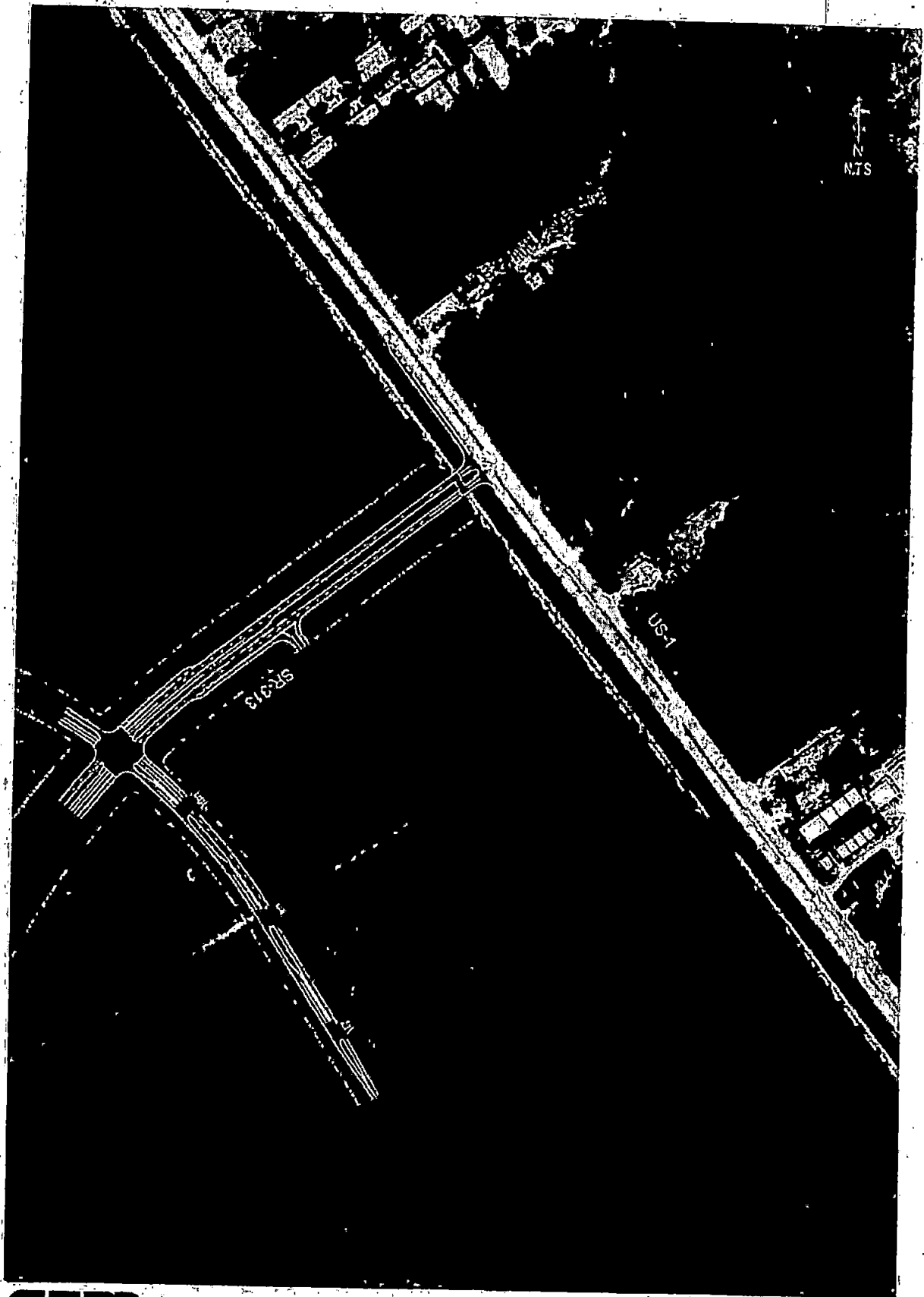
**ETM**  
 VISION • EXPERIENCE • INTEGRITY

Richard, Tuma & Miller, Inc.  
 7475 Old Dixie Highway Road  
 Jacksonville, FL 32212  
 TEL: (904) 221-4270  
 FAX: (904) 444-4445  
 CA: 602754 LC: 000014

SR-313 Alignment

FIGURE 5

**EXHIBIT A**



**ETM**  
 ENGINEERING • SURVEYING • PLANNING

Edward T. Terry & Miller, Inc.  
 1170 Du St. Aqueduct Road  
 Jacksonville, FL 32218  
 TEL: 904/241-2200  
 FAX: 904/241-2201  
 E-MAIL: ETM@ETM.COM

Proposed Improvements

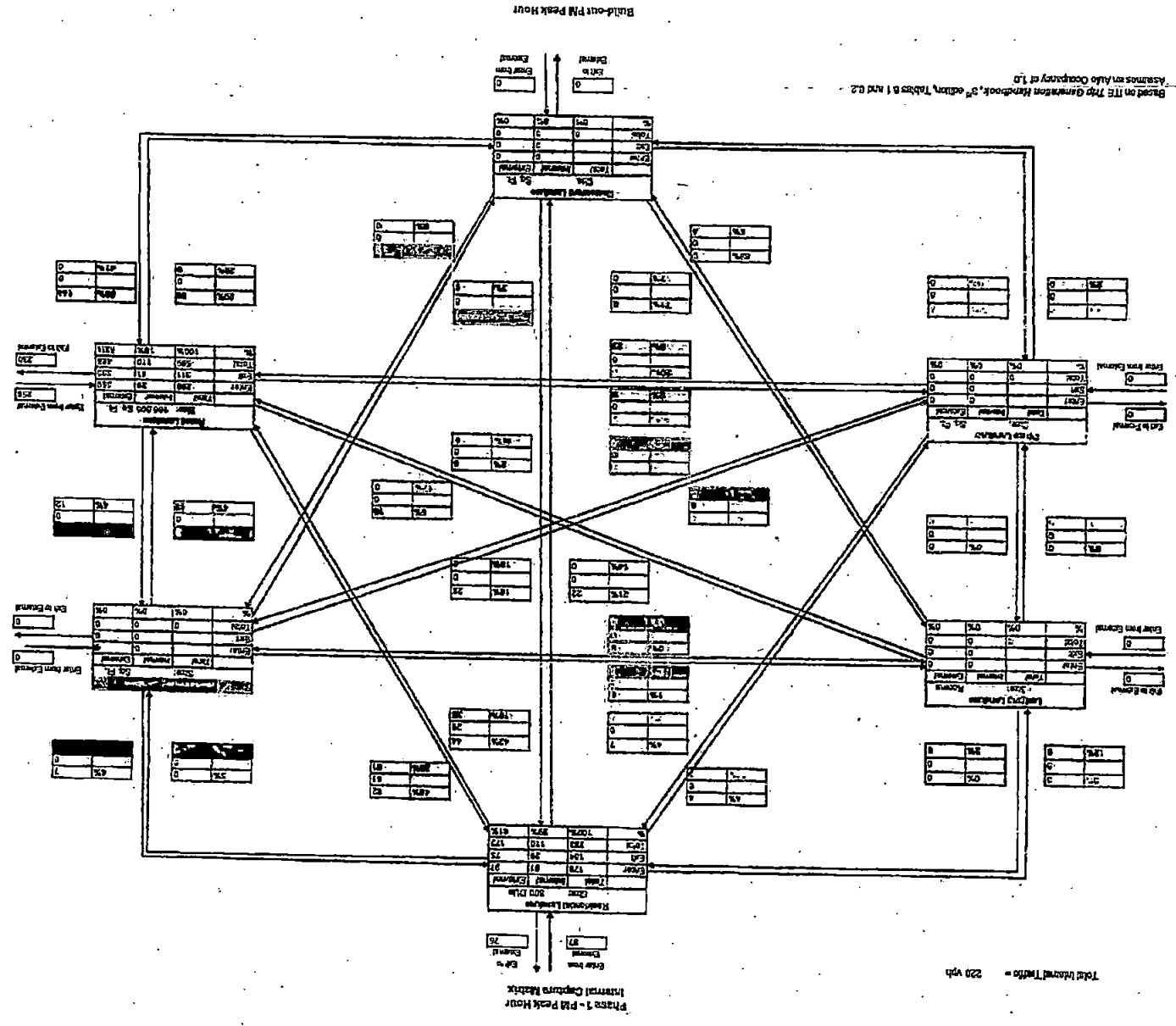
FIGURE 6

**EXHIBIT A**

Appendix A

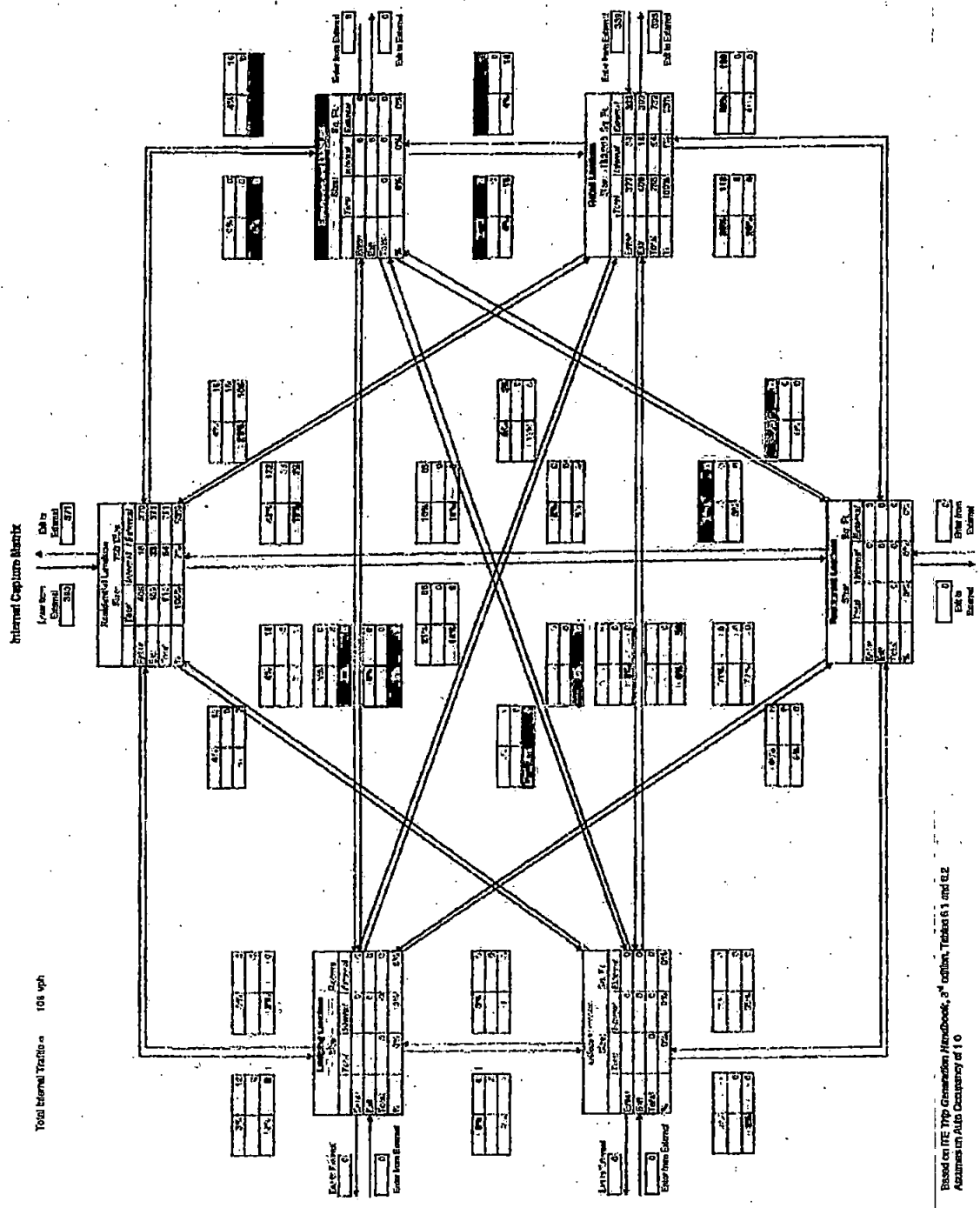
**EXHIBIT A**





Based on ITC The Generator Handbook, 2<sup>nd</sup> edition, Tables B1 and C2. Asstons on Aile Company of ITC

Total Demand Matrix = 220 yhp



Total Internal Traffic = 108 vph

Internal Captions Matrix

Based on ITE Trip Generation Handbook, 3rd Edition, Tables 1 and 6.2  
Assumes an Auto Occupancy of 1.0

# MAP SHOWING BOUNDARY SURVEY OF A PORTION OF SECTION 15 AND A PORTION OF SECTION 50 OF THE PABLO SABATE GRANT, TOWNSHIP 6 SOUTH, RANGE 29 EAST, ST. JOHNS COUNTY, FLORIDA, ALSO BEING A PORTION OF THOSE LANDS DESCRIBED AND RECORDED IN OFFICIAL RECORDS BOOK 3012, PAGE 1645, OF THE PUBLIC RECORDS OF SAID COUNTY.

**SURVEYOR'S DESCRIPTION:**

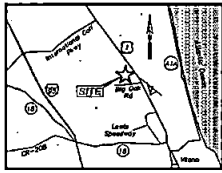
**PARCEL 6:**

A portion of Section 15 and a portion of Section 30 of the Pablo Sabate Grant, Township 6 South, Range 29 East, St. Johns County, Florida, one being a portion of those lands described and recorded in Official Records Book 3012, page 1645, of the Public Records of said county, being more particularly described as follows:

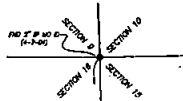
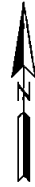
For a Point of Reference, commence at the Southwest corner of said Section 15, thence North 83°47'16" East, along the Southern line of said Section 15, a distance of 1350.10 feet to the Point of Beginning.

From said Point of Beginning, thence North 08°41'11" East, departing said Southern line of Section 15, a distance of 397.82 feet to the point of curvature of a curve commencing Southwesterly having a radius of 4224.00 feet; thence Northwesterly along the arc of said curve, through a central angle of 34°29'05", on an arc length of 2248.27 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of North 37°18'44" East, 2308.48 feet; thence North 40°31'16" East, 1428.04 feet to a point lying on the Southwesterly right of way line of the Florida East Coast Railroad, a 100 foot right of way as generally established; thence South 37°52'52" East, along said Southwesterly right of way line, 308.22 feet to its intersection with the Northwesterly prolongation of the westerly line of Parcel 3 as described and recorded in Official Records Book 4308, page 1874, of said Public Records; thence South 40°31'16" West, departing said Southwesterly right of way line, along said Northwesterly prolongation and along said Westerly line, 1354.65 feet to the point of curvature of a curve commencing Southwesterly having a radius of 4424.00 feet; thence Southwesterly along the arc of said curve, through a central angle of 34°29'05", on an arc length of 2258.77 feet to the point of tangency of said curve, said arc being subtended by a chord bearing and distance of South 27°19'44" West, 2026.81 feet; thence South 08°41'11" West, continuing along said Westerly line, 364.83 feet to the Southwest corner of said Parcel 6, thence along said Southern line, 301.81 feet to the Point of Beginning.

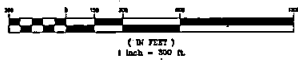
Containing 31.24 acres, more or less.



VICINITY MAP  
(NOT TO SCALE)



GRAPHIC SCALE

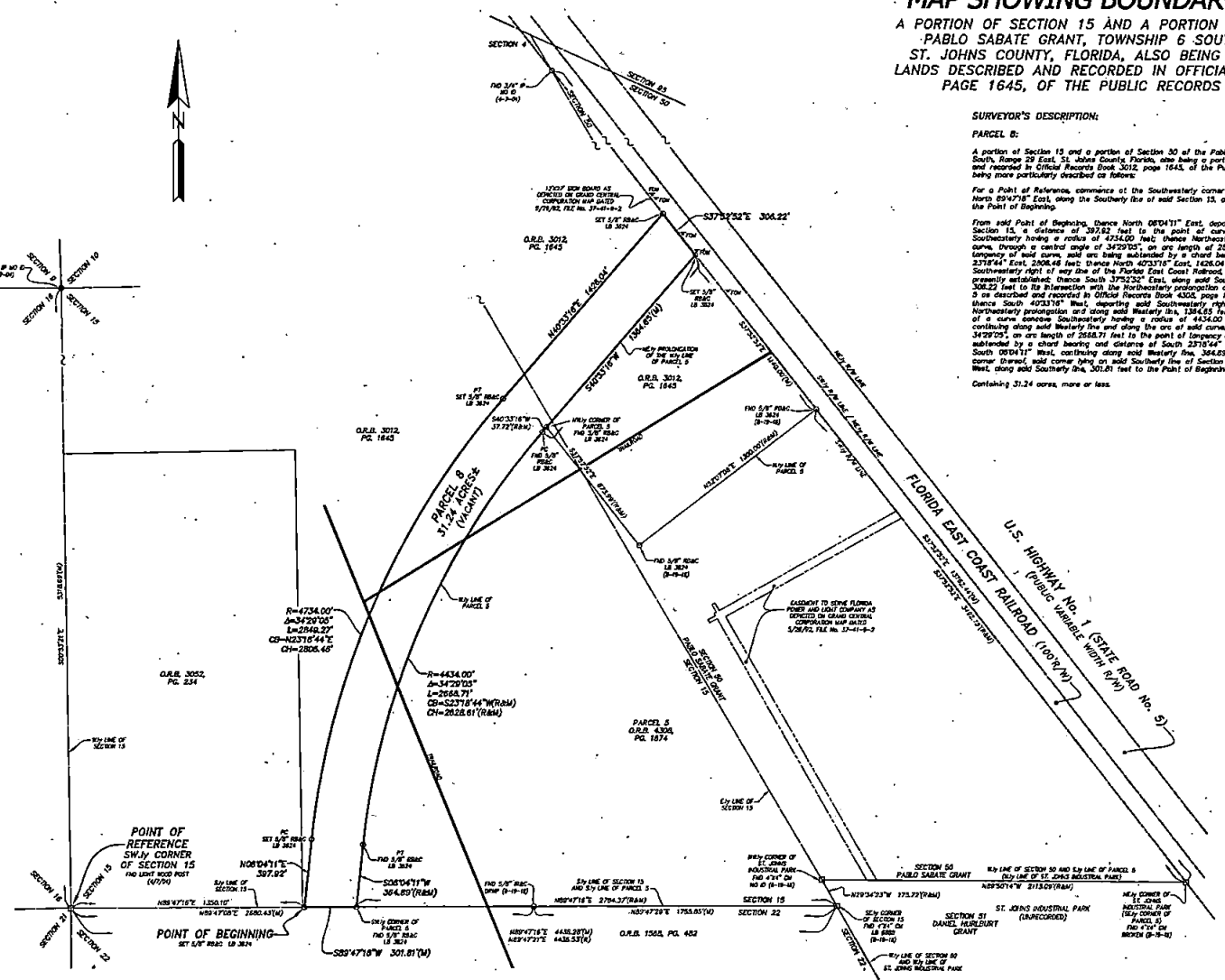


**LEGEND:**

- O.R.A. OFFICIAL RECORDS BOOK
- P.A.C. PLAT
- D.R. DATA OF RECORD
- F.M.D. FIELD MEASURED DATA
- D. DISTANCE
- L. LEGNED BOUNDARY
- F.M.D. FIELD MEASURED DATA
- C.M. CONCRETE MONUMENT
- R.S. REBAR
- R.S. REBAR AND CAP
- R.S. REBAR AND CAP
- R.S. REBAR AND CAP
- P.C. POINT OF CURVATURE
- P.C. POINT OF CURVATURE
- P.C. POINT OF CURVATURE
- R. RADIUS
- L. ARC LENGTH
- C.D. CHORD DISTANCE
- F.O.N. FIELD OF NUMBER

**GENERAL NOTES:**

- 1) BEARINGS BASED ON THE WESTERLY LINE OF SECTION 15 AS BEING SOUTH 08°41'11" EAST; RECORD BEARINGS DEPICTED HEREON ARE REFLECTIVE OF ADJUSTMENT OF DATA TO STATE PLATE COORDINATES AND ARE NOT TRANSCRIBED HEREON FROM DEEDS OF RECORD.
- 2) SECTION AND/OR LOT LINES DEPICTED HEREON ARE GRAPHIC REPRESENTATIONS ONLY UNLESS OTHERWISE NOTED.
- 3) LOCATION OF IMPROVEMENTS LIMITED TO ABOVE CIRCLED WHERE EVIDENT AS BOUNDARY INDICATOR ONLY; UNRECORDED IMPROVEMENTS NOT LOCATED, EXCEPT AS INDICATED BY ABOVE CIRCLED FEATURES; THEREOF AT THE INDICATED INTERIOR IMPROVEMENTS NOT LOCATED OR SHOWN.
- 4) TOWNSHIPS DEPICTED HEREON FIELD LOCATED AT PERIMETER ONLY; INTERIOR SECTION OF TOWNSHIPS NOT SHOWN.
- 5) CERTAIN BOUNDARY INFORMATION DEPICTED HEREON FROM PREVIOUS SURVEYS BY ROBERT M. ANDERSON ASSOCIATES, INC. FILE NO. 1772-75, DATED APRIL 7, 2004, LAST REVISED MAY 23, 2005, AND FILE NO. 1729-76, DATED AUGUST 18, 2005, LAST REVISED NOVEMBER 22, 2016.
- 6) SURVEY PERFORMED WITHOUT BENEFIT OF COMMITMENT FOR TITLE, AND MAY BE SUBJECT TO RESTRICTIONS, RESERVATIONS, EASEMENTS AND RIGHTS OF WAY OF RECORD AND/OR NON-RECORD THAT DO NOT APPEAR HEREON.



**PRIMA**  
ROBERT M. ANDERSON ASSOCIATES, INC.  
SURVEYORS & PLANNERS • TAMPA, FLORIDA  
14775 DE ST. AUGUSTINE PLACE, TAMPA, FL 33626  
TEL: (813) 842-1000 FAX: (813) 842-1163  
CORPORATE AUTHORIZATION FILE NO. 3624  
68929@primap.com

SCALE: 1"=300'  
DATE: OCTOBER 27, 2017  
PROFESSIONAL SURVEYOR AND MAPPER  
STATE OF FLORIDA, LICENSE NO. 8254  
68929@primap.com

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

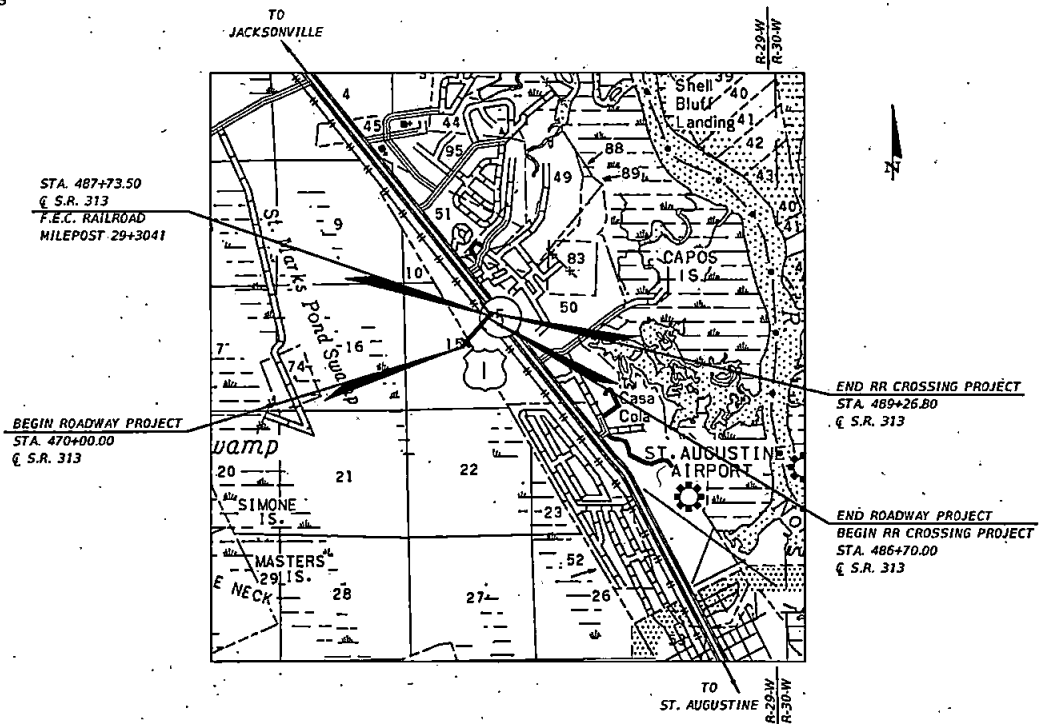
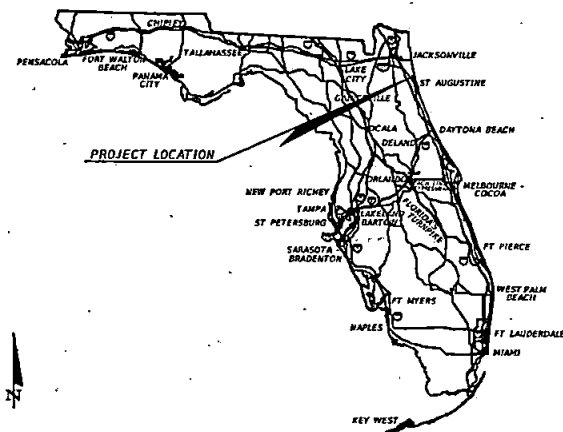
# FDG CORDOVA PALMS, LLC

ST. JOHNS COUNTY

STATE ROAD NO. 313

## INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	TYPICAL SECTION
3 - 13	ROADWAY PLAN & PROFILE SHEETS



PLANS PREPARED BY:  
 ENGLAND-THIMS & MILLER, INC.  
 14775 OLD ST. AUGUSTINE ROAD  
 JACKSONVILLE, FLORIDA 32258  
 TEL: (904) 642-8990  
 CA-00002584, LC-0000316



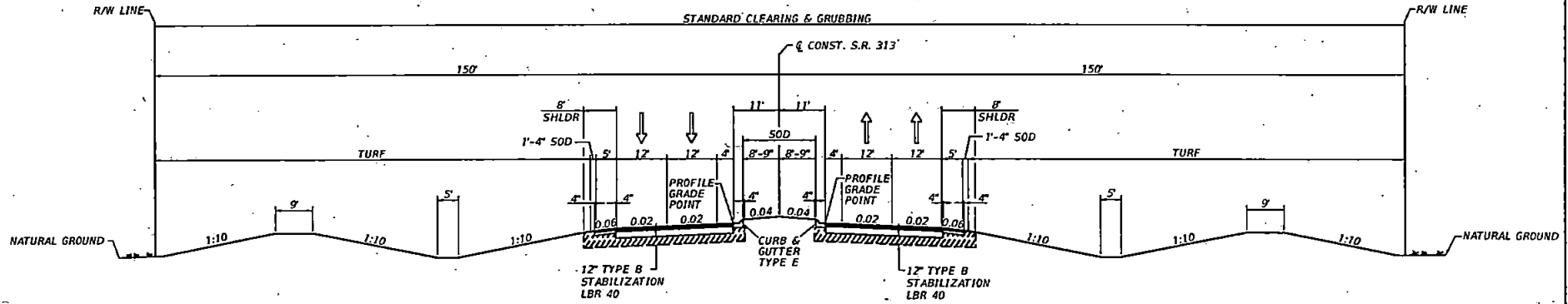
## REFERENCED DESIGN STANDARDS

560	RAILROAD CROSSING
17881	ADVANCE WARNING FOR R/R CROSSING
17882	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES

## CONCEPT PLANS

## EXHIBIT C

SHEET NO.
1



SUBURBAN TYPICAL SECTION  
 SR 313 (CORDOVA PALMS)  
 STA. 470+00.00 TO STA. 489+09.74

**MAINLINE**  
 10" LIMEROCK BASE COURSE LBR 100/98% MAXIMUM DENSITY  
 PER AASHTO T-180

2" 12.5 S.P. OVERLAYED WITH 1½" 9.5 S.P.


STRUCTURAL NUMBER = 4.30

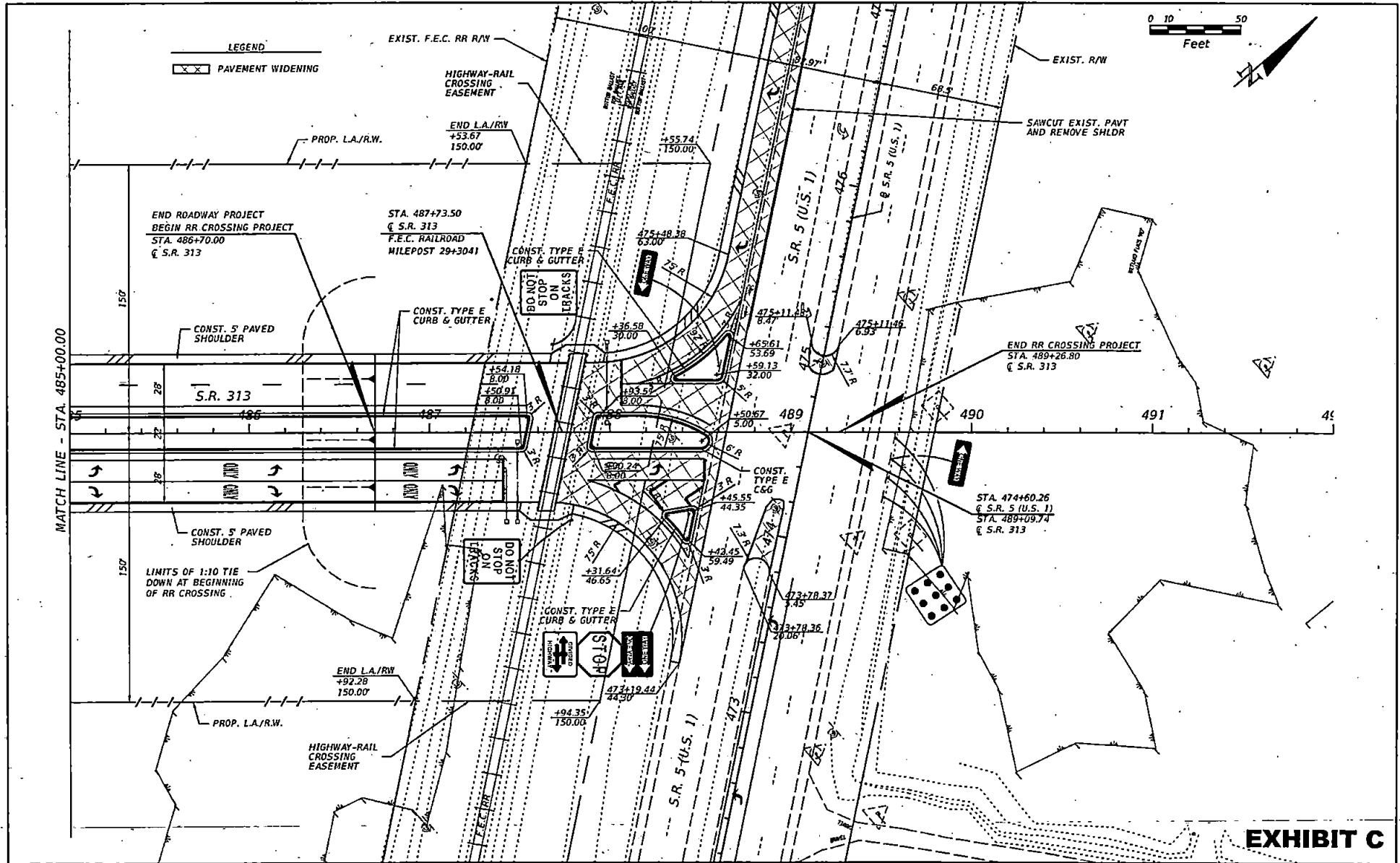
**SHOULDER**  
 4" LIMEROCK BASE COURSE LBR 100/98% MAXIMUM DENSITY  
 PER AASHTO T-180

1½" 9.5 S.P.

DESIGN SPEED = 55 MPH

**EXHIBIT C**

REVISIONS		REVISIONS		 <small>Engineering &amp; Technical Management, Inc.          1475 East 11th Street          Jacksonville, FL 32218          TEL: (904) 644-0000          FAX: (904) 644-0021          CA - 00000004 - 00000015</small>	<b>FDG CORDOVA PALMS, LLC</b>			<b>CORDOVA PALMS          S.R. 313          ROADWAY PLANS</b>	SHEET NO.  2
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	ETM PROJECT NO.		
					313	ST. JOHNS	14-001-05		



**EXHIBIT C**

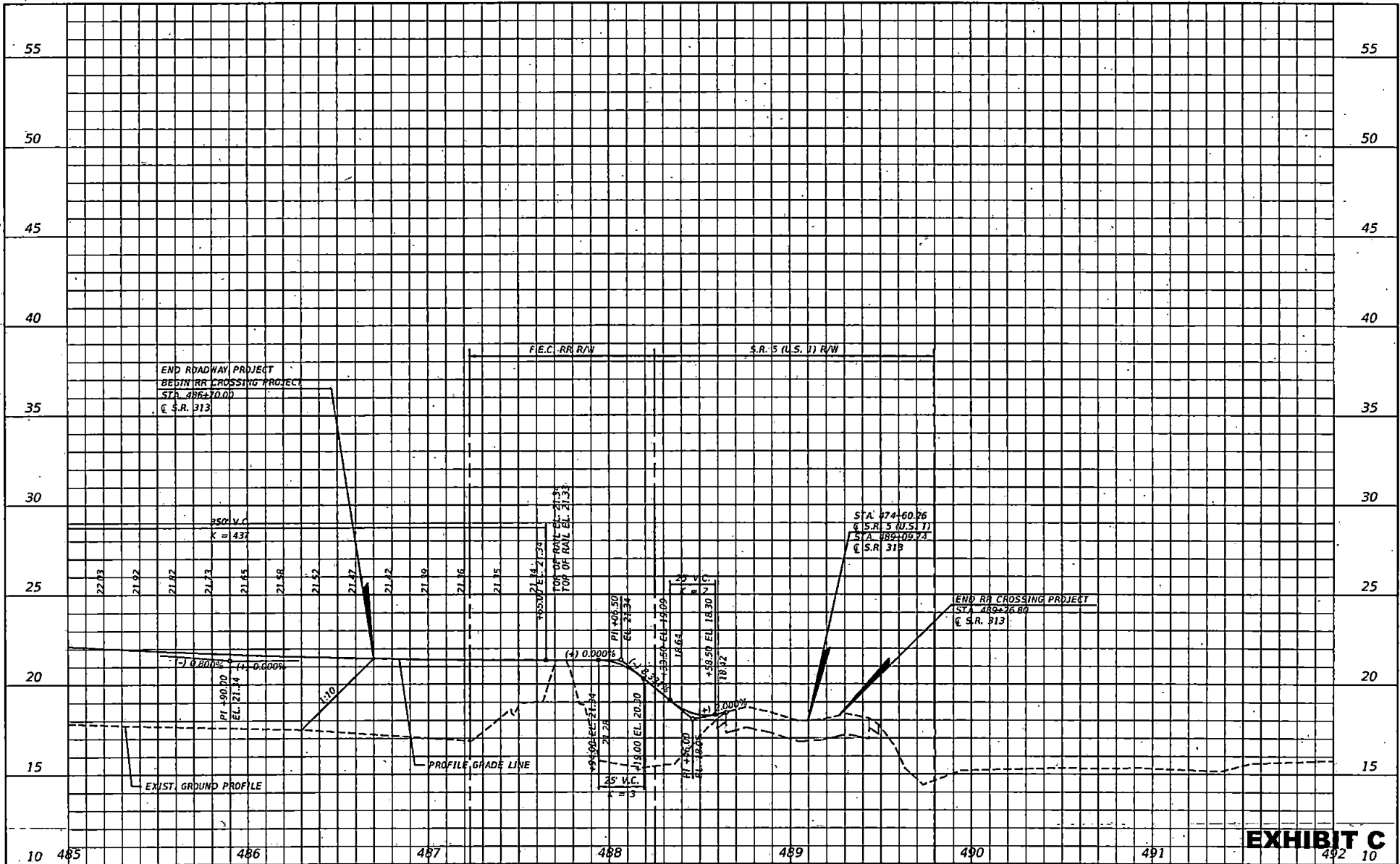
REVISIONS	
DATE	DESCRIPTION

**ETM**  
 Engineering, Technical & Planning  
 14714 Old St. Anthony Road  
 Jacksonville, FL 32218  
 TEL: 904 343-9999  
 FAX: 904 343-9999  
 CA 9000234 LC 000118

FDG CORDOVA PALMS, LLC		
ROAD NO.	COUNTY	ETM PROJECT NO.
313	ST. JOHNS	14-001-05

**CORDOVA PALMS  
 S.R. 313  
 ROADWAY PLANS**

SHEET NO.
9



**EXHIBIT C**

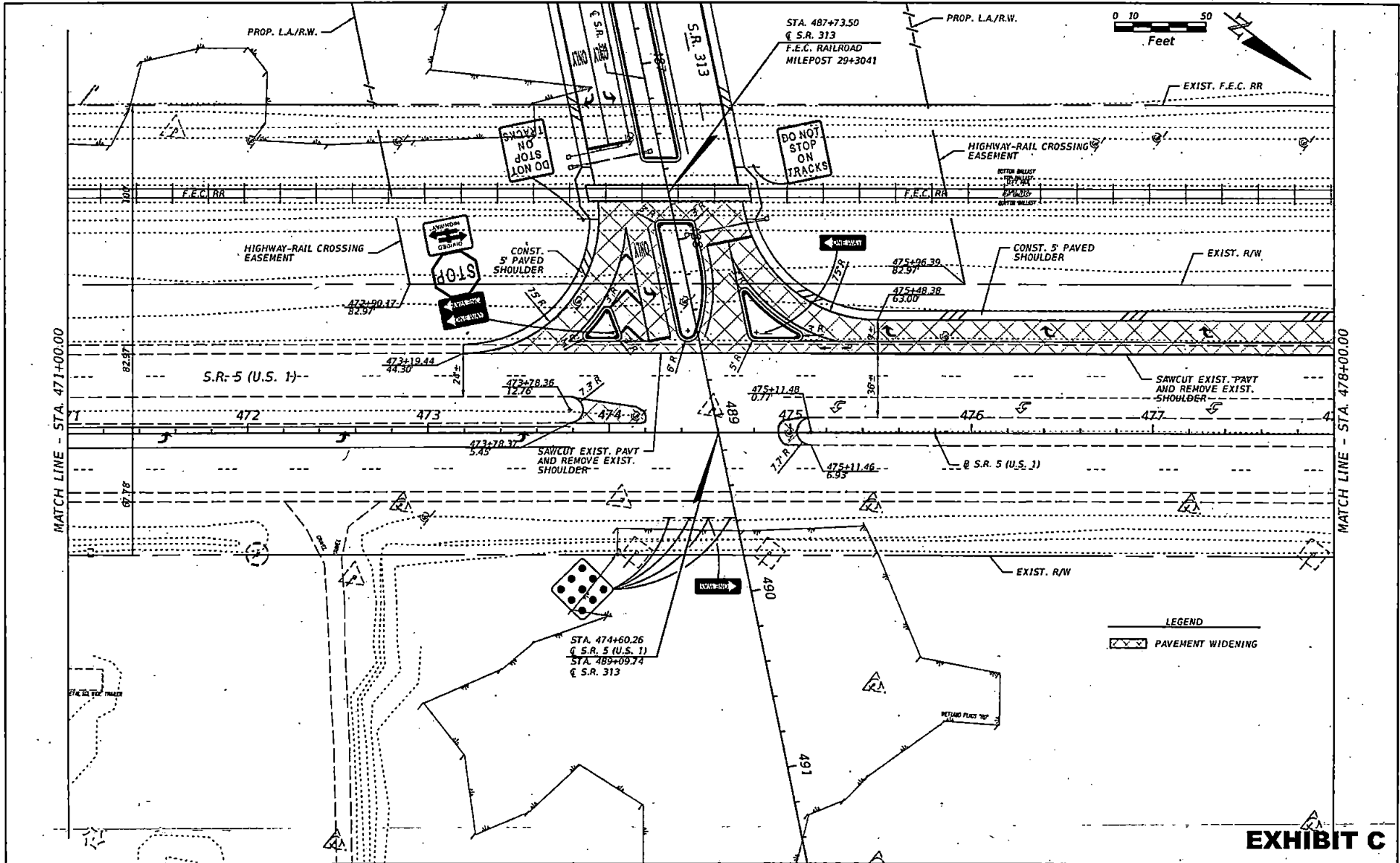
REVISIONS	
DATE	DESCRIPTION




FDG CORDOVA PALMS, LLC		
ROAD NO.	COUNTY	ETM PROJECT NO.
313	ST. JOHNS	14-001-05

CORDOVA PALMS S.R. 313 ROADWAY PROFILE
--

SHEET NO.
10



**EXHIBIT C**

REVISIONS		REVISIONS		 <small>Engineering &amp; Traffic Management, Inc.          1415 S. Orange Ave., Suite 100          Tallahassee, FL 32310          TEL: 904-844-8888          FAX: 904-844-8888          CA-000004 LC-000016</small>	<b>FDG CORDOVA PALMS, LLC</b>		<b>CORDOVA PALMS          S.R. 5 (U.S. 1)          ROADWAY PLANS</b>	<b>SHEET          NO.          12</b>
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY		
					313	ST. JOHNS	14-001-05	



CROSSING SURFACES	
Type	Definition
C	Concrete
R	Rubber
RA	Rubber/Asphalt
TA	Timber/Asphalt

STOP ZONE FOR RUBBER CROSSING	
Design Speed (mph)	Zone Length (Distance From Stop)
45 Or Less	250'
50 - 55	350'
60 - 65	500'
70	600'


Notes:

1. Type R Crossings are NOT to be used for multiple track crossings within zones for an existing or scheduled future vehicular stop. Zone lengths are charted above.
2. Single track Type R Crossings within the zones on the chart may be used unless engineering or safety considerations dictate otherwise.

GENERAL NOTES

1. The Railroad Company will furnish and install all track bed (ballast), crossties, rails, crossing surface panels and accessory components. All pavement material, including that through the crossing, will be furnished and installed by the Department or its Contractor, unless negotiated otherwise.
2. When a railroad grade crossing is located within the limits of a highway construction project, a transition pavement will be maintained at the approaches of the crossing to reduce vehicular impacts to the crossing. The transition pavement will be maintained as appropriate to protect the crossing from low clearance vehicles and vehicular impacts until the construction project is completed and the final highway surface is constructed.
3. The Central Rail Office will maintain a list of currently used Railroad Crossing Products and will periodically distribute the current list to the District Offices as the list is updated.
4. The Railroad Company shall submit engineering drawings for the proposed crossing surface type to the Construction Project Engineer and/or the District Rail Office for concurrence along with the List of Railroad Crossing Products. The approved engineering drawings of the crossing surface type shall be made a part of the installation agreement.
5. Sidewalks shall be constructed through the crossing between approach sidewalks of the crossing. Sidewalks shall be constructed with appropriate material to allow unobstructed travel through the crossing in accordance with ADA requirements.
6. Install pavement in accordance with the Specifications.
7. The Department will participate in crossing work that requires adjustments to rail outside of the crossing, no more than 50 feet from the edge of the travel way.

EXHIBIT C

LAST REVISION 11/01/16	DESCRIPTION:	 FY 2017-18 DESIGN STANDARDS	RAILROAD CROSSING	INDEX NO. 560	SHEET NO. 1 of 2
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CROSSING SURFACES	
Type	Definition
C	Concrete
R	Rubber
RA	Rubber/Asphalt
TA	Timber/Asphalt

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Design Speed (mph)	Zone Length (Distance From Stop)
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7. The Department will participate in crossing work, that requires adjustments to rail outside of the crossing, no more than 50 feet from the edge of the travel way.

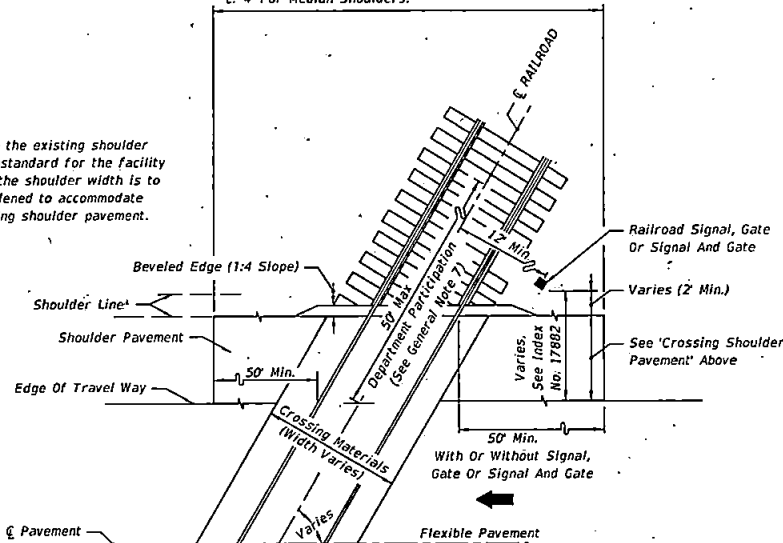
EXHIBIT D

10/18/2016 1:59:52 PM

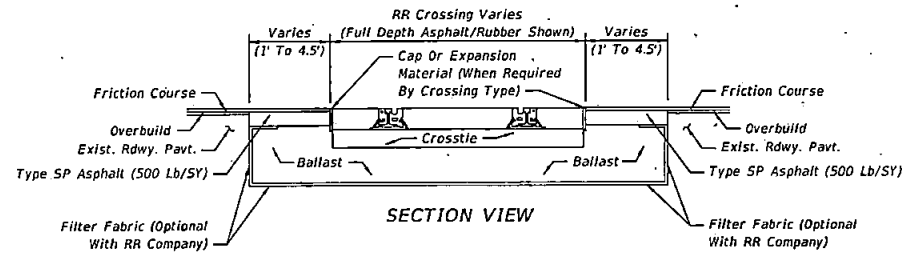
LAST REVISION 11/01/16	REVISION	DESCRIPTION:	 FY. 2017-18 DESIGN STANDARDS	RAILROAD CROSSING	INDEX NO. 560	SHEET NO. 1 of 2
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**Crossing Shoulder Pavement**  
 (Except Area Occupied By Crossing Surfacing Material):  
 a. To Shoulder Line For Outside Shoulders Less Than 8' Wide.  
 b. To 8' Maximum Width For Outside Shoulders 8' Or Wider.  
 (Regardless Of Approach Shoulder Pavement Width).  
 c. 4' For Median Shoulders.

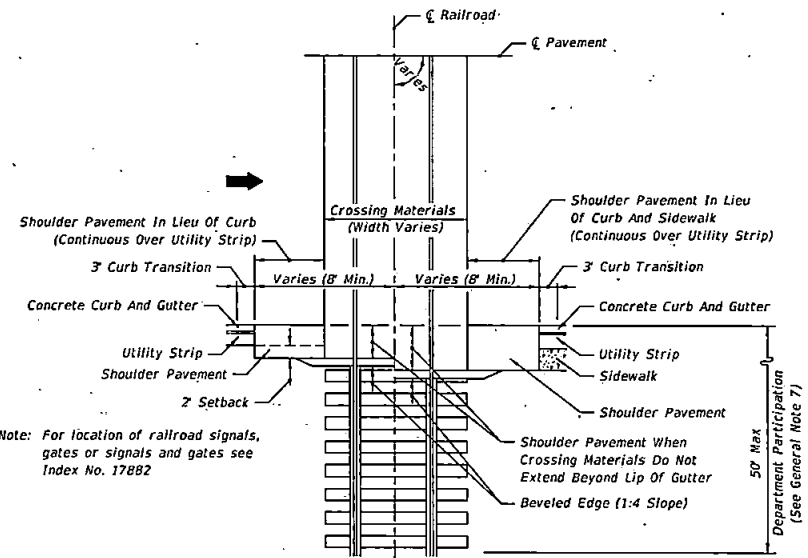
\* Where the existing shoulder is substandard for the facility type, the shoulder width is to be widened to accommodate crossing shoulder pavement.



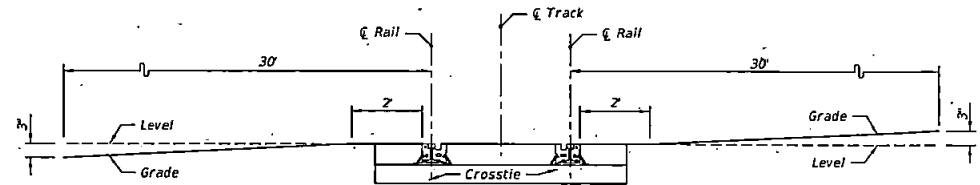
HALF PLAN  
 ROADWAYS WITH FLUSH SHOULDERS



TYPICAL CROSSING MATERIAL REPLACEMENT AT RR CROSSINGS



HALF PLAN  
 CURBED ROADWAYS



To prevent low-clearance vehicles from becoming caught on the tracks, the crossing surface should be at the same plane as the top of the rails for a distance of 2 feet outside the rails. The surface of the highway should also not be more than 3 inches higher or lower than the top of the nearest rail at a point 30 feet from the rail unless track superelevation makes a different level appropriate. Vertical curves should be used to traverse from the highway grade to a level plane at the elevation of the rails. Rails that are superelevated, or a roadway approach section that is not level, will necessitate a site specific analysis for rail clearances.

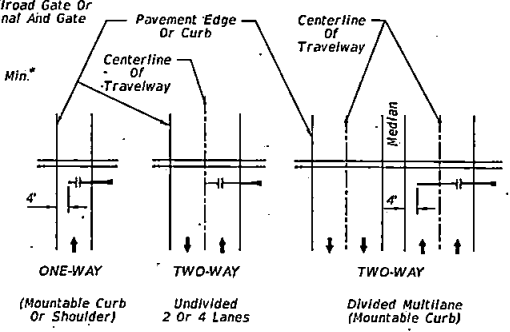
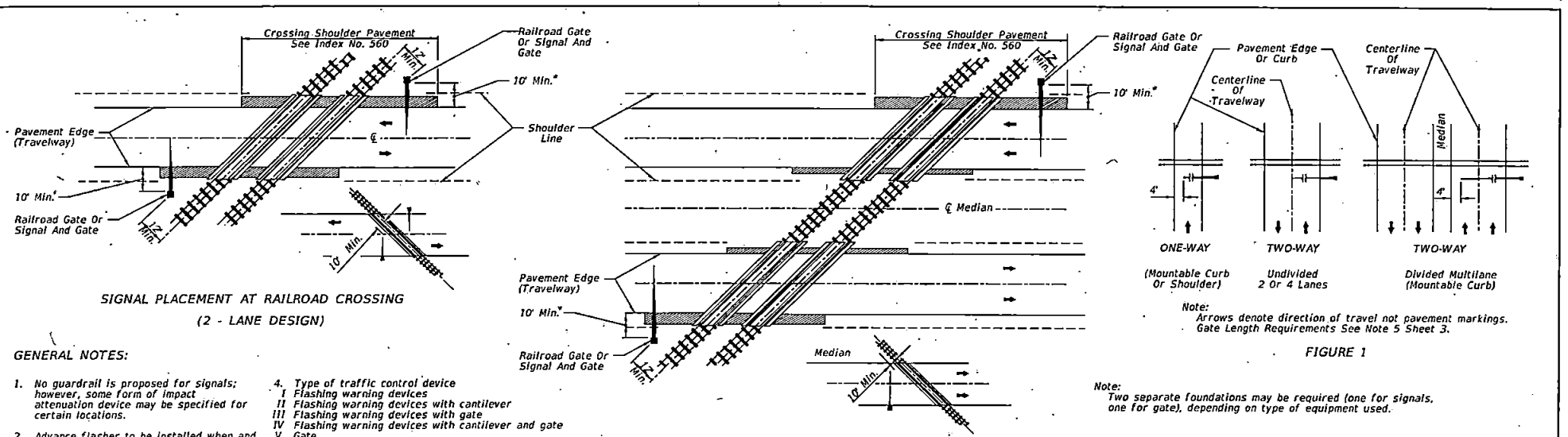
VERTICAL ROADWAY ALIGNMENT THROUGH A RAILROAD CROSSING

EXHIBIT D

10/12/2016 11:08:53 AM

LAST REVISION 01/01/10	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	RAILROAD CROSSING	INDEX NO. 560	SHEET NO. 2 of 2
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11/09/2016 8:22:08 AM



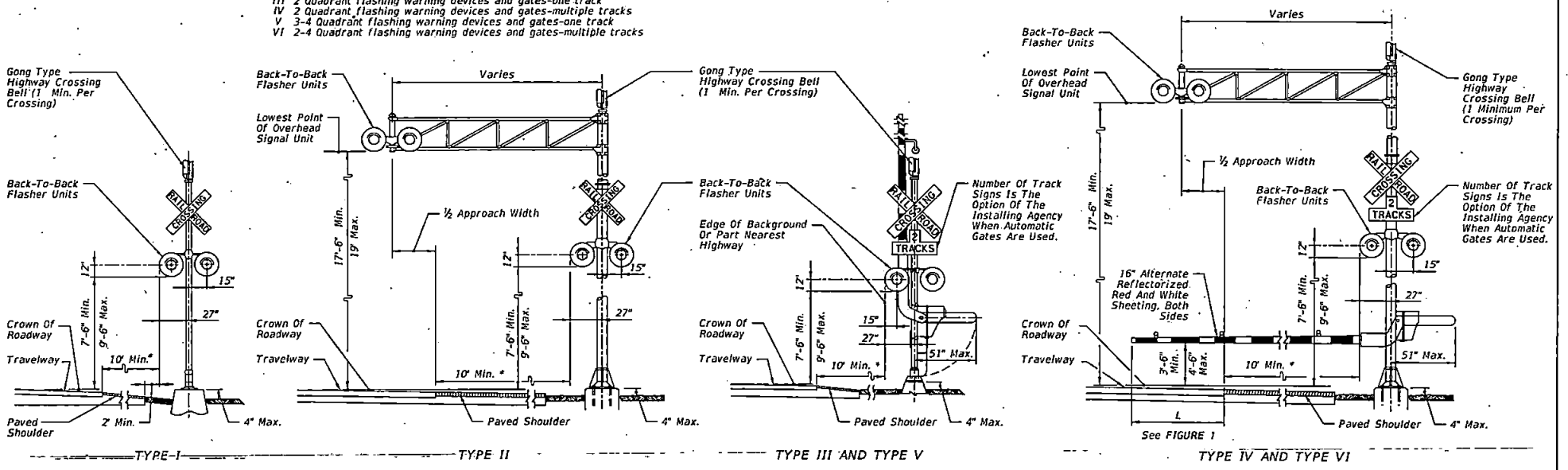
**FIGURE 1**  
Note: Arrows denote direction of travel not pavement markings. Gate Length Requirements See Note 5 Sheet 3.

**GENERAL NOTES:**

- No guardrail is proposed for signals; however, some form of impact attenuation device may be specified for certain locations.
- Advance flasher to be installed when and if called for in plans or specifications.
- Top of foundation shall be no higher than 4" above finished shoulder grade.
- Type of traffic control device
  - I Flashing warning devices
  - II Flashing warning devices with cantilever
  - III Flashing warning devices with gate
  - IV Flashing warning devices with cantilever and gate
  - V Gate
- Class of traffic control devices (Not Shown)
  - 1 2 Quadrant flashing warning devices-one track
  - II 2 Quadrant flashing warning devices-multiple tracks
  - III 2 Quadrant flashing warning devices and gates-one track
  - IV 2 Quadrant flashing warning devices and gates-multiple tracks
  - V 3-4 Quadrant flashing warning devices and gates-one track
  - VI 2-4 Quadrant flashing warning devices and gates-multiple tracks

Note: Two separate foundations may be required (one for signals, one for gate), depending on type of equipment used.

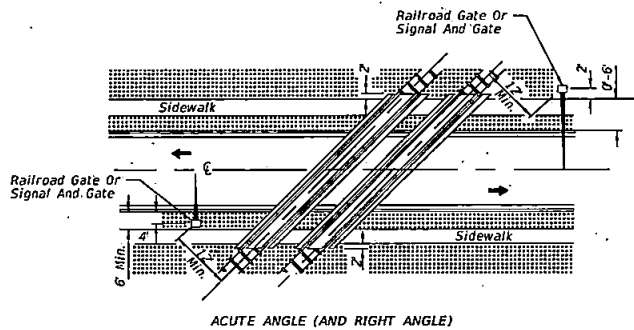
\* When 10' is deemed impracticable the control device can be located as close as 2' from the edge of a paved shoulder, but not less than 6' from the edge of the near traffic lane.



**TRAFFIC CONTROL DEVICES FOR FLUSH SHOULDER ROADWAY**

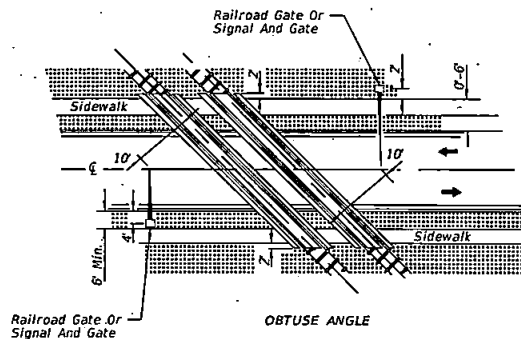
<p>LAST REVISION 11/07/16</p>	<p>DESCRIPTION:</p>	<p>FDOT FY 2017-18 DESIGN STANDARDS</p>	<p>RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES</p>	<p>INDEX NO. 17882</p>	<p>SHEET NO. 1 of 4</p>
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EXHIBIT E



ACUTE ANGLE (AND RIGHT ANGLE)

SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 LANES, CURB & GUTTER)

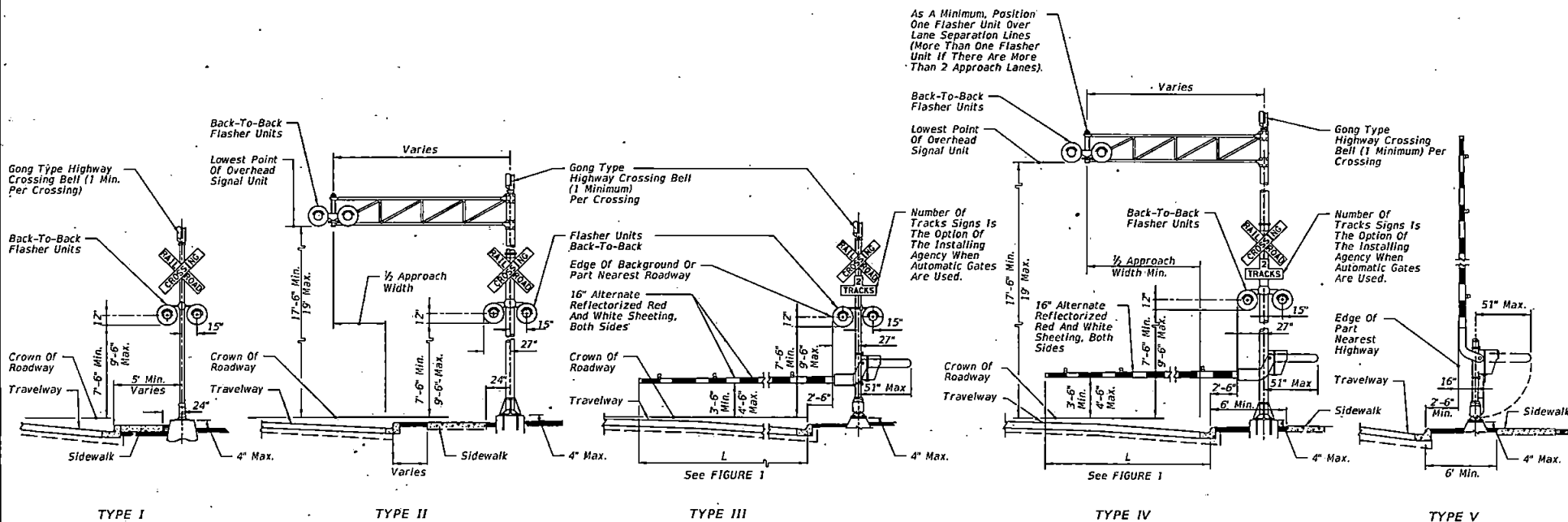


OBTUSE ANGLE

SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 LANES, CURB & GUTTER)

**NOTES:**

1. The location of flashing warning devices and stop lines shall be established based on future (or present) installation of gate with appropriate track clearances.
2. Where plans call for railroad traffic control devices to be installed in curbed medians, the minimum median width shall be 12'-6\".
3. Location of railroad traffic control device is based on the distance available between face of curb & sidewalk. 0' to 6' - Locate device outside sidewalk. Over 6' - Locate device between face of curb and sidewalk.
4. Stop line to be perpendicular to edge of roadway, approx. 15' from nearest rail; or 8' from and parallel to gate when present.
5. When a cantilevered-arm flashing warning device is used, the minimum vertical clearance shall be 17'-6\" from above the Crown of Roadway to the Lowest Point of the Overhead Signal Unit.



TRAFFIC CONTROL DEVICES FOR CURBED ROADWAY

LAST REVISION 11/07/16	DESCRIPTION:	FY 2017-18 DESIGN STANDARDS	<b>RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES</b>	INDEX NO. 17882	SHEET NO. 2 of 4
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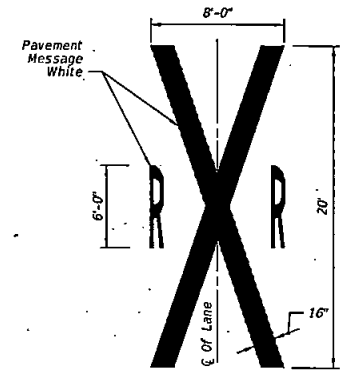
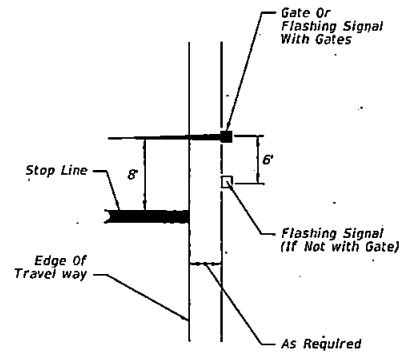
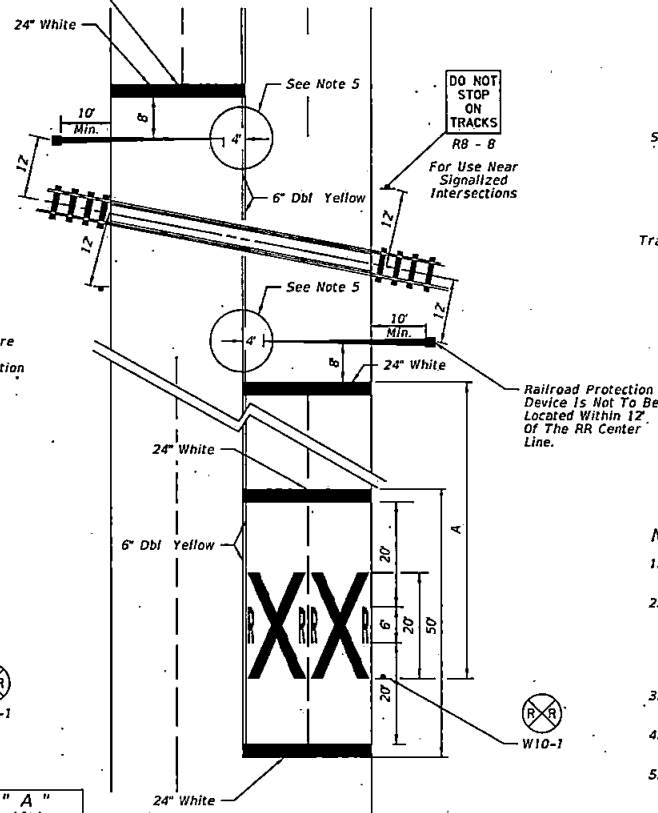
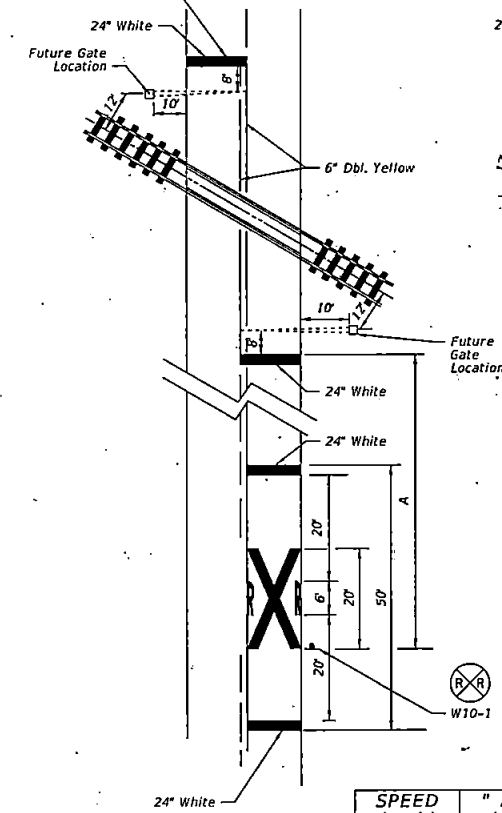
**RAILROAD CROSSING AT TWO (2)-LANE ROADWAY**

**RAILROAD CROSSING AT MULTILANE ROADWAY**

**RELATIVE LOCATION OF CROSSING TRAFFIC CONTROL DEVICES**

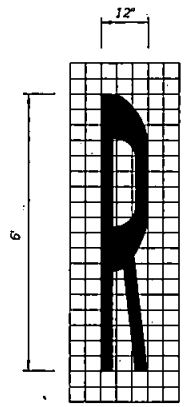
Stop Bar Perpendicular to Edge Of Travel Way Or 8' From & Parallel To Gate When Present.

Stop Bar Perpendicular to Edge Of Travel Way Or 8' From & Parallel To Gate When Present.



**NOTES:**

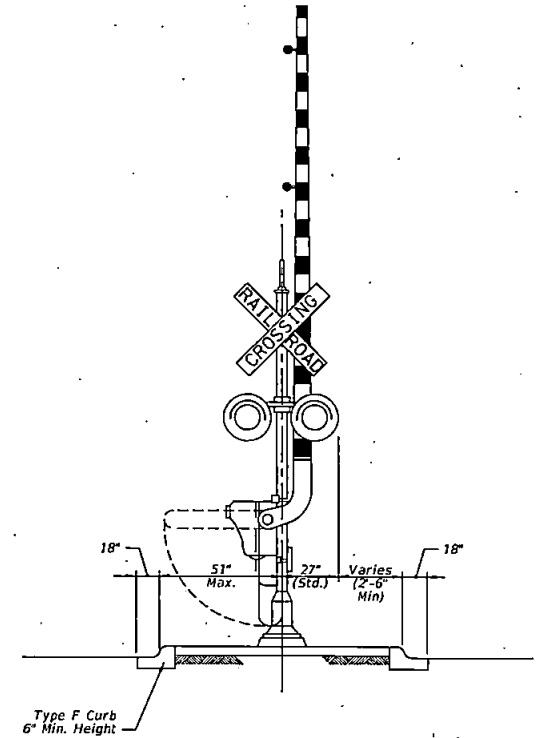
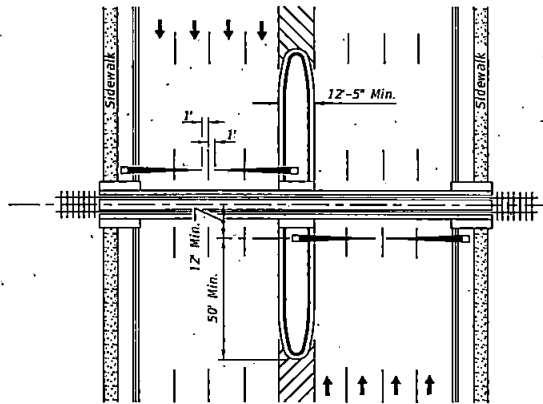
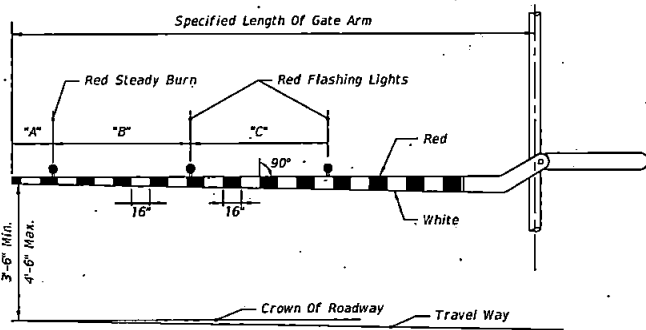
1. When computing pavement message, quantities do not include traverse lines.
2. Placement of sign W10-1 in a residential or business district, where low speeds are prevalent, the W10-1 sign may be placed a minimum distance of 100' from the crossing. Where street intersections occur between the RR pavement message and the tracks an additional W10-1 sign and additional pavement message should be used.
3. A portion of the pavement markings symbol should be directly opposite the W10-1 sign.
4. Recommended location for FTP-61-06 or FTP-62-06 signs, 100' urban and 300' rural. See Index 17355 for sign details.
5. Gate Length Requirements:  
For Two-way undivided sections:  
The gate should extend to within 1' of the center line. On multiple approaches the maximum gate length may not reach to within 1' of the center line. For those cases, the distance from the gate to the center line shall be a maximum of 4'.  
For one-way or divided sections:  
The gate shall be of sufficient length such that the distance from the gate tip to the inside edge of pavement is a maximum of 4'.



SPEED (mph)	" A " (ft)
60	400
55	325
50	250
45	175
40	125
35	100
URBAN	85 MIN.

**EXHIBIT E**

10/14/2016 12:36:12 PM



RAILROAD GATE ARM LIGHT SPACING

Specified Length Of Gate Arm	Dimension "A"	Dimension "B"	Dimension "C"
14 Ft.	6"	36"	5'
15 Ft.	18"	36"	5'
16-17 Ft.	24"	36"	5'
18-19 Ft.	28"	41"	5'
20-23 Ft.	28"	4'	5'
24-28 Ft.	28"	5'	5'
29-31 Ft.	36"	6'	6'
32-34 Ft.	36"	7'	7'
35-37 Ft.	36"	9'	9'
38 And Over	36"	10'	10'

NOTE:  
For additional information see the "Manual On Uniform Traffic Control Devices", Part 8; The "Traffic Control Handbook", Part VIII; and AASHTO "A Policy On Geometric Design Of Streets And Highways".

MEDIAN SECTION AT SIGNAL GATES

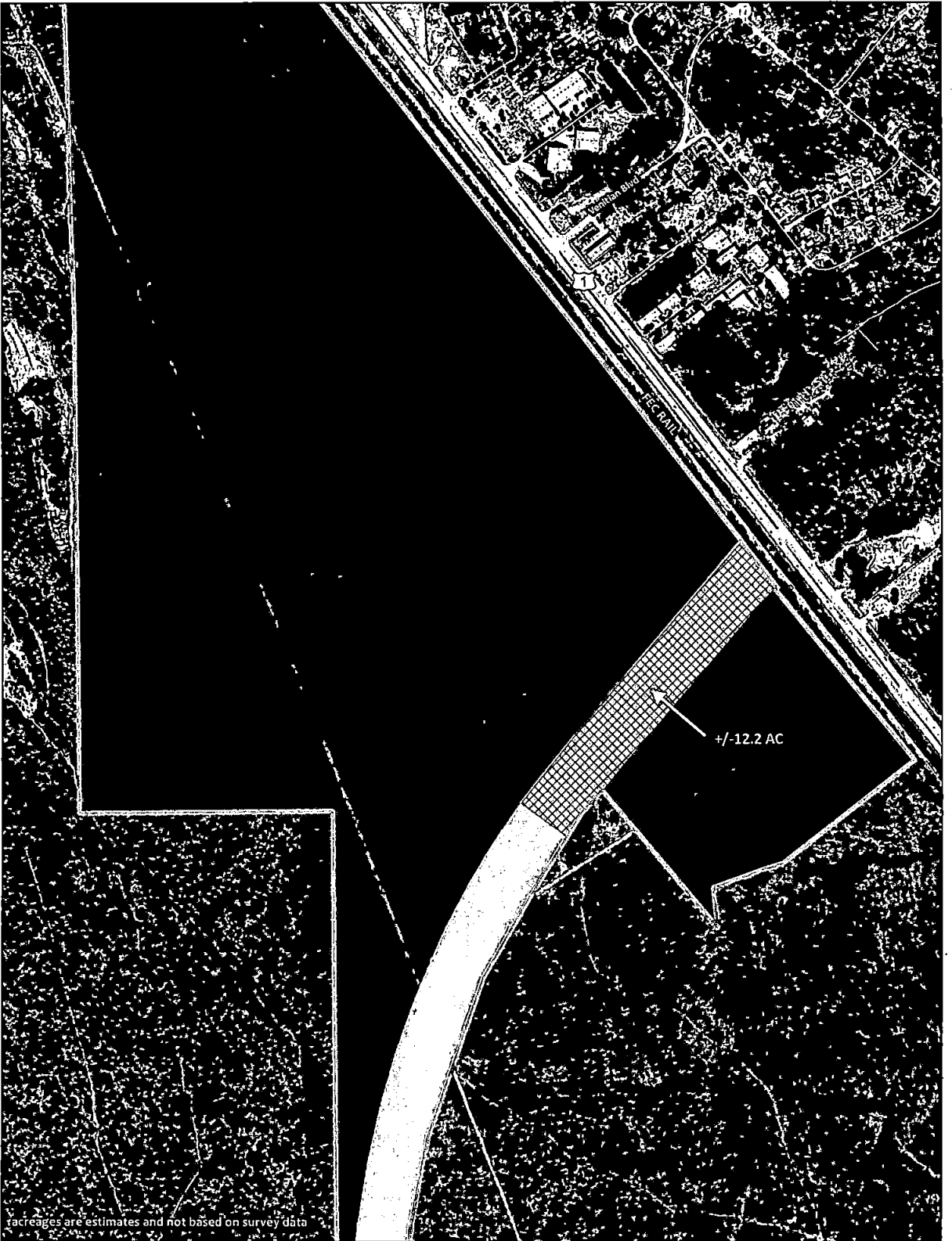
MEDIAN SIGNAL GATES FOR  
MULTILANÉ UNDIVIDED URBAN SECTIONS

(THREE OR MORE DRIVING LANES IN ONE DIRECTION, 45 MPH OR LESS)

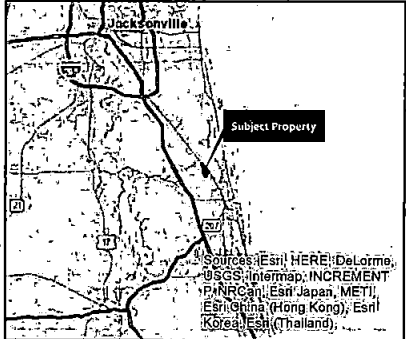
LAST REVISION 01/01/12	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX NO. 17882	SHEET NO. 4 of 4
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EXHIBIT E

10/14/2015 10:58 AM






acreages are estimates and not based on survey data

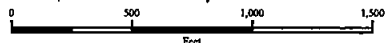


**Cordova Palms**

Source: ETM, St. Johns County

**LEGEND**

-  FDG CORDOVA PALMS
-  SR 313 ROW DEDICATION
-  SR 313 ROW DEDICATION AND DEVELOPER TO CONSTRUCT 4-LANE DIVIDED ROADWAY



**ETM** England-Thom & Miller, Inc.  
 VISION • EXPERIENCE • RESULTS  
 14775 Old St. Augustine Road Jacksonville, FL 32258  
 904-642-0990 • Fax: 904-646-9485 • www.etmnc.com

**EXHIBIT F**