

Enhanced Plans - Making Connections

Ryan Florence, P.E. & Ashraf Elmaghraby, P.E.



INVITATION TO INNOVATION



Bold and Innovative Ideas:

- ◆ **Enhanced Plans**
- ◆ SMART Board Meetings
- ◆ AutoCad
- ◆ Digital Delivery
- ◆ Perpetual Plans Update
- ◆ KMZit
- ◆ Streamlined Plan Reviews

The Florida Department of Transportation's desire for innovation will utilize newly developed technology or employ "outside the box" thinking to generate new and better value for every transportation dollar invested.

<http://www.dot.state.fl.us/officeofdesign/innovation/>

What is behind a set of plans?

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS
SIGNALIZATION PLANS

A DETAILED INDEX APPEARS ON THE
KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
1A	NOTES TO REVIEWERS
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
4	TYPICAL SECTION
5 THRU 6	TYPICAL SECTION DETAILS
SQ-1 THRU SQ-8	SUMMARY OF QUANTITIES
7	GENERAL NOTES
8 THRU 22	PLAN
23 THRU 24	HALF SECTIONS
25	STORMWATER POLLUTION PREVENTION PLAN
26	TEMPORARY TRAFFIC CONTROL PLAN

GOVERNING STANDARDS AND SPECIFICATIONS

Florida Department of Transportation, 2014 Design Standards and revised Index Drawings as appended herein, and 2014 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

For Design Standards click on the "Design Standards" link at the following web site:
<http://www.dot.state.fl.us/rddesign/>

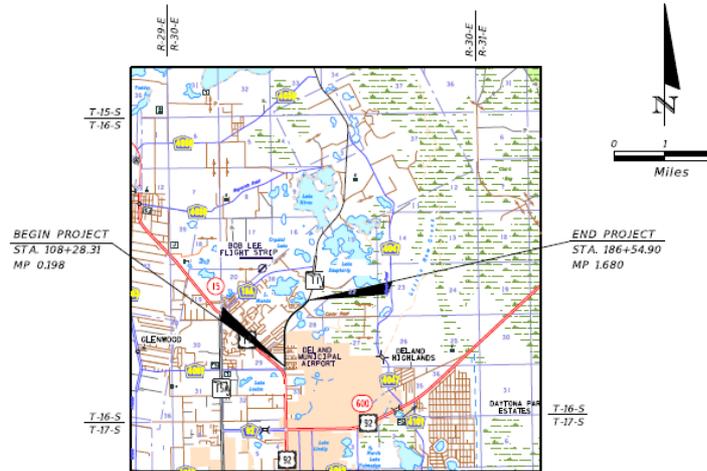
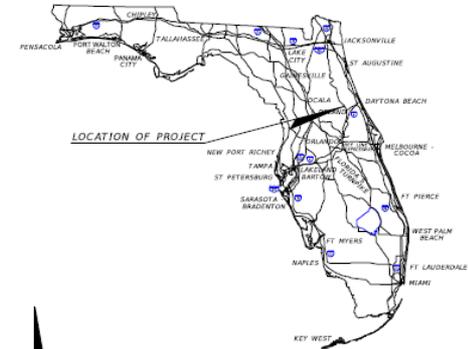
For the Standard Specifications for Road and Bridge Construction click on the "Specifications" link at the following web site:
<http://www.dot.state.fl.us/specificationoffice/>

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430680-1-52-01
(FEDERAL FUNDS)
VOLUSIA COUNTY (79090)
STATE ROAD NO. 11

CONSTRUCTION CONTRACT NO. TSXXX



ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:
RYAN B. FLORENCE, P.E.
AECOM Technical Services, Inc.
4010 BOY SCOUT BLVD, SUITE 300
TAMPA, FLORIDA 33607

PLANS PREPARED BY:
AECOM TECHNICAL SERVICES, INC.
4010 BOY SCOUT BLVD, STE 300
TAMPA, FLORIDA 33607
TEL: (813) 630-2500 * FAX: (813) 621-2300
CERTIFICATE OF AUTHORIZATION NO. 8115
VENDOR NO. 95-2661922
CONTRACT NO. C-8517

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.

NOTE: THIS PROJECT TO BE LET TO CONTRACT
WITH FINANCIAL PROJECT ID 430679-1-52-01

NOTE: THIS PROJECT IS A LUMP SUM PROJECT.

FINAL PLANS (PHASE III)
March 25, 2014

PROJECT LENGTH IS BASED ON Q OF CONSTRUCTION

LENGTH OF PROJECT

	LINEAR FEET	MILES
ROADWAY	7,826.59	1.482
BRIDGES		
NET LENGTH OF PROJECT	7,826.59	1.482
EXCEPTIONS		
GROSS LENGTH OF PROJECT	7,826.59	1.482

FDOT PROJECT MANAGER: GENE VARANO

KEY SHEET REVISIONS

DATE	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: RYAN B. FLORENCE, P.E.

P.E. NO.: 68475

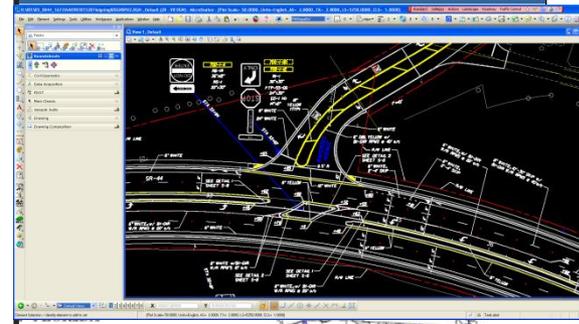
FISCAL YEAR	SHEET NO.
15	1



ELECTRONIC REVIEW COMMENTS

Project Name: 430680-1-52-01
 Project Number: 430680-1-52-01
 Revision: 1.00
 Date: 1/11/11
 Author: J. B. FLORENCE
 Checked: J. B. FLORENCE
 Approved: J. B. FLORENCE

NO.	REVISION	DATE	BY	DESCRIPTION
1	Initial	1/11/11	JBF	Initial
2	Revised	1/11/11	JBF	Revised
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50	Revised	1/11/11	JBF	Revised



Florida Department of Transportation

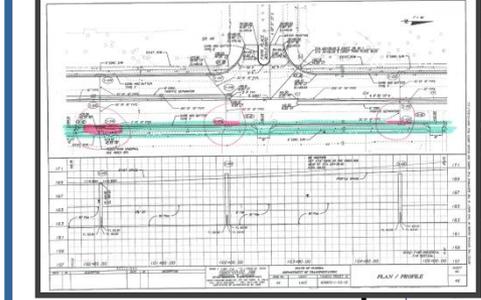
Project No. 430680-1-52-01

Sheet No. 10

Scale: 1" = 100'

Revision: 1.00

NO.	REVISION	DATE	BY	DESCRIPTION
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KEY SHEET
 NOTES TO REVIEWERS
 SIGNATURE SHEET
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 TYPICAL SECTION DETAILS
 SUMMARY OF QUANTITIES
 GENERAL NOTES
 PLAN
 HALF SECTIONS
 STORMWATER POLLUTION PREVENTION PLAN
 TEMPORARY TRAFFIC CONTROL PLAN

DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430680-1-52-01
 (FEDERAL FUNDS)
 VOLUSIA COUNTY (79090)
 STATE ROAD NO. 11



ROADWAY SHOP DRAWINGS
 TO BE SUBMITTED TO:
 RYAN B. FLORENCE, P.E.
 AECOM TECHNICAL SERVICES, INC.
 8019 BOY SCOUT BLVD, SUITE 300
 TAMPA, FLORIDA 33607

PLANS PREPARED BY:
 AECOM TECHNICAL SERVICES, INC.
 8019 BOY SCOUT BLVD, SUITE 300
 TAMPA, FLORIDA 33607
 PLS. (813) 840-2300 FAX: (813) 631-2300
 CERTIFICATE OF AUTHORIZATION NO. 8115
 VENDOR NO. 95-3661972
 CONTRACT NO. C-8517

NOTE: THE SCALE OF THESE PLANS MAY
 HAVE CHANGED DUE TO REPRODUCTION.
 NOTE: THIS PROJECT TO BE LET TO CONTRACT
 WITH FINANCIAL PROJECT ID 430680-1-52-01

INITIAL ROADWAY PLANS
 NOVEMBER 7, 2011

ROADWAY PLANS
 ENGINEER OF RECORD: RYAN B. FLORENCE, P.E.
 P.E. NO.: 68415
 FISCAL SHEET

NO.	REVISION	DATE	BY	DESCRIPTION
1	Initial	1/11/11	JBF	Initial
2	Revised	1/11/11	JBF	Revised
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STANDARDS AND SPECIFICATIONS:
 Florida Department of Transportation 2014 Design Standards and
 Drawings as Appointed herein, and 2004 Standard
 Specifications for Road and Bridge Construction, as amended by
 Addendum 1 through 10.
 The user should click on the "Design Standards" link at the
 following web site:
<http://www.dot.state.fl.us/roads/>

PROJECT LENGTH IS BASED ON 6% OF CONSTRUCTION

LENGTH OF PROJECT	LINEAR FEET	MILES
PROJECT	7,826.59	1.492
CONTRACT	7,826.59	1.492

KEY SHEET REVISIONS	REVISION	DESCRIPTION
1	Initial	Initial
2	Revised	Revised
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46	Revised	Revised
47	Revised	Revised
48	Revised	Revised
49	Revised	Revised
50	Revised	Revised

Candidate Project RIB Review

To: AECOM
 From: Michael J. B. Florence
 RE: SR 11 SCOPE OF SERVICES - FINAL SCORE (Updated January 2011)

State Road Number: SR 11
 Section Number: 79090
 County: Volusia
 Project Name: SR 11 South of Deltona Blvd to East of Carter Rd
 Project Length: 1.492 Miles
 Project No: 430680-1-52-01

This project was updated in October 2011 for conformance to Practical Design Guidelines.

NO.	REVISION	DATE	BY	DESCRIPTION
1	Initial	1/11/11	JBF	Initial
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17				

What are Enhanced Plans?

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS
SIGNALIZATION PLANS

A DETAILED INDEX APPEARS ON THE
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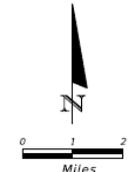
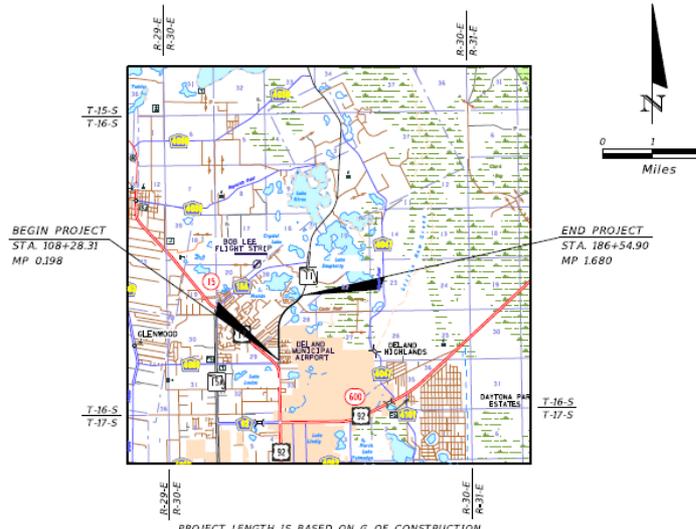
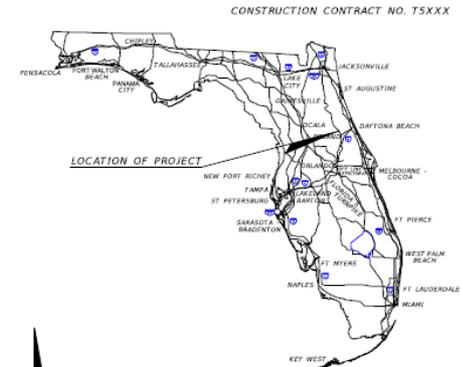
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FINAL PLANS (PHASE III)
March 25, 2014

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	LINEAR FEET	MILES
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BRIDGES		
NET LENGTH OF PROJECT	7,826.59	1.482
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GROSS LENGTH OF PROJECT	7,826.59	1.482

FDOT PROJECT MANAGER: GENE VARANO (68)

KEY SHEET REVISIONS	
DATE	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: RYAN B. FLORENCE, P.E.

P.E. NO.: 68475

FISCAL YEAR	SHEET NO.
15	1

Enhanced Plans Features – Plans Navigation

Go to Previous Page

Go to Next Page

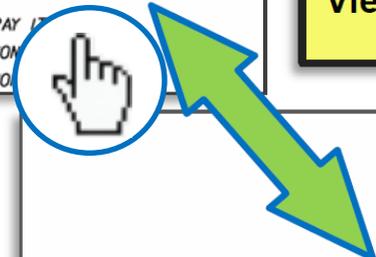
Go to Previous View

KEY SHEET OF EACH COMPONENT

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3 - 4	TYPICAL SECTION
5 - 6	TYPICAL SECTION

Click on Key Sheet Index to View Sheet



SUMMARY OF PAY ITEMS		SHEET NO.
10		2
01		



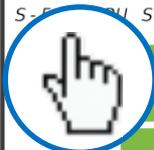
Click on Sheet Title Block to Return to Component Key Sheet

Click on Plan Sheets in Index to Expand Sheet Selection Set.

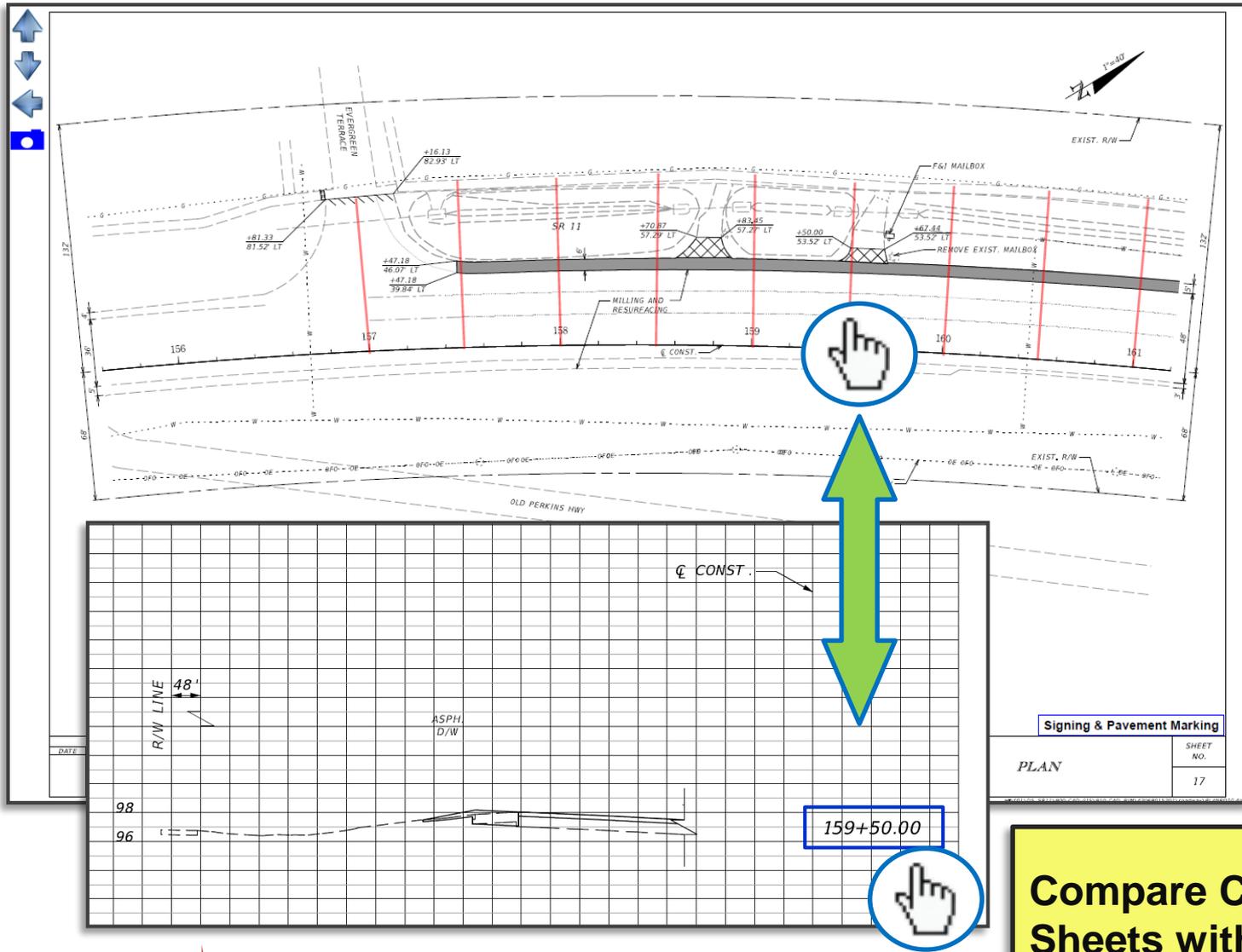
Click again to collapse.

INDEX OF SIGNING AND PAVEMENT MARKINGS

SHEET NO.	SHEET DESCRIPTION				
S-1	KEY SHEET				
S-2 THRU S-3	TABULATION OF QUANTITIES				
S-4	GENERAL NOTES				
S-5 THRU S-19	SIGNING AND PAVEMENT MARKINGS				
	S-5	S-6	S-7	S-8	S-9
	S-10	S-11	S-12	S-13	S-14
	S-15	S-16	S-17	S-18	S-19



Enhanced Plans Features – Plans Navigation



Compare Cross-Section Sheets with Plan Sheets

Enhanced Plans Features – Design Information

Quickly Connect to Design Documentation

PROJECT IDENTIFICATION																					
FINANCIAL PROJECT ID: 430680-1-32-01	COUNTY (SECTION): VOLUSIA 79090																				
PROJECT DESCRIPTION: SR 11 FROM S. OF DOLORES BLVD. TO N. OF CARTER ROAD																					
PROJECT CONTROLS																					
FUNCTIONAL CLASSIFICATION	HIGHWAY SYSTEM																				
() RURAL (X) URBAN () FREEWAY/EXPWY. () PRINCIPAL ART. (X) MINOR ART.	() (X) NATIONAL HIGHWAY SYSTEM () (X) FLORIDA INTRASTATE HIGHWAY SYSTEM () (X) STRATEGIC INTERMODAL SYSTEM () () STATE HIGHWAY SYSTEM () (X) OFF STATE HIGHWAY SYSTEM																				
ACCESS CLASSIFICATION	TRAFFIC																				
() 1 - FREEWAY () 2 - RESTRICTIVE w/Service Roads () 3 - RESTRICTIVE w/660 ft. Connection Spacing (X) 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	<table border="1"> <tr> <th>YEAR</th> <th>AADT</th> <th>DISTRIBUTION</th> </tr> <tr> <td>CURRENT 2013</td> <td>5,800</td> <td>K 9.00%</td> </tr> <tr> <td>OPENING 2015</td> <td>6,400</td> <td>D 64.30%</td> </tr> <tr> <td>DESIGN 2035</td> <td>9,200</td> <td>T24 6.50%</td> </tr> </table> <table border="1"> <tr> <th>DESIGN SPEED</th> <th>POSTED SPEED</th> </tr> <tr> <td>MP 0.098 TO MP 0.410</td> <td>50</td> </tr> <tr> <td>MP 0.410 TO MP 0.560</td> <td>50</td> </tr> <tr> <td>MP 0.560 TO MP 1.690</td> <td>60</td> </tr> </table>	YEAR	AADT	DISTRIBUTION	CURRENT 2013	5,800	K 9.00%	OPENING 2015	6,400	D 64.30%	DESIGN 2035	9,200	T24 6.50%	DESIGN SPEED	POSTED SPEED	MP 0.098 TO MP 0.410	50	MP 0.410 TO MP 0.560	50	MP 0.560 TO MP 1.690	60
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CRITERIA	DESIGN SPEED APPROVALS																				
() NEW CONSTRUCTION / RECONSTRUCTION () RRR INTERSTATE / FREEWAY (X) RRR NON-INTERSTATE / FREEWAY () TDLC / NEW CONSTRUCTION / RECONSTRUCTION () TDLC / RRR () MANUAL OF UNIFORM MINIMUM STANDARDS () FLORIDA GREENSBORO/OFF-STATE HIGHWAY SYSTEM ONLY	DISTRICT DESIGN ENGINEER: _____ DATE: _____ DISTRICT TRAFFIC OPERATIONS ENGINEER: _____ DATE: _____																				
LIST ANY POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION ELEMENTS: HORIZONTAL CLEARANCE VARIATION																					
LIST MAJOR STRUCTURES LOCATION/DESCRIPTION - REQUIRING SPECIAL DESIGN: NONE																					
LIST MAJOR UTILITIES WITHIN PROJECT CORRIDOR: AT&T DISTRIBUTION BRIGHT HOUSE NETWORKS CITY OF DELAND FLORIDA PUBLIC UTILITIES PROGRESS ENERGY DISTRIBUTION PROGRESS ENERGY TRANSMISSION																					
LIST OTHER INFORMATION PERTINENT TO DESIGN OF PROJECT: NONE																					

FLORIDA DEPARTMENT OF TRANSPORTATION
FLEXIBLE PAVEMENT DESIGN SUMMARY SHEET 2 OF 5

S.L. NO: 11	DESIGN SPEED: 50/60 MPH
FROM: South of Dolores Blvd (MP 0.198)	SN REQUIRED: N/A
TO: North of Carter Rd (MP 1.690)	DESIGN LBR: N/A
FINANCIAL PROJ. ID: 430680-1-32-01	M _r : 17,000 PSI
Opening Year: 2015	R: 97% (Rehabilitation, Urban Arterial)
Design Year: 2035 (20 Yr Design)	18K ESAL: 1,607,900

EXISTING PAVEMENT
(Based on Pavement Survey and Evaluation Report)¹
Paved Shoulders (OR, OL) (Fair Condition)

Layer / Material	MP 0.198 to MP 1.690		Existing SN
	Average Thickness (in.)	Coefficient	
FC-3/ FC-6	1.10	0.17 ²	0.19
Type S	1.80	0.25	0.45
ABC Base	4.10 ³	0.14	0.57
Stabilization (Type B) (LBR 40)	12.00	0.08	0.96
Total Existing SN =			2.17

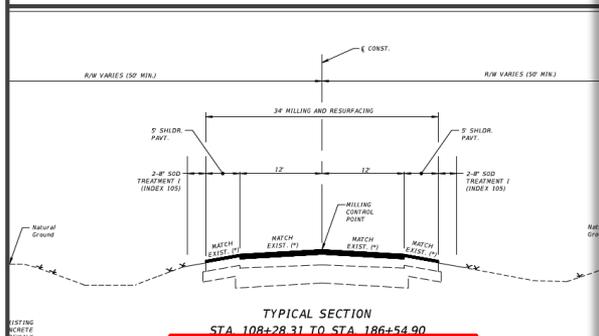
PROPOSED PAVEMENT DESIGN
Paved Shoulders (OR, OL): 1.50" Milling/ 1.50" Resurfacing

Layer / Material	MP 0.198 to MP 1.690		SN
	Average Thickness (in.)	Coefficient	
Total Existing SN	-	-	2.17
1.50" Milling	(-) 1.50	-	(-) 0.29
FC-12.5 (Traffic B) (PG 76-22) (PMA)	1.50	0.44	0.66
Total SN Provided =			2.54 SN _r > 2.17 SN _r

- See Appendix E, "Calculations and Reference Material" for details.
- Conservatively, the coefficient for FC-3 was utilized.
- Conservatively, the coefficient for FC-3 was utilized. See Appendix E for Calculations.

Concurrence by: Steven Back, E.I. District Design Engineer
Date: 11-7-13

Concurrence by: Annette K. Brennan, P.E. District Design Engineer
Date: 11/7/13



TRAFFIC DATA

CURRENT YEAR = 2014 AADT = 5,900
ESTIMATED OPENING YEAR = 2015 AADT = 6,100
ESTIMATED DESIGN YEAR = 2035 AADT = 9,000
K = 9.0% D = 64.3% T = 6.5% (24 HOUR)
DESIGN HOUR T = 4.0%
DESIGN SPEED = 50 MPH (STA. 108+28.31 TO STA. 127+39.67)
DESIGN SPEED = 60 MPH (STA. 127+39.67 TO STA. 186+54.90)

TYPICAL SECTION
STA. 108+28.31 TO STA. 186+54.90

MILLING
MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (3 1/2") (1)

RESURFACING
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (1) (2) (PG 76-22) (PMA) AND FRICTION COURSE FC-12.5 (TRAFFIC B) (1) (1/2) (PG 76-22) (PMA)

SHOULDER, SOUTHBOUND RIGHT TURN LANE AND SIDE STREET MILLING
MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (1 1/2")

SHOULDER, SOUTHBOUND RIGHT TURN LANE AND SIDE STREET RESURFACING
FRICTION COURSE FC-12.5 (TRAFFIC B) (1) (1/2) (PG 76-22) (PMA)

NORTHBOUND RIGHT TURN LANE MILLING
MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (2 1/2")

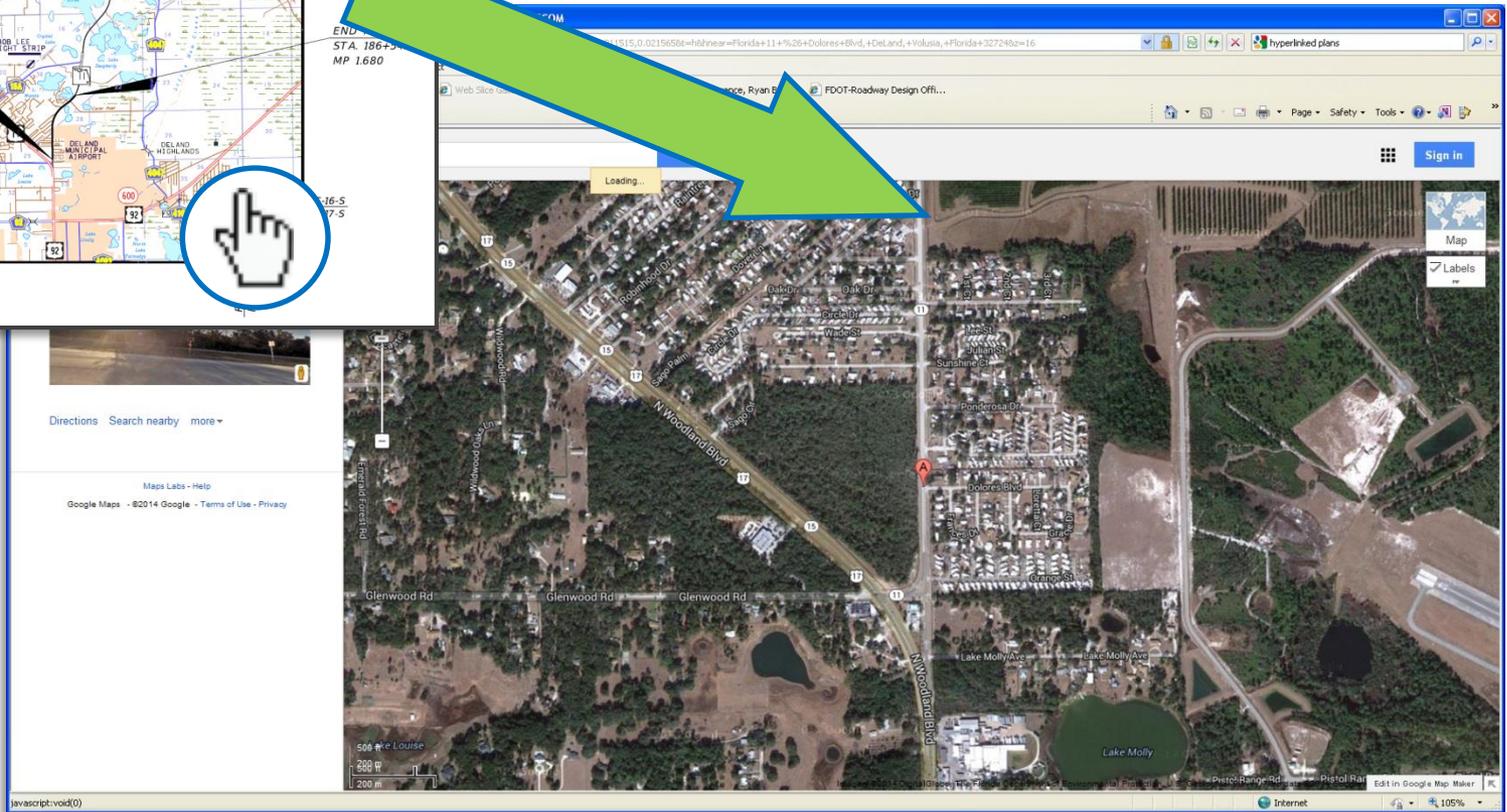
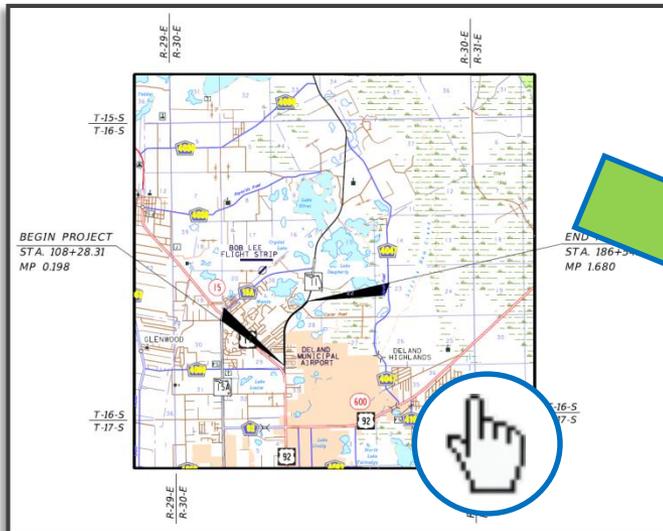
NORTHBOUND RIGHT TURN LANE RESURFACING
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (1) (2) (PG 76-22) (PMA) AND FRICTION COURSE FC-12.5 (TRAFFIC B) (1) (1/2) (PG 76-22) (PMA)

1. PAVEMENT CONSTRUCTION DATA, INCLUDING BASE MATERIAL TYPE AND THICKNESS, IS AVAILABLE ON THE DEPARTMENT'S WEBSITE. THE URL FOR OBTAINING THIS INFORMATION IS LOCATED AT: FTP://FTP.DOT.STATE.FL.US/ITS/DC/CONSTRUCTION/PMP/EMTS/CONDATA/. THE DATA REPRESENTS MATERIALS ENCOUNTERED AT EACH CORING LOCATION. MATERIAL VARIATIONS BETWEEN CONES SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2.4 OF THE STANDARD SPECIFICATIONS.

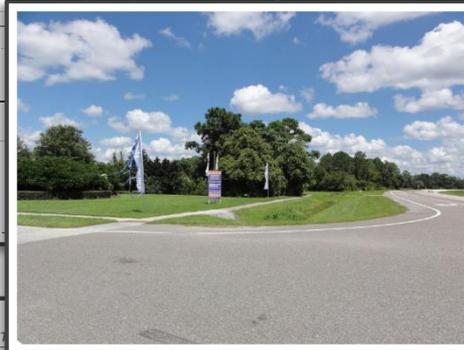
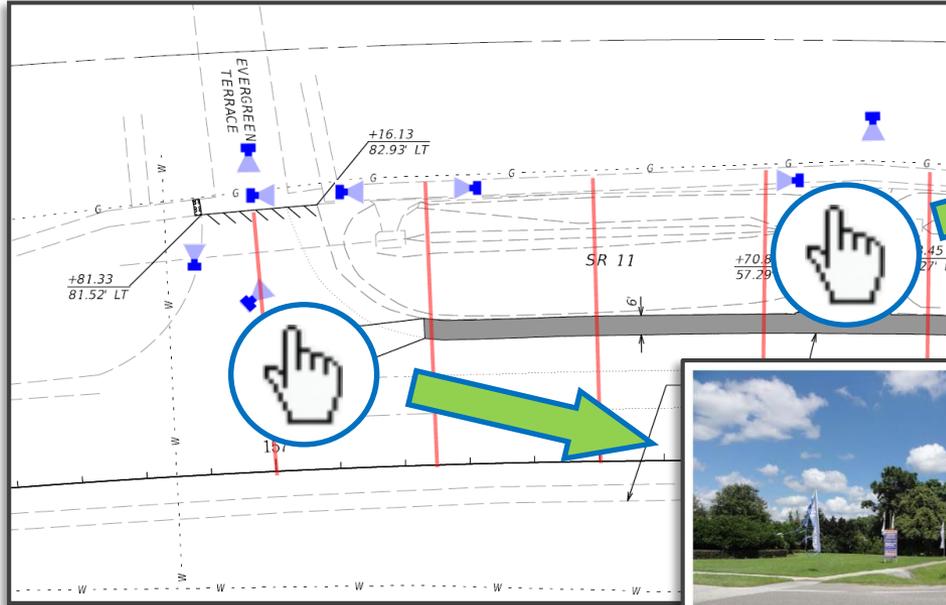


Enhanced Plans Features – Map Navigation

Connect to Maps on the Web

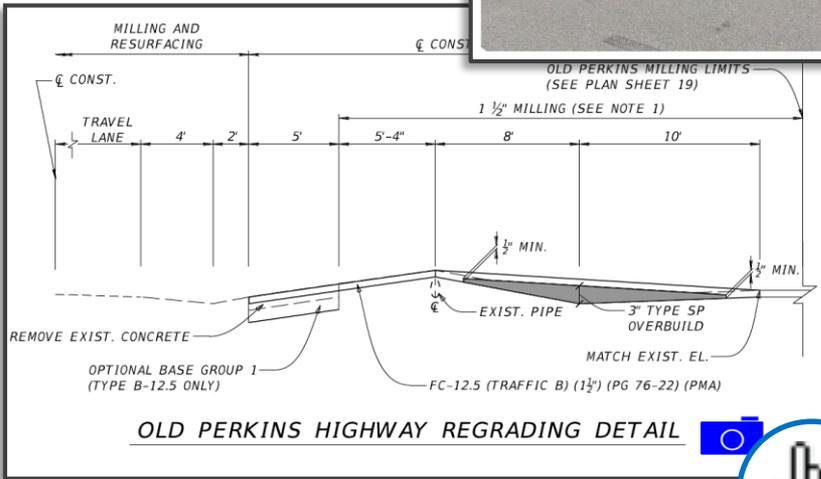


Enhanced Plans Features – Photo Browsing



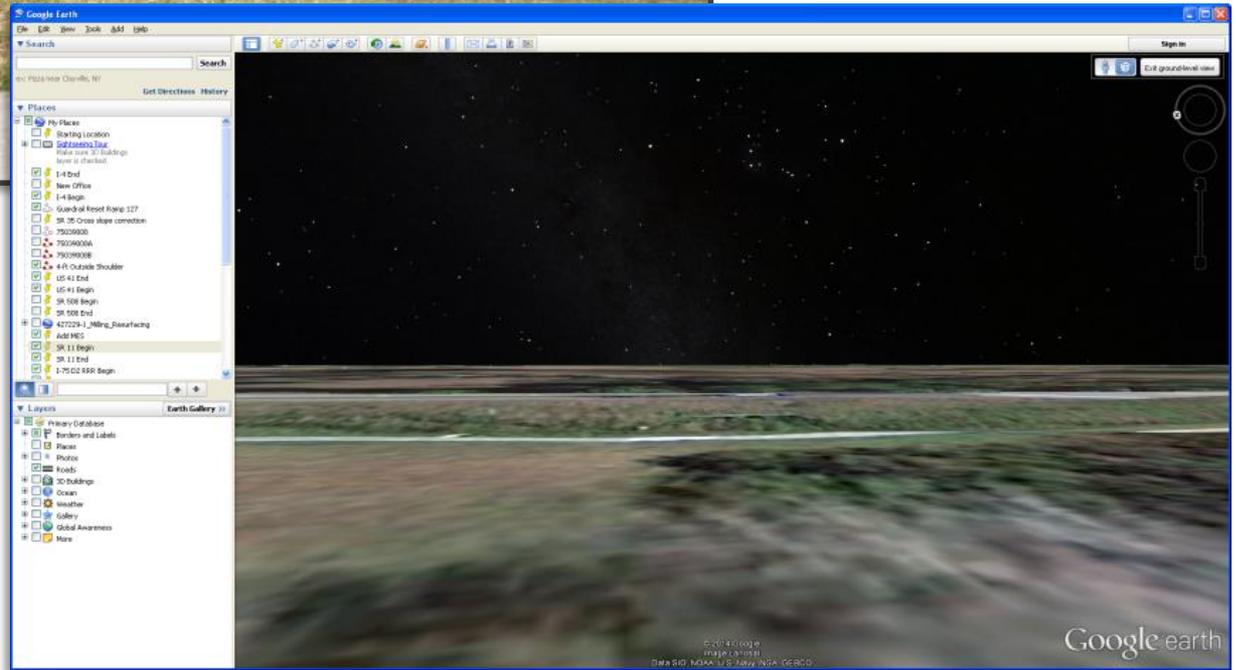
Provide quick access to key site visit photos

Add Clarity To Details

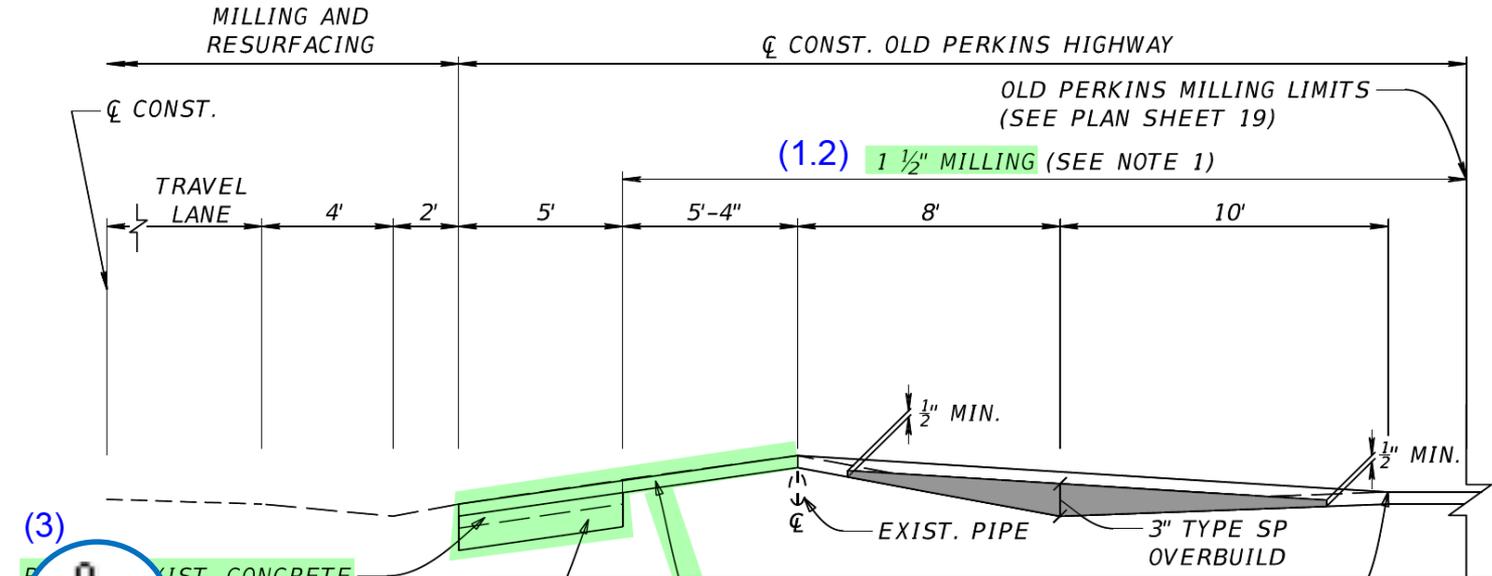




Can't get this photo from Google Earth... yet.



Enhanced Plans Features – ERC Comment Confirmation



(3)



OPTIONAL BASE GROUP 1
(TYPE B)

Common Rdwy Name: State Road 11
Mile Post: 0.198 to 1.680
Section: 79090
County: Volusia
Submittal Description: ENHANCED PLANS - SR 11 from south of Dolores Blvd. to north of Carter Rd. Volusia county, Contract# C-S817

ERC Comment No.	Reviewer Name	Ref/Pg #	Area of Review	Comment	Response / Status
1			Construction, pavement Design	1.) Can we simplify by using all PG 76-22 on this job? From the condition of the road it could justify. If the Contractor places Overbuild and Structure on the same day it is easier to run one mix rather than switching to a second and only having to purchase, Truck and store one liquid. 2.) Can we just have 12.5 for the detail for Old Perkins Highway, rather than 9.5 with Contractor's option to use 12.5? Much easier for plant operations rather than starting a new mix Lot and the rest of the project has 12.5.	Ryan Florence, 11/14/2013: 1.) PG 76-22, PMA Binder, is not required for the Overbuild material; however, the note on the Typical Section Details, Sheet 6, states, "AT THE CONTRACTOR'S OPTION, (PG 76-22) (PMA) MAY BE UTILIZED FOR OVERBUILD." This will give the Contractor the option to use polymer binder for constructability purposes. 2.) Agree. Existing asphalt depth is limited at Old Perkins Highway; however, to improve constructability, milling depth will be increased to 1.5' to allow for placement of PG-12.5. The Old Perkins Highway Regrading Detail will be revised accordingly.
2	Chris Dabson		Structures	No Structures on the project, NO COMMENTS	Ryan Florence, 11/14/2013: Comment noted. Thank you for your review. Chris Dabson, 11/19/2013: Response Accepted & Comment Closed
3	Victor Lopiccolo	Sheet 5	Construction	Old Perkins Hwy regrading detail. The existing 5' concrete apron is in very poor condition and will be difficult to tie in to; the concrete should be removed entirely. Given this opportunity, the ditch may be reworked and the culvert should be set at a lower grade, removing the existing "hump."	Ryan Florence, 11/26/2013: Agree. The plans have been revised to show removal of the existing concrete apron and replacement with asphalt pavement. Modification of the milled end section and rework of the existing ditch was considered during the scoping phase of the project; however, it was eliminated from the project scope because it did not meet the practical design guidelines for RRR projects. Victor Lopiccolo, 1/3/2014: Thank you

Click on the Blue ERC comment number to open the ERC Comment Spreadsheet



Enhanced Plans Demonstration - Functionality



Enhanced Plans Demonstration - Implementation



Enhanced Plans Pilot Study – Preliminary Results



Pilot Study – SR 11 Project Overview

- ◆ 1.5 mi. RRR Project
- ◆ Two-lane, Rural Roadway
- ◆ Design Features:
 - ✓ Cross Slope Correction
 - ✓ Minor Widening
 - ✓ ADA Improvements
 - ✓ Traffic Monitoring Site
 - ✓ Design Variation: Horizontal Clearance
- ◆ Plan Coverage: 31 Plan View Sheets / 57 Total Sheets
- ◆ Lump Sum Project
- ◆ Major ERC Review Submittals: Phase II and Phase III



Pilot Study – Preliminary Results, Reviewer Surveys

- ◆ 10 Unique ERC Reviewers Completed Pilot Surveys

- ◆ Grading Scale of 1 to 4:
 - ✓ 1 = Strongly Disagree
 - ✓ 2 = Disagree
 - ✓ 3 = Agree
 - ✓ 4 = Strongly Agree

- ◆ Average of 3.5 when asked if Reviewers would like to see Enhanced Plans on future projects

- ◆ Most Useful Features:
 - ✓ Plans Navigation
 - ✓ Photo Browser
 - ✓ Supporting Design Documentation

Question	1	2	3	4	5	6	7	8	9	10*	11	Avg.
1 - Accelerated Project Understanding	3	3	4	4	3	3	4	4	4	4	4	3.6
2 - Reduced Review Time	3	3	4	4	4	3	4	4	3	3	4	3.5
3 - Increased Quality of Review	3	3	NE	4	4	2	4	4	3	4	4	3.5
4 - Quick to Learn	3	3	4	4	4	4	3	4	3	4	3	3.5
5 - Intuitive	3	3	4	4	2	3	4	3	3	3	4	3.3
6 - Would like to see on future projects	3	3	NE	4	4	3	4	3	3	4	4	3.5
Average per Survey:	3.0	3.0	4.0	4.0	3.5	3.0	3.8	3.7	3.2	3.7	3.8	3.5

Most Useful Features	1	2	3	4	5	6	7	8	9	10*	11	Total
Plans Navigation	1	1		1			1	1	1	1	1	8
Photo Browser		1		1	1	1	1	1	1		1	8
Component Comparison						1	1	1			1	4
Web Map Links				1			1	1			1	4
Design Calculation Links								1				1
Supporting Design Documentation	1				1	1	1	1		1	1	7
Cross Section Navigation			1		1		1	1			1	5
ERC Comment Confirmation					1		1	-			1	3
FDOT Index/Specs Links							1				1	2
Key Correspondence Links							1	1			1	3

NE - Not Evaluated

(*) Non-unique survey respondent, survey completed at Phase II and Phase III.

Pilot Study – Preliminary Results, Time Savings

- ◆ Time to create Enhanced Plans Pilot sets: \approx 50 hours.
 - ✓ Includes Phase I and Phase II Enhanced Plans Submittals
 - ✓ Does not include research and development time to design and create concept
- ◆ Four Reviewers estimated time savings:
 - ✓ Average estimated time saved: 1.44 hours per review.
- ◆ Between Phase II and Phase III, 30 Reviewers provided comments
- ◆ $1.44 \text{ hours (Average time savings)} \times 30 \text{ Reviews} = 43.2 \text{ hours saved}$
- ◆ Correct assumption to make? Probably not.
- ◆ Other considerations need to be made.

Pilot Study – Evaluation Considerations

- ◆ Manual techniques were used to produce Pilot Prototype
- ◆ Significant time savings may be realized through automation / semi-automation of most popular features such as Plans Navigation and the Photo Browser
- ◆ Unquantifiable savings and benefits must be considered:
 - ✓ Savings in construction costs due to errors/omissions possibly discovered using Enhanced Plans' information
 - ✓ Effective communication tool with Public & Local Agencies
 - ✓ Archival value
 - ✓ Training tool
 - ✓ Residual search savings by many, including non-Reviewers
- ◆ After time savings are factored in, do the unquantifiable benefits justify the remaining cost by adding new and better value?
- ◆ What potential savings are realized if the Contractor receives Enhanced Plans? (modified from Design set, as needed)

Enhanced Plans – Next Steps

What are the next steps for Enhanced Plans?

- ◆ Fall 2014 – Completion of Pilot Study & Final Report
- ◆ Enhanced Plans are not currently a Standard Operating Procedure for Plans Production
- ◆ Pilot Study results will be reviewed to determine further actions
- ◆ Potential for future Pilot Studies

Questions?

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