# **APPENDIX A**

# Preferred Alternative Concept Plan Set, Typical Sections, and Preferred Profile Sheets

# STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

# CONTRACT PLANS

FINANCIAL PROJECT ID 437200-2-22-01 OSCEOLA COUNTY (92010000, 92010100)

STATE ROAD NO. 600 (US 17-92) SR 600 (US 17-92) WIDENING FROM IVY MIST LANE TO AVENUE A

END ROADWAY ID: 92010100

# INDEX OF ROADWAY PLANS

SHEET NO. SHEET DESCRIPTION KEY SHEET 2-22 CONCEPT PLANS

END BRIDGE ROADWAY ID: 92010100 MP 0.875 BEGIN BRIDGE ROADWAY ID: 92010100 STA. 1215+59 END ROADWAY ID: 92010000 BEGIN ROADWAY ID: 92010100

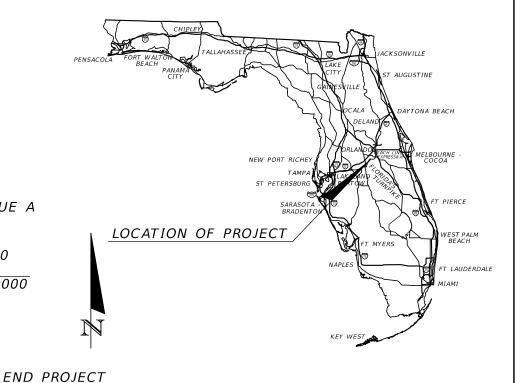
BEGIN PROJECT ROADWAY ID: 92010000 MP 0.299 STA. 1176+53

MP 0.445

MP 0.536

MP 0.000

# MP 1.354 BEGIN ROADWAY ID: 92010000 STA. 1238+64 MP 1.915 \_\_\_\_28 -ROADWAY ID: 92010000 MP 4.132 STA. 1390+08 Creek-



# ROADWAY PLANS ENGINEER OF RECORD:

KEVIN TYLER FREEMAN, P.E. NO.: 76146 VANASSE HANGEN BRUSTLIN, INC. 225 E ROBINSON STREET, SUITE 300 ORLANDO, FL 32801 CERTIFICATE OF AUTHORIATION: 3932

#### FDOT PROJECT MANAGER:

DAVID ANDREW GRAEBER, P.E.

# GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2025-26 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: http://www.fdot.gov/design/standardplans

APPLICABLE IRs: IR\_\_\_-\_\_

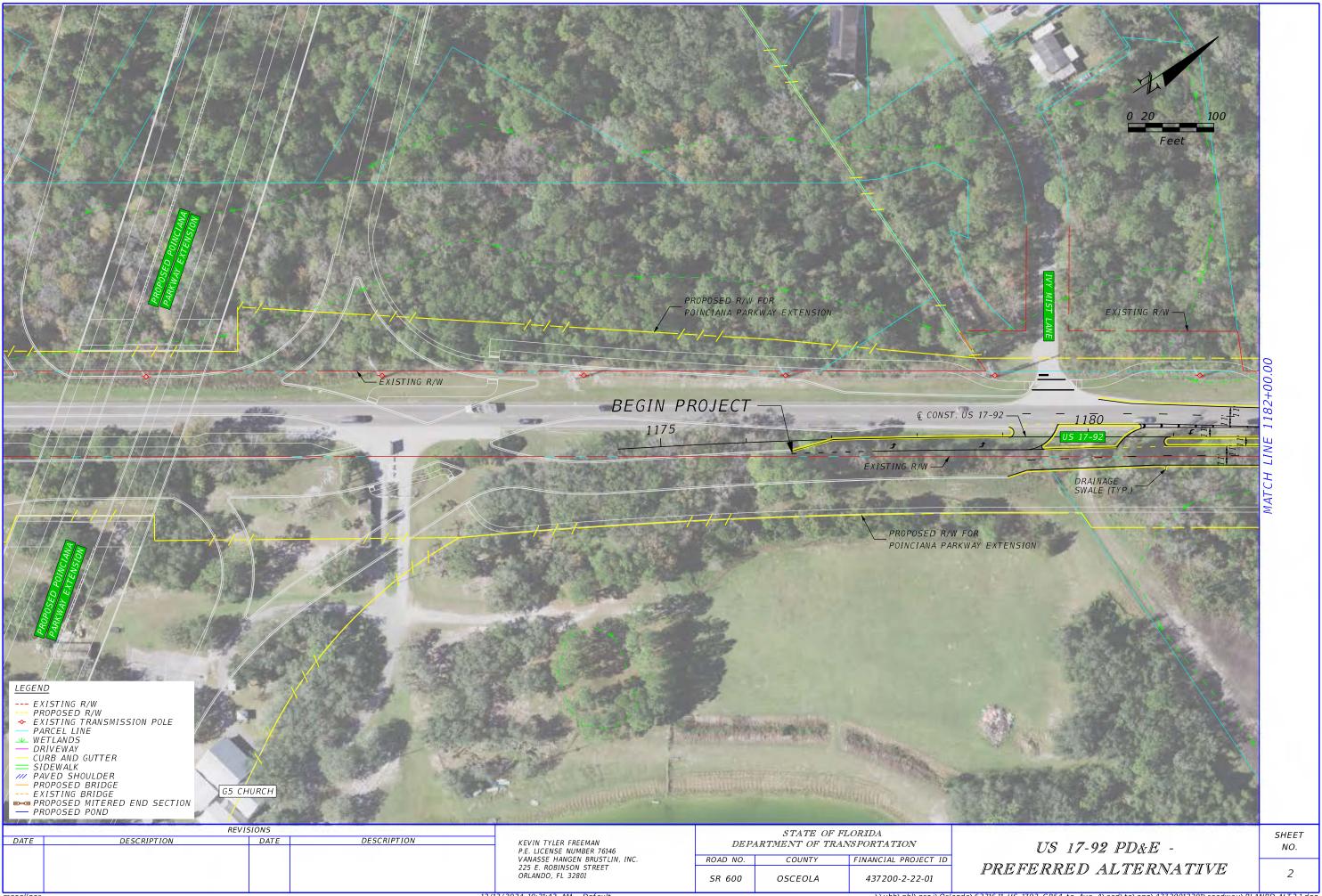
Standard Plans for Bridge Construction are included in the Structures Plans

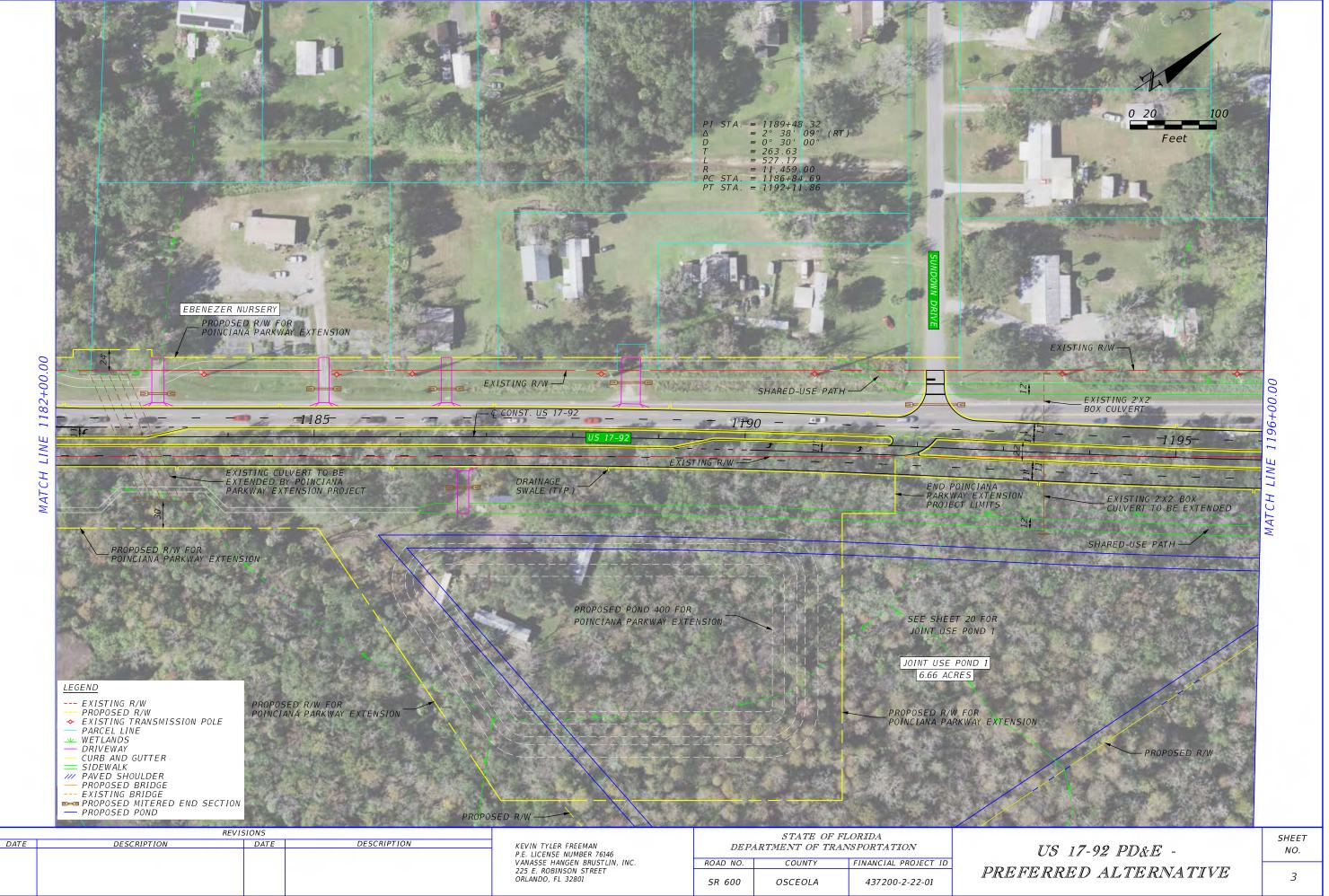
#### GOVERNING STANDARD SPECIFICATIONS:

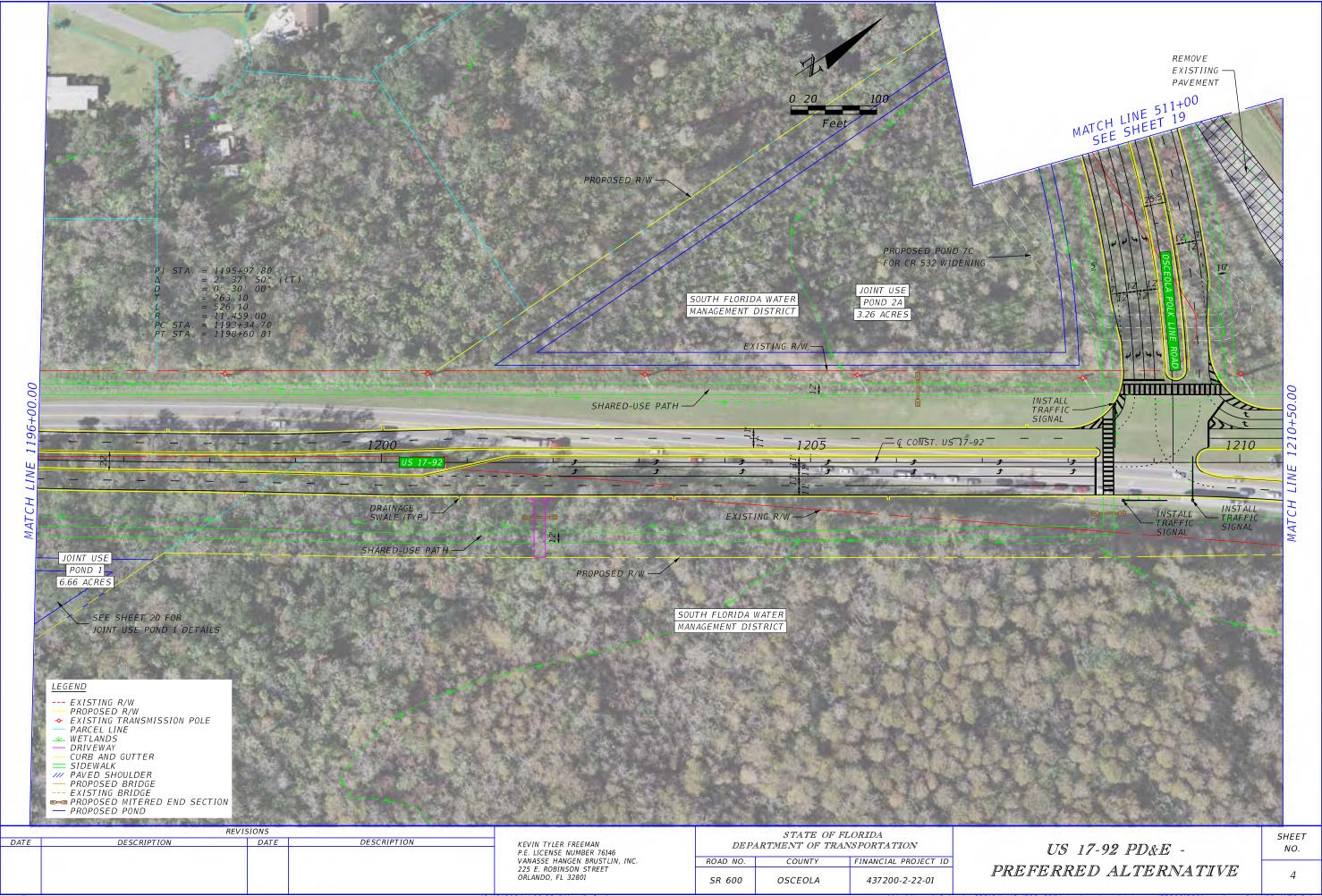
Florida Department of Transportation, July 2025 Standard Specifications for Road and Bridge Construction at the following website: http://www.fdot.gov/programmanagement/Implemented/SpecBooks

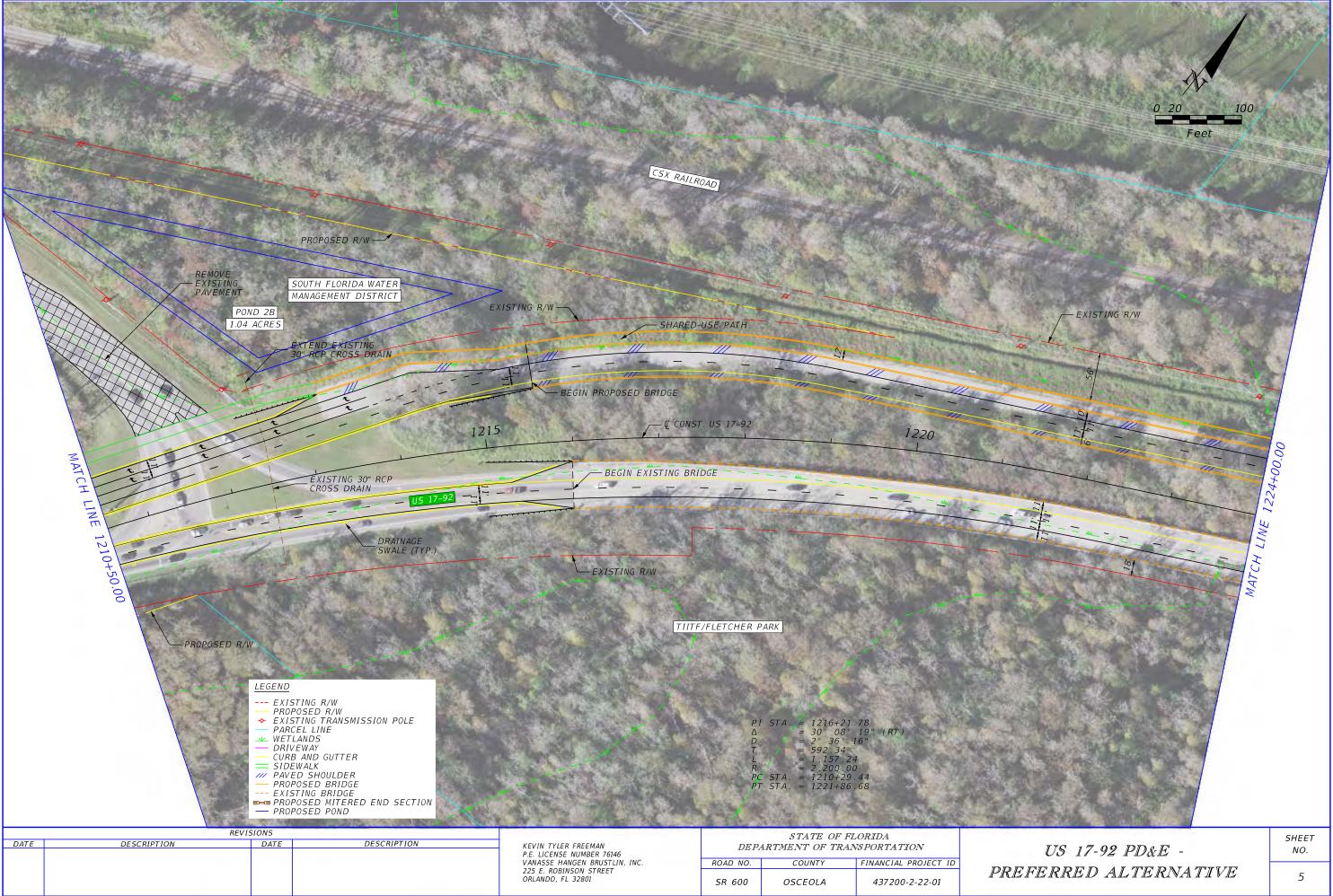
SHEET

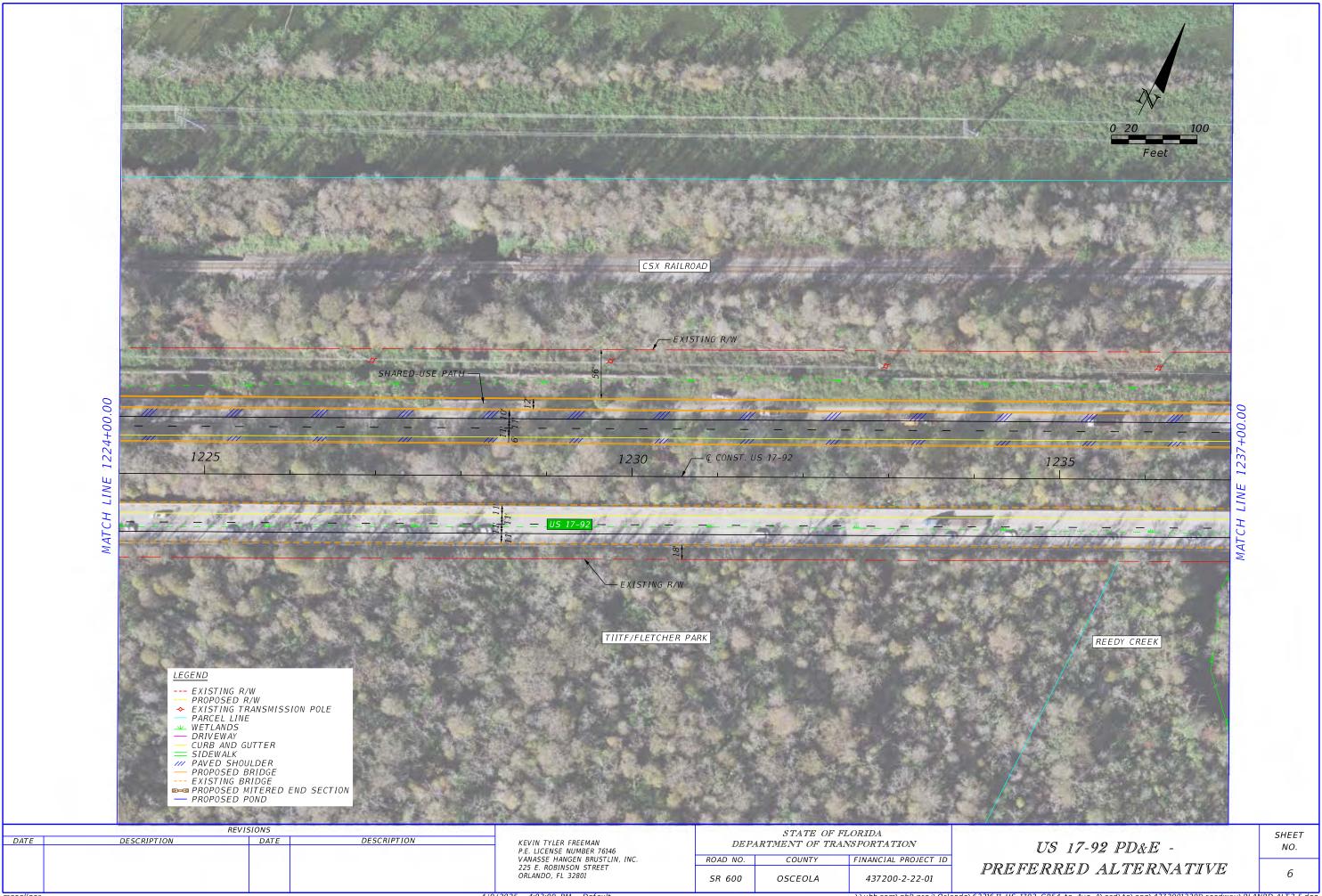
12/12/2024 1:04:19 PM

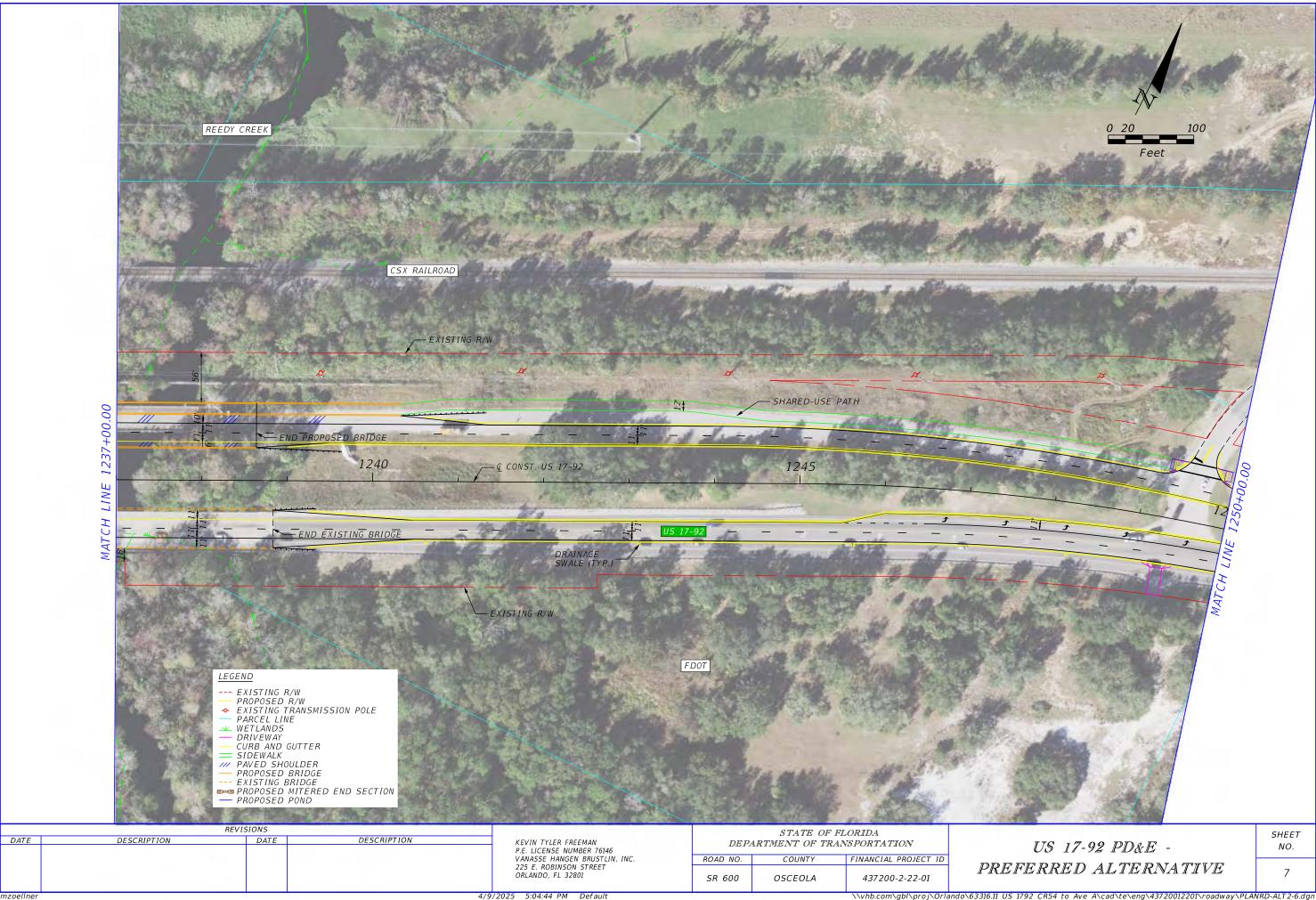


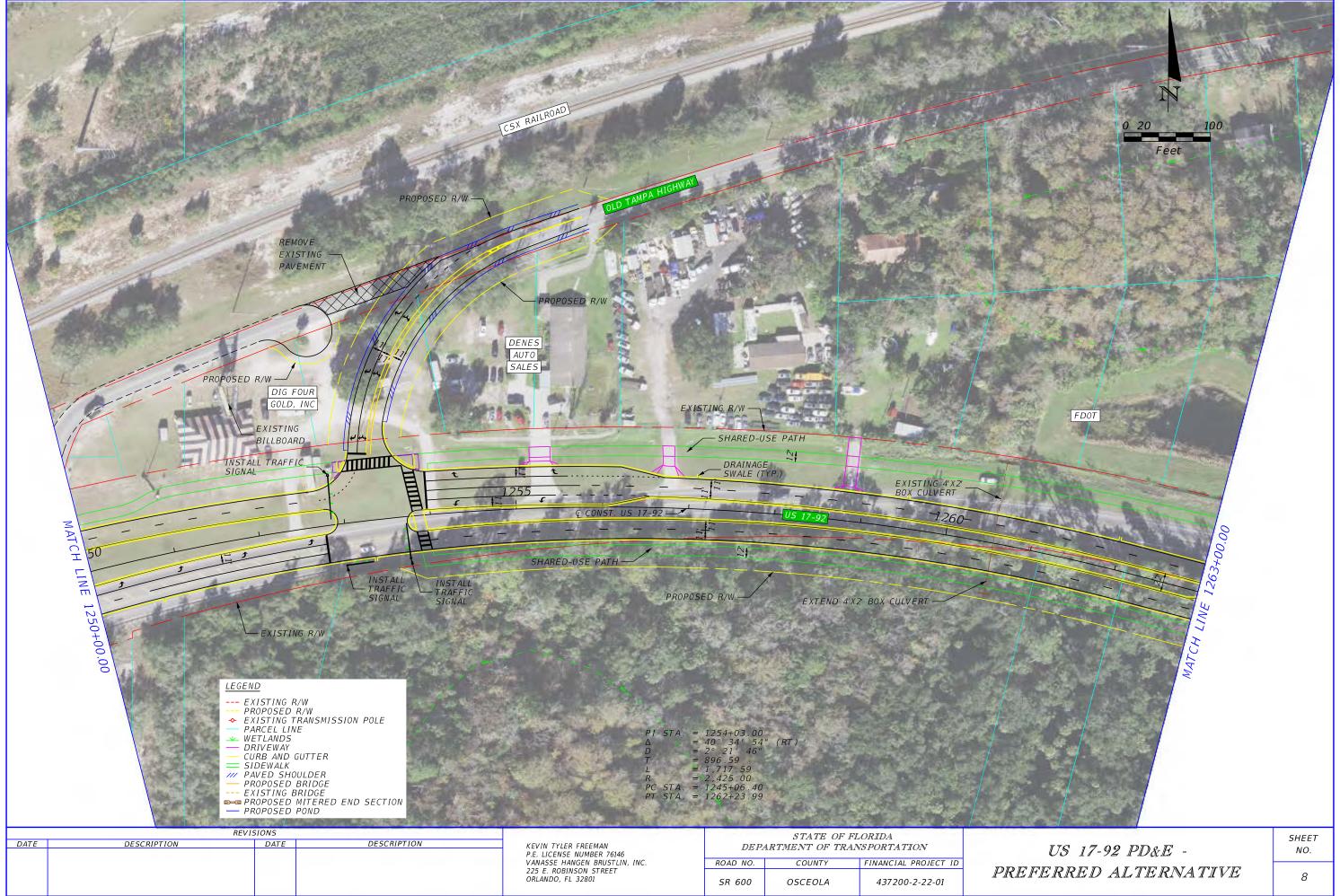


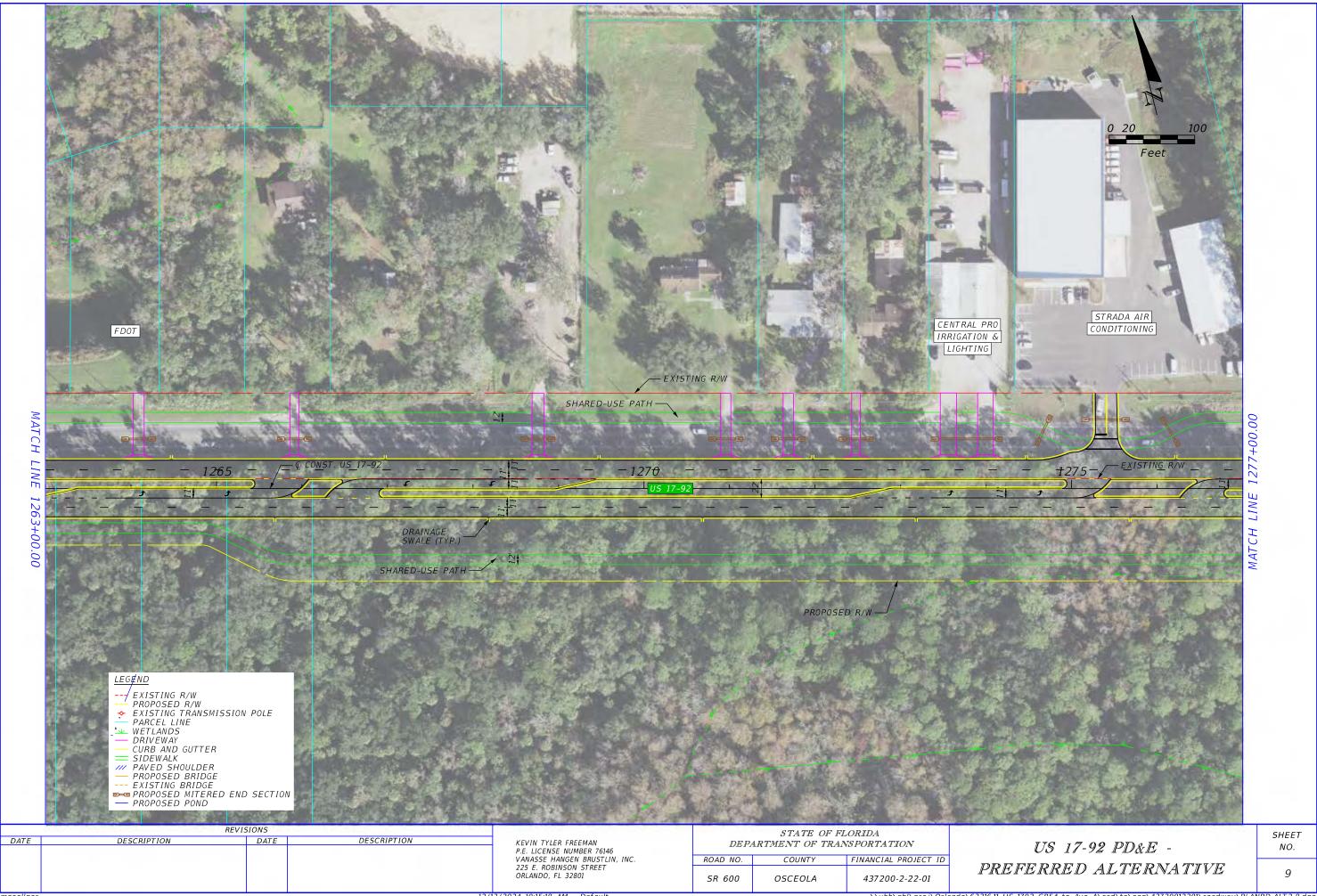


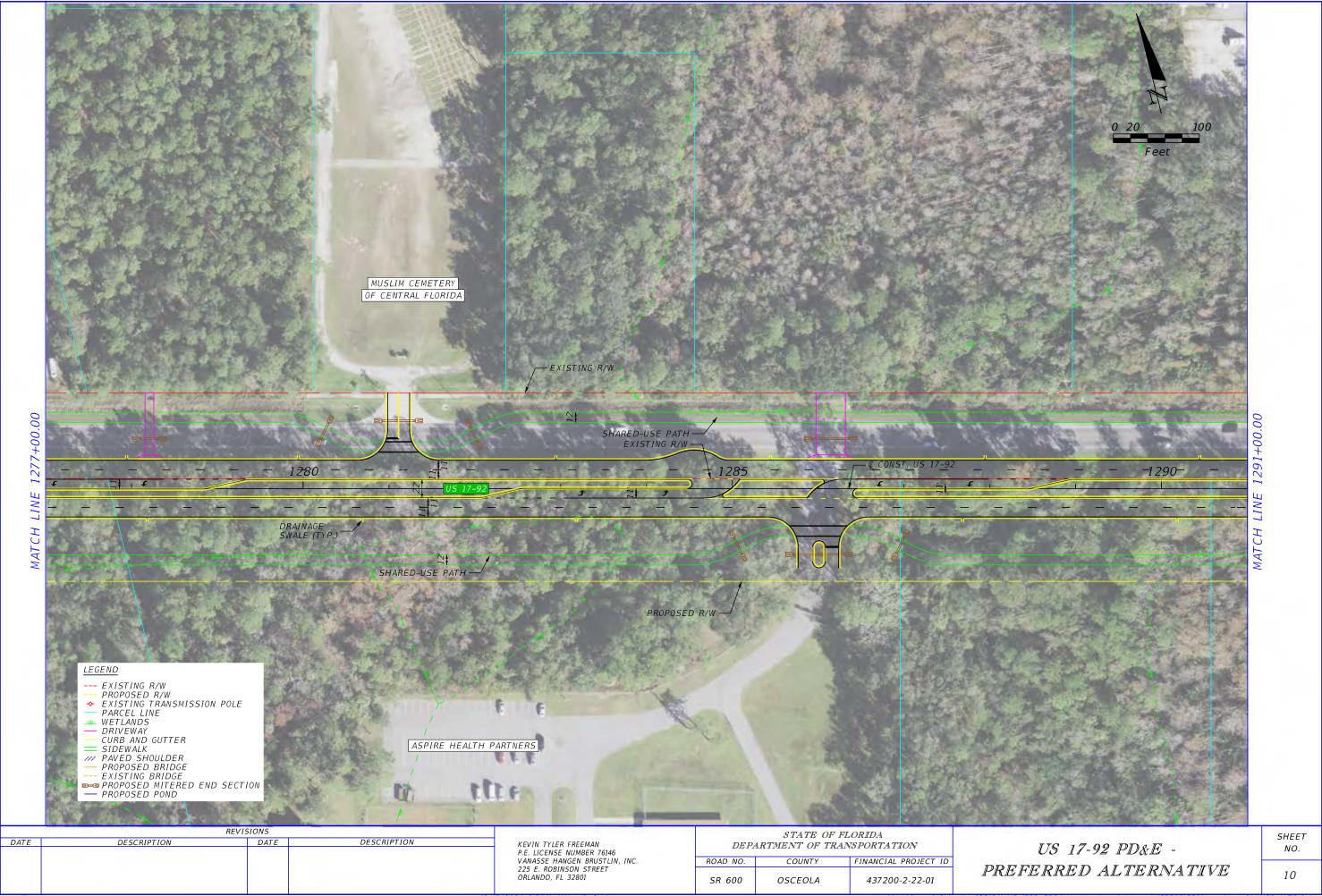


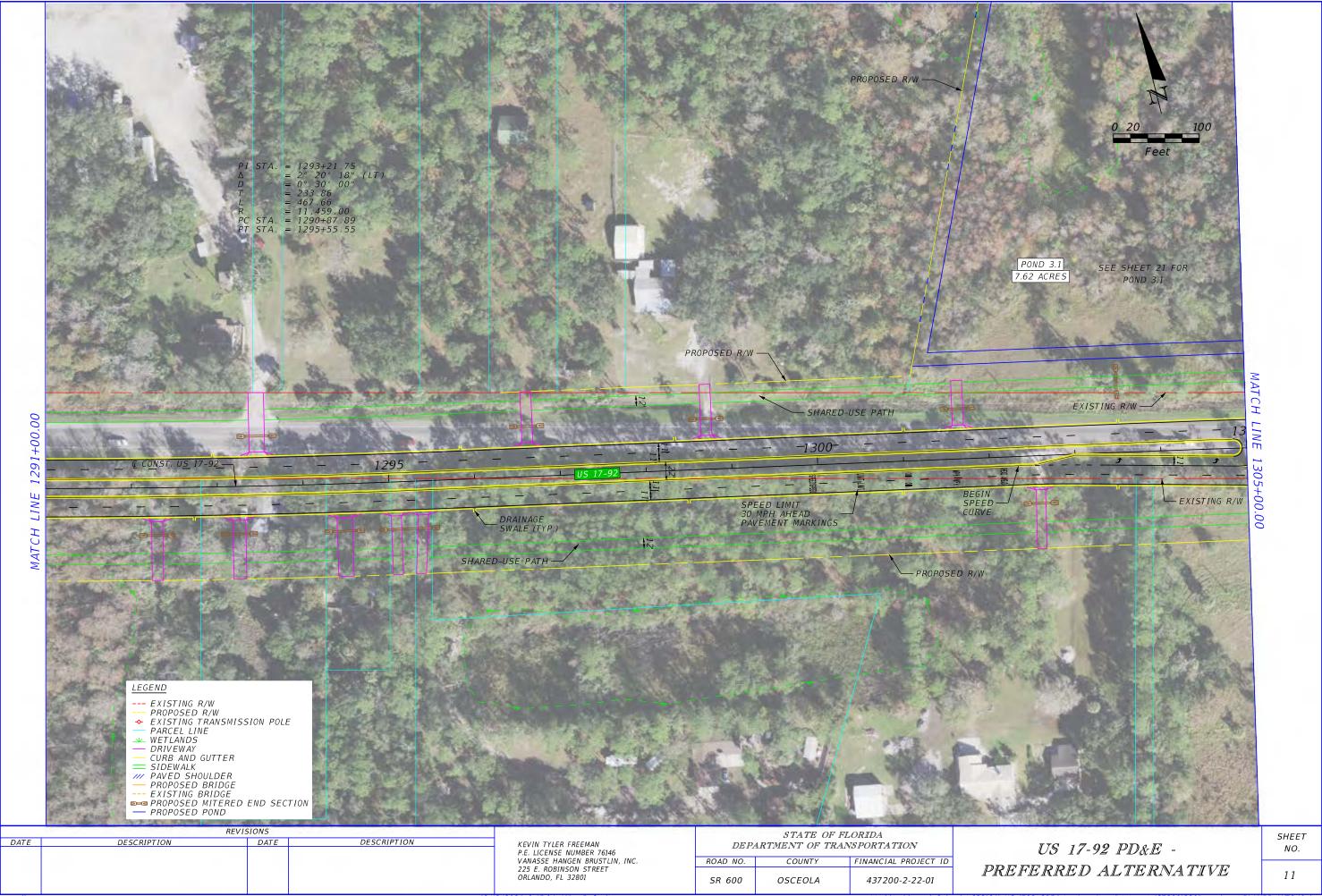


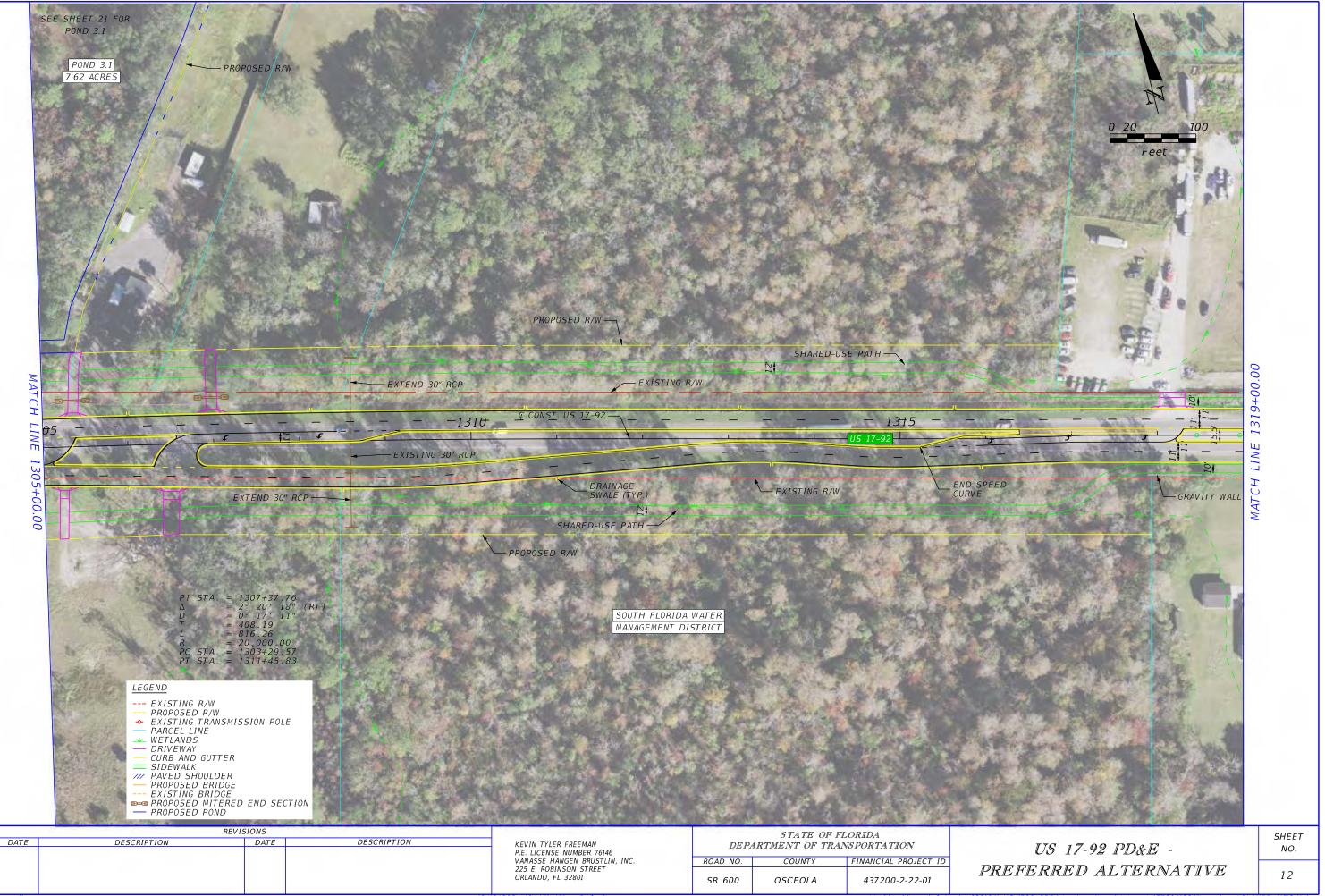


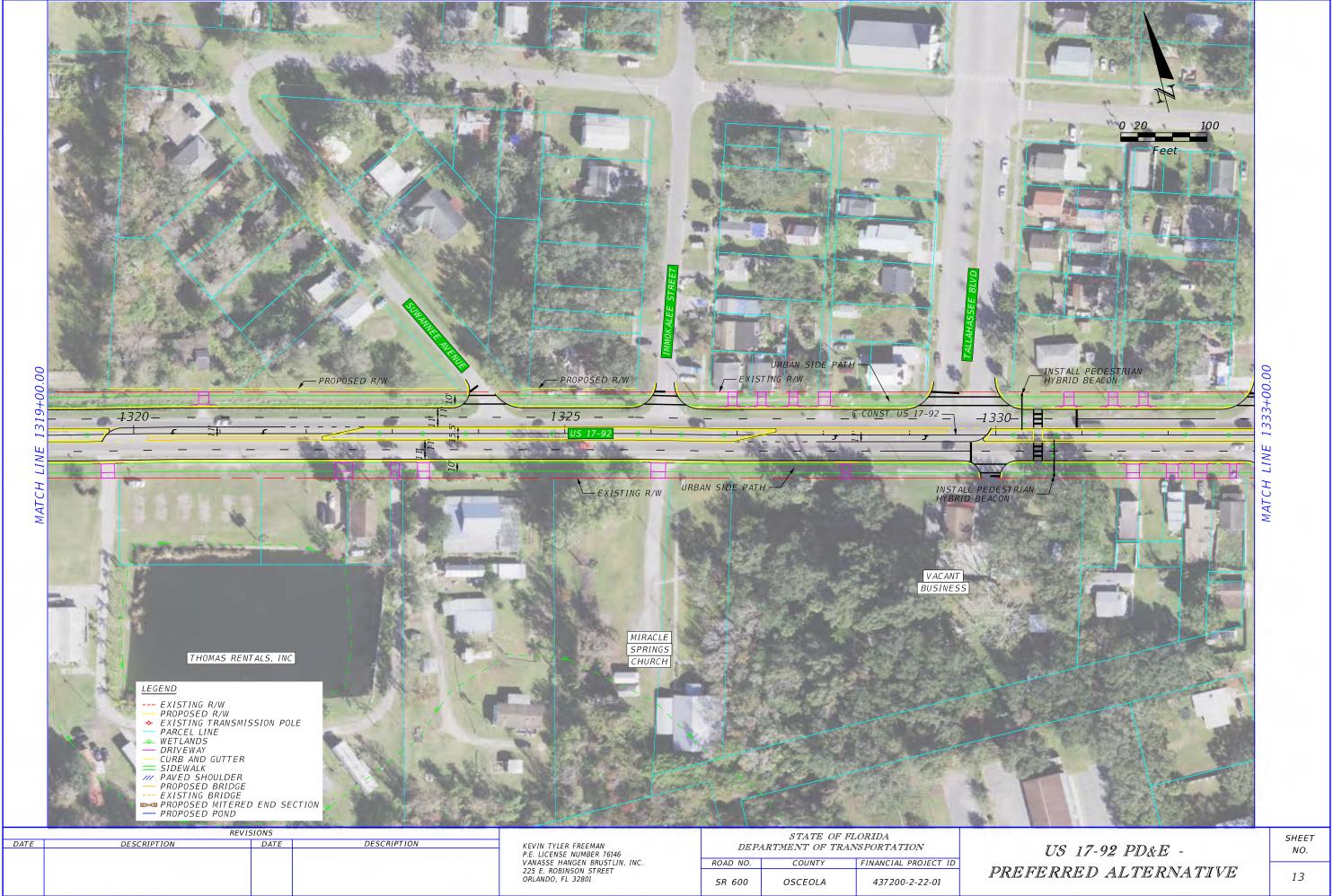


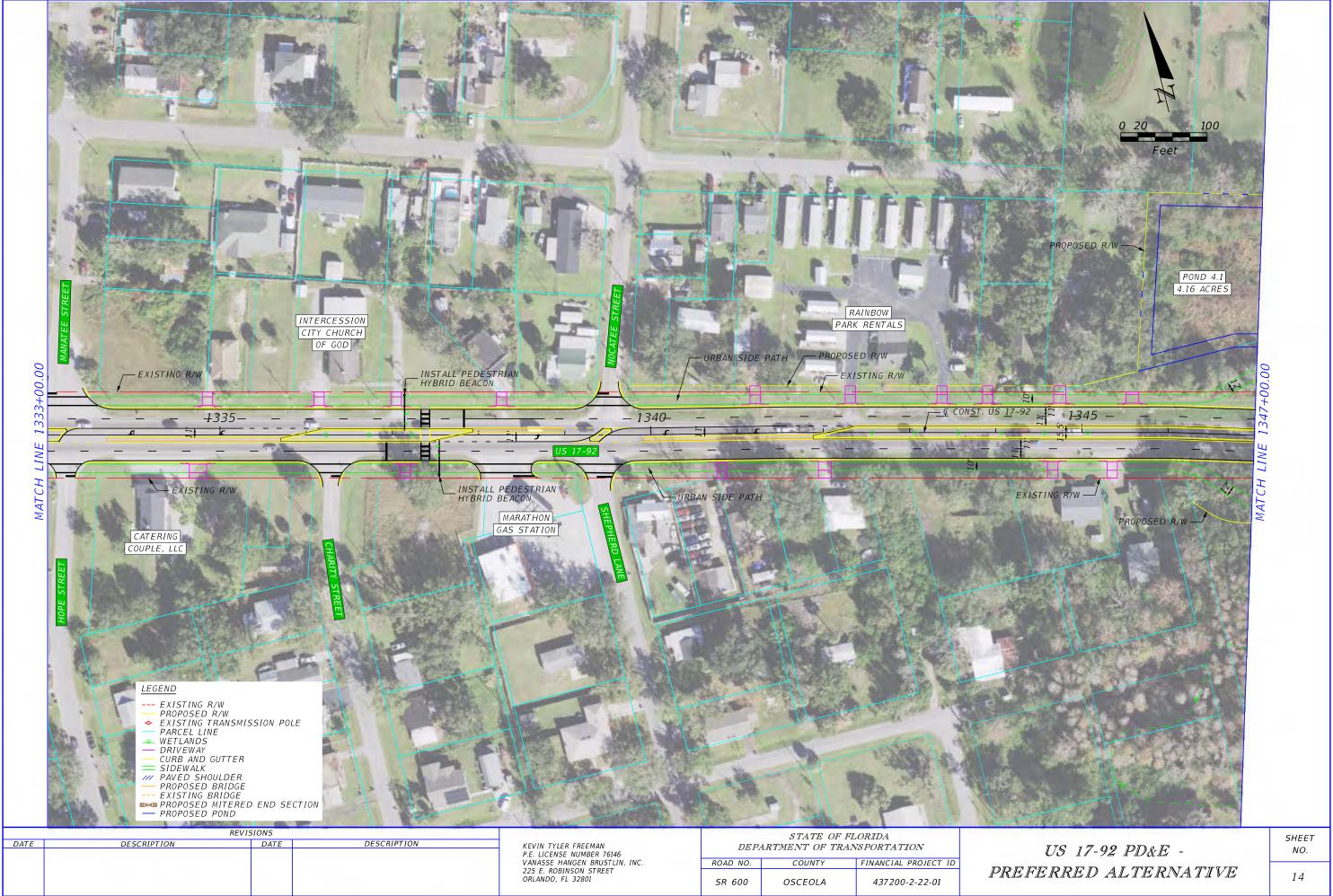


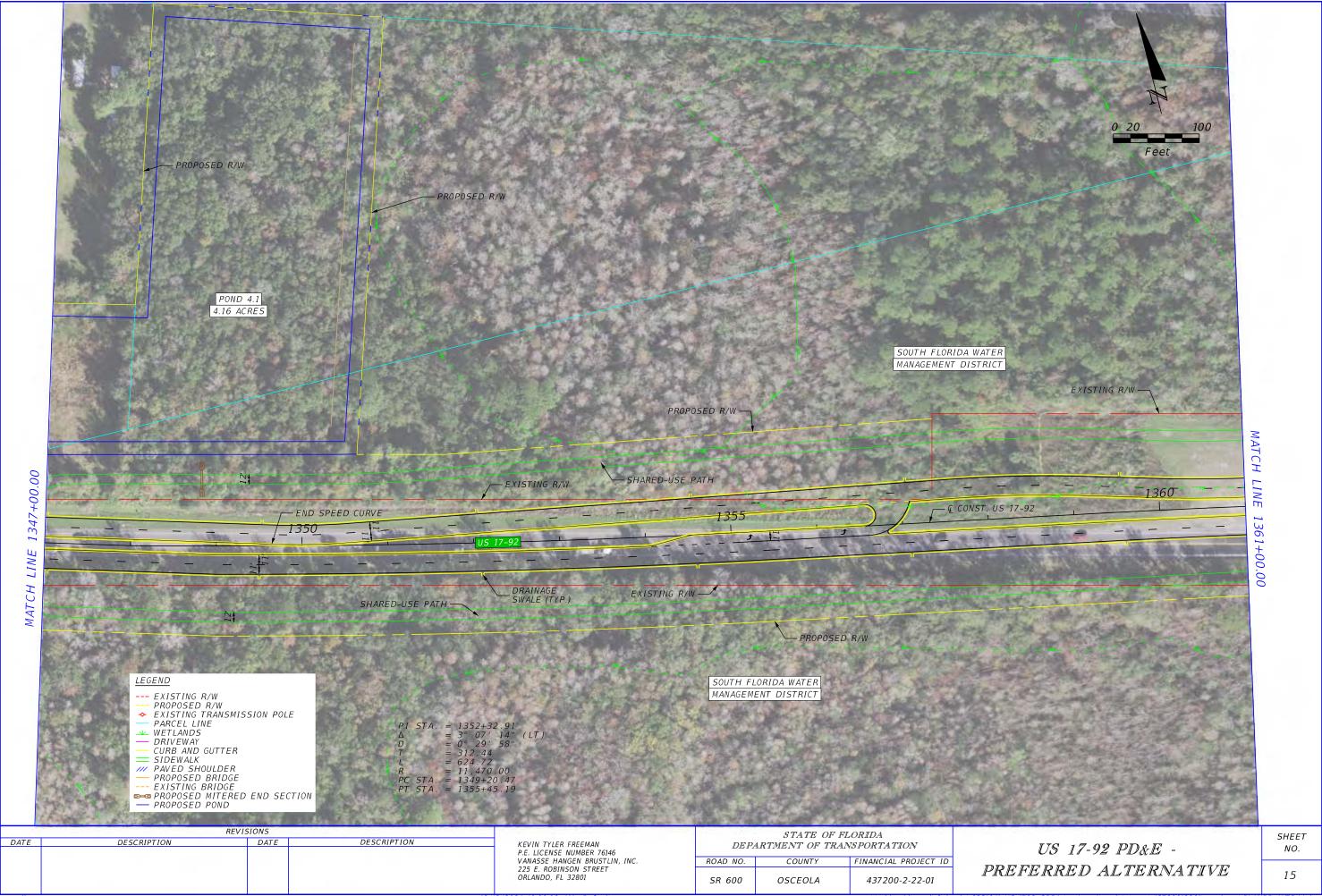


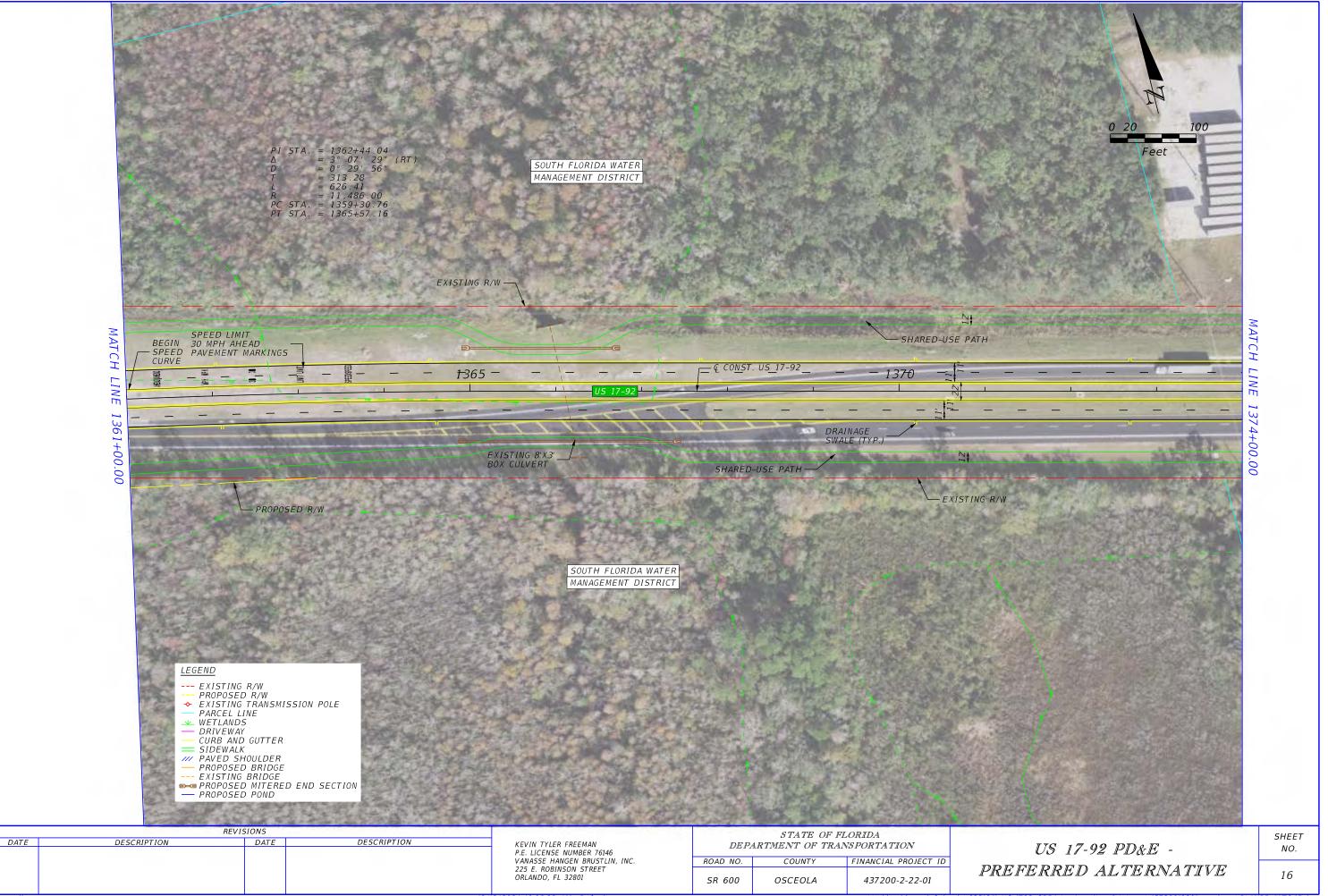


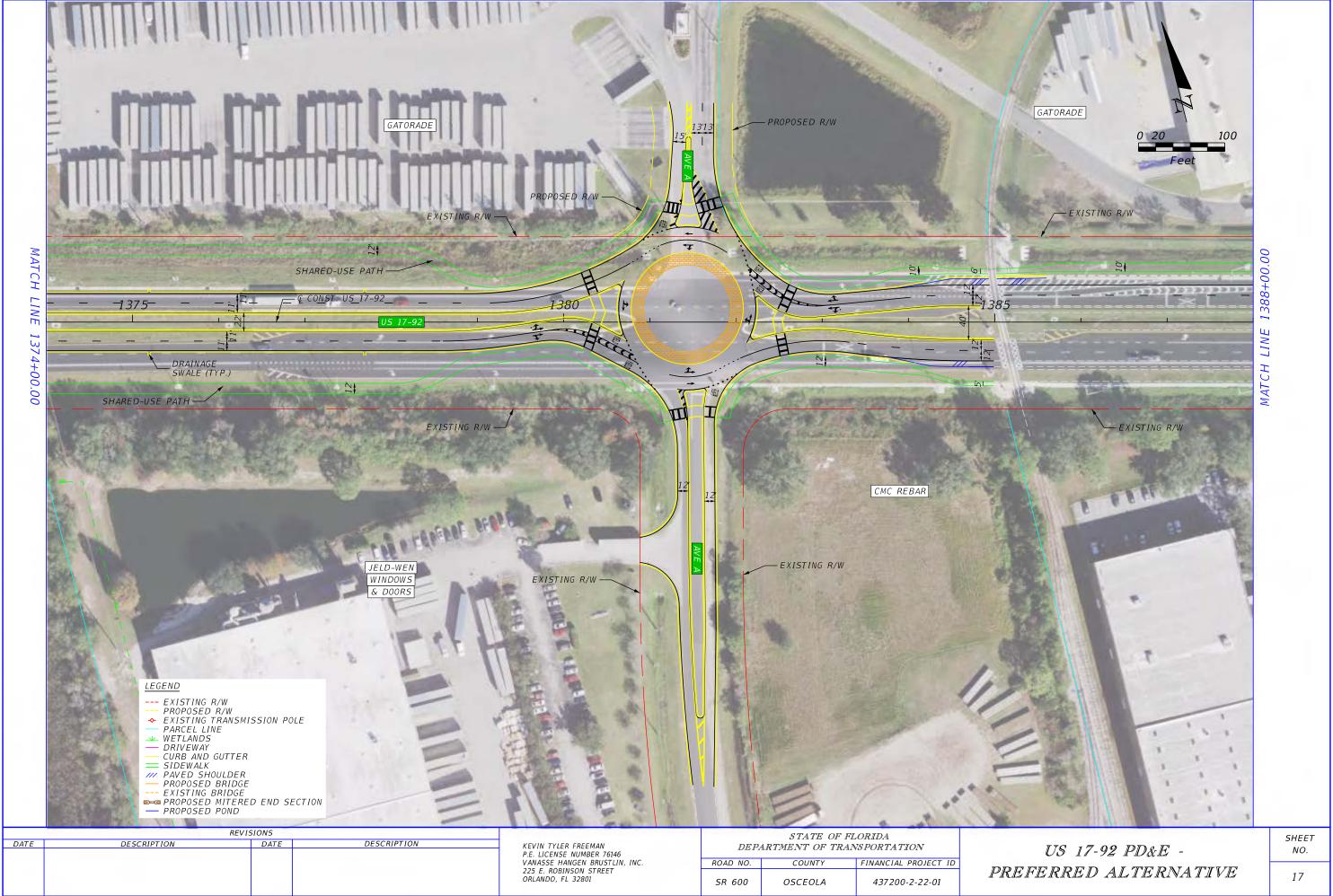


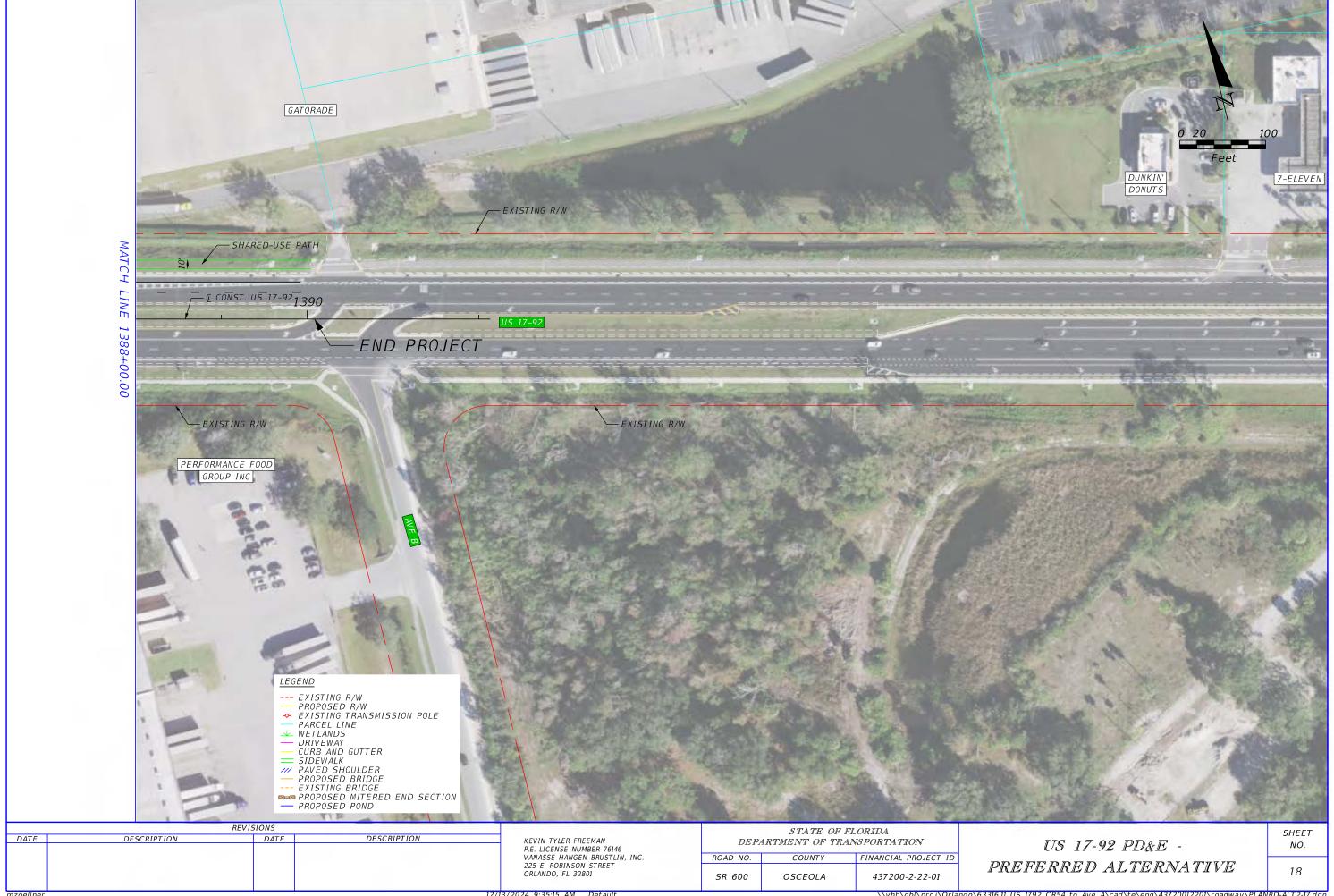


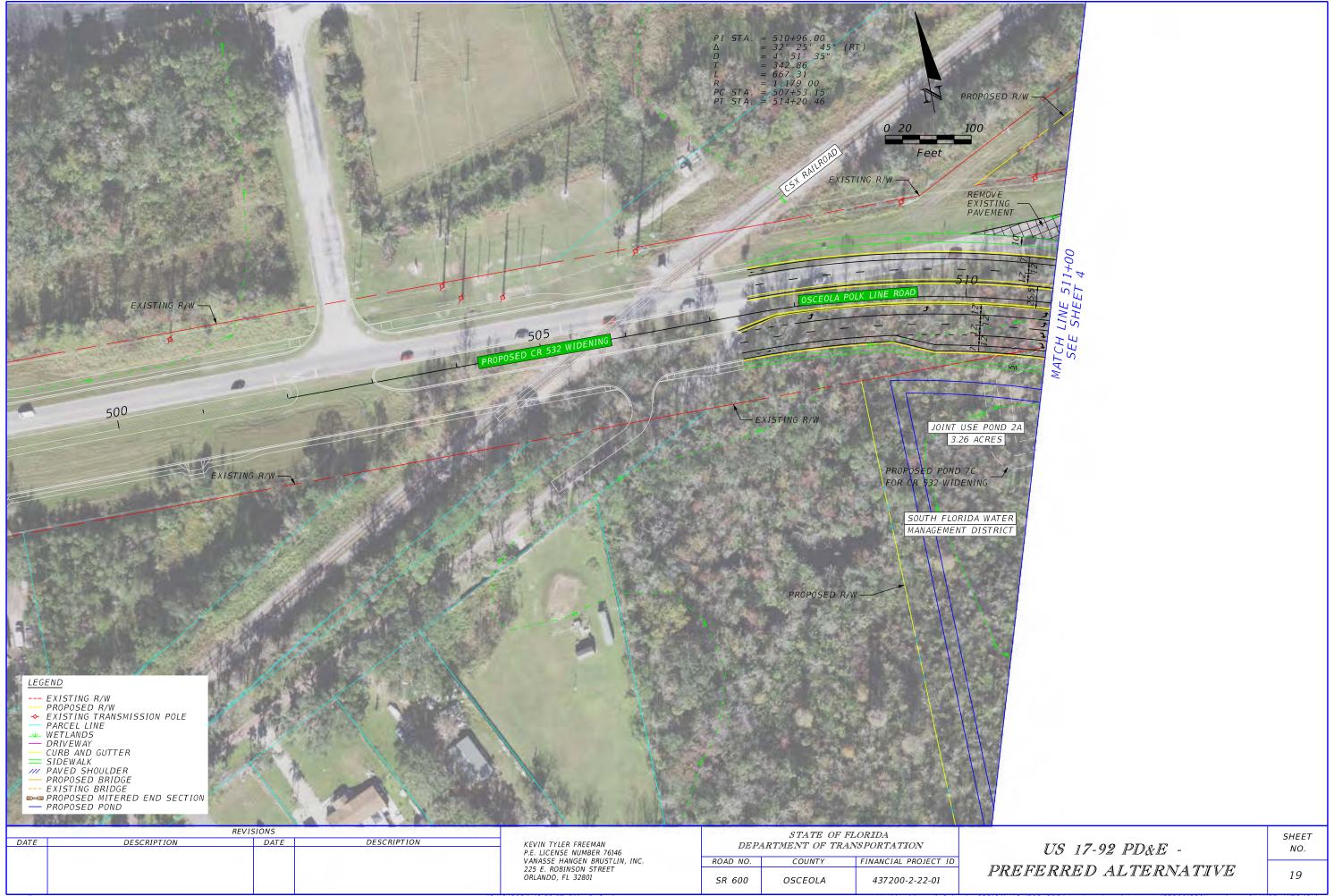


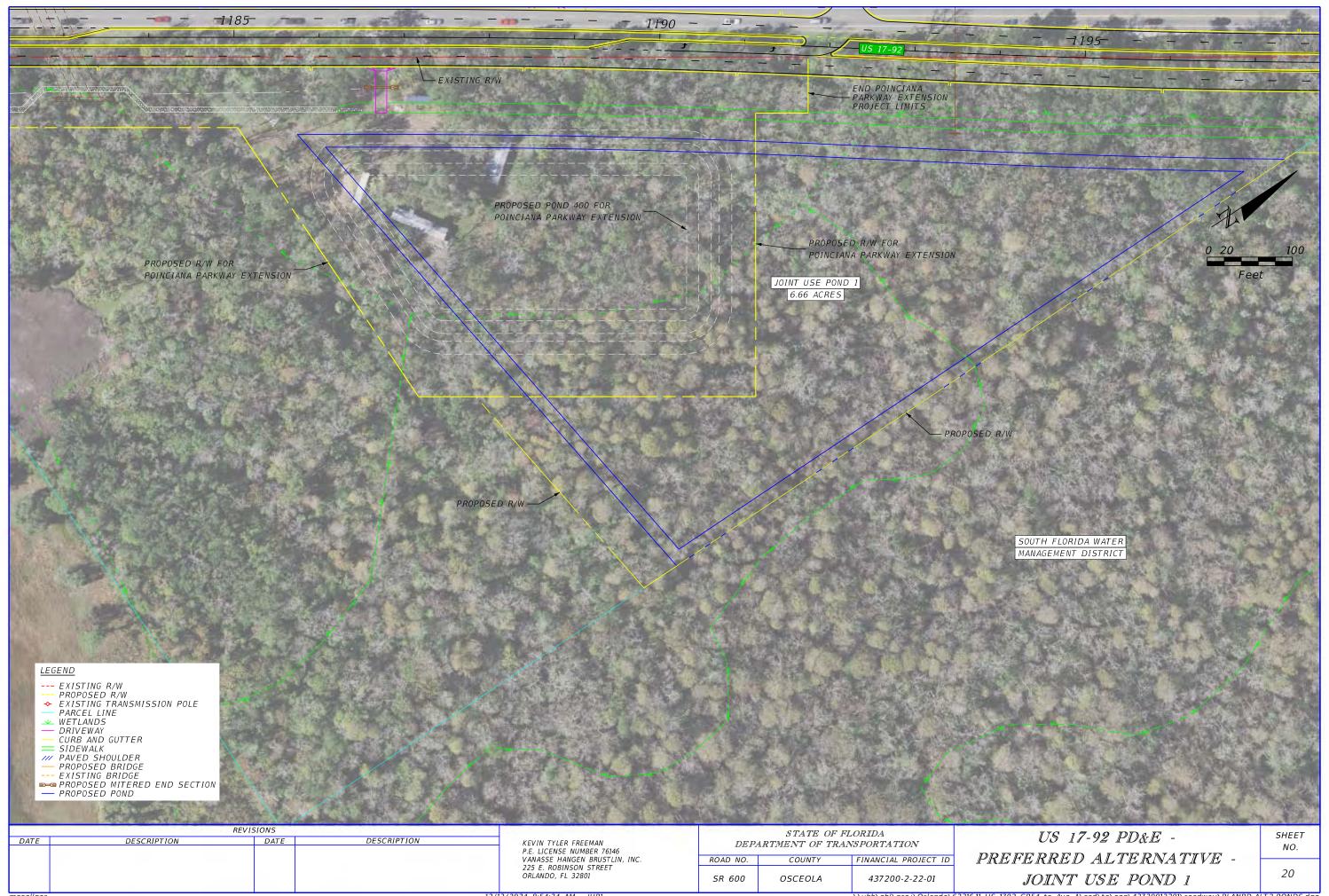


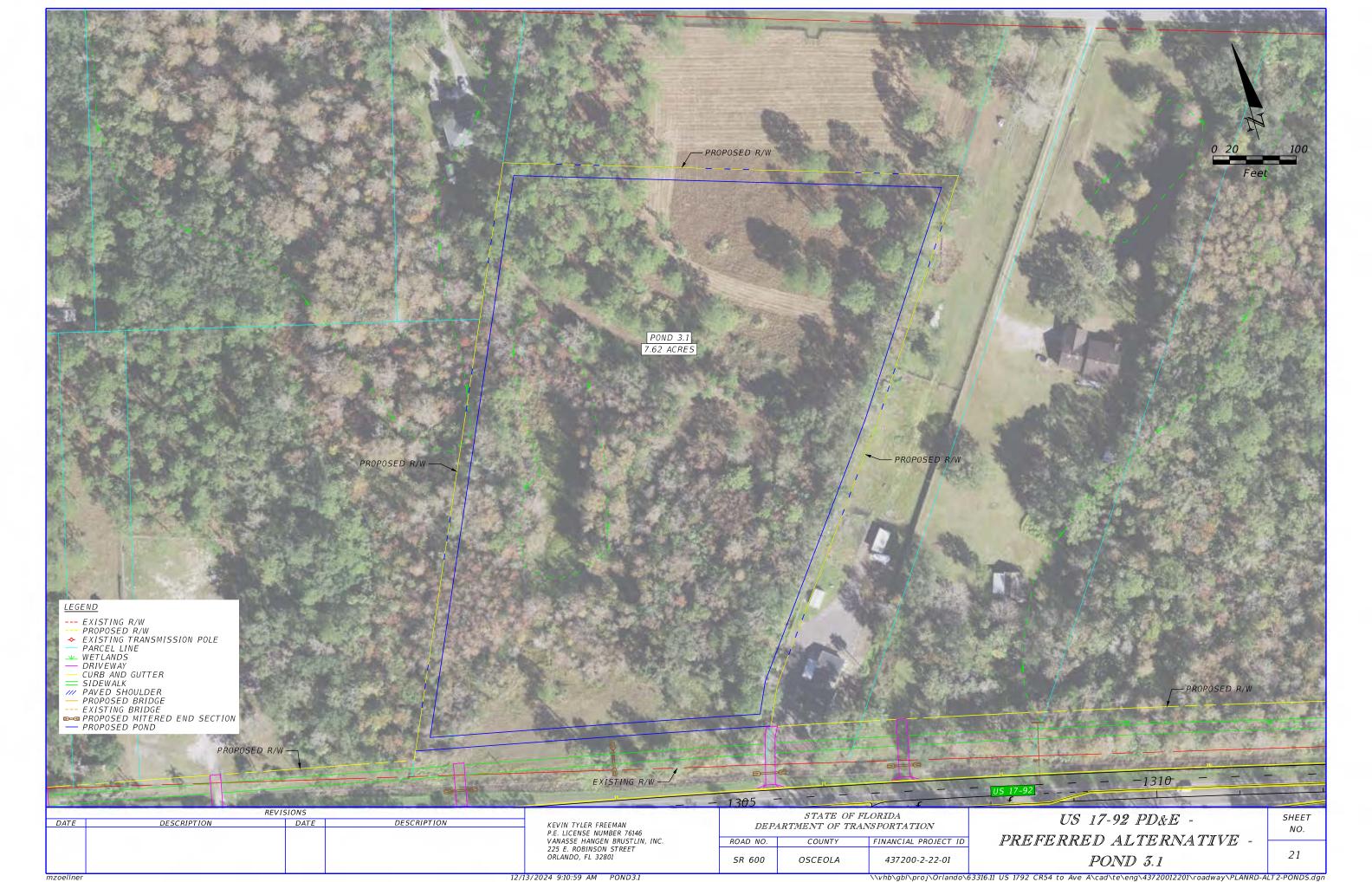


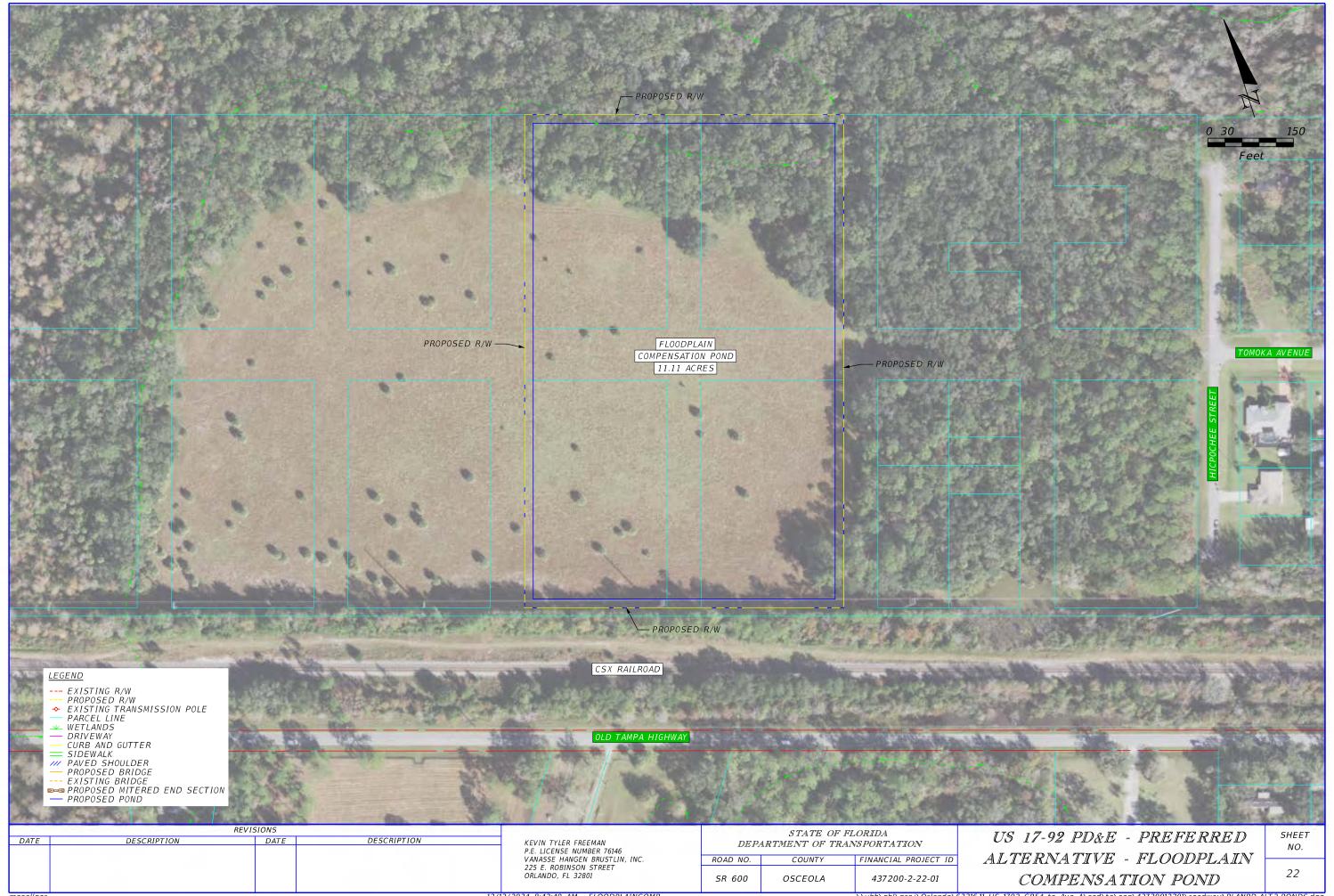












# STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

# TYPICAL SECTION PACKAGE

FINANCIAL PROJECT ID 437200-2-22-01

OSCEOLA COUNTY (92010000, 92010100)

STATE ROAD NO. 600 (US 17-92)

SR 600 (US 17-92) WIDENING/RECONSTRUCTION FROM IVY MIST LANE TO AVENUE A

FDOT DISTRICT DESIGN ENGINEER

-DocuSigned by:

Ed kestory -EDD7768CC3204E 07/23/2024 | 8:03 AM EDT

CONCURRING WITH: TYPICAL SECTION ELEMENTS TARGET SPEED DESIGN & POSTED SPEEDS

FDOT DISTRICT TRAFFIC OPERATIONS

CONCURRING WITH: TARGET SPEED

FDOT DISTRICT INTERMODAL SYSTEMS DEVELOPMENT MANAGER

-DocuSianed by:

kellie Smiith 07/23/2024 | 8:47 AM EDT

CONCURRING WITH: CONTEXT CLASSIFICATION TARGET SPEED

FHWA TRANSPORTATION ENGINEER

CONCURRING WITH:

TYPICAL SECTION ELEMENTS

NOT USED

N/A

NOT USED

CONCURRING WITH: CONCURRING WITH:

ENGINEER

07/23/2024 | 8:36 AM EDT

DESIGN & POSTED SPEEDS

FDOT DISTRICT STRUCTURES DESIGN ENGINEER

07/23/2024 | 9:11 AM EDT CONCURRING WITH:

TYPICAL SECTION ELEMENTS

LOCAL TRANSPORTATION ENGINEER

N/A

CONCURRING WITH:

TYPICAL SECTION ELEMENTS

PROJECT LOCATION URL: https://tinyurl.com/yupwhb5n

PROJECT LIMITS: BEGIN MP 0.299 - END MP 4.135

**EXCEPTIONS**: NONE

BRIDGE LIMITS: 92010100 MP 0.452 - MP 0.870

RAILROAD CROSSING: NONE APPROVED BY:



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

AYTONA BEACH

PIERCE

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

VANASSE HANGEN BRUSTLIN, INC. 225 E ROBINSON STREET, SUITE 300 ORLANDO, FL 32801 CERTIFICATE OF AUTHORIATION: 3932 KEVIN TYLER FREEMAN, P.E. NO. 76146

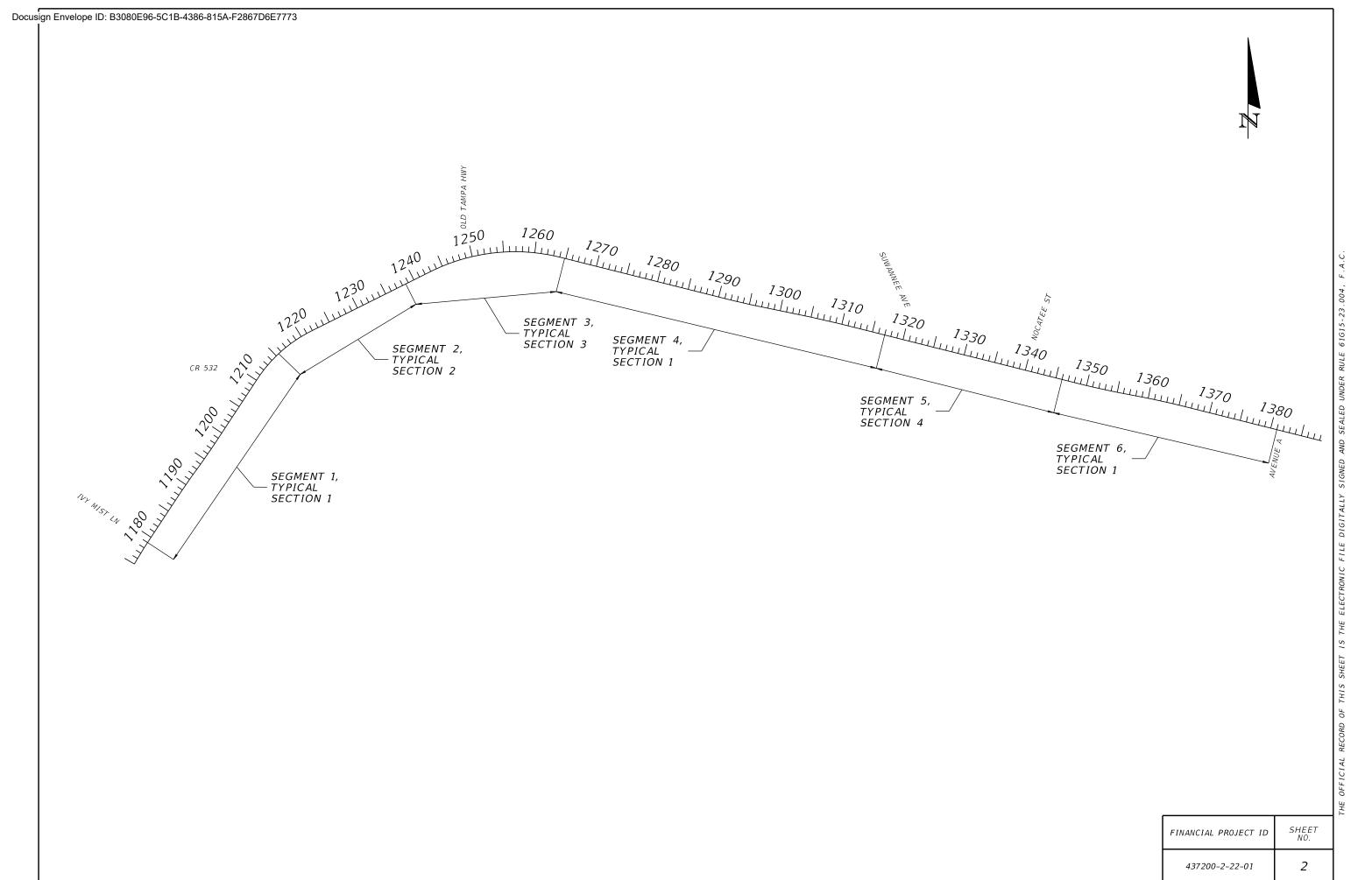
THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

LOCATION OF PROJECT

# INDEX OF SHEETS

SHEET NO	SHEET DESCRIPTION
1	COVER SHEET
2	SEGMENTS
3	TYPICAL SECTION NO.
4	TYPICAL SECTION NO.
5	TYPICAL SECTION NO.
6	TYPICAL SECTION NO.

SHEET



9/22/2023 12:43:28

# CONTEXT CLASSIFICATION

- (X) C1: NATURAL\*
- (X) C3C : SUBURBAN COMM.\*\*\*
- () C2: RURAL
- C2T : RURAL TOWN
- () C4: URBAN GENERAL
- (X) C3R: SUBURBAN RES.\*\* () C6: URBAN CORE
- () C5: URBAN CENTER
- ( ) N/A : L.A. FACILITY

#### FUNCTIONAL CLASSIFICATION

- () INTERSTATE
- () MAJOR COLLECTOR
- FREEWAY/EXPWY.
- ( ) MINOR COLLECTOR
- PRINCIPAL ARTERIAL
- () LOCAL
- () MINOR ARTERIAL

# HIGHWAY SYSTEM

- NATIONAL HIGHWAY SYSTEM
- STRATEGIC INTERMODAL SYSTEM\*\*\*\*
- STATE HIGHWAY SYSTEM
- OFF-STATE HIGHWAY SYSTEM

# ACCESS CLASSIFICATION

- () 1 FREEWAY
- () 2 RESTRICTIVE w/Service Roads
- (X) 3 RESTRICTIVE w/660 ft. Connection Spacing
- () 4 NON-RESTRICTIVE w/2640 ft. Signal Spacing
- () 5 RESTRICTIVE w/440 ft. Connection Spacing
- () 6 NON-RESTRICTIVE w/1320 ft. Signal Spacing
- () 7 BOTH MEDIAN TYPES

#### CRITERIA

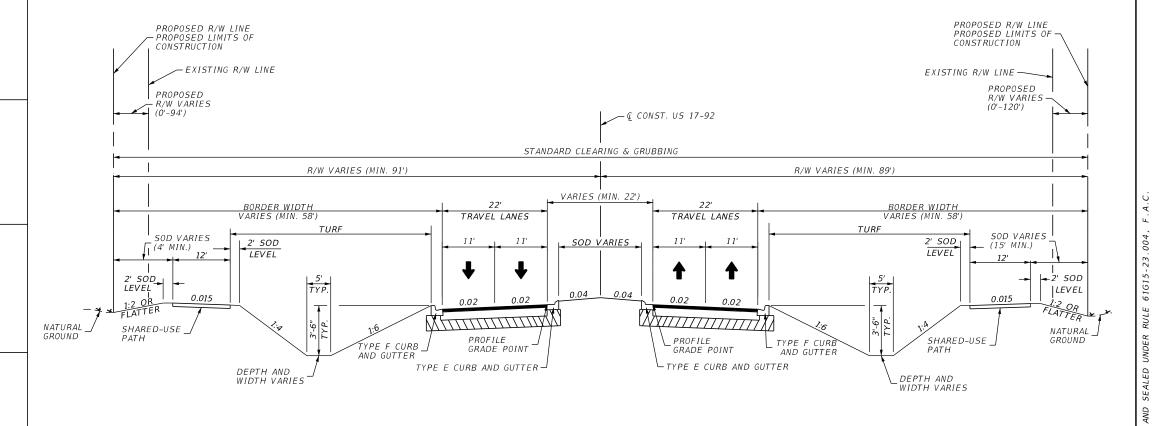
- (X) NEW CONSTRUCTION / RECONSTRUCTION
- RESURFACING (LA FACILITIES)
- () RRR (ARTERIALS & COLLECTORS)

# POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

#### SPEED VARIATION:

IN THE C1 CONTEXT CLASSIFICATION SECTIONS OF THIS TYPICAL SECTION, THE ALLOWABLE DESIGN SPEED IS 55-70MPH, PER FDM TABLE 201.5.1. HOWEVER, THE TARGET SPEED AND DESIGN SPEED IS 45 MPH FOR THAT SECTION.

# TYPICAL SECTION No. 1



SEGMENT 1 TYPICAL SECTION SR 600 (US 17/92)

FROM JUST EAST OF IVY MIST LANE TO REEDY CREEK BRIDGE

ROADWAY ID: 92010000 STA. 1179+00 TO STA. 1192+20 ROADWAY ID: 92010100 STA. 1192+20 TO STA. 1215+60

SEGMENT 4 TYPICAL SECTION SR 600 (US 17/92)

FROM JUST EAST OF OLD TAMPA HIGHWAY TO JUST WEST OF SUWANNEE AVENUE

ROADWAY ID: 92010000 STA. 1264+80 TO STA. 1317+00

SEGMENT 6 TYPICAL SECTION SR 600 (US 17/92)

FROM JUST EAST OF NOCATEE STREET/SHEPHERD LANE TO AVENUE A ROADWAY ID: 92010000

STA. 1346+00 TO STA. 1381+00

# TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 29,000ESTIMATED OPENING YEAR = 2025 AADT = 32,500 ESTIMATED DESIGN YEAR = 2045 AADT = 43,500 K = 9 % D = 57 % T = 10 % (24 HOUR)DESIGN SPEED = 45 MPH POSTED SPEED = 45 MPH

TARGET SPEED = 45 MPH

# NOTES:

\*STA. 1200+30 TO STA. 1215+60, STA. 1346+00 TO STA. 1373+40 \*\*STA. 1179+00 TO STA. 1200+30

\*\*\*STA. 1249+50 TO STA. 1317+00. STA. 1373+40 TO STA. 1381+00 \*\*\*\*STA. 1212+00 TO STA. 1215+60, 1264+80 TO 1317+00, 1346+00 TO STA. 1381+00

SHEET FINANCIAL PROJECT ID 3 437200-2-22-01

# CONTEXT CLASSIFICATION

(X) C1: NATURAL () C3C: SUBURBAN COMM. () C2: RURAL () C4: URBAN GENERAL () C5: URBAN CENTER C2T : RURAL TOWN

() C3R: SUBURBAN RES. () C6: URBAN CORE

() N/A: L.A. FACILITY

# FUNCTIONAL CLASSIFICATION

() INTERSTATE () MAJOR COLLECTOR () FREEWAY/EXPWY. () MINOR COLLECTOR

(X) PRINCIPAL ARTERIAL () LOCAL

() MINOR ARTERIAL

# HIGHWAY SYSTEM

NATIONAL HIGHWAY SYSTEM

STRATEGIC INTERMODAL SYSTEM

STATE HIGHWAY SYSTEM

OFF-STATE HIGHWAY SYSTEM

# ACCESS CLASSIFICATION

() 1 - FREEWAY

() 2 - RESTRICTIVE w/Service Roads

(X) 3 - RESTRICTIVE w/660 ft. Connection Spacing

() 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing

() 5 - RESTRICTIVE w/440 ft. Connection Spacing

() 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing

() 7 - BOTH MEDIAN TYPES

# CRITERIA

(X) NEW CONSTRUCTION / RECONSTRUCTION

( ) RESURFACING (LA FACILITIES)

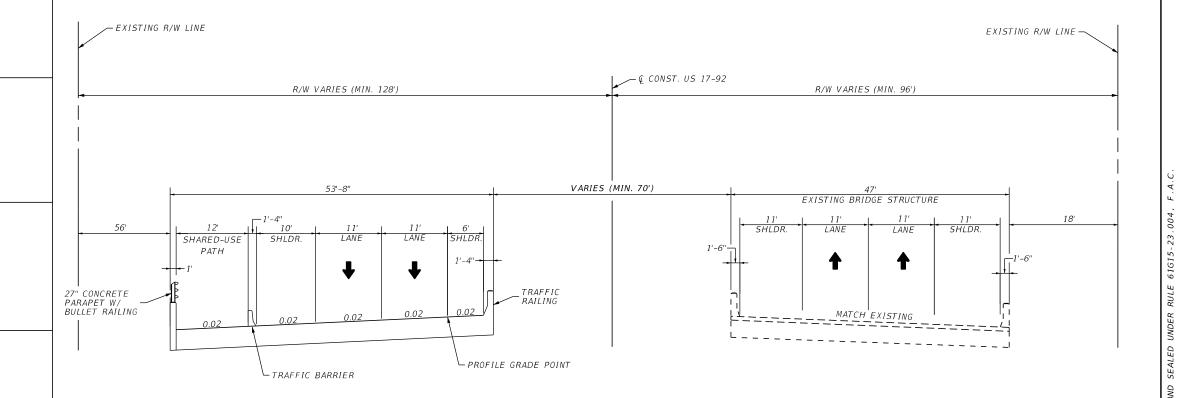
() RRR (ARTERIALS & COLLECTORS)

# POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

## SPEED VARIATION:

IN THE C1 CONTEXT CLASSIFICATION SECTION OF THIS TYPICAL SECTION, THE ALLOWABLE DESIGN SPEED IS 55-70MPH, PER FDM TABLE 201.5.1. HOWEVER, THE TARGET SPEED AND DESIGN SPEED IS 45 MPH FOR THAT SECTION.

# TYPICAL SECTION No. 2



SEGMENT 2 TYPICAL SECTION SR 600 (US 17/92) REEDY CREEK BRIDGE ROADWAY ID: 92010100 STA. 1215+60 TO STA. 1238+60

# TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 29,000ESTIMATED OPENING YEAR = 2025 AADT = 32,500 ESTIMATED DESIGN YEAR = 2045 AADT = 43,500 K = 9 % D = 57 % T = 10 % (24 HOUR)DESIGN SPEED = 45 MPH POSTED SPEED = 45 MPH TARGET SPEED = 45 MPH

SHEET FINANCIAL PROJECT ID 437200-2-22-01

# CONTEXT CLASSIFICATION

- (X) C1: NATURAL\*
- (X) C3C : SUBURBAN COMM.\*\*
- () C2: RURAL
- , 02 / //0////2
- ( ) C4 : URBAN GENERAL
- () C2T : RURAL TOWN
- () C5: URBAN CENTER
- () C3R: SUBURBAN RES. () C6: URBAN CORE
- ( ) N/A : L.A. FACILITY

#### FUNCTIONAL CLASSIFICATION

- () INTERSTATE
- () MAJOR COLLECTOR
- () FREEWAY/EXPWY.
- ( ) MINOR COLLECTOR
- (X) PRINCIPAL ARTERIAL
- () LOCAL
- ( ) MINOR ARTERIAL

# HIGHWAY SYSTEM

- (X) NATIONAL HIGHWAY SYSTEM
- (X) STRATEGIC INTERMODAL SYSTEM
- (X) STATE HIGHWAY SYSTEM
- () OFF-STATE HIGHWAY SYSTEM

# ACCESS CLASSIFICATION

- () 1 FREEWAY
- () 2 RESTRICTIVE w/Service Roads
- (X) 3 RESTRICTIVE w/660 ft. Connection Spacing
- () 4 NON-RESTRICTIVE w/2640 ft. Signal Spacing
- () 5 RESTRICTIVE w/440 ft. Connection Spacing
- () 6 NON-RESTRICTIVE w/1320 ft. Signal Spacing
- () 7 BOTH MEDIAN TYPES

#### CRITERIA

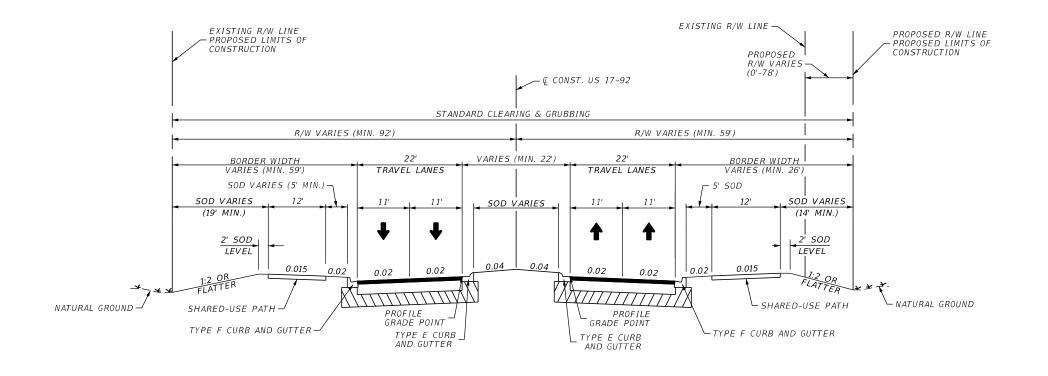
- (X) NEW CONSTRUCTION / RECONSTRUCTION
- () RESURFACING (LA FACILITIES)
- () RRR (ARTERIALS & COLLECTORS)

# POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

#### SPEED VARIATION:

IN THE C1 CONTEXT CLASSIFICATION SECTIONS OF THIS TYPICAL SECTION, THE ALLOWABLE DESIGN SPEED IS 55-70MPH, PER FDM TABLE 201.5.1. HOWEVER, THE TARGET SPEED AND DESIGN SPEED IS 45 MPH FOR THAT SECTION.

# TYPICAL SECTION No. 3



SEGMENT 3 TYPICAL SECTION

SR 600 (US 17/92)

FROM REEDY CREEK BRIDGE TO JUST EAST OF OLD TAMPA HIGHWAY

ROADWAY ID: 92010100

STA. 1238+60 TO STA. 1264+20

ROADWAY ID: 92010000

STA. 1264+20 TO STA. 1264+80

#### TRAFFIC DATA

CURRENT YEAR = 2019 AADT = 28,000 ESTIMATED OPENING YEAR = 2025 AADT = 30,000 ESTIMATED DESIGN YEAR = 2045 AADT = 37,500 K = 9 % D = 57 % T = 10 % (24 HOUR) DESIGN SPEED = 45 MPH POSTED SPEED = 45 MPH TARGET SPEED = 45 MPH

NOTES: \*STA. 1238+60 TO STA. 1249+50 \*\*STA. 1249+50 TO STA. 1264+80 FINANCIAL PROJECT ID SHEET NO. 5

# CONTEXT CLASSIFICATION

- () C1: NATURAL () C3C: SUBURBAN COMM.
- () C2: RURAL () C4: URBAN GENERAL
- () C5: URBAN CENTER C2T : RURAL TOWN () C3R: SUBURBAN RES. () C6: URBAN CORE
- ( ) N/A : L.A. FACILITY

#### FUNCTIONAL CLASSIFICATION

- () INTERSTATE
  - () MAJOR COLLECTOR
- () MINOR COLLECTOR FREEWAY/EXPWY.
- PRINCIPAL ARTERIAL () LOCAL
- () MINOR ARTERIAL

# HIGHWAY SYSTEM

- NATIONAL HIGHWAY SYSTEM
- STRATEGIC INTERMODAL SYSTEM
- STATE HIGHWAY SYSTEM
- OFF-STATE HIGHWAY SYSTEM

### ACCESS CLASSIFICATION

- () 1 FREEWAY
- () 2 RESTRICTIVE w/Service Roads
- () 3 RESTRICTIVE w/660 ft. Connection Spacing
- () 4 NON-RESTRICTIVE w/2640 ft. Signal Spacing
- (X) 5 RESTRICTIVE w/440 ft. Connection Spacing
- () 6 NON-RESTRICTIVE w/1320 ft. Signal Spacing
- () 7 BOTH MEDIAN TYPES

#### CRITERIA

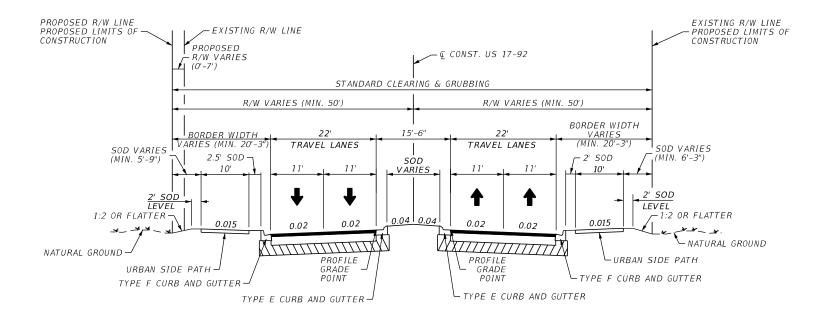
- (X) NEW CONSTRUCTION / RECONSTRUCTION
- RESURFACING (LA FACILITIES)
- () RRR (ARTERIALS & COLLECTORS)

# POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

#### SPEED VARIATION:

THE ALLOWABLE DESIGN SPEED IS 25-45MPH, WITH AN SIS MINIMUM DESIGN SPEED OF 40 MPH, PER FDM TABLE 201.5.1. HOWEVER, THE TARGET SPEED AND DESIGN SPEED IS 30 MPH FOR THIS SECTION.

# TYPICAL SECTION No. 4

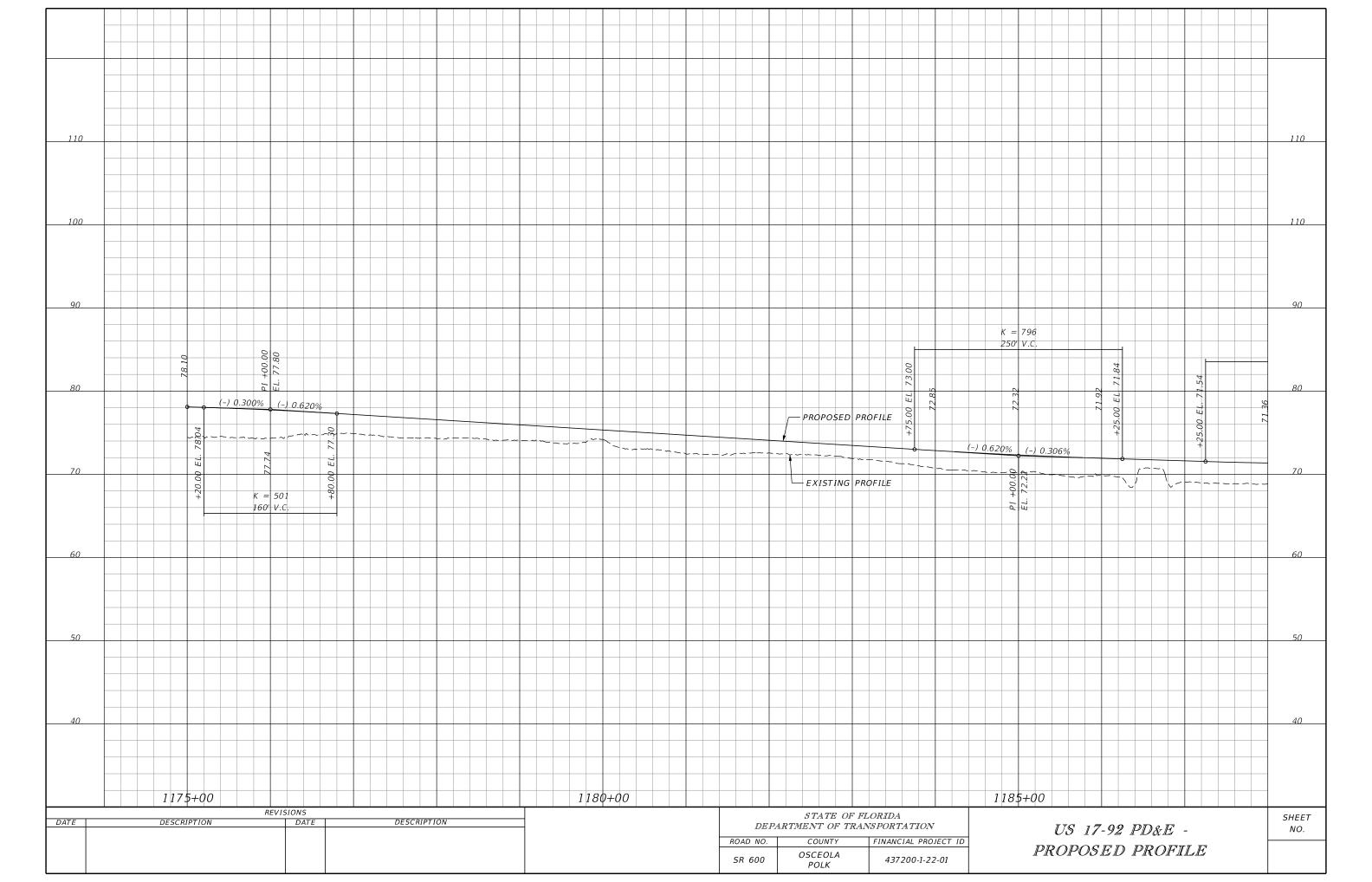


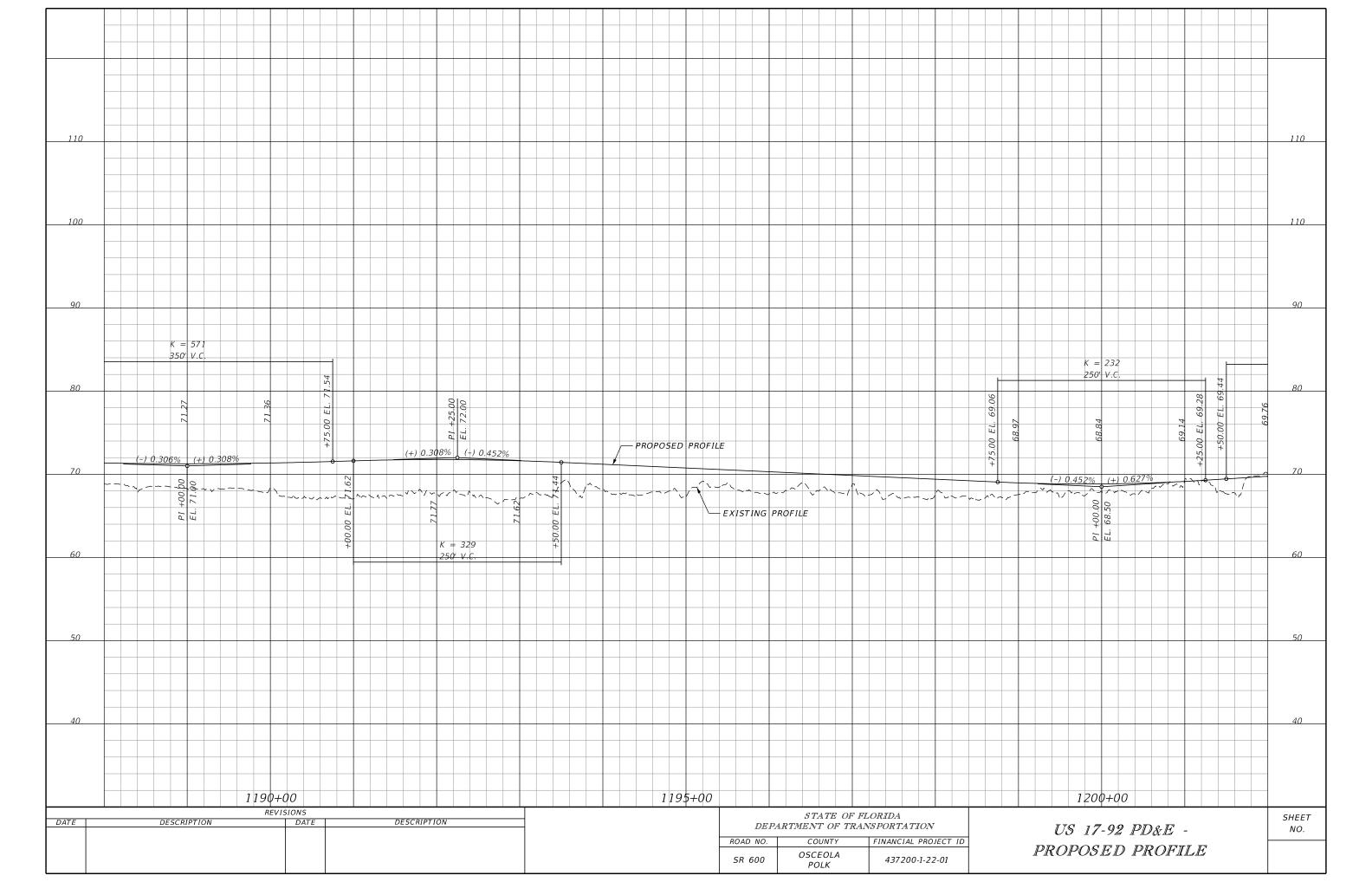
SEGMENT 5 TYPICAL SECTION SR 600 (US 17/92) FROM JUST WEST OF SUWANNEE AVENUE TO JUST EAST OF NOCATEE STREET/SHEPHERD LANE ROADWAY ID: 92010000 STA. 1317+00 TO STA. 1346+00

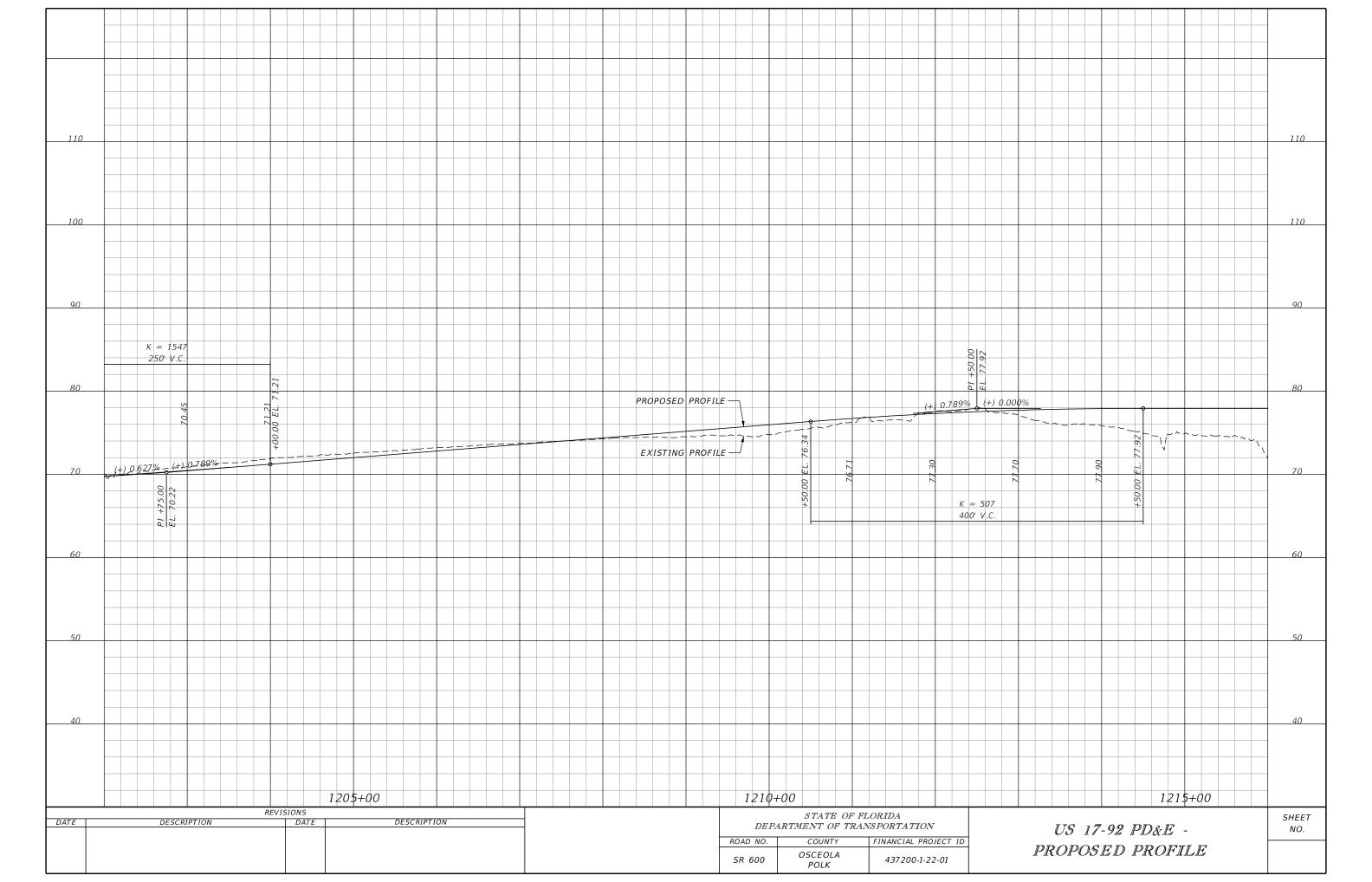
#### TRAFFIC DATA

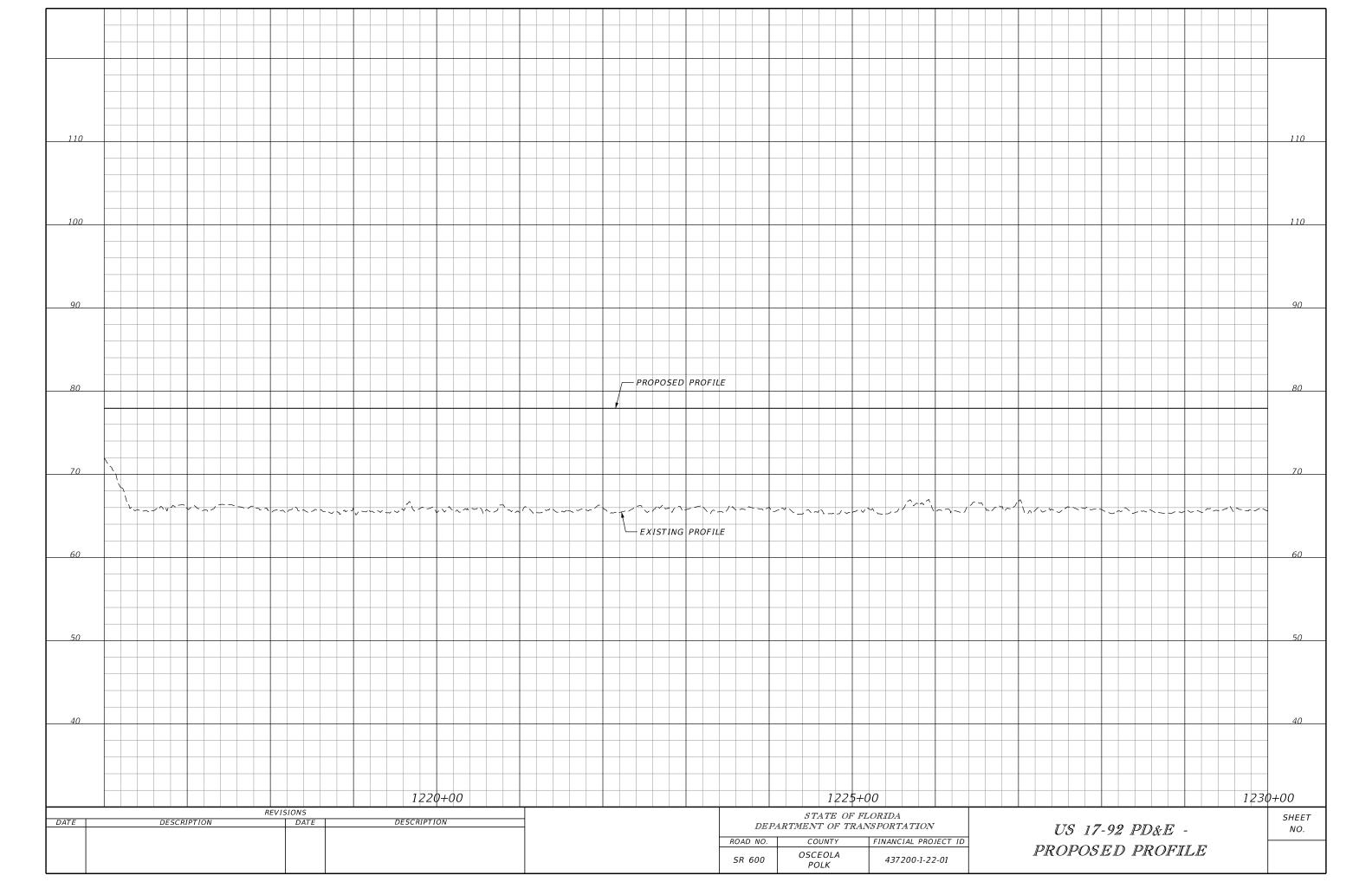
CURRENT YEAR = 2019 AADT = 25,500ESTIMATED OPENING YEAR = 2025 AADT = 27,500 ESTIMATED DESIGN YEAR = 2045 AADT = 34,000 K = 9 % D = 57 % T = 10 % (24 HOUR)DESIGN SPEED = 30 MPH POSTED SPEED = 30 MPH TARGET SPEED = 30 MPH

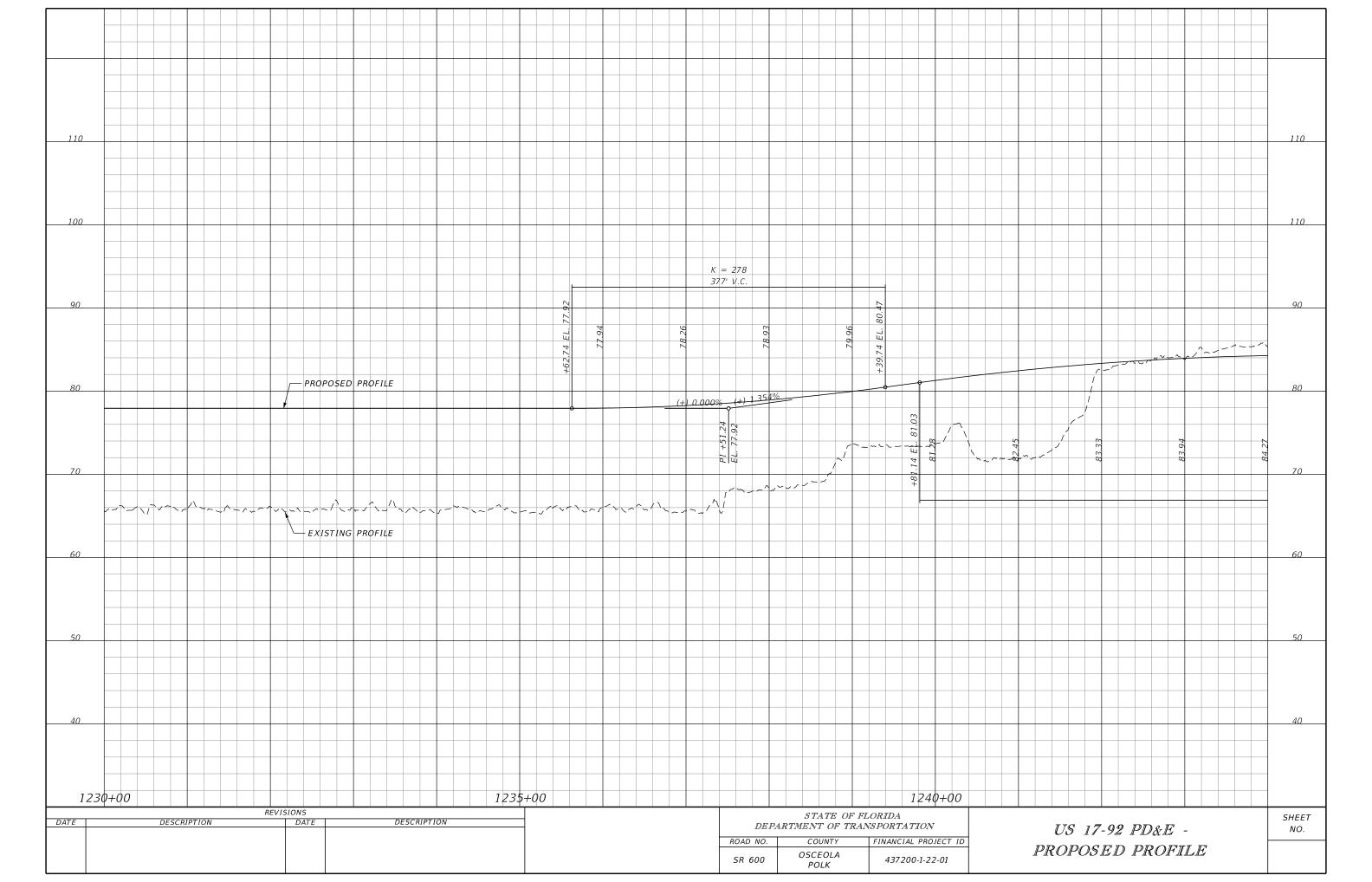
SHEET FINANCIAL PROJECT ID 6 437200-2-22-01

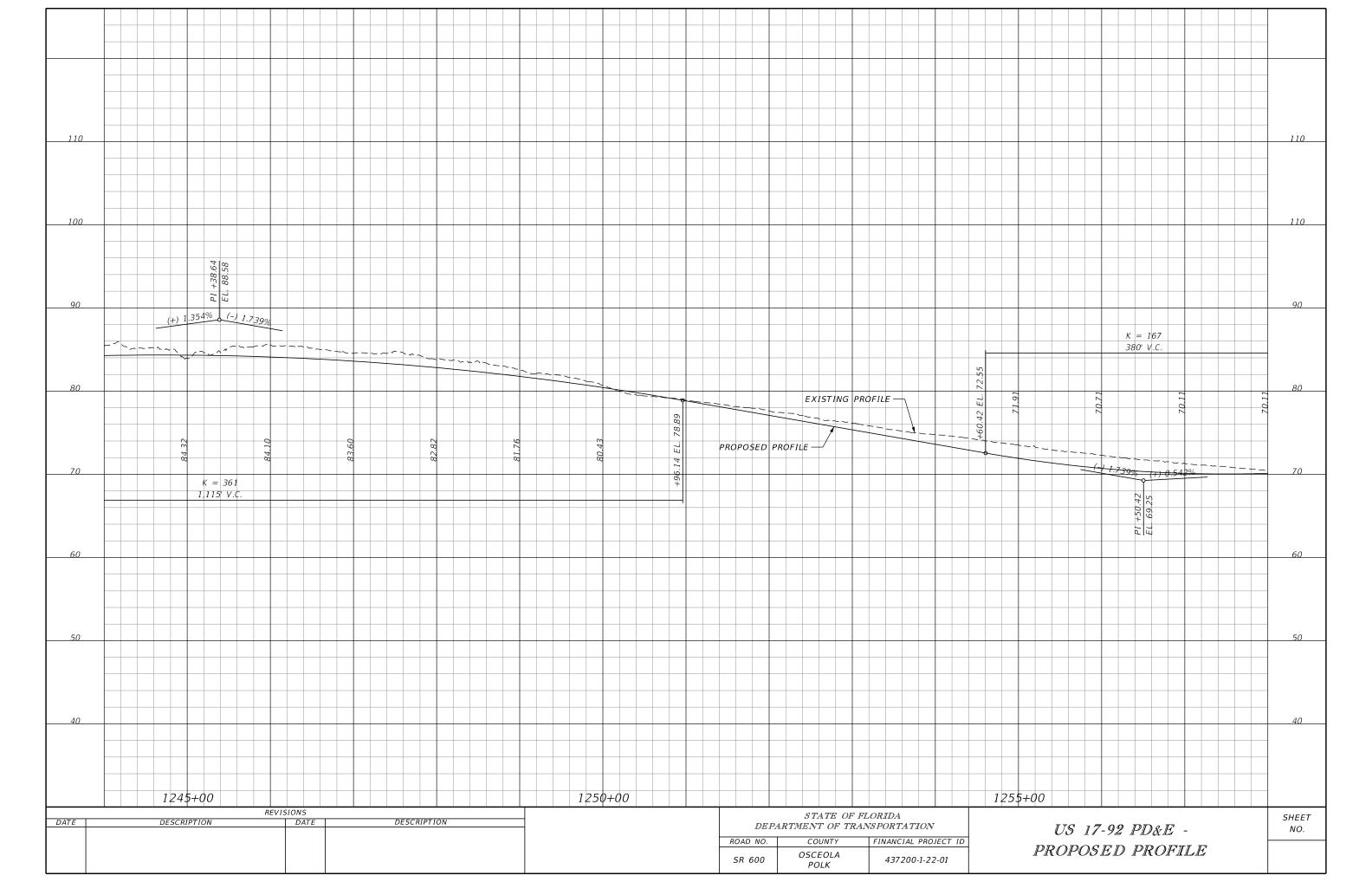


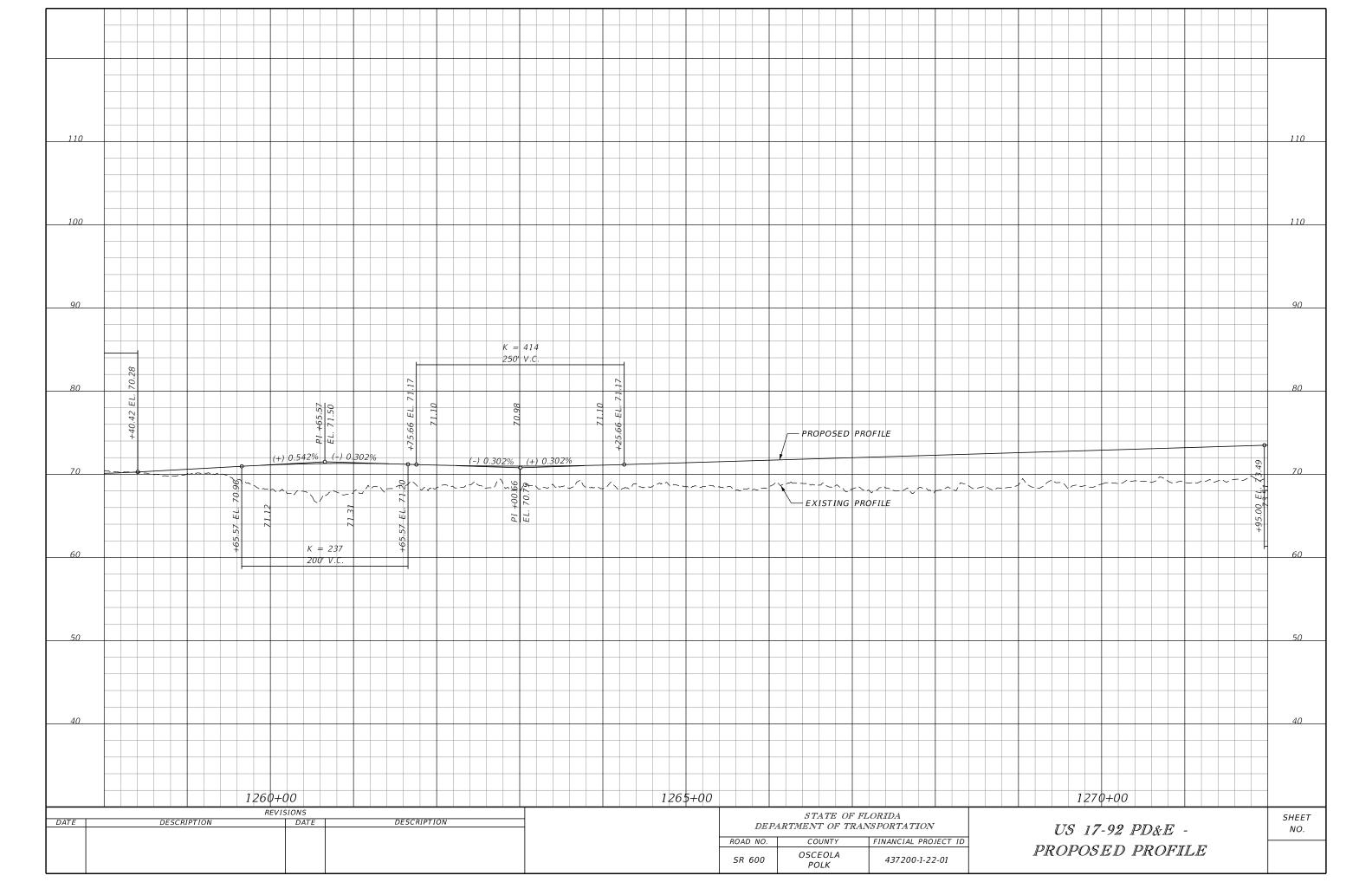


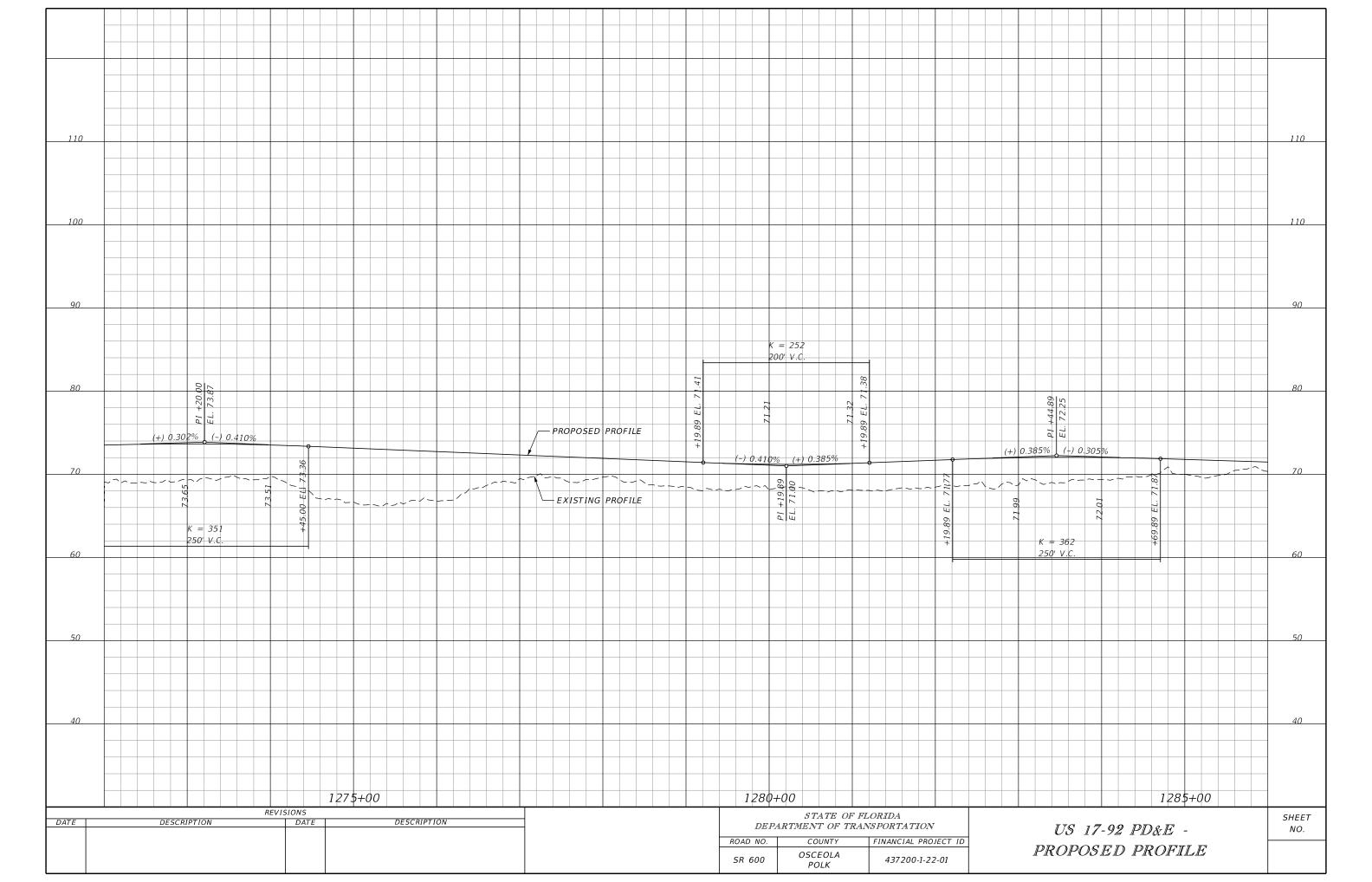


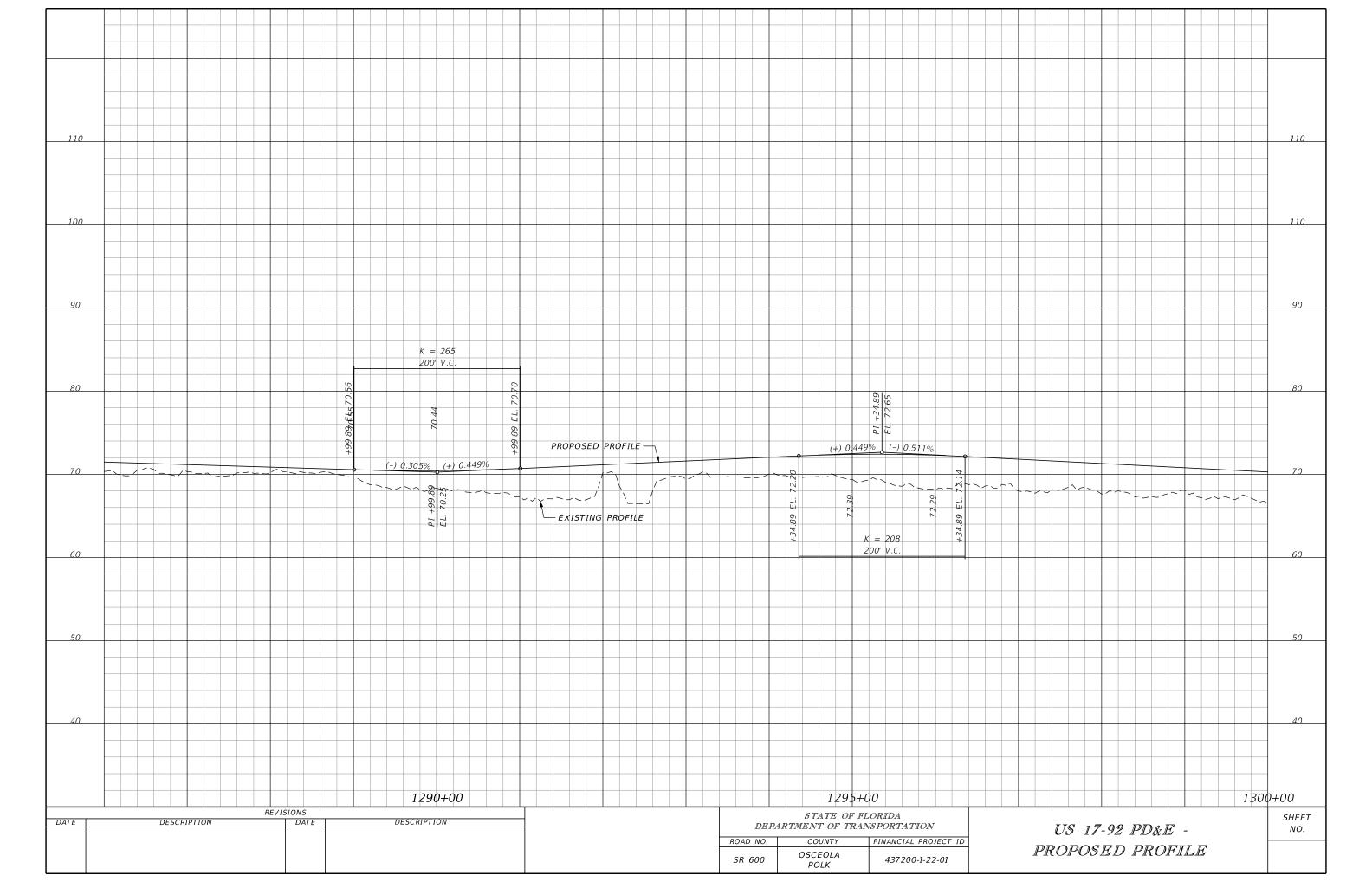


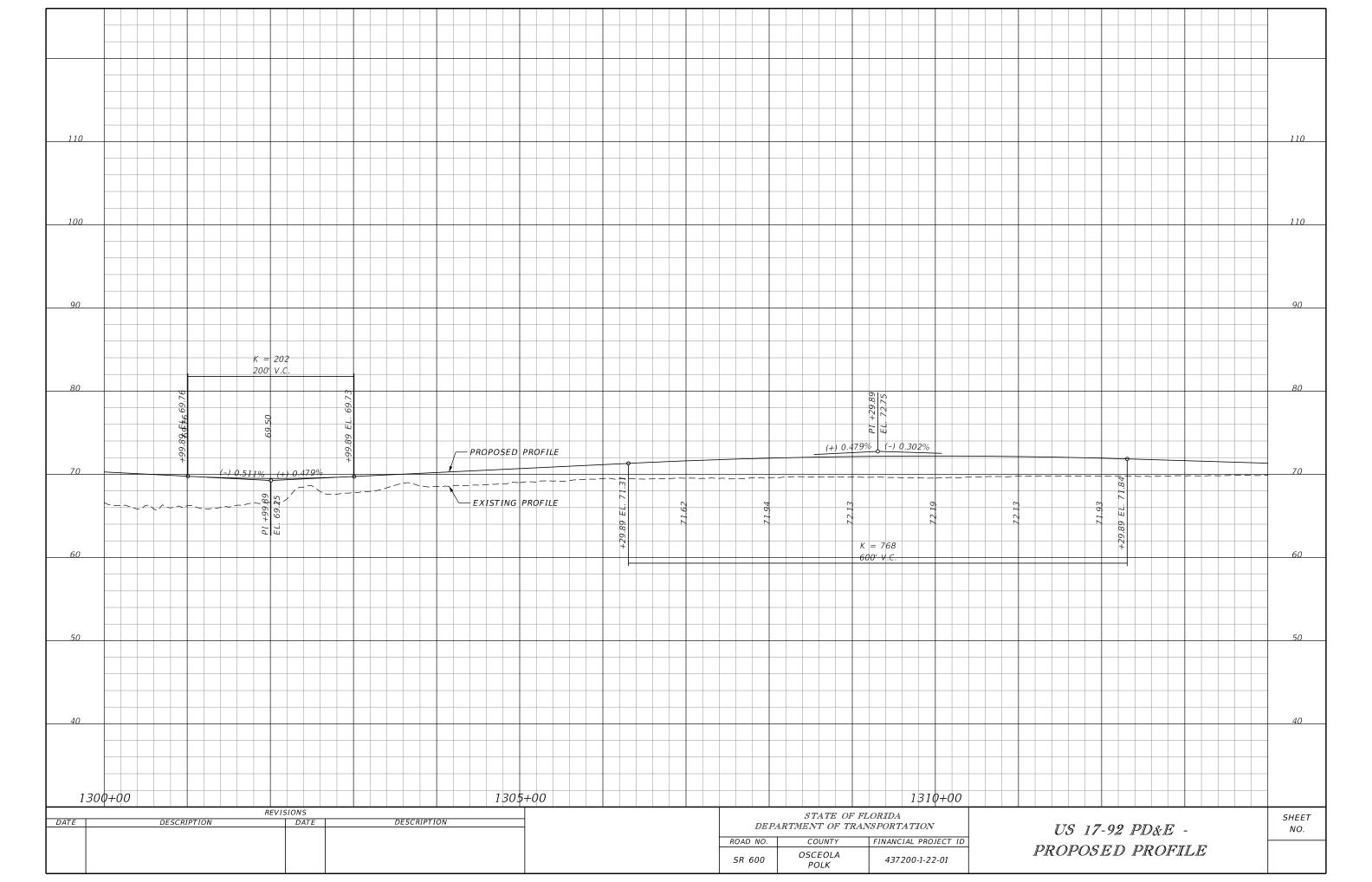


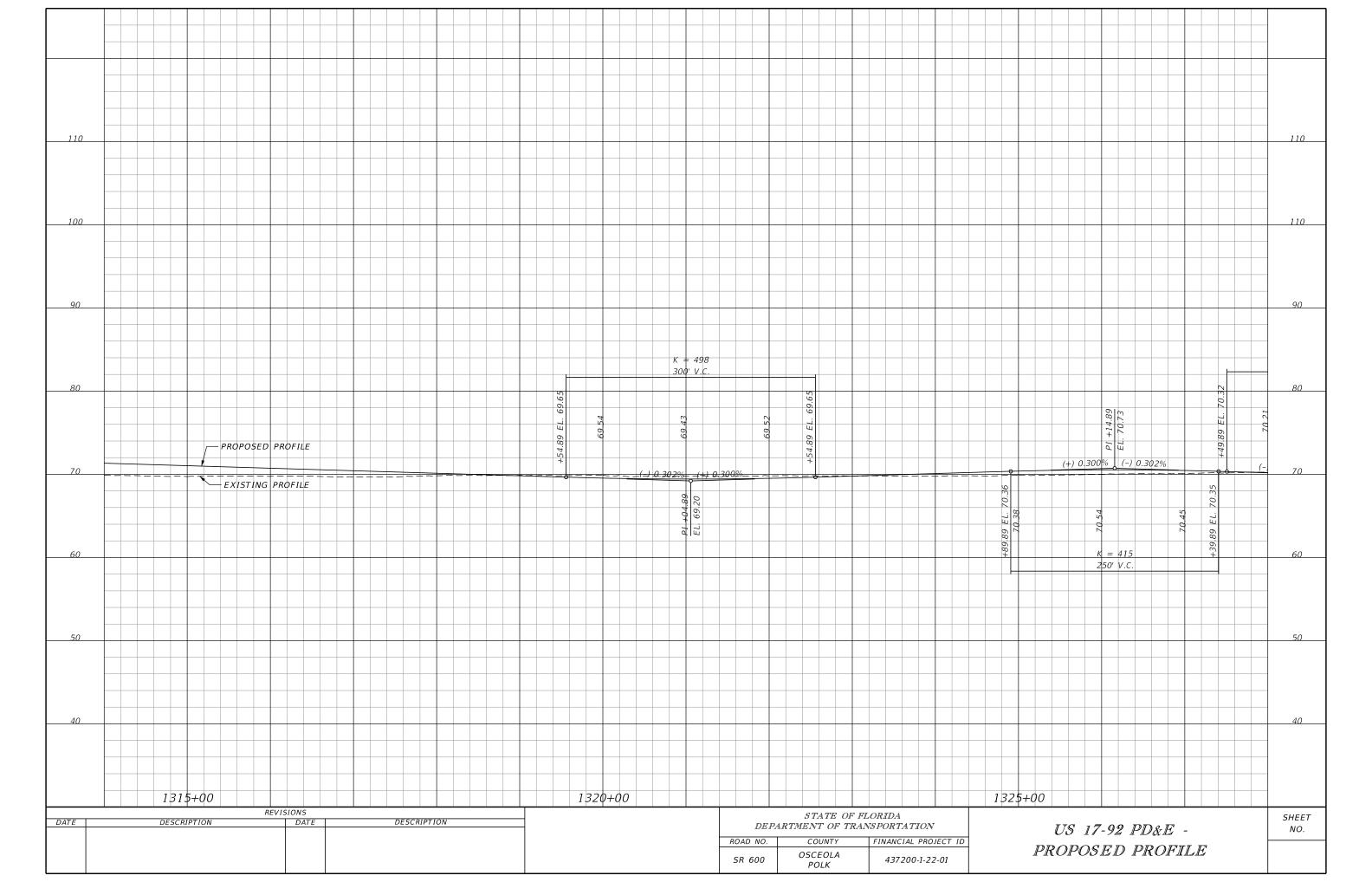


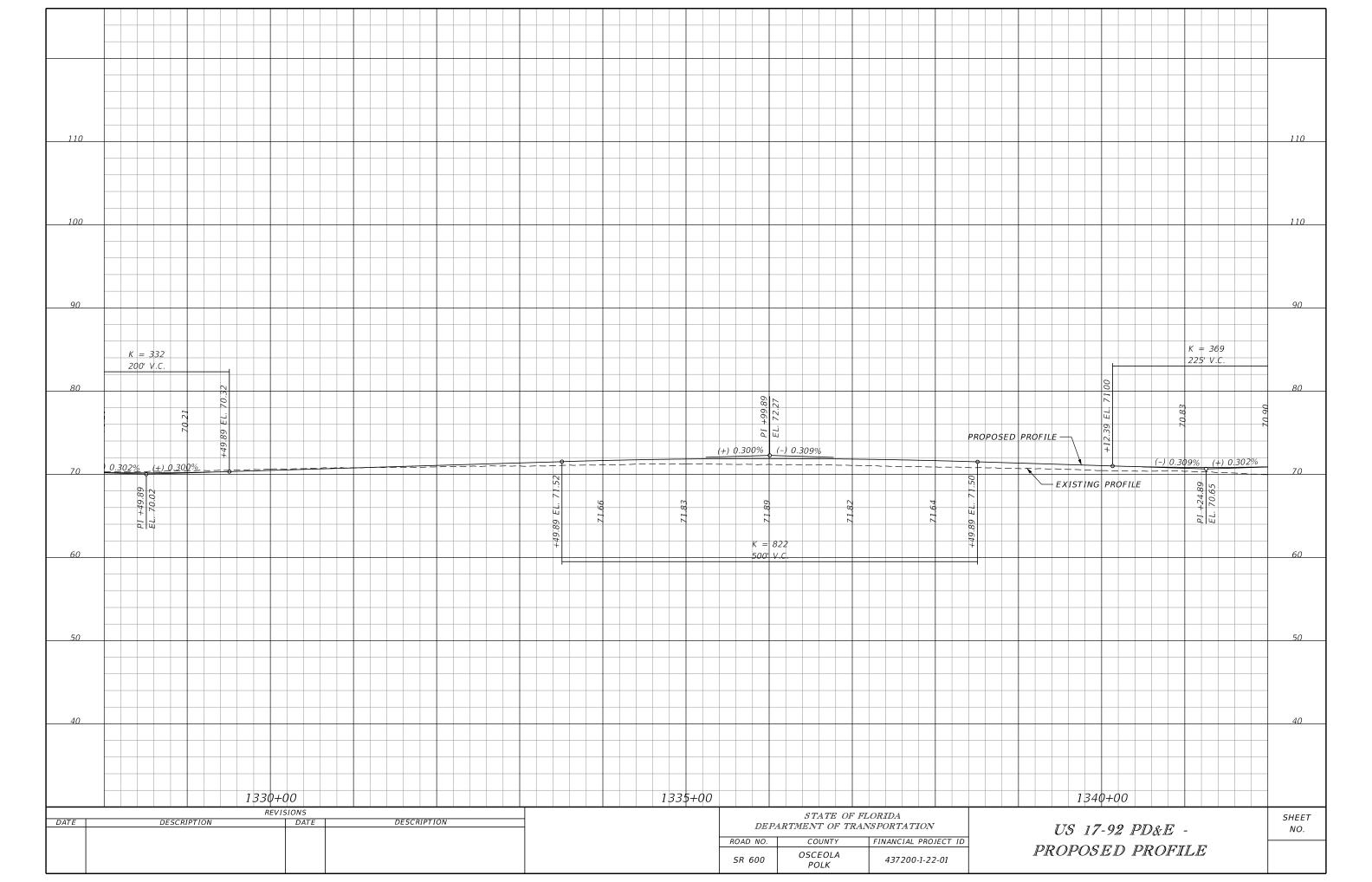


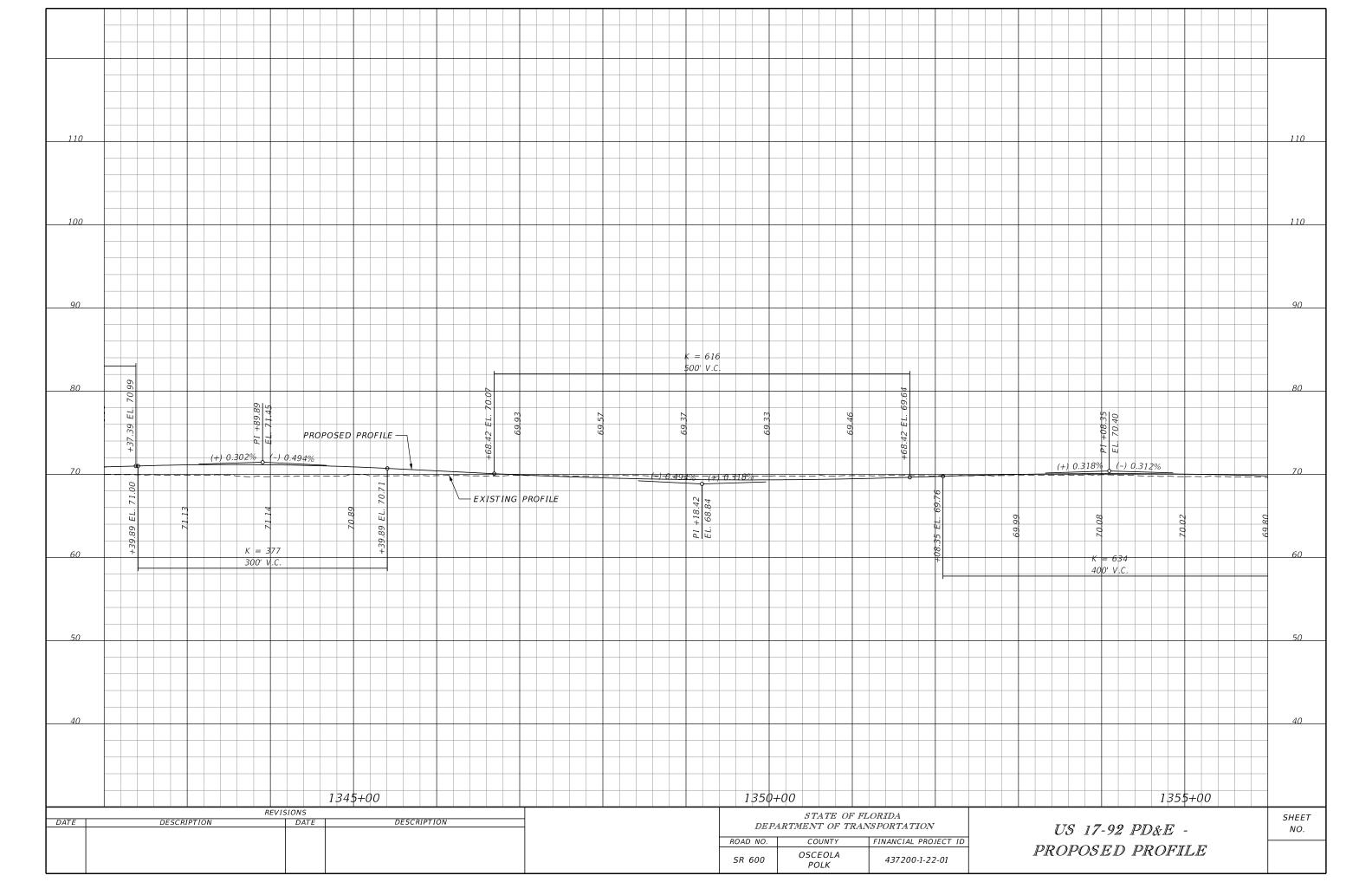


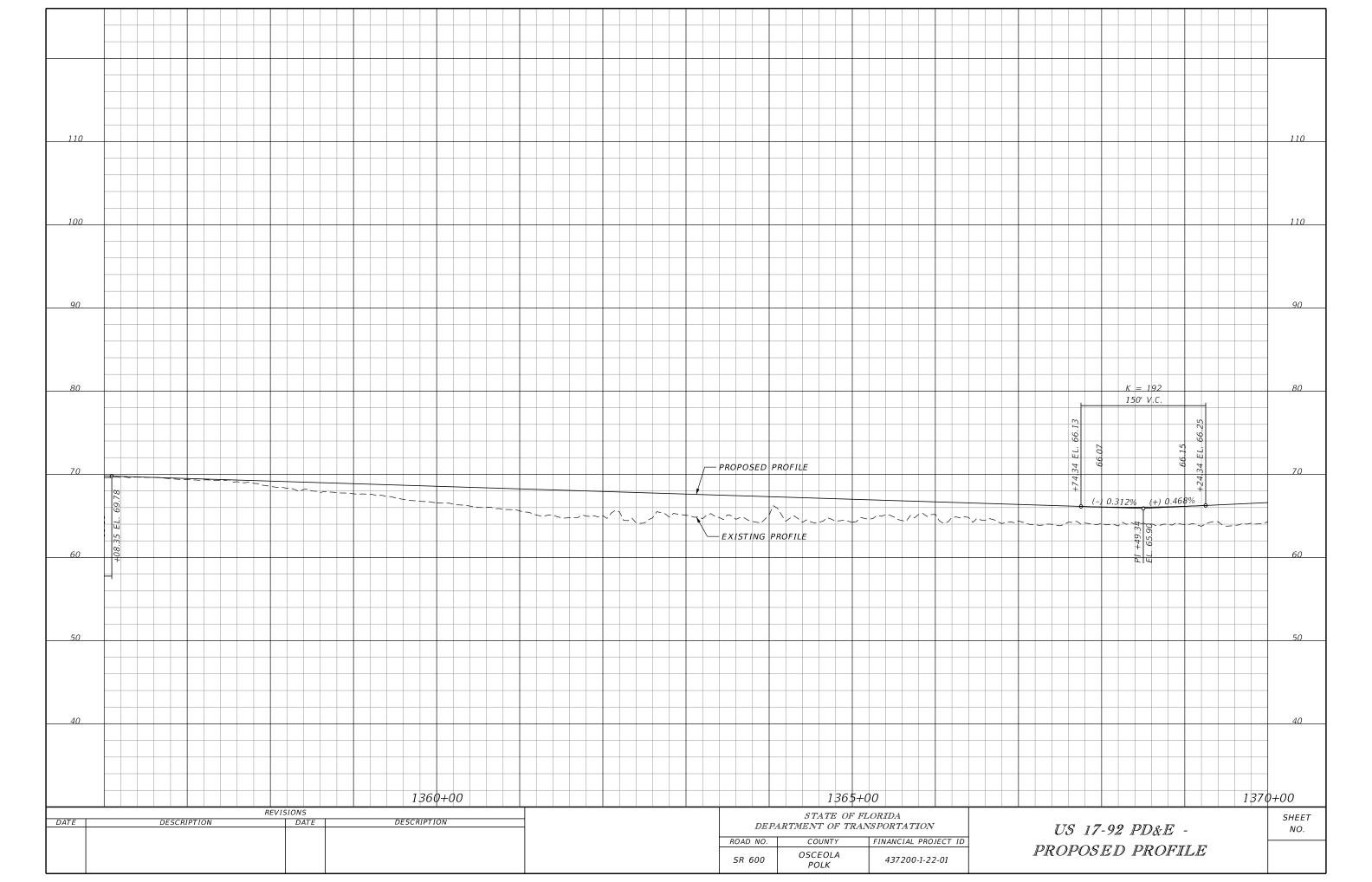


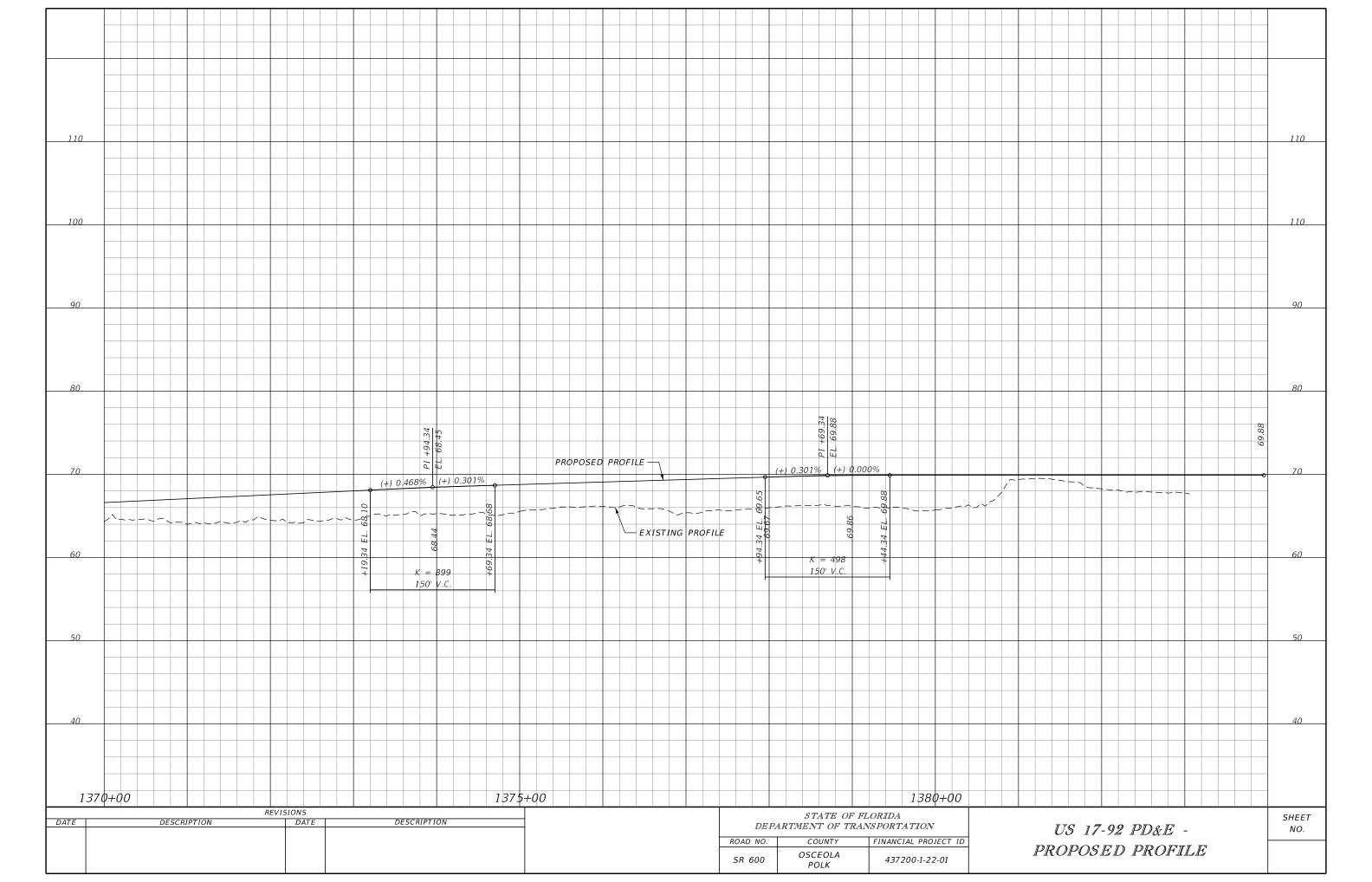


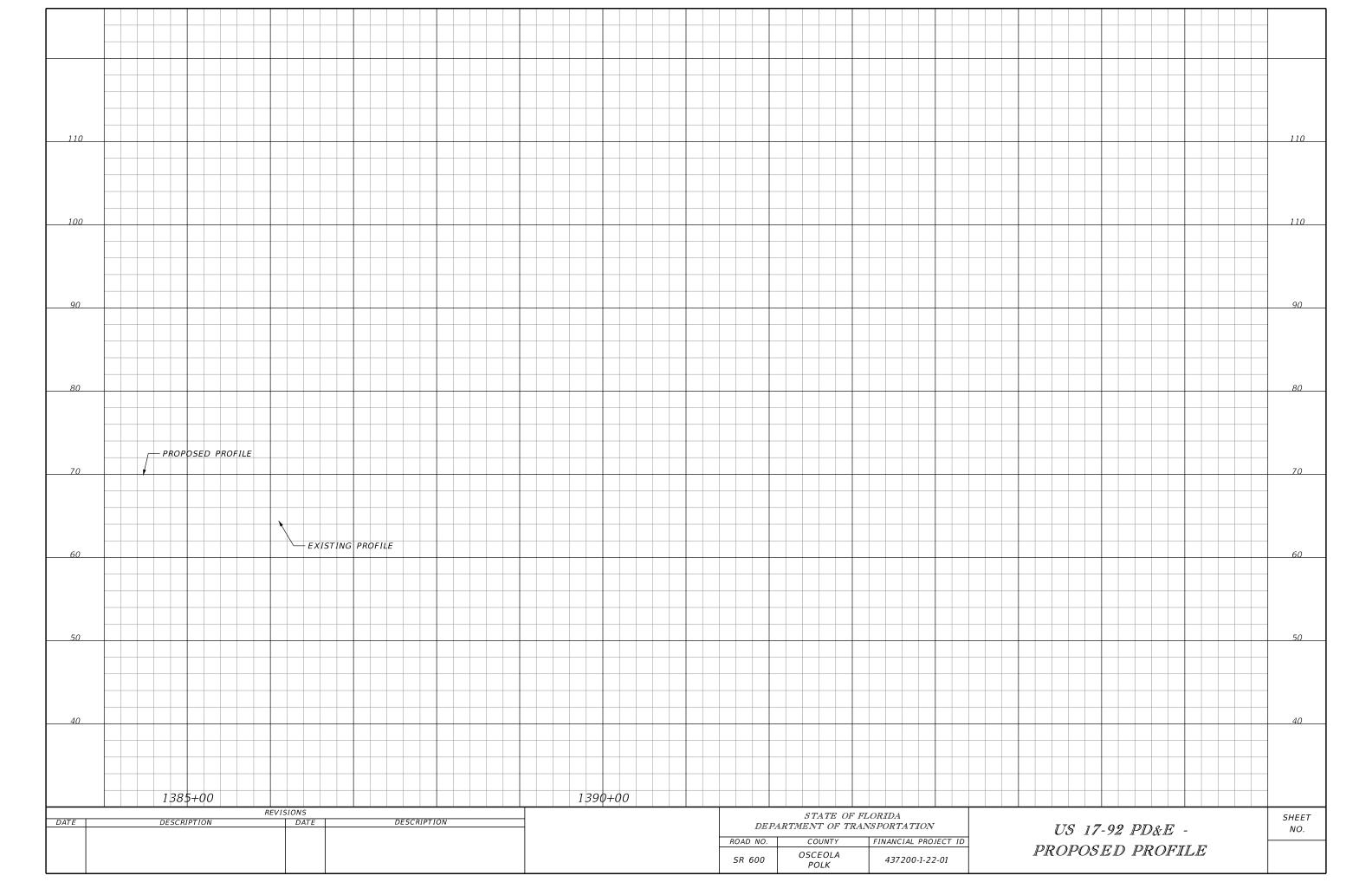












# **APPENDIX B**

# **Context Classification Request Form and Map**

### CONTEXT CLASSIFICATION REQUEST FORM

**To:** Tina Williamson AICP, Principal Planner/Growth Management Coordinator
HNTB Corporation, FDOT In-House
Consultant
719 S. Woodland Blvd, DeLand, FL 32720

386-943-5150/<u>Tina.Williamson@dot.state.fl.us</u>

From: Sigal Carmenate, Transportation Analyst

Kittelson & Associates, Inc.

225 East Robinson Street, Suite 355 Orlando, FL 32801

407-373-1154/scarmenate@kittelson.com

**RE:** Current Context Classification Request

#### Required:

City/Town: N/A County: Osceola
Road Name: US 17/92/S Orange Blossom Trail State Road Number: 600

Section Number: <u>92010000/92010100</u>

Begin Mile Point: 0.000 End Mile Point: 4.572

FM Number: <u>437200-1</u>

Date Sent: <u>07/08/20</u> Date Needed: <u>07/15/20</u>

#### LOCATION MAP MUST BE INCLUDED WITH REQUEST

#### Optional:

Suggested Classification of Applicant: N/A

List necessary description, comments, and concerns:

### **FDOT Use Only**

Current Context Class Determination: <u>C3</u>	RID:	92010000	Begin N	/lile Point:	0.000	End Mile Point:	0.536
Current Context Class Determination: <u>C3</u>	RID:	92010100	Begin N	/lile Point:	0.000	End Mile Point:	<u>0.155</u>
Current Context Class Determination: <u>C1</u>	RID	: 92010100	Begin N	/lile Point:	<u>0.155</u>	End Mile Point:	1.074
Current Context Class Determination: <u>C3</u>	C RID	: 92010100	Begin N	/lile Point:	<u>1.074</u>	End Mile Point:	1.354
Current Context Class Determination: <u>C3</u>	C RID	92010000	Begin N	/lile Point:	<u>1.915</u>	End Mile Point:	<u>2.964</u>
Current Context Class Determination: <u>C2</u>	<u>T</u> RID:	92010000	Begin N	/lile Point:	2.964	End Mile Point:	<u>3.462</u>
Current Context Class Determination: <u>C1</u>	RID	92010000	Begin N	/lile Point:	3.462	End Mile Point:	<u>3.983</u>
Current Context Class Determination: <u>C3</u>	C RID	92010000	Begin N	/lile Point:	3.983	End Mile Point:	<u>4.572</u>

Summary of Current Context Class Determination:

South Orange Blossom Trail/SR 600 from the Osceola County Line to 0.155 miles north of Sundown Drive is C3R Suburban Residential because of the predominantly single-story residential land uses along the roadway, without fronting uses, and large setbacks, and intersection density of about eight, block length of about 1,400 feet, and block perimeter of about 4,300 feet. The population and employment densities are less than one. From 0.155 miles north of Sundown Drive to Old Tampa Highway is C1 Natural because of the Upper Lakes Basin Watershed conservation area. From Old Tampa Highway to 0.091 miles south of Suwannee Avenue is C3C Suburban Commercial because of the commercial, industrial, and some residential land uses, and intersection density of about 10, with block lengths of about 2,800 feet, and a block perimeter about 3,000 feet. From 0.091 miles south of Suwannee Avenue to 0.121 miles east of Shepard Lane/Nocatee Street is C2T Rural Town within the town of Intercession City. There is a gridded network with commercial, industrial, and residential land uses, and intersection density of about 100, average block length of about 300 and population density over two. From MP 3.462 to 0.134 miles west of Avenue A is C1 because of Upper Lakes Basin Watershed conservation area. From MP 3.983 to South Poinciana Boulevard is C3C Suburban Commercial because of the industrial and commercial land uses, no fronting uses, large setbacks, and intersection density of about 40, average block length of about 1,180 feet, median block perimeter of about 6,000.

Lino Williamson	
3000	07/14/20
Tina Williamson AICP	Date
Principal Planner/Growth Management Coordinator	

<u>Please allow 10 working days</u> to process a standard review request.

In the case of multiple roadway segments, <u>please submit a separate form for each roadway</u>.

FDOT Context Classification FDOT Context Classification

## **CONTEXT CLASSIFICATION MATRIX**

Table 1 Context Classification Matrix presents a framework to determine the context classifications along state roadways. This Context Classification Matrix outlines (1) distinguishing characteristics, (2) primary measures, and (3) secondary measures.

The distinguishing characteristics give a broad description of the land use types and street patterns found within each context classification. The primary and secondary measures provide more detailed assessments of the existing or future conditions along the roadway. These measures can be evaluated through a combination of a field visit, internet-based

aerial and street view imagery, map analysis, and review of existing or future land use or existing zoning information. The Context Classification Matrix presents the primary and secondary measures thresholds for the eight context classifications.

Appendix A illustrates the eight FDOT context classifications through case studies. These case studies present examples of real-world values for the primary and secondary measures that determine a roadway's context classification.

TABLE 1 CO	ONTEXT CLASSIFICATION MATRIX	(2) Primary Measures									(3) Secondary Measures			
						Location of	Roadway Cor	nectivity		Allowed	Allowed			
		Land Use	Building Height	Building Placement	Fronting Uses	Off-street Parking	Intersection Density	Block Perimeters	Block Length	Residential Density	Office/ Retail Density	Population Density	Employment Density	
Context Classification	(1) Distinguishing Characteristics	Description	Floor Levels	Description	Yes/No	Description	Intersections/ Square Mile	Feet	Feet	Dwelling Units/ Acre	Floor-Area Ratio (FAR)	Persons/Acre	Jobs/Acre	
C1-Natural	Lands preserved in a natural or wilderness condition, including lands unsuitable for settlement due to natural conditions.	Conservation Land, Open Space, or Park	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
C2-Rural	Sparsely settled lands; may include agricultural land, grassland, woodland, and wetlands.	Agricultural or Single-Family Residential	1 to 2	Detached buildings with no consistent pattern of setbacks	No	N/A	<20	N/A	N/A	<1	N/A	<2	N/A	
C2T-Rural Town	Small concentrations of developed areas immediately surrounded by rural and natural areas; includes many historic towns.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Industrial	1 to 2	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	>0.25	N/A	>2	
C3R-Suburban Residential	Mostly residential uses within large blocks and a disconnected or sparse roadway network.	Single-Family or Multi-Family Residential	1 to 2, with some 3	Detached buildings with medium (20' to 75') front setbacks	No	Mostly in front; occasionally in rear or side	<100	N/A	N/A	1 to 8	N/A	N/A	N/A	
C3C-Suburban Commercial	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.	Retail, Office, Multi- Family Residential, Institutional, or Industrial	1 (retail uses) and 1 to 4 (office uses)	Detached buildings with large (>75') setbacks on all sides	No	Mostly in front; occasionally in rear or side		>3,000	>660	N/A	<0.75	N/A	N/A	
C4-Urban General	Mix of uses set within small blocks with a well-connected roadway network. May extend long distances. The roadway network usually connects to residential neighborhoods immediately along the corridor or behind the uses fronting the roadway.	Single-Family or Multi-Family Residential, Institutional, Neighborhood Scale Retail, or Office	taller buildings	Both detached and attached buildings with no setbacks or up to medium (<75') front setbacks	Yes	Mostly on side or rear; occasionally in front	>100	<3,000	<500	>4	N/A	>5	>5	
C5-Urban Center	Mix of uses set within small blocks with a well-connected roadway network. Typically concentrated around a few blocks and identified as part of a civic or economic center of a community, town, or city.	Retail, Office, Single-Family or Multi-Family Residential, Institutional, or Light Industrial	1 to 5, with some taller buildings	Both detached and attached buildings with no or shallow (<20') front setbacks	Yes	Mostly on side or rear; occasionally in front, or in shared off-site parking facilities	>100	<2,500	<500	>8	>0.75	>10	>20	
C6-Urban Core	Areas with the highest densities and building heights, and within FDOT classified Large Urbanized Areas (population	Retail, Office, Institutional, or	>4, with some shorter buildings	Mostly attached buildings with no or	Yes	Side or rear; often in shared	>100	<2,500	<660	>16	>2	>20	>45	

More information on measures with undefined thresholds (N/As) are included in Appendix B. The thresholds presented in Table 1 are based on the following sources, with modifications made based on Florida case studies:

>1,000,000). Many are regional centers and destinations.

are within a well-connected roadway network.

Buildings have mixed uses, are built up to the roadway, and

Multi-Family

Residential

off-site garage

parking

 $_{4}$ 

minimal (<10') front

setbacks

<sup>1) &</sup>lt;u>2008 Smart Transportation Guidebook: Planning and Designing Highways and Streets that Support Sustainable and Livable Communities</u>, New Jersey Department of Transportation and Pennsylvania Department of Transportation;

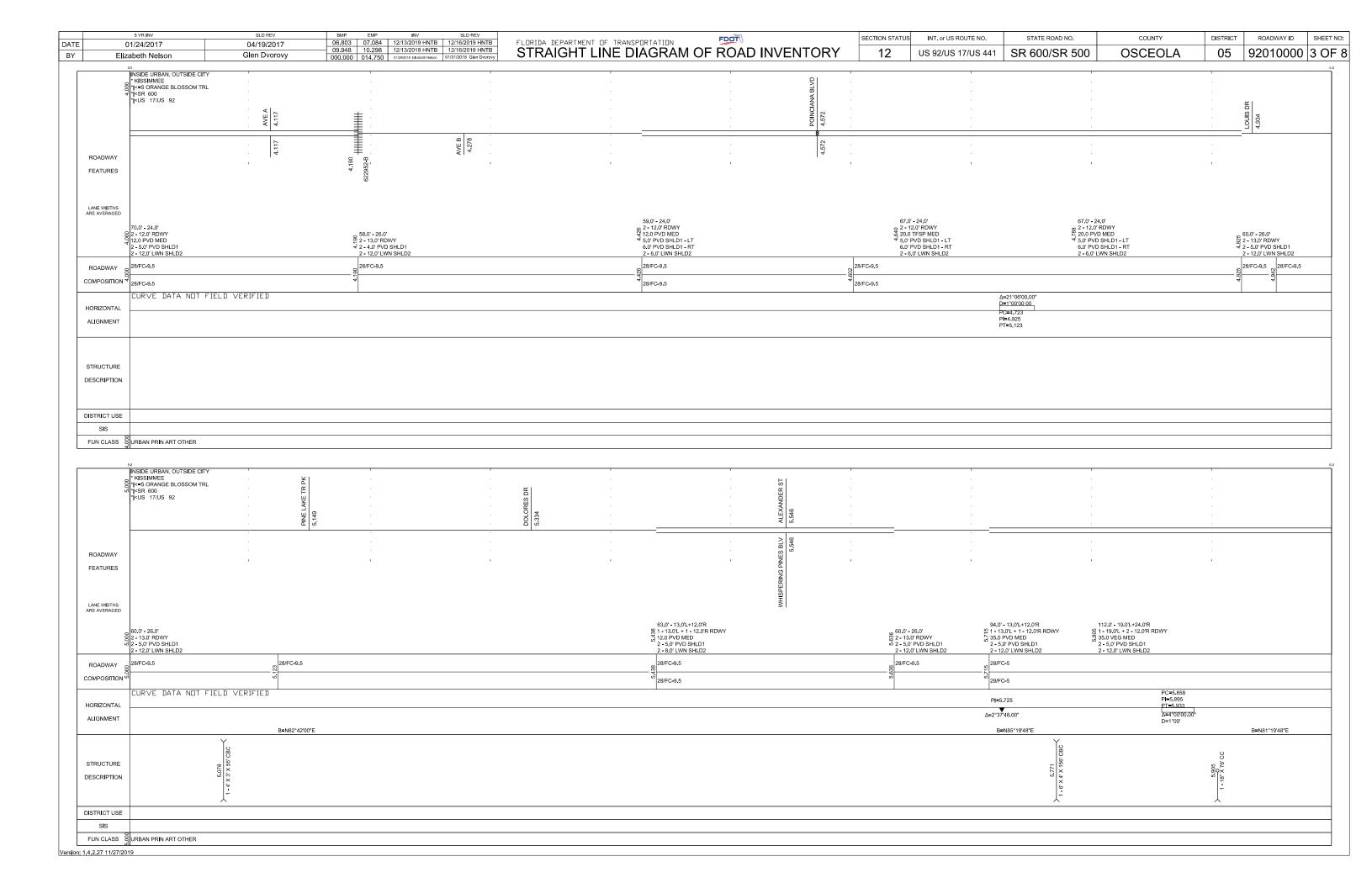
<sup>2) 2012</sup> Florida TOD Guidebook, Florida Department of Transportation;

<sup>3) 2009</sup> SmartCode Version 9.2., Duany, Andres, Sandy Sorlien, and William Wright; and

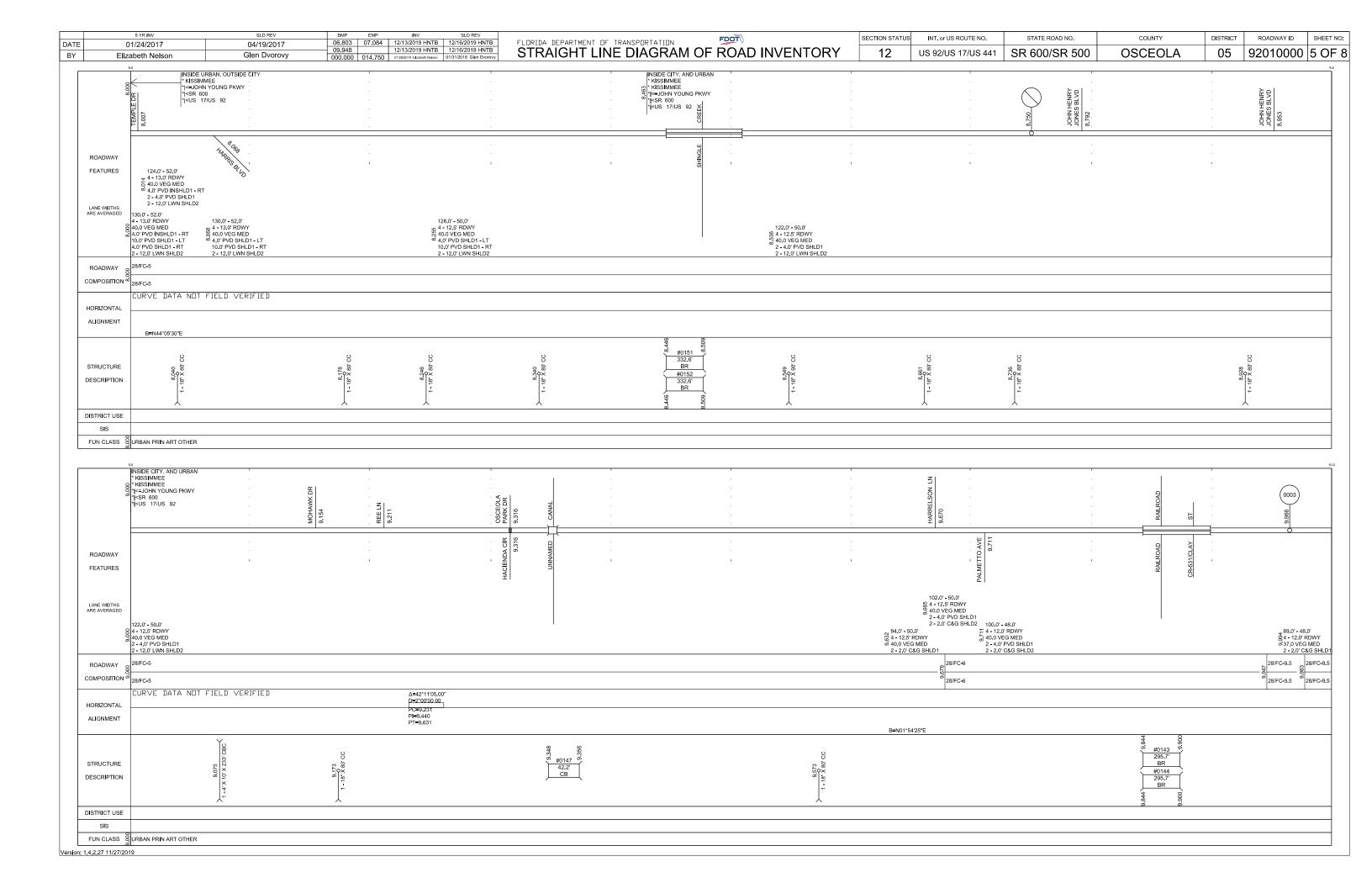
<sup>4) 2010</sup> Designing Walkable Urban Thoroughfares: A Context Sensitive Approach, Institute of Transportation Engineers and Congress for the New Urbanism.

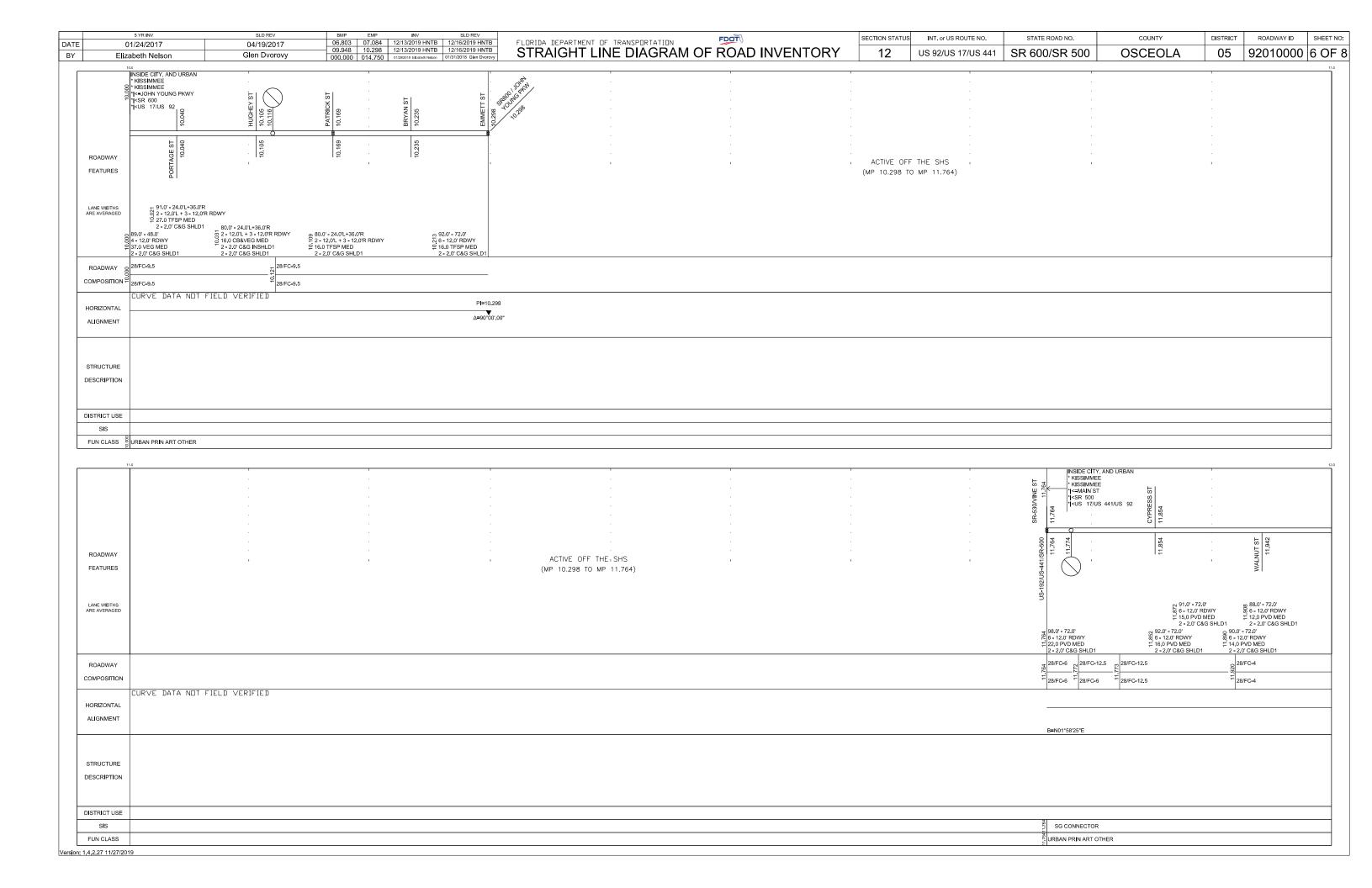
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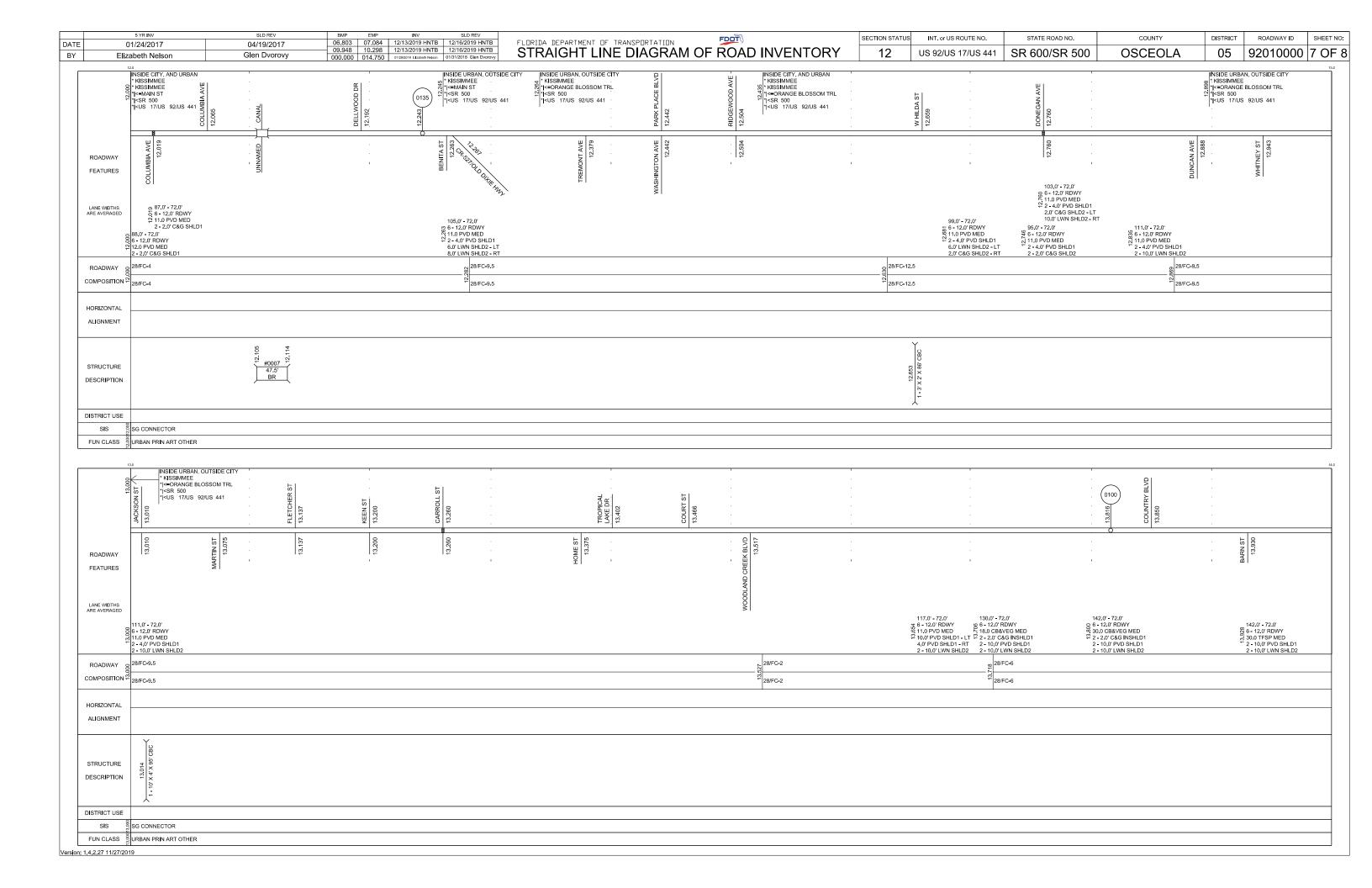
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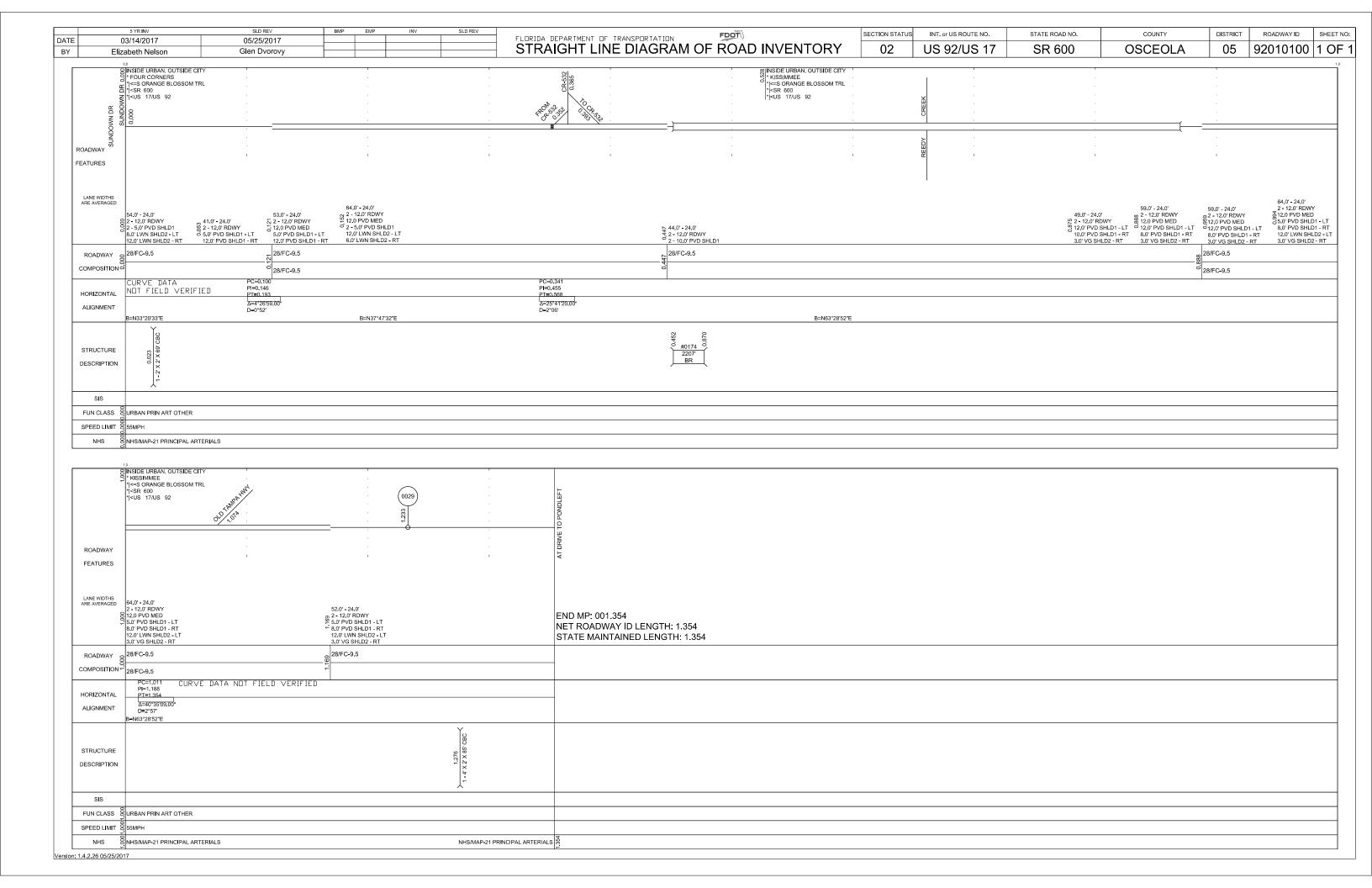
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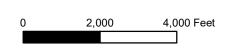
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US 17/92/SR 600/S Orange Blossom Trail, Osceola County

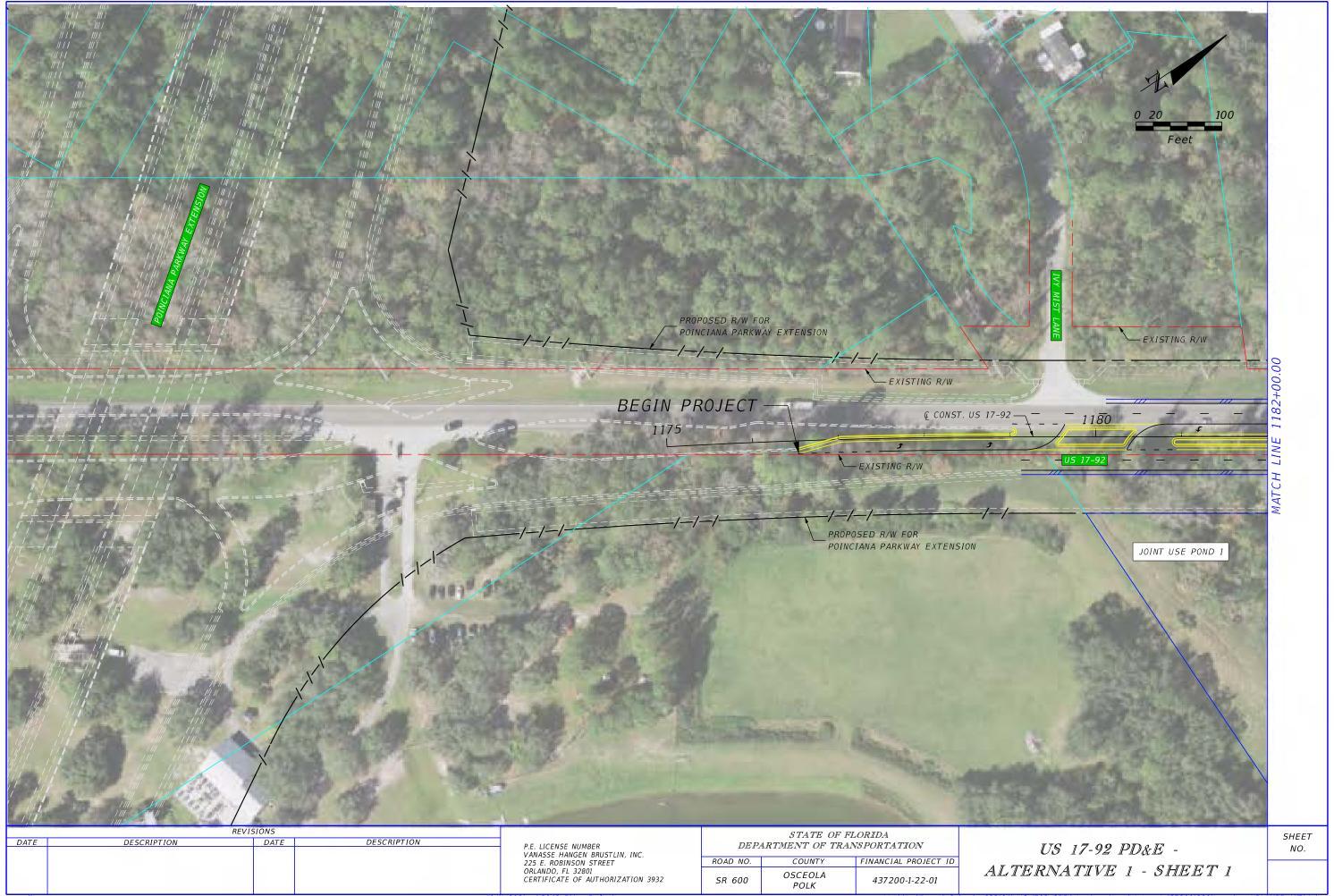
Current Context Classification 07/14/20



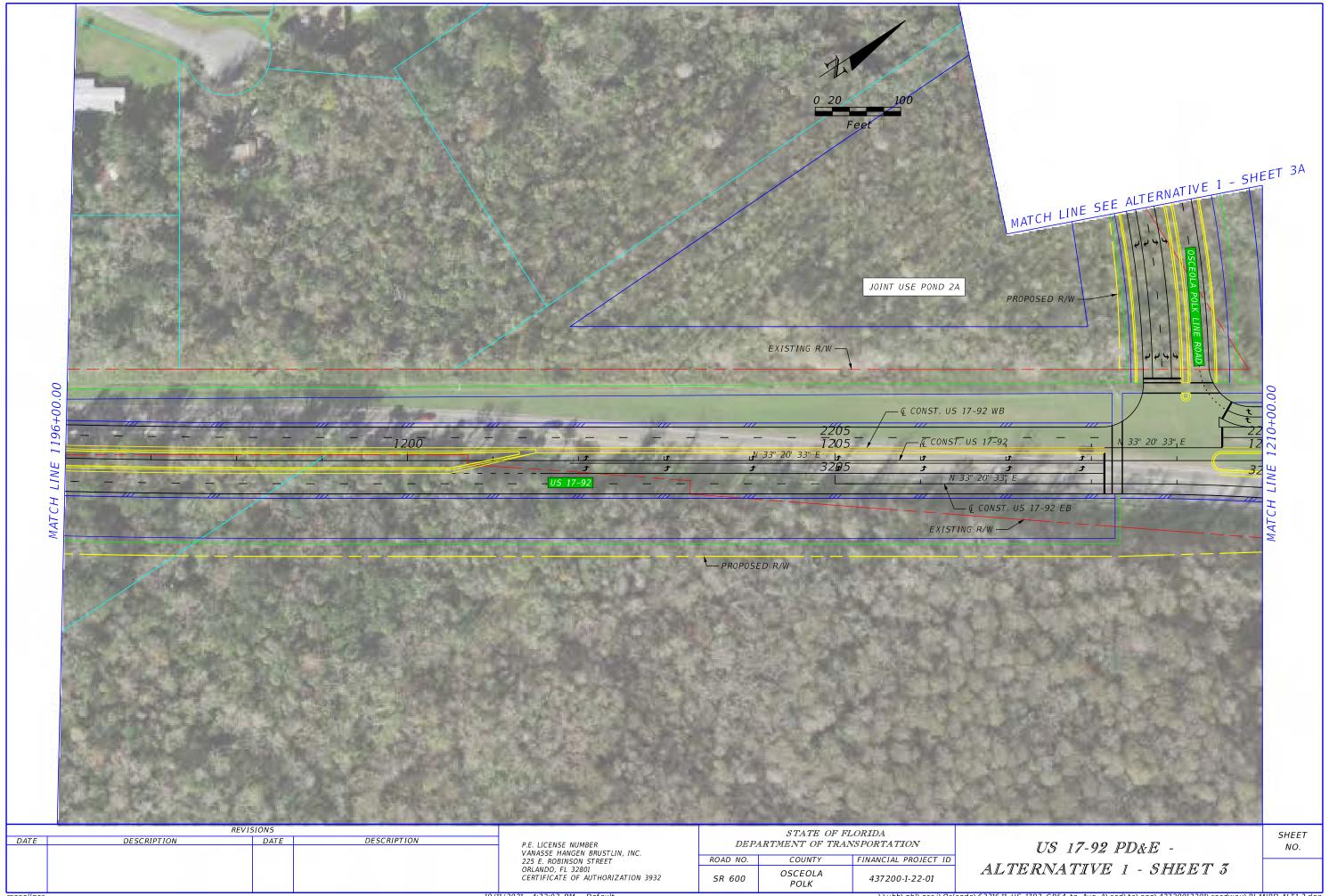


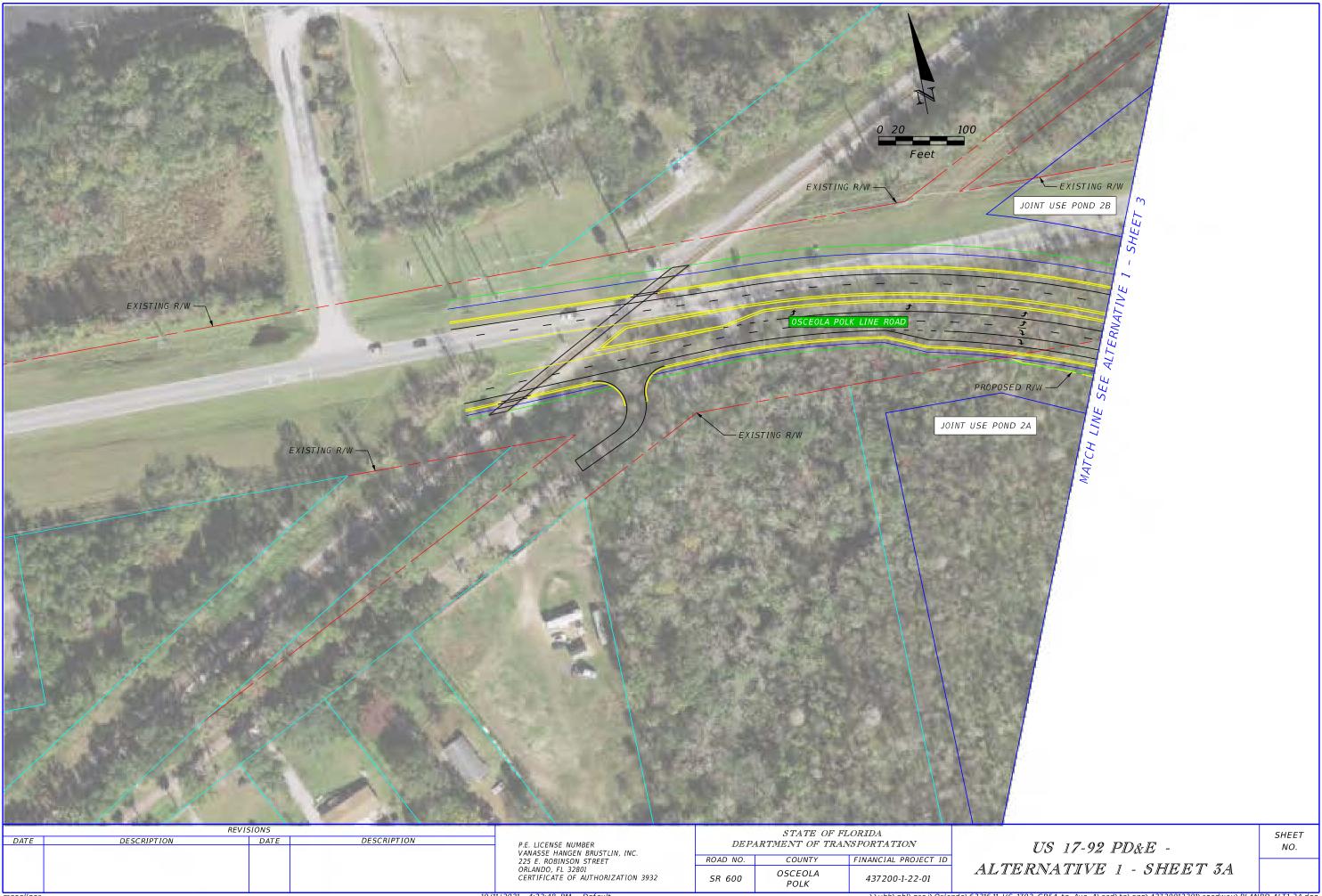
# **APPENDIX C**

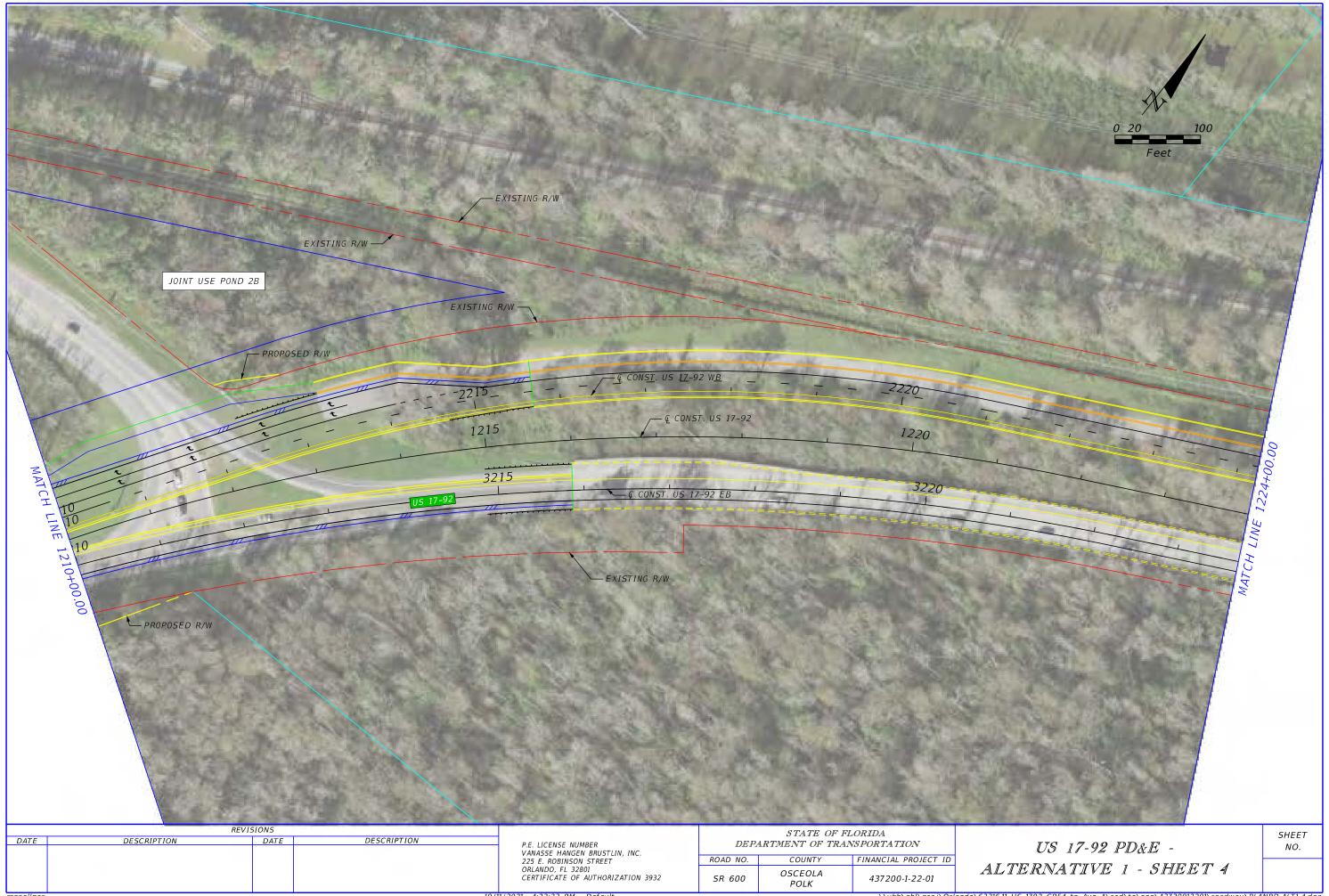
# **Alternatives 1-3 Concept Plan Sets**

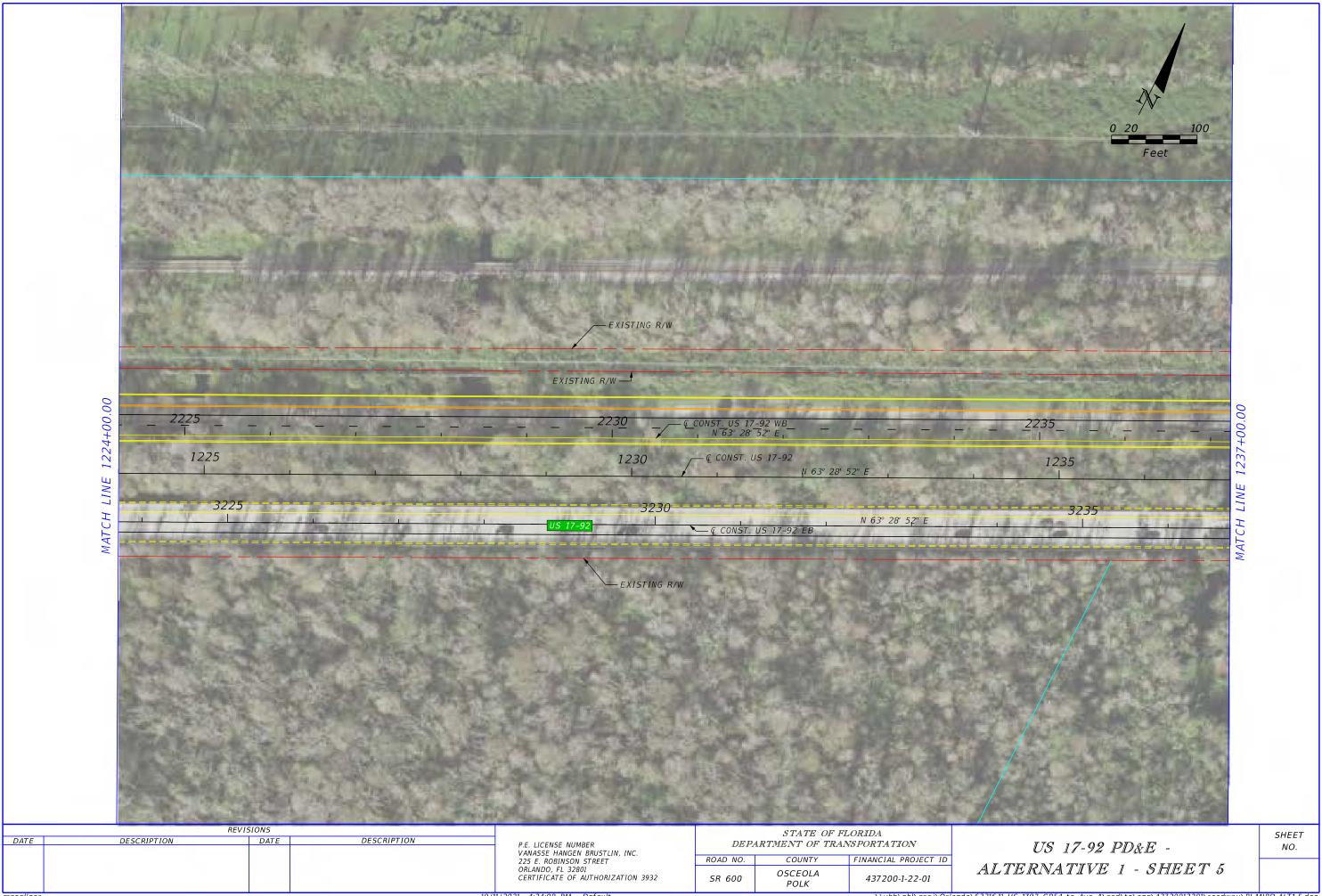


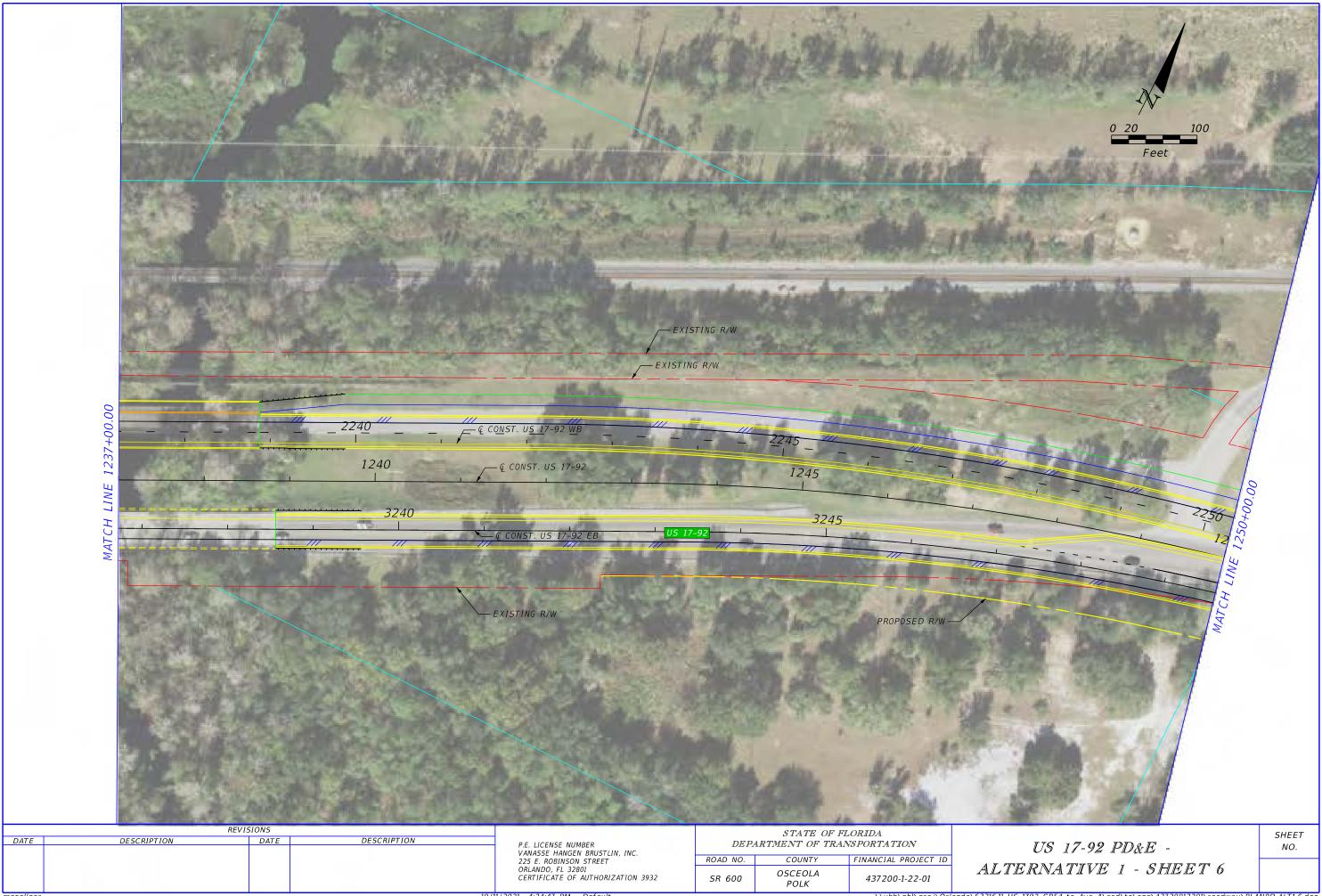


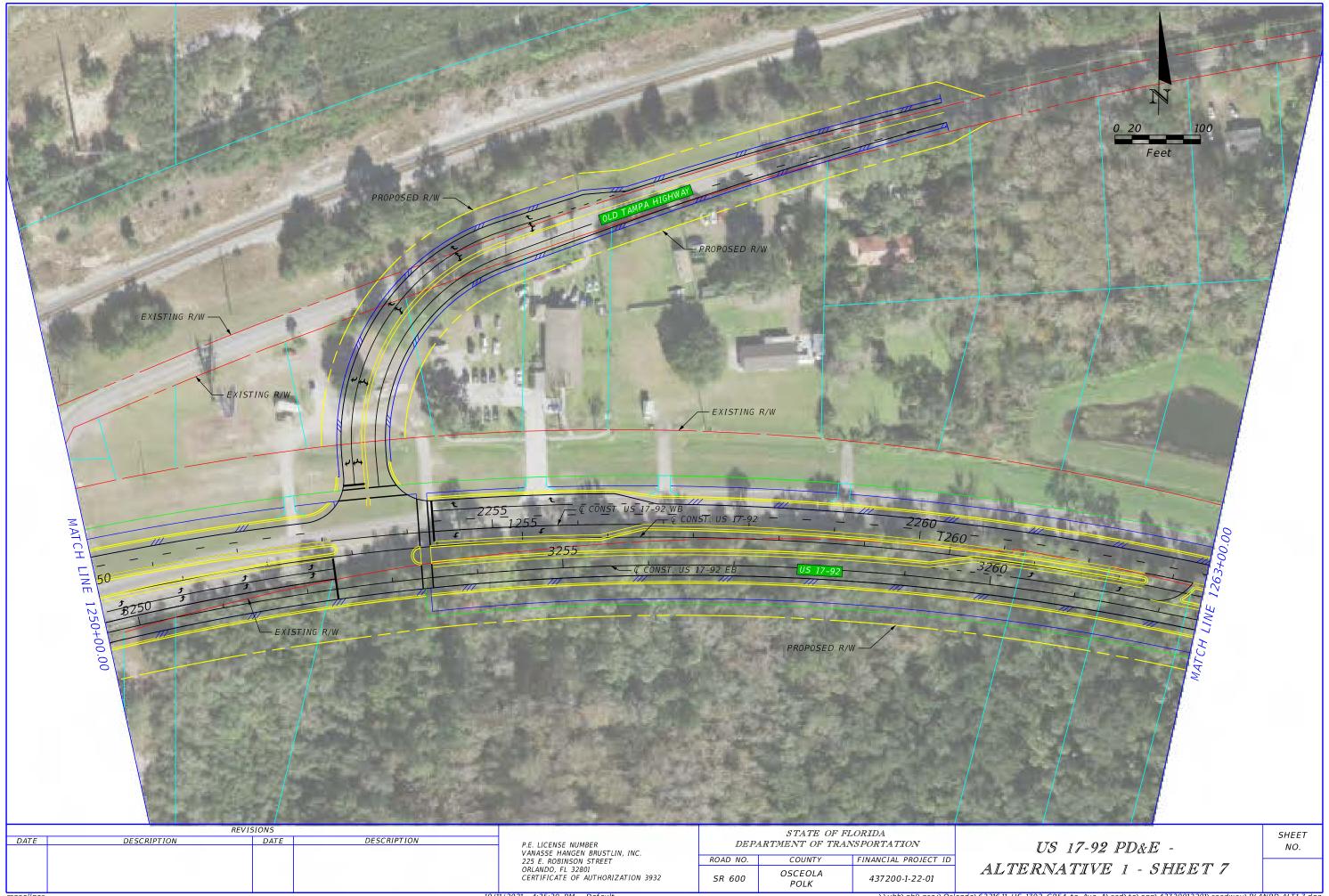


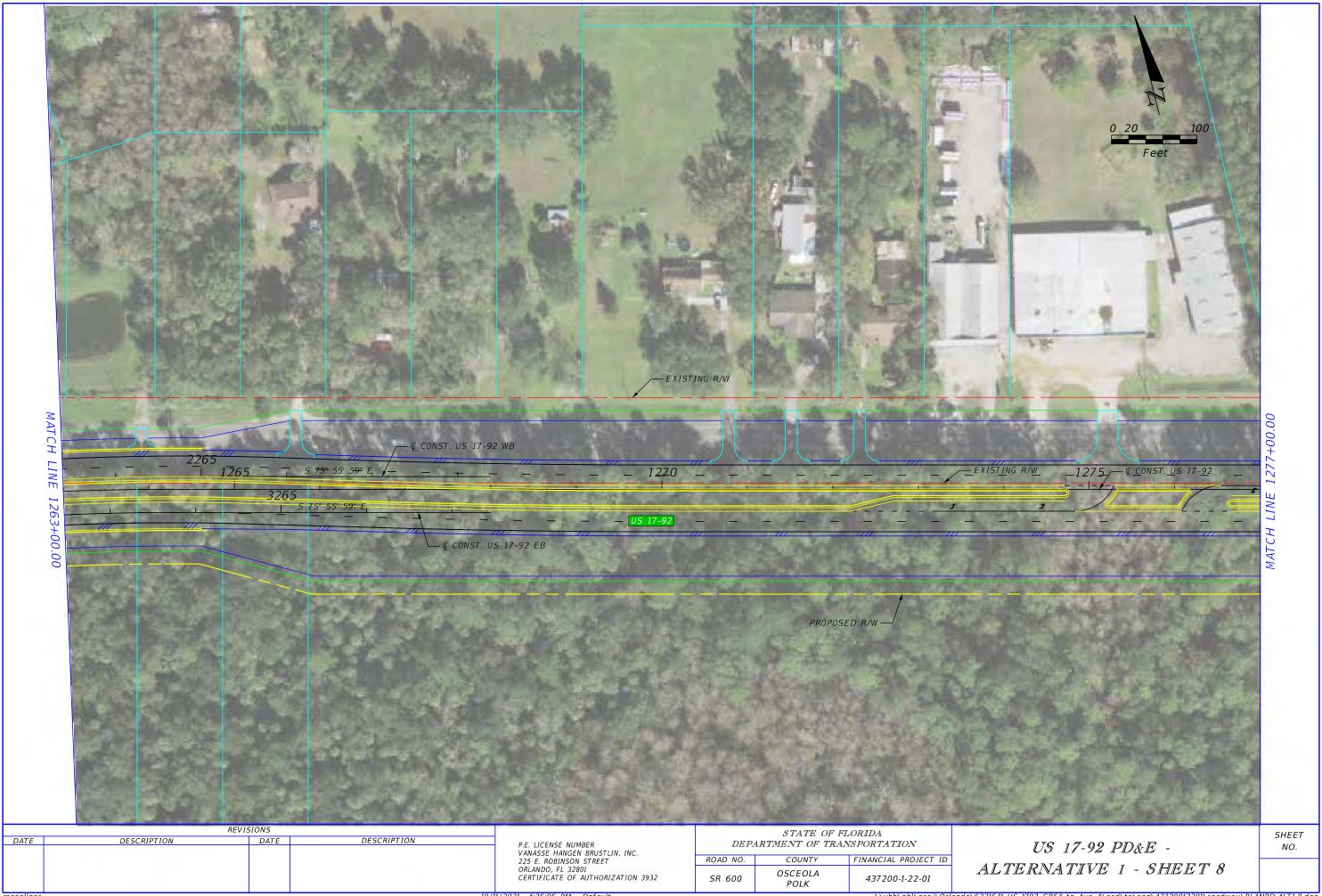


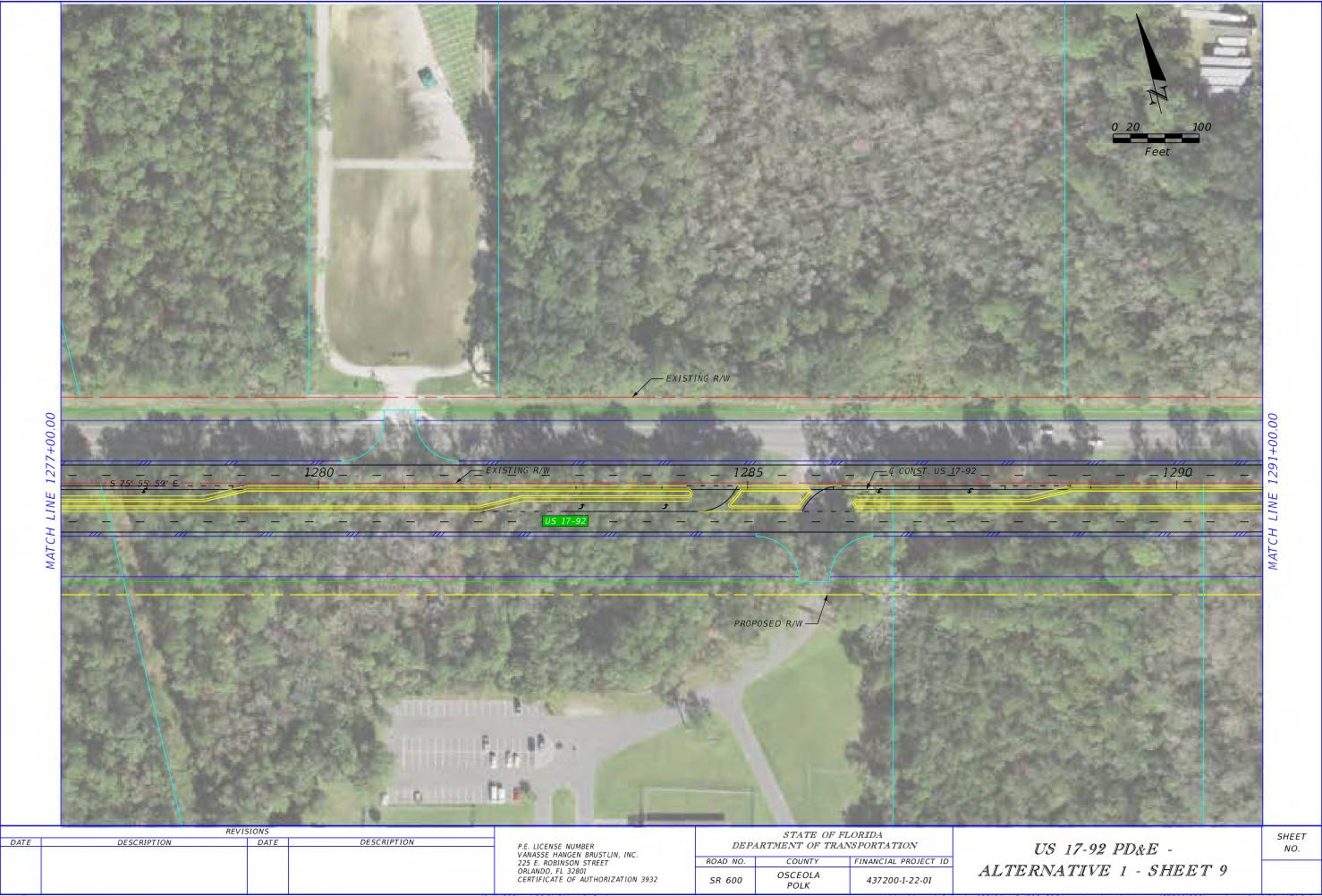


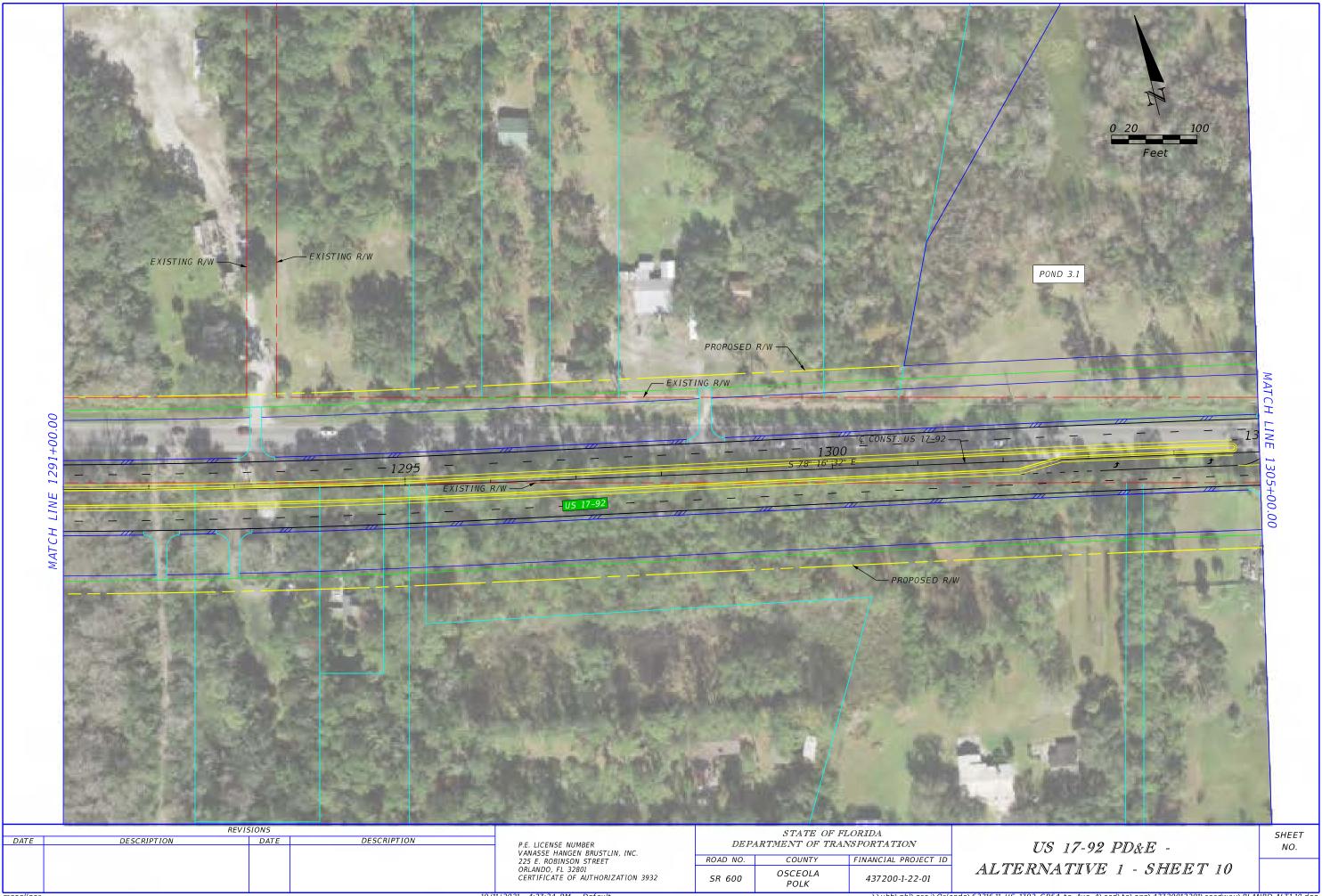


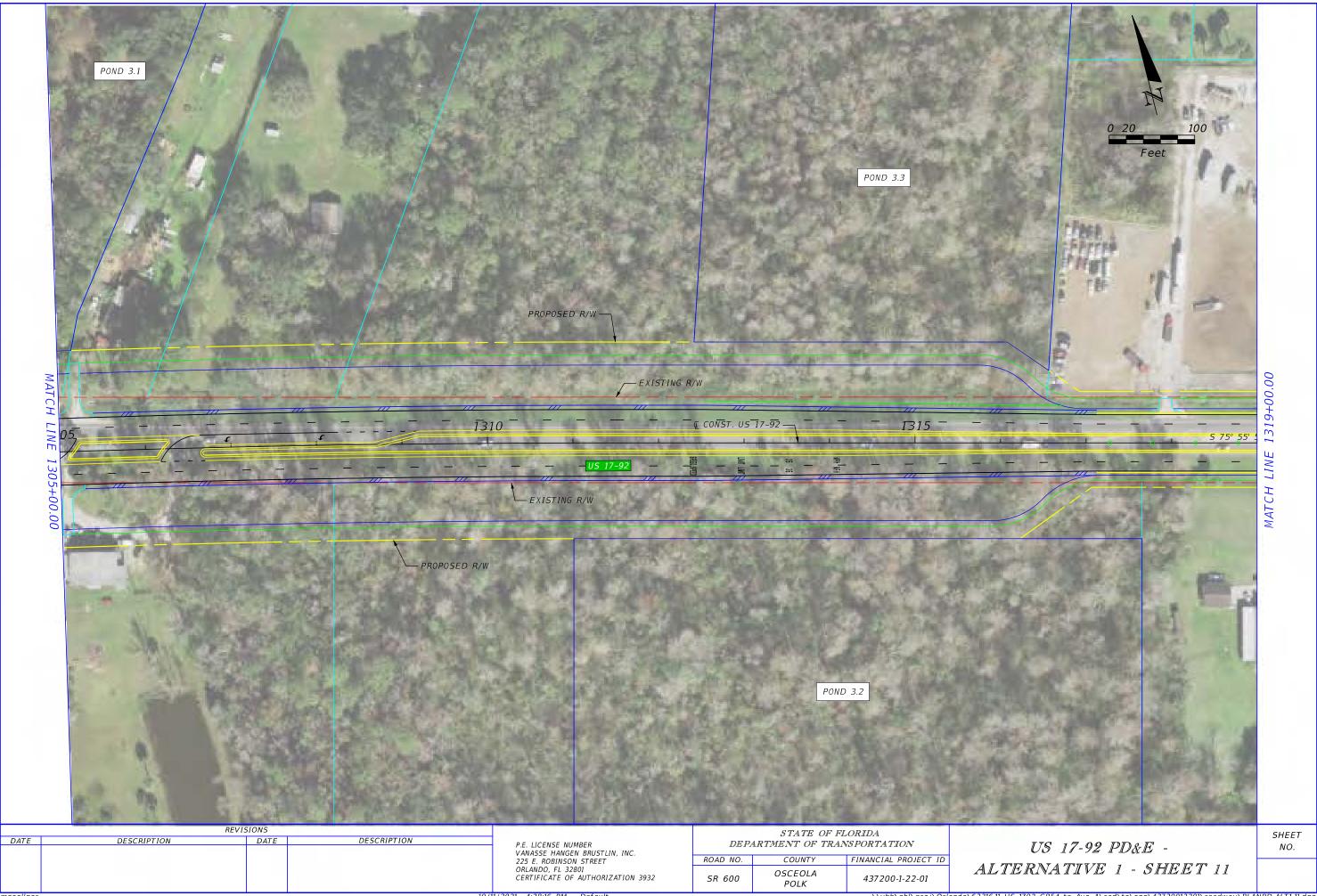






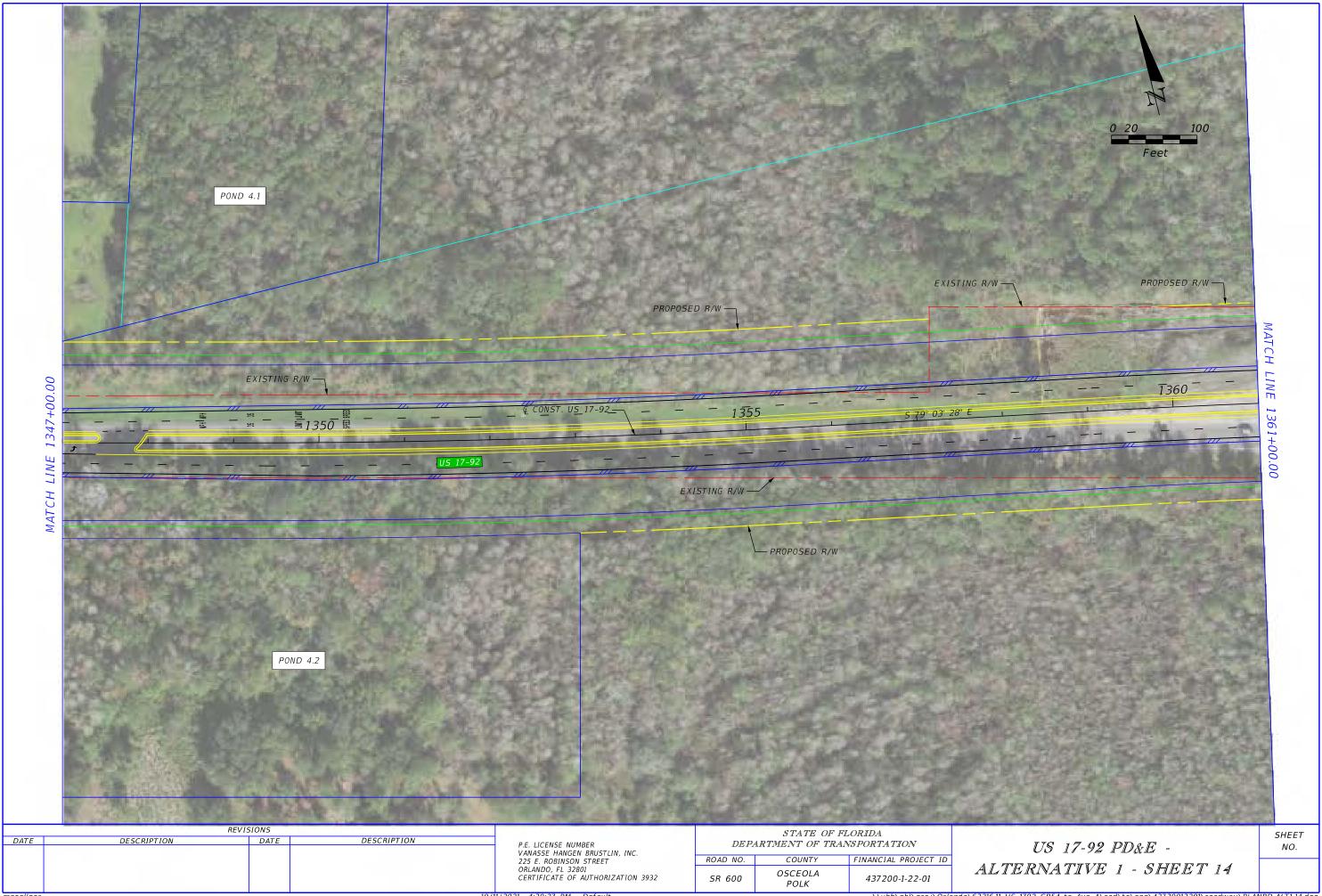




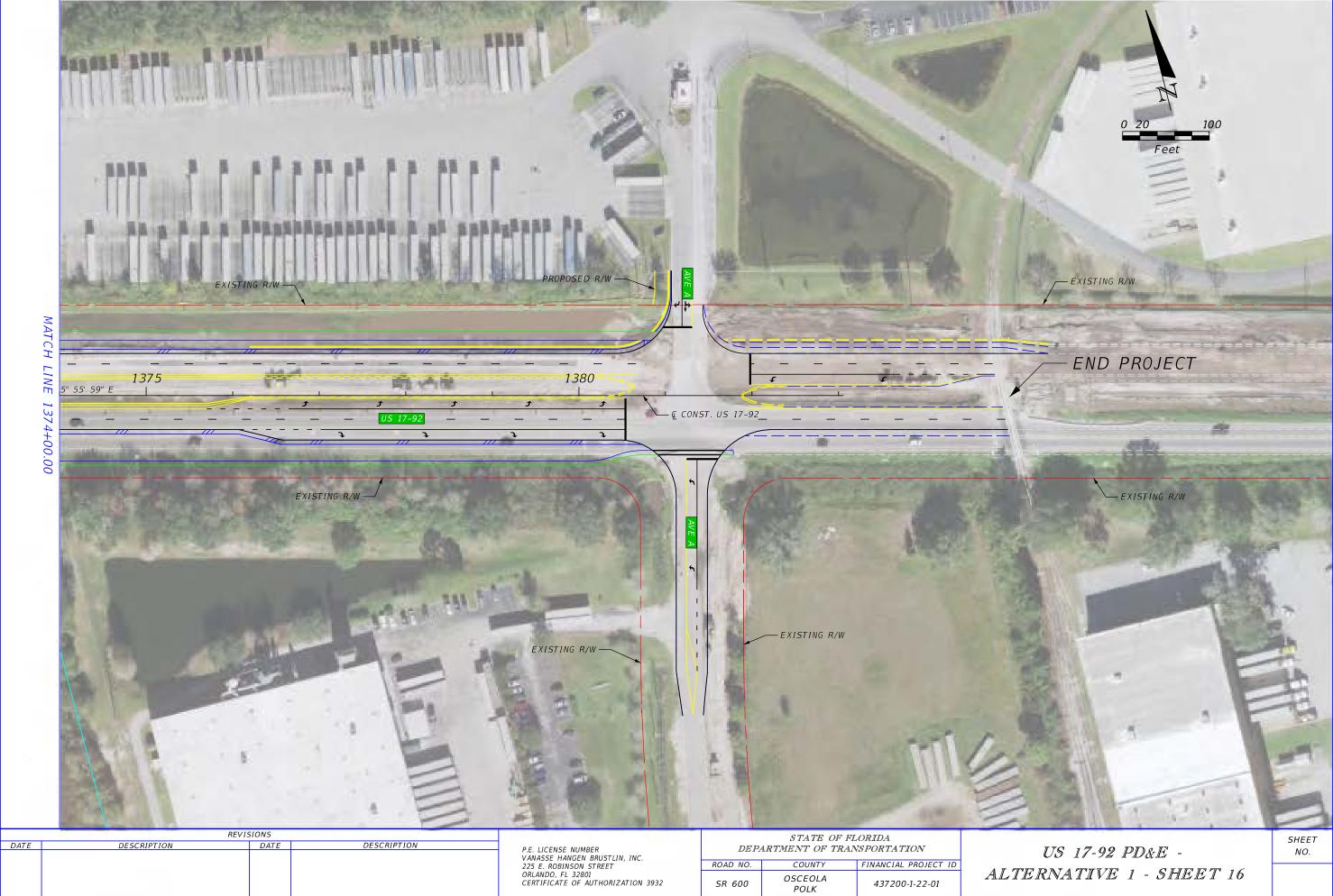


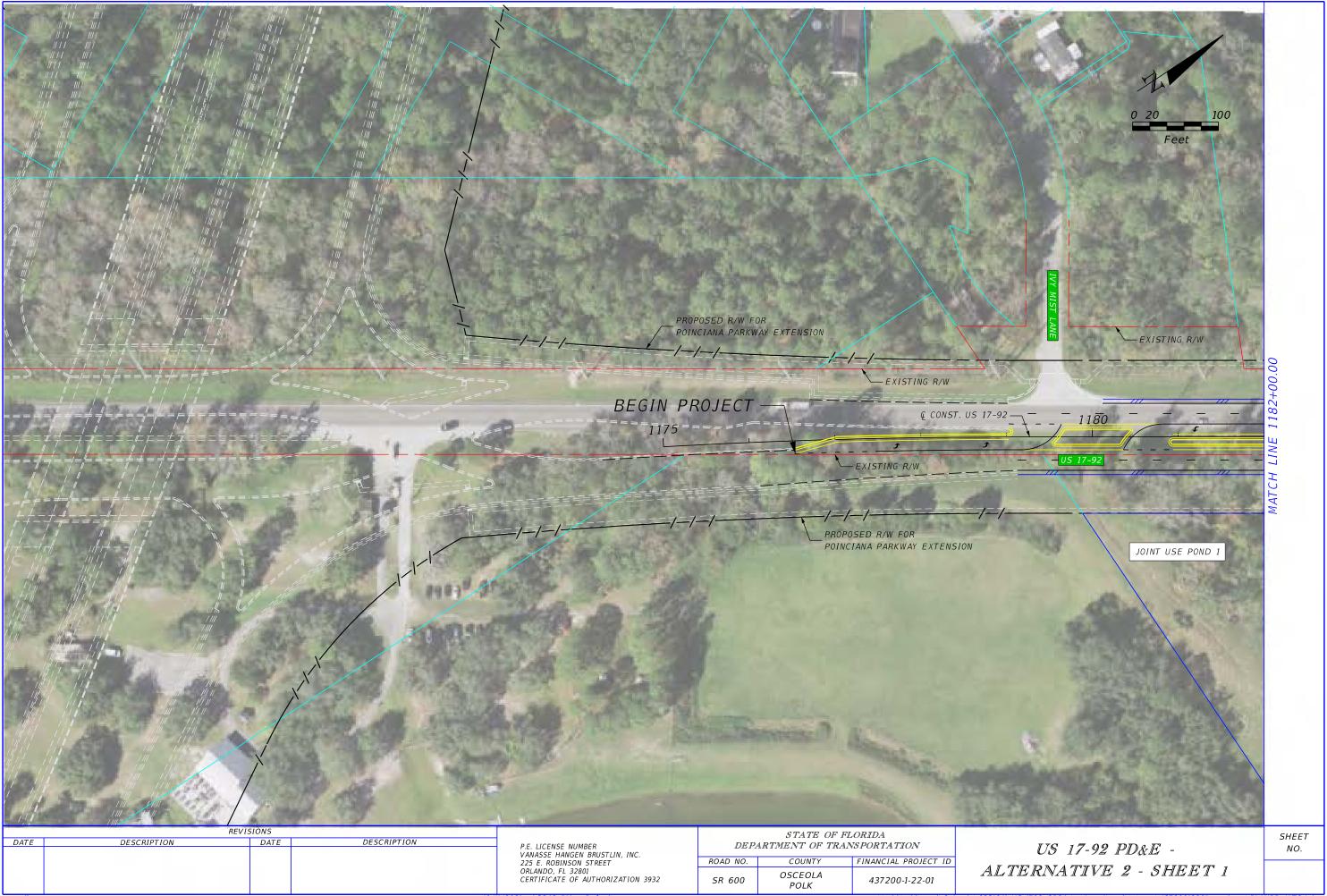




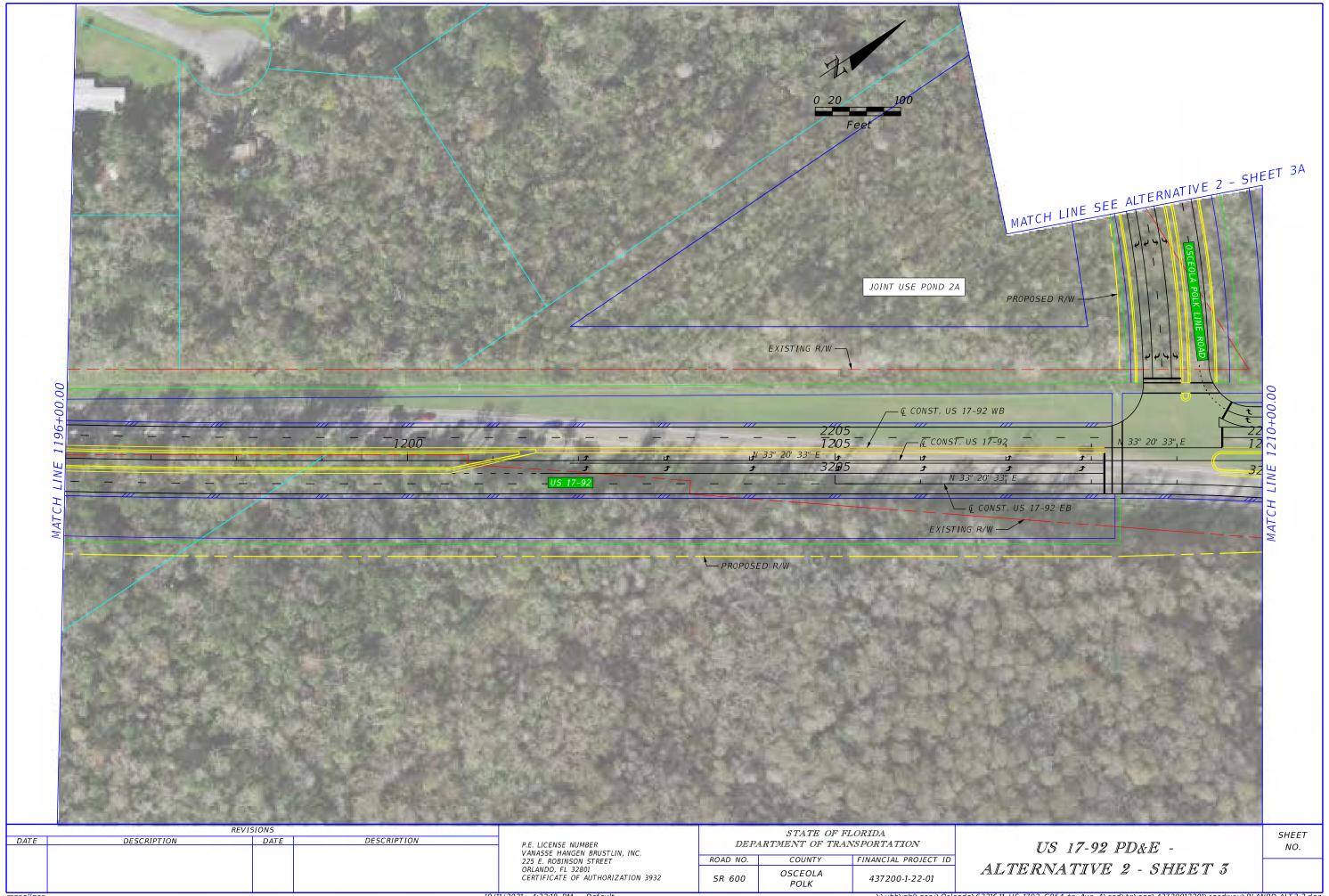


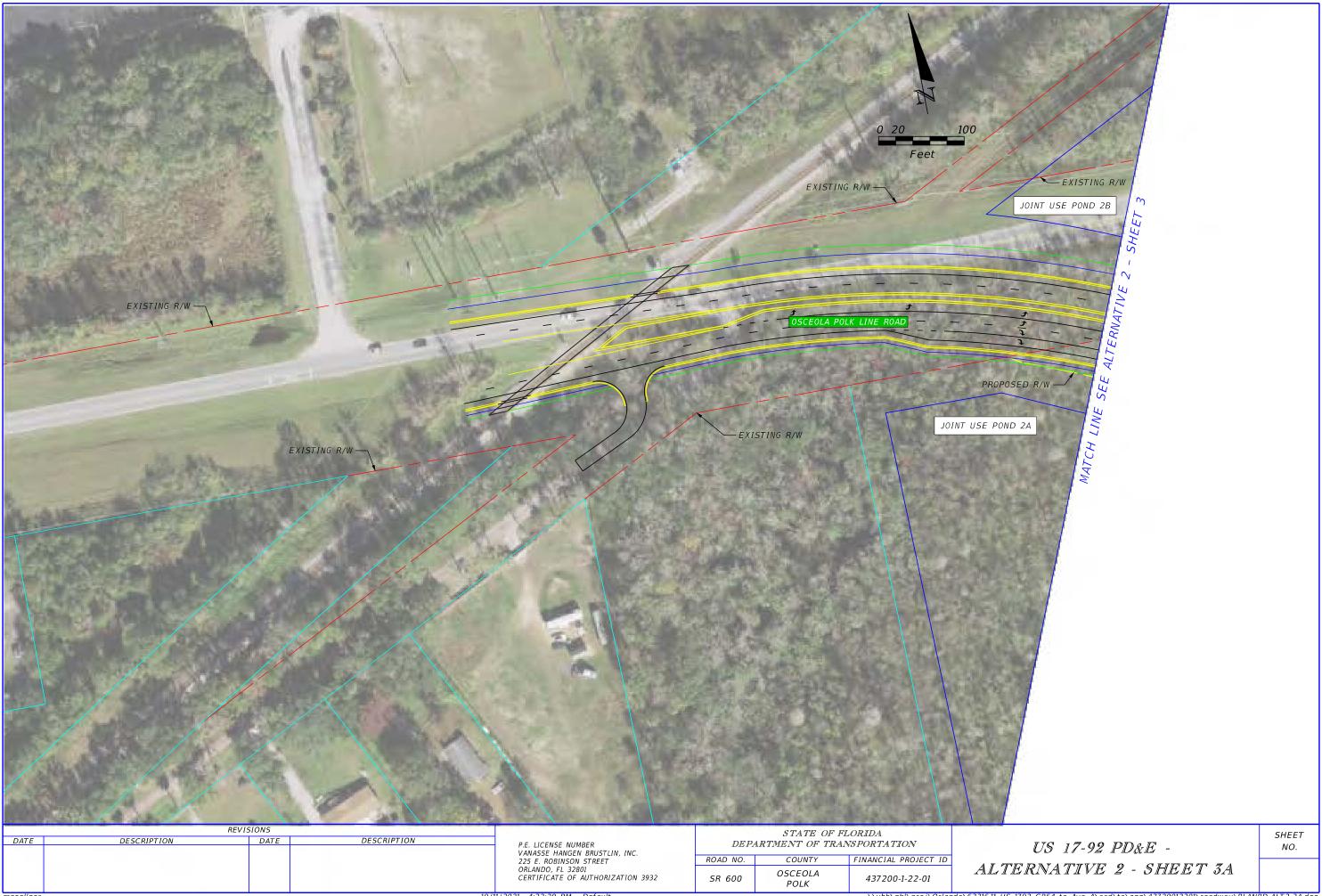


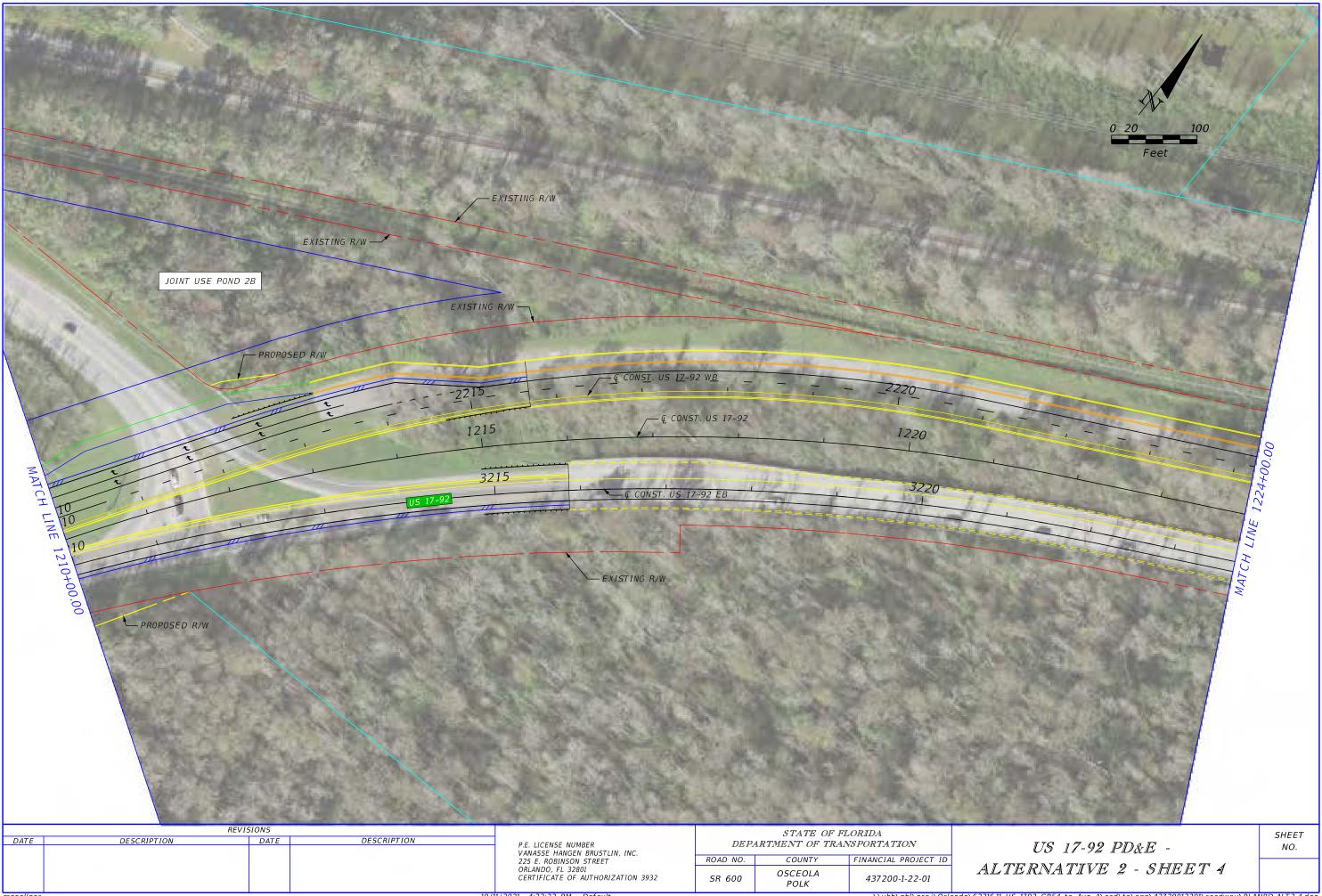


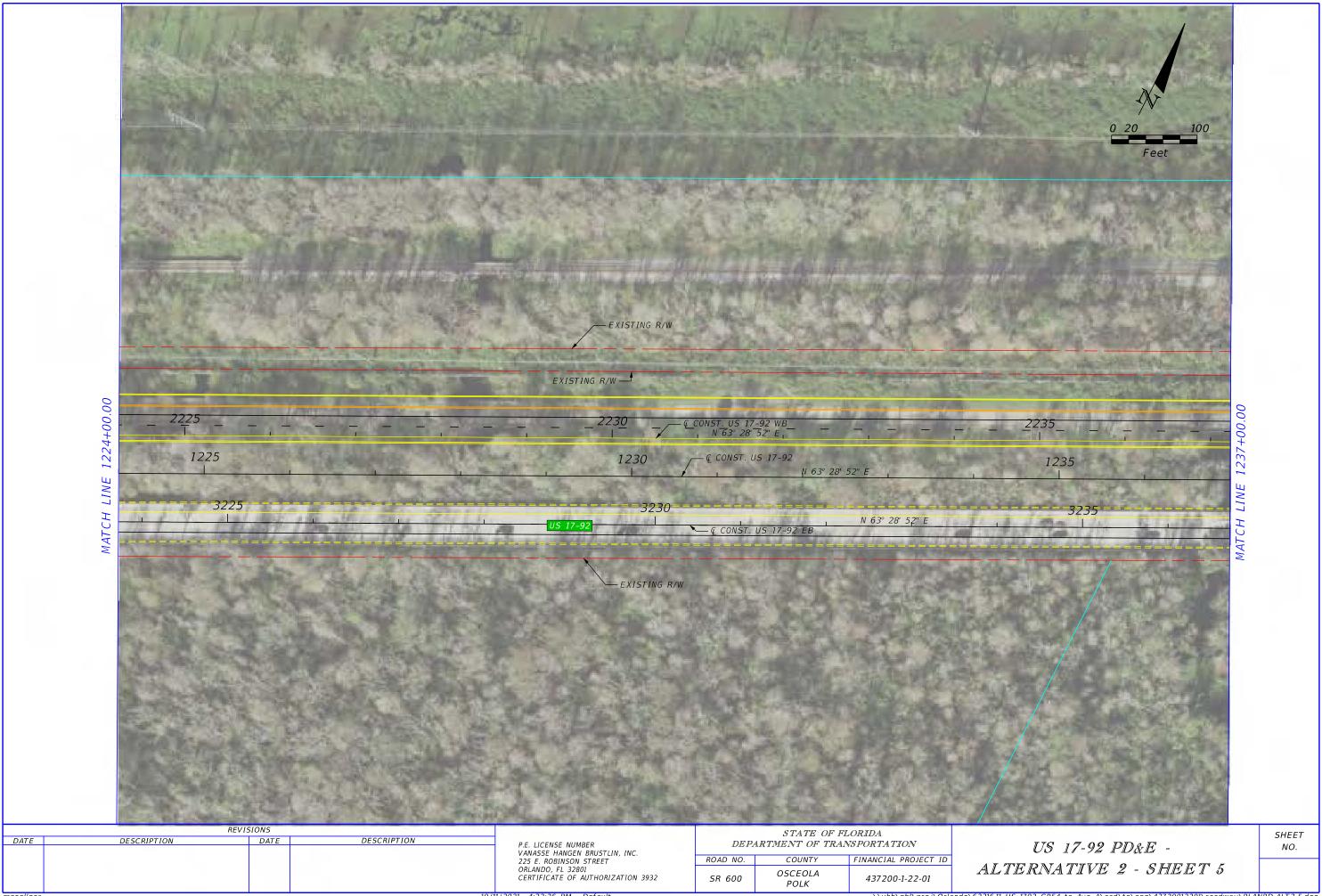


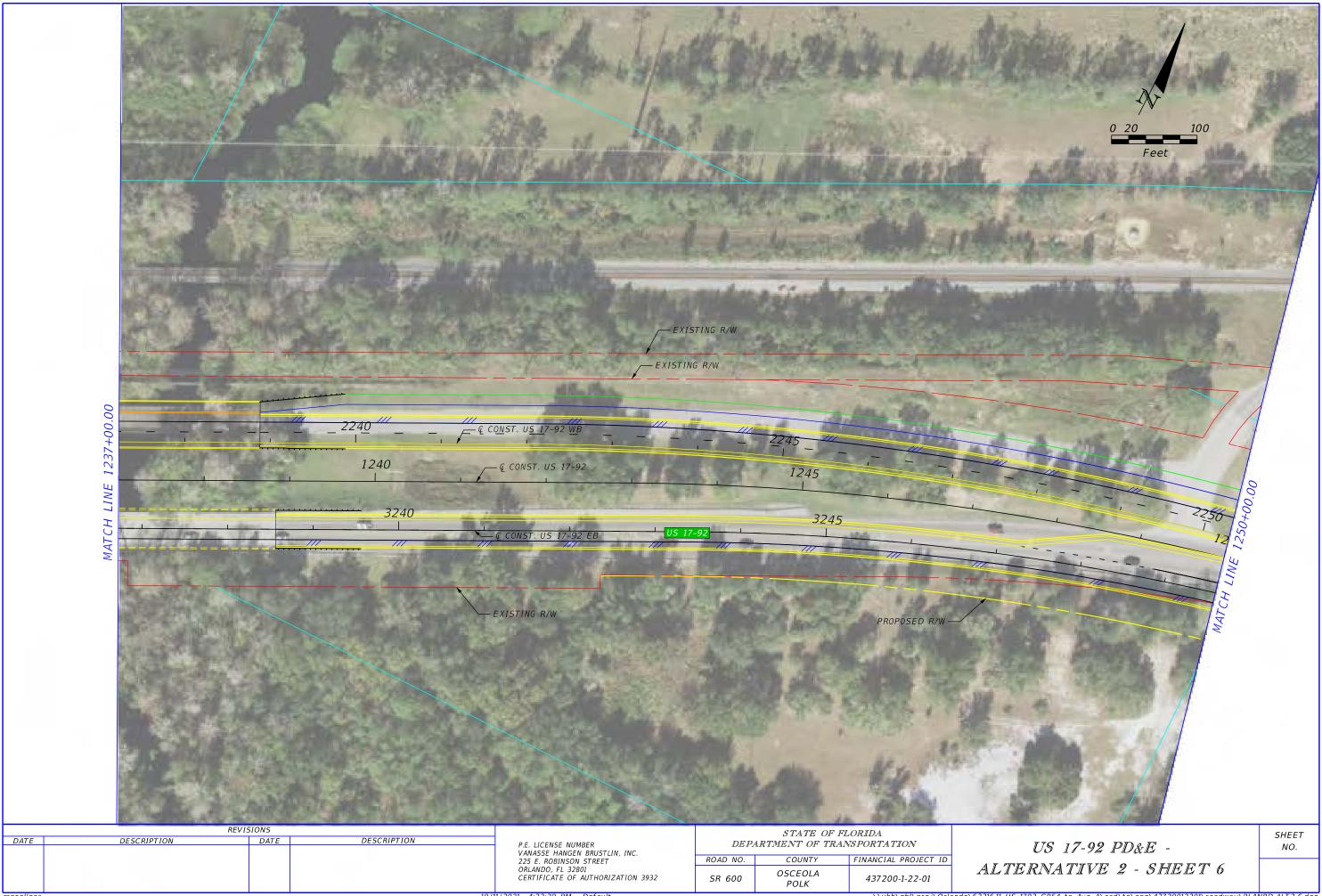


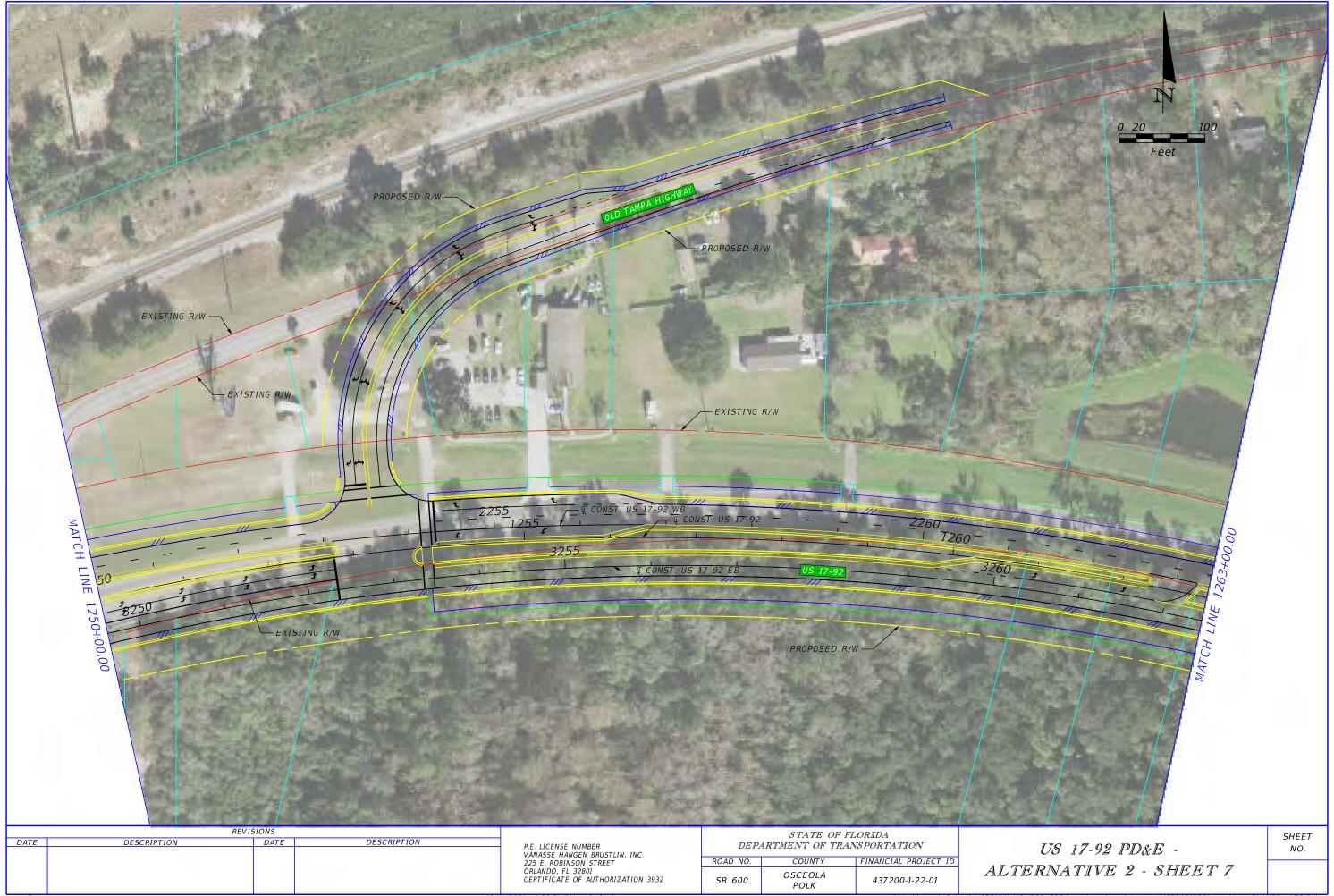


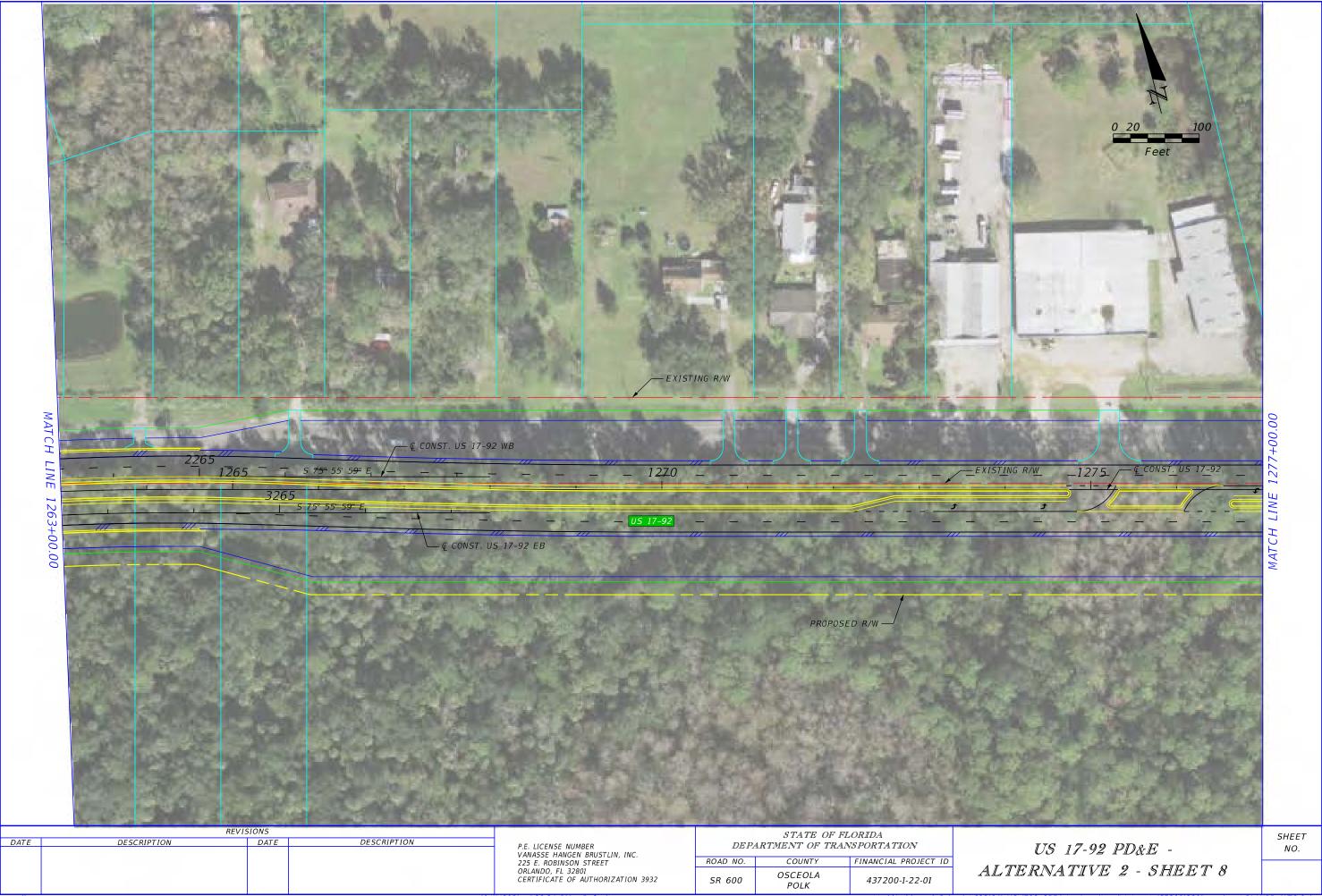


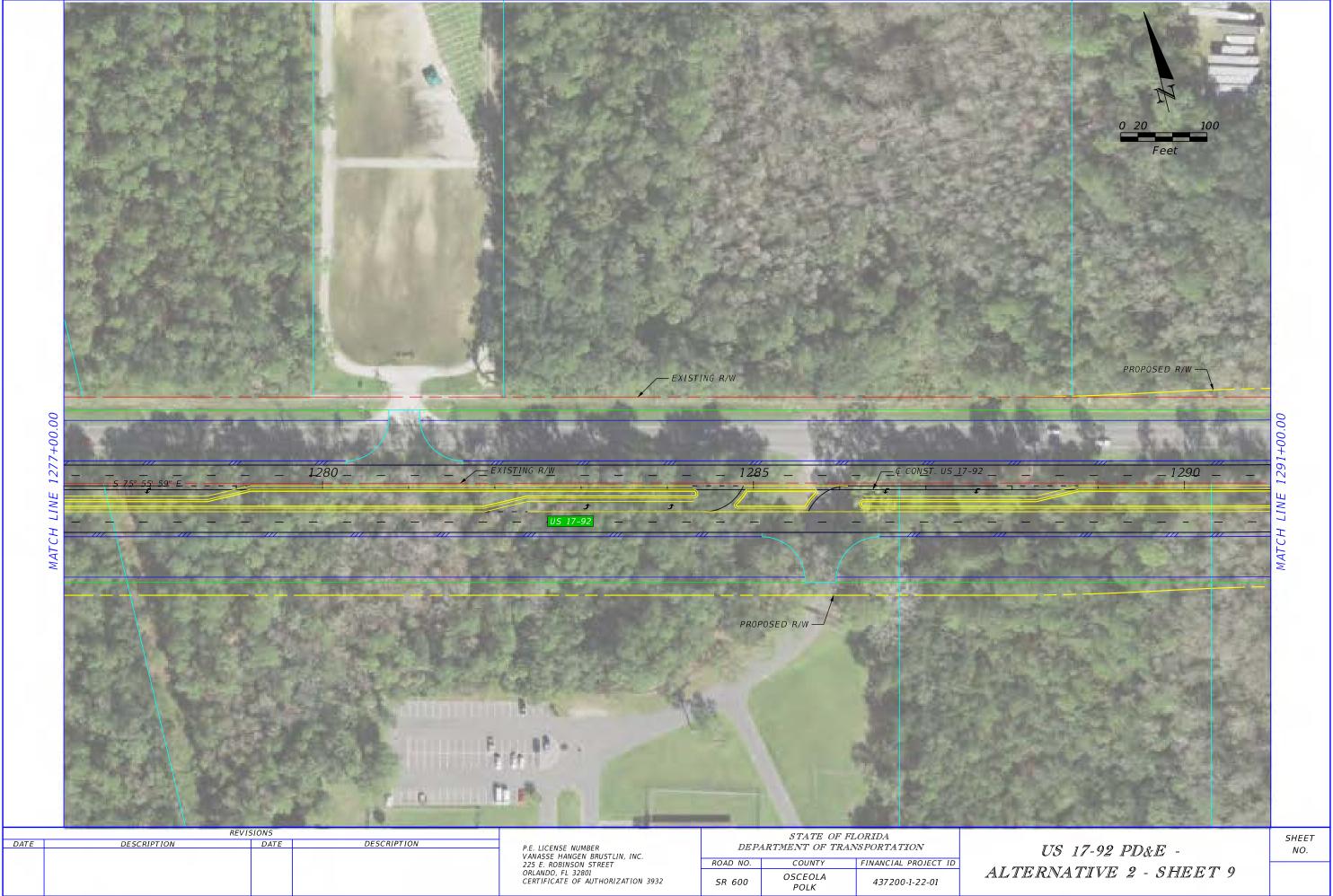


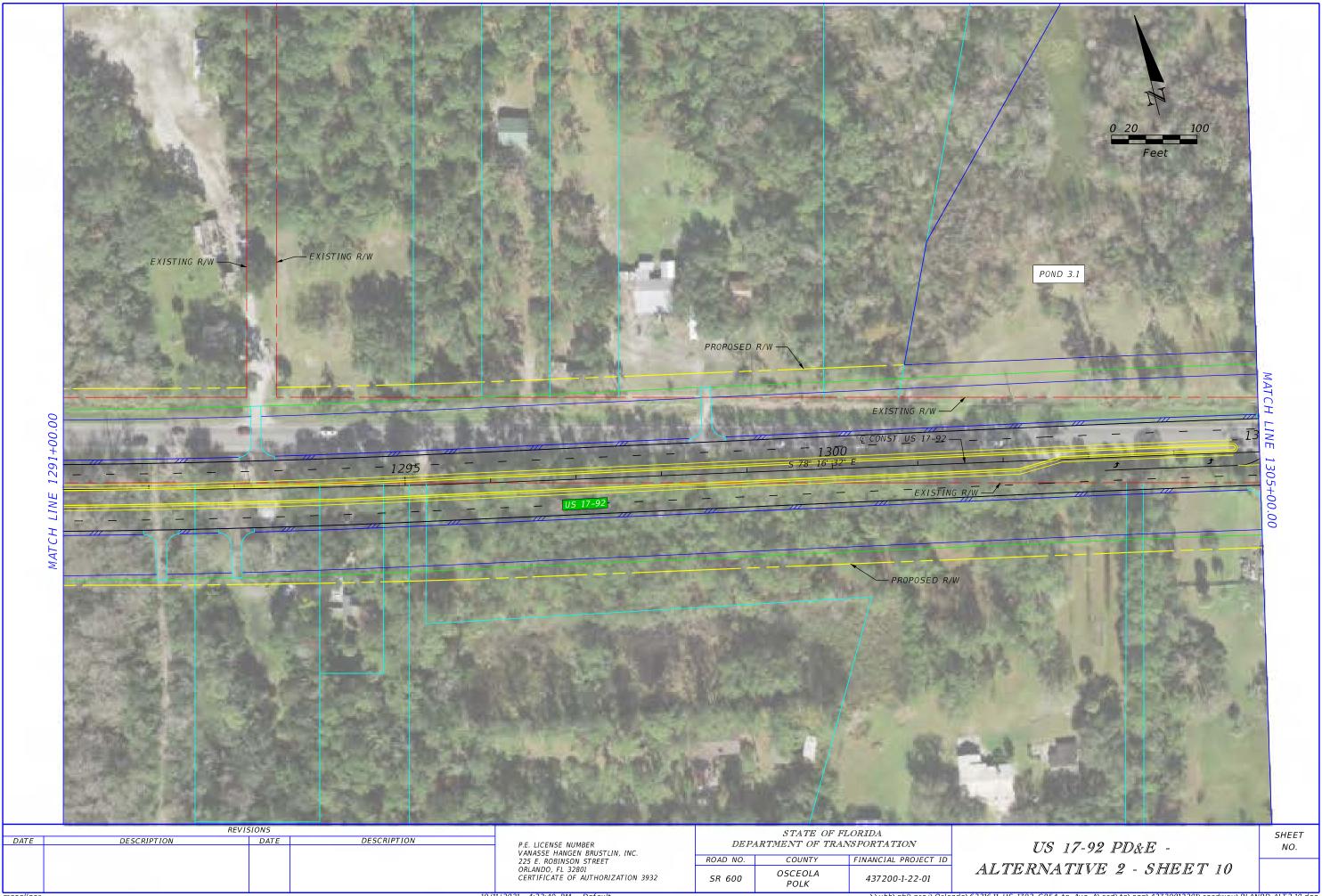


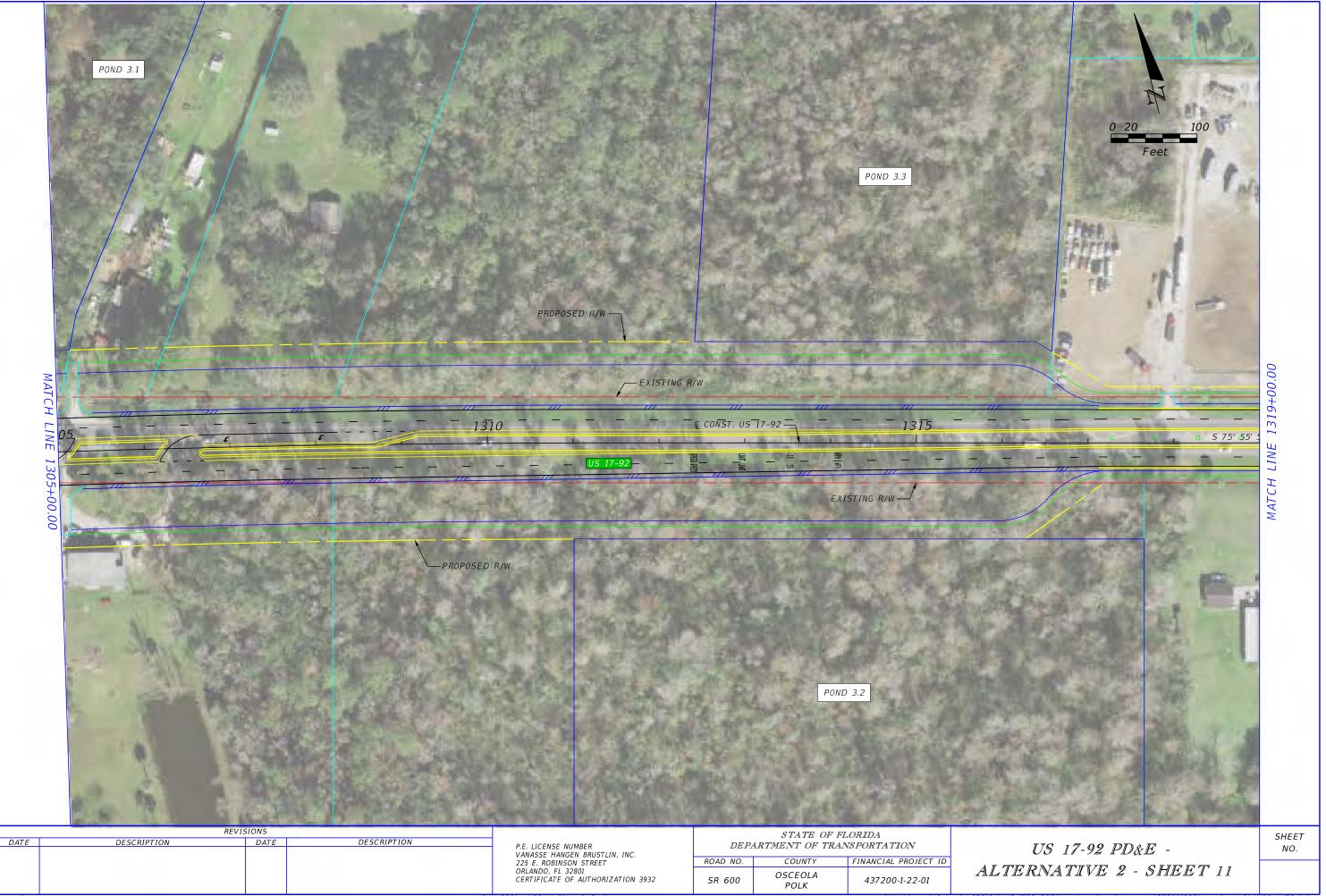






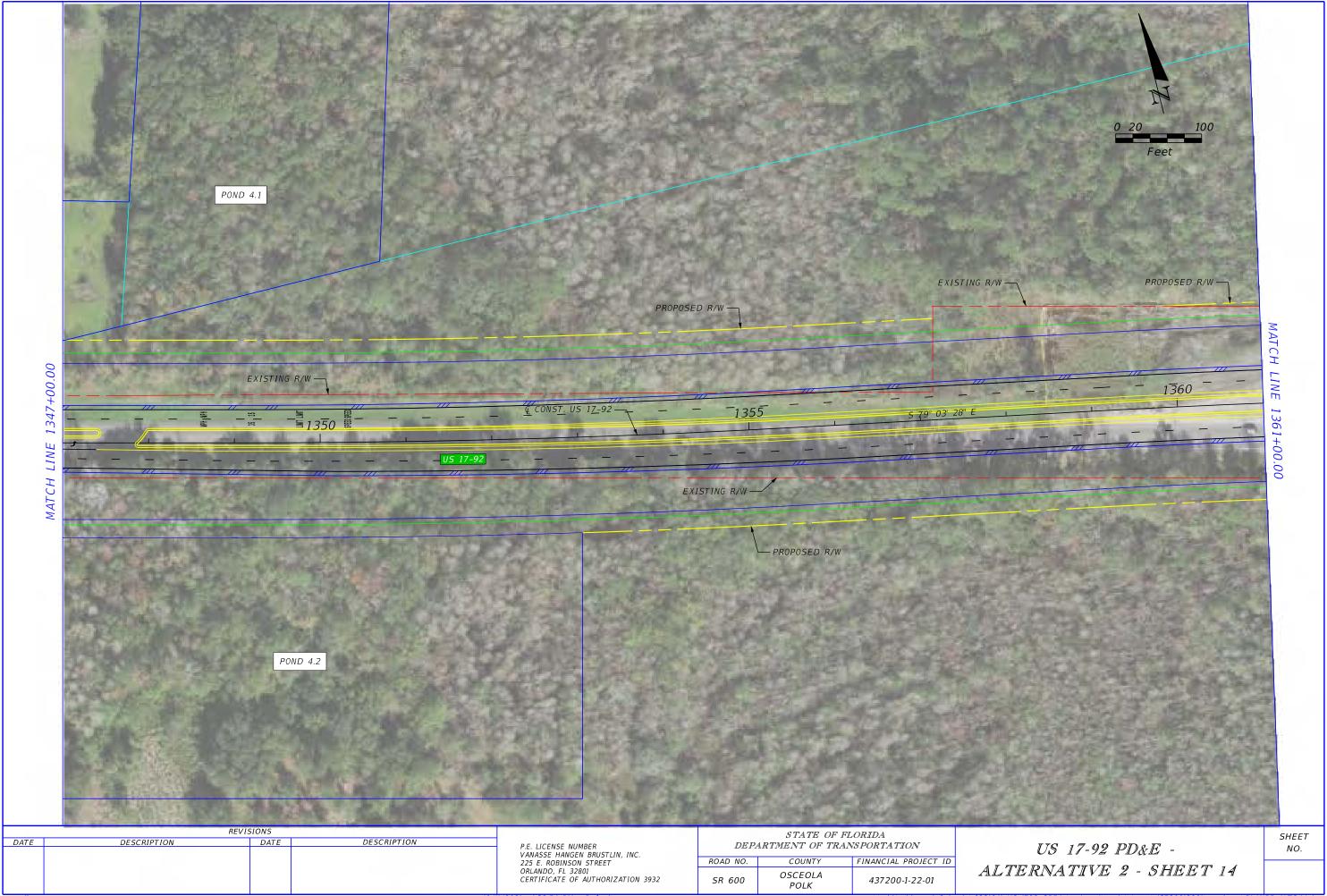




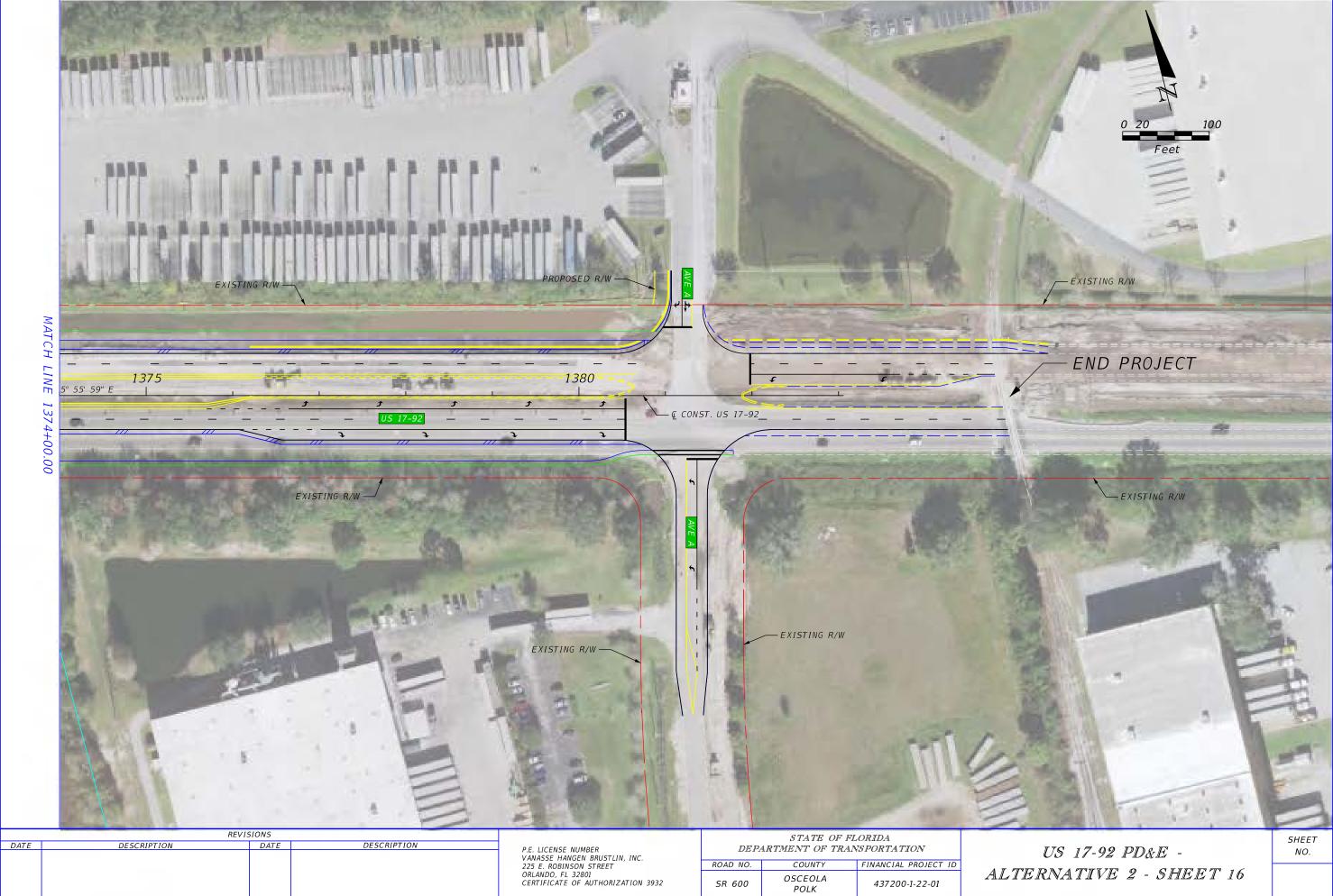


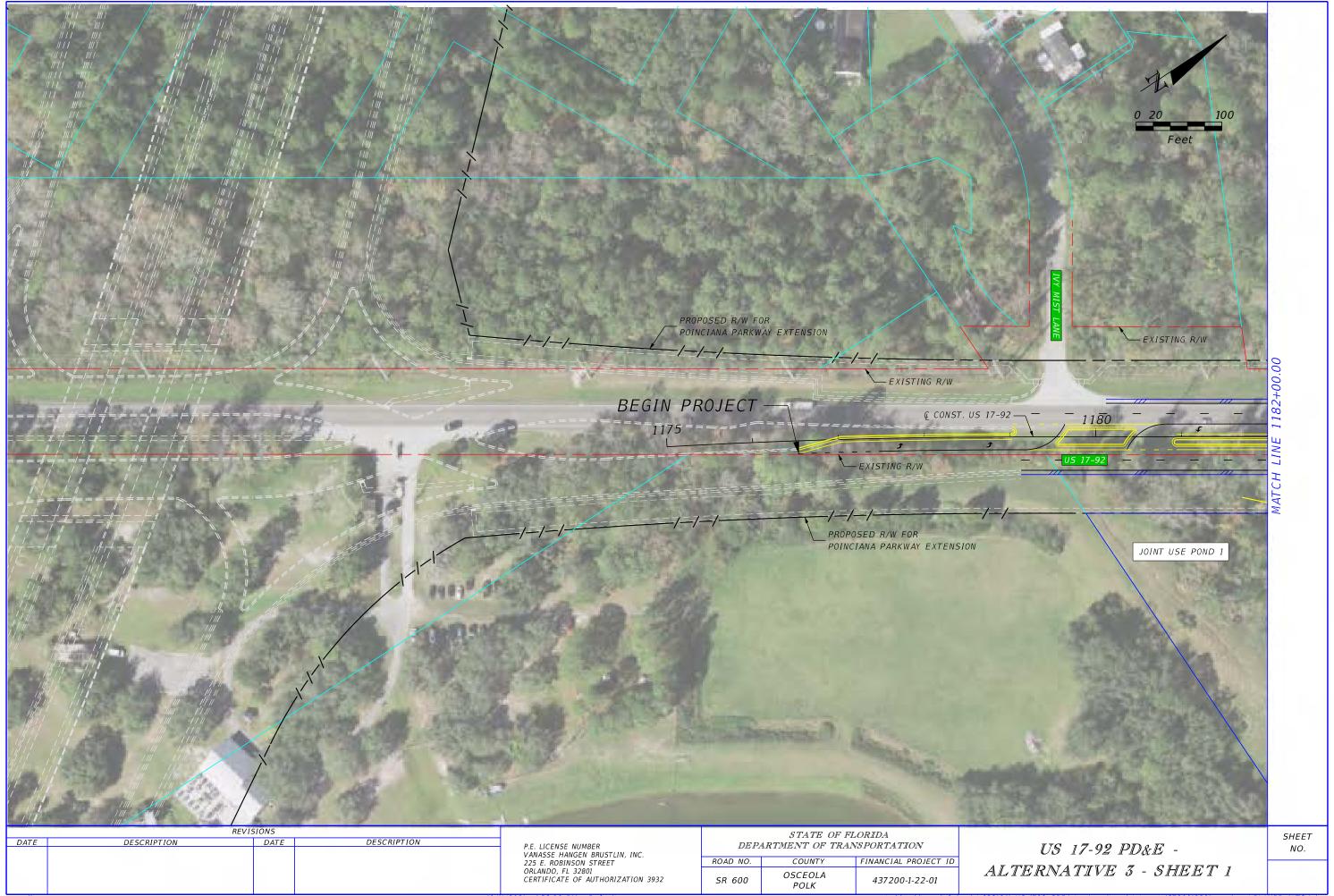




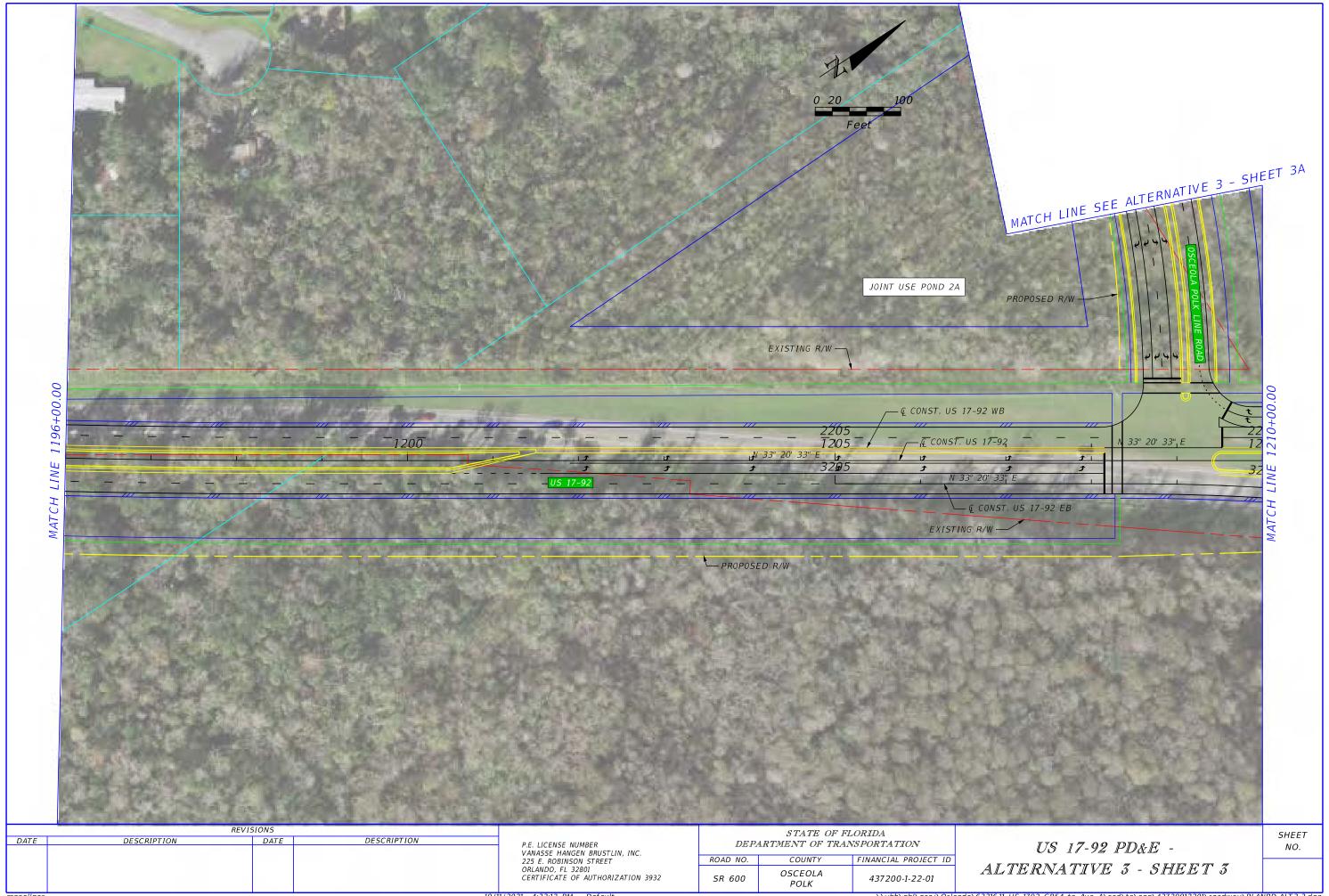


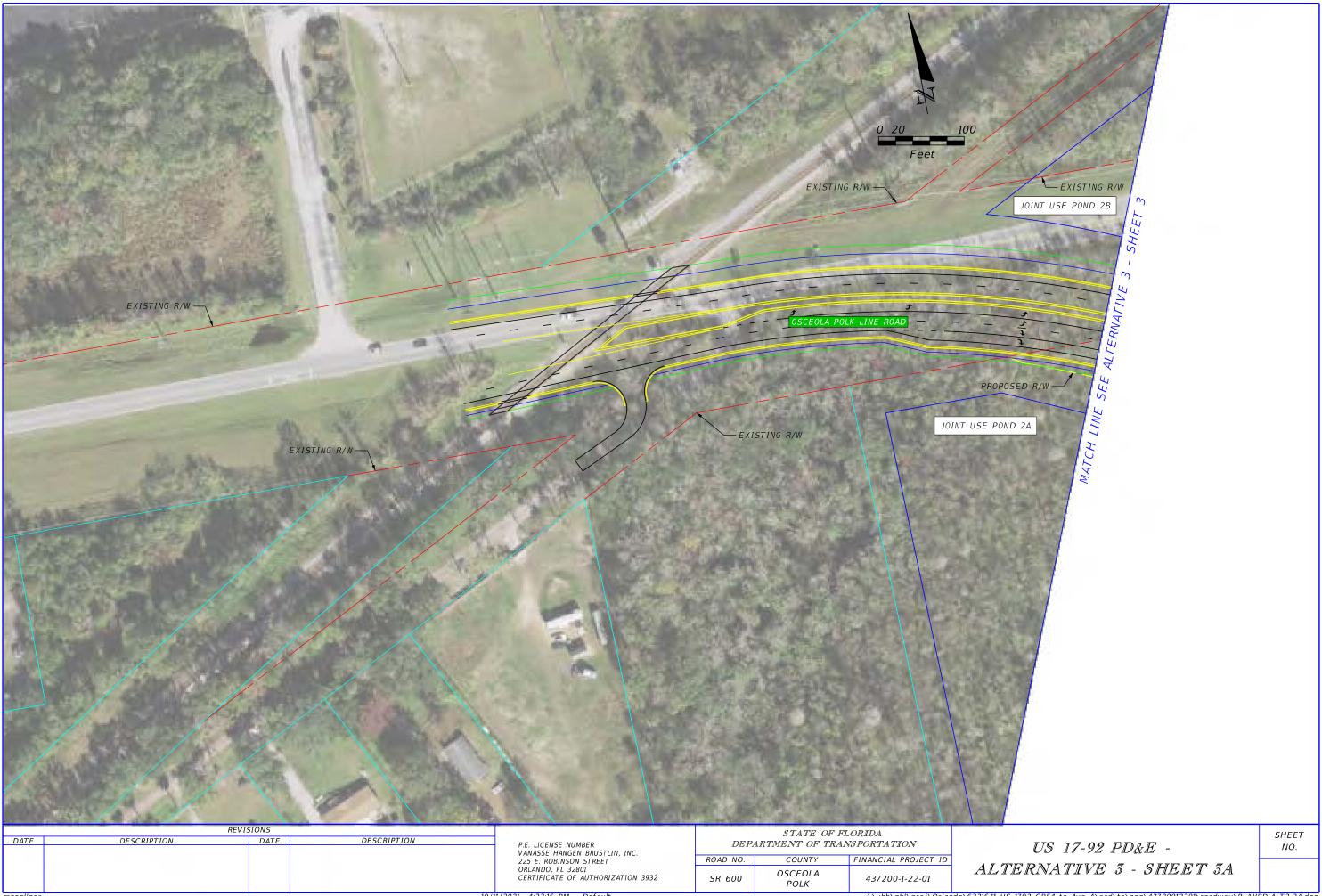


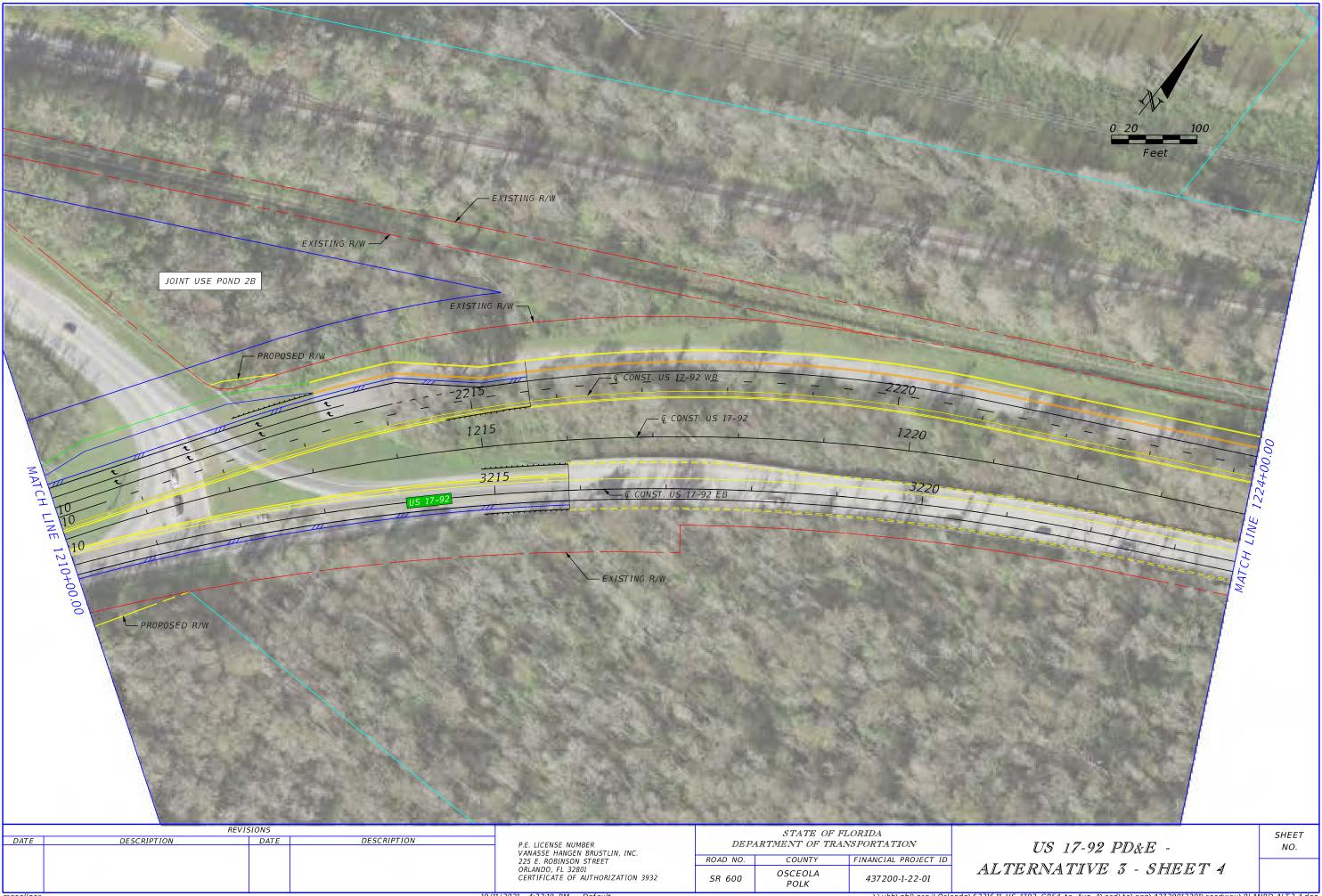


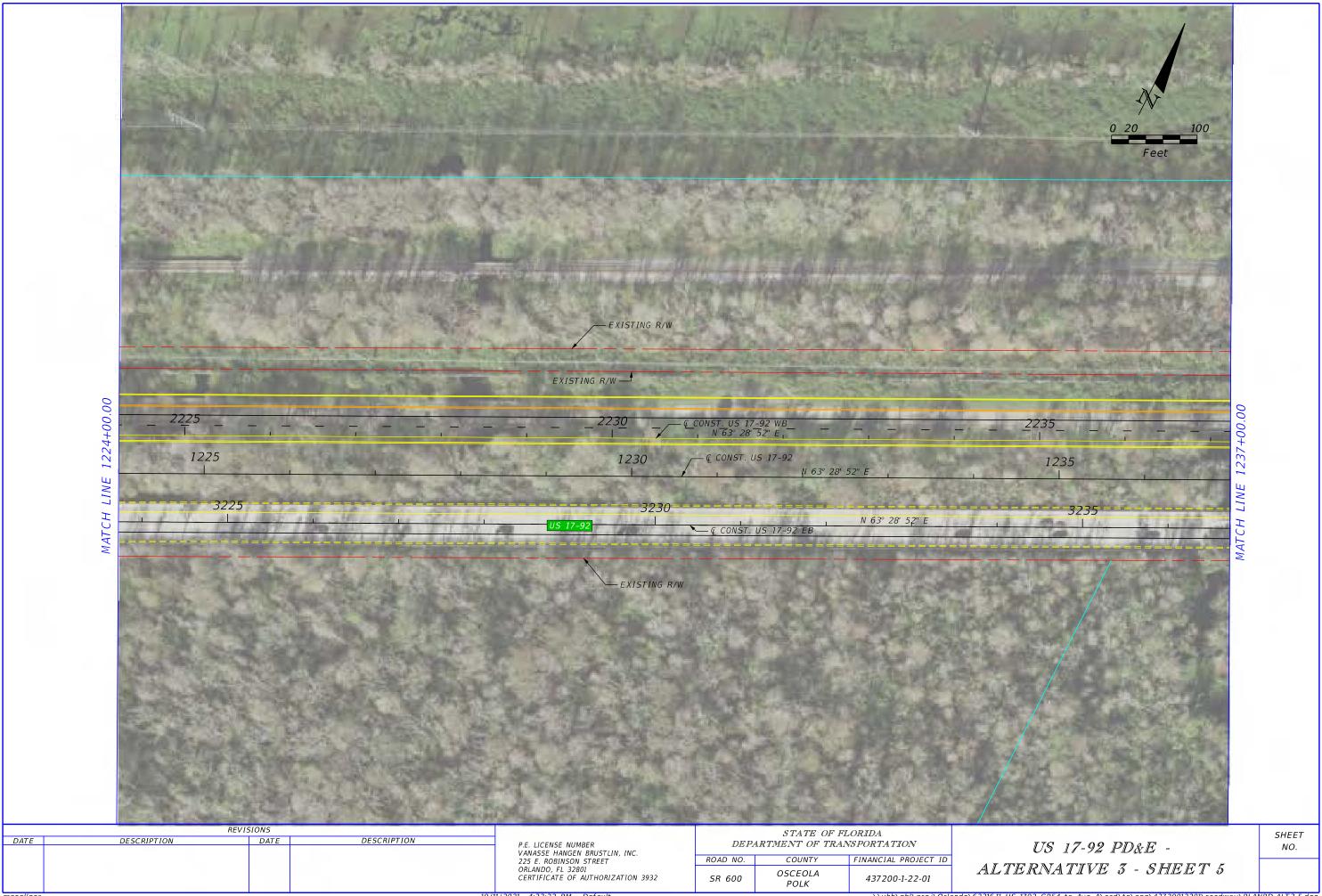


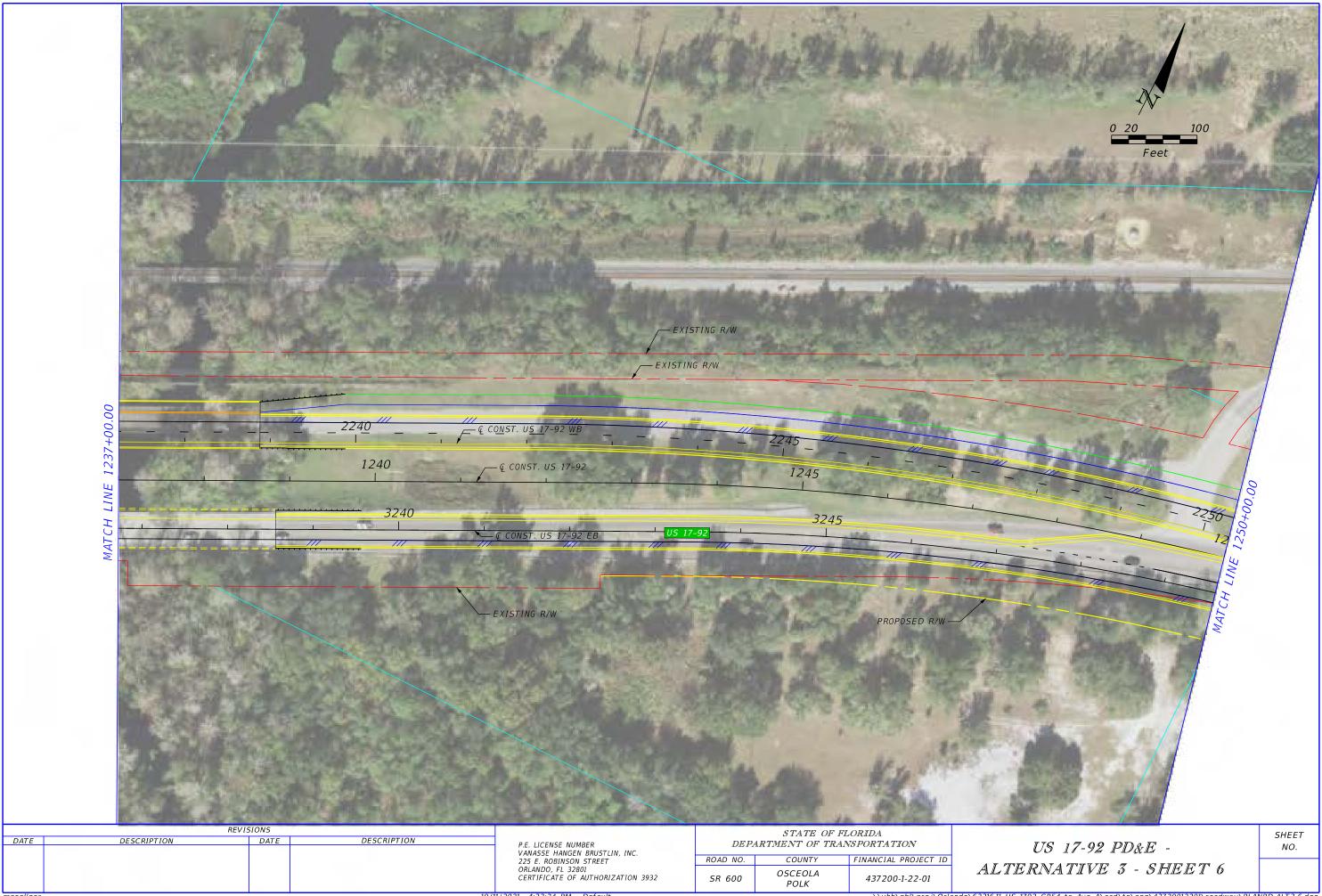


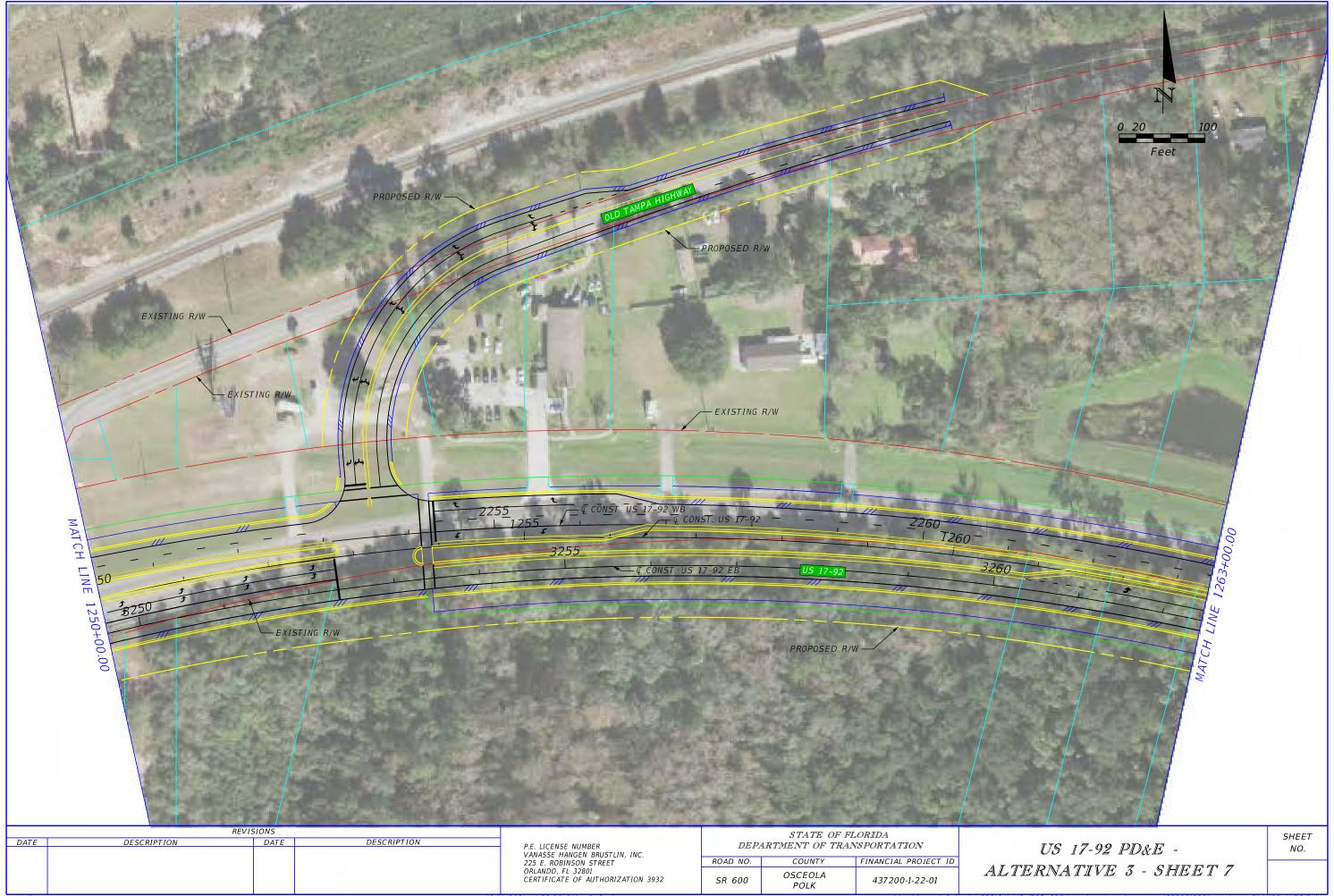


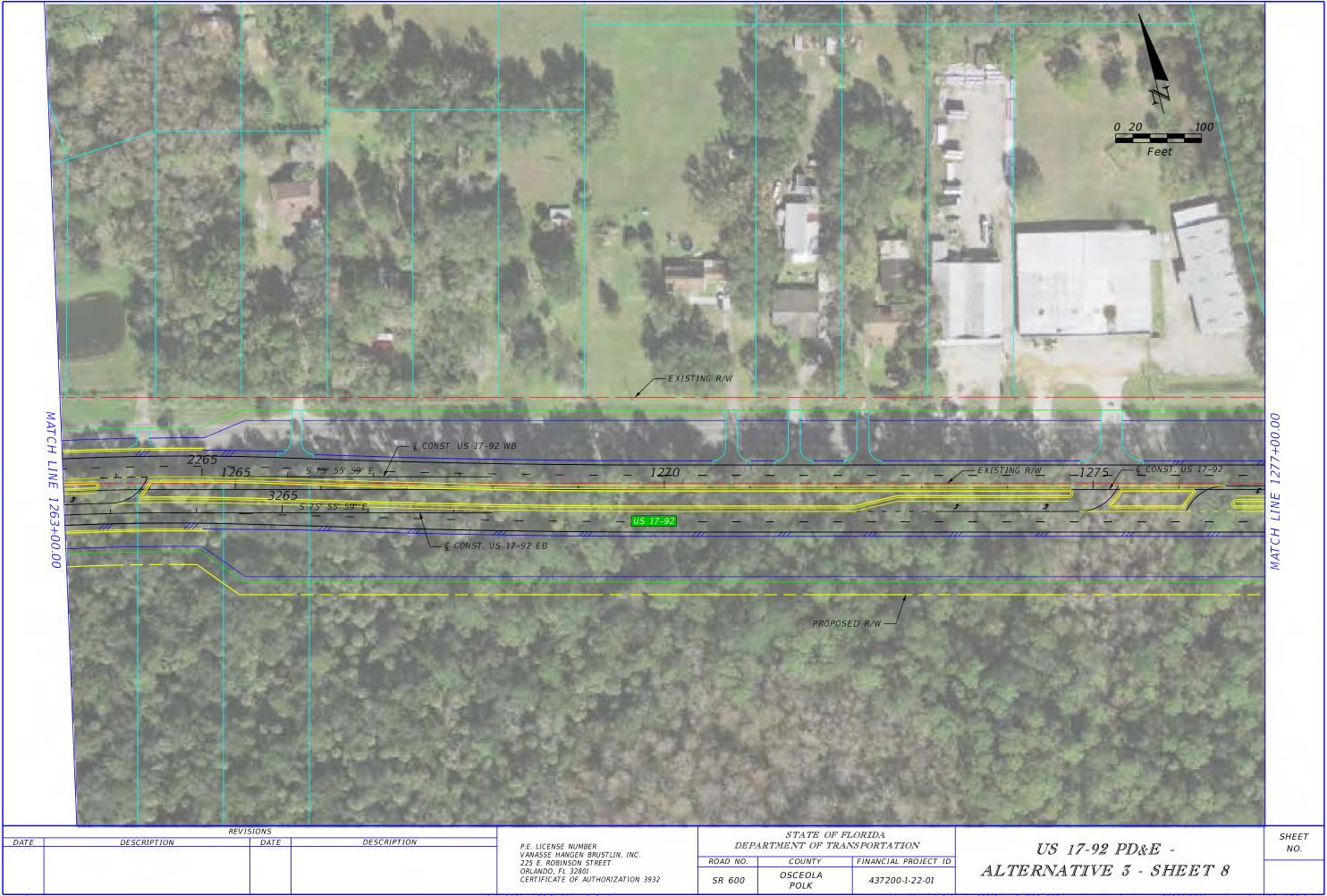


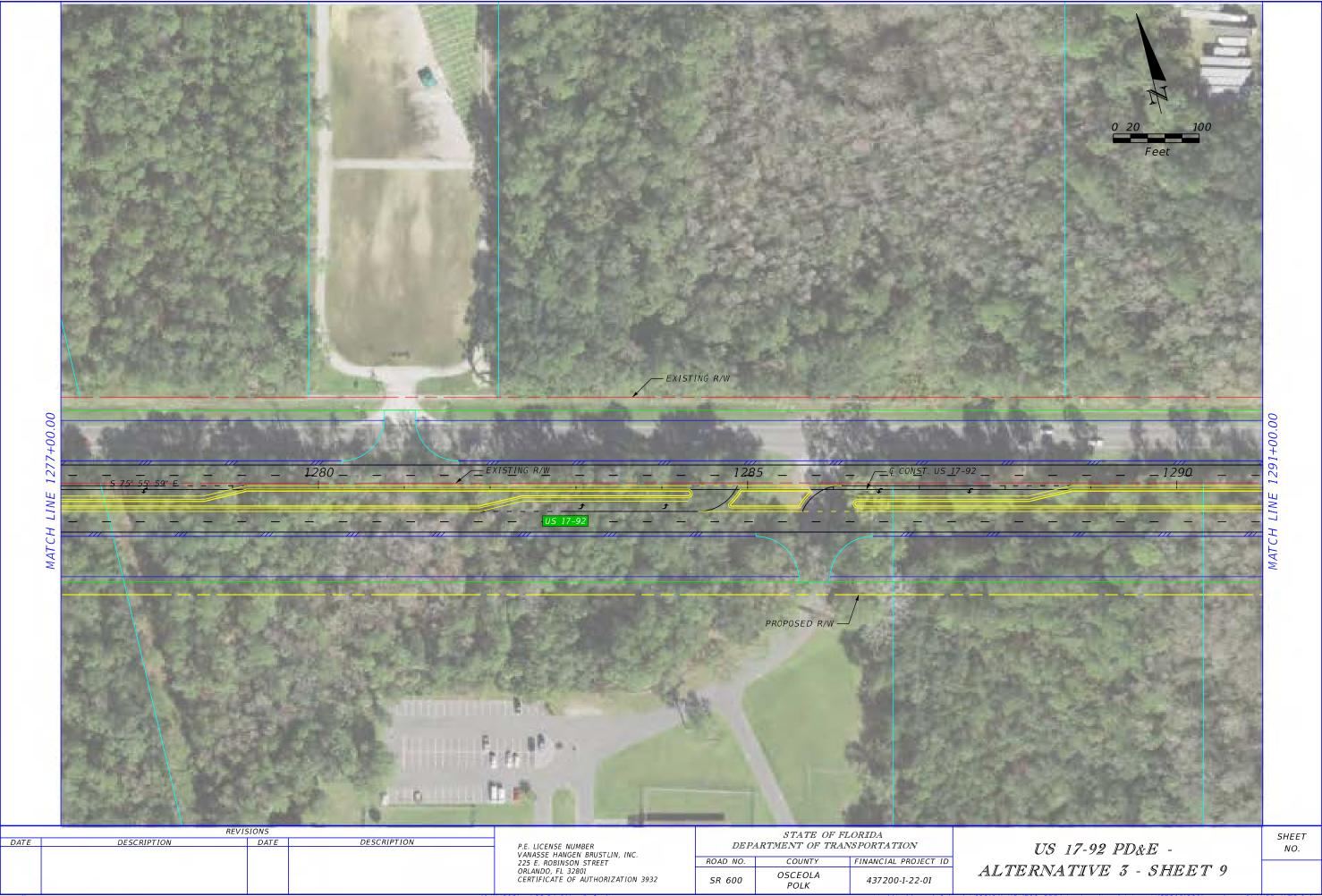


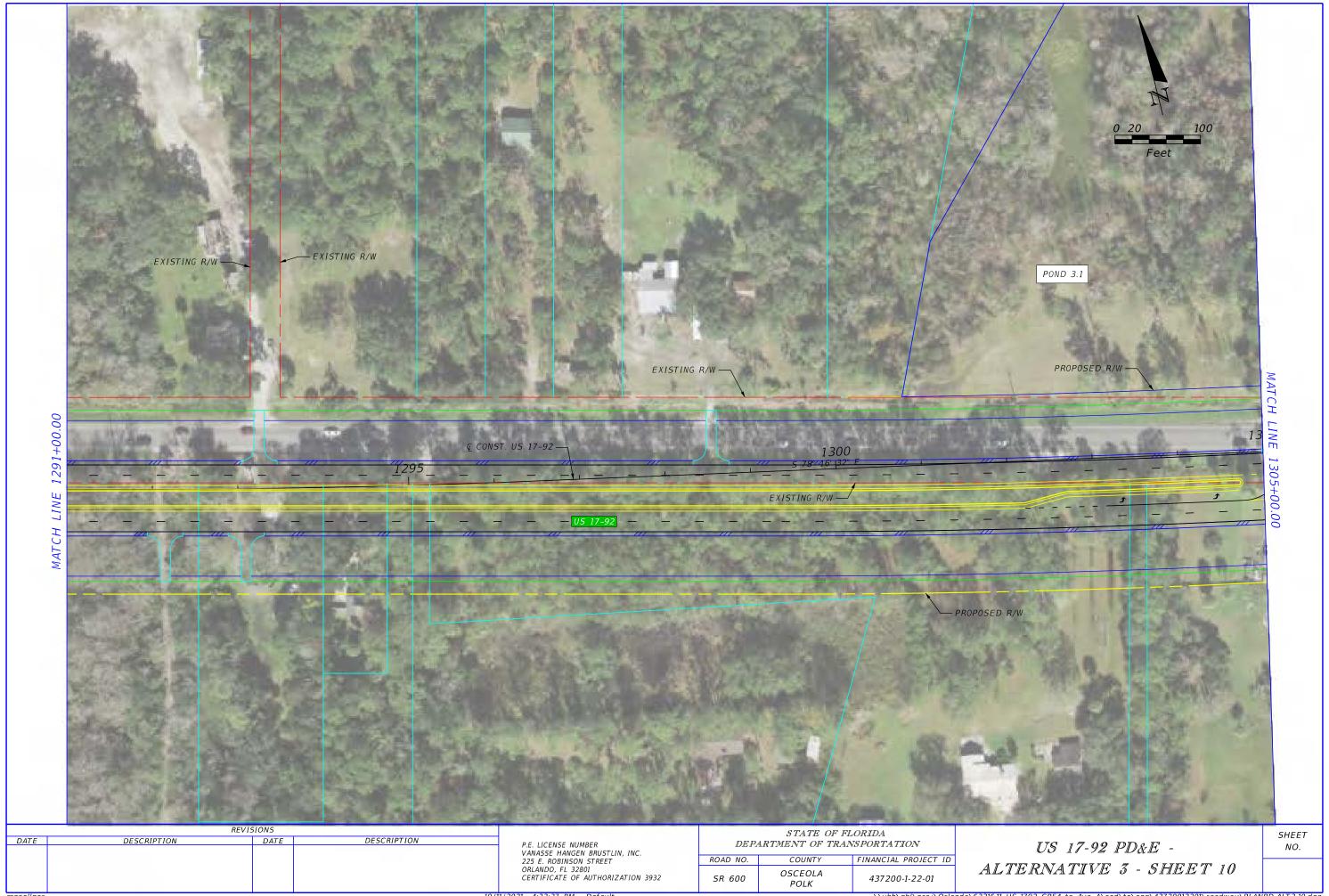


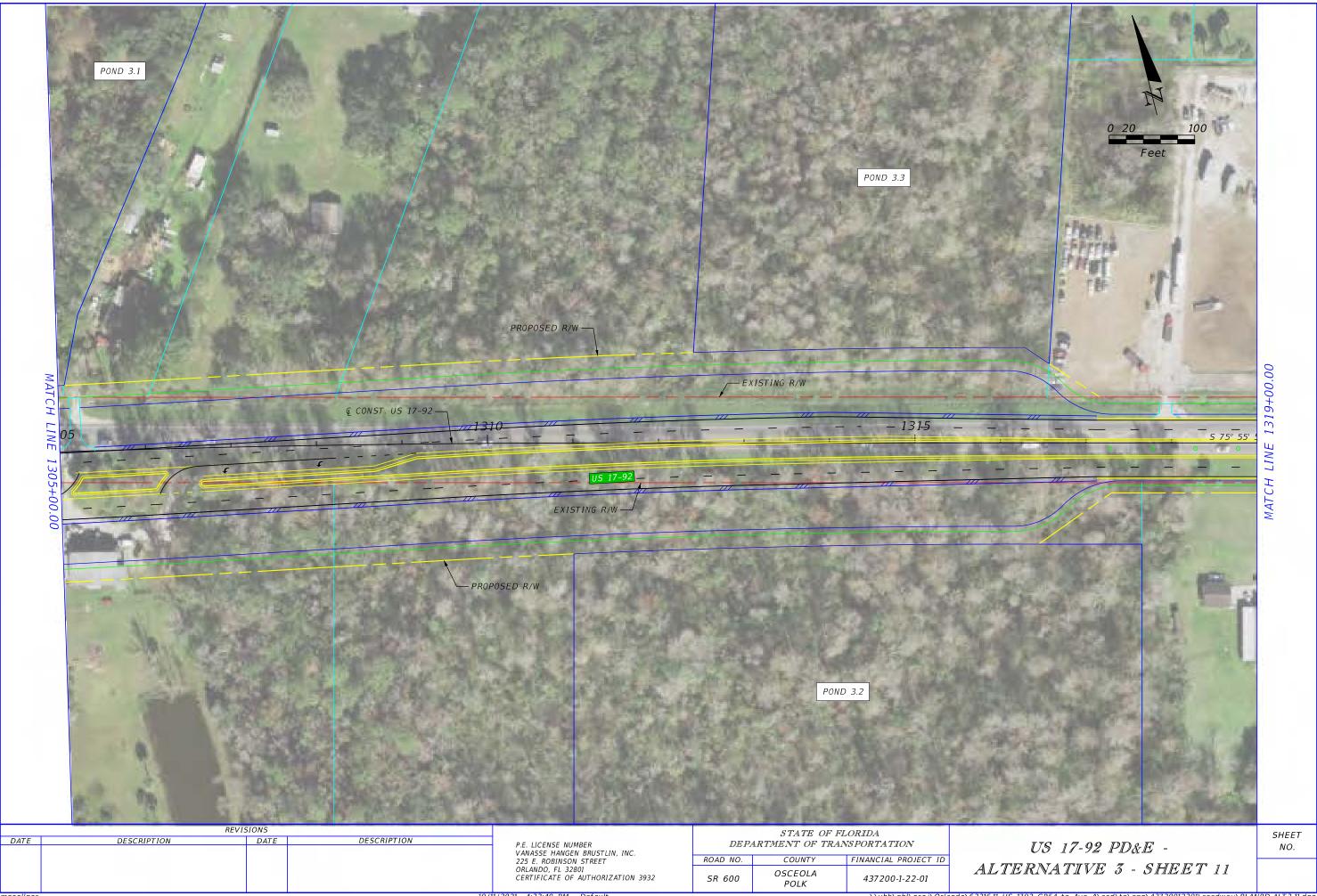






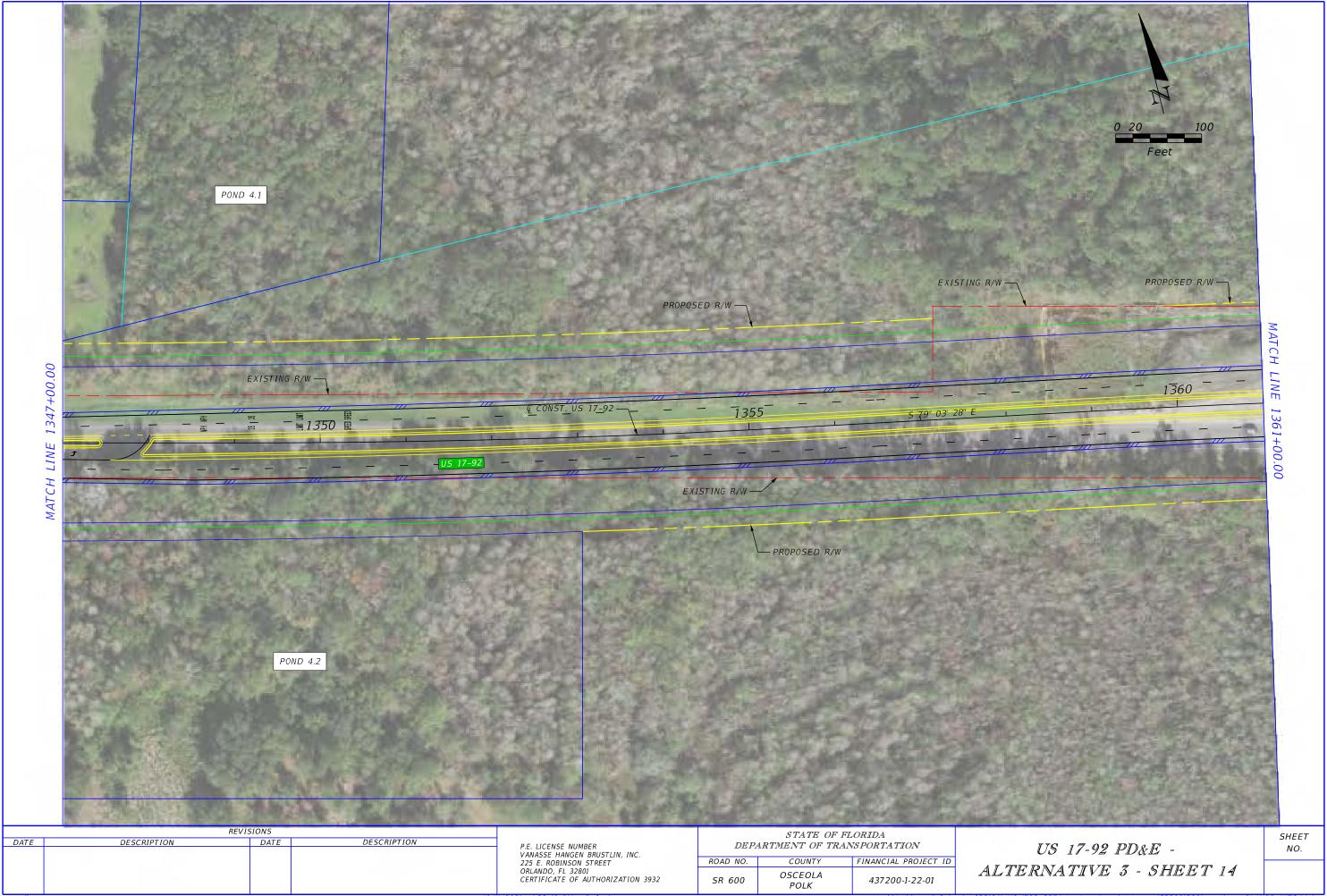




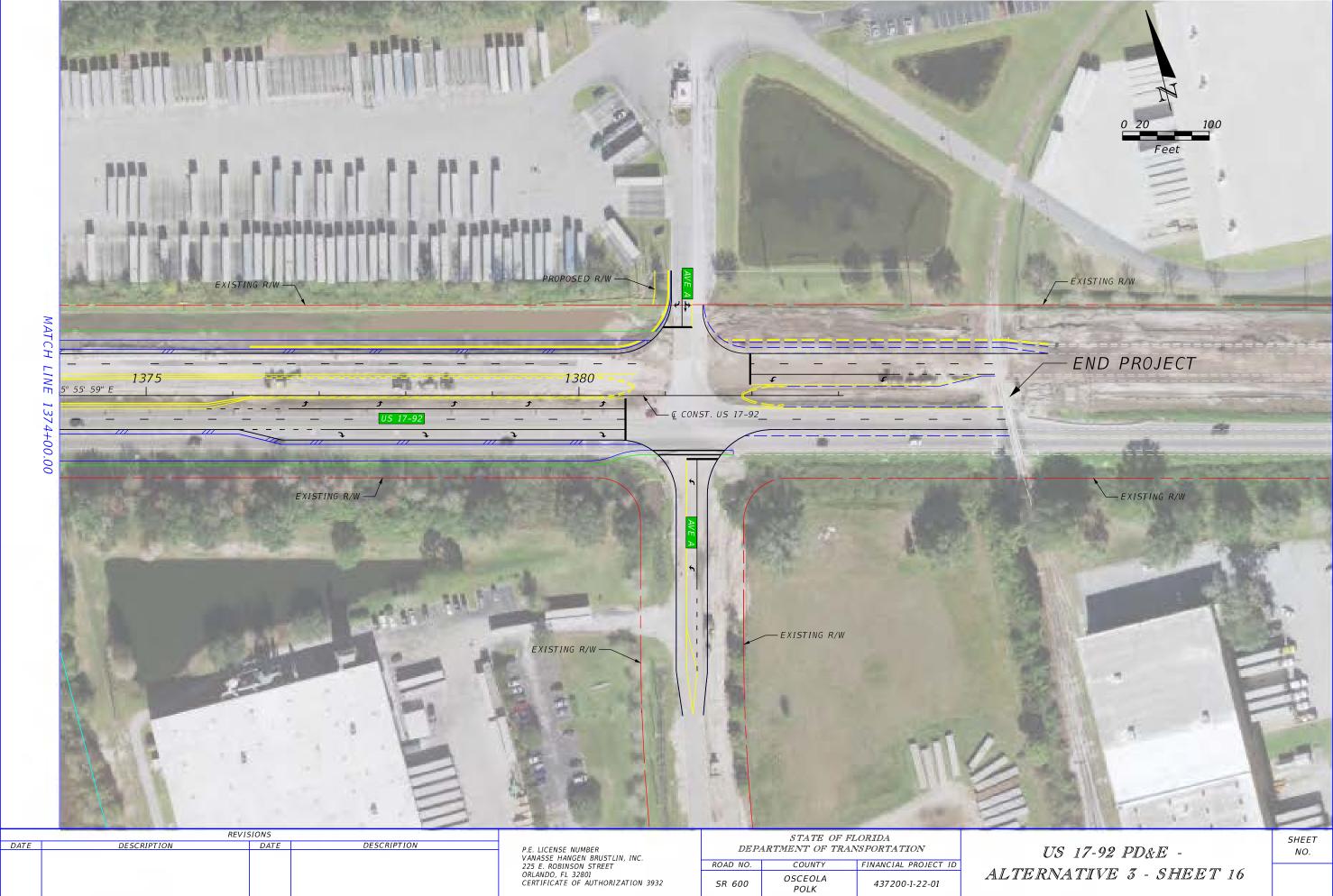












## **APPENDIX D**

# **FDOT 2024 All System Pavement Condition Forecast**

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

	DIST	RICT =	5 CO	UNTY =	OSCEO	LA								
RDWYID BMP EMP RW SYS TYP SPD DISTRESS SR US G_BMP G_EMP LN %T AADT RATINGS INTERSECT AT (MP SIDE) SURFTYPE =======	1999			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P W_BMP W_EMP RW FY-P WKMX-P CONTRACTOR (AGE_ONE YEAR) ASTYPE ITMSEG-F W_BMP W_EMP RW FY-F WKMX-F	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
92010000 0.000 0.536 C 1 1 55 CRACKING 600 17 2 6.9 21000 RIDE LABOR CAMP RD( 0.0L) FC95	8.2	7.5 8.1	6.5	6.5	6.5	6.5	6.5	6.5	6.5	10.0	10.0	10.0	10.0	
4135921 0.000 5.671 C 2006 0012 CRACKING THE MIDDLESEX CORPORATION (2008) SPRIDE 4526961 0.000 0.536 C 2027 0226	8.1	9.0 8.1	9.0 8.2	9.0 8.1	9.0 7.8	9.0 7.9	9.0 7.8	9.0 7.7	9.0 7.7	7.5 7.6	6.0* 7.7	6.0* 7.5	6.0* 7.3	7.0
92010000 1.915 2.770 C 1 1 55 CRACKING 600 17 2 4.9 29500 RIDE FC95	9.0 8.2	7.5 8.1	6.5 7.6	9.0 7.8	8.0 7.6	9.5 7.5	9.5 7.3	7.0 7.0	6.5 7.2	10.0	10.0 8.7	10.0	10.0 8.6	
4135921 0.000 5.671 C 2006 0012 CRACKING THE MIDDLESEX CORPORATION (2008) SPRIDE	8.5	9.0 8.5	9.0 8.5	9.0 8.5	9.0 8.3	9.0 8.2	9.0 8.2	9.0 8.1	9.0 8.2	7.5 8.1	7.5 8.1	7.5 8.1	7.5 8.0	5.5* 7.7
92010000 2.770 3.745 R 1 1 45 CRACKING 600 17 1 4.9 29500 RIDE WONDER CT( 2.9C) FC95	10.0	9.5 7.8	8.0 7.8	8.0 7.7	7.0 7.4	7.0 7.2	6.0* 7.1	4.5* 6.7	4.5* 6.8	10.0	10.0	10.0	10.0 8.4	
4135921 0.000 5.671 C 2006 0012 CRACKING THE MIDDLESEX CORPORATION (2008) SPRIDE	8.2	9.0 8.2	9.0 8.3	9.0 8.3	9.0 8.0	9.0 8.1	9.0 8.0	9.0 7.9	9.0 7.9	8.5 7.9	8.5 7.8	8.5 7.8	8.5 7.8	6.5 7.5
92010000 3.745 6.000 R 1 7 55 CRACKING 600 17 2 4.9 29500 RIDE AVE A( 4.1C) FC5M	7.0	7.0 7.4	7.0 6.9	6.5 7.5	6.5 7.1	6.5 6.2*	6.5 6.3*	6.5 5.4*	6.5 6.1*	10.0	10.0	10.0	10.0	
2397141 3.957 6.172 C 2019 0213 CRACKING SOUTHLAND CONSTRUCTION, IN(2024) SPRIDE	9.0 8.1	9.0 8.2	8.5 8.1	8.5 8.0	8.0 8.0	8.0 7.9	8.0 7.9	8.0 7.8	8.0 7.7				10.0 7.9	9.0 7.7
92010000 6.000 9.928 R 1 1 55 CRACKING 600 17 2 10.9 41500 RIDE CR 535( 6.0R) FC5	9.0	8.0 9.0	7.0 9.0	7.0 8.8	5.0* 8.6	5.0* 7.6	5.0* 7.4	2.0* 6.9	2.0*	10.0	10.0	10.0	10.0	
4135921 5.671 9.624 C 2006 0012 CRACKING THE MIDDLESEX CORPORATION (2008) SPRIDE 4452101 6.050 9.932 C 2022 0012	9.5 8.0	9.5 8.0	8.5 8.0	7.0 7.9	7.0 8.2	6.5 8.1	6.5 8.1	6.5 8.0	6.5 8.2	4.5* 8.1	3.5* 8.1	1.0* 7.9	1.0* 7.6	7.4
92010000 9.928 10.298 R 1 6 40 CRACKING 600 17 2 10.9 41500 RIDE PORTAGE ST(10.0C) FC95MR	10.0 7.5	10.0 7.3	10.0	10.0	9.5 7.1	9.5 6.2	10.0 7.8	10.0 7.0	10.0 6.6	10.0 6.7	10.0	10.0 6.7	10.0 6.6	
CRACKING (2024) RIDE	9.0 6.8	8.5 6.7	8.5 6.0	8.5 6.2	8.5 6.9				7.5 7.5	7.0 7.1	6.0*	6.0*	9.5	8.5
92010000 11.764 12.228 R 1 1 40 CRACKING 500 17 2 10.3 34000 RIDE US-192/US-441/SR-500(11.8R) FC125M	5.8*							10.0	10.0	9.5 7.5	9.5 7.4	9.5 7.3	8.0 6.8	
4410171 11.916 12.283 R 2021 0012 CRACKING RANGER CONSTRUCTION INDUST(2023) SPRIDE	8.0 6.5	7.0 6.1	7.0 6.0	7.0 6.0	7.0 6.1	6.5 6.1	6.5 5.6	6.5 5.4*	6.5 5.3*	6.5 5.1*	5.5* 5.2*	10.0	10.0	9.0 6.2
92010000 12.228 13.706 R 1 1 45 CRACKING 500 17 2 6.2 38500 RIDE BENITA ST(12.3R) FC95	10.0	10.0 8.7	10.0	10.0 8.7	9.5 8.4	9.5 8.0	9.5 8.0	6.5 7.7	6.5 7.9	4.5* 7.8	4.5* 7.4	10.0	10.0	
4195621 12.234 13.484 C 2009 0012 CRACKING THE MIDDLESEX CORPORATION (2010) SPRIDE 4528791 12.289 14.750 C 2027 0012	8.2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.5 7.8	7.5 7.6	7.5 7.7	7.5 7.7	7.5 7.2	5.5* 6.9
92010000 13.706 14.750 R 1 1 50 CRACKING 500 17 3 6.2 38500 RIDE BARN ST(13.9R) FC125	10.0	10.0 8.7	10.0	10.0 8.7	10.0	9.5 7.4				10.0	10.0	10.0	10.0	
DARN SI(13.78) 2397251 13.700 14.722 C 2004 0213 CRACKING HUBBARD CONSTRUCTION COMPA(2008) SPRIDE 4528791 12.289 14.750 C 2027 0012	7.7	7.9	7.7	7.6	7.6	7.6	7.3	7.6	8.5 7.5	7.5 7.4	7.0 7.3	7.0 7.2	7.0 7.2	5.0* 6.9
92010000 13.706 14.750 L 1 1 50 CRACKING 500 17 3 6.2 38500 RIDE COUNTRY BLVD(13.9L) FC125	10.0	10.0	10.0	10.0						10.0	10.0		10.0	
2397251 13.700 14.722 C 2004 0213 CRACKING HUBBARD CONSTRUCTION COMPA(2008) SPRIDE 4528791 12.289 14.750 C 2027 0012	10.0 7.8	10.0 7.8	10.0	10.0 7.6	10.0 7.6	10.0	10.0 7.6	10.0 7.5	8.5 7.4	7.5 7.2		7.0 7.3	5.5* 7.4	
92010000 12.289 13.706 L 1 1 45 CRACKING 500 17 2 6.2 38500 RIDE KISSIMMEE CITY LIMITS(12.4L) FC95	10.0	10.0 8.6	10.0	10.0 8.5		8.0 7.9	7.5 7.6	6.5 7.6	6.5 7.4	4.5* 7.4	4.5* 6.9	10.0	10.0 7.9	
4195621 12.234 13.484 C 2009 0012 CRACKING	10.0 7.9	10.0 7.9	10.0	10.0 7.8	10.0 7.6	10.0 7.4	10.0 7.6		8.5 7.8	7.5 7.2	7.0 7.3	7.0 7.2	7.0 7.1	5.0* 6.8

<sup>&</sup>quot;\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2006, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 50 MPH.
"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

	DIST	RICT =	5 CO	UNTY =	OSCEO	LA								
RDWYID BMP EMP RW SYS TYP SPD DISTRESS SR US G_BMP G_EMP LN %T AADT RATINGS INTERSECT AT (MP SIDE) SURFTYPE =======	1999			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P W_BMP W_EMP RW FY-P WKMX-P CONTRACTOR (AGE_ONE YEAR) ASTYPE ITMSEG-F W_BMP W_EMP RW FY-F WKMX-F	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
92010000 11.764 12.289 L 1 1 40 CRACKING 500 17 2 10.3 34000 RIDE SR 530 / VINE ST(11.8L) FC125M	6.3*		7.0 6.3*	7.0 6.9	7.0 6.2	7.0 5.5	10.0 8.4	10.0	10.0	9.5 8.2	9.5 7.8	9.5 8.0	9.5 7.5	
4410171 11.916 12.283 L 2021 0012 CRACKING RANGER CONSTRUCTION INDUST(2023) SPRIDE	9.5 7.8	9.5 7.9	9.5 7.8	9.5 7.4	9.5 7.4	7.0 7.4	7.0 7.0	6.5 7.3	6.5 5.3*	6.5 5.6	5.5*	10.0	10.0	9.0 7.0
92010000 9.941 10.298 L 1 1 40 CRACKING 600 17 3 10.9 41500 RIDE PORTAGE ST(10.0C) FC95MR	9.0 6.6	9.0 6.7	9.0 6.2*	9.0 6.8	9.0 6.2	9.0 5.9	10.0 8.1	10.0 7.0	10.0 7.2	10.0 7.0	9.5 7.0	9.5 6.9	8.0 6.7	
PORTAGE ST(10.0C) FC95MR CRACKING (2024) RIDE	8.0 6.4	8.0 6.7	8.0 6.7	7.0 6.6	7.0 7.2				6.5 7.4	6.5 7.3	6.5 7.4	6.0* 7.0	9.5 7.1	8.5 6.8
92010000 7.658 9.941 L 1 8 55 CRACKING 600 17 2 10.9 41500 RIDE TEMPLE DR( 8.0L) FC5	9.5 8.9	8.0 8.9	8.0 8.9	8.0 8.7	8.0 8.5	6.0* 7.8	4.5* 7.5	4.5* 7.2	4.5* 7.4	10.0 8.1	10.0 8.1	10.0	10.0	
THE MIDDLESEX CORPORATION (2008) SPRIDE 4452101 6.050 9.932 C 2022 0012	9.5 7.9	9.5 7.9	8.5 7.7	7.0 7.5	6.5 7.8	6.5 7.8	6.5 7.7	6.5 7.5	4.5* 7.8	3.5* 7.7	0.0* 7.4	0.0* 6.9		
92010000 6.149 7.658 L 1 8 55 CRACKING 600 17 2 4.9 29500 RIDE	9.5 8.9	8.0 8.9	8.0 8.9	8.0 8.7	8.0 8.5	8.0 8.2	7.0 8.0	6.5 7.9	6.5 8.1	10.0 8.1	10.0 8.1	10.0	10.0	
LIME ST( 6.2L) FC5 4135921 5.671 9.624 C 2006 0012 CRACKING THE MIDDLESEX CORPORATION (2008) SPRIDE 4452101 6.050 9.932 C 2022 0012	9.5 7.9	9.5 7.9	8.5 7.7	7.0 7.5	6.5 7.8	6.5 7.8	6.5 7.7	3.5* 7.6	3.5* 7.8	1.0* 7.6	1.0* 7.5	0.0* 7.3		
92010000 4.200 6.149 L 1 7 55 CRACKING 600 17 2 4.9 29500 RIDE	7.0 7.7	7.0 7.4	7.0 6.9	6.5 7.5	6.5 7.1	6.5 6.2*	6.5 6.3*	6.5 5.4*	6.5 6.1*	10.0 8.6	10.0 8.4	10.0 8.3	10.0 8.2	
POINCIANA BLVD( 4.6C) FC5M 2397141 3.957 6.172 C 2019 0213 CRACKING SOUTHLAND CONSTRUCTION, IN(2024) SPRIDE	9.0 8.1	9.0 8.2	8.5 8.1	8.5 8.0	8.0	8.0 7.9	8.0 7.9	8.0 7.8	8.0 7.7				10.0 7.8	9.0 7.6
92010000 3.745 4.200 L 1 7 45 CRACKING 600 17 1 4.9 29500 RIDE	7.0 7.7	7.0 7.4	7.0 6.9	6.5 7.5	6.5 7.1	6.5 6.2*		10.0 7.1	8.0 6.9	10.0	10.0	10.0	10.0	
AVE A( 4.1C) FC5M 2397141 3.957 6.172 C 2019 0213 CRACKING SOUTHLAND CONSTRUCTION, IN(2024) SPRIDE	9.0 8.1	9.0 8.2	8.5 8.1	8.5 8.0	8.0 8.0	8.0 7.9	8.0 7.9	8.0 7.8	8.0 7.7				10.0 7.6	9.0 7.4
92010000 2.770 3.745 L 1 1 45 CRACKING 600 17 1 4.9 29500 RIDE WONDER CT( 2.9C) FC2	10.0 7.9	9.5 7.8	8.0 7.8	8.0 7.7	7.0 7.4	7.0 7.2	6.0* 7.1	4.5* 6.7	4.5* 6.8	10.0	10.0 8.4	10.0	10.0	
4135921 0.000 5.671 C 2006 0012 CRACKING THE MIDDLESEX CORPORATION (2008) SPRIDE	10.0 8.2	9.0 8.2	9.0 8.3	9.0 8.3	9.0 8.0	9.0 8.1	9.0 8.0	9.0 7.9	9.0 7.9	8.5 7.9	8.5 7.8	8.5 7.8	8.5 7.1	4.0* 6.9
92010100 0.000 0.452 C 1 1 55 CRACKING 600 17 2 6.9 21000 RIDE											10.0 8.4	10.0 8.4	10.0 8.4	
SUNDOWN DR( 0.0L) FC3 CRACKING (2009) RIDE	10.0 8.3	9.0 8.4	9.0 8.4	9.0 8.2	9.0 8.0	9.0 7.6	9.0 7.8	9.0 8.0	9.0 7.9	7.5 7.5	7.5 7.9	7.5 7.8	7.5 7.4	5.5* 7.1
92010100 0.875 1.354 C 1 1 55 CRACKING 600 17 2 4.9 25000 RIDE												10.0		
OLD TAMPA HWY( 1.1L) FC3 CRACKING (2009) RIDE	10.0 8.5	9.5 8.5	9.5 8.4	9.5 8.4	9.5 8.2	9.5 8.1	9.5 8.1	9.5 8.1	9.5 8.1	9.0 8.0	8.5 8.0	8.5 7.9	8.5 7.9	6.5 7.6
92030000 0.000 0.610 R 1 1 40 CRACKING 500 192 3 11.8 46500 RIDE		7.5 8.0	7.0 8.0	6.5 7.6	10.0 8.2	10.0 7.9	10.0 7.8		10.0			10.0 8.3	8.5 8.3	
AERONAUTICAL LN R( 0.0C) FC125  CRACKING (2003) RIDE 4507781 0.015 3.844 C 2026 0226	8.5 8.2	8.5 8.2	8.5 8.2	8.5 8.3	8.5 8.0	7.5 8.0	7.5 7.9	7.5 7.9	7.5 8.0	7.0 8.0		5.5* 8.0	5.5 <sup>*</sup> 7.9	
92030000 0.610 3.851 R 1 1 50 CRACKING 500 192 3 4.7 31500 RIDE	7.0 8.6	5.0* 8.5		4.0* 8.1		10.0	10.0	10.0	10.0	10.0	9.0 8.2	9.0 8.2	8.5 8.2	
OAK ST( 0.8R) FC3 2397081 0.610 3.851 C 2002 0213 CRACKING MARTIN K. EBY CONSTRUCTION(2004) S RIDE 4507781 0.015 3.844 C 2026 0226		8.5 8.1	8.5 8.1	8.5 8.1	8.5 7.8	8.5 7.8	8.5 7.6	8.5	8.5 7.8	8.5	7.0 7.8	7.0 7.8	7.5 7.7	5.0* 7.4

<sup>&</sup>quot;\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2006, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 50 MPH.
"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

		DIST	RICT =	5 CO	UNTY =	OSCEO	LA								
SR US G_BMP G_EMP LN %T	P SPD DISTRESS AADT RATINGS FTYPE ======				2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P W_BMP W_EMP RW FY-P WI CONTRACTOR (AGE_ONE YEAR) A: ITMSEG-F W_BMP W_EMP RW FY-F WI	STYPE	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
500 192 3 6.0 4 AERONAUTICAL DR( 3.9R) FO	1 50 CRACKING 48000 RIDE C5M	8.3	8.4	8.3	10.0	10.0	10.0	10.0 7.9	10.0 8.1	10.0 8.2	9.5 8.2	9.5 8.1	9.5	9.5	
2396821 3.851 7.774 C 2015 JR. DAVIS CONSTRUCTION COM(2021)	0213 CRACKING SPRIDE	7.0 7.9	7.0 7.8	7.0 7.8	7.0 7.7	7.0 7.9	6.5 7.8				10.0 7.9	10.0 7.8	10.0	10.0 7.5	8.5 7.3
	1 40 CRACKING 45500 RIDE C125M	10.0	10.0 8.1	10.0 7.8	10.0 7.4	9.5 7.6	9.5 7.0	9.5 6.9	8.0 7.0	7.0 7.0	7.0 6.3	7.0 6.9	7.0 6.7	7.0 6.7	
4233611 7.774 9.786 C 2011 RANGER CONSTRUCTION INDUST(2013)	0226 CRACKING RIDE	7.0 6.7	10.0 7.9	10.0 7.8	10.0 7.5	10.0 7.3	10.0 7.2	10.0 7.1	10.0 6.8	10.0 6.9	8.5 6.6	7.0 6.7	7.0 6.9	7.0 6.9	5.5* 6.6
92030000 9.786 13.243 R 1 500 192 3 7.8 CORANGE AVE(10.0C)	1 55 CRACKING 42500 RIDE		10.0	10.0	10.0 8.9	9.5 8.8	9.5 8.4	8.0 8.3	7.5 8.3	6.5 8.1	6.5 7.9	3.5* 7.6	1.0* 7.1	1.0° 6.8	•
2396831 9.786 12.968 C 2015 JR. DAVIS CONSTRUCTION COM(2018)	0218 CRACKING SPRIDE		10.0	10.0	10.0 8.3	10.0 8.4		10.0 8.2	10.0 8.2	10.0 8.3	10.0 8.3	10.0 8.3	10.0	10.0 8.3	8.0 8.1
15 192 2 8.4	1 60 CRACKING 19700 RIDE	3.5* 7.6	4.0* 7.6	3.5* 7.3	10.0 8.5	10.0 8.4	10.0 8.1	10.0 8.1	9.0 8.2	9.0 8.2			10.0 8.4	10.0 8.4	
WHIP O WILL LN(15.6R) FO 2396731 12.468 18.133 C 2006 HUBBARD CONSTRUCTION COMPA(2010)	C5 0213 CRACKING SPRIDE	10.0 8.4	10.0 8.3	10.0 8.3	10.0 8.3	10.0 8.3	10.0 8.3	9.0 8.2	9.0 8.1	8.0 8.3	6.5 8.2	4.5* 8.2	4.5* 8.1	4.5° 8.0	* 0.5* 7.8
	12369 RIDE	3.5* 7.6	4.0* 7.6	3.5* 7.3	10.0 8.5	10.0 8.4	10.0 8.1		10.0 7.8	10.0 7.8	10.0 7.8	10.0 7.7	10.0	10.0	
ARTHUR J GALLAGHER(18.4R) F0 4391221 18.182 19.340 C 2020 PREFERRED MATERIALS, INC. (2022)	C5M 0012 CRACKING SPRIDE	9.0 7.5	9.0 7.4	7.5 7.2	7.5 6.9	6.5 6.9	5.5* 7.0	5.5* 6.8	3.5* 6.6	3.5* 6.8	0.0* 6.6	10.0 8.5	10.0 8.5	10.0 8.3	8.5 8.1
92030000 19.343 31.600 R 1 500 192 2 13.9	9000 RIDE	1.5* 7.6	10.0 8.9	10.0	10.0 8.7	10.0 8.6	10.0 8.2	10.0 8.1	9.0 8.2	9.0 8.3		10.0 8.1	10.0	10.0	
CYPRESS CREEK RANCH RD(21.8R) F0 2397531 24.765 31.624 C 2005 VEZINA, LAWRENCE & PISCITE(2009)		10.0	10.0 7.9	10.0 7.9	10.0 7.8	9.5 8.3	9.5 8.2	9.5 8.2	9.5 8.2	9.5 8.5	8.0 8.5	8.0 8.4	6.5 8.4	6.5 8.4	2.5* 8.2
	1 65 CRACKING 9000 RIDE	3.0* 7.7	10.0	10.0	10.0 8.7	10.0 8.6	10.0 8.3			10.0	10.0 8.1	10.0	10.0	10.0	
2396761 31.476 38.145 C 2004 HEWITT CONTRACTING CO. INC(2007) 4470991 31.637 38.145 R 2023		9.5 7.9	9.5 7.8	9.5 7.9	9.5 7.8	9.5 8.1	9.5 8.1	9.0 8.0	9.0 8.0	6.5 8.3	6.5 8.3	4.5* 8.3	4.5* 8.2	3.5° 8.2	* 0.0* 8.0
92030000 37.100 38.145 R 1 500 192 2 18.2 SAPLING RD(38.1R)	10300 RIDE	3.0* 7.7	10.0	10.0	10.0 8.7	10.0 8.6	10.0 8.3			10.0 8.0	10.0 8.1	10.0 8.0	10.0	10.0 8.0	
2396761 31.476 38.145 C 2004 HEWITT CONTRACTING CO. INC(2007) 4470991 31.637 38.145 R 2023		9.5 7.9	9.5 7.8	7.0 7.4	7.0 7.3	7.0 7.6	7.0 7.6	7.0 7.4	6.5 7.4	4.5* 7.7	4.5* 7.6	4.5* 7.7	4.5* 7.4	3.5° 7.3	0.0* 7.1
	 1 65 CRACKING 9000 RIDE C5		10.0	10.0	10.0 8.7	10.0	10.0			10.0 8.1		10.0 8.2	10.0		
2396761 31.476 38.145 C 2004 HEWITT CONTRACTING CO. INC(2007) 4470991 31.615 38.145 L 2023	0213 CRACKING SPRIDE 0012	9.5 8.1	9.5 8.0	9.5 8.0	9.0 7.9	9.0 8.1	9.0 8.1	9.0 8.0	9.0 7.9	4.5* 8.3	4.5* 8.2	3.5* 8.2	3.5* 8.0	3.5° 8.0	0.0* 7.8
	9000 RIDE	1.5* 7.6	10.0 8.9	10.0 8.9	10.0 8.7	10.0 8.6	10.0 8.2	10.0 8.1	9.0 8.2	9.0 8.3		10.0 8.2	10.0	10.0 8.1	
TURN AROUND BAY RD(24.5L) F0 2397531 24.765 31.624 C 2005 VEZINA, LAWRENCE & PISCITE(2009)	0213 CRACKING		10.0 7.9	9.5 7.8	9.5 7.8	9.5 8.2	9.5 8.2	9.5 8.2	9.5 8.2	9.5 8.5	8.0 8.4	8.0 8.4	6.5 8.3	6.5 8.3	2.5* 8.1
92030000 18.427 19.343 L 1 : 15 192 2 12.9 : HARMONY SQUARE DR(19.0L) FO	12369 RIDE	3.5* 7.6	4.0* 7.6	3.5* 7.3	10.0 8.5	10.0 8.4	10.0 8.1		10.0 7.7	10.0 7.9	10.0 7.9	10.0 7.7	10.0 7.9	10.0 7.9	
4391221 18.182 19.340 C 2020 PREFERRED MATERIALS, INC. (2022)		9.0 7.8	9.0 7.8	9.0 7.6	9.0 7.4	7.5 7.7	6.5 7.6	6.5 7.5	6.5 7.3	4.5* 7.3	3.5* 6.9	10.0 8.6	10.0 8.6	10.0 8.6	8.5 8.4

<sup>&</sup>quot;\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2006, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 50 MPH.
"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

		DIST	RICT =	5 CO	UNTY =	OSCEO	LA								
	TYP SPD DISTRESS T AADT RATINGS SURFTYPE =======	1999			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P W_BMP W_EMP RW FY- CONTRACTOR (AGE_ONE YEAR) ITMSEG-F W_BMP W_EMP RW FY-	ASTYPE	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
15 192 2 8 FIVE OAKS DR(18.1L)	1 60 CRACKING 4 19700 RIDE FC5	7.6	4.0* 7.6	3.5* 7.3	10.0 8.5	10.0 8.4	10.0 8.1	10.0 8.1	9.0 8.2	9.0 8.2			10.0 8.5	10.0 8.5	
2396731 12.468 18.133 C 20 HUBBARD CONSTRUCTION COMPA(20: 4487961 15.552 18.435 L 20:	0) SPRIDE	10.0 8.5	10.0 8.5	10.0 8.4	10.0 8.4	10.0 8.4	10.0 8.4	9.0 8.3	9.0 8.3	9.0 8.4	8.0 8.4	6.5 8.3	4.5* 8.1	3.5* 8.1	0.0* 7.9
92030000 9.786 13.243 L 5 500 192 3 7 GRAPE AVE( 9.9L)	1 55 CRACKING 8 42500 RIDE FC5M		10.0 9.0	10.0 8.9	10.0 8.9	9.5 8.8	9.5 8.3	8.0 8.1	8.0 8.3	6.5 8.4	6.5 8.4	6.5 8.3	6.5 8.1	4.5* 8.0	
2396831 9.786 12.968 C 20 JR. DAVIS CONSTRUCTION COM(20)	5 0218 CRACKING		10.0 8.4	10.0	10.0 8.4	10.0 8.4		10.0 8.5	10.0 8.4	10.0 8.5	10.0 8.5	10.0 8.5	10.0 8.5	10.0 8.5	8.0 8.3
92030000 7.774 9.786 L 500 192 3 11 MONTANA AVE( 7.8L)	1 40 CRACKING 8 45500 RIDE FC125M	10.0	10.0 9.0	10.0	10.0 8.9	10.0 8.7	10.0 8.2	10.0 8.1	10.0 8.1	10.0 8.3	8.0 8.1	7.0 8.0	7.0 8.1	7.0 8.1	
4233611 7.774 9.786 C 201 RANGER CONSTRUCTION INDUST(201	1 0226 CRACKING	7.0 7.9	10.0 8.4	10.0 8.4	10.0 8.4	10.0	10.0 8.3	10.0 8.2	10.0 8.2	10.0 8.3	8.5 8.3	8.5 8.3	7.5 8.2	7.5 8.2	6.0* 7.9
	1 50 CRACKING 0 48000 RIDE FC5M	4.0* 8.5	3.5* 8.4	3.5* 8.4	10.0 8.7	10.0 8.6	10.0 7.9	10.0 7.9	10.0 7.8	10.0 8.1	9.5 8.1	9.5 8.0	9.5 8.0	9.5 7.9	
2396821 3.851 7.774 C 201 JR. DAVIS CONSTRUCTION COM(201	5 0213 CRACKING	7.0 7.8	7.0 7.7	7.0 7.6	7.0 7.6	7.0 8.0	6.5 8.1	6.5 7.9			10.0 7.8	10.0 7.7	10.0 7.8	10.0 7.7	8.5 7.5
	1 50 CRACKING 7 31500 RIDE FC3	8.0 8.8	7.0 8.8	7.0 8.8	7.0 8.5		10.0 8.3	10.0 8.4	10.0 8.4	10.0 8.5	10.0 8.4	10.0 8.4	10.0	8.5 8.3	
2397081 0.610 3.851 C 200 MARTIN K. EBY CONSTRUCTION(20) 4507781 0.015 3.844 C 200	2 0213 CRACKING 4) S RIDE	8.5 8.2	8.5 8.1	8.5 8.1	8.5 8.1	8.5 8.0	8.5 7.9	7.5 7.9	7.5 7.9	7.5 7.8	7.5 7.9	7.0 7.8	7.0 7.9	7.5 7.8	5.0* 7.5
92030000 0.000 0.610 L 500 192 3 11 AERONAUTICAL LN R( 0.0C)	1 40 CRACKING 8 46500 RIDE FC125	9.5 7.9	9.5 7.8	9.5 7.6	9.5 7.7	10.0 8.4	10.0 7.9	10.0 7.7	10.0 7.8	10.0 8.0	10.0 7.7	10.0 7.9	10.0	8.5 7.8	
(20) 4507781 0.015 3.844 C 200		8.5 7.3	8.5 8.0	8.5 8.0	8.5 8.0	8.0 7.7	8.0 7.8	7.0 7.4	7.0 7.4	7.0 7.2	7.0 7.3	6.5 7.2	4.5* 7.3	4.5* 7.2	2.0* 6.9
92040000 0.000 1.147 R	1 50 CRACKING 3 26500 RIDE FC5	7.0 8.1	5.0* 7.7	4.0* 7.8	4.0* 8.4	4.0* 8.2	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
4041321 0.164 1.147 C 200 APAC-FLORIDA INC (200	2 0012 CRACKING	9.5 7.6	9.5 7.6	9.5 7.7	8.0 7.5	8.0 7.3	8.0 7.5	8.0 7.6	7.5 7.3	6.5 7.3	4.5* 7.2	4.5* 7.2	4.5* 7.6	4.5* 7.5	0.0* 7.3
92040000 0.000 1.147 L : 535 3 8 SR 530( 0.0C)	1 50 CRACKING 3 26500 RIDE FC5	5.5* 8.0	3.5* 8.1	3.5* 8.0	3.5* 7.6	3.5* 7.2	10.0 7.8	10.0 7.8	10.0	10.0	9.0 8.1	9.0 8.0	9.0 8.0	9.0 8.0	
4041321 0.164 1.147 C 200 APAC-FLORIDA INC (200	2 0012 CRACKING	9.0 8.0	9.0 7.8	9.0 7.8	9.0 7.8	9.0 7.9	9.0 7.9	9.0 7.9	9.0 7.8	5.5* 7.9	5.5* 7.4	5.5* 7.3	5.5* 7.1	5.5* 7.1	0.0* 6.9
92060000 0.000 4.333 C 15 441 2 43 KENANSVILLE RD( 4.3C)		3.5* 6.8			10.0	10.0	10.0	10.0	10.0 7.9	10.0	10.0	10.0 7.9	8.5 7.9	8.5 7.8	
4394871 0.000 4.333 C 20: OHLA USA, INC. (20:	1 0012 CRACKING	8.5 7.6	8.5 7.8	8.5 7.5	7.0 7.6	7.0 7.4	6.5 7.2	6.5 7.2	6.5 7.4	6.5 7.3	5.5* 7.3	5.5* 7.2	10.0 8.6	10.0 8.5	9.0 8.2
92060000 4.333 6.554 C 15 441 2 30	1 60 CRACKING 6 1500 RIDE FC125M	10.0 8.2	9.5 8.1	8.0 7.8	8.0 7.7	7.0 7.4	6.5 6.9	6.5 6.4*		10.0 8.4	10.0 8.3	10.0 8.4	10.0 8.3	10.0 8.3	
4155101 4.333 6.554 C 20	6 0012 CRACKING		10.0 8.1		10.0 8.2	9.0 8.0	9.0 7.8	9.0 7.9	9.0 7.8	9.0 7.8	8.5 7.8	8.5 7.7	8.5 7.7	8.5 7.6	6.5 7.3
92060000 6.554 23.500 C 15 441 2 30 BLUE CYPRESS RANCH( 8.3R)	FC125H		10.0 8.9	10.0	10.0 8.8	10.0 8.7	10.0 8.3	10.0 8.2	10.0 8.2	9.5 8.3	7.0 8.2	7.0 8.3	7.0 8.0	7.0 8.0	
4344061 6.554 23.500 C 20 HUBBARD CONSTRUCTION CO. (20)	8 0012 CRACKING 0) RIDE	7.0 8.0	7.0 7.9	7.0 7.5	7.0 7.7	7.0 7.6	7.0 7.5	7.0 7.7	9.0 7.8	10.0 8.7	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.5	9.0 8.2

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"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

PAVEMENT IMPROVEMENT PROJECTS IN FM WPA TENTATIVE PLAN - 2025 - 2030, EXTRACTED ON 08/16/2024

SORT BY RDWYID MILEPOST R ASCENDING L DESCENDING

------ DISTRICT = 5 COUNTY = OSCEOLA RDWYID BMP EMP RW SYS TYP SPD DISTRESS SURVEYED YEAR SR US G\_BMP G\_EMP LN %T AADT RATINGS 1999 2000 2 INTERSECT AT (MP|SIDE) SURFTYPE ======== FUTURE 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 ITMSSG-P W\_BMP W\_EMP RW FY-P WKMX-P
CONTRACTOR (AGE\_ONE YEAR) ASTYPE
ITMSEG-F W\_BMP W\_EMP RW FY-F WKMX-F 2020 2012 2013 2014 2015 2016 2017 2018 2019 2021 2022 2023 (PM) 92060000 23.500 31.386 C 1 1 60 CRACKING 7.0 15 441 3100 RIDE 7.3 WILLIAMS RD(24.4L) 4375431 23.081 38.033 C 2020 0012 CRACKING 8.5 PREFERRED MATERIALS, INC. (2022) SPRIDE 7.3 10.0 10.0 9.5 6.0\* 7.3 10.0 7.0 6.6 10.0 92060000 31.386 38.033 C 1 1 60 CRACKING 15 441 2 22.4 3100 RIDE CREWS LN(31.6R) C 2020 0012 CRACKING 10.0 6.0° 7.3 6.0° 7.3 6.0<sup>3</sup> 5.5 10.0 10.0 10.0 8.1 10.0 8.0 23.081 38.033 C 2020 0012 CRACKING PREFERRED MATERIALS, INC. (2022) SPRIDE 7.0 6.9 7.0 6.8 10.0 8.5 8.0 7.5 8.0 8.0 7.0 7.0 7.0 6.5 7.0 10.0 10.0 7.0 9.0 92070000 0.113 1.229 C 1 1 60 CRACKING 8.0 60 2 32.5 9400 RIDE 8.0 S 65( 0.3R) FC125 4117831 0.447 1.160 C 2004 0012 CRACKING 10.0 RANGER CONSTRUCTION INDUST(2005) RIDE 7.8 6.0\* 7.6 6.0\* 6.8 6.0\* 6.6 10.0 7.7 10.0 7.8 10.0 7.9 10.0 6.0\* 7.3 10.0 7.7 10.0 7.6 10.0 7.5 5.0\* 6.8 92070000 1.229 2.528 C 1 1 60 CRACKING 60 3 32.5 9400 RIDE FC5M 4288671 1.358 2.310 C 2014 0012 CRACKING RANGER CONSTRUCTION INDUST(2016) RIDE 60 CRACKING 10.0 8.0 7.8 7.5 7.5 6.5 7.5 6.5 7.3 10.0 8.0 8.0 6.5 7.6 4.5\* 7.0 7.5 7.7 8.6 8.7 8.6 8.5 8.4 8.0 7.5 7.5 4.5 4.5 4.5 10.0 10.0 10.0 10.0 9.0 9.0 6.5 4.0\* 6.9 8.3 8.3 8.0 9.5 8.6 7.0 8.2 6.03 5.5° 8.1 3.5\* 6.8 9.5 8.5 9.5 7.7 92070000 3.547 4.820 C 1 1 60 CRACKING 10.0 60 8.6 SIDE ROAD( 4.4L) 4155091 3.547 8.114 C 2006 0012 CRACKING 10.0 ELMO GREER & SONS, LLC (2007) SPRIDE 8.5 9.5 8.5 8.0 8.0 8.0 7.6 10.0 10.0 10.0 10.0 10.0 8.0 10.0 8.6 8.6 10.0 8.4 10.0 9.0 9.0 8.1 9.0 9.0 8.1 9.0 8.2 10.0 7.0 8.3 6.0\* 8.1 6.0 4.07 4.5\* 6.2\* 4.5° 6.5 10.0 10.0 10.0 10.0 10.0 8.7 8.5 8.5 8.4 8.5 8.4 5.0° 8.1 8.5 92070000 8.114 13.028 C 1 1 60 CRACKING 3.5\*
60 2 32.5 9400 RIDE 7.0
ACCESS RD( 8.6R)
4288671 8.114 13.151 C 2014 0012 CRACKING 7.0
RANGER CONSTRUCTION INDUST(2016) RIDE 7.8 3.0\* 1.5\* 1.0\* 10.0 10.0 10.0 10.0 10.0 9.5 7.0 7.9 7.0 7.9 7.0 7.9 8.0 8.0 7.0 7.8 7.0 7.7 10.0 10.0 10.0 8.5 8.7 6.0\* 8.3 7.0 10.0 10 0 8.5 92070000 13.028 14.301 C 1 1 60 CRACKING 10.0 60 79400 RIDE 8.7 JUSTIN ROHDE RD(14.2L) 5 C55M 4288671 13.151 14.300 C 2014 0012 CRACKING 4.5\* RANGER CONSTRUCTION INDUST(2016) RIDE 7.0 10.0 8.0 8.0 7.6 9.5 8.6 9.5 8.6 8.0 6.5 7.4 6.5 7.5 6.5 7.2 10.0 10.0 10.0 10.0 10.0 8.5 8.5 10.0 7.9 10.0 10.0 10.0 7.9 10.0 10.0 8.0 7.8 9.5 7.9 10.0 8.5 10.0 8.5 8.4 92070000 14.767 16.040 C 1 1 60 CRACKING 160 3 32.5 9400 RIDE ROHDE RD(15.6L) FCSM 4288671 14.942 16.053 C 2014 0012 CRACKING RANGER CONSTRUCTION INDUST(2016) RIDE 60 CRACKING 10.0 8.0 10.0 9.5 9.5 8.0 8.0 7.5 6.5 7.5 6.5 7.3 8.5 8.6 8.4 10.0 10.0 4.5° 4.5 4.5° 6.5 10.0 10.0 8.4 8.3 8.4

<sup>&</sup>quot;\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2006, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 50 MPH.
"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

			DIST	RICT =	5 CO	UNTY =	OSCEC	LA								
	RW SYS TYP SE LN %T AAL SURFTYE		1999			2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P W_BMP W_EMP CONTRACTOR (AGE_ONE YEAF ITMSEG-F W_BMP W_EMP		E	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
92070000 16.040 19.603 60 MAE BASS RD(16.6C)	C 1 1 6 2 32.5 940 FC125	0 CRACKING 0 RIDE	7.0 8.0	10.0	10.0	10.0 8.7	10.0 8.7	10.0 8.3	10.0 8.2	9.0 8.1	9.0 8.3	7.5 8.0	7.5 8.0	7.5 8.0	7.5 7.9	
4288671 16.053 19.956 RANGER CONSTRUCTION INDU	C 2014 001	2 CRACKING RIDE	7.5 7.8	6.5 7.7	6.5 7.3	6.5 7.2	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	8.5 8.6	8.5 8.5	8.5 8.5	8.5 8.5	7.0 8.2
92070000 19.603 20.220 60	R 1 7 4 1 29.5 1290 FC125		6.0* 7.3	10.0 8.6	10.0 8.6	10.0 8.7	10.0 8.5	10.0 8.0	10.0 8.0	10.0 7.4	10.0 8.0	9.5 8.1	9.5 8.2	9.5 8.0	8.0 8.1	
	(2024)	CRACKING RIDE	7.0 8.1	7.0 7.5	7.0 7.5	7.0 7.4	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	8.5 8.6	8.5 8.5		10.0 8.0	9.0 7.7
92070000 20.220 21.820 60	R 1 1 6 2 29.5 1290 FC5M	5 CRACKING 0 RIDE	7.0 7.9	5.0* 7.7	4.0* 8.0	4.0* 7.7	10.0 8.3	10.0 8.1	10.0 8.1	10.0 8.0	10.0 7.5	9.5 8.2		10.0 8.2	10.0 8.2	
2396852 19.965 21.890 ELMO GREER & SONS, LLC 4506231 19.956 21.820	C 2005 021 (2010)	3 CRACKING SPRIDE 6	10.0	10.0	10.0	10.0	10.0	9.0 8.2	9.0 8.2	9.0 8.0	9.0 8.4	8.0	6.5 8.3	6.5 8.5	6.5 8.4	2.5* 8.2
92070000 20.220 21.820 60	2 29.5 1290	5 CRACKING 0 RIDE	7.0 7.9	5.0* 7.7	4.0* 8.0	4.0* 7.7	10.0	10.0	10.0	10.0	10.0 7.5	9.5 8.2		10.0 8.1	10.0 8.1	
SUNSHINE AVE(20.6L) 2396852 19.965 21.890 ELMO GREER & SONS, LLC 4506231 19.956 21.820		3 CRACKING SPRIDE 6	10.0 8.2	10.0 8.1	10.0	10.0 8.0	10.0 8.3	10.0 8.2	9.0 8.3	9.0 8.2	9.0 8.3	8.0 8.3	8.0 8.2	8.0 8.4	8.0 8.3	4.0* 8.1
92070000 19.603 20.220 60	L 1 7 4 1 29.5 1290 FC125		6.0* 7.3	10.0 8.6	10.0 8.6	10.0 8.7	10.0 8.5	10.0 8.0	10.0 8.0	10.0 7.4	10.0 8.0	9.5 8.1	9.5 8.2	9.5 8.0	8.0 8.1	
	(2024)	CRACKING RIDE	8.1	7.0 7.5	7.0 7.5	7.0 7.4	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	8.5 8.6	8.5 8.5		10.0 7.4	9.0 7.1
92090000 0.000 3.330 530 192 FRONTAGE RD( 0.0R)	R 1 1 4 3 5.0 5650 FC125	0 RIDE					10.0	10.0	10.0	10.0	9.5 8.2	9.5 8.2	9.5 8.1	9.5 8.1	9.5 8.0	
2396691 0.048 3.506 HUBBARD CONSTRUCTION CO 4509531 0.000 3.330	C 1999 021 (2003)	3 CRACKING SPRIDE	9.5 7.9	9.5 8.0	9.5 8.1	9.5 8.0	9.5 7.9	9.5 7.9	9.5 8.0	8.0 7.8	8.0 7.8	7.0 7.7	7.0 7.9	7.0 7.8	7.0 7.7	4.5* 7.4
92090000 3.330 4.643 530 192 GRIFFIN RD( 3.5R)	R 1 1 5 3 6.2 7500 FC5	0 CRACKING 0 RIDE	10.0 9.0	10.0 8.9	10.0 8.9	10.0 8.9	9.5 8.6	9.5 8.1	9.5 8.3	8.0 8.1	7.5 8.1	6.5 8.1	6.5 8.0	5.5* 7.6	5.5* 7.6	,
4249061 3.330 4.643 LANE CONSTRUCTION CORPOR	C 2012 001	2 CRACKING RIDE	5.5* 7.5		10.0	10.0 8.4	10.0 8.4	10.0 8.4	10.0 8.4	10.0 8.2	10.0 8.4	9.0 8.4	9.0 8.4	7.5 8.4	7.5 8.4	4.5* 8.2
92090000 4.643 6.000 530 192	R 1 1 5 3 9.4 5350 DGFC	0 CRACKING 0 RIDE	3.5* 6.0*		3.5* 6.6	10.0 8.4	10.0 8.3	10.0 7.6	10.0 7.7			10.0 8.4	10.0 8.2	10.0 8.2	10.0 8.3	
	(2008)	CRACKING RIDE	10.0	10.0 8.2	9.5 8.3	9.5 8.1	9.5 8.0	9.5 8.1	9.5 8.0	9.5 8.0	9.5 8.0	9.0 7.9	8.5 7.9	8.5 8.0	8.5 7.9	6.5 7.6
92090000 6.000 6.663 530 192 CELEBRATION PL( 6.1R)	R 1 1 4 3 9.4 5350 FC95	5 CRACKING 0 RIDE	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.5	10.0 8.3	8.0 7.8	8.0 7.7	6.5 7.2	6.5 6.7	3.5* 7.0	3.5* 7.0	1.0* 6.1	10.0 8.4	
4220331 5.990 6.724 HUBBARD CONSTRUCTION COM	C 2009 001	2 CRACKING RIDE	10.0	10.0 8.3	10.0	10.0 8.4	10.0 7.9	10.0 8.0	10.0 8.1	10.0 8.2	10.0 8.1	8.5 8.1	7.5 7.9	7.0 7.9	7.0 8.1	5.0* 7.8
92090000 6.663 9.657 530 192	3 3.8 3750	0 RIDE	1.5* 7.7				10.0 8.7	10.0 8.4	10.0 8.4	10.0 8.3	10.0 8.4	10.0 8.4	10.0 8.3	9.5 8.3	8.0 8.3	
HOL-I-DAY TR( 7.1C) 4410211 6.678 9.652 PREFERRED MATERIALS, INC		2 CRACKING	8.0 8.2	7.0 8.2	7.0 8.2	7.0 8.2	7.0 7.8	10.0 7.9	10.0 7.7	9.5 7.8	8.0 7.9	8.0 7.8	8.0 7.8	10.0	10.0 8.0	9.0 7.7
92090000 9.657 13.012 530 192 SEVEN DWARFS LN(10.2C)	R 1 2 4 3 2.9 6439 OGFC	5 CRACKING 0 RIDE	1.5* 7.7	10.0 8.7	10.0	10.0 8.5	9.5 8.3	9.5 7.7			10.0 8.0	10.0 8.0	10.0 7.9	10.0 7.9	10.0 7.9	
2396631 9.712 12.853 THE MIDDLESEX CORPORATION	C 2004 021	3 CRACKING S RIDE	9.5 7.7	9.5 7.7	9.5 7.7	9.5 7.7	9.5 7.6	9.5 7.6	9.5 7.5	9.0 7.4	9.0 7.5	7.5 7.3	6.5 7.4	4.5* 7.4	4.5* 7.4	0.0* 7.2

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"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

		DIST	RICT =	5 CO	UNTY =	OSCEO	LA								
RDWYID BMP EMP RW SYS TYP SR US G_BMP G_EMP LN %T I INTERSECT AT (MP SIDE) SURF					2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P W_BMP W_EMP RW FY-P WKI CONTRACTOR (AGE_ONE YEAR) AS' ITMSEG-F W_BMP W_EMP RW FY-F WKI	TYPE	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
		7.4	9.0 7.2	8.0 7.7	7.5 7.5	7.0 7.2	7.0 6.5	5.5* 6.2	8.1	10.0	10.0	10.0	10.0	8.5 8.0	
(2006) 4543312 12.667 15.386 C 2027	CRACKING RIDE 9924	8.5 8.0	8.5 8.0	8.5 7.8	8.5 7.8	8.5 7.8	7.5 7.6	7.5 7.8	7.0 7.5	7.5 7.7	7.0 7.6	5.5* 7.7	5.5* 7.7	5.5* 7.5	3.0* 7.2
92090000 13.012 15.386 L 1 1 530 192 3 2.9 6	40 CRACKING 1390 RIDE	10.0	9.5 7.8	9.5 7.7	9.5 7.6	9.5 7.6	8.0 6.7	8.0 6.7	10.0	10.0	10.0	10.0	10.0	8.5 7.9	
(2006)	CRACKING RIDE	8.5 8.0	8.5 7.9	8.5 7.9	8.5 7.8	8.5 8.1	8.5 8.0	7.5 7.9	7.5 7.6	7.5 7.8	7.0 7.7	5.5* 7.7	5.5* 7.8	5.5* 7.7	3.0* 7.4
92090000 9.657 13.012 L 1 1 530 192 3 2.9 6 SEVEN DWARFS LN(10.2C) OG	1390 RIDE	3.5* 8.2	10.0 8.6	10.0 8.6	9.5 8.4	9.5 8.2	9.5 7.8			10.0 8.1	10.0 8.1	10.0 8.0	10.0 7.9	10.0 7.9	
2396631 9.712 12.853 C 2004 THE MIDDLESEX CORPORATION (2007)	0213 CRACKING S RIDE 0012	9.5 7.9	9.5 7.8	9.5 7.8	9.5 7.8	9.5 7.7	9.5 7.7	9.5 7.6	9.0 7.5	9.0 7.5	7.5 7.4	4.5* 7.2	3.5* 7.1	3.5* 6.7	0.0* 6.5
530 192 3 3.8 3	45 CRACKING 7500 RIDE 125M	3.5* 8.2				10.0 8.6	10.0 8.2	10.0 8.2	10.0	10.0	10.0 8.3	10.0 8.2	10.0 8.2	9.5 8.2	
		9.5 8.1	9.5 8.1	9.5 8.1	8.0 8.1	7.0 7.9	7.0 7.7	7.0 7.8	7.0 7.7	7.0 7.7	7.0 7.5	7.0 7.6	10.0 8.4	10.0 8.2	9.0 7.9
530 192 3 9.4 53	45 CRACKING 3500 RIDE	10.0	10.0	10.0 8.6	10.0 8.3	9.5 8.3	9.5 7.8	7.0 7.8	7.0 7.8	8.0 7.8	6.5 7.8	6.5 7.8	4.5* 7.7	10.0	
CELEBRATION BLVD( 6.1L) FC: 4220331 5.990 6.724 C 2009 ( HUBBARD CONSTRUCTION COMPA(2011)		10.0	10.0	10.0 8.0	10.0 8.2	10.0 8.1	10.0 8.0	10.0 8.1	10.0	10.0 8.1	9.5 8.0	8.5 8.1	8.5 8.1	8.5 8.1	6.5 7.8
530 192 3 9.4 5	50 CRACKING 3500 RIDE	3.0* 7.0	3.0* 6.9	3.0* 6.7	10.0 8.8	10.0 8.6	10.0 7.9	9.0 7.9			10.0 8.3	10.0 8.2	10.0 8.2	10.0 8.2	
DG1 (2008)	CRACKING RIDE	10.0	10.0 8.1	10.0 7.7	10.0 7.9	9.5 8.0	9.5 7.9	9.5 8.0	9.5 7.9	9.5 7.9	9.0 7.9	8.5 7.8	7.5 7.8	7.5 7.8	5.5* 7.5
	50 CRACKING 5000 RIDE	10.0 8.7	10.0	10.0 8.7	10.0 8.7	10.0 8.6	10.0 8.1	10.0 8.2	9.5 8.1	8.0 8.2	6.5 8.2	6.5 8.1	6.5 8.1	6.5 8.0	
		6.5 7.5		10.0 8.3	10.0 8.4	10.0 8.7	10.0 8.6	10.0 8.6	10.0 8.6	10.0 8.6	9.0 8.7	8.0 8.7	8.0 8.6	8.0 8.3	5.0* 8.1
530 192 3 5.0 50		3.0* 8.2	10.0 8.5			10.0 8.5	10.0 8.2	10.0 8.2	10.0	10.0	10.0	10.0	10.0	10.0	
HUBBARD CONSTRUCTION CO (2003)	125 )213 CRACKING SPRIDE )226	9.5 8.1	9.5 8.1	9.5 8.0	9.5 8.2	9.5 8.0	9.5 7.9	9.5 7.9	9.5 7.8	9.5 7.9	8.0 7.9	7.0 7.8	7.0 7.9	7.0 7.8	4.5* 7.5
92090000 0.000 1.233 L 1 1 530 192 3 5.0 56	50 CRACKING 5500 RIDE		10.0					10.0	10.0	10.0 7.9	10.0	9.5 8.2	9.5 7.8	9.5 8.0	
YOGI BEAR BLVD( 0.0L) FC: 2336691 0.048 3.506 C 1999 ( HUBBARD CONSTRUCTION CO (2005) 4509531 0.000 3.330 C 2026	0213 CRACKING SPRIDE	9.5 7.3	9.5 7.5	9.5 7.5	9.5 7.8	9.5 7.7	9.5 8.1	9.5 7.9	8.0	8.0 8.0	7.0 7.8		6.0* 7.9		
92130000 0.000 5.482 R 4 7 400 I4 3 5.8 13	65 CRACKING 5500 RIDE		9.5 9.1	9.5 8.9	8.0 8.7	8.0 8.6					10.0 8.2	10.0 8.1	10.0		
		9.5 8.1	9.5 7.8	8.5 7.7	7.0 7.6	7.0 7.6	7.0 7.7	6.5 7.6	6.5 7.4	4.5* 7.7	2.0* 7.3	2.0* 7.2	2.0* 7.1	10.0 8.5	9.0 8.4
92130000 5.482 6.856 R 4 1 400 I4 3 5.8 9	65 CRACKING 0500 RIDE	10.0 9.1	10.0	10.0	10.0	10.0					10.0	10.0	10.0	9.5 7.9	
RANGER CONSTRUCTION INDUST(2008)	0218 CRACKING S RIDE 0213	9.5 7.9	9.5 7.3	9.5 7.6	8.5 7.6	8.0 7.6	8.0 7.9	8.0 7.9	8.0 7.8	8.0 8.1	5.5* 8.0		3.5* 7.8	1.0* 7.8	0.0* 7.7

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"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

							DIST	RICT =	5 CC	UNTY =	OSCEO	)LA								
RDWYID SR US INTERSECT		G_EMP		%T	AADT	DISTRESS RATINGS				2002	2003	2004	2005	2006	2007	2008	2009	2010		FUTURE
ITMSEG-P CONTRACTOR ITMSEG-F	R (AGE_C	NE YEAR	₹)		WKMX-P ASTYPE WKMX-F		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
92130000 400 I4	6.856	7.885			1 65 139500 FC5	CRACKING RIDE	10.0	10.0 9.0		10.0 8.4	8.5	10.0 8.0	10.0 7.8	10.0	10.0	10.0	10.0	10.0	7.9	
4314561	0.000	7.885		2002 2026	0213	CRACKING RIDE	10.0 7.9	10.0 7.6	10.0 7.6	9.5 7.5	9.0 8.0	9.0 7.8	9.0 7.7	9.0 7.5	9.0 7.7	6.5 7.7	4.5* 7.7	2.0* 7.4	1.0* 7.2	0.0* 7.1
92130000 400 I4	5.596	7.885			139500	CRACKING RIDE	10.0	10.0		10.0	10.0	10.0	10.0 7.5	10.0		10.0	10.0	10.0 7.9	9.5 7.9	
2425231 RANGER CON 4314561	ISTRUCTI	6.856 ON INDU 7.885	JST (	2008		CRACKING RIDE	9.5 7.9	9.5 7.8	9.5 7.8	8.5 7.7	8.0 8.0	8.0 8.1	8.0	8.0	9.0 8.4	6.5 8.3	4.5* 8.3	4.5* 8.1	1.0* 7.9	0.0* 7.8
92130000 400 I4	0.000	5.596	1 3	4 5.8	7 65 135500 FC5	CRACKING RIDE	10.0 9.1	9.5 9.1	9.5 8.9	9.5 8.9	9.5 8.7				10.0	10.0 8.1	10.0 8.0	10.0 7.9	10.0 7.9	
4439581 SOUTHLAND 4314561	CONSTRU	5.606 CTION, 7.885	IN(	2024	0012	CRACKING PRIDE	10.0 7.9	9.5 7.8	8.5 7.7	7.0 7.6	7.0 7.6	7.0 7.7	7.0 7.7	7.0 7.6	6.5 7.9	4.5* 7.8	4.5* 7.7	4.5* 7.5	10.0 8.5	9.0 8.4
92470000 91		8.000	R 2	5 10.4	36000	CRACKING RIDE	10.0 8.9	9.5 8.9	8.0	7.5 8.7	6.5 8.5	6.0* 7.4	6.0* 7.0	6.0* 8.0	10.0 8.2	10.0 8.2	10.0 8.1	10.0	10.0	
NB EXIT TO 4407001 OHLA USA,	0.000	2.8R) 8.000		2021 2024		CRACKING PRIDE	9.5 8.0	9.5 7.9	9.5 7.9	9.5 7.8	9.0 8.1	9.0 8.0	9.0 8.0	7.5 7.9	7.5 8.2	6.5 8.1	4.5* 8.0		10.0 8.5	9.0 8.4
92470000 91	8.000	9.017		5 10.4	36000	CRACKING RIDE	10.0 8.9	10.0 9.1	10.0 9.1	10.0 9.1	10.0 8.9	10.0 8.6	8.5 8.5	7.0 8.3	7.0 8.2		10.0	10.0 8.1	10.0	
4154291 PREFERRED 4417191	MATERIA	16.500 LS, INC 16.522	C. (	2009		CRACKING PRIDE	10.0	10.0 8.0	10.0 8.0	10.0 8.0	10.0 8.0	10.0 7.9	10.0	10.0	10.0	8.0 7.9	8.0 7.9	6.5 8.0	6.5 7.9	3.0* 7.8
92470000 91	9.017	15.244		5 10.4	36000	CRACKING RIDE	10.0 8.9	9.5 9.1	9.5 9.0	9.5 8.9	8.0 8.8	8.0 7.7	7.0 7.6	6.5 7.2	4.5* 7.2		10.0 8.1	10.0 8.1	10.0 8.1	
4154291 PREFERRED 4417191	MATERIA	16.500 LS, ING 16.522	c. (	2009		CRACKING PRIDE	10.0	10.0 8.0	10.0 8.0	10.0 7.9	10.0 8.1	10.0 8.0	10.0 8.1	10.0	9.0 8.2	7.5 8.2	7.5 8.2	7.5 8.2	6.5 8.1	3.0* 8.0
92470000 91	15.244	16.511		5 10.4	1 70 36000 FC5M	CRACKING RIDE	10.0 8.9	10.0 9.0	10.0 9.0	10.0 8.9	10.0 8.8	10.0 8.5	10.0 8.4	9.0 8.1	8.5 7.6		10.0 7.5	10.0 7.6	10.0 7.5	
4154291 PREFERRED 4417191	MATERIA	16.500 LS, ING 16.522	C. (	2009	0012	CRACKING PRIDE	10.0	10.0 7.4	10.0 7.4	10.0 7.5	10.0 7.5	10.0 7.3	10.0 7.4	10.0 7.4	10.0	8.0 7.7	8.0 7.7	6.5 7.6	6.5 7.6	3.0* 7.5
91	16.511		2		36000	CRACKING RIDE	10.0 8.9	9.5 9.0	8.0 8.9	8.0 8.6	7.0 8.3	5.0* 7.2	10.0 7.9	10.0	10.0	10.0 8.2	10.0 8.1	10.0	10.0 7.9	
BMP UNDERP 4351691 PREFERRED	16.522	17.972	C	2018		CRACKING PRIDE	9.5 7.9	8.5 7.7	8.5 7.7	7.0 7.4	7.0 8.1	5.5* 8.0	5.5* 7.9	3.5* 7.6			10.0 8.9	10.0	10.0	9.0 8.9
92470000 91			2	10.4	36000	CRACKING RIDE	10.0	8.0 8.9	8.0 8.7	7.0 8.8	7.0 8.6	5.0* 7.6		10.0 7.7	10.0	10.0 8.1	9.5 8.1	9.5 7.7	9.5 8.0	
BMP UNDERP 4351691 PREFERRED	16.522	17.972	C	2018	0012	CRACKING PRIDE	9.5 7.8	8.5 7.7	7.0 7.6	7.0 7.6	7.0 8.1	7.0 8.0	7.0 7.9	6.5 7.9			10.0	10.0	10.0	9.0 8.8
92470000 91	15.310	16.511	L 2	5 10.4	36000	CRACKING RIDE	10.0 8.9	10.0 9.1	10.0 9.2	10.0 9.1	10.0 9.0	10.0 8.7	10.0 8.6	10.0 8.5	8.5 8.3		10.0 8.1	10.0 7.7	10.0 8.1	
4154291 PREFERRED 4417191	MATERIA		C. (	2009	) SI	CRACKING PRIDE	10.0	10.0 7.8	10.0 8.1	10.0 8.0	10.0 8.1	10.0 8.1	10.0	10.0	9.0 8.2	8.0 8.2	6.5 8.1	6.5 8.1	6.5 8.2	3.0* 8.1
92470000 91	14.604	15.310	L 2	5 10.4	36000	CRACKING RIDE	9.5 8.8	9.5 8.9	8.0 8.7	8.0 8.3	7.0 8.0	5.0* 6.9	4.0* 6.4*	2.0* 6.0*	2.0* 6.2*		10.0 8.2	10.0 7.8	10.0	
4154291 PREFERRED 4417191	MATERIA	16.500 LS, INC 16.522	C. (	2009	) SI	CRACKING PRIDE		10.0 7.9		9.5 7.7	9.5 7.9	9.5 7.8	9.5 7.7	9.0 7.7	7.5 7.8	4.5* 7.6	4.5* 7.7	4.5* 7.4	3.5* 7.2	0.0*

<sup>&</sup>quot;\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2006, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 50 MPH.
"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

PAVEMENT IMPROVEMENT PROJECTS IN FM WPA TENTATIVE PLAN - 2025 - 2030, EXTRACTED ON 08/16/2024

SORT BY RDWYID MILEPOST R ASCENDING L DESCENDING

----- DISTRICT = 5 COUNTY = OSCEOLA EMP RW SYS TYP SPD DISTRESS SURVEYED YEAR G\_EMP LN %T AADT RATINGS 1999 2000 2 SIDE) SURFTYPE ======= RDWYID FUTURE US G\_BMP 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 INTERSECT AT (MP|SIDE) ITMSEG-P W\_BMP W\_EMP RW FY-P WKMX-P CONTRACTOR (AGE\_ONE YEAR) ASTYPE 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 W\_EMP RW FY-F WKMX-F ITMSEG-F W BMP (PM) 92470000 91 92470000 9.168 14.604 L 5 1 70 CRACKING 9.0 91 2 10.4 36000 RIDE 9.0 FC5M 4154291 8.000 16.500 C 2007 0012 CRACKING 10.0 PREFERRED MATERIALS, INC. (2009) SPRIDE 8.1 4417191 8.022 16.522 C 2023 0012 8.0 9.0 8.0 9.0 10.0 10.0 7.8 10.0 8.8 10.0 10.0 10.0 10.0 10.0 70 CRACKING 9.0 000 RIDE 9.0 92470000 10.0 9.0 10.0 10.0 7.8 8.000 9.168 8.000 9.168 L 5 1 70 CRACKING 9.0 2 10.4 36000 RIDE 9.0 FC5M 8.000 16.500 C 2007 0012 CRACKING 10.0 10.0 9.1 10.0 9.1 10.0 10.0 10.0 9.5 9.5 10.0 7.5 8.3 4154291 10.0 10.0 10.0 10.0 10.0 9.5 8.3 9.5 8.2 9.0 8.5 6.5 8.4 7.5 8.4 3.0\* 8.3 PREFERRED MATERIALS, INC. (2009) 4417191 8.022 16.522 C 2023 SPRIDE 0012 8.1 8.1 92470000 91 L 5 / .2 10.4 3600 FC5M 7 70 CRACE 36000 RIDE 5.0\* 8.6 10.0 10.0 10.0 8.2 0.000 8.000 9.0 9.0 8.0 9.0 7.0 8.9 7.0 8.8 10.0 10.0 C 2021 0012 CRACKING 9.0 4407001 0.000 8.000 10.0 (2024) OHLA USA, INC. SPRIDE 0.000 8.315 R 5 1 70 CRACKING 2 10.4 36000 RIDE 25 L( 0.0C) FC5M 0.000 8.501 C 2018 0012 CRACKING 92471000 8.0 7.0 7.0 5.0° 7.3 10.0 10.0 9.5 7.9 9.5 7.9 5.0 10.0 9.0 8.8 8.6 8.3 8.1 8.0 8.0 OVERPASS #25 L( 0.0C) 4351691 0.000 8.501 8.0 10.0 10.0 9.5 9.5 9.5 8.0 8.0 10.0 9.0 6.5 PREFERRED MATERIALS, INC. (2022) SPRIDE 8.1 8.0 8.0 7.9 9.0 8.9 8.315 11.633 R 5 1 70 CRACKING 10.0 2 10.4 36000 RIDE 9.0 10.0 9.0 10.0 9.5 9.0 8.0 7.0 8.7 FC5M 10.0 8.9 CRACKING 10.0 9.0 (2022)RIDE 92471000 11.633 18.463 R 5 1 70 CRACKING 91 2 10.4 36000 RIDE FC5M 4328261 11.526 18.463 C 2016 0012 CRACKING HUBBARD CONSTRUCTION COMPA(2018) SPRIDE 70 CRACKING 10.0 8.5 9.1 7.5 8.9 7.0 8.7 7.0 7.9 10.0 8.1 10.0 8.3 10.0 10.0 10.0 10.0 9.0 8 8.0 7.0 8.2 7.0 7.8 7.0 7.8 7.0 10.0 7.0 8.4 7.0 10.0 10.0 10.0 10.0 92471000 18.463 26.431 R 5 1 70 CRACKING 10.0 91 2 10.4 36000 RIDE 9.1 8.5 9.1 7.5 9.0 7.5 8.9 7.0 8.7 7.0 7.8 6.5 7.1 18.600 30.300 C 2007 001 2007 0012 CRACKING 10.0 (2009) RIDE 8.2 10.0 8.2 10.0 10.0 10.0 3.03 4154291 18.450 26.450 C 2024 0005 4417181 1 70 CRACKING 9.0 5 92471000 26.431 27.483 R 10.0 10.0 10.0 10.0 10.0 8.4 10.0 10.0 10.0 10.0 10.0 10.0 10.0 2 10.4 36000 RIDE 8.9 FC5M 26.400 30.210 C 2020 0012 CRACKING 10.0 8.9 9.0 8.2 8.1 8.2 10.0 8.1 10.0 10.0 10.0 4365161 10.0 10.0 10.0 10.0 10.0 8.5 10.0 10.0 9.0 HUBBARD CONSTRUCTION COMPA(2022) SPRIDE 92471000 27.483 28.570 R 5 7 70 CRACKING 10.0 91 2 10.4 5000 RIDE 8.6 FC5M 5001 CNSTRUCTION COMPA(2024) SPRIDE 7.7 10.0 7.7 10.0 10.0 10.0 10.0 10.0 7.0 10.0 10.0 10.0 8.6 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 9.0 9.0 10.0 9.0 92471000 28.570 30.230 R 5 1 70 CRACKING 10.0 91 2 10.4 36000 RIDE 8.8 FC5M 4365161 26.400 30.210 C 2020 0012 CRACKING 10.0 HUBBARD CONSTRUCTION COMPA(2022) SPRIDE 8.3 10.0 8.7 10.0 10.0 7.9 7.0 7.6 7.0 7.8 10.0 10.0 10.0 10.0 10.0 9.5 7.8 10.0 8.8 8.9 8.6 10.0 10.0 10.0 8.4 10.0 10.0 10.0 10.0 92471000 30.230 39.830 R 5 1 70 CRACKING 91 2 10.4 81200 RIDE 10.0 7.7 4.0\* 9.0 4.0\* 9.0 4.0° 9.0 4.0\* 8.3 4.0 10.0 10.0 9.5 9.5 9.5 7.8 9.5 | 2 10.4 81200 RIDE | FC5M | S428271 | 30.230 39.960 | C 2016 | 0012 CRACKING | MIDDLESEX PAVING, LLC | (2019 | SPRIDE | 4361941 | 35.030 40.537@ C 2025 | 0213 | 8.7 7.8 10.0 10.0 10.0 10.0 7.5 9.0

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"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

						DIST	RICT =	5 CO	UNTY =	OSCEO	LA								
RDWYID SR US INTERSECT	BMP G_BMP 'AT (MP S	G_EMP 1 IDE)	LN %	r aadt Surftype	DISTRESS RATINGS				2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	FUTURE
ITMSEG-P CONTRACTO ITMSEG-F	R (AGE_ON	E YEAR	)	P WKMX-P ASTYPE F WKMX-F		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
92471000 91 KISSIMMEE	39.830 4		2 10.4	1 70 4 81200 FC5M	CRACKING RIDE	8.0 9.0	8.0 9.0	8.0 8.9	8.0 8.8	7.0 8.5	6.0* 7.8	6.0* 7.6	4.5* 7.3	4.5* 7.4	4.5* 7.4		10.0 8.2	10.0 8.1	
4114064 LANE CONS 4361941	40.000 4	0.760 CORPOR	C 201' AT(202	7 0213 3) S	CRACKING PRIDE	9.5 8.1	9.5 8.0	9.5 8.0	9.5 8.0	9.5 8.3	9.5 8.2						10.0 8.5	10.0 8.5	9.0 8.4
92471000 91			2 10.4	99600	CRACKING RIDE	7.0 8.9	7.0 8.9	6.0* 8.9	6.0* 8.8	4.0* 8.4	10.0	10.0	10.0 8.0	10.0	10.0 8.2	10.0 8.1	10.0	9.5 7.6	
KISSIMMEE 4114064 LANE CONS 4361941	CITY LIM 40.000 4 TRUCTION 35.030 4	0.760 CORPOR	C 201' AT(202	7 0213 3) S	CRACKING PRIDE	8.0 7.8	7.0 7.7	7.0 7.6	7.0 7.6	7.0 7.9	6.5 7.9						10.0 8.4	10.0 8.3	9.0 8.2
92471000 91	30.230 3	9.960		1 70 4 81200 FC5M	CRACKING RIDE	10.0 9.2	9.5 9.2	8.0 9.1	8.0 8.9	7.0 8.2	10.0 8.0	4.0* 6.9	10.0 8.0	10.0 8.0	10.0 8.2	10.0 8.1	10.0 7.6	9.5 7.6	
4328271 MIDDLESEX 4361941	30.230 3 PAVING, 35.030 4	LLC	(201	5 0012 9) S	CRACKING PRIDE	8.0 7.8	7.0 7.7	7.0 7.6	7.0 7.6	7.0 7.9	6.5 7.9		10.0 8.9	10.0 9.1	10.0 9.1	10.0 9.0	9.0 9.0	9.0 9.0	7.5 8.9
92471000 91	28.153 3	0.230		4 36000	CRACKING RIDE	10.0 8.7	10.0 8.7	10.0 8.6	10.0 8.6	9.5 8.5	9.5 7.9	9.5 7.9	6.5 7.7	6.5 7.5	6.5 7.9	10.0 8.4	10.0 7.8	10.0 7.8	
4365161 HUBBARD C	26.400 3 ONSTRUCTI				CRACKING PRIDE	10.0 8.1	10.0 8.2	10.0 7.9	10.0 8.2	10.0 8.4	10.0 8.3	10.0	10.0	10.0 8.4	8.5 8.4	10.0 8.7	10.0 8.7	10.0 8.7	9.0 8.6
92471000 91	27.483 2	8.153		4 36000		10.0 8.4	10.0 8.2	10.0 8.3	10.0 8.2	10.0 8.7	9.5 8.4	8.0 7.1	7.5 7.2	6.5 7.0		10.0	10.0 7.4	10.0 7.5	
4365161 HUBBARD C	26.400 3 ONSTRUCTI				CRACKING PRIDE	10.0 7.8	10.0 7.7	10.0 7.8	10.0 7.7	10.0	9.0 7.6	9.0 7.6	6.5 7.3	4.5* 7.2	3.5* 7.0	10.0		10.0	9.0 8.2
92471000 91	26.374 2	7.483		1 70 4 36000 FC5M	CRACKING RIDE	3.5* 8.2	10.0	10.0 8.9	10.0 9.0	10.0 8.7	9.5 8.4	9.5 8.2	7.0 8.2	6.5 7.5	6.5 8.0	10.0 8.3	10.0 7.8	10.0 7.7	
4365161 HUBBARD C	26.400 3 ONSTRUCTI			0012	CRACKING PRIDE	10.0	10.0 8.2	10.0 8.2	10.0 8.2	10.0 8.2	10.0 8.2	10.0 8.2	9.0 8.1	9.0 8.1	7.5 8.2	10.0 8.9	10.0 8.8	10.0 8.9	9.0 8.8
92471000 91	18.463 2	6.374		1 70 4 36000 FC5M	CRACKING RIDE	10.0	9.5 9.1	9.5 9.1	9.5 9.0	8.0 8.8	6.0* 8.0	6.0* 7.7	4.5* 7.1	4.5* 7.0	4.5* 6.8	10.0	10.0 7.8	10.0	
4154291 4417181	18.600 3 18.450 2		C 200 (2009 C 2024	7 0012 9)	CRACKING RIDE	10.0	10.0 8.2	10.0 8.2	10.0 8.1	10.0	10.0 8.2	10.0 8.2	10.0 8.1	9.0 8.2	7.5 8.2	6.5 8.2	6.5 8.2	6.5 8.1	3.0* 8.0
92471000 91	11.526 1	8.463	L 5	1 70 4 36000	CRACKING RIDE	8.0 8.9	7.0 8.9	7.0 8.8	5.0* 8.7	5.0* 8.5	4.0* 7.2	10.0 8.1	10.0	10.0	10.0	10.0	10.0 7.9	10.0 7.9	
4328261 HUBBARD C	11.526 1 ONSTRUCTI				CRACKING PRIDE	9.5 8.1	9.5 8.1	8.0 8.0	8.0	8.0 8.3	8.0 8.2	10.0 8.3	10.0	10.0 8.5	10.0	9.0 8.4	9.0 8.4	9.0 8.4	7.0 8.3
92471000 91	9.547 1	1.526		36000	CRACKING RIDE	8.0 8.9	7.0 8.9	7.0 8.8	7.0 8.8	5.0* 8.4	5.0* 7.5	10.0 8.1	10.0	10.0	10.0	10.0	10.0 7.9	10.0 7.9	
			(202	FC5M 2)	CRACKING RIDE	9.5 8.1	9.5 8.1	8.0 8.0	8.0 8.0	8.0	8.0 8.2	8.0 8.2	7.5 8.2			10.0 8.9	10.0 8.9	10.0 8.9	9.0 8.8
92471000 91	8.984	9.547	2 10.4	1 70 4 36000 FC5M	CRACKING RIDE	4.0* 7.8	4.0* 7.7	4.0* 7.7	4.0* 7.6	3.0* 7.4	10.0 7.8	10.0 7.9	10.0 7.9	10.0 7.8	10.0	10.0	10.0 7.5	9.5 7.5	
			(202		CRACKING RIDE	8.5 7.8	7.0 7.7	7.0 7.6	7.0 7.4	6.5 7.8	6.5 7.7	6.5 7.6	6.5 7.4			10.0 9.0	10.0 9.0	10.0 9.0	9.0 8.9
91	0.000		2 10 4	4 36000	RIDE	9 0	7.0 9.0	7.0 8.9	6.0* 8.8	6.0* 8.6	4.0* 7.5		10.0	10.0	10.0	9.5 8.3	9.5 7.8	9.5 7.8	
OVERPASS 4351691 PREFERRED	#25 L( 0.000 MATERIAL	0.0C) 8.501 S, INC	C 2018	FC5M 3 0012 2) S	CRACKING PRIDE	9.5	9.5 7.8	9.5 7.7	9.5 7.7	8.0 8.2	8.0 8.1		6.5				10.0		9.0 8.9

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"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

#### ALL SYSTEM PAVEMENT CONDITION FORECAST

		DISTR	ICT =	5 COT	JNTY =	OSCEO	LA								
SR US G_BMP G_EMP LN %T INTERSECT AT (MP SIDE) S	JRFTYPE ======				2002	2003	2004	2005	2006	2007	2008	2009	2010		FUTURE
ITMSEG-P W_BMP W_EMP RW FY-P CONTRACTOR (AGE_ONE YEAR) ITMSEG-F W_BMP W_EMP RW FY-F	ASTYPE 2	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2029 (PM)
92472000 0.000 2.906 R 5 417 2 10.4 BRIDGE #154 R( 0.0C)	37900 RIDE			10.0 8.7	10.0 8.7	9.5 8.5	9.5 8.1	9.5 8.1	7.5 8.0	6.5 8.0	6.5 8.0	6.5 7.9	6.5 7.6	6.5 7.5	
4232021 0.000 2.906 C 2011 THE MIDDLESEX CORPORATION (2013 4458831 1.020 2.906@ C 2025	0012 CRACKING ) SPRIDE 0012		10.0		10.0 8.2		10.0	10.0	10.0 8.3	10.0 8.4	8.5 8.3	8.5 8.3	9.0 8.4	9.0 8.3	6.5 8.2
92472000 0.000 2.906 L 5	1 70 CRACKING 1 37900 RIDE		10.0	10.0	10.0	10.0	10.0	9.5 7.9	7.5 7.5	6.5 7.6	6.5 7.6	6.5 7.5	6.5 7.5	6.5 7.2	
4232021 0.000 2.906 C 2011 THE MIDDLESEX CORPORATION (2013 4458831 1.020 2.906@ C 2025	0012 CRACKING ) SPRIDE 0012		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0 8.4	8.5 8.3	9.0 8.4	9.0 8.2	6.5 8.1
92473000 0.000 1.055 R 5 429 2 10.4 EMP 92473001/003( 0.0C)	7 70 CRACKING 30200 RIDE										10.0 8.1	10.0 8.1	10.0	10.0 7.9	
(2024	CRACKING 1		10.0 7.8					10.0	9.0 7.6	9.0 7.7	7.5 7.7	4.5* 7.6	4.5* 7.4		9.0 8.3
	7 70 CRACKING 30000 RIDE FC5M										10.0 8.1	10.0 8.1	10.0	10.0 7.9	
4402891 1.336 4.528 R 2022 PREFERRED MATERIALS, INC. (2024	0012 CRACKING 1	7.9	7.8	7.8	7.7	7.8	7.7	7.7	9.0 7.6	9.0 7.7	7.5 7.7	4.5* 7.6		10.0 8.8	9.0 8.7
92473000 0.164 4.528 L 5 429 2 10.4											10.0	10.0		10.0 7.9	
4402891 0.201 4.528 L 2022 PREFERRED MATERIALS, INC. (2024	0012 CRACKING 1	10.0 8.0	10.0 7.7	10.0 7.6	10.0 7.6	9.0 7.8	9.0 7.7	9.0 7.7	9.0 7.6	9.0 7.8	6.5 7.7	4.5* 7.6		10.0 8.7	9.0 8.6
92473000 0.000 0.164 L 5 429 2 10.4 EMP 92473001/003( 0.0C)	30200 RIDE										10.0 8.2	10.0 8.1	10.0 8.1	10.0 7.9	
4034972 0.000 1.873 C 2004 KIEWIT INFRASTRUCTURE SOUT(2008	0002 CRACKING 1 ) SPRIDE	8.0	7.7	7.6	7.6	9.0 7.8	9.0 7.7	9.0 7.7	9.0 7.6	9.0 7.8	6.5 7.7	4.5* 7.6	3.5* 7.6	3.5* 7.8	* 0.0* 7.7
92550002 0.000 0.877 R 1 600 17 3 6.6 EMMETT ST( 0.0C)	1 40 CRACKING 45500 RIDE		6.0*	6.0* 4.7*	10.0	6.5 5.0*		10.0 7.9		9.5 6.6	7.0 6.1	7.0 6.4	7.0 6.2	7.0 6.5	
EMMETT ST (0.0C) 4184032 0.000 0.877 C 2015 MASCI GENERAL CONTRACTORS (2020	0213 CRACKING	7.0 6.2	7.0 6.0	7.0 6.0	7.0 5.9	7.0 5.8				10.0 7.5	10.0 7.2	10.0 7.3	10.0	10.0 7.1	9.0 6.8
	45500 RIDE			6.5 5.5*	10.0	10.0			10.0	9.5 6.8	7.0 6.8	6.0* 6.5	6.0* 6.0	6.0* 6.3	,
EMMETT ST( 0.0C) 4184032 0.000 0.877 C 2015 MASCI GENERAL CONTRACTORS (2020	0213 CRACKING		6.0* 5.7	6.0* 6.5	6.0* 6.6	6.0* 6.4				10.0 7.5	10.0 7.5	10.0 7.6	10.0 7.4	10.0 7.4	9.0 7.1

<sup>&</sup>quot;\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2006, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 50 MPH.
"\*" INDICATES PAVEMENT DEFICIENT (ANY RATING <=6); START 2002, RIDE RATING OF 6 NOT CONSIDERED DEFICIENT WHEN SPEED LIMIT < 45 MPH.
"@" INDICATES G1 PROJECT LENGTH SHORTER THAN ROADWAY SEGMENT 1 MILE OR MORE.
2029 FORECASTED BY PAVEMARS (PM).

## **APPENDIX E**

## **United States DOT Crossing Inventory Form**

# ATTACHMENT RAILROAD CROSSING

## **U. S. DOT CROSSING INVENTORY FORM**

#### **DEPARTMENT OF TRANSPORTATION**

FEDERAL RAILROAD ADMINISTRATION OMB No. 2130-0017

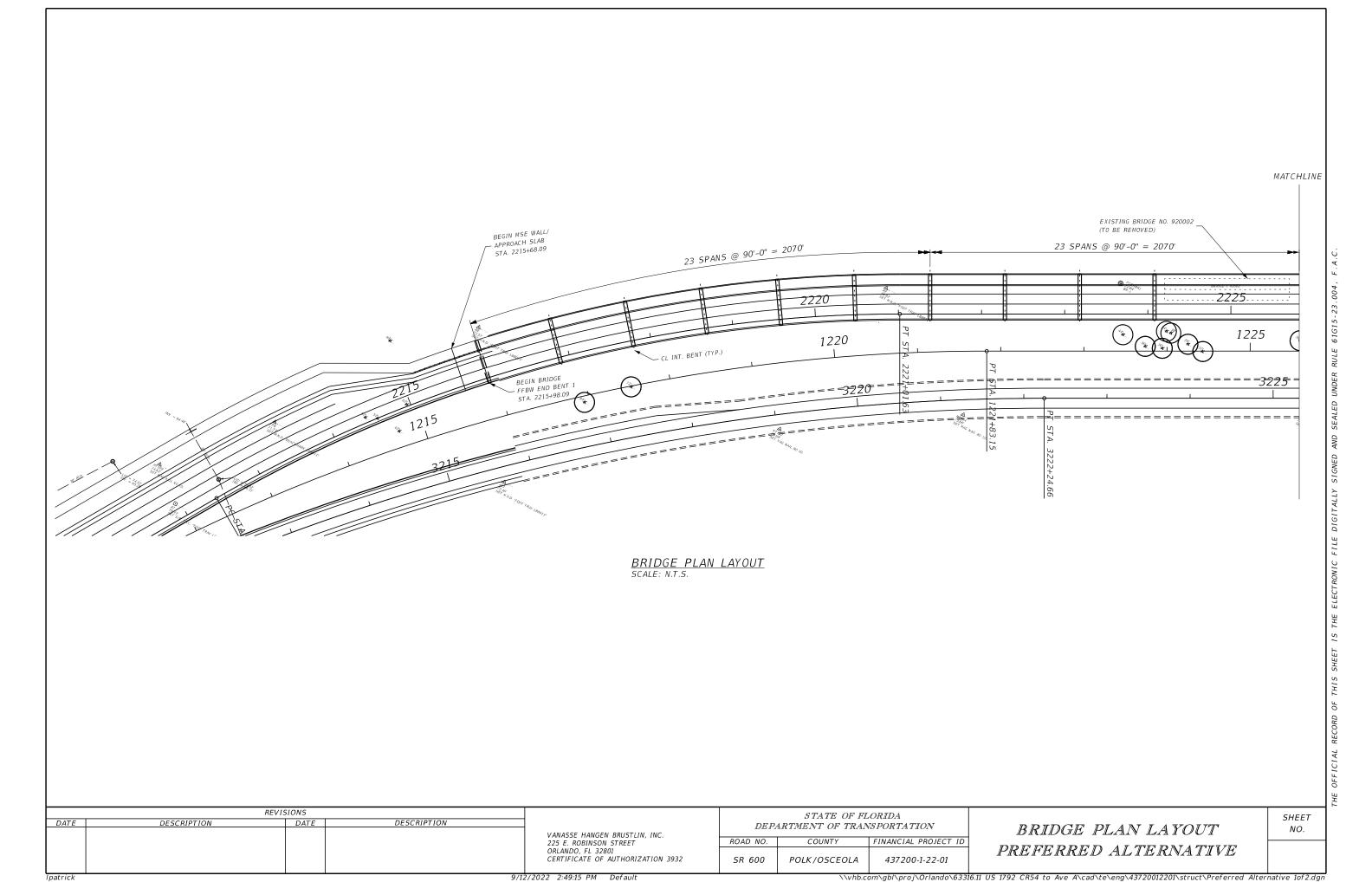
Instructions for the inform. For private his pedestrian station grants I and II, and the I, and the Submission updated data fields. I	ighway-ra rade cros e Submis on Inform	rail grade cross ssings), compl ssion Informati mation section	ssings, complete the He sion section on. For chang	plete the eader, Par For grade ges to exi	Header ts I and e-separ isting d	r, Parts I and II, and the rated highwallata, comple	d II, a Subm ay-rail ete the	and the Sunission Information or pathways Header,	ubmission Information formation section. Fo ay crossings (includin Part I Items 1-3, an	on section. For por Private pathwing pedestrian stand the Submission	public path yay grade cation crossion	nway gr crossing ings), co ition se	rade cross gs, comple omplete the ection, in	sings (including ete the Header, he Header, Part
A. Revision Date		B. Reporting	· · ·			son for Upda	(	· · · · · / _	,					Crossing
( <i>MM/DD/YYYY</i> ) 04 / 21 / 2020		☐ Railroad	∟ Ir		Char Data	Ü	New ossing		Closed	☐ No Train Traffic	☐ Quiet Zone Up		Invento	ory Number
		<b>■</b> State	□ O		□ Re-C	Open 🗆	Date lange (		☐ Change in Primary Operating RR	☐ Admin. Correction		,	622952	В
				Part	l: Loc				tion Informatio	n				
1. Primary Operating CSX Transportatio	n [CSX]					2. State FLOR	IDA			3. County OSCEOLA				
4. City / Municipality	-		<u>s c</u>	ORÁNGE	BLOS	& Block Nu SSOM TRL	mber	_  <u>5007</u>		6. Highway Ty	•			
▼ Near KISSIMI  7. Do Other Railroad		to a Senarate		rossing?			<b>⊤</b> 8 Γ		k Number) Railroads Operate O	US-1792,SR		.o □ ∨	os 🕱 No	
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9. Railroad Division of	Ū	n	10. Railr			or District		11. Bra	nch or Line Name		12. RR Mi	ilepost 0813.		
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13. Line Segment *		14. Nea	arest RR Tii n *	metable		15. Parent	: <b>RR</b> (1)	f applicab	ıle)	16. Crossin	ig Owner (i	if applic	cable)	
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■ Public	() ()													
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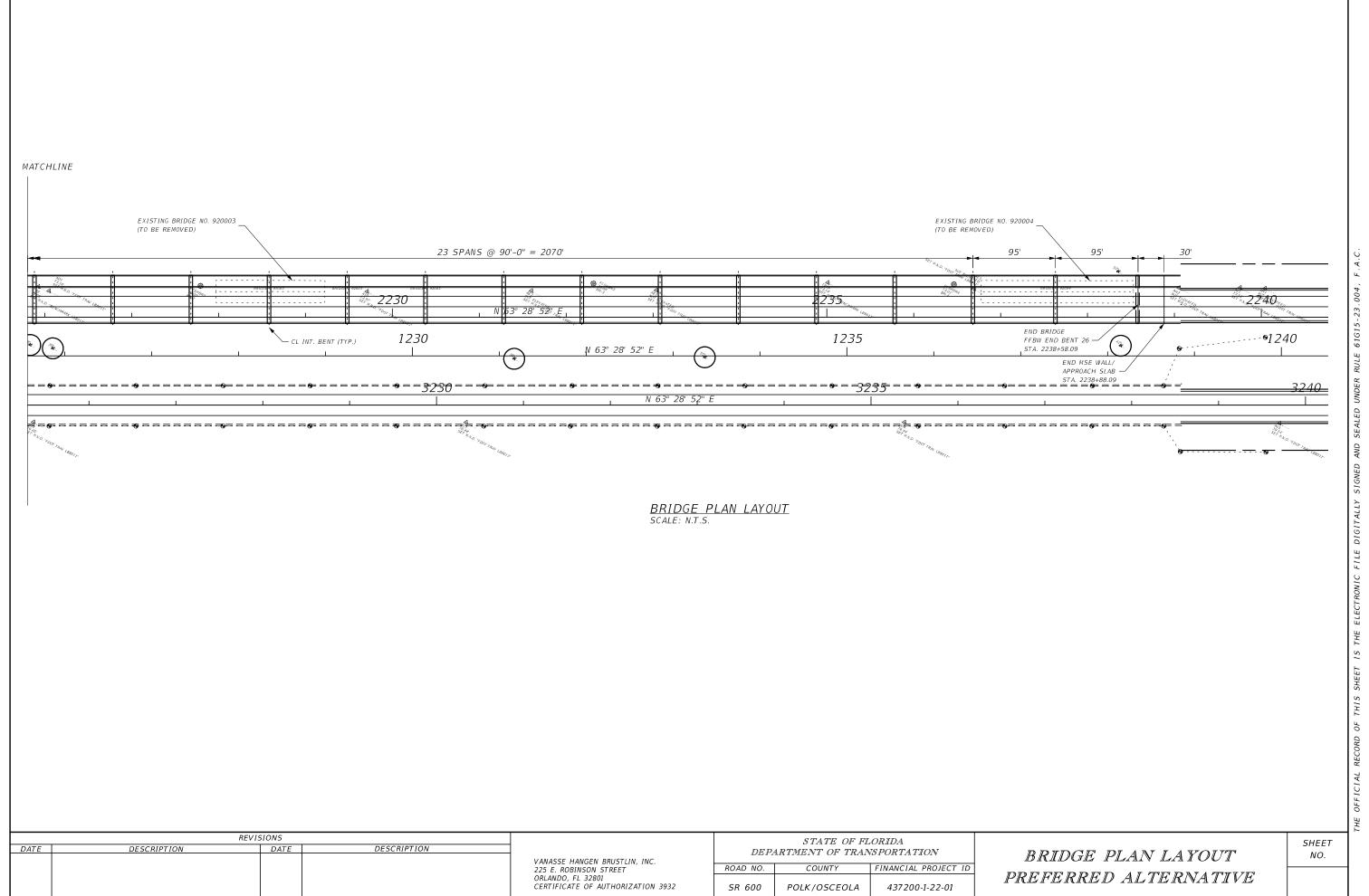
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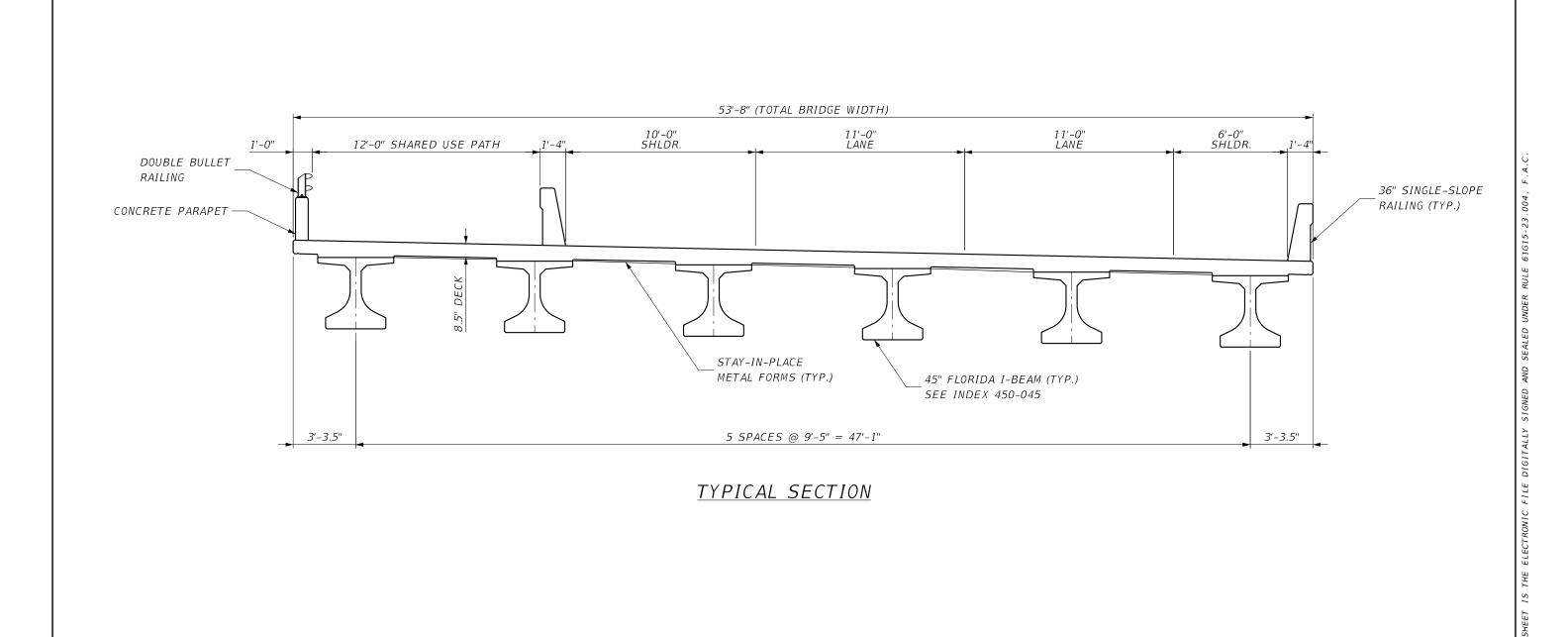
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2.E. Low Ground Cl	earance Sign	2.F. Paven	ent Mark	ings	I		2.G. Cha	nnelization			2.H. EXEMP		2.I. ENS		
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6. Intersecting Roa	dway within 500	feet?					7. Smalle	est Crossing A	ngle			8. Is Cor	mmercia	l Po	wer Available? *
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, ,	tate Highway Sy		` '	nterstate				r Collector		Yes				ost	ed 🗆 Statutory
	Nat Hwy System	ı (NHS)		Other Free	•	•		r Collector	5. 92	Linear 2010000	Referencing Sy	ystem <i>(LRS</i>	Route ID	) *	
□ (03) Federal AID, Not NHS □ (08) Non-Federal Aid □ (4) Minor Arterial □ (6) Minor Collector □ (08) Non-Federal Aid □ (4) Minor Arterial □ (7) Local □ (8) Rilepost * 4.202															
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Washington, DC 20			•										•		

## **APPENDIX F**

**Preferred Alternative Bridge Plan Layout and Typical Section** 







REVISIONS

DATE DESCRIPTION

VANASSE HANGEN BRUSTLIN, INC.
225 E. ROBINSON STREET
ORLANDO, FL 32801
CERTIFICATE OF AUTHORIZATION 3932

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO. COUNTY FINANCIAL PROJECT ID
SR 600 POLK/OSCEOLA 437200-1-22-01

BRIDGE TYPICAL SECTION

BRIDGE TYPICAL SECTION

9/12/2022 2:45:28 PM Default

SHEET NO.

## **APPENDIX G**

# **Target Speed Recommendation Report**

# TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1



## **General Roadway Information**

FIN#: 437200-1	FDOT Project Manager: Lorena Cucek
State Road Number (Local Name): US 17-92	Roadway ID: 92010000, 92010100
Project Limits: Polk County Line to	92010000: 0.000-0.536, 1.915-4.117
Avenue A	92010100: 0.000-1.354
County: Osceola	City/Town: Intercession City
PROPOSED TARGET SPEED: 92010000:	Project Type (Description): PD&E
0.000-0.536: 45 mph	
1.915-2.964: 45 mph	
2.964-3.462: 30 mph	
3.462-4.117: 45 mph	
92010100:	
0.000-1.354: 45 mph	
EXISTING TYPICAL SECTION	
92010000:	
2 lanes undivided – 12' lanes (0.000-0.536)	
2 lanes undivided – 13' lanes (1.915-2.843)	
2 lanes divided – 12' lanes (2.843-3.376)	
2 lanes undivided – 13' lanes (3.376-3.931)	
2 lanes divided – 12' lanes (3.931-4.117)	
92010100:	
2 lanes undivided – 12' lanes (0.000-0.121)	
2 lanes divided – 12' lanes (0.121-0.447)	
2 lanes undivided – 12' lanes (0.447-0.888)	
2 lanes divided – 12' lanes (0.888-1.169)	
2 lanes undivided – 12' lanes (1.169-1.354)	

## **Step 1: Identify Need**

SAFETY CONCERNS:	3 Pedestrian Crashes (1 Fatality), 1 Bicycle Crash (0 Fatalities)
LOCAL INPUT:	
OTHER:	

**Step 2: Determine FDM Consistency** 

# TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1

CONTEXT CLASSIFICATION:	92010000:
	C3R (0.000-0.536), C3C (1.915-2.964), C2T
	(2.964-3.462), C1 (3.462-3.983), C3C (3.983-
	4.117)
	92010100:
	C3R (0.000-0.365), C1 (0.365-1.074), C3C
	(1.074-1.354)
STRATEGIC INTERMODAL SYSTEM (SIS):	No
POSTED SPEED (CURRENT):	92010000:
	55 mph (0.000-0.536, 1.915-2.881), 45 mph
	(2.881-4.117)
	92010100:
	55 mph (0.000-1.354)
DESIGN SPEED:	

## **OPTIONAL: Speed Study Information**

Allowable range of design speeds:	C3R/C3C: 35-55 mph
(per FDM table 201.5.1)	C2T: 25-45 mph
	C1: 55-70 mph

## **Step 3: Identify Important Roadway Features**

THROUGH LANES & LANE WIDTHS:	See Typical Sections
TRANSIT:	No
BICYCLISTS / PEDESTRIANS	92010000: Very small section (2.214-2.258 and 3.098-3.148 L side,
FACILITY CONDITIONS:	and 3.142-3.181 R side) with 5'-6' sidewalks; No bike lanes
	92010100: None
ACCESS MANAGEMENT:	92010000: Class 3
	92010100: None
CURRENT ANNUAL AVERAGE	92010000: 15,800 (0.000-0.536), 29,500 (1.915-4.117)
DAILY TRAFFIC (AADT):	92010100: 15,800 (0.000-0.365), 25,000 (0.365-1.354)
% TRUCK USAGE:	92010000: 10.1% (0.000-0.536), 4.9% (1.915-4.117)
	92010100: 10.1% (0.000-0.365), 9.3% (0.365-1.354)

## **Step 4: Potential Countermeasures**

POTENTIAL COUNTERMEASURES to help Achieve	C3: Lane Narrowing, PHBs, Shared-Use Paths,
the Target Speed (Refer to Spreadsheet):	Speed Feedback Signs
{It is understood that the project team will make every effort to implement the proposed countermeasures. However, due to limits in budget or time (R/W, etc.) not all may be implemented in this project.}	C2T: Island at crossings, street trees, curb extensions, horizontal deflection, roundabout C1: Shared-Use Path, Sidewalks
Other Improvements within or outside of the Right-of-Way (R/W):	

## **Step 5: Determine Target Speed**

	Reduce Target Speed in Eastern C3's (0-2.964) to
CONCLUSIONS AND RECOMMENDATION	45 mph. Reducing Target Speed in C2T due to
	crashes, limited lighting, limited crosswalks and
	sidewalks. On NE end of project (3.462-4.117),

# TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1

		match cross section with 239714-1, which		
		includes sidewalk and shared-use path; this cross		
		section can also be used on the western C3		
			section as well	
	Posted Speed	Design	Target Speed	Ultimate Target
		Speed		Speed (If Applicable)
Comment	92010000:			
	55 mph (0.000-0.536			
	1.915-2.881)			
	45 mph (2.881-			
Current:	4.117)			
	92010100:			
	55 mph (0.000-			
	1.354)			
			92010000:	
			0.000-0.536: 45 mph	
			1.915-2.964: 45 mph	
Recommended			2.964-3.462: 30 mph	
			3.462-4.117: 45 mph	
			92010100:	
			0.000-1.354: 45 mph	

## **TARGET SPEED MEETINGS:**

Target Speed (TS) Request Received:	
TS Determination Date:	3/9/22
Initial District TS Concurrence:	3/15/22
TS Local Agency Concurrence:	
Final TS District Approval:	
TS Report Submitted to PM:	

## **APPENDIX H**

# **Design Speed Variations**

# Design Speed Variation (Segments 1, 2, and 3) From north of Sundown Drive to Old Tampa Highway

# **DESIGN SPEED VARIATION**

CLIENT:

## **FDOT District 5**

PROJECT:

SR 600 (US 17/92) **PD&E Study from** Ivy Mist Lane to Avenue A

FPID: 437200-1-22-01

Segments 1, 2, and 3: From north of Sundown Drive to Old Tampa Highway Roadway ID: 92010000 / 92010100 MP 0.299 - MP 4.117

Osceola County

Vanasse Hangen Brustlin, Inc. 225 East Robinson Street, Suite 300 Orlando, FL 32801 Tel 407.839.4006 • Fax 407.839.4008 www.vhb.com

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE BELOW THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

VHB, INC. 225 E ROBINSON STREET, SUITE 300 ORLANDO, FL 32801 KEVIN TYLER FREEMAN, P.E. NO. 76146

VHB Project No.: 63316.11

Submitted:

December 2024

Prepared and Submitted by: Kevin Freeman, P.E.

**Project Manager** 

1 of 20

Design Speed Variation (Segments 1, 2, and 3) SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida FPID: 437200-1-22-01

VHB Project No.: 63316.11

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Purpose and Need	5
Transportation Connectivity	5
Future Traffic Demand	5
Safety	6
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Description of Preferred Alternative	8
Urban Typical Section – Segments 1,4, and 6	10
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Justification for Approval	12
Conclusion	14
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rigare of Great Typical Gootlen (Goginent G)	
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Appendix C: Current Context Classification Map

Appendix D: Design Criteria

Appendix E: SR 600 (US 17/92) Straight Line Diagram

2 of 20

Design Speed Variation (Segments 1, 2, and 3) SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida

FPID: 437200-1-22-01 VHB Project No.: 63316.11

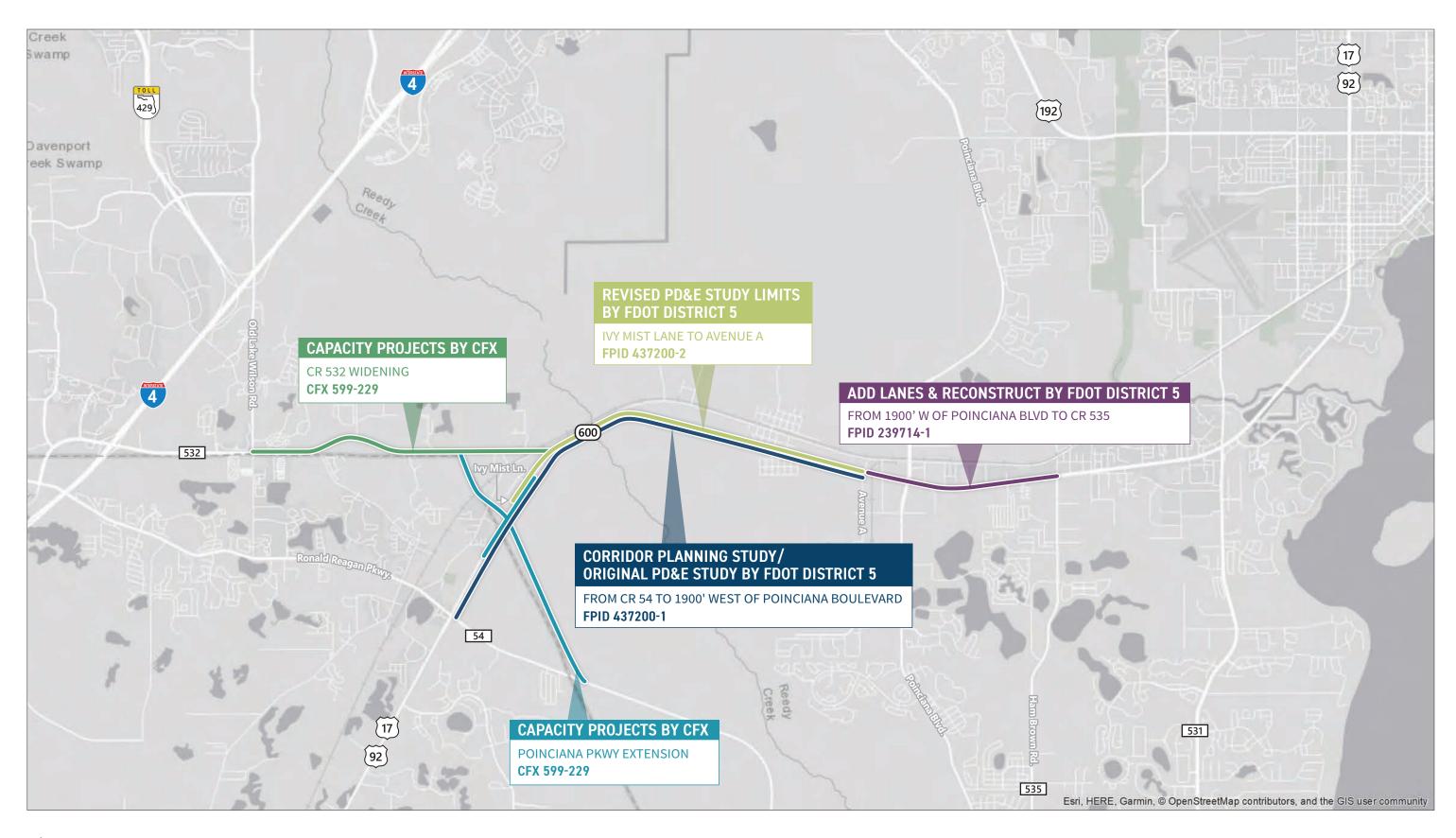
## **Introduction**

The Florida Department of Transportation (FDOT) District 5 is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to widen SR 600 (US 17/92) from the existing two-lane roadway to a four-lane divided roadway from Ivy Mist Lane to Avenue A, a distance of 3.8 miles, in Osceola County. As part of the PD&E Study, a design variation is proposed to decrease the design speed below the allowable design speed for the context classification per Florida Design Manual (FDM) Table 201.5.1. If approved, the design variation would maintain consistency with the Target Speed set by the district for Segments 1, 2, and 3, between north of Sundown Drive to Old Tampa Highway. A prior Corridor Planning Study of SR 600 (US 17/92) from County Road (CR) 54 (Ronald Reagan Parkway) in Polk County to 1,900 feet west of Poinciana Boulevard at Avenue A in Osceola County was completed in 2018. This project traverses through the community of Poinciana, and the unincorporated community of Intercession City. **Figure 1** shows the SR 600 (US 17/92) PD&E Study limits (shown in light green) and previous Corridor Planning Study limits (shown in blue), along with the limits of adjacent projects mentioned below.

Two related projects overlap the western end of this PD&E Study:

- The segment of SR 600 (US 17/92) from west of Parker Road in Polk County to Ivy Mist Lane in Osceola County is included in the Central Florida Expressway Authority's (CFX) SR 538/Poinciana Parkway Extension to CR 532 project, which is under design and anticipated to be complete in late 2022 with construction beginning in mid-2023. The SR 538/Poinciana Parkway Extension project will include the widening of SR 600 (US 17/92) within these limits, as well as a proposed diverging diamond interchange with SR 600 (US 17/92) southwest of Ivy Mist Lane as shown in teal (Figure 1).
- Adjacent to the western end of the PD&E Study (shown in dark green) is a CFX study evaluating widening CR 532/Osceola Polk Line Road from two to four lanes from Old Lake Wilson Road to SR 600 (US 17/92) (Figure 1). This study includes design and is anticipated to begin construction in 2024.

One ongoing project abuts the eastern limits of this PD&E Study. FDOT District 5 is widening SR 600 (US 17/92) from two to four lanes, with limits from 1,900 feet west of Poinciana Boulevard (Avenue A) to CR 535 (Ham Brown Road) in Kissimmee (FPID: 239714-1). This project, shown in purple on **Figure 1**, is currently under construction and anticipated to be completed in 2022.







## Purpose and Need

The purpose of this project is to provide needed capacity through the design year 2045, enhance regional connectivity, and improve safety conditions along the study corridor. The project is needed to meet future traffic demand, provide satisfactory future traffic operations, improve corridor access management, and improve safety along the corridor.

The following sections describe the need for improvements based on transportation connectivity, future traffic demand, and existing crash data.

#### Transportation Connectivity

The SR 600 (US 17/92) study corridor is a vital east-west segment in the regional transportation network within western Osceola County and the primary thoroughfare through Intercession City. Regionally, the SR 600 (US 17/92) corridor serves as a major arterial connecting Kissimmee to the north and Polk County to the south. The study corridor will connect to the programmed SR 538/Poinciana Parkway Extension at the western end of the project, which will include an interchange connection to SR 600 (US 17/92) immediately southwest of Ivy Mist Lane. The SR 538/Poinciana Parkway Extension is planned to extend to I-4 in the vicinity of the State Road (SR) 429 interchange providing enhanced connectivity from SR 600 (US 17/92) to Osceola and Orange Counties. This project would provide a continuous four-lane section between the Poinciana Parkway Extension and Avenue A. The programmed widening of CR 532 from SR 600 (US 17/92) to Lake Wilson Road will complete a continuous four-lane connection to I-4. The corridor is designated an evacuation route by the Florida Division of Emergency Management (FEMA).

#### Future Traffic Demand

Future traffic analyses were conducted for the SR 600 (US 17/92) study corridor for three analysis years (2025, 2035, and 2045). Based on the intersection operational analysis, by 2045 most of the study intersections are anticipated to experience very high delays. Specifically, the high delays start from 2025 for the majority of unsignalized intersections and the signalized intersection at SR 600 (US 17/92) and CR 532. Capacity improvements are needed to accommodate future traffic demand and provide satisfactory traffic operations.

Based on the arterial operational analysis, the SR 600 (US 17/92) study corridor is expected to operate at target Level of Service (LOS) D or better through the design year 2045, except for the northbound/eastbound approach south of CR 532, which is expected to fail in the 2035 and 2045 AM design hour. These results are due to the lack of signalized intersections between CR 532 and Poinciana Boulevard and the existing high posted speed limit. However, the signalized intersection at CR 532 is expected to experience very high approach delays and extensive queueing along SR 600 (US 17/92), which will impact the arterial operations. Additionally, all of the future Annual Average Daily Traffic (AADT) along the study corridor will exceed the Maximum Service Volume of 18,590 for LOS D for a two-lane urbanized arterial starting in opening year 2025.

VHB Project No.: 63316.11

#### Safety

Crash data for a five-year period (October 1, 2019 – September 30, 2024) obtained from Signal 4 Analytics found a total of 325 crashes occurred along the study corridor. Of the 325 reported crashes, 147 involved injuries and three resulted in fatalities. The highest portion of crashes were rear-end (62.46%). The crash rates at the Ivy Mist Lane, CR 532 (Osceola Polk Line Road) intersection, Old Tampa Highway intersection, Shepherd Lane intersection, and at the Avenue A intersection were found to be above the statewide crash rate. This project intends to increase capacity and improve access management, which is anticipated to reduce congestion and conflict points. This project will also provide pedestrian and bicycle facilities to improve multimodal accommodations throughout the study corridor.

### Report Purpose

The Florida Design Manual (FDM) Section 122.2 states a formal Design Variation document is required when proposed design elements do not meet the FDOT criteria. This report serves as a formal Design Variation document for a segment of SR 600 (US 17/92) within Osceola County; Roadway ID 92010100, MP 0.155 to MP 1.074.

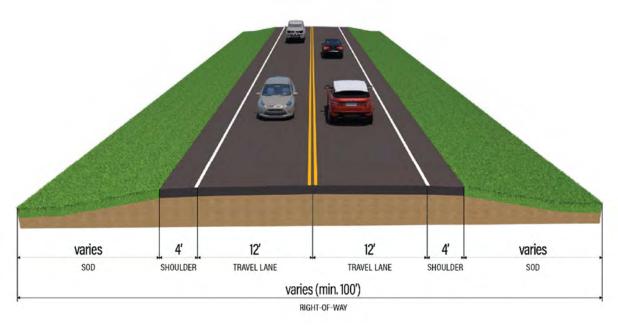
#### **Project Alternatives**

#### No-Build Alternative

The No-Build Alternative assumes no improvements such as additional traffic lanes or other improvements will be made within the study area, except for programmed improvements to nearby or adjacent facilities. For this project, the No-Build Alternative includes the ongoing widening of SR 600 (US 17/92) from Avenue A to CR 535 (FPID: 239714-1) to four lanes, the programmed SR 538/Poinciana Parkway Extension, and the CR 532 widening.

The No-Build Alternative serves as the baseline for comparing the Build Alternative and remains a viable option throughout the PD&E study process. Based on programmed improvements, the existing typical section assumed for the No-Build Alternative remains a two-lane undivided rural typical section. At the eastern end of the project at Avenue A, the corridor transitions to a four-lane typical section. For the majority of the study limits, the existing typical section along SR 600 (US 17/92) within the study limits is provided below in **Figure 2**. The existing bridge typical section is provided as **Figure 3**.

VHB Project No.: 63316.11



**Figure 2: Existing Typical Section** 



Figure 3: Existing Bridge Typical Section

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Design Speed Variation (Segments 1, 2, and 3) SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida

FPID: 437200-1-22-01 VHB Project No.: 63316.11

#### Alternatives Considered

The Build Alternative widens SR 600 (US 17/92) to four lanes (two lanes per direction) throughout the study limits from Ivy Mist Lane to Avenue A. Due to alignment constraints from adjacent facilities and the existing bridge over Reedy Creek, the Build Alternative applied from Ivy Mist Lane to east of Old Tampa Highway is a best-fit alignment. From east of Old Tampa Highway to Avenue A, the study developed three alignments for alternatives comparison. The recommended alignment maximizes the existing Right-of-Way (ROW) and consists of widening to the south on the west end of the project corridor to align with the Poinciana Parkway Extension proposed improvements, then shifts to the south through the central portion of the project corridor to avoid the existing cemetery, widens to the north through Intercession City to avoid relocations, and aligns with the adjacent widening at the east end of the project corridor. The Preliminary Engineering Report prepared for the study summarizes the alternatives considered, the related analysis, and selection of the Preferred Alternative. The Preferred Alternative was developed to avoid and minimize environmental effects where feasible. Several stormwater treatment pond alternatives were evaluated, and the Pond Siting Report (PSR) discusses these alternatives and selection of the preferred pond sites.

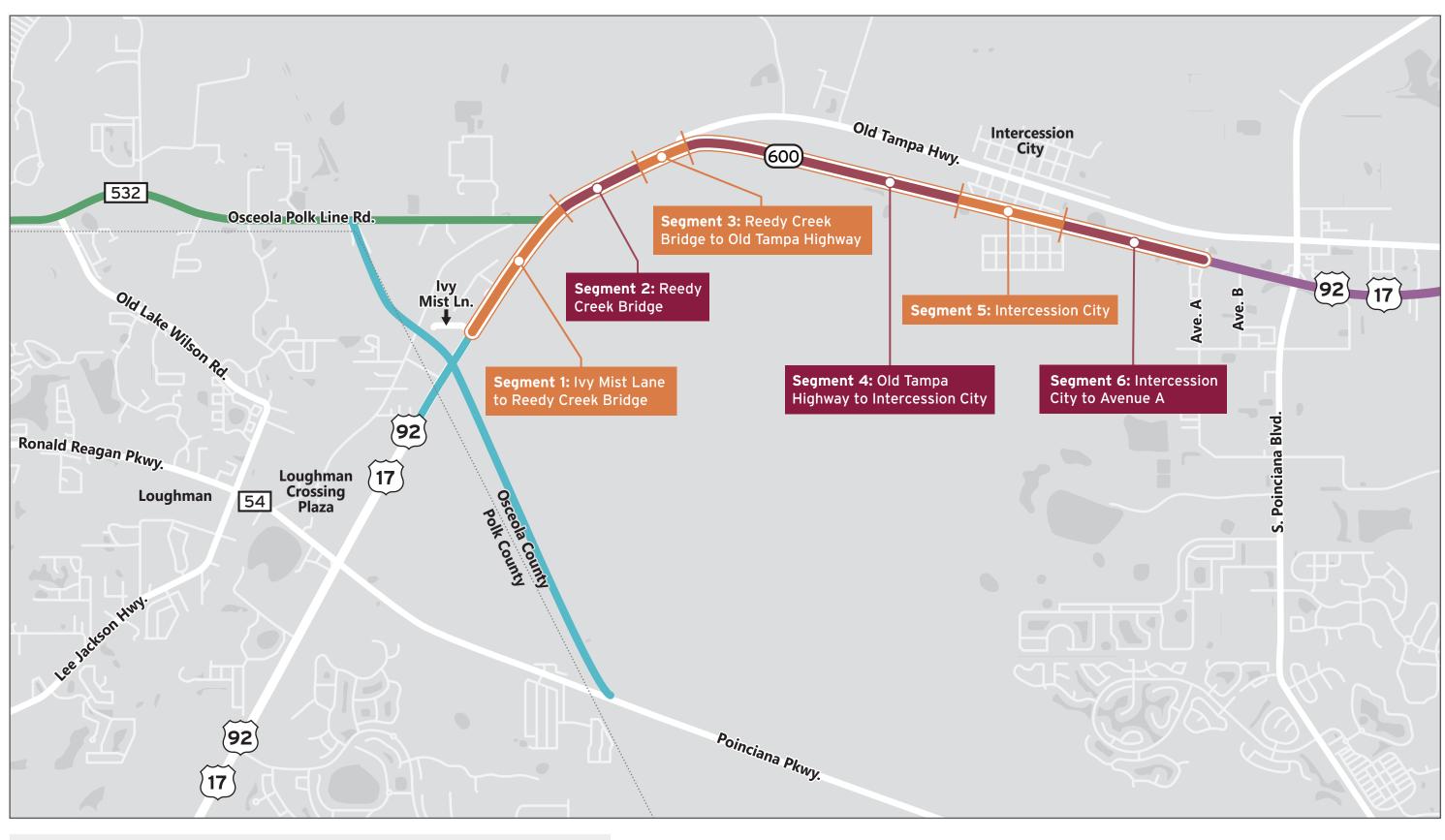
#### Description of Preferred Alternative

The Preferred Alternative widens SR 600 (US 17/92) from Ivy Mist Lane to Avenue A from the existing two-lane rural facility to a four-lane divided facility. The Preferred Alternative includes access management modifications to improve safety. The Preferred Alternative adds continuous multimodal facilities along both sides of the roadway for the entire length of the study corridor, except at the Reedy Creek Bridge due to constraints along the existing bridge (proposed eastbound structure). A pedestrian crossing will be provided at the Osceola Polk Line Road and Old Tampa Highway intersections to provide pedestrians with a crossing over SR 600 (US 17/92) to the shared-use path.

The Preferred Alternative also involves the retention of the existing bridge over Reedy Creek to serve as the eastbound traffic lanes and the addition of a new bridge over Reedy Creek to serve as the westbound traffic lanes. The westbound bridge will have a 12-foot-wide shared-use path for the use of pedestrians and bicyclists travelling in both directions. In addition to the widening and multimodal improvements along SR 600 (US 17/92), this project includes intersection improvements at CR 532, Old Tampa Highway, and Avenue A. Five pond site locations have been recommended as part of the Preferred Alternative for a total of 25.9 acres of stormwater ponds.

The typical section for the Preferred Alternative is divided into six segments (shown in **Figure 4**).

VHB Project No.: 63316.11



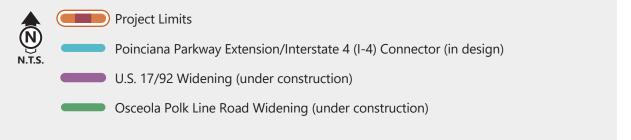




Figure 4
Study Segments
SR 600 (US 17/92) PD&E
FPID 437200-1

## Urban Typical Section - Segments 1,4, and 6

An urban roadway typical section with swales is proposed for Segments 1, 4, and 6. The typical section (depicted in **Figure 5**) includes a 22-foot raised median, two 11-foot travel lanes in each direction, and a 12-foot shared-use path along both sides of the roadway. The shared-use paths are both separated from the roadway curb and gutter by 42-foot-wide drainage swales. The required ROW for the suburban roadway typical section varies with a minimum of 192 feet.

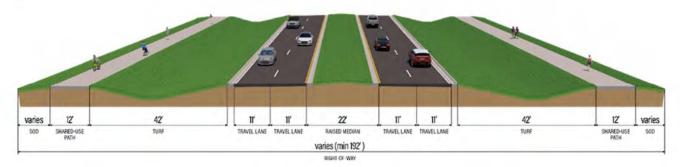


Figure 5: Suburban Typical Section (Segments 1, 4, and 6)

## Bridge Typical Section – Segment 2

The typical section for the Reedy Creek Bridge, within Segment 2, includes two bridge structures (**Figure 6**). The existing bridge structure will serve eastbound traffic and a new bridge structure will serve the westbound traffic. The two bridge structures will be separated by a width of 70 feet. The existing eastbound bridge includes 11-foot inside and outside shoulders and two 11-foot travel lanes. The new westbound structure includes a six-foot inside shoulder, a 10-foot outside shoulder, two 11-foot travel lanes, and a 12-foot shared-use path separated from the roadway by a raised concrete barrier. The existing 244 feet ROW accommodates the proposed bridge structure. The existing eastbound bridge is located in a permanent easement on the south side of the FDOT ROW, which allows the new westbound bridge to be located fully within the existing ROW to the north.

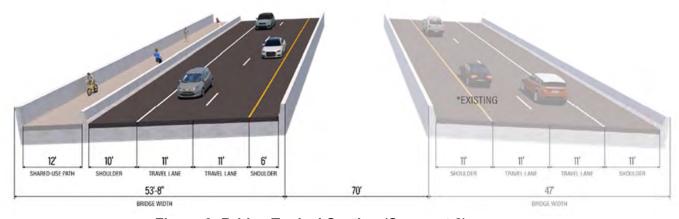


Figure 6: Bridge Typical Section (Segment 2)

#### **Urban Typical Section – Segment 3**

An urban typical section, as illustrated in **Figure 7**, is proposed for Segment 3 from the east end of the Reedy Creek Bridge to Old Tampa Highway. This typical section consists of two 11-foot travel lanes in each direction separated by a 22-foot raised median, and a 12-foot shared-use path along both sides of the roadway. The shared-use path is separated from the roadway by curb and gutter and a buffer varying in width with a minimum of five feet. The total ROW needed for this typical section varies with a minimum of 151 feet.

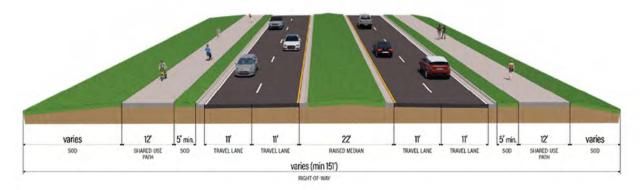


Figure 7: Urban Typical Section (Segment 3)

#### **Urban Typical Section – Segment 5**

An urban typical section is proposed for Segment 5 through Intercession City (**Figure 8**). This typical section includes a 15.5-foot raised median, two 11-foot travel lanes in each direction, and a 10-foot urban side path along both sides of the roadway. The urban side path is separated from the roadway by curb and gutter and a buffer with a width of two feet along the south side of the roadway and 2.5 feet along the north side of the roadway. The total ROW needed for this typical section varies with a minimum of 100 feet.

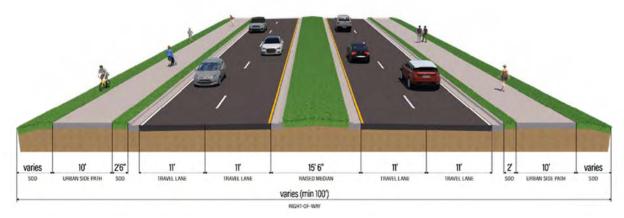


Figure 8: Urban Typical Section (Segment 5)

## <u>Description of Requested Design Variation</u>

A design variation is being requested for design speed in segments 1, 2, and 3, between north of Sundown Drive and Old Tampa Highway:

Start MP	End MP	Design Speed Variation
0.155	1.074	45 mph

The segment of SR 600 (US 17/92) (Roadway ID 92010100) between north of Sundown Drive (MP 0.155) and Old Tampa Highway (MP 1.074) has a recommended Target Speed of 45 mph. See Appendix A for the Target Speed Recommendation Report.

Additionally, the context classification for the segment of SR 600 (US 17/92) (Roadway ID 92010100) between north of Sundown Drive (MP 0.155) and Old Tampa Highway (MP 1.074) has been designated C1 - Natural as shown in Appendix C. The segment to the west of the C1 - Natural section is designated C3R with a design speed of 45 mph. The segment east of the C1 - Natural section is designated C3C with a design speed of 45 mph. See Appendix C for the context classification map.

Per FDM Table 201.5.1, the allowable design speed range for C1 – Natural designated roadways is 55-70 mph. The total length of the segment is 0.919 miles.

## **Justification for Approval**

**Target Speed Requirement:** In accordance with the Target Speed Recommendation Report, FDOT FPID 437200-1, the Target Speed for this segment of roadway, ID #92010100 from MP 0.155 to MP 1.074, is 45 mph. To meet the Target Speed, the approval of this design variation is required.

**Safety/Operational Performance:** Given the context classification and design speeds for the segments between west of Sundown Drive and east of Old Tampa Highway (C3 classifications and 45 mph design speed), the C1 segment along SR 600 (US 17/92) from Sundown Drive to Old Tampa Highway (Segments 1, 2, and 3) should maintain identical design speeds to maintain consistency along the corridor. Utilizing a 45-mph design speed in this section will provide consistency throughout the corridor while simultaneously providing a lower operating speed for users of the shared-use path and sidewalk adjacent to the roadway.

**Right of Way:** Providing a lower 45-mph design speed as compared to a 55-mph design speed allows the use of smaller horizontal curve radii criteria. Additionally, the reduction in design speed allows the lane widths to be reduced from 12' to 11', and a reduction in median width from 30' to 22'. With two lanes of travel in each direction, the total typical section width was reduced by 12'. The smaller horizontal curve radii criteria and smaller typical section width minimize the footprint of proposed right-of-way required.

**Community:** Utilizing a lower 45-mph design speed as compared to a 55-mph design speed reduces the noises caused from the roadway for nearby residents. Additionally, as mentioned above, the lower design speed allows for a reduction of the total typical section width. Both factors will improve the quality of life for nearby residents.

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Design Speed Variation (Segments 1, 2, and 3)

SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida

FPID: 437200-1-22-01 VHB Project No.: 63316.11 **Environment:** Using a lower 45 mph design speed as compared to a 55-mph design speed allows for the use of smaller horizontal curves, which can lead to choosing an alignment that minimizes the impacts to the environment, especially in the section over Reedy Creek. If a 55-mph design speed were used, an additional 0.14 acres of wetlands impacts would occur in Reedy Creek.

**Usability by all Modes of Transportation:** Using a lower 45 mph design speed as compared to a 55-mph design speed provides a more comfortable experience for pedestrians and bicyclists on the adjacent sidewalk and shared-use path.

**Cost:** Based on the LRE cost estimates, the estimated project cost per mile for the 45-mph design speed typical section is \$16,353,107.45. Meanwhile, the estimated project cost per mile for the 55-mph design speed typical section is \$17,091,717.18. Therefore, the estimated savings per mile is \$738,609.73 by using a 45-mph design speed as compared to a 55-mph design speed.

**Mitigation:** A potential mitigation strategy is to use cross-sectional elements and horizontal curves to reduce operating speeds to design speed. These strategies include:

- **Horizontal Deflection** There are five different deflections/curves in the alignment in Segments 1, 2, and 3. These deflections and curves were consistent with design criteria for a 45 mph target speed.
- Lane Narrowing The lane width will be reduced from 12-foot to a proposed 11-foot to be consistent with the FDM criteria.
- **Speed Feedback Signs** Speed feedback signs are proposed on the bridges over Reedy Creek to provide immediate feedback to drivers when the speed limit is exceeded, which may help to reduce unintentional speeding.
- **Use of Curb and Gutter** The use of curb and gutter is proposed throughout the three segments to narrow the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.

The travel lanes in this segment of the roadway will be the FDOT minimum of 11-feet-wide. See Appendix B: Speed Management Strategies Memo for more information regarding mitigation strategies.

Table 1: Pros and Cons of 45 mph Design Speed

	Tuble 1: 1 Too und Cons	<u> </u>	40 mpn Booign Opeca
	Pros		Cons
•	Provides design consistency from the C3R section in the west to the C3C section in the east.	•	Design speed does not line up with the natural land use adjacent to the roadway.
•	Lower design speed improves operational safety.		
•	Narrower roadway footprint will discourage speeding.		

## **Conclusion**

The recommended Target Speed for this segment of roadway necessitates the design speed variation of 45 mph. Furthermore, to maintain consistency with the C3 segments to the west and east of the segment, a 45-mph design speed is desirable. It is recommended that this variation be approved.

# Appendix A

(Target Speed Recommendation Report)



# **General Roadway Information**

FIN#: 437200-1	FDOT Project Manager: Lorena Cucek
State Road Number (Local Name): US 17-92	Roadway ID: 92010000, 92010100
Project Limits: Polk County Line to	92010000: 0.000-0.536, 1.915-4.117
Avenue A	92010100: 0.000-1.354
County: Osceola	City/Town: Intercession City
PROPOSED TARGET SPEED: 92010000:	Project Type (Description): PD&E
0.000-0.536: 45 mph	
1.915-2.964: 45 mph	
2.964-3.462: 30 mph	
3.462-4.117: 45 mph	
92010100:	
0.000-1.354: 45 mph	
EXISTING TYPICAL SECTION	
92010000:	
2 lanes undivided – 12' lanes (0.000-0.536)	
2 lanes undivided – 13' lanes (1.915-2.843)	
2 lanes divided – 12' lanes (2.843-3.376)	
2 lanes undivided – 13' lanes (3.376-3.931)	
2 lanes divided – 12' lanes (3.931-4.117)	
92010100:	
2 lanes undivided – 12' lanes (0.000-0.121)	
2 lanes divided – 12' lanes (0.121-0.447)	
2 lanes undivided – 12' lanes (0.447-0.888)	
2 lanes divided – 12' lanes (0.888-1.169)	
2 lanes undivided – 12' lanes (1.169-1.354)	

# **Step 1: Identify Need**

SAFETY CONCERNS:	3 Pedestrian Crashes (1 Fatality), 1 Bicycle Crash (0 Fatalities)
LOCAL INPUT:	
OTHER:	

**Step 2: Determine FDM Consistency** 

CONTEXT CLASSIFICATION:	92010000:
	C3R (0.000-0.536), C3C (1.915-2.964), C2T
	(2.964-3.462), C1 (3.462-3.983), C3C (3.983-
	4.117)
	92010100:
	C3R (0.000-0.365), C1 (0.365-1.074), C3C
	(1.074-1.354)
STRATEGIC INTERMODAL SYSTEM (SIS):	No
POSTED SPEED (CURRENT):	92010000:
	55 mph (0.000-0.536, 1.915-2.881), 45 mph
	(2.881-4.117)
	92010100:
	55 mph (0.000-1.354)
DESIGN SPEED:	

# **OPTIONAL: Speed Study Information**

Allowable range of design speeds:	C3R/C3C: 35-55 mph
(per FDM table 201.5.1)	C2T: 25-45 mph
	C1: 55-70 mph

## **Step 3: Identify Important Roadway Features**

THROUGH LANES & LANE WIDTHS:	See Typical Sections
TRANSIT:	No
BICYCLISTS / PEDESTRIANS	92010000: Very small section (2.214-2.258 and 3.098-3.148 L side,
FACILITY CONDITIONS:	and 3.142-3.181 R side) with 5'-6' sidewalks; No bike lanes
	92010100: None
ACCESS MANAGEMENT:	92010000: Class 3
	92010100: None
CURRENT ANNUAL AVERAGE	92010000: 15,800 (0.000-0.536), 29,500 (1.915-4.117)
DAILY TRAFFIC (AADT):	92010100: 15,800 (0.000-0.365), 25,000 (0.365-1.354)
% TRUCK USAGE:	92010000: 10.1% (0.000-0.536), 4.9% (1.915-4.117)
	92010100: 10.1% (0.000-0.365), 9.3% (0.365-1.354)

# **Step 4: Potential Countermeasures**

POTENTIAL COUNTERMEASURES to help Achieve	C3: Lane Narrowing, PHBs, Shared-Use Paths,
the Target Speed (Refer to Spreadsheet):	Speed Feedback Signs
{It is understood that the project team will make every effort to implement the proposed countermeasures. However, due to limits in budget or time (R/W, etc.) not all may be implemented in this project.}	C2T: Island at crossings, street trees, curb extensions, horizontal deflection, roundabout C1: Shared-Use Path, Sidewalks
Other Improvements within or outside of the Right-of-Way (R/W):	

# **Step 5: Determine Target Speed**

CONCLUSIONS AND RECOMMENDATION	Reduce Target Speed in Eastern C3's (0-2.964) to
CONCLUSIONS AND RECOMMENDATION	45 mph. Reducing Target Speed in C2T due to
	crashes, limited lighting, limited crosswalks and
	sidewalks. On NE end of project (3.462-4.117),

			match cross section with 239714-1, which							
			includes sidewalk and shared-use path; this cross							
			section can also be used on the western C3							
			section as well							
	Posted Speed	Design	Target Speed	Ultimate Target						
		Speed		Speed (If Applicable)						
	92010000:									
	55 mph (0.000-0.536									
	1.915-2.881)									
Current:	45 mph (2.881-									
Current:	4.117)									
	92010100:									
	55 mph (0.000-									
	1.354)									
			92010000:							
			0.000-0.536: 45 mph							
			1.915-2.964: 45 mph							
Recommended			2.964-3.462: 30 mph							
			3.462-4.117: 45 mph							
			92010100:							
			0.000-1.354: 45 mph							

## **TARGET SPEED MEETINGS:**

Target Speed (TS) Request Received:	
TS Determination Date:	3/9/22
Initial District TS Concurrence:	3/15/22
TS Local Agency Concurrence:	
Final TS District Approval:	
TS Report Submitted to PM:	

# Appendix B

(Speed Management Strategies Memo)



#### **M**EMORANDUM

Date: September 8, 2022

Project: US 17/92 Project Development & Environmental (PD&E) Study

**FPID:** 437200-2-22-01

**Subject:** Speed Management Strategies

The US 17/92 Project Development and Environment (PD&E) Study is evaluating the widening of US 17/92 from two to four lanes from Ivy Mist Lane to Avenue A in Osceola County. This memorandum summarizes the speed management strategies evaluated for the project. More detailed documentation is provided in the *Preliminary Engineering Report* for the study.

The existing posted speed along the corridor is 55 mph from Ivy Mist Lane to approximately 1,000 feet west of Suwannee Avenue. To the east of this segment, the corridor transitions to an existing speed limit of 45 mph. After review of the project corridor and existing/future land uses, FDOT provided designated context classifications for the corridor (see attached map). The corridor transitions from C3R (Suburban Residential) in the westernmost port of the corridor adjacent to existing residential areas and also in the vicinity of the proposed Poinciana Parkway Extension interchange at US 17/92. For the majority of the corridor including the eastern limits of the project, the designated context class is C3C (Suburban Commercial) based on existing land uses. Within Intercession City, the context class is C2T (Rural Town). In between these sections, the existing South Florida Water Management District (SFWMD) and Reedy Creek conservation areas are designated C1 (Natural).

After review of the context classifications, FDOT identified a target speed determination involving 45 mph for the entire study corridor for corridor consistency with exception of the area within Intercession City from 500 feet west of Suwannee Avenue to 650 feet east of Nocatee Street, this area was determined to be a target speed of 30 mph. Based on FDM Table 201.5.1, the allowable range for design speed for C3 and C2T is consistent with the target speed of 45 mph and 30 mph, respectively. For the C1 areas located in between C3R and C3C segments, FDOT recommended a target speed of 45 mph to achieve corridor consistency and lower speeds along the corridor for improved safety. As design speed is a controlling design element, a Design Variation is anticipated. This memorandum focuses on speed management strategies employed in both the 45 mph target speed area and in the transition areas approaching Intercession City to achieve the target speed of 30 mph.

Table 202.3.1 of the FDM identifies Speed Management Strategies to achieve a desired operating speed. The table uses context classification and target speed to identify the types of strategies that would be most effective. Based on Table 202.3.1, with context classification of C3R or C3C and a target speed of 45 mph, speed management practices such as, Roundabouts, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Rectangular Rapid Flashing Beacon (RRFB) and Pedestrian Hybrid Beacon (PHB) were identified for consideration. For the 30 mph (C2T) section within Intercession City, the speed management

strategies considered include the ones identified for the 45 mph section above plus On-street parking, Street Trees, Short Blocks, Islands at Crossings, Road Diet, Bulb-outs, Terminated Visas, and Chicanes.

The proposed improvements for the Preferred Alternative (included in the *Preliminary Concept Plans*) utilize appropriate strategies from the opportunities listed above where feasible based on project considerations such as multimodal needs, access management, design criteria and right-of-way considerations. The following outlines the speed management strategies used for this corridor based on the two different target speeds identified above for the corridor. For the 45 mph target speed section of US 17/92, three speed management strategies are proposed below to achieve the target speed.

#### **Speed Management Strategies for 45 mph Target Speed Section**

- **Horizontal Deflection** There are 8 different deflections/curves in the alignment in the 3.2 mile 45 mph target speed section. This number does not include the speed curves/horizontal deflection directly adjacent to entering Intercession City. These deflections and curves were consistent with design criteria for a 45 mph target speed.
- Lane Narrowing The lane width will be reduced from 12-foot to a proposed 11-foot to be consistent with the FDM criteria.
- **Speed Feedback Signs** Speed feedback signs are proposed on the bridges over Reedy Creek. The signs provide immediate feedback to drivers when the speed limit is exceeded, which may help to reduce unintentional speeding. The signs consist of a speed-measuring device, along with a message sign that displays the speed to drivers.
- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- Roundabout at Avenue A Based on the Stage 2 Intersection Control Evaluation (ICE) analysis at
  Avenue A, a roundabout was recommended for the Preferred Alternative. This will help manage
  speeds into and out of Intercession City by helping to create a transition from the rural section to
  the east and the urban section to the west.

Based on stakeholder and public input, the existing 45 mph speed limit within the Rural Town (C2T) of Intercession City is a safety concern and the community vision is to reduce the speed limit through the town. Additional speed management strategies were identified below for this area to help reduce speeds to the 30 mph target speed. These strategies will help provide a transition zone prior to entering Intercession City.

#### **Speed Management Strategies for 30 mph Target Speed Section**

• Horizontal Deflection – Four proposed horizontal curves are provided in both directions just west and east of Intercession City. The proposed horizontal alignment includes two 40 mph curves and two 30 mph curves all of which meet FDOT criteria. These will be appropriately signed with posted speed limits and advance warning signs upstream of these curves to introduce the reduced speed limits at curves. This alleviates the existing "race-track" feel that the community expressed opposition to during the public meeting in October 2021 and provides a deceleration area prior to entering Intercession City. Posted Speed Pavement markings are proposed to provide

additional driver awareness of the reduced speed limit through the horizontal deflection areas. These will be placed in the Perception – Reaction area to prepare drivers for the Deceleration Area coming into Intercession City.

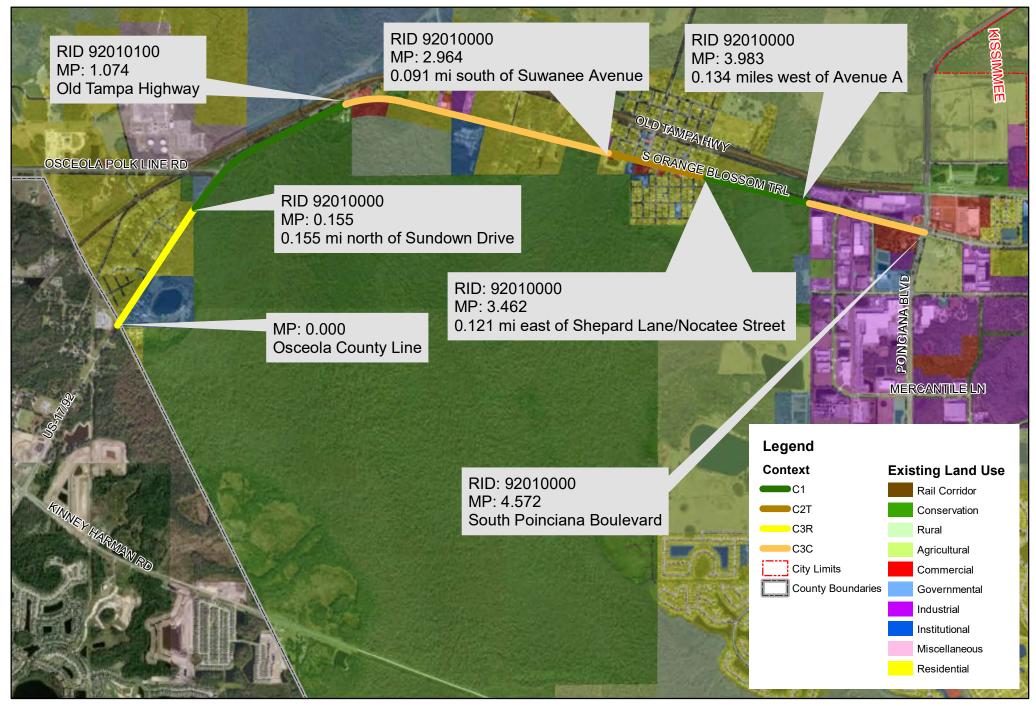
- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- **Landscaping** Provide landscaping where feasible to increase the enclosure feeling of the corridor to help naturally keep speeds low and enhance the aesthetics of the corridor.
- **PHB's** Two locations are identified through Intercession City to provide a crosswalk to help improve mobility within the community. One is located just east of Tallahassee Boulevard and the other is located just east of Charity Street. These PHB's will establish shorter block lengths and create engagement with the drivers which will help manage speed.
- **Speed Feedback Signs** The feedback signs will be placed just west of Suwannee Ave in the eastbound direction and just east of Nocatee Street in the westbound direction. This will be used to engage the driver of their current speed and make them aware of the reduced speed limit within Intercession City.

The strategies identified were discussed during the Alternatives Public Meeting, Stakeholder Meeting #3, and FDOT Phase III Meeting. Based on input received, there has been substantial support for these strategies throughout the life of the project.

-- END MEMO --

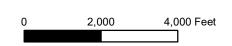
	TARGET SPEED COUNTERMEASURE OPTIONS																					
Context			C1	C2			C2T					:3				:4			C5			26
Classification			61	C2					r						,		r					
Target Speed			55-70	55-70	45	40	35	30	25	50-55	45	40	35	45	40	35	30	35	30	25	30	25
(mph)	Charles also	FDM Reference																			<del>                                     </del>	
	Strategies	FDIVI Keterence																			<del>                                     </del>	
	Curb Extensions (Bulb-Outs)	202.3.12, 222.2.6																				
	Lane Narrowing	202.3.12, 222.2.6 202.3.4, Table 210.2.1																				
	Lane Repurposing (Road Diet)	202.1.1, 126 202.3.6, 212.11, 215.2.4																				
	Street Trees	202.3.6, 212.11, 215.2.4																				
	Terminated Vista																					
	Horizontal Deflection	202.3.5, 210.8.1, 217																				
	Chicanes	202.3.3																				
	Islands at Crossings	202.3.11, 210.3.2																				
	Islands in curved sections	202.3.11, 210																				
	Mini-Roundabouts	202.3.1, 213																				
	Roundabout	202.3.1, 213																				
	Vertical Deflection	202.3.8																				
Reduction	Speed Tables	202.3.8																				
Strategies	Raised Crosswalks	202.3.8																				
Strategies	Raised Intersections	202.3.8																				
	Textured Surface																					
	Pedestrian Hybrid Beacons (PHBs)	202.3.13, TEM 5.2																			1	
	On-street Parking	202.3.2, 210.3.2																				
	Rectangular Rapid Flashing Beacons (RRFBs)	202.3.13, TEM 5.2																				
	Short Blocks	202.3.7, 222.2.3.1																				
	Speed Feedback Signs	202.3.9																				
	Bicycle Lanes	223																				
	Shared Use Paths	223.2.3, 224																				
	Separated Bicycle Lanes	223.2.4.1																				
	Shared Lane Markings (Sharrows)	223.3																				
	Marked Shoulders	223.2.2.1																				
	Sidewalks (See FDM 222.2.1)	222.2.1																				
																					<b>—</b>	
	Median Widths - Raised or Restrictive (RRR Projects)	210.3.1	30'-40'	30'-40'	19.5'	15.5'	15.5'	15.5'	15.5'	30'-40'	19.5'	15.5'	15.5'	19.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'
l i	Minimal Travel Lane Width	Table 210.2.1	12'	12'	11'	11'	11'	11'	11'	12'	11'	11'	10'	11'	11'	10'	10'	10'	10'	10'	10'	10'
Additional	Two-Way Left Turn Lane	Table 210.2.1	l			12'	12'	12'	12'	<del> </del>		12'	11'	l	12'	11'	11'	11'	11'	11'	11'	11'
Information	Two-Way Left Turn Lane (RRR Projects)	Table 210.2.1				11'	11'	11'	11'			11'	10'	l	11'	10'	10'	10'	10'	10'	10'	10'
	Minimal Travel Lane Width	Table 210.2.1	12'	12'	11'	11'	11'	11'	11'	12'	11'	11'	10'	11'	11'	10'	10'	10'	10'	10'	10'	10'
	Sidewalks - Standard Widths	Table 222.2.1	5'	5'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	10'	10'	10'	12'	12'

Target Speed Countermeasure Options table developed for educational purposes only, utilizing strategies to achieve desired operating speed identified in Table 202.3.1 of the FDOT Design manual.



US 17/92/SR 600/S Orange Blossom Trail, Osceola County

Current Context Classification 07/14/20







# **General Roadway Information**

FIN#: 437200-1	FDOT Project Manager: Lorena Cucek
State Road Number (Local Name): US 17-92	Roadway ID: 92010000, 92010100
Project Limits: Polk County Line to	92010000: 0.000-0.536, 1.915-4.117
Avenue A	92010100: 0.000-1.354
County: Osceola	City/Town: Intercession City
PROPOSED TARGET SPEED: 92010000:	Project Type (Description): PD&E
0.000-0.536: 45 mph	
1.915-2.964: 45 mph	
2.964-3.462: 30 mph	
3.462-4.117: 45 mph	
92010100:	
0.000-1.354: 45 mph	
EXISTING TYPICAL SECTION	
92010000:	
2 lanes undivided – 12' lanes (0.000-0.536)	
2 lanes undivided – 13' lanes (1.915-2.843)	
2 lanes divided – 12' lanes (2.843-3.376)	
2 lanes undivided – 13' lanes (3.376-3.931)	
2 lanes divided – 12' lanes (3.931-4.117)	
92010100:	
2 lanes undivided – 12' lanes (0.000-0.121)	
2 lanes divided – 12' lanes (0.121-0.447)	
2 lanes undivided – 12' lanes (0.447-0.888)	
2 lanes divided – 12' lanes (0.888-1.169)	
2 lanes undivided – 12' lanes (1.169-1.354)	

# **Step 1: Identify Need**

SAFETY CONCERNS:	3 Pedestrian Crashes (1 Fatality), 1 Bicycle Crash (0 Fatalities)
LOCAL INPUT:	
OTHER:	

**Step 2: Determine FDM Consistency** 

CONTEXT CLASSIFICATION:	92010000:
	C3R (0.000-0.536), C3C (1.915-2.964), C2T
	(2.964-3.462), C1 (3.462-3.983), C3C (3.983-
	4.117)
	92010100:
	C3R (0.000-0.365), C1 (0.365-1.074), C3C
	(1.074-1.354)
STRATEGIC INTERMODAL SYSTEM (SIS):	No
POSTED SPEED (CURRENT):	92010000:
	55 mph (0.000-0.536, 1.915-2.881), 45 mph
	(2.881-4.117)
	92010100:
	55 mph (0.000-1.354)
DESIGN SPEED:	

# **OPTIONAL: Speed Study Information**

Allowable range of design speeds:	C3R/C3C: 35-55 mph
(per FDM table 201.5.1)	C2T: 25-45 mph
	C1: 55-70 mph

## **Step 3: Identify Important Roadway Features**

THROUGH LANES & LANE WIDTHS:	See Typical Sections
TRANSIT:	No
BICYCLISTS / PEDESTRIANS	92010000: Very small section (2.214-2.258 and 3.098-3.148 L side,
FACILITY CONDITIONS:	and 3.142-3.181 R side) with 5'-6' sidewalks; No bike lanes
	92010100: None
ACCESS MANAGEMENT:	92010000: Class 3
	92010100: None
CURRENT ANNUAL AVERAGE	92010000: 15,800 (0.000-0.536), 29,500 (1.915-4.117)
DAILY TRAFFIC (AADT):	92010100: 15,800 (0.000-0.365), 25,000 (0.365-1.354)
% TRUCK USAGE:	92010000: 10.1% (0.000-0.536), 4.9% (1.915-4.117)
	92010100: 10.1% (0.000-0.365), 9.3% (0.365-1.354)

# **Step 4: Potential Countermeasures**

POTENTIAL COUNTERMEASURES to help Achieve	C3: Lane Narrowing, PHBs, Shared-Use Paths,
the Target Speed (Refer to Spreadsheet):	Speed Feedback Signs
{It is understood that the project team will make every effort to implement the proposed countermeasures. However, due to limits in budget or time (R/W, etc.) not all may be implemented in this project.}	C2T: Island at crossings, street trees, curb extensions, horizontal deflection, roundabout C1: Shared-Use Path, Sidewalks
Other Improvements within or outside of the Right-of-Way (R/W):	

# **Step 5: Determine Target Speed**

	Reduce Target Speed in Eastern C3's (0-2.964) to
CONCLUSIONS AND RECOMMENDATION	45 mph. Reducing Target Speed in C2T due to
	crashes, limited lighting, limited crosswalks and
	sidewalks. On NE end of project (3.462-4.117),

		match cross section with 239714-1, which		
		includes sidewalk and shared-use path; this cross		
			section can also be used o	n the western C3
			section as well	
	Posted Speed	Design	Target Speed	Ultimate Target
		Speed		Speed (If Applicable)
	92010000:			
	55 mph (0.000-0.536			
	1.915-2.881)			
	45 mph (2.881-			
Current:	4.117)			
	92010100:			
	55 mph (0.000-			
	1.354)			
			92010000:	
			0.000-0.536: 45 mph	
			1.915-2.964: 45 mph	
Recommended			2.964-3.462: 30 mph	
			3.462-4.117: 45 mph	
			92010100:	
			0.000-1.354: 45 mph	

## **TARGET SPEED MEETINGS:**

Target Speed (TS) Request Received:	
TS Determination Date:	3/9/22
Initial District TS Concurrence:	3/15/22
TS Local Agency Concurrence:	
Final TS District Approval:	
TS Report Submitted to PM:	

# Appendix C (Current Context Classification Map)



US 17/92/SR 600/S Orange Blossom Trail, Osceola County

Current Context Classification 07/14/20

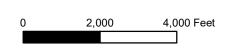






Table 201.5.1 Design Speed

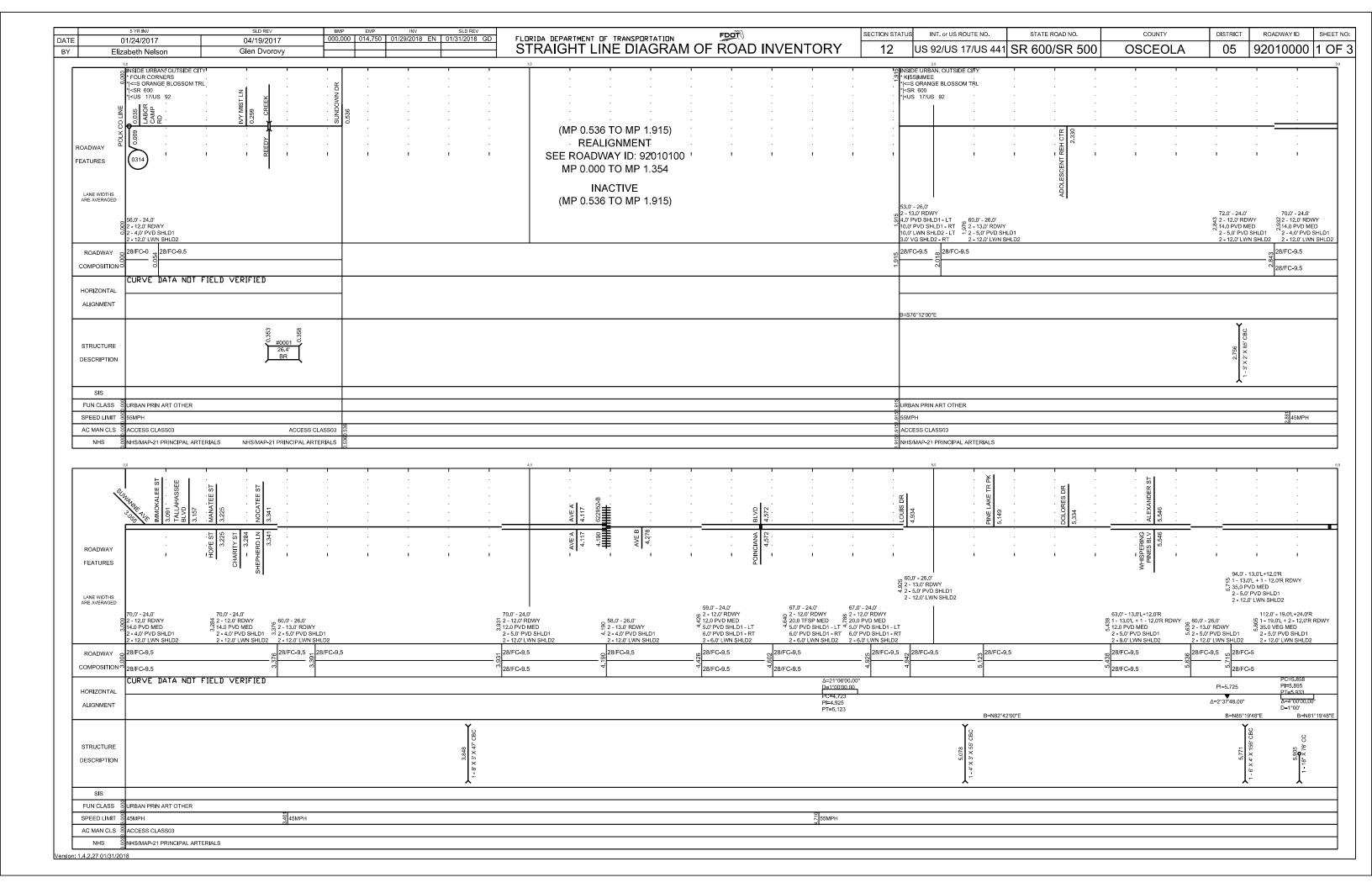
Limited Access Facilities (Interstates, Freeways, and Expressways)				
	Area	Allowable Range (mph)	SIS Minimum (mph)	
	Rural and Urban	70	70	
	Urbanized	50-70	60	
Arterials and Collectors				
Co	ontext Classification	Allowable Range (mph)	SIS Minimum (mph)	
C1	Natural	55-70	65	
C2	Rural	55-70	65	
C2T	Rural Town	25-45	40	
С3	Suburban	35-55	50	
C4	Urban General	25-45	45	
C5	Urban Center	25-35	-	
C6	Urban Core	25-30	-	

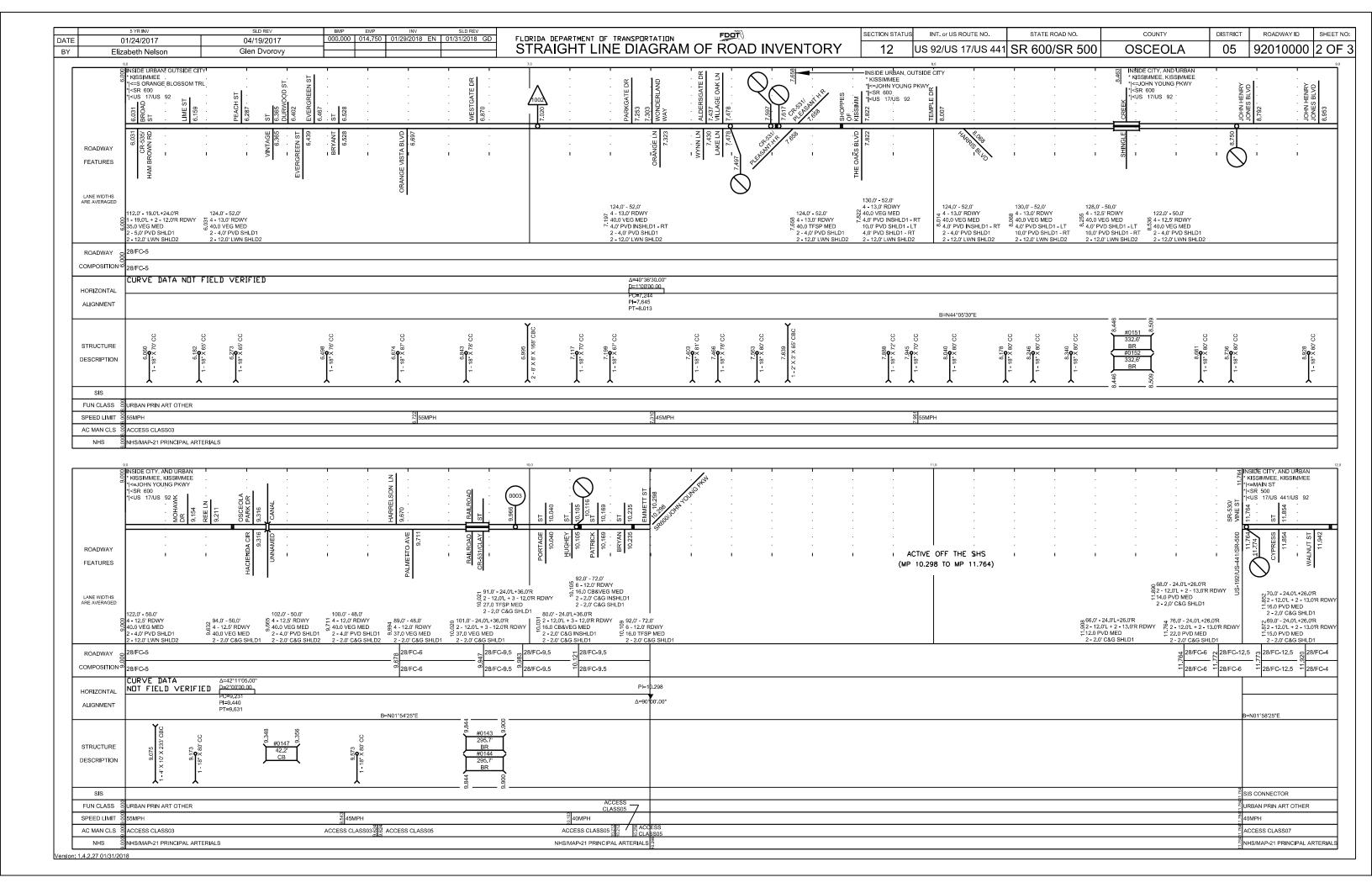
#### Notes:

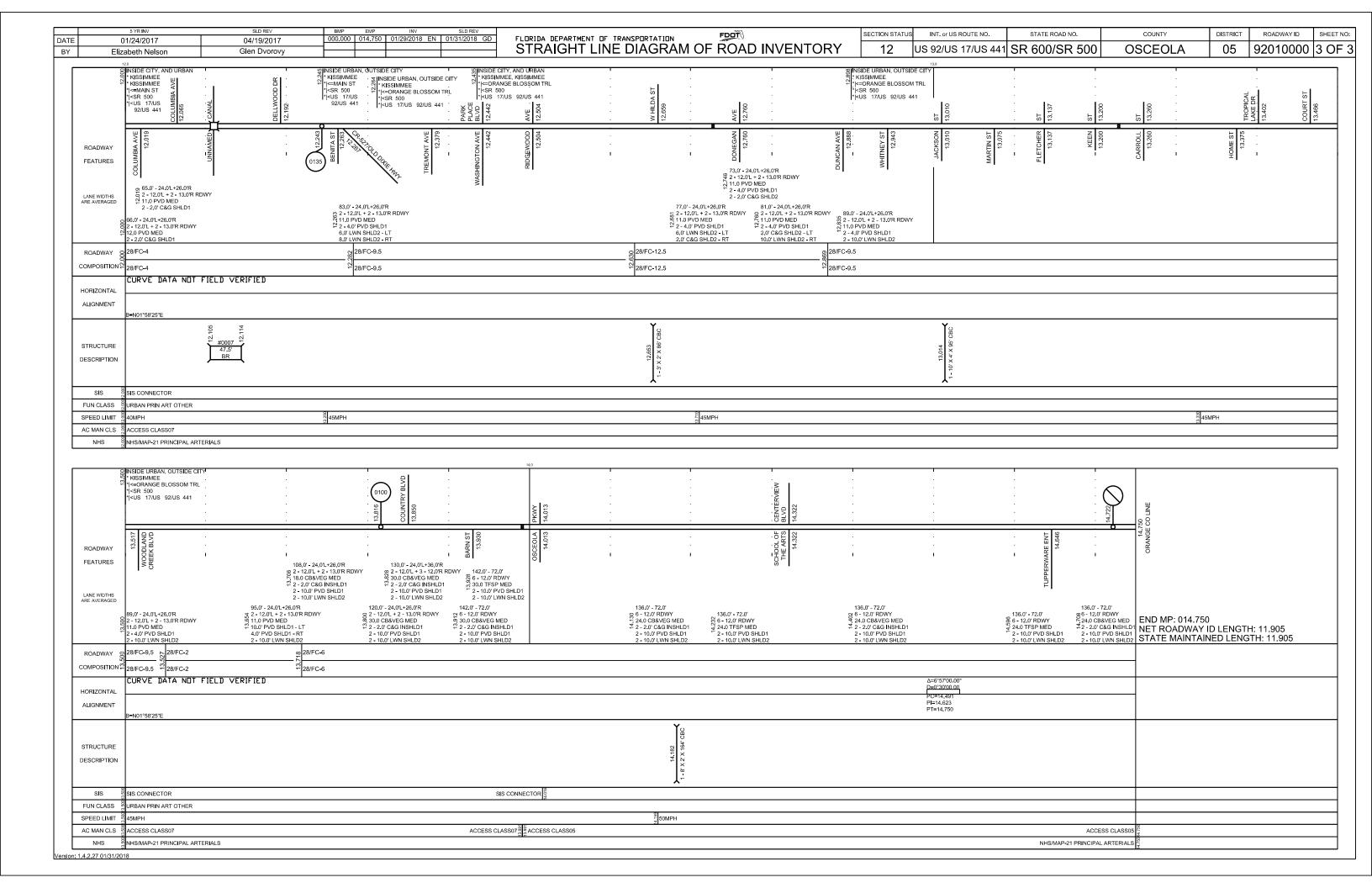
- (1) SIS Minimum Design Speed may be reduced to 35 mph for C2T Context Classification when appropriate design elements are included to support the 35-mph speed, such as on-street parking.
- (2) SIS Minimum Design Speed may be reduced to 45 mph for curbed roadways within C3 Context Classification.
- (3) For SIS facilities on the State Highway System, a selected Design Speed less than the SIS Minimum Design Speed requires a Design Variation as outlined in **SIS Procedure (Topic No. 525-030-260)**.
- (4) For SIS facilities not on the State Highway System, a selected Design Speed less than the SIS Minimum Design Speed may be approved by the District Design Engineer following a review by the District Planning (Intermodal Systems Development) Manager.
- (5) SIS minimum Design Speed may be reduced to 30 mph for C2T, C3, and C4 for facilities with a transit route.

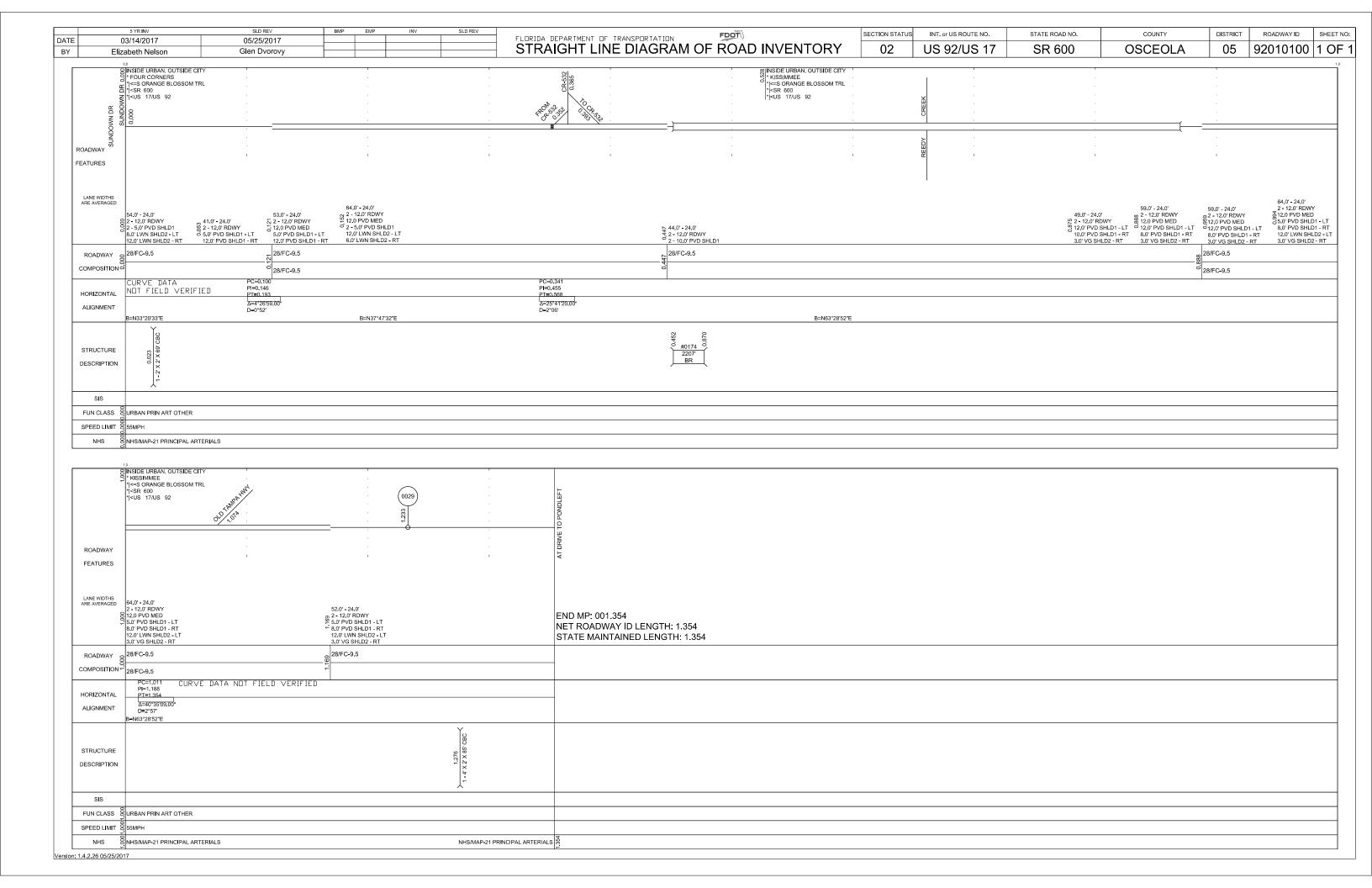
# Appendix E

(SR 600 (US 17/92) Straight Line Diagrams)









# Design Speed Variation (Segment 5) From west of Suwannee Avenue to east of Shepherd Lane/Nocatee Street

# **DESIGN SPEED VARIATION**

Prepared For:

# **FDOT District 5**

719 South Woodland Blvd Deland, FL 32720

PROJECT:

SR 600 (US 17/92)
PD&E Study from
Ivy Mist Lane to
Avenue A

FPID: 437200-1-22-01

Segment 5: From west of Suwannee Avenue to east of Shepherd Lane/Nocatee Street

> MP 0.299 - MP 4.117 Roadway ID: 92010000

**Osceola County** 

Vanasse Hangen Brustlin, Inc. 225 East Robinson Street, Suite 300 Orlando, FL 32801 Tel 407.839.4006 • Fax 407.839.4008 www.vhb.com

VHB Project No.: 63316.11

Submitted:

December 2024

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE BELOW THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

VHB, INC. 225 E ROBINSON STREET, SUITE 300 ORLANDO, FL 32801 KEVIN TYLER FREEMAN, P.E. NO. 76146

Prepared and Submitted by: Kevin Freeman, P.E.

Project Manager

1 of 19

Design Speed Variation (Segment 5)
US SR 600 (17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, FL
FPID: 437200-1-22-01
VHB Project No.: 63316.11

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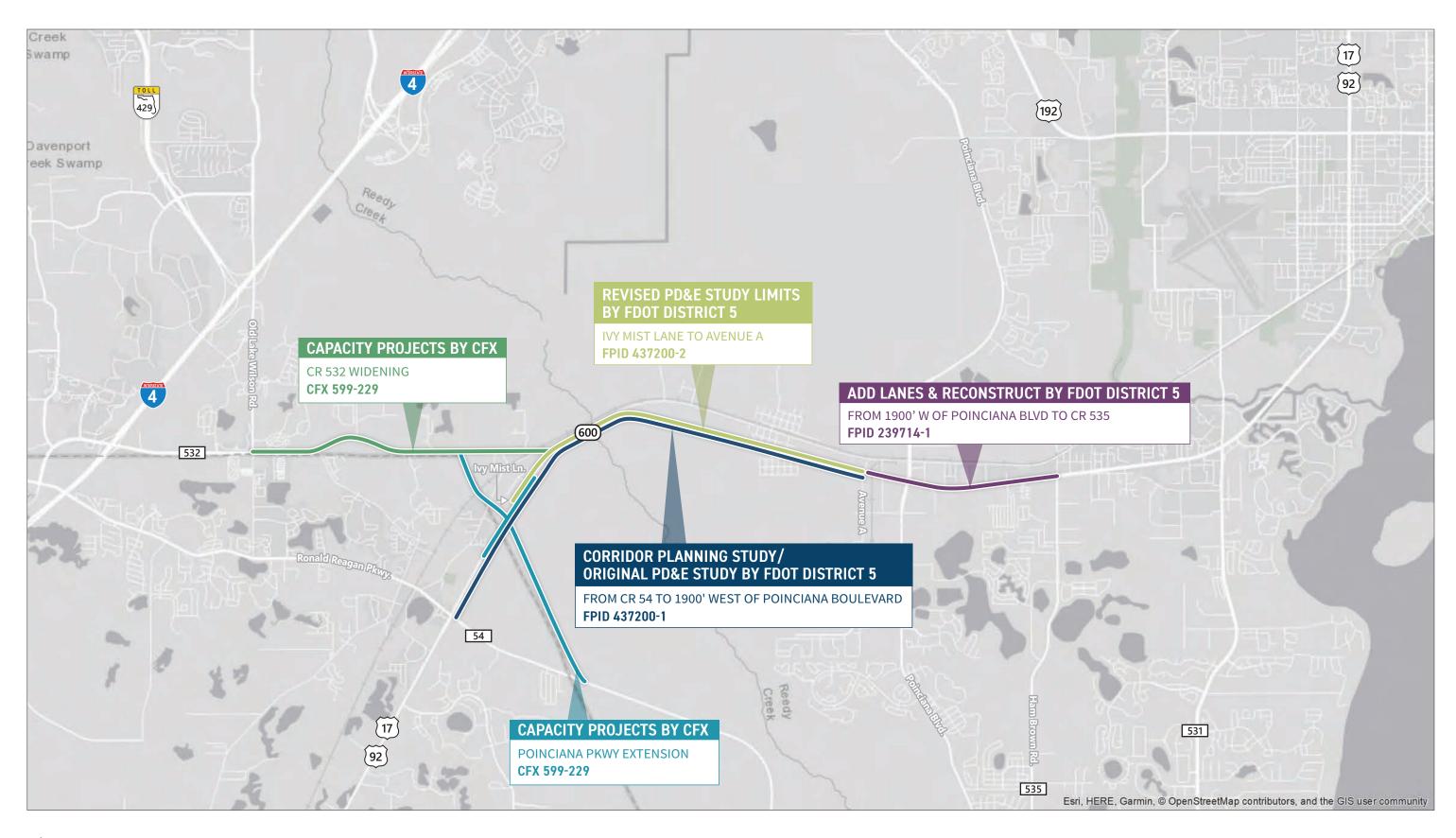
## Introduction

The Florida Department of Transportation (FDOT) District 5 is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to widen SR 600 (US 17/92) from the existing two-lane roadway to a four-lane divided roadway from Ivy Mist Lane to Avenue A, a distance of 3.8 miles, in Osceola County. A prior Corridor Planning Study of SR 600 (US 17/92) from County Road (CR) 54 (Ronald Reagan Parkway) in Polk County to 1,900 feet west of Poinciana Boulevard at Avenue A in Osceola County was completed in 2018. This project traverses through the community of Poinciana, and the unincorporated community of Intercession City. **Figure 1** shows the SR 600 (US 17/92) PD&E Study limits (shown in light green) and previous Corridor Planning Study limits (shown in blue), along with the limits of adjacent projects mentioned below.

Two related projects overlap the western end of this PD&E Study:

- The segment of SR 600 (US 17/92) from west of Parker Road in Polk County to Ivy Mist Lane in Osceola County is included in the Central Florida Expressway Authority's (CFX) SR 538/Poinciana Parkway Extension to CR 532 project (CFX Project #538-235), which has design completed and construction beginning in 2024. The SR 538/Poinciana Parkway Extension project will include the widening of SR 600 (US 17/92) within these limits, as well as a proposed diverging diamond interchange with SR 600 (US 17/92) southwest of Ivy Mist Lane as shown in teal (Figure 1).
- Adjacent to the western end of the PD&E Study (shown in dark green) is a CFX project (CFX Project #538-235A) widening CR 532/Osceola Polk Line Road from two to four lanes from Old Lake Wilson Road to SR 600 (US 17/92) (Figure 1). This project has completed design and is anticipated to begin construction in 2024.

One recently completed project abuts the eastern limits of this PD&E Study. FDOT District 5 widened SR 600 (US 17/92) from two to four lanes, with limits from 1,900 feet west of Poinciana Boulevard (Avenue A) to CR 535 (Ham Brown Road) in Kissimmee (FPID: 239714-1), shown in **Figure 1**.







## **Purpose and Need**

The purpose of this project is to provide needed capacity through the design year 2045 and improve safety conditions along the study corridor. The project is needed to meet future traffic demand, provide satisfactory future traffic operations, improve corridor access management, and improve safety along the corridor.

The following sections describe the need for improvements based on future traffic demand and existing crash data.

#### Future Traffic Demand

Future traffic analyses were conducted for the SR 600 (US 17/92) study corridor for three analysis years (2025, 2035, and 2045). Based on the intersection operational analysis, by 2045 most of the study intersections are anticipated to experience very high delays. Specifically, the high delays start from 2025 for the majority of unsignalized intersections and the signalized intersection at SR 600 (US 17/92) and CR 532. Capacity improvements are needed to accommodate future traffic demand and provide satisfactory traffic operations.

Based on the arterial operational analysis, the SR 600 (US 17/92) study corridor is expected to operate at target LOS D or better through the design year 2045, except for the northbound/eastbound approach south of CR 532, which is expected to fail in the 2035 and 2045 AM design hour. These results are due to the lack of signalized intersections between CR 532 and Poinciana Boulevard and the existing high posted speed limit. However, the signalized intersection at CR 532 is expected to experience very high approach delays and extensive queueing along SR 600 (US 17/92), which will impact the arterial operations. Additionally, all of the future AADTs along the study corridor will exceed the Maximum Service Volume of 18,590 for LOS D for a two-lane urbanized arterial starting in opening year 2025.

#### Safety

Crash data for a five-year period (October 1, 2019 – September 30, 2024) obtained from Signal 4 Analytics found a total of 325 crashes occurred along the study corridor. Of the 325 reported crashes, 147 involved injuries and three resulted in fatalities. The highest portion of crashes were rear-end (62.46%). The crash rates at the Ivy Mist Lane, CR 532 (Osceola Polk Line Road) intersection, Old Tampa Highway intersection, Shepherd Lane intersection, and at the Avenue A intersection were found to be above the statewide crash rate. This project intends to increase capacity and improve access management, which is anticipated to reduce congestion and conflict points. This project will also provide pedestrian and bicycle facilities to improve multimodal accommodations throughout the study corridor.

#### Report Purpose

The Florida Design Manual (FDM) Section 122.2 states a formal Design Variation document is required when proposed design elements do not meet the FDOT criteria. This report serves as a formal Design Variation document for segment 5 of SR 600 (US 17/92) within Osceola County; Roadway ID 92010000, MP 3.055 to MP 3.462.

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Design Speed Variation (Segment 5)
US SR 600 (17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, FL FPID: 437200-1-22-01

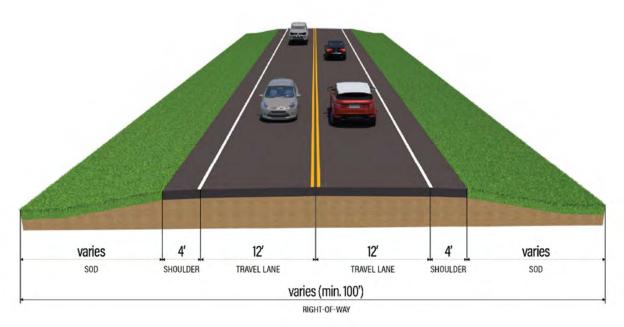
VHB Project No.: 63316.11

## **Project Alternatives**

#### No-Build Alternative

The No-Build Alternative assumes no improvements such as additional traffic lanes or other improvements will be made within the study area, except for programmed improvements to nearby or adjacent facilities. For this project, the No-Build Alternative includes the ongoing widening of SR 600 (US 17/92) from Avenue A to CR 535 (FPID: 239714-1) to four lanes, the programmed SR 538/Poinciana Parkway Extension, and the CR 532 widening.

The No-Build Alternative serves as the baseline for comparing the Build Alternative and remains a viable option throughout the PD&E study process. Based on programmed improvements, the existing typical section assumed for the No-Build Alternative remains a two-lane undivided rural typical section. At the eastern end of the project at Avenue A, the corridor transitions to a four-lane typical section. For the majority of the study limits, the existing typical section along SR 600 (US 17/92) within the study limits is provided below in **Figure 2**. The existing bridge typical section is provided as **Figure 3**.



**Figure 2: Existing Typical Section** 

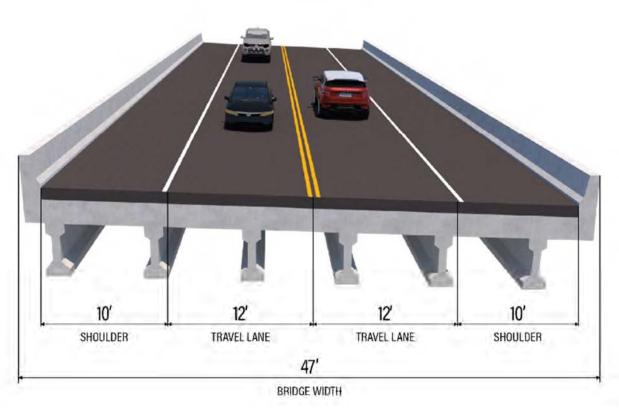


Figure 3: Existing Bridge Typical Section

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Design Speed Variation (Segment 5)
US SR 600 (17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, FL
FPID: 437200-1-22-01
VHB Project No.: 63316.11

#### Alternatives Considered

The Build Alternative widens SR 600 (US 17/92) to four lanes (two lanes per direction) throughout the study limits from Ivy Mist Lane to Avenue A. Due to alignment constraints from adjacent facilities and the existing bridge over Reedy Creek, the Build Alternative applied from Ivy Mist Lane to east of Old Tampa Highway is a best-fit alignment. From east of Old Tampa Highway to Avenue A, the study developed three alignments for alternatives comparison. The recommended alignment maximizes the existing Right-of-Way (ROW) and consists of widening to the south on the west end of the project corridor to align with the Poinciana Parkway Extension proposed improvements, then shifts to the south through the central portion of the project corridor to avoid the existing cemetery, widens to the north through Intercession City to avoid relocations, and aligns with the adjacent widening at the east end of the project corridor. The Preliminary Engineering Report prepared for the study summarizes the alternatives considered, the related analysis, and selection of the Preferred Alternative. The Preferred Alternative was developed to avoid and minimize environmental effects where feasible. Several stormwater treatment pond alternatives were evaluated, and the Pond Siting Report (PSR) discusses these alternatives and selection of the preferred pond sites.

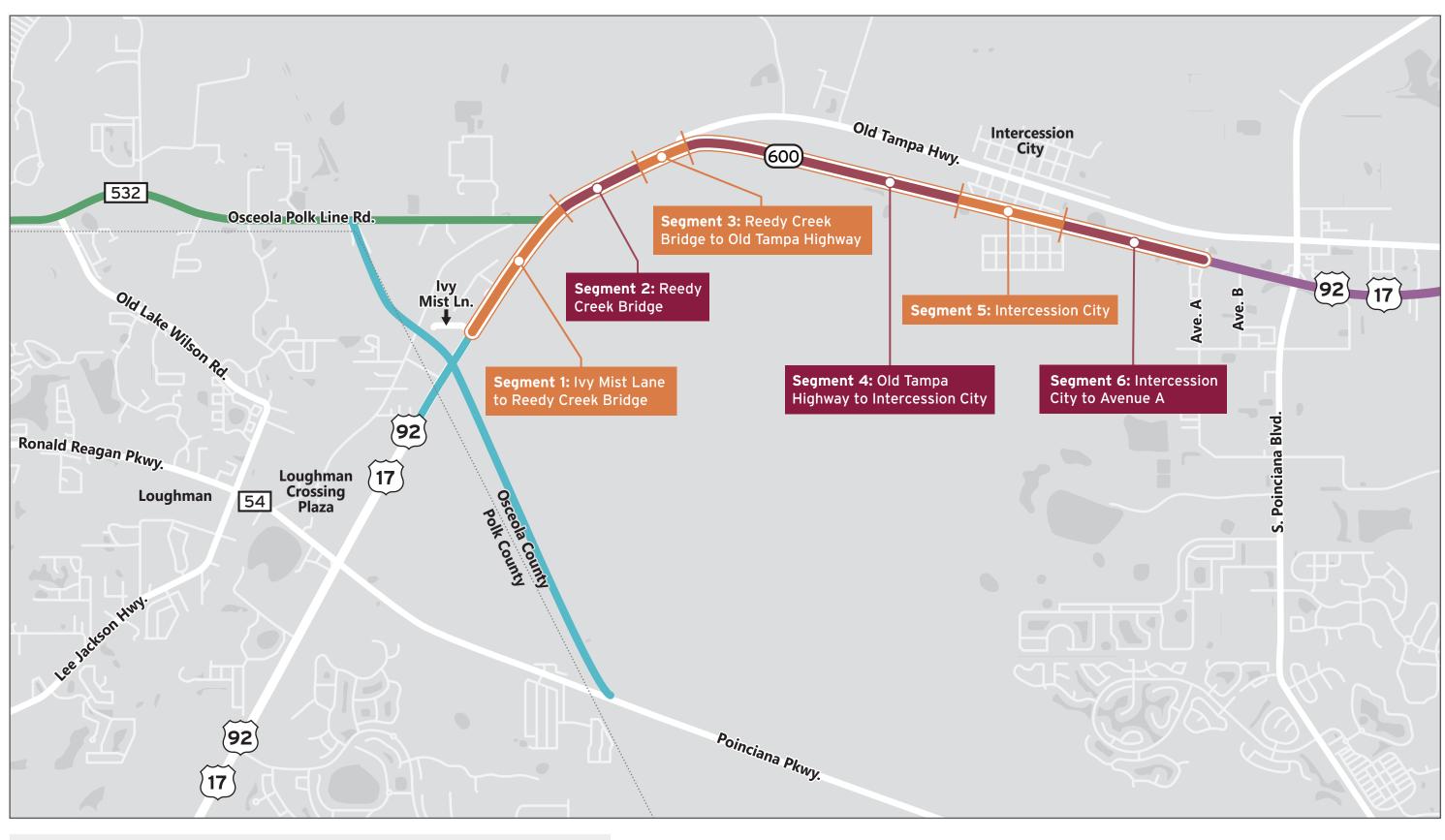
#### Description of Preferred Alternative

The Preferred Alternative widens SR 600 (US 17/92) from Ivy Mist Lane to Avenue A from the existing two-lane rural facility to a four-lane divided facility. The Preferred Alternative includes access management modifications to improve safety. The Preferred Alternative adds continuous multimodal facilities along both sides of the roadway for the entire length of the study corridor, except at the Reedy Creek Bridge due to constraints along the existing bridge (proposed eastbound structure). A pedestrian crossing will be provided at the Osceola Polk Line Road and Old Tampa Highway intersections to provide pedestrians with a crossing over SR 600 (US 17/92) to the shared-use path.

The Preferred Alternative also involves the retention of the existing bridge over Reedy Creek to serve as the eastbound traffic lanes and the addition of a new bridge over Reedy Creek to serve as the westbound traffic lanes. The westbound bridge will have a 12-foot-wide shared-use path for the use of pedestrians and bicyclists travelling in both directions. In addition to the widening and multimodal improvements along SR 600 (US 17/92), this project includes intersection improvements at CR 532, Old Tampa Highway, and Avenue A. Five pond site locations have been recommended as part of the Preferred Alternative for a total of 25.9 acres of stormwater ponds.

The typical section for the Preferred Alternative is divided into six segments (shown in **Figure 4**).

VHB Project No.: 63316.11



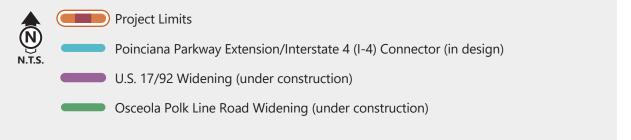




Figure 4
Study Segments
SR 600 (US 17/92) PD&E
FPID 437200-1

#### Urban Typical Section - Segments 1,4, and 6

An urban roadway typical section with swales is proposed for Segments 1, 4, and 6. The typical section (depicted in **Figure 5**) includes a 22-foot raised median, two 11-foot travel lanes in each direction, and a 12-foot shared-use path along both sides of the roadway. The shared-use paths are both separated from the roadway curb and gutter by 42-foot-wide drainage swales. The required ROW for the suburban roadway typical section varies with a minimum of 192 feet.

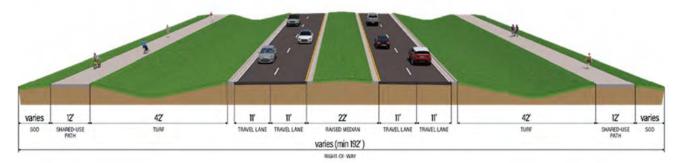


Figure 5: Suburban Typical Section (Segments 1, 4, and 6)

#### Bridge Typical Section – Segment 2

VHB Project No.: 63316.11

The typical section for the Reedy Creek Bridge, within Segment 2, includes two bridge structures (**Figure 6**). The existing bridge structure will serve eastbound traffic and a new bridge structure will serve the westbound traffic. The two bridge structures will be separated by a width of 70 feet. The existing eastbound bridge includes 11-foot inside and outside shoulders and two 11-foot travel lanes. The new westbound structure includes a six-foot inside shoulder, a 10-foot outside shoulder, two 11-foot travel lanes, and a 12-foot shared-use path separated from the roadway by a raised concrete barrier. The existing 244 feet ROW accommodates the proposed bridge structure. The existing eastbound bridge is located in a permanent easement on the south side of the FDOT ROW, which allows the new westbound bridge to be located fully within the existing ROW to the north.

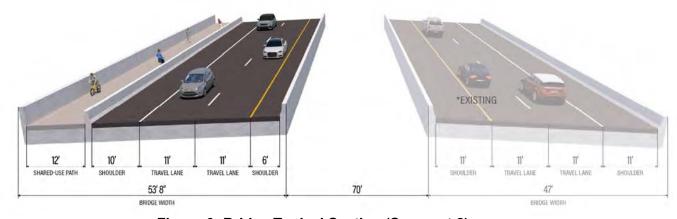


Figure 6: Bridge Typical Section (Segment 2)

#### **Urban Typical Section – Segment 3**

An urban typical section, as illustrated in **Figure 7**, is proposed for Segment 3 from the east end of the Reedy Creek Bridge to Old Tampa Highway. This typical section consists of two 11-foot travel lanes in each direction separated by a 22-foot raised median, and a 12-foot shared-use path along both sides of the roadway. The shared-use path is separated from the roadway by curb and gutter and a buffer varying in width with a minimum of five feet. The total ROW needed for this typical section varies with a minimum of 151 feet.

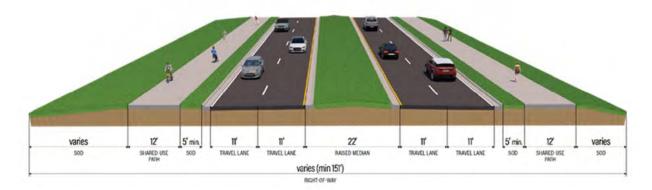


Figure 7: Urban Typical Section (Segment 3)

#### **Urban Typical Section – Segment 5**

VHB Project No.: 63316.11

An urban typical section is proposed for Segment 5 through Intercession City (**Figure 8**). This typical section includes a 15.5-foot raised median, two 11-foot travel lanes in each direction, and a 10-foot urban side path along both sides of the roadway. The urban side path is separated from the roadway by curb and gutter and a buffer with a width of two feet along the south side of the roadway and 2.5 feet along the north side of the roadway. The total ROW needed for this typical section varies with a minimum of 100 feet.

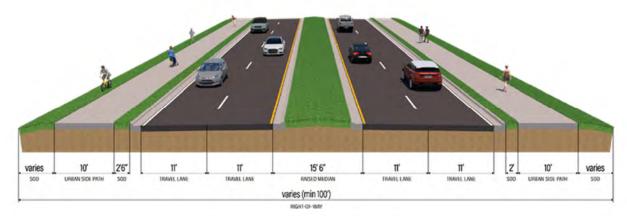


Figure 8: Urban Typical Section (Segment 5)

#### **Description of Requested Design Variation**

A design variation is being requested for design speed in segment 5, from just west of Suwannee Avenue to just east of Shepherd Lane/Nocatee Street:

Start MP	End MP	Design Speed Variation
3.055	3.462	30 mph

The segment of SR 600 (US 17/92) (Roadway ID 92010000) from just west of Suwannee Avenue (MP 3.055) to just east of Shepherd Lane/Nocatee Street (MP 3.462) has a recommended Target Speed of 30 mph. See Appendix A for the Target Speed Recommendation Report.

Additionally, the context classification for this segment has been designated C2T-Rural Town as shown in Appendix C. The segment to the west of this C2T–Rural Town section is designated C3C, with a proposed design speed of 45 mph. The segment east of the C2T-Rural Town section is designated C1, with a proposed design speed of 45 mph. See Appendix C for the context classification map.

Per FDM Table 201.5.1, the allowable SIS minimum design speed for C2T-Rural Town designated roadways is 40 mph. The total length of segment 5 is 0.407 miles.

The existing design speed between 1,450 feet west of Suwannee Avenue to Nocatee Street is 50 mph. The existing design speed between Nocatee Street to 2,110 feet east of Nocatee Street is 60 mph. The existing design speed between 2,110 feet east of Nocatee Street and Avenue A is 55 mph. The proposed design speed of 30 mph represents a large decrease in design speed compared to the existing conditions.

#### **Justification for Approval**

**Target Speed Requirement:** In accordance with the Target Speed Recommendation Report, FDOT FPID 437200-1, the Target Speed for this segment of roadway, ID #92010000 from MP 3.055 to MP 3.462, is 30 mph. To meet the Target Speed, the approval of this design variation is required.

**Safety/Operational Performance:** The C2T segment along SR 600 (US 17/92) from just west of Suwannee Avenue to just east of Shepherd Lane/Nocatee Street is located within Intercession City. Intercession City is an unincorporated community with 19 driveways filtering onto SR 600 (US 17/92) and a proposed urban side path on the north and south sides of SR 600 (US 17/92). Utilizing a 30-mph design speed in this section will enhance safety for pedestrians and bicyclists using the urban side path, accommodate vehicles merging onto SR 600 (US 17/92) from driveways, and notify existing drivers to adjust their behavior and expectations accordingly. Also, this SR 600 (US 17/92) corridor bifurcates this rural town of Intercession City, and pedestrians travel along and across SR 600 (US 17/92) to connect to community features. These slower speeds will help enhance safety and reduce level of traffic stress for pedestrian and bicycle users.

**Right of Way:** Per FDM Table 210.3.1, providing a lower 30-mph design speed allows the use of a 15.5-foot median width as compared to a 40-mph design speed requiring the use of a 22-foot median width. This will minimize the footprint of the proposed ROW required.

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Design Speed Variation (Segment 5)
US SR 600 (17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, FL FPID: 437200-1-22-01

VHB Project No.: 63316.11

**Community:** Utilizing a lower 30-mph design speed as compared to a 40-mph design speed reduces the noises caused from the roadway for nearby residents. Additionally, as mentioned above, the lower design speed will minimize the footprint of the proposed ROW. Both factors will minimize impacts for nearby residents.

**Environment:** Using a lower 30-mph design speed as compared to a 40-mph design speed minimizes the footprint of the proposed ROW and reduces property needs, which can lead to minimizing impacts to the social environment.

**Usability by all Modes of Transportation:** Using a lower 30-mph design speed as compared to a 40-mph design speed provides a more comfortable experience for pedestrians and bicyclists on the adjacent urban side paths.

**Cost:** Based on the LRE cost estimates, the estimated project cost per mile for the 30-mph design speed typical section is \$21,661,058.28. Meanwhile, the estimated project cost per mile for the 40-mph design speed typical section is \$23,709,776.79. Therefore, the estimated savings per mile is \$2,048,718.51 by using a 30-mph design speed as compared to a 40-mph design speed. This equates to a \$833,828.43 savings for the 0.407-mile segment. Additionally, by reducing the design speed to 30-mph, there will be less required proposed ROW acquisition. This is a further reduction in cost as compared to a 40-mph design speed.

**Mitigation:** A potential mitigation strategy is to use cross-sectional elements to reduce operating speeds to design speed. These strategies include:

- Horizontal Deflections There are three horizontal curves proposed in segment 6, including a 40-mph and 30-mph speed curve just east of Intercession City, and three horizontal curves proposed in segment 4, including a 40-mph and 30-mph speed curve just west of Intercession City. The purpose of these curves is to slow driving speeds before entering Intercession City.
- **Use of Curb and Gutter** The use of curb and gutter is proposed throughout Segment 5 to narrow the footprint of the roadway and is a strategy that has been shown to encourage slower driving speeds.
- Urban Side Path An urban side path is proposed along the north and south side of SR 600 (US 17/92). The use of an urban side path removes the need for a bike lane, as bicyclists can travel on the urban side path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to encourage slower driving speeds.
- Landscaping Landscaping is proposed where feasible to increase the enclosure feeling
  of the corridor to help naturally keep speeds low and enhance the aesthetics of the
  corridor.
- **Pedestrian Hybrid Beacons** The installation of two pedestrian hybrid beacons will be used to warn and control traffic at strategic crossing locations to assist pedestrians in crossing SR 600 (US 17/92) at marked crosswalks.

The travel lanes in this segment of the roadway will be the FDOT minimum of 11-feet-wide. See Appendix B: Speed Management Strategies Memo for more information regarding mitigation strategies.

VHB Project No.: 63316.11

Table 1: Pros and Cons of 30-mph Design Speed

	or so-inpir besign speed
Pros	Cons
<ul> <li>Lower design speed improves operational safety.</li> <li>Pedestrian hybrid beacons will enhance safety of pedestrians and warn drivers to slow down.</li> <li>Narrower roadway footprint will encourage slower driving speeds.</li> <li>Slower driving speeds will reduce level of traffic stress for pedestrians and reduce traffic noise along the corridor.</li> <li>Slower design speed will reduce environmental impacts.</li> </ul>	Design speed does not align with the range provided for SIS roadways in a C2T context classification.

#### Conclusion

VHB Project No.: 63316.11

The recommended Target Speed for this segment of roadway necessitates the design speed variation of 30 mph. Furthermore, the C2T segment along SR 600 (US 17/92) from just west of Suwannee Avenue to just east of Shepherd Lane/Nocatee Street is located within Intercession City and a 30-mph design speed is desirable for safety. It is recommended that this variation be approved.

## Appendix A

(Target Speed Recommendation Report)

## TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1



#### **General Roadway Information**

FIN#: 437200-1	FDOT Project Manager: Lorena Cucek
State Road Number (Local Name): US 17-92	Roadway ID: 92010000, 92010100
Project Limits: Polk County Line to	92010000: 0.000-0.536, 1.915-4.117
Avenue A	92010100: 0.000-1.354
County: Osceola	City/Town: Intercession City
PROPOSED TARGET SPEED: 92010000:	Project Type (Description): PD&E
0.000-0.536: 45 mph	
1.915-2.964: 45 mph	
2.964-3.462: 30 mph	
3.462-4.117: 45 mph	
92010100:	
0.000-1.354: 45 mph	
EXISTING TYPICAL SECTION	
92010000:	
2 lanes undivided – 12' lanes (0.000-0.536)	
2 lanes undivided – 13' lanes (1.915-2.843)	
2 lanes divided – 12' lanes (2.843-3.376)	
2 lanes undivided – 13' lanes (3.376-3.931)	
2 lanes divided – 12' lanes (3.931-4.117)	
92010100:	
2 lanes undivided – 12' lanes (0.000-0.121)	
2 lanes divided – 12' lanes (0.121-0.447)	
2 lanes undivided – 12' lanes (0.447-0.888)	
2 lanes divided – 12' lanes (0.888-1.169)	
2 lanes undivided – 12' lanes (1.169-1.354)	

#### **Step 1: Identify Need**

SAFETY CONCERNS:	3 Pedestrian Crashes (1 Fatality), 1 Bicycle Crash (0 Fatalities)
LOCAL INPUT:	
OTHER:	

**Step 2: Determine FDM Consistency** 

## TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1

CONTEXT CLASSIFICATION:	92010000:
	C3R (0.000-0.536), C3C (1.915-2.964), C2T
	(2.964-3.462), C1 (3.462-3.983), C3C (3.983-
	4.117)
	92010100:
	C3R (0.000-0.365), C1 (0.365-1.074), C3C
	(1.074-1.354)
STRATEGIC INTERMODAL SYSTEM (SIS):	No
POSTED SPEED (CURRENT):	92010000:
	55 mph (0.000-0.536, 1.915-2.881), 45 mph
	(2.881-4.117)
	92010100:
	55 mph (0.000-1.354)
DESIGN SPEED:	

#### **OPTIONAL: Speed Study Information**

Allowable range of design speeds:	C3R/C3C: 35-55 mph
(per FDM table 201.5.1)	C2T: 25-45 mph
	C1: 55-70 mph

#### **Step 3: Identify Important Roadway Features**

THROUGH LANES & LANE WIDTHS:	See Typical Sections
TRANSIT:	No
BICYCLISTS / PEDESTRIANS	92010000: Very small section (2.214-2.258 and 3.098-3.148 L side,
FACILITY CONDITIONS:	and 3.142-3.181 R side) with 5'-6' sidewalks; No bike lanes
	92010100: None
ACCESS MANAGEMENT:	92010000: Class 3
	92010100: None
CURRENT ANNUAL AVERAGE	92010000: 15,800 (0.000-0.536), 29,500 (1.915-4.117)
DAILY TRAFFIC (AADT):	92010100: 15,800 (0.000-0.365), 25,000 (0.365-1.354)
% TRUCK USAGE:	92010000: 10.1% (0.000-0.536), 4.9% (1.915-4.117)
	92010100: 10.1% (0.000-0.365), 9.3% (0.365-1.354)

#### **Step 4: Potential Countermeasures**

POTENTIAL COUNTERMEASURES to help Achieve	C3: Lane Narrowing, PHBs, Shared-Use Paths,				
the Target Speed (Refer to Spreadsheet):	Speed Feedback Signs				
{It is understood that the project team will make every effort to implement the proposed countermeasures. However, due to limits in budget or time (R/W, etc.) not all may be implemented in this project.}	C2T: Island at crossings, street trees, curb extensions, horizontal deflection, roundabout C1: Shared-Use Path, Sidewalks				
Other Improvements within or outside of the Right-of-Way (R/W):					

#### **Step 5: Determine Target Speed**

	Reduce Target Speed in Eastern C3's (0-2.964) to
CONCLUSIONS AND RECOMMENDATION	45 mph. Reducing Target Speed in C2T due to
	crashes, limited lighting, limited crosswalks and
	sidewalks. On NE end of project (3.462-4.117),

## TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1

		match cross section with 239714-1, which								
			includes sidewalk and shared-use path; this cross							
		section can also be used on the western C3								
			section as well							
	Posted Speed	Design	Target Speed	Ultimate Target						
		Speed		Speed (If Applicable)						
	92010000:									
	55 mph (0.000-0.536									
	1.915-2.881)									
	45 mph (2.881-									
Current:	4.117)									
	92010100:									
	55 mph (0.000-									
	1.354)									
			92010000:							
			0.000-0.536: 45 mph							
			1.915-2.964: 45 mph							
Recommended			2.964-3.462: 30 mph							
			3.462-4.117: 45 mph							
			92010100:							
			0.000-1.354: 45 mph							

#### **TARGET SPEED MEETINGS:**

Target Speed (TS) Request Received:	
TS Determination Date:	3/9/22
Initial District TS Concurrence:	3/15/22
TS Local Agency Concurrence:	
Final TS District Approval:	
TS Report Submitted to PM:	

## Appendix B

(Speed Management Strategies Memo)



#### **M**EMORANDUM

Date: September 8, 2022

Project: US 17/92 Project Development & Environmental (PD&E) Study

**FPID:** 437200-2-22-01

**Subject:** Speed Management Strategies

The US 17/92 Project Development and Environment (PD&E) Study is evaluating the widening of US 17/92 from two to four lanes from Ivy Mist Lane to Avenue A in Osceola County. This memorandum summarizes the speed management strategies evaluated for the project. More detailed documentation is provided in the *Preliminary Engineering Report* for the study.

The existing posted speed along the corridor is 55 mph from Ivy Mist Lane to approximately 1,000 feet west of Suwannee Avenue. To the east of this segment, the corridor transitions to an existing speed limit of 45 mph. After review of the project corridor and existing/future land uses, FDOT provided designated context classifications for the corridor (see attached map). The corridor transitions from C3R (Suburban Residential) in the westernmost port of the corridor adjacent to existing residential areas and also in the vicinity of the proposed Poinciana Parkway Extension interchange at US 17/92. For the majority of the corridor including the eastern limits of the project, the designated context class is C3C (Suburban Commercial) based on existing land uses. Within Intercession City, the context class is C2T (Rural Town). In between these sections, the existing South Florida Water Management District (SFWMD) and Reedy Creek conservation areas are designated C1 (Natural).

After review of the context classifications, FDOT identified a target speed determination involving 45 mph for the entire study corridor for corridor consistency with exception of the area within Intercession City from 500 feet west of Suwannee Avenue to 650 feet east of Nocatee Street, this area was determined to be a target speed of 30 mph. Based on FDM Table 201.5.1, the allowable range for design speed for C3 and C2T is consistent with the target speed of 45 mph and 30 mph, respectively. For the C1 areas located in between C3R and C3C segments, FDOT recommended a target speed of 45 mph to achieve corridor consistency and lower speeds along the corridor for improved safety. As design speed is a controlling design element, a Design Variation is anticipated. This memorandum focuses on speed management strategies employed in both the 45 mph target speed area and in the transition areas approaching Intercession City to achieve the target speed of 30 mph.

Table 202.3.1 of the FDM identifies Speed Management Strategies to achieve a desired operating speed. The table uses context classification and target speed to identify the types of strategies that would be most effective. Based on Table 202.3.1, with context classification of C3R or C3C and a target speed of 45 mph, speed management practices such as, Roundabouts, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Rectangular Rapid Flashing Beacon (RRFB) and Pedestrian Hybrid Beacon (PHB) were identified for consideration. For the 30 mph (C2T) section within Intercession City, the speed management

strategies considered include the ones identified for the 45 mph section above plus On-street parking, Street Trees, Short Blocks, Islands at Crossings, Road Diet, Bulb-outs, Terminated Visas, and Chicanes.

The proposed improvements for the Preferred Alternative (included in the *Preliminary Concept Plans*) utilize appropriate strategies from the opportunities listed above where feasible based on project considerations such as multimodal needs, access management, design criteria and right-of-way considerations. The following outlines the speed management strategies used for this corridor based on the two different target speeds identified above for the corridor. For the 45 mph target speed section of US 17/92, three speed management strategies are proposed below to achieve the target speed.

#### **Speed Management Strategies for 45 mph Target Speed Section**

- **Horizontal Deflection** There are 8 different deflections/curves in the alignment in the 3.2 mile 45 mph target speed section. This number does not include the speed curves/horizontal deflection directly adjacent to entering Intercession City. These deflections and curves were consistent with design criteria for a 45 mph target speed.
- Lane Narrowing The lane width will be reduced from 12-foot to a proposed 11-foot to be consistent with the FDM criteria.
- **Speed Feedback Signs** Speed feedback signs are proposed on the bridges over Reedy Creek. The signs provide immediate feedback to drivers when the speed limit is exceeded, which may help to reduce unintentional speeding. The signs consist of a speed-measuring device, along with a message sign that displays the speed to drivers.
- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- Roundabout at Avenue A Based on the Stage 2 Intersection Control Evaluation (ICE) analysis at
  Avenue A, a roundabout was recommended for the Preferred Alternative. This will help manage
  speeds into and out of Intercession City by helping to create a transition from the rural section to
  the east and the urban section to the west.

Based on stakeholder and public input, the existing 45 mph speed limit within the Rural Town (C2T) of Intercession City is a safety concern and the community vision is to reduce the speed limit through the town. Additional speed management strategies were identified below for this area to help reduce speeds to the 30 mph target speed. These strategies will help provide a transition zone prior to entering Intercession City.

#### **Speed Management Strategies for 30 mph Target Speed Section**

• Horizontal Deflection – Four proposed horizontal curves are provided in both directions just west and east of Intercession City. The proposed horizontal alignment includes two 40 mph curves and two 30 mph curves all of which meet FDOT criteria. These will be appropriately signed with posted speed limits and advance warning signs upstream of these curves to introduce the reduced speed limits at curves. This alleviates the existing "race-track" feel that the community expressed opposition to during the public meeting in October 2021 and provides a deceleration area prior to entering Intercession City. Posted Speed Pavement markings are proposed to provide

additional driver awareness of the reduced speed limit through the horizontal deflection areas. These will be placed in the Perception – Reaction area to prepare drivers for the Deceleration Area coming into Intercession City.

- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- **Landscaping** Provide landscaping where feasible to increase the enclosure feeling of the corridor to help naturally keep speeds low and enhance the aesthetics of the corridor.
- **PHB's** Two locations are identified through Intercession City to provide a crosswalk to help improve mobility within the community. One is located just east of Tallahassee Boulevard and the other is located just east of Charity Street. These PHB's will establish shorter block lengths and create engagement with the drivers which will help manage speed.
- **Speed Feedback Signs** The feedback signs will be placed just west of Suwannee Ave in the eastbound direction and just east of Nocatee Street in the westbound direction. This will be used to engage the driver of their current speed and make them aware of the reduced speed limit within Intercession City.

The strategies identified were discussed during the Alternatives Public Meeting, Stakeholder Meeting #3, and FDOT Phase III Meeting. Based on input received, there has been substantial support for these strategies throughout the life of the project.

-- END MEMO --

	TARGET SPEED COUNTERMEASURE OPTIONS																					
Context			C1	C2			C2T					:3				:4			C5			26
Classification			61	C2			· · ·		r						,		r					
Target Speed			55-70	55-70	45	40	35	30	25	50-55	45	40	35	45	40	35	30	35	30	25	30	25
(mph)	Charles also	FDM Reference																			<del>                                     </del>	
	Strategies	FDIVI Keterence																			<del>                                     </del>	
	Curb Extensions (Bulb-Outs)	202.3.12, 222.2.6																				
	Lane Narrowing	202.3.12, 222.2.6 202.3.4, Table 210.2.1																				
	Lane Repurposing (Road Diet)	202.1.1, 126 202.3.6, 212.11, 215.2.4																				
	Street Trees	202.3.6, 212.11, 215.2.4																				
	Terminated Vista																					
	Horizontal Deflection	202.3.5, 210.8.1, 217																				
	Chicanes	202.3.3																				
	Islands at Crossings	202.3.11, 210.3.2																				
	Islands in curved sections	202.3.11, 210																				
	Mini-Roundabouts	202.3.1, 213																				
	Roundabout	202.3.1, 213																				
	Vertical Deflection	202.3.8																				
Reduction	Speed Tables	202.3.8																				
Strategies	Raised Crosswalks	202.3.8																				
Strategies	Raised Intersections	202.3.8																				
	Textured Surface																					
	Pedestrian Hybrid Beacons (PHBs)	202.3.13, TEM 5.2																			1	
	On-street Parking	202.3.2, 210.3.2																				
	Rectangular Rapid Flashing Beacons (RRFBs)	202.3.13, TEM 5.2																				
	Short Blocks	202.3.7, 222.2.3.1																				
	Speed Feedback Signs	202.3.9																				
	Bicycle Lanes	223																				
	Shared Use Paths	223.2.3, 224																				
	Separated Bicycle Lanes	223.2.4.1																				
	Shared Lane Markings (Sharrows)	223.3																				
	Marked Shoulders	223.2.2.1																				
	Sidewalks (See FDM 222.2.1)	222.2.1																				
																					<b>—</b>	
	Median Widths - Raised or Restrictive (RRR Projects)	210.3.1	30'-40'	30'-40'	19.5'	15.5'	15.5'	15.5'	15.5'	30'-40'	19.5'	15.5'	15.5'	19.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'
l i	Minimal Travel Lane Width	Table 210.2.1	12'	12'	11'	11'	11'	11'	11'	12'	11'	11'	10'	11'	11'	10'	10'	10'	10'	10'	10'	10'
Additional	Two-Way Left Turn Lane	Table 210.2.1	l			12'	12'	12'	12'	<del> </del>		12'	11'	l	12'	11'	11'	11'	11'	11'	11'	11'
Information	Two-Way Left Turn Lane (RRR Projects)	Table 210.2.1				11'	11'	11'	11'			11'	10'	l	11'	10'	10'	10'	10'	10'	10'	10'
	Minimal Travel Lane Width	Table 210.2.1	12'	12'	11'	11'	11'	11'	11'	12'	11'	11'	10'	11'	11'	10'	10'	10'	10'	10'	10'	10'
	Sidewalks - Standard Widths	Table 222.2.1	5'	5'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	10'	10'	10'	12'	12'

Target Speed Countermeasure Options table developed for educational purposes only, utilizing strategies to achieve desired operating speed identified in Table 202.3.1 of the FDOT Design manual.

# Appendix C (Current Context Classification Map)



US 17/92/SR 600/S Orange Blossom Trail, Osceola County

Current Context Classification 07/14/20

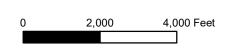






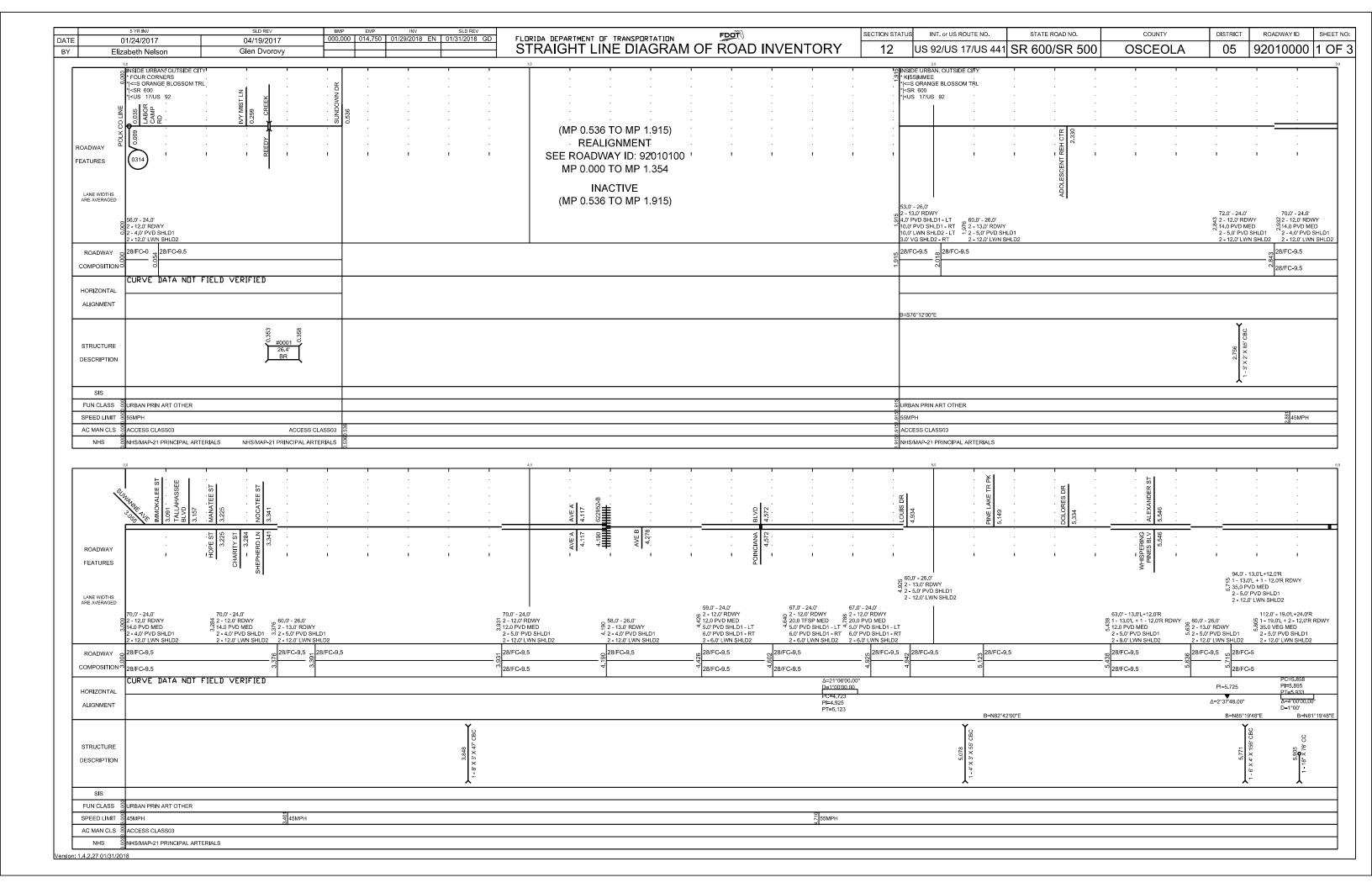
Table 201.5.1 Design Speed

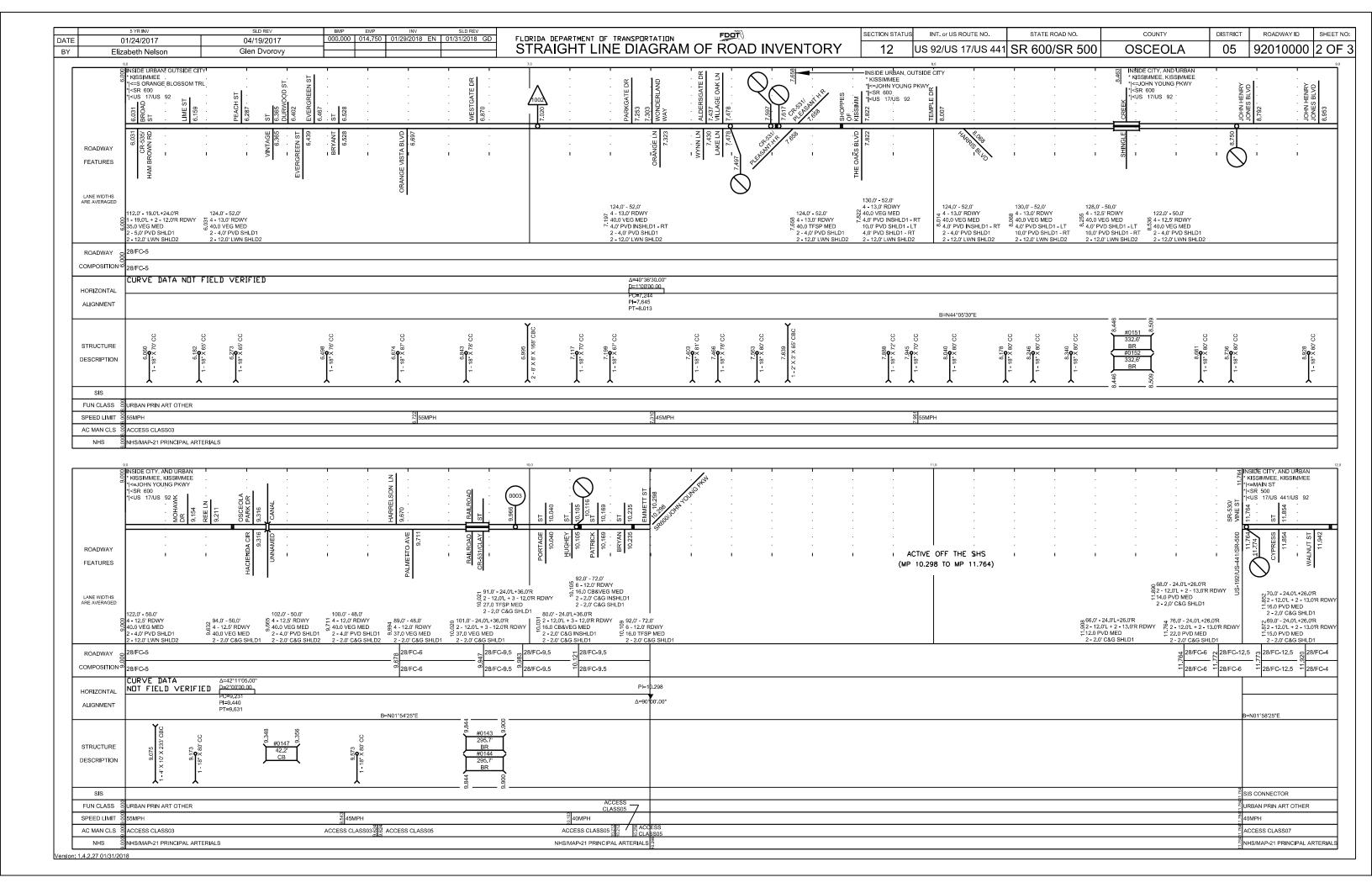
Limited Access Facilities (Interstates, Freeways, and Expressways)				
	Area	Allowable Range (mph)	SIS Minimum (mph)	
Rural and Urban		70	70	
Urbanized		50-70	60	
Arterials and Collectors				
Context Classification		Allowable Range (mph)	SIS Minimum (mph)	
C1	Natural	55-70	65	
C2	Rural	55-70	65	
C2T	Rural Town	25-45	40	
С3	Suburban	35-55	50	
C4	Urban General	25-45	45	
C5	Urban Center	25-35	-	
C6	Urban Core	25-30	-	

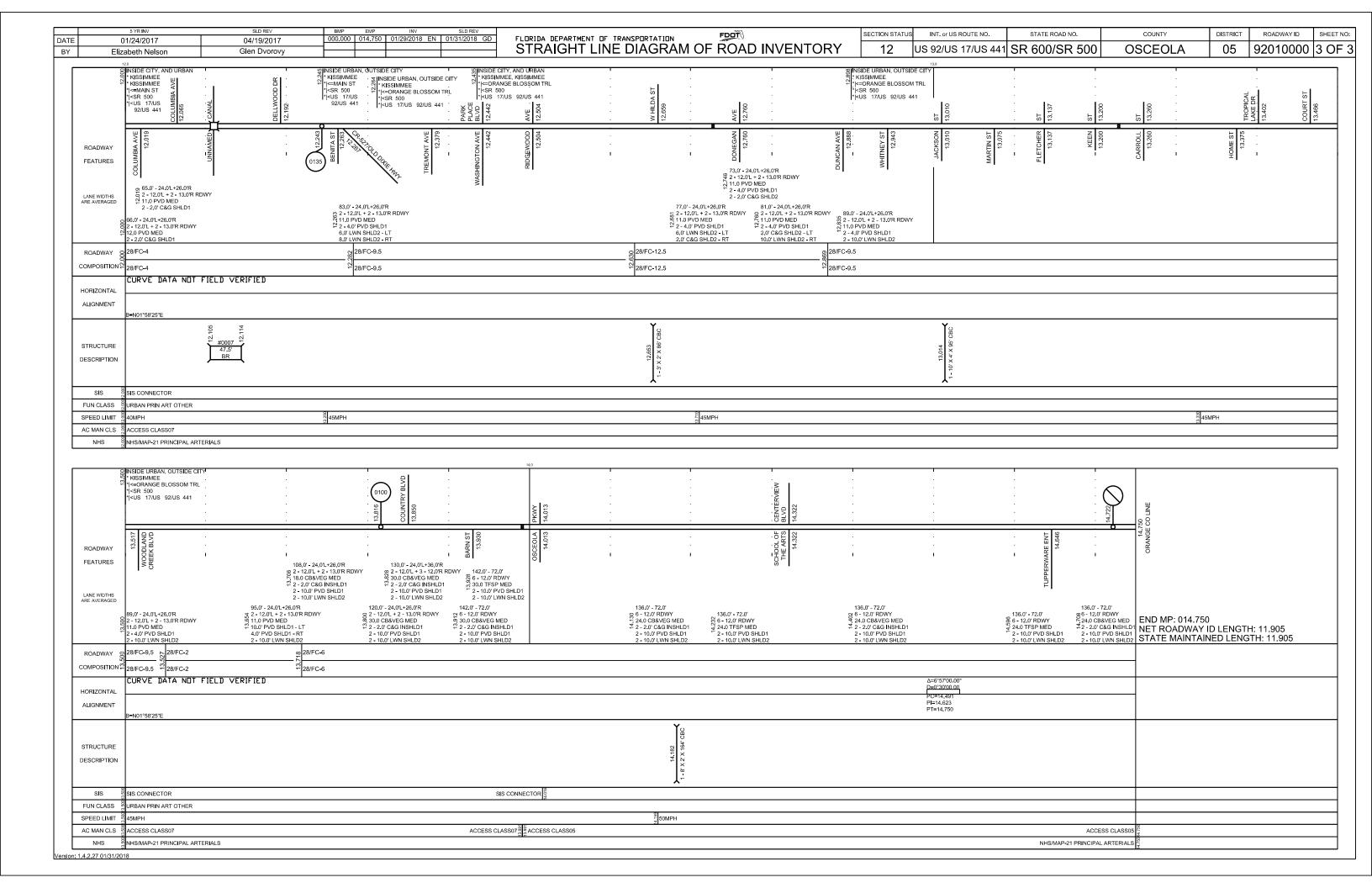
#### Notes:

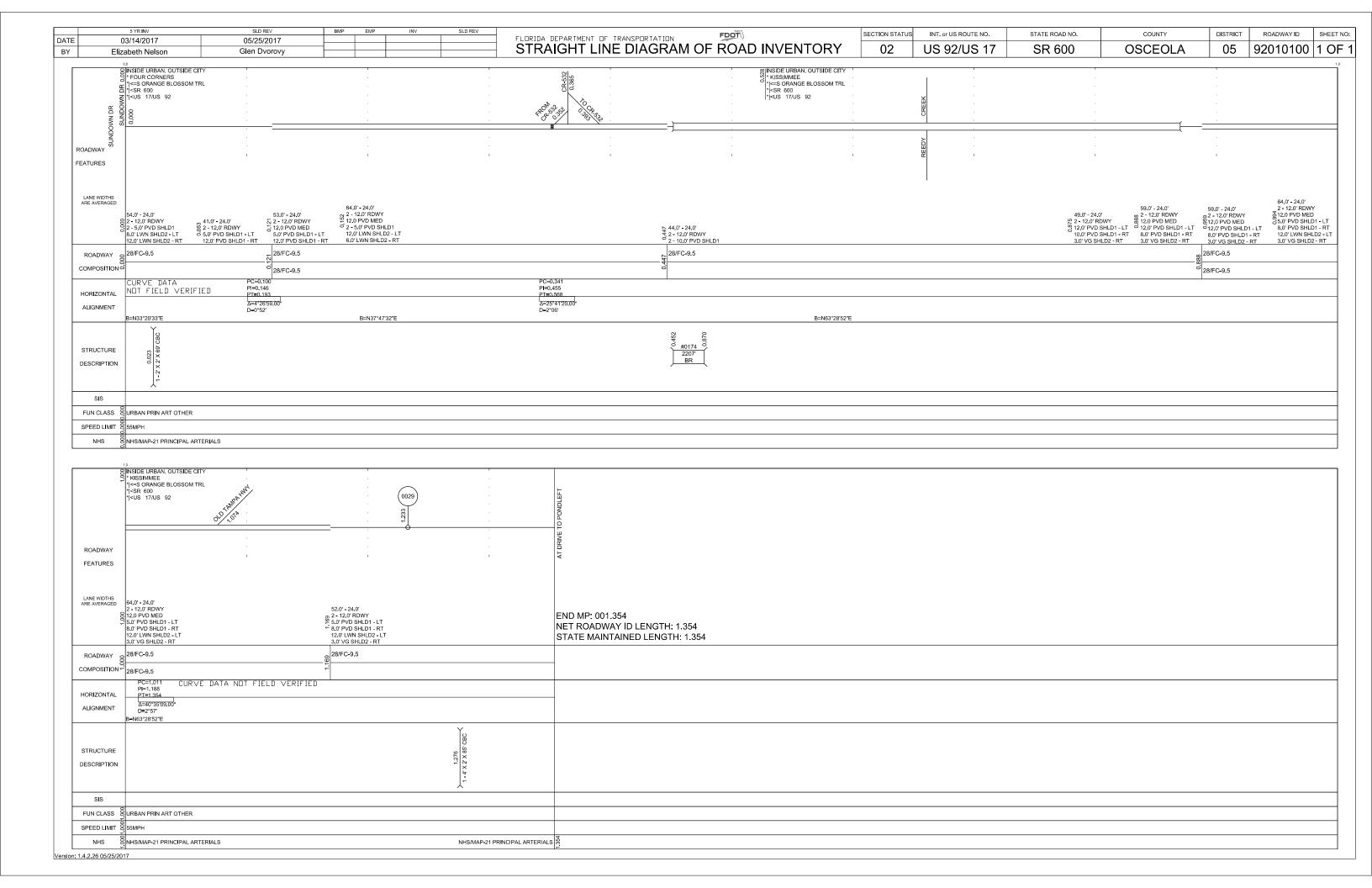
- (1) SIS Minimum Design Speed may be reduced to 35 mph for C2T Context Classification when appropriate design elements are included to support the 35-mph speed, such as on-street parking.
- (2) SIS Minimum Design Speed may be reduced to 45 mph for curbed roadways within C3 Context Classification.
- (3) For SIS facilities on the State Highway System, a selected Design Speed less than the SIS Minimum Design Speed requires a Design Variation as outlined in **SIS Procedure (Topic No. 525-030-260)**.
- (4) For SIS facilities not on the State Highway System, a selected Design Speed less than the SIS Minimum Design Speed may be approved by the District Design Engineer following a review by the District Planning (Intermodal Systems Development) Manager.
- (5) SIS minimum Design Speed may be reduced to 30 mph for C2T, C3, and C4 for facilities with a transit route.

# Appendix E (SR 600 (US 17/92) Straight Line Diagrams)









# Design Speed Variation (Segment 6) From east of Shepherd Lane/Nocatee Street to west of Avenue A

## **DESIGN SPEED VARIATION**

CLIENT:

## **FDOT District 5**

PROJECT:

SR 600 (US 17/92)

PD&E Study from

Ivy Mist Lane to

Avenue A

FPID: 437200-1-22-01

Segment 6: From east of Shepherd Lane/Nocatee Street to west of Avenue A MP 0.299 - MP 4.117 Roadway ID: 92010000

**Osceola County** 

Vanasse Hangen Brustlin, Inc. 225 East Robinson Street, Suite 300 Orlando, FL 32801 Tel 407.839.4006 • Fax 407.839.4008 www.vhb.com

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ON THE DATE BELOW THE SEAL.

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VHB, INC. 225 E ROBINSON STREET, SUITE 300 ORLANDO, FL 32801 KEVIN TYLER FREEMAN, P.E. NO. 76146

VHB Project No.: 63316.11

Submitted:

December 2024

Prepared and Submitted by: Kevin Freeman, P.E.

Project Manager

1 of 20

Design Speed Variation (Segment 6) SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida FPID: 437200-1-22-01 VHB Project No.: 63316.11

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Design Speed Variation (Segment 6) SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida FPID: 437200-1-22-01 VHB Project No.: 63316.11

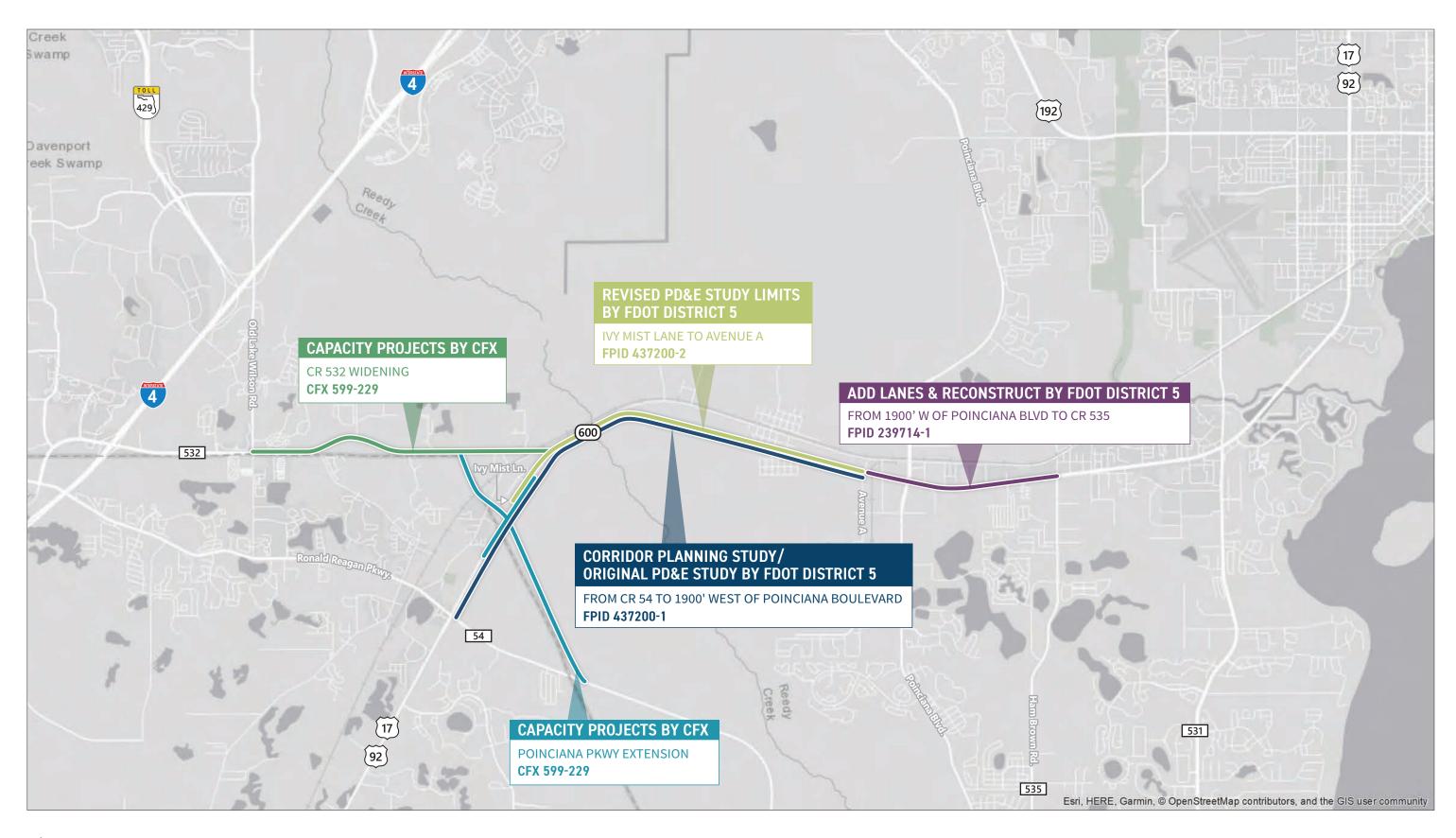
#### Introduction

The Florida Department of Transportation (FDOT) District 5 is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to widen SR 600 (US 17/92) from the existing two-lane roadway to a four-lane divided roadway from Ivy Mist Lane to Avenue A, a distance of 3.8 miles, in Osceola County. As part of the PD&E Study, a design variation is proposed to decrease the design speed below the allowable design speed for the context classification per Florida Design Manual (FDM) Table 201.5.1. If approved, the design variation would maintain consistency with the Target Speed set by the district for Segment 6, between east of Shepherd Lane/Nocatee Street to west of Avenue A. A prior Corridor Planning Study of SR 600 (US 17/92) from County Road (CR) 54 (Ronald Reagan Parkway) in Polk County to 1,900 feet west of Poinciana Boulevard at Avenue A in Osceola County was completed in 2018. This project traverses through the community of Poinciana, and the unincorporated community of Intercession City. **Figure 1** shows the SR 600 (US 17/92) PD&E Study limits (shown in light green) and previous Corridor Planning Study limits (shown in blue), along with the limits of adjacent projects mentioned below.

Two related projects overlap the western end of this PD&E Study:

- The segment of SR 600 (US 17/92) from west of Parker Road in Polk County to Ivy Mist Lane in Osceola County is included in the Central Florida Expressway Authority's (CFX) SR 538/Poinciana Parkway Extension to CR 532 project, which is under design and anticipated to be complete in late 2022 with construction beginning in mid-2023. The SR 538/Poinciana Parkway Extension project will include the widening of SR 600 (US 17/92) within these limits, as well as a proposed diverging diamond interchange with SR 600 (US 17/92) southwest of Ivy Mist Lane as shown in teal (Figure 1).
- Adjacent to the western end of the PD&E Study (shown in dark green) is a CFX study evaluating widening CR 532/Osceola Polk Line Road from two to four lanes from Old Lake Wilson Road to SR 600 (US 17/92) (Figure 1). This study includes design and is anticipated to begin construction in 2024.

One ongoing project abuts the eastern limits of this PD&E Study. FDOT District 5 is widening SR 600 (US 17/92) from two to four lanes, with limits from 1,900 feet west of Poinciana Boulevard (Avenue A) to CR 535 (Ham Brown Road) in Kissimmee (FPID: 239714-1). This project, shown in purple on **Figure 1** is currently under construction and anticipated to be completed in 2022.







#### **Purpose and Need**

The purpose of this project is to provide needed capacity through the design year 2045, enhance regional connectivity, and improve safety conditions along the study corridor. The project is needed to meet future traffic demand, provide satisfactory future traffic operations, improve corridor access management, and improve safety along the corridor.

The following sections describe the need for improvements based on transportation connectivity, future traffic demand, and existing crash data.

#### Transportation Connectivity

The SR 600 (US 17/92) study corridor is a vital east-west segment in the regional transportation network within western Osceola County and the primary thoroughfare through Intercession City. Regionally, the SR 600 (US 17/92) corridor serves as a major arterial connecting Kissimmee to the north and Polk County to the south. The study corridor will connect to the programmed SR 538/Poinciana Parkway Extension at the western end of the project, which will include an interchange connection to SR 600 (US 17/92) immediately southwest of Ivy Mist Lane. The SR 538/Poinciana Parkway Extension is planned to extend to I-4 in the vicinity of the State Road (SR) 429 interchange providing enhanced connectivity from SR 600 (US 17/92) to Osceola and Orange Counties. This project would provide a continuous four-lane section between the Poinciana Parkway Extension and Avenue A. The programmed widening of CR 532 from SR 600 (US 17/92) to Lake Wilson Road will complete a continuous four-lane connection to I-4. The corridor is designated an evacuation route by the Florida Division of Emergency Management (FEMA).

#### Future Traffic Demand

Future traffic analyses were conducted for the SR 600 (US 17/92) study corridor for three analysis years (2025, 2035, and 2045). Based on the intersection operational analysis, by 2045 most of the study intersections are anticipated to experience very high delays. Specifically, the high delays start from 2025 for the majority of unsignalized intersections and the signalized intersection at SR 600 (US 17/92) and CR 532. Capacity improvements are needed to accommodate future traffic demand and provide satisfactory traffic operations.

Based on the arterial operational analysis, the SR 600 (US 17/92) study corridor is expected to operate at target Level of Service (LOS) D or better through the design year 2045, except for the northbound/eastbound approach south of CR 532, which is expected to fail in the 2035 and 2045 AM design hour. These results are due to the lack of signalized intersections between CR 532 and Poinciana Boulevard and the existing high posted speed limit. However, the signalized intersection at CR 532 is expected to experience very high approach delays and extensive queueing along SR 600 (US 17/92), which will impact the arterial operations. Additionally, all of the future Annual Average Daily Traffic (AADT) along the study corridor will exceed the Maximum Service Volume of 18,590 for LOS D for a two-lane urbanized arterial starting in opening year 2025.

#### Safety

Crash data for a five-year period (October 1, 2019 – September 30, 2024) obtained from Signal 4 Analytics found a total of 325 crashes occurred along the study corridor. Of the 325 reported crashes, 147 involved injuries and three resulted in fatalities. The highest portion of crashes were rear-end (62.46%). The crash rates at the Ivy Mist Lane, CR 532 (Osceola Polk Line Road) intersection, Old Tampa Highway intersection, Shepherd Lane intersection, and at the Avenue A intersection were found to be above the statewide crash rate. This project intends to increase capacity and improve access management, which is anticipated to reduce congestion and conflict points. This project will also provide pedestrian and bicycle facilities to improve multimodal accommodations throughout the study corridor.

#### Report Purpose

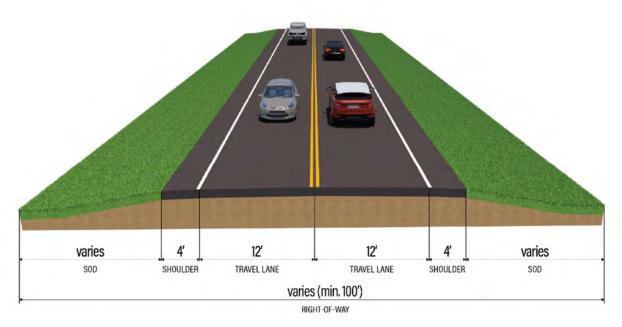
The Florida Design Manual (FDM) Section 122.2 states a formal Design Variation document is required when proposed design elements do not meet the FDOT criteria. This report serves as a formal Design Variation document for a segment of SR 600 (US 17/92) within Osceola County; Roadway ID 92010000, MP 3.462 to MP 3.983.

#### **Project Alternatives**

#### No-Build Alternative

The No-Build Alternative assumes no improvements such as additional traffic lanes or other improvements will be made within the study area, except for programmed improvements to nearby or adjacent facilities. For this project, the No-Build Alternative includes the ongoing widening of SR 600 (US 17/92) from Avenue A to CR 535 (FPID: 239714-1) to four lanes, the programmed SR 538/Poinciana Parkway Extension, and the CR 532 widening.

The No-Build Alternative serves as the baseline for comparing the Build Alternative and remains a viable option throughout the PD&E study process. Based on programmed improvements, the existing typical section assumed for the No-Build Alternative remains a two-lane undivided rural typical section. At the eastern end of the project at Avenue A, the corridor transitions to a four-lane typical section. For the majority of the study limits, the existing typical section along SR 600 (US 17/92) within the study limits is provided below in **Figure 2**. The existing bridge typical section is provided as **Figure 3**.



**Figure 2: Existing Typical Section** 

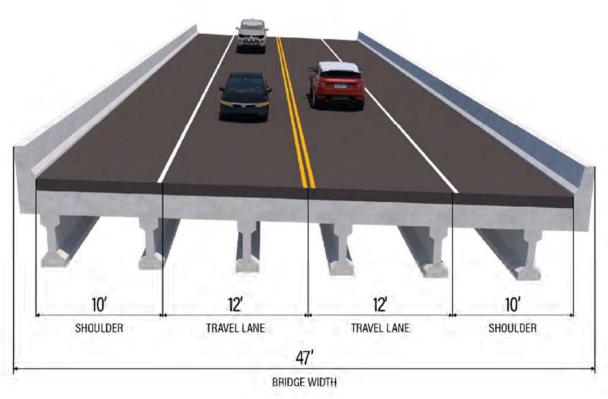


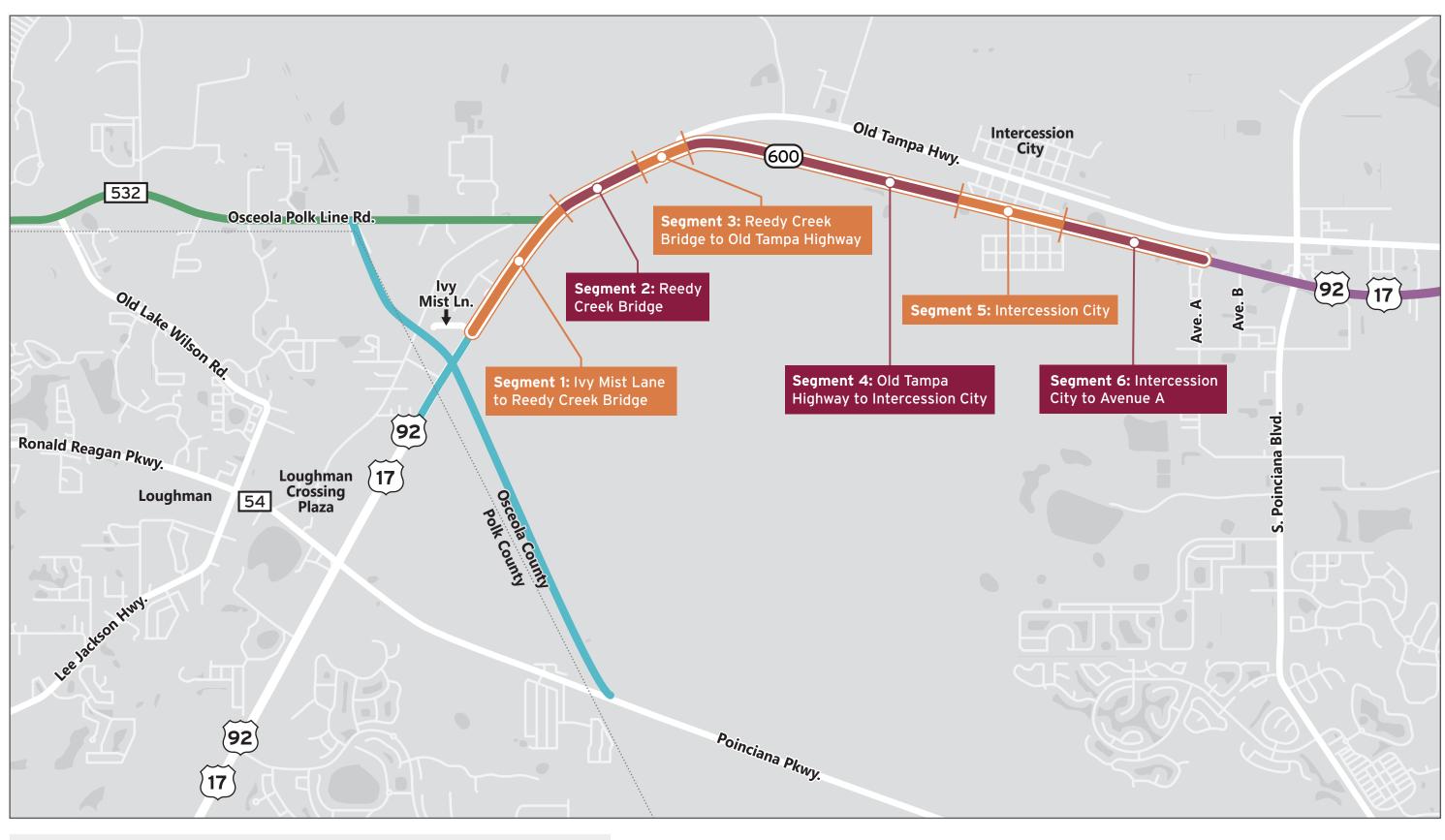
Figure 3: Existing Bridge Typical Section

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Design Speed Variation (Segment 6)

SR 600 (US 17/92) PD&E Study from Ivy Mist Lane to Avenue A in Osceola County, Florida FPID: 437200-1-22-01

VHB Project No.: 63316.11



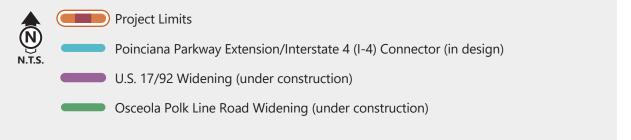
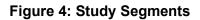




Figure 4
Study Segments
SR 600 (US 17/92) PD&E
FPID 437200-1



#### Urban Typical Section - Segments 1,4, and 6

An urban roadway typical section with swales is proposed for Segments 1, 4, and 6. The typical section (depicted in **Figure 5**) includes a 22-foot raised median, two 11-foot travel lanes in each direction, and a 12-foot shared-use path along both sides of the roadway. The shared-use paths are both separated from the roadway curb and gutter by 42-foot-wide drainage swales. The required ROW for the suburban roadway typical section varies with a minimum of 192 feet.

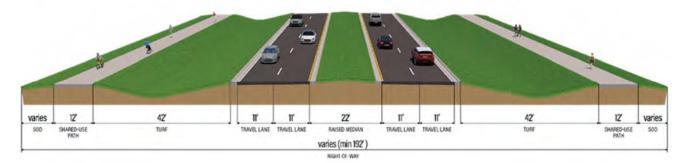


Figure 5: Suburban Typical Section (Segments 1, 4, and 6)

#### Bridge Typical Section – Segment 2

The typical section for the Reedy Creek Bridge, within Segment 2, includes two bridge structures (**Figure 6**). The existing bridge structure will serve eastbound traffic and a new bridge structure will serve the westbound traffic. The two bridge structures will be separated by a width of 70 feet. The existing eastbound bridge includes 11-foot inside and outside shoulders and two 11-foot travel lanes. The new westbound structure includes a six-foot inside shoulder, a 10-foot outside shoulder, two 11-foot travel lanes, and a 12-foot shared-use path separated from the roadway by a raised concrete barrier. The existing 244 feet ROW accommodates the proposed bridge structure. The existing eastbound bridge is located in a permanent easement on the south side of the FDOT ROW, which allows the new westbound bridge to be located fully within the existing ROW to the north.

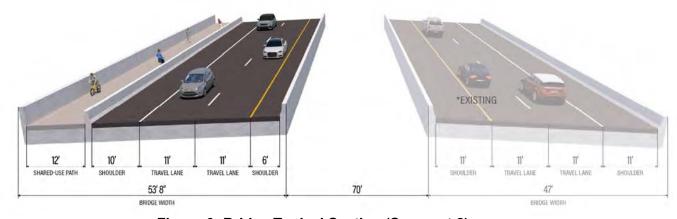


Figure 6: Bridge Typical Section (Segment 2)

#### **Urban Typical Section – Segment 3**

An urban typical section, as illustrated in **Figure 7**, is proposed for Segment 3 from the east end of the Reedy Creek Bridge to Old Tampa Highway. This typical section consists of two 11-foot travel lanes in each direction separated by a 22-foot raised median, and a 12-foot shared-use path along both sides of the roadway. The shared-use path is separated from the roadway by curb and gutter and a buffer varying in width with a minimum of five feet. The total ROW needed for this typical section varies with a minimum of 151 feet.

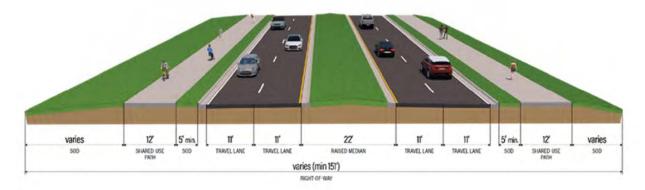


Figure 7: Urban Typical Section (Segment 3)

#### **Urban Typical Section – Segment 5**

An urban typical section is proposed for Segment 5 through Intercession City (**Figure 8**). This typical section includes a 15.5-foot raised median, two 11-foot travel lanes in each direction, and a 10-foot urban side path along both sides of the roadway. The urban side path is separated from the roadway by curb and gutter and a buffer with a width of two feet along the south side of the roadway and 2.5 feet along the north side of the roadway. The total ROW needed for this typical section varies with a minimum of 100 feet.

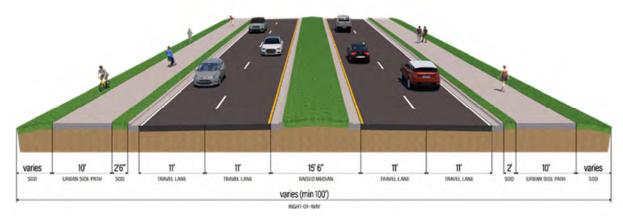


Figure 8: Urban Typical Section (Segment 5)

VHB Project No.: 63316.11

#### <u>Description of Requested Design Variation</u>

A design variation is being requested for design speed in segment 6, between east of Shepherd Lane/Nocatee Street and west of Avenue A:

Start MP	End MP	Design Speed Variation
3.462	3.983	45 mph

The segment of SR 600 (US 17/92) (Roadway ID 92010000) between east of Shepherd Lane/Nocatee Street (MP 3.462) and west of Avenue A (MP 3.983) has a recommended Target Speed of 45 mph. See Appendix A for the Target Speed Recommendation Report.

Additionally, the context classification for the segment of SR 600 (US 17/92) (Roadway ID 92010000) between east of Shepherd Lane/Nocatee Street (MP 3.462) and west of Avenue A (MP 3.983) has been designated C1 – Natural as shown in Appendix C. The segment to the west of C1 – Natural section is designated C2T with a design speed of 30 mph. The segment east of the C1 – Natural section is designated C3C, and design plans for the current construction project indicates a 55 mph design speed and a 45 mph regulatory speed limit. See Appendix C for the context classification map.

Per FDM Table 201.5.1, the allowable design speed range for C1 – Natural designated roadways is 55-70 mph. The total length of the segment is 0.521 miles.

#### **Justification for Approval**

**Target Speed Requirement:** In accordance with the Target Speed Recommendation Report, FDOT FPID 437200-1, the Target Speed for this segment of roadway, ID #92010000 from MP 3.462 to MP 4.117, is 45 mph. To meet the Target Speed, the approval of this design variation is required.

**Safety/Operational Performance:** Given the context classification and posted speeds for the segments between east of Shepherd Lane/Nocatee Street and west of Avenue A (Segment 6), the C1 segment along SR 600 (US 17/92) from east of Shepherd Lane/Nocatee Street to west of Avenue A should be considered a transition zone. This transition zone will link the C2T segment from the west to the C3C segment to the east. Utilizing a 45-mph design speed in this section will allow a better transition from the rural section proposed in the east to the urban section planned in the C2T area to the west. Based on FDM 202.4, transition zones are necessary to alert drivers to the change in context classification and notify them to adjust behavior and expectations accordingly.

**Right of Way:** Providing a lower 45-mph design speed as compared to a 55-mph design speed allows the use of smaller horizontal curve radii criteria. Additionally, the reduction in design speed allows the lane widths to be reduced from 12' to 11', and a reduction in median width from 30' to 22'. With two lanes of travel in each direction, the total typical section width was reduced by 12'. The smaller horizontal curve radii criteria and smaller typical section width minimize the footprint of proposed right-of-way required.

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**Community:** Utilizing a lower 45-mph design speed as compared to a 55-mph design speed reduces the noises caused from the roadway for nearby residents. Additionally, as mentioned above, the lower design speed allows for a reduction of the total typical section width. Both factors will improve the quality of life for nearby residents.

**Environment:** Using a lower 45-mph design speed as compared to a 55-mph design speed allows for the use of smaller horizontal curves, which can lead to choosing an alignment that minimizes the impacts to the environment, especially in the section over Reedy Creek. If a 55-mph design speed were used, an additional 0.14 acres of wetlands impacts would occur in Reedy Creek.

**Usability by all Modes of Transportation:** Using a lower 45-mph design speed as compared to a 55-mph design speed provides a more comfortable experience for pedestrians and bicyclists on the adjacent sidewalk and shared-use path.

**Cost:** Based on the LRE cost estimates, the estimated project cost per mile for the 45-mph design speed typical section is \$16,353,107.45. Meanwhile, the estimated project cost per mile for the 55-mph design speed typical section is \$17,091,717.18. Therefore, the estimated savings per mile is \$738,609.73 by using a 45-mph design speed as compared to a 55-mph design speed.

**Mitigation:** A potential mitigation strategy is to use cross-sectional elements to reduce operating speeds to design speed. These strategies include:

- **Horizontal Deflection** Three horizontal curves are proposed in Segment 6, including a 40 mph and 30 mph speed curve just east of Intercession City, all of which meet FDOT criteria.
- **Use of Curb and Gutter –** The use of curb and gutter is proposed throughout Segment 6 to narrow the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- Landscaping Landscaping is proposed where feasible to increase the enclosure feeling
  of the corridor to help naturally keep speeds low and enhance the aesthetics of the
  corridor.
- Roundabout at Avenue A Based on the Stage 2 Intersection Control Evaluation (ICE) analysis at Avenue A, a roundabout was recommended for the Preferred Alternative. This will help manage speeds into and out of Intercession City by helping to create a transition from the rural section to the east and the urban section to the west.

The travel lanes in this segment of the roadway will be the FDOT minimum of 11-feet-wide. An additional mitigation strategy would be the strategic use of landscaping elements to increase the enclosure feeling of the corridor to help naturally keep speeds low. See Appendix B: Speed Management Strategies Memo for more information regarding mitigation strategies.

Table 1: Pros and Cons of 45 mph Design Speed

	or rempir boorgii opood
Pros	Cons
<ul> <li>Provides transition from rural typical section into the urban typical section within Intersession City.</li> <li>Gradually narrows the roadway between rural and urban rather than in an abrupt change within the rural town.</li> <li>Narrower roadway footprint will encourage driver to slow down prior to rural town.</li> </ul>	Design speed does not line up with the natural land use adjacent to the roadway.

## Conclusion

The recommended Target Speed for this segment of roadway necessitates the design speed variation of 45 mph. Furthermore, based on guidance in FDM 202.4, the C1 segment along SR 600 (US 17/92) from east of Shepherd Lane/Nocatee Street to west of Avenue A should be considered a transition zone; and it is recommended that this variation be approved.

# Appendix A

(Target Speed Recommendation Report)



#### **M**EMORANDUM

Date: September 8, 2022

Project: US 17/92 Project Development & Environmental (PD&E) Study

**FPID:** 437200-2-22-01

**Subject:** Speed Management Strategies

The US 17/92 Project Development and Environment (PD&E) Study is evaluating the widening of US 17/92 from two to four lanes from Ivy Mist Lane to Avenue A in Osceola County. This memorandum summarizes the speed management strategies evaluated for the project. More detailed documentation is provided in the *Preliminary Engineering Report* for the study.

The existing posted speed along the corridor is 55 mph from Ivy Mist Lane to approximately 1,000 feet west of Suwannee Avenue. To the east of this segment, the corridor transitions to an existing speed limit of 45 mph. After review of the project corridor and existing/future land uses, FDOT provided designated context classifications for the corridor (see attached map). The corridor transitions from C3R (Suburban Residential) in the westernmost port of the corridor adjacent to existing residential areas and also in the vicinity of the proposed Poinciana Parkway Extension interchange at US 17/92. For the majority of the corridor including the eastern limits of the project, the designated context class is C3C (Suburban Commercial) based on existing land uses. Within Intercession City, the context class is C2T (Rural Town). In between these sections, the existing South Florida Water Management District (SFWMD) and Reedy Creek conservation areas are designated C1 (Natural).

After review of the context classifications, FDOT identified a target speed determination involving 45 mph for the entire study corridor for corridor consistency with exception of the area within Intercession City from 500 feet west of Suwannee Avenue to 650 feet east of Nocatee Street, this area was determined to be a target speed of 30 mph. Based on FDM Table 201.5.1, the allowable range for design speed for C3 and C2T is consistent with the target speed of 45 mph and 30 mph, respectively. For the C1 areas located in between C3R and C3C segments, FDOT recommended a target speed of 45 mph to achieve corridor consistency and lower speeds along the corridor for improved safety. As design speed is a controlling design element, a Design Variation is anticipated. This memorandum focuses on speed management strategies employed in both the 45 mph target speed area and in the transition areas approaching Intercession City to achieve the target speed of 30 mph.

Table 202.3.1 of the FDM identifies Speed Management Strategies to achieve a desired operating speed. The table uses context classification and target speed to identify the types of strategies that would be most effective. Based on Table 202.3.1, with context classification of C3R or C3C and a target speed of 45 mph, speed management practices such as, Roundabouts, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Rectangular Rapid Flashing Beacon (RRFB) and Pedestrian Hybrid Beacon (PHB) were identified for consideration. For the 30 mph (C2T) section within Intercession City, the speed management

strategies considered include the ones identified for the 45 mph section above plus On-street parking, Street Trees, Short Blocks, Islands at Crossings, Road Diet, Bulb-outs, Terminated Visas, and Chicanes.

The proposed improvements for the Preferred Alternative (included in the *Preliminary Concept Plans*) utilize appropriate strategies from the opportunities listed above where feasible based on project considerations such as multimodal needs, access management, design criteria and right-of-way considerations. The following outlines the speed management strategies used for this corridor based on the two different target speeds identified above for the corridor. For the 45 mph target speed section of US 17/92, three speed management strategies are proposed below to achieve the target speed.

#### **Speed Management Strategies for 45 mph Target Speed Section**

- **Horizontal Deflection** There are 8 different deflections/curves in the alignment in the 3.2 mile 45 mph target speed section. This number does not include the speed curves/horizontal deflection directly adjacent to entering Intercession City. These deflections and curves were consistent with design criteria for a 45 mph target speed.
- Lane Narrowing The lane width will be reduced from 12-foot to a proposed 11-foot to be consistent with the FDM criteria.
- **Speed Feedback Signs** Speed feedback signs are proposed on the bridges over Reedy Creek. The signs provide immediate feedback to drivers when the speed limit is exceeded, which may help to reduce unintentional speeding. The signs consist of a speed-measuring device, along with a message sign that displays the speed to drivers.
- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- Roundabout at Avenue A Based on the Stage 2 Intersection Control Evaluation (ICE) analysis at
  Avenue A, a roundabout was recommended for the Preferred Alternative. This will help manage
  speeds into and out of Intercession City by helping to create a transition from the rural section to
  the east and the urban section to the west.

Based on stakeholder and public input, the existing 45 mph speed limit within the Rural Town (C2T) of Intercession City is a safety concern and the community vision is to reduce the speed limit through the town. Additional speed management strategies were identified below for this area to help reduce speeds to the 30 mph target speed. These strategies will help provide a transition zone prior to entering Intercession City.

#### **Speed Management Strategies for 30 mph Target Speed Section**

• Horizontal Deflection – Four proposed horizontal curves are provided in both directions just west and east of Intercession City. The proposed horizontal alignment includes two 40 mph curves and two 30 mph curves all of which meet FDOT criteria. These will be appropriately signed with posted speed limits and advance warning signs upstream of these curves to introduce the reduced speed limits at curves. This alleviates the existing "race-track" feel that the community expressed opposition to during the public meeting in October 2021 and provides a deceleration area prior to entering Intercession City. Posted Speed Pavement markings are proposed to provide

additional driver awareness of the reduced speed limit through the horizontal deflection areas. These will be placed in the Perception – Reaction area to prepare drivers for the Deceleration Area coming into Intercession City.

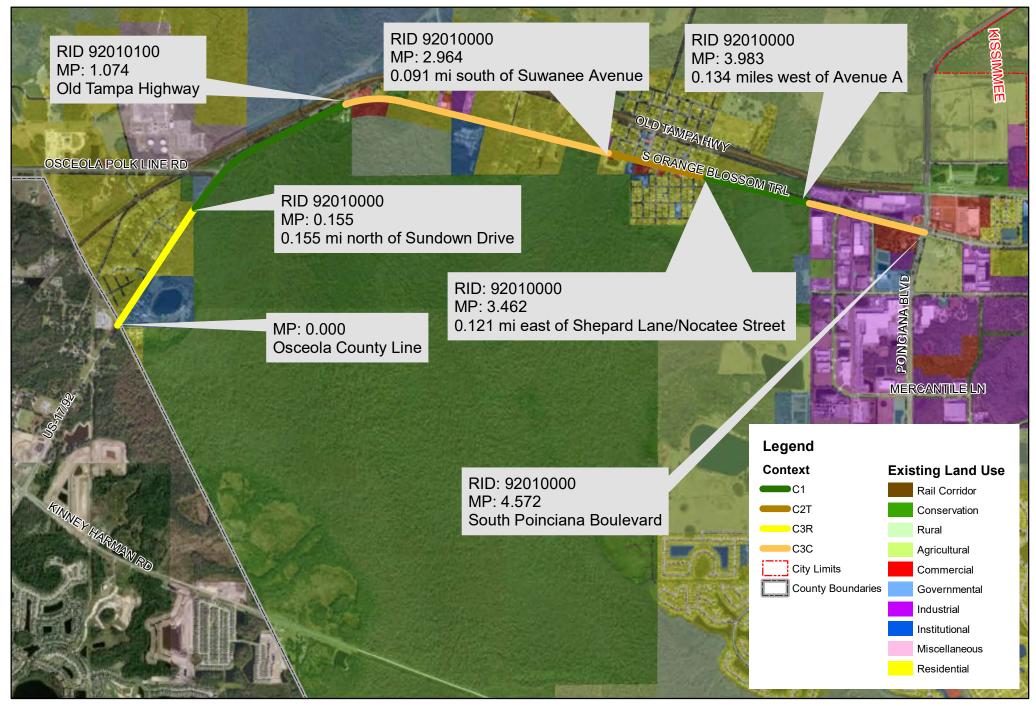
- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- Shared-Use Path A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path removes the need for a bike lane, as bicyclists can travel on the shared-use path separated from the roadway. By not including a bike lane, the roadway footprint narrows, which has been shown to reduce the speed of drivers.
- **Landscaping** Provide landscaping where feasible to increase the enclosure feeling of the corridor to help naturally keep speeds low and enhance the aesthetics of the corridor.
- **PHB's** Two locations are identified through Intercession City to provide a crosswalk to help improve mobility within the community. One is located just east of Tallahassee Boulevard and the other is located just east of Charity Street. These PHB's will establish shorter block lengths and create engagement with the drivers which will help manage speed.
- **Speed Feedback Signs** The feedback signs will be placed just west of Suwannee Ave in the eastbound direction and just east of Nocatee Street in the westbound direction. This will be used to engage the driver of their current speed and make them aware of the reduced speed limit within Intercession City.

The strategies identified were discussed during the Alternatives Public Meeting, Stakeholder Meeting #3, and FDOT Phase III Meeting. Based on input received, there has been substantial support for these strategies throughout the life of the project.

-- END MEMO --

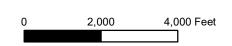
						TARGET	SPEED CO	UNTERME	ASURE OPT	IONS												
Context			C1	C2			С2Т				,	3			,	24			C5		С	·c
Classification			CI	C2			CZI															.0
Target Speed			55-70	55-70	45	40	35	30	25	50-55	45	40	35	45	40	35	30	35	30	25	30	25
(mph)																						
	Strategies	FDM Reference																				
	Curb Extensions (Bulb-Outs)	202.3.12, 222.2.6																				
	,	202.3.12, 222.2.6 202.3.4, Table 210.2.1										1			1							
	Lane Narrowing	202.3.4, Table 210.2.1 202.1.1. 126																				
	Lane Repurposing (Road Diet)																					
	Street Trees	202.3.6, 212.11, 215.2.4																				
	Terminated Vista	202.3.14																				
	Horizontal Deflection	202.3.5, 210.8.1, 217																			<u> </u>	
	Chicanes	202.3.3																				
	Islands at Crossings	202.3.11, 210.3.2																				
	Islands in curved sections	202.3.11, 210																				
	Mini-Roundabouts	202.3.1, 213																				
	Roundabout	202.3.1, 213																				
	Vertical Deflection	202.3.8																				
Reduction	Speed Tables	202.3.8																				
Strategies	Raised Crosswalks	202.3.8																				
Strategies	Raised Intersections	202.3.8																				
	Textured Surface																					
	Pedestrian Hybrid Beacons (PHBs)	202.3.13, TEM 5.2																				
	On-street Parking	202.3.2, 210.3.2																			/	
	Rectangular Rapid Flashing Beacons (RRFBs)	202.3.13, TEM 5.2																				
	Short Blocks	202.3.7, 222.2.3.1																				
	Speed Feedback Signs	202.3.9																				
	Bicycle Lanes	223																				
	Shared Use Paths	223.2.3, 224																				
	Separated Bicycle Lanes	223.2.4.1																				
	Shared Lane Markings (Sharrows)	223.3																				
	Marked Shoulders	223.2.2.1																				
	Sidewalks (See FDM 222.2.1)	222.2.1																				
	,																					
	Median Widths - Raised or Restrictive (RRR Projects)	210.3.1	30'-40'	30'-40'	19.5'	15.5'	15.5'	15.5'	15.5'	30'-40'	19.5'	15.5'	15.5'	19.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'	15.5'
	Minimal Travel Lane Width	Table 210.2.1	12'	12'	11'	11'	11'	11'	11'	12'	11'	11'	10'	11'	11'	10'	10'	10'	10'	10'	10'	10'
Additional	Two-Way Left Turn Lane	Table 210.2.1				12'	12'	12'	12'			12'	11'		12'	11'	11'	11'	11'	11'	11'	11'
Information	Two-Way Left Turn Lane (RRR Projects)	Table 210.2.1				11'	11'	11'	11'			11'	10'		11'	10'	10'	10'	10'	10'	10'	10'
	Minimal Travel Lane Width	Table 210.2.1	12'	12'	11'	11'	11'	11'	11'	12'	11'	11'	10'	11'	11'	10'	10'	10'	10'	10'	10'	10'
	Sidewalks - Standard Widths	Table 222.2.1	5'	5'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	6'	10'	10'	10'	12'	12'

Target Speed Countermeasure Options table developed for educational purposes only, utilizing strategies to achieve desired operating speed identified in Table 202.3.1 of the FDOT Design manual.



US 17/92/SR 600/S Orange Blossom Trail, Osceola County

Current Context Classification 07/14/20





# TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1



## **General Roadway Information**

FIN#: 437200-1	FDOT Project Manager: Lorena Cucek
State Road Number (Local Name): US 17-92	Roadway ID: 92010000, 92010100
Project Limits: Polk County Line to	92010000: 0.000-0.536, 1.915-4.117
Avenue A	92010100: 0.000-1.354
County: Osceola	City/Town: Intercession City
PROPOSED TARGET SPEED: 92010000:	Project Type (Description): PD&E
0.000-0.536: 45 mph	
1.915-2.964: 45 mph	
2.964-3.462: 30 mph	
3.462-4.117: 45 mph	
92010100:	
0.000-1.354: 45 mph	
EXISTING TYPICAL SECTION	
92010000:	
2 lanes undivided – 12' lanes (0.000-0.536)	
2 lanes undivided – 13' lanes (1.915-2.843)	
2 lanes divided – 12' lanes (2.843-3.376)	
2 lanes undivided – 13' lanes (3.376-3.931)	
2 lanes divided – 12' lanes (3.931-4.117)	
92010100:	
2 lanes undivided – 12' lanes (0.000-0.121)	
2 lanes divided – 12' lanes (0.121-0.447)	
2 lanes undivided – 12' lanes (0.447-0.888)	
2 lanes divided – 12' lanes (0.888-1.169)	
2 lanes undivided – 12' lanes (1.169-1.354)	

## **Step 1: Identify Need**

SAFETY CONCERNS:	3 Pedestrian Crashes (1 Fatality), 1 Bicycle Crash (0 Fatalities)
LOCAL INPUT:	
OTHER:	

**Step 2: Determine FDM Consistency** 

# TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1

CONTEXT CLASSIFICATION:	92010000:
	C3R (0.000-0.536), C3C (1.915-2.964), C2T
	(2.964-3.462), C1 (3.462-3.983), C3C (3.983-
	4.117)
	92010100:
	C3R (0.000-0.365), C1 (0.365-1.074), C3C
	(1.074-1.354)
STRATEGIC INTERMODAL SYSTEM (SIS):	No
POSTED SPEED (CURRENT):	92010000:
	55 mph (0.000-0.536, 1.915-2.881), 45 mph
	(2.881-4.117)
	92010100:
	55 mph (0.000-1.354)
DESIGN SPEED:	

## **OPTIONAL: Speed Study Information**

Allowable range of design speeds:	C3R/C3C: 35-55 mph
(per FDM table 201.5.1)	C2T: 25-45 mph
	C1: 55-70 mph

#### **Step 3: Identify Important Roadway Features**

THROUGH LANES & LANE WIDTHS:	See Typical Sections
TRANSIT:	No
BICYCLISTS / PEDESTRIANS	92010000: Very small section (2.214-2.258 and 3.098-3.148 L side,
FACILITY CONDITIONS:	and 3.142-3.181 R side) with 5'-6' sidewalks; No bike lanes
	92010100: None
ACCESS MANAGEMENT:	92010000: Class 3
	92010100: None
CURRENT ANNUAL AVERAGE	92010000: 15,800 (0.000-0.536), 29,500 (1.915-4.117)
DAILY TRAFFIC (AADT):	92010100: 15,800 (0.000-0.365), 25,000 (0.365-1.354)
% TRUCK USAGE:	92010000: 10.1% (0.000-0.536), 4.9% (1.915-4.117)
	92010100: 10.1% (0.000-0.365), 9.3% (0.365-1.354)

## **Step 4: Potential Countermeasures**

POTENTIAL COUNTERMEASURES to help Achieve	C3: Lane Narrowing, PHBs, Shared-Use Paths,		
the Target Speed (Refer to Spreadsheet):	Speed Feedback Signs		
{It is understood that the project team will make every effort to implement the proposed countermeasures. However, due to limits in budget or time (R/W, etc.) not all may be implemented in this project.}	C2T: Island at crossings, street trees, curb extensions, horizontal deflection, roundabout C1: Shared-Use Path, Sidewalks		
Other Improvements within or outside of the Right-of-Way (R/W):			

## **Step 5: Determine Target Speed**

	Reduce Target Speed in Eastern C3's (0-2.964) to
CONCLUSIONS AND RECOMMENDATION	45 mph. Reducing Target Speed in C2T due to
	crashes, limited lighting, limited crosswalks and
	sidewalks. On NE end of project (3.462-4.117),

# TARGET SPEED RECOMMENDATION REPORT FDOT FIN 437200-1

			match cross section with 2	·			
			includes sidewalk and shared-use path; this cross				
			section can also be used on the western C3				
			section as well				
	Posted Speed	Design	Target Speed	Ultimate Target			
		Speed		Speed (If Applicable)			
	92010000:						
	55 mph (0.000-0.536						
	1.915-2.881)						
Current:	45 mph (2.881-						
Current:	4.117)						
	92010100:						
	55 mph (0.000-						
	1.354)						
			92010000:				
			0.000-0.536: 45 mph				
			1.915-2.964: 45 mph				
Recommended			2.964-3.462: 30 mph				
			3.462-4.117: 45 mph				
			92010100:				
			0.000-1.354: 45 mph				

#### **TARGET SPEED MEETINGS:**

Target Speed (TS) Request Received:	
TS Determination Date:	3/9/22
Initial District TS Concurrence:	3/15/22
TS Local Agency Concurrence:	
Final TS District Approval:	
TS Report Submitted to PM:	

# Appendix B

(Speed Management Strategies Memo)



#### **M**EMORANDUM

Date: September 8, 2022

Project: US 17/92 Project Development & Environmental (PD&E) Study

**FPID:** 437200-2-22-01

**Subject:** Speed Management Strategies

The US 17/92 Project Development and Environment (PD&E) Study is evaluating the widening of US 17/92 from two to four lanes from Ivy Mist Lane to Avenue A in Osceola County. This memorandum summarizes the speed management strategies evaluated for the project. More detailed documentation is provided in the *Preliminary Engineering Report* for the study.

The existing posted speed along the corridor is 55 mph from Ivy Mist Lane to approximately 1,000 feet west of Suwannee Avenue. To the east of this segment, the corridor transitions to an existing speed limit of 45 mph. After review of the project corridor and existing/future land uses, FDOT provided designated context classifications for the corridor (see attached map). The corridor transitions from C3R (Suburban Residential) in the westernmost port of the corridor adjacent to existing residential areas and also in the vicinity of the proposed Poinciana Parkway Extension interchange at US 17/92. For the majority of the corridor including the eastern limits of the project, the designated context class is C3C (Suburban Commercial) based on existing land uses. Within Intercession City, the context class is C2T (Rural Town). In between these sections, the existing South Florida Water Management District (SFWMD) and Reedy Creek conservation areas are designated C1 (Natural).

After review of the context classifications, FDOT identified a target speed determination involving 45 mph for the entire study corridor for corridor consistency with exception of the area within Intercession City from 500 feet west of Suwannee Avenue to 650 feet east of Nocatee Street, this area was determined to be a target speed of 30 mph. Based on FDM Table 201.5.1, the allowable range for design speed for C3 and C2T is consistent with the target speed of 45 mph and 30 mph, respectively. For the C1 areas located in between C3R and C3C segments, FDOT recommended a target speed of 45 mph to achieve corridor consistency and lower speeds along the corridor for improved safety. As design speed is a controlling design element, a Design Variation is anticipated. This memorandum focuses on speed management strategies employed in both the 45 mph target speed area and in the transition areas approaching Intercession City to achieve the target speed of 30 mph.

Table 202.3.1 of the FDM identifies Speed Management Strategies to achieve a desired operating speed. The table uses context classification and target speed to identify the types of strategies that would be most effective. Based on Table 202.3.1, with context classification of C3R or C3C and a target speed of 45 mph, speed management practices such as, Roundabouts, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Rectangular Rapid Flashing Beacon (RRFB) and Pedestrian Hybrid Beacon (PHB) were identified for consideration. For the 30 mph (C2T) section within Intercession City, the speed management

strategies considered include the ones identified for the 45 mph section above plus On-street parking, Street Trees, Short Blocks, Islands at Crossings, Road Diet, Bulb-outs, Terminated Visas, and Chicanes.

The proposed improvements for the Preferred Alternative (included in the *Preliminary Concept Plans*) utilize appropriate strategies from the opportunities listed above where feasible based on project considerations such as multimodal needs, access management, design criteria and right-of-way considerations. The following outlines the speed management strategies used for this corridor based on the two different target speeds identified above for the corridor. For the 45 mph target speed section of US 17/92, three speed management strategies are proposed below to achieve the target speed.

#### **Speed Management Strategies for 45 mph Target Speed Section**

- Horizontal Deflection There are 8 different deflections/curves in the alignment in the 3.2 mile 45 mph target speed section. This number does not include the speed curves/horizontal deflection directly adjacent to entering Intercession City. These deflections and curves were consistent with design criteria for a 45 mph target speed.
- Lane Narrowing The lane width will be reduced from 12-foot to a proposed 11-foot to be consistent with the FDM criteria.
- **Speed Feedback Signs** Speed feedback signs are proposed on the bridges over Reedy Creek. The signs provide immediate feedback to drivers when the speed limit is exceeded, which may help to reduce unintentional speeding. The signs consist of a speed-measuring device, along with a message sign that displays the speed to drivers.
- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- **Shared-Use Path** A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path is a recommended speed management strategy for a 45 mph target speed.
- Roundabout at Avenue A Based on the Stage 2 Intersection Control Evaluation (ICE) analysis at Avenue A, a roundabout was recommended for the Preferred Alternative. This will help manage speeds into and out of Intercession City by helping to create a transition from the rural section to the east and the urban section to the west.

Based on stakeholder and public input, the existing 45 mph speed limit within the Rural Town (C2T) of Intercession City is a safety concern and the community vision is to reduce the speed limit through the town. Additional speed management strategies were identified below for this area to help reduce speeds to the 30 mph target speed. These strategies will help provide a transition zone prior to entering Intercession City.

#### **Speed Management Strategies for 30 mph Target Speed Section**

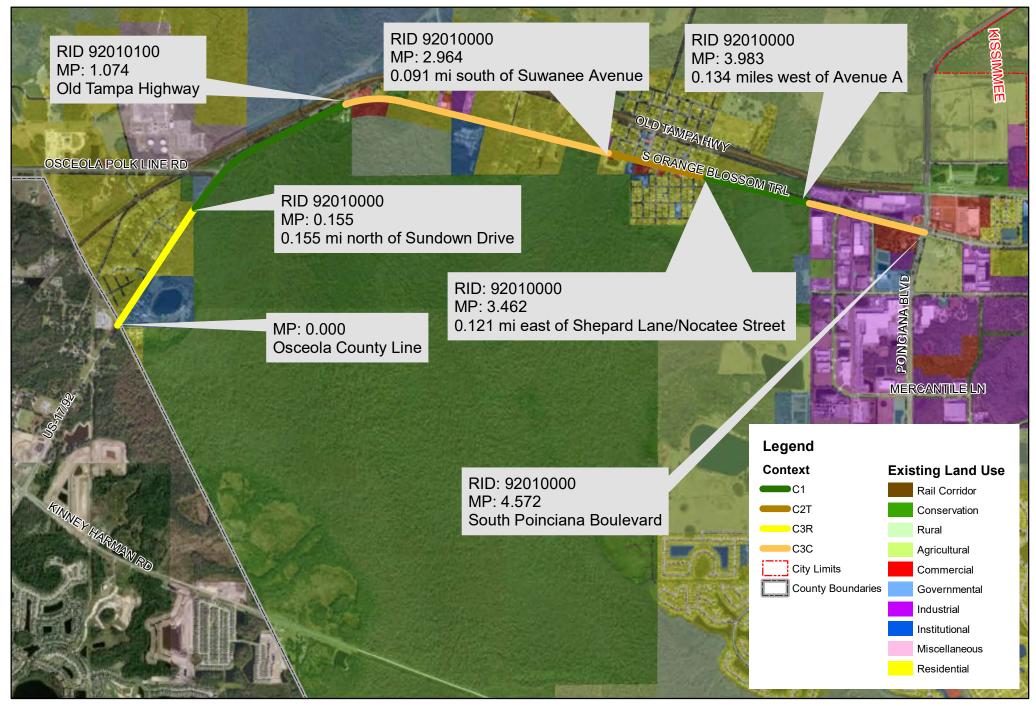
• Horizontal Deflection – Four proposed horizontal curves are provided in both directions just west and east of Intercession City. The proposed horizontal alignment includes two 40 mph curves and two 30 mph curves all of which meet FDOT criteria. These will be appropriately signed with posted speed limits and advance warning signs upstream of these curves to introduce the reduced speed limits at curves. This alleviates the existing "race-track" feel that the community expressed opposition to during the public meeting in October 2021 and provides a deceleration area prior to entering Intercession City. Posted Speed Pavement markings are proposed to provide additional driver awareness of the reduced speed limit through the horizontal deflection areas.

These will be placed in the Perception – Reaction area to prepare drivers for the Deceleration Area coming into Intercession City.

- Use of Curb and Gutter The use of curb and gutter is proposed. Currently, US 17/92 has flush shoulders on the outside of the travel lanes. The use of curbs as compared to flush shoulder narrows the footprint of the roadway, and is a strategy that has been shown to limit the speed of drivers.
- **Shared-Use Path** A shared-use path is proposed along the north side of US 17/92. The use of a shared-use path is a recommended speed management strategy for a 45 mph target speed.
- Landscaping Provide landscaping where feasible to increase the enclosure feeling of the corridor to help naturally keep speeds low and enhance the aesthetics of the corridor.
- **PHB's** Two locations are identified through Intercession City to provide a crosswalk to help improve mobility within the community. One is located just east of Tallahassee Boulevard and the other is located just east of Charity Street. These PHB's will establish shorter block lengths and create engagement with the drivers which will help manage speed.
- Speed Feedback Signs The feedback signs will be placed just west of Suwannee Ave in the eastbound direction and just east of Nocatee Street in the westbound direction. This will be used to engage the driver of their current speed and make them aware of the reduced speed limit within Intercession City.

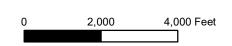
The strategies identified were discussed during the Alternatives Public Meeting, Stakeholder Meeting #3, and FDOT Phase III Meeting. Based on input received, there has been substantial support for these strategies throughout the life of the project.

-- END MEMO --



US 17/92/SR 600/S Orange Blossom Trail, Osceola County

Current Context Classification 07/14/20





# Appendix C (Current Context Classification Map)



US 17/92/SR 600/S Orange Blossom Trail, Osceola County

Current Context Classification 07/14/20

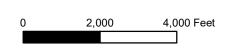






Table 201.5.1 Design Speed

Limited Access Facilities (Interstates, Freeways, and Expressways)					
	Area Allowable Range (mph) SIS Minimum (mph)				
	Rural and Urban	70	70		
	Urbanized	50-70	60		
Arterials and Collectors					
Co	ontext Classification	Allowable Range (mph)	SIS Minimum (mph)		
C1	Natural	55-70	65		
C2	Rural	55-70	65		
C2T	Rural Town	25-45	40		
С3	Suburban	35-55	50		
C4	Urban General	25-45	45		
C5	Urban Center	25-35	-		
C6	Urban Core	25-30	-		

#### Notes:

- (1) SIS Minimum Design Speed may be reduced to 35 mph for C2T Context Classification when appropriate design elements are included to support the 35-mph speed, such as on-street parking.
- (2) SIS Minimum Design Speed may be reduced to 45 mph for curbed roadways within C3 Context Classification.
- (3) For SIS facilities on the State Highway System, a selected Design Speed less than the SIS Minimum Design Speed requires a Design Variation as outlined in **SIS Procedure (Topic No. 525-030-260)**.
- (4) For SIS facilities not on the State Highway System, a selected Design Speed less than the SIS Minimum Design Speed may be approved by the District Design Engineer following a review by the District Planning (Intermodal Systems Development) Manager.
- (5) SIS minimum Design Speed may be reduced to 30 mph for C2T, C3, and C4 for facilities with a transit route.

Figure 202.3.4 Concept Sketch – Terminated Vista Example



Table 202.3.1 Strategies to Achieve Desired Operating Speed

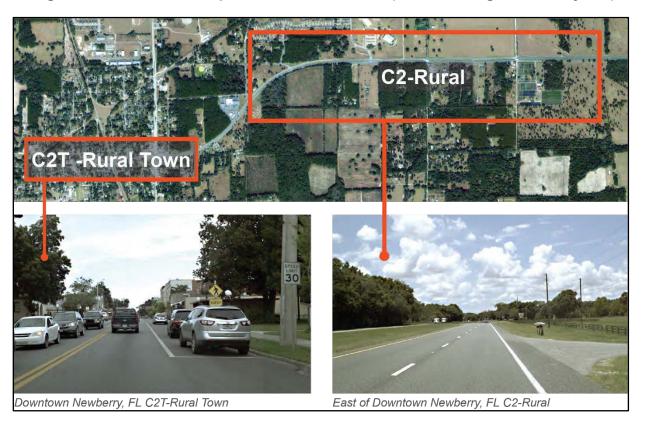
Context Classification	Target Speed (mph)	Strategies
C1	55-70	N/A: Speed Management Strategies are not used on high-speed roadways. See <b>FDM 202.4</b> for information on transitions from high-speed to low-speed facilities.
C2	55-70	N/A: Speed Management Strategies are not used on high-speed roadways. See <b>FDM 202.4</b> for information on transitions from high-speed to low-speed facilities.
	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFBs and PHBs
С2Т	35	Techniques for 40-45 mph, plus On-street Parking, Street Trees, Short Blocks, Islands at Crossings, Road Diet, Bulb-outs, Terminated Vista
	30	Techniques for 35-45 mph, plus Chicanes, Islands in curved sections
	≤ 25	Techniques for 30-45 mph, plus Vertical Deflection
	50-55	Project-specific; see <b>FDM 202.4</b> .
C3R, C3C	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB
	35	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, Islands in crossings, Road Diet, RRFB and PHB, Terminated Vista
	40-45	Roundabout, Lane Narrowing, Horizontal Deflection, Speed Feedback Signs, RRFB and PHB
C4	35	Techniques for 40-45mph plus On-Street Parking, Street Trees, Short Blocks, Islands at Crossings, Bulb-outs, Terminated Vista, Road Diet
	30	Techniques for 35-45 mph plus Chicanes, Islands in Curve Sections
	35	Roundabout, On-street Parking, Street Trees, Short Blocks, Speed Feedback Signs, Islands in Crossings, Road Diet, Bulb-outs, RRFB and HAWK, Terminated Vista
C5	30	Techniques for 35 mph plus Chicanes, Island in Curve Sections
	25	Techniques for 30-35 mph plus Vertical Deflection
C6	30	Roundabout, On-Street Parking, Horizontal Deflection, Street Trees, Islands in Curve Sections, Road Diet, Bulb-outs, Terminated Vista
	25	Techniques for 30 mph plus vertical deflection

#### 202.4 Transition Zones

Roadways may traverse more than one context classification. As the context changes, the design criteria for the roadway will also change. The transition from C1 (Natural) or C2 (Rural) context classification to a higher classification such as C2T (Rural Town) provides a potentially abrupt change in the recommended design speed and design users.

For example, the land use surrounding SR 26 through Newberry, Florida transitions from C2 (Rural) to C2T (Rural Town) over the course of a few blocks (see *Figure 202.4.1*). Such conditions require a transition zone to alert drivers to the context change and to notify them to adjust their behavior and expectations accordingly. Changes in Posted Speed as part of transition zones must comply with the requirement of the *Speed Zoning for Highways, Roads, and Streets in Florida*.

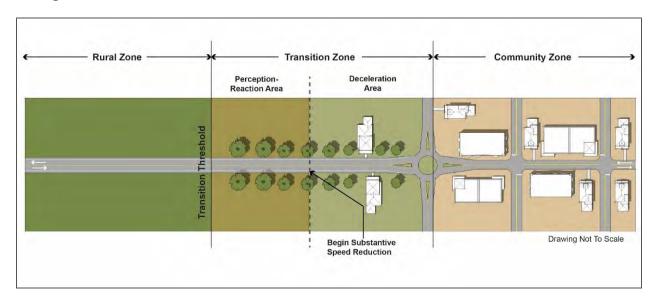
Figure 202.4.1 Example of Transition Zone (SR 26 through Newberry, FL)



Transition zones have two distinct sections, as illustrated in *Figure 202.4.2*:

- (1) Perception-Reaction Area and
- (2) Deceleration Area

Figure 202.4.2 Transition Zone from C1/C2 to C2T Context Classification



In the perception-reaction area, drivers are made aware of the need to reduce speed. This section will include visual cues to alert the driver of an upcoming deceleration. These cues may include:

- Signage, including warning signs such as "Reduced Speed Ahead" signs, or gateways signs where appropriate.
- Pavement markings: lane narrowing can be highlighted with the use of a wider outside stripe. The Posted Speed may be placed on the pavement.
- Curb changes: from flush paved shoulders to curbed roadway.
- Architectural elements such as type, location, and spacing of lighting or landscaping.

In the deceleration area, drivers are expected to slow down to an operating speed that matches the context of the community being approached. In the deceleration area, there is a noticeable change in roadway characteristics. The length of the deceleration area is a function of design speed, sight distance, and design criteria of the new context classification. Transition from a high-speed to low-speed cross section can be accomplished through a variety of features, including but not limited to:

- Horizontal deflection (e.g., splitter islands, chicanes, roundabouts)
- Lane narrowing
- Lane repurposing
- Introduction of curb and gutter
- Street enclosure through vertical landscaping
- Signage or gateway treatments, including speed feedback signs
- Posted Speed pavement markings

A combination of strategies is more effective for reducing speed. *Figures 202.4.3* and *202.4.4* provide an example of horizontal deflection and lane narrowing at the entrance of a rural town.

Figure 202.4.3 Example of a Transition Zone from 60 to 30 mph (SR 636, entrance to town of Wauchula, Florida)

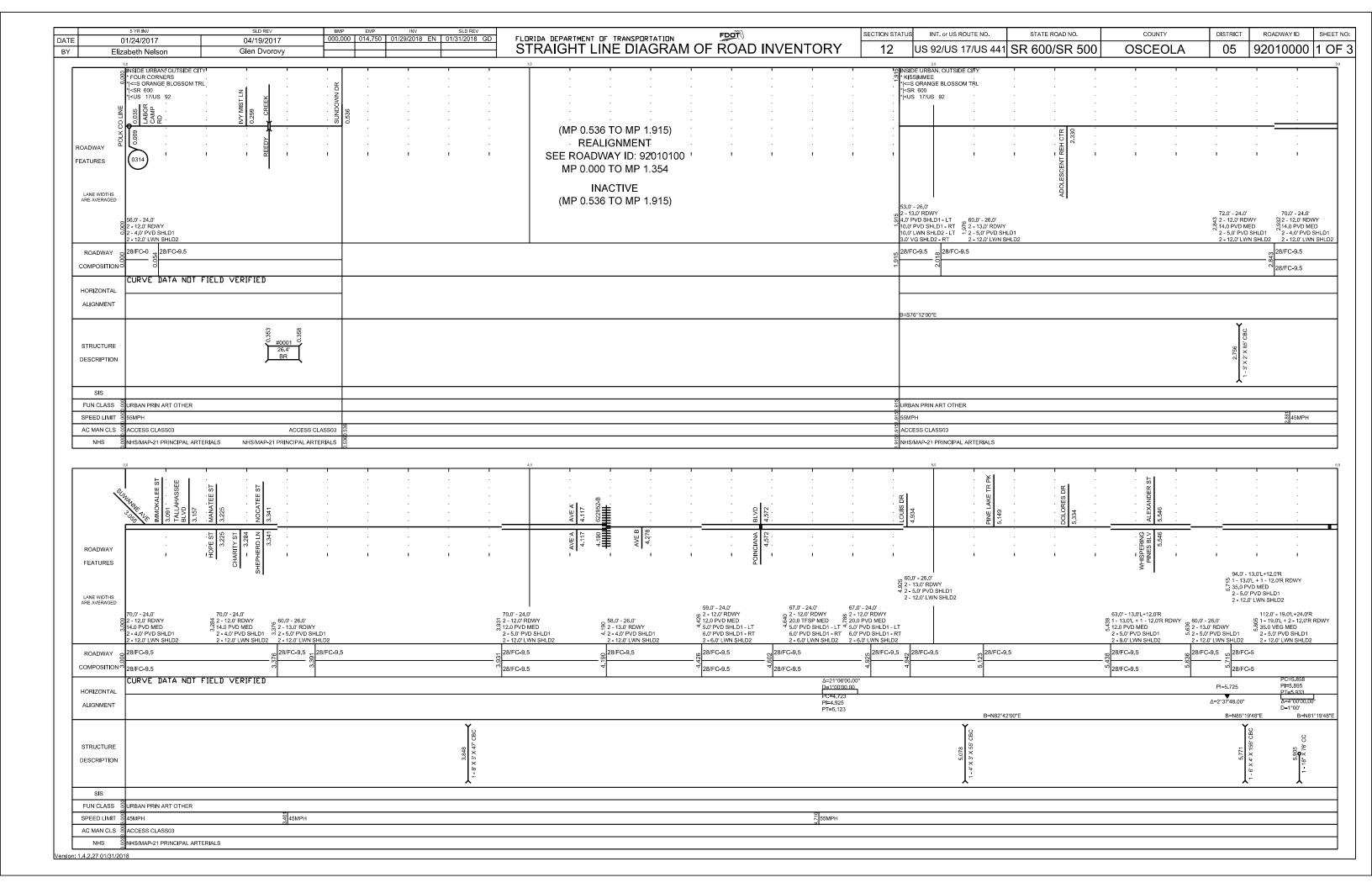


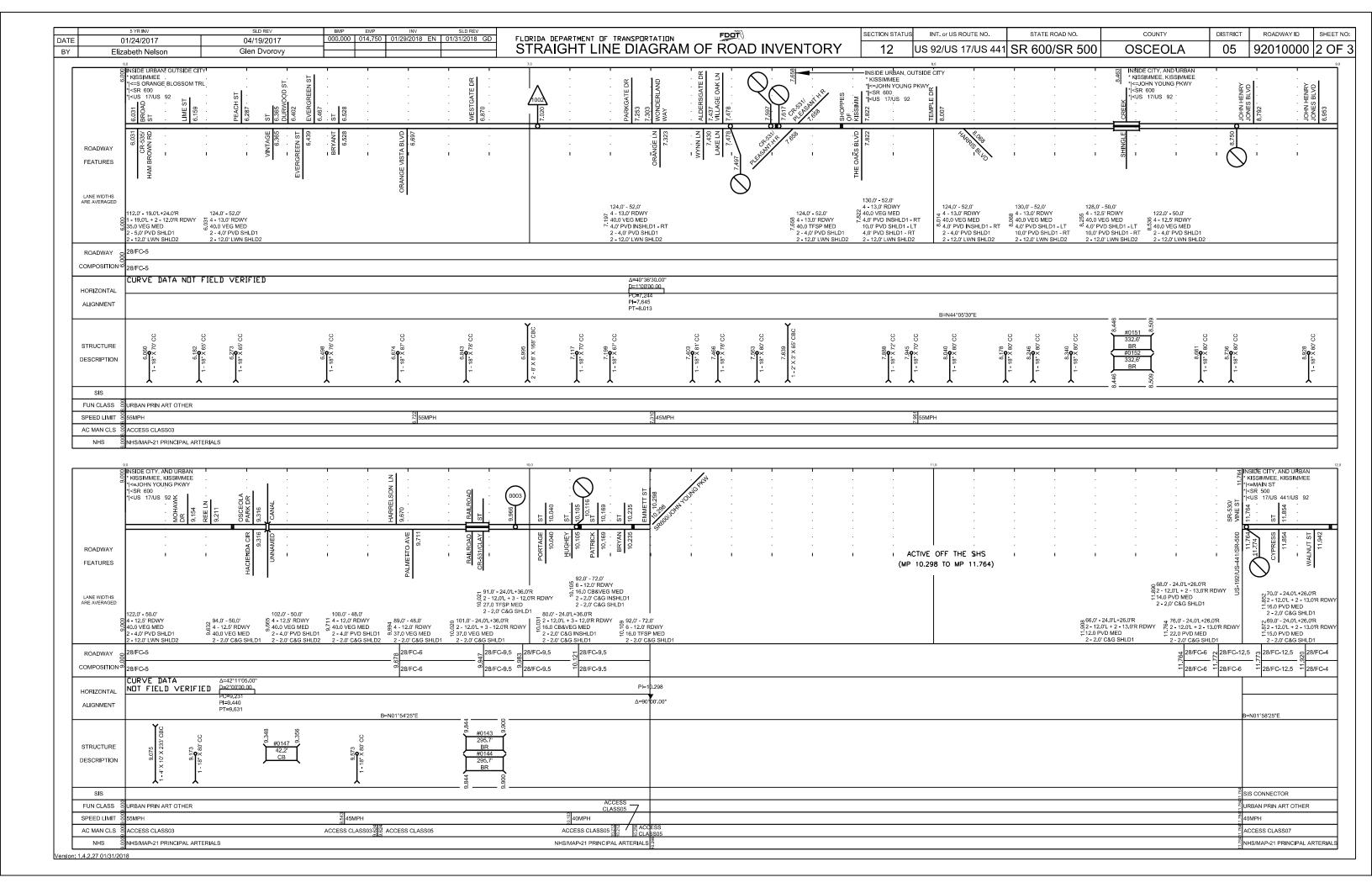
Figure 202.4.4 Section Change Near Transition from 40 to 30 mph (Entrance to Wauchula, FL, showing lane narrowing)

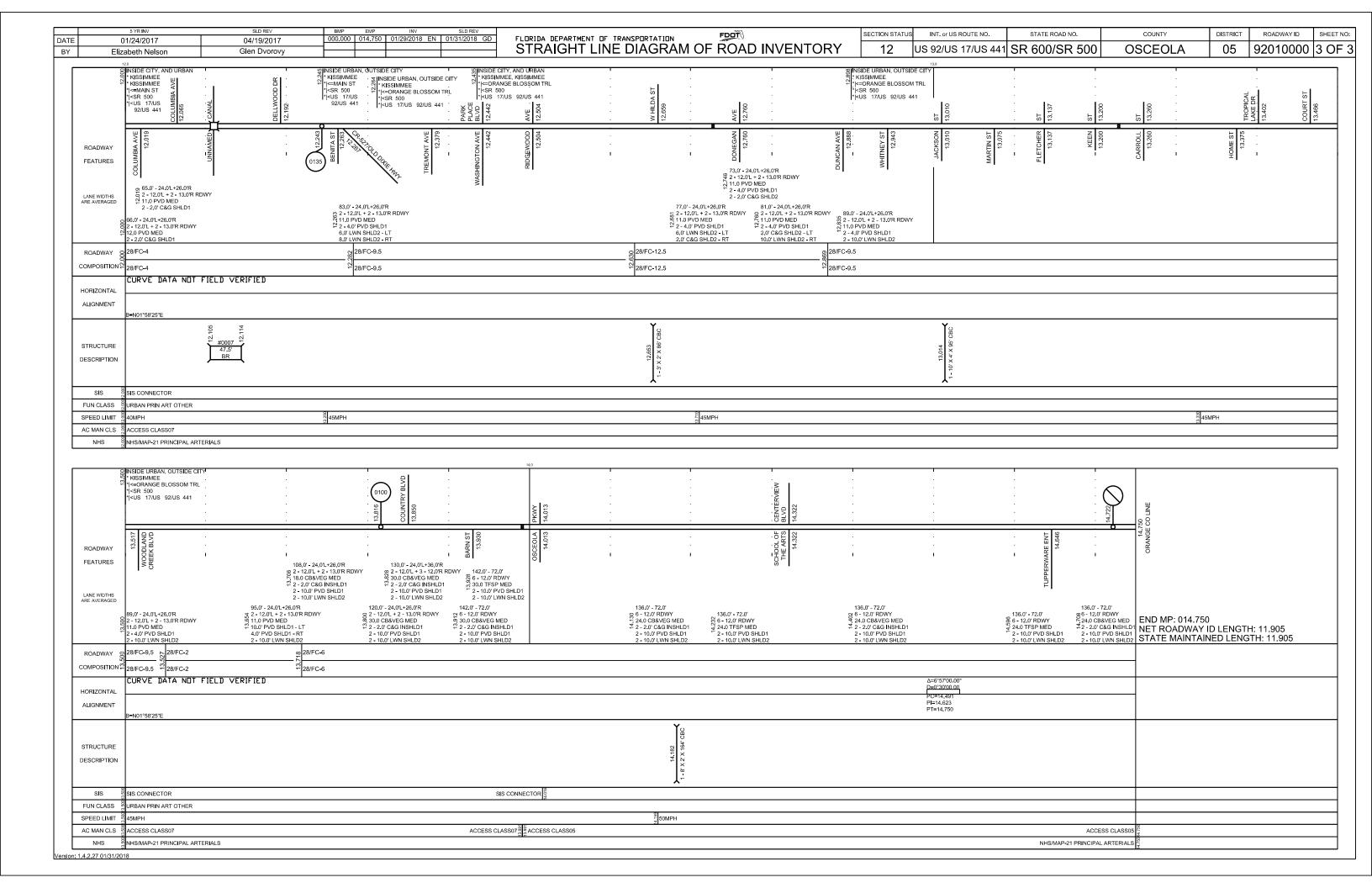


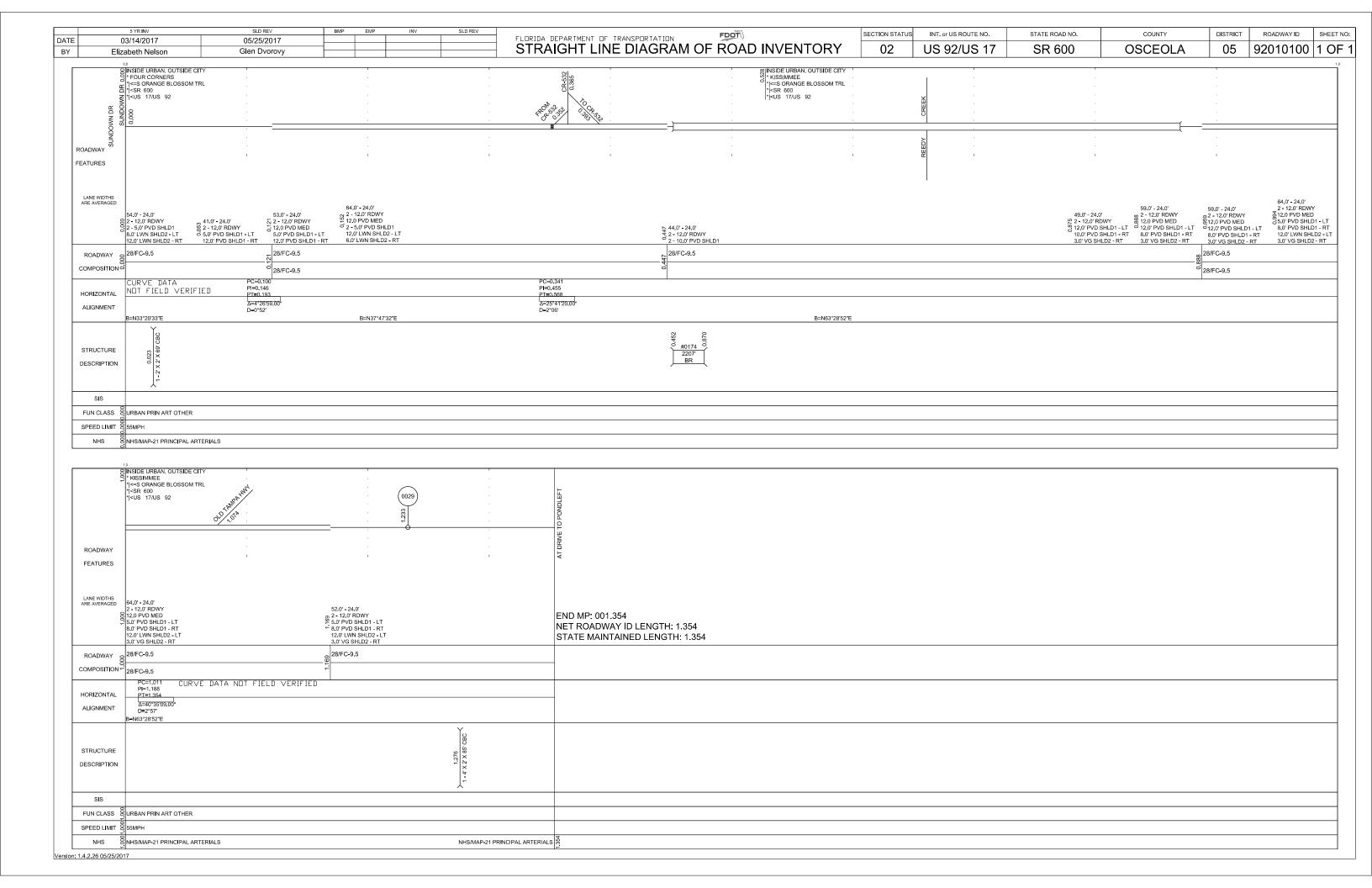
Photo by FDOT District 1

# Appendix E (SR 600 (US 17/92) Straight Line Diagrams)









# **APPENDIX I**

# **Long Range Estimates Report**

Date: 12/16/2024 11:35:17 AM

# **FDOT Long Range Estimating System - Production**

# R4: Project Details Composite Report By Component

Project: 437200-2-52-01 Letting Date: 01/2099

**Description:** US 17/92 FROM IVY MIST LANE TO AVENUE A

District: 05 County: 92 OSCEOLA

**Project Manager:** 

Version 3 Project Grand Total \$86,401,688.19

**Description:** US 17/92 FROM IVY MIST LANE TO AVENUE A (Preferred Alternative)

#### **EARTHWORK COMPONENT**

Pay Items			
Pay Item	Description	Total Unit Quantity	Weighted Avg. Total Amount Unit Price
110-1-1	CLEARING & GRUBBING	87.94 AC	\$67,326.67 \$5,920,707.38
120-1	REGULAR EXCAVATION	65,732.78 CY	\$36.14 \$2,375,582.66
120-6	EMBANKMENT	142,906.28 CY	\$41.44 \$5,922,036.25
	Earthwork Component Total		\$14,218,326.29

#### **ROADWAY COMPONENT**

Pay Items			
Pay Item	Description	Total Unit Quantity	Weighted Avg. Total Amount Unit Price
160-4	TYPE B STABILIZATION	168,516.02 SY	\$21.42 \$3,609,613.16
285-701	OPTIONAL BASE,BASE GROUP 01	41,159.47 SY	\$30.39 \$1,250,836.30
285-709	OPTIONAL BASE,BASE GROUP 09	104,393.06 SY	\$58.69 \$6,126,828.69
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,057.98 TN	\$183.34 \$377,310.07
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	16,580.11 TN	\$188.58 \$3,126,677.14
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	3,012.80 TN	\$245.45 \$739,491.76
337-7-82	ASPH CONC FC,TRAFFIC C,FC-9.5,PG 76-22	105.00 TN	\$235.44 \$24,721.20
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	2,042.04 TN	\$206.55 \$421,783.36
400-0-11	CONC CLASS NS, GRAVITY WALL	15.00 CY	\$1,293.90 \$19,408.50
515-2-111	PED/BICYCLE RAILING,NS, 42" TYPE 1	2,324.00 LF	\$130.88 \$304,165.12
520-1-10	CONCRETE CURB & GUTTER, TYPE F	38,727.00 LF	\$52.25 \$2,023,485.75
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	281.00 LF	\$92.08 \$25,874.48
521-72-40	SHLDR CONC BARRIER,38" OR 44" HEIGHT	2,324.00 LF	\$365.80 \$850,119.20
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	10,150.00 SY	\$79.93 \$811,289.50
536-1-0	GUARDRAIL- ROADWAY, GEN/LS TL-2	700.00 LF	\$26.79 \$18,753.00
706-1-1	RAISED PAVMT MARK, TYPE B W/O FINAL SURF	1,703.00 EA	\$3.58 \$6,096.74
706-1-3	RAISED PAVMT MARK, TYPE B	15.00 EA	\$4.65 \$69.75

710-11-101	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	32.27 GM	\$1,426.28	\$46,026.05
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	14.41 GM	\$581.59	\$8,380.71
710-11-141	PAINTED PAVT MARK,STD,WH,DOT GUIDE, 6"	0.02 GM	\$747.50	\$14.95
710-11-170	PAINTED PAVT MARK,STD,WHITE, ARROWS	6.00 EA	\$40.59	\$243.54
710-11-201	PAINTED PAVT MARK,STD,YELLOW,SOLID,6"	0.07 GM	\$1,428.14	\$99.97
710-11-231	PAINTED PAVT MARK,STD,YELLOW,SKIP,6"	0.16 GM	\$616.06	\$98.57
711-11-123	THERMOPLASTIC, STD, WHITE, SOLID, 12"	216.00 LF	\$3.89	\$840.24
711-11-125	THERMOPLASTIC, STD, WHITE, SOLID, 24"	48.00 LF	\$6.93	\$332.64
711-15-101	THERMOPLASTIC, STD-OP, WHITE, SOLID, 6"	0.86 GM	\$6,484.03	\$5,576.27
711-15-131	THERMOPLASTIC, STD-OP, WHITE, SKIP, 6"	0.86 GM	\$2,050.71	\$1,763.61
711-17-1	THERMOPLASTIC, REMOVE	6,794.00 SF	\$3.71	\$25,205.74
	Roadway Component Total		\$	19,825,106.01

#### SHOULDER COMPONENT

Pay Items				
Pay Item	Description	Total Unit Quantity	Weighted Avg. Unit Price	Total Amount
104-10-3	SEDIMENT BARRIER	62,714.06 LF	\$3.21	\$201,312.15
104-11	FLOATING TURBIDITY BARRIER	1,201.27 LF	\$15.95	\$19,160.27
104-12	STAKED TURBIDITY BARRIER- NYL REINF PVC	1,201.27 LF	\$8.96	\$10,763.38
104-15	SOIL TRACKING PREVENTION DEVICE	13.00 EA	\$3,918.73	\$50,943.49
104-18	INLET PROTECTION SYSTEM	87.00 EA	\$169.83	\$14,775.21
107-1	LITTER REMOVAL	93.78 AC	\$57.10	\$5,354.84
107-2	MOWING	93.78 AC	\$88.31	\$8,281.71
285-704	OPTIONAL BASE,BASE GROUP 04	505.94 SY	\$38.48	\$19,468.57
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	44.43 TN	\$188.58	\$8,378.61
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	39.16 TN	\$206.55	\$8,088.50
570-1-1	PERFORMANCE TURF	652.55 SY	\$4.10	\$2,675.45
	Shoulder Component Total			\$349,202.18

#### **MEDIAN COMPONENT**

Pay Items			
Pay Item	Description	Total Unit Quantity	Weighted Avg. Total Amount Unit Price
350-30-13	CONC PAVEMENT FOR ROUNDABOUT APRON, 12"	575.00 SY	\$270.12 \$155,319.00
520-1-7	CONCRETE CURB & GUTTER, TYPE E	44,741.66 LF	\$52.95 \$2,369,070.89
520-2-4	CONCRETE CURB, TYPE D	320.00 LF	\$48.50 \$15,520.00
520-2-8	CONCRETE CURB, TYPE RA	410.00 LF	\$44.72 \$18,335.20
570-1-1	PERFORMANCE TURF	40,721.57 SY	\$4.10 \$166,958.45
570-1-2	PERFORMANCE TURF, SOD	900.00 SY	\$5.93 \$5,337.00

#### **Median Component Total**

\$2,730,540.54

#### **DRAINAGE COMPONENT**

Pay Items				
Pay Item	Description	Total Unit Quantity	Weighted Avg. Unit Price	Total Amount
400-4-1	CONC CLASS IV, CULVERTS	61.00 CY	\$2,168.60	\$132,284.60
415-1-1	REINF STEEL- ROADWAY	6,975.93 LB	\$1.83	\$12,765.95
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	4,160.00 LF	\$221.25	\$920,400.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	136.00 LF	\$322.14	\$43,811.04
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	144.00 EA	\$3,648.95	\$525,448.80
570-1-1	PERFORMANCE TURF	87,598.00 SY	\$4.10	\$359,151.80
	Drainage Component Total			\$1,993,862.19

#### INTERSECTIONS COMPONENT

Pay Items			
Pay Item	Description	Total Unit Quantity	Weighted Avg. Total Amount Unit Price
110-1-1	CLEARING & GRUBBING	12.24 AC	\$67,326.67 \$824,078.43
120-1	REGULAR EXCAVATION	3,015.83 CY	\$36.14 \$108,992.10
120-6	EMBANKMENT	28,180.76 CY	\$41.44 \$1,167,810.71
160-4	TYPE B STABILIZATION	37,635.57 SY	\$21.42 \$806,153.87
285-704	OPTIONAL BASE,BASE GROUP 04	2,146.68 SY	\$38.48 \$82,604.26
285-709	OPTIONAL BASE,BASE GROUP 09	35,488.89 SY	\$58.69 \$2,082,842.90
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,973.74 TN	\$188.58 \$1,126,527.90
337-7-25	ASPH CONC FC,INC BIT,FC-5,PG76-22	977.66 TN	\$245.45 \$239,966.62
337-7-83	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1,088.62 TN	\$206.55 \$224,854.46
520-1-7	CONCRETE CURB & GUTTER, TYPE E	811.36 LF	\$52.95 \$42,961.52
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,184.00 LF	\$52.25 \$114,114.00
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	2,440.00 LF	\$92.08 \$224,675.20
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	3,360.02 SY	\$79.93 \$268,566.40
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	695.54 SY	\$104.66 \$72,795.22
570-1-1	PERFORMANCE TURF	2,359.68 SY	\$4.10 \$9,674.72
	Intersections Component Total		\$7,396,618.31

#### **SIGNING COMPONENT**

Pay Items				
Pay Item	Description	Total Unit Quantity	Weighted Avg. Unit Price	Total Amount
700-1-111	SINGLE COL GRND SIGN AS, F&I GM, <12 SF	119.00 EA	\$542.10	\$64,509.90
700-1-112	SINGLE COL GRND SIGN AS, F&I GM, 12-20	19.00 EA	\$1,906.68	\$36,226.92
700-2-114	MULTI- COLUMN SIGN, F&I GM, 30.1-50 SF	12.00 EA	\$7,631.71	\$91,580.52

700-2-115	MULTI- COLUMN SIGN, F&I GM, 50.1-100 SF	16.00 EA	\$10,325.62	\$165,209.92
700-2-116	MULTI- COLUMN SIGN, F&I GM, 100.1- 200 SF	5.00 EA	\$18,398.07	\$91,990.35
700-3-201	SIGN PANEL, F&I OM, UP TO 12 SF	2.00 EA	\$991.78	\$1,983.56
700-5-22	INTERNAL ILLUM SIGN, F&I OM, 12-18 SF	6.00 EA	\$4,892.37	\$29,354.22
700-141-111	EHSA, AC, GROUND MT, BEACON, <12SF	4.00 EA	\$11,167.80	\$44,671.20
	Signing Component Total			\$525,526.59

#### LIGHTING COMPONENT

Pay Items			
Pay Item	Description	Total Unit Quantity	Weighted Avg. Total Amount Unit Price
630-2-11	CONDUIT, F& I, OPEN TRENCH	23,996.01 LF	\$22.88 \$549,028.72
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	4,762.84 LF	\$38.61 \$183,893.26
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24"	163.00 EA	\$1,544.48 \$251,750.24
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	87,639.99 LF	\$4.47 \$391,750.77
715-7-12	LOAD CENTER, F&I, PRIMARY VOLTAGE	1.00 EA	\$21,200.28 \$21,200.28
715-61-342	LIGHT POLE CMPLT,STD,F&I, 40'MH,12'ARM L	163.00 EA	\$10,468.11 \$1,706,301.93
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	163.00 EA	\$894.93 \$145,873.59
	Lighting Component Total		\$3,249,798.79

#### SIGNALIZATIONS COMPONENT

Pay Items				
Pay Item	Description	Total Unit Quantity	Weighted Avg. Unit Price	Total Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,500.00 LF	\$22.88	\$34,320.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	500.00 LF	\$38.61	\$19,305.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	6.00 PI	\$11,289.70	\$67,738.20
633-1-122	FIBER OPTIC CABLE, F&I, UG,13-48	10,000.00 LF	\$4.27	\$42,700.00
633-1-123	3-1-123 FIBER OPTIC CABLE, F&I, UG,49-96		\$4.95	\$9.90
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24"	32.00 EA	\$1,544.48	\$49,423.36
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	2.00 AS	\$5,263.12	\$10,526.24
639-2-1	ELECTRICAL SERVICE WIRE, F&I	8,120.00 LF	\$10.36	\$84,123.20
639-3-11	ELEC SERV DISCON, F&I, POLE MNT	5.00 EA	\$2,011.05	\$10,055.25
641-2-12	PREST CNC POLE,F&I,TYP P-II SRV POLE	8.00 EA	\$2,458.40	\$19,667.20
641-2-13	PREST CNC POLE,F&I,TYP P-III	2.00 EA	\$10,003.82	\$20,007.64
646-1-11	ALUMINUM SIGNALS POLE, PEDESTAL	8.00 EA	\$2,717.12	\$21,736.96
649-21-10	STEEL MAST ARM ASSEMBLY, F&I, 60'	6.00 EA	\$84,628.51	\$507,771.06
650-1-14	VEH TRAF SIGNAL,F&I ALUMINUM, 3 S 1 W	21.00 AS	\$1,761.14	\$36,983.94
653-1-11	PEDESTRIAN SIGNAL, F&I LED COUNT, 1 WAY	12.00 AS	\$1,043.52	\$12,522.24
654-3-10	MID: PEDESTRIAN HYBRID BEACON, F&I, COMP	8.00 AS	\$2,278.82	\$18,230.56

660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	24.00 EA	\$605.72	\$14,537.28
660-2-102	LOOP ASSEMBLY, F&I, TYPE B	16.00 AS	\$1,347.79	\$21,564.64
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	24.00 AS	\$1,795.17	\$43,084.08
663-1-122	SIGNAL PRIO & PREEMP, F&I, GPS, DETE	2.00 EA	\$8,848.82	\$17,697.64
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	12.00 EA	\$395.67	\$4,748.04
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	4.00 AS	\$49,472.19	\$197,888.76
670-5-112	TRAF CNTL ASSEM, F&I, NEMA, 2 PREEMPT	2.00 AS	\$49,011.14	\$98,022.28
685-1-13	UPS, F&I, LINE INTERACTIVE W CAB	4.00 EA	\$12,418.99	\$49,675.96
685-2-1	REMOTE POWER MANAGEMENT UNIT- RPMU, F&I	4.00 EA	\$1,224.26	\$4,897.04
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	8.00 EA	\$298.25	\$2,386.00
	Signalizations Component Total		\$	\$1,409,622.47

## INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Pay Items				
Pay Item	Description	Total Unit Quantity	Weighted Avg. Unit Price	Total Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	20,900.00 LF	\$22.88	\$478,192.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	8,600.00 LF	\$38.61	\$332,046.00
630-2-15	CONDUIT, F& I, BRIDGE MOUNT	2,389.00 LF	\$48.68	\$116,296.52
633-1-121	FIBER OPTIC CABLE, F&I, UG,2-12	6,900.00 LF	\$4.61	\$31,809.00
633-1-124	FIBER OPTIC CABLE, F&I, UG,97-144	27,050.00 LF	\$5.64	\$152,562.00
633-2-31	FIBER OPTIC CONNECTION, INSTALL, SPLICE	300.00 EA	\$56.59	\$16,977.00
633-3-11	FIBER OPTIC CONN HDWR, SPLICE ENCLOSURE	5.00 EA	\$1,319.80	\$6,599.00
633-3-15	FIBER OPTIC CONN HDWR, PRETERM PATCH PAN	4.00 EA	\$2,324.81	\$9,299.24
635-2-11	PULL & SPLICE BOX, F&I, 13" X 24"	60.00 EA	\$1,544.48	\$92,668.80
635-2-12	PULL & SPLICE BOX, F&I, 24" X 36"	23.00 EA	\$2,983.84	\$68,628.32
635-2-13	PULL & SPLICE BOX, F&I, 30" X 60" OR 36"	4.00 EA	\$5,867.29	\$23,469.16
635-3-12	JUNCTION BOX, FURNISH & INSTALL, MOUNTED	1.00 EA	\$966.43	\$966.43
639-1-121	ELECTRICAL POWER SRV,F&I, UG,FUR BY POWE	3.00 AS	\$4,891.66	\$14,674.98
639-2-1	ELECTRICAL SERVICE WIRE, F&I	7,100.00 LF	\$10.36	\$73,556.00
639-3-11	ELEC SERV DISCON, F&I, POLE MNT	3.00 EA	\$2,011.05	\$6,033.15
660-4-11	VEHICLE DETECTION SYSTEM- VIDEO, CABINET	2.00 EA	\$18,768.52	\$37,537.04
660-4-12	VEHICLE DETECTION SYSTEM- VIDEO, ABOVE G	7.00 EA	\$7,708.47	\$53,959.29
676-2-111	ITS CABINET- F&I, POLE, 336	4.00 EA	\$9,204.98	\$36,819.92
682-1-113	ITS CCTV CAMERA, F&I, DOME ENCL- PRESS	2.00 EA	\$8,341.94	\$16,683.88
684-1-1	MANAGED FIELD ETHERNET SWITCH, F&I	4.00 EA	\$5,023.81	\$20,095.24
1	CURRUX VISSION - MIDBLOCK CROSSING - PEDESTRIAN MONITORING	2.00 EA	\$40,000.00	\$80,000.00

#### Intelligent Traffic System (ITS) Component Total

\$1,668,872.97

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Landscaping Lump Sum Cost Total\$40,000.00Landscaping Component Total\$40,000.00

#### **BRIDGES COMPONENT**

Bridge Type: Misc/Rehab

Pay Items

Pay ItemDescriptionTotal Unit QuantityWeighted Avg. Total Amount Unit Price110-3REMOVAL OF EXISTING STRUCTURES/BRIDGES12,448.44 SF\$71.57\$890,934.85

Bridge No. 3

Bridge Type: Low Level

Pay Items

Pay Item **Total Unit** Weighted Avg. Total Amount Description **Unit Price** Quantity 400-2-10 CONC CLASS II, APPROACH SLABS 119.27 CY \$950.84 \$113,406.69 415-1-9 **REINF STEEL- APPROACH SLABS** \$32,143.27 20,872.25 LB \$1.54

Bridge No. 1 Type=LLB Length=2324 FT Width=53.67 FT

Bridge Basic Cost based on Factored Cost \$135.00 SF \$16,838,425.80

Bridge Final Cost Per SF \$136.17

Bridges Component Total \$17,874,910.60

Date: 12/16/2024 11:35:17 AM

## **FDOT Long Range Estimating System - Production**

## R4: Project Details Composite Report By Component

Project: 437200-2-52-01 Letting Date: 01/2099

**Description:** US 17/92 FROM IVY MIST LANE TO AVENUE A

District: 05 County: 92 OSCEOLA

**Project Manager:** 

Version 3 Project Grand Total \$86,401,688.19

**Description:** US 17/92 FROM IVY MIST LANE TO AVENUE A (Preferred Alternative)

 Project Sequences Subtotal
 \$71,282,386.94

 102-1 MAINTENANCE OF TRAFFIC 10.00
 \$7,128,238.69

 101-1 MOBILIZATION
 10.00
 \$7,841,062.56

 Project Sequences Total
 \$86,251,688.19

 Project Unknowns
 0.00%
 \$0.00

 Design/Build
 0.00%
 \$0.00

**Non-Bid Components:** 

Pay item DescriptionQuantity UnitUnit PriceExtended Amount999-25INITIAL CONTINGENCY AMOUNT (DO NOT BID)1.00 LS \$150,000.00\$150,000.00Project Non-Bid Subtotal\$150,000.00

Version 3 Project Grand Total \$86,401,688.19