SR 400 (I-4) Project Development and Environment (PD&E) Study
FM No.: 432100-1-22-01

Preliminary Engineering Report

Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)

Orange County (75280), Florida

June 2, 2017

HNTB Corporation
610 Crescent Executive Court
Suite 400
Lake Mary, FL 32746

4 EXPRESS

PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation

ETDM Number: N/A
Financial Management Number: 432100-1-22-01
Federal-Aid Project Number: 0041-227-I

This preliminary engineering report contains detailed engineering information that fulfills the purpose and need for State Road 400 (SR 400)/Interstate 4 (I-4), from West of SR 528 (Beachline Expressway) to
West of SR 435 (Kirkman Road), PD&E study.

2 / 5 / 18
Date

Professional Engineer

ROBERT M. DENNEY
LICENSE
No. 58593
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Notes to Reviewer:

The typical section package for the entire SR 400 (I-4) Beyond the Ultimate corridor has been submitted under separate cover.

TABLE OF CONTENTS

1.0 Summary of Project 1
1.1 Commitments 2
1.2 Recommendations 4
1.3 Description of Proposed Action 5
1.4 Purpose and Need 7
2.0 Existing Conditions 12
2.1 Roadway Classification 12
2.2 Typical Section 12
2.3 Right-of-way 12
2.4 Existing Property Lines and Land Use 12
2.5 Horizontal Alignment 16
2.6 Vertical Alignment 16
2.7 Pedestrian and Bicycle Facilities 18
2.8 Design and Posted Speed 18
2.9 Lighting 19
2.10 Railroad 19
2.11 Existing Traffic 19
2.11.1 Traffic Volumes 19
2.11.2 Intersection Geometry and Signalization 19
2.11.3 Traffic Operational Analyses 23
2.12 Pavement Conditions 24
2.13 Drainage and Hydrology 25
2.13.1 Existing Drainage Patterns 25
2.13.2 Cross Drains 26
2.14 Existing Bridges 27
2.14.1 Type of Structure 27
2.14.2 Current Conditions and Year of Construction 27
2.14.3 Horizontal and Vertical Alignments of Structures 30
2.14.4 Span Arrangement 30
2.14.5 Historical Significance 31
2.14.6 Channel Dimensions 31

2.14.7 Bridge Openings 31
2.14.8 Ship Impact Data 31
2.15 Crash Data 32
2.16 Utilities 35
2.17 Soils 66
2.18 Sociocultural Conditions 69
2.18.1 Study Area 69
2.18.2 Social Demographics 69
2.18.3 Economics 71
2.18.4 Existing Developments 71
2.18.5 Community Facilities and Services 71
3.0 Planning Phase/Corridor Analysis 74
4.0 Design Criteria and Standards 75
5.0 Alternatives Analysis 79
5.1 No Project (No-Build) Alternative 79
5.2 Transportation System Management and Operations 80
5.3 Multi-Modal Alternatives 81
5.3.1 Transit 81
5.3.2 Bicycles and Pedestrians 82
5.4 Build Alternatives 82
5.4.1 Design Speed 83
5.4.2 Interchange Alternatives 84
5.5 Design Traffic 87
5.5.1 Future Traffic Volumes 88
5.5.2 Design Traffic Factors 88
5.5.3 Intersection/Interchange Traffic Volumes 89
5.5.4 Intersection Operational Analysis 92
5.6 Intersection Improvements 94
5.7 Environmental Impacts 96
5.7.1 Floodplains and Regulatory Floodways 96
5.7.2 Wetlands 96

5.7.3 Wildlife and Habitat 107
5.7.4 Archaeological and Historical Resources 117
5.7.5 Contamination 124
5.7.6 Noise 129
5.7.7 Air Quality 131
5.8 Section 4(f) Lands 132
5.9 Public Involvement Program 132
5.10 Value Engineering (VE) 135
5.11 Comparative Evaluation 136
5.11.1 Evaluation Criteria 136
5.11.2 Evaluation Matrix 137
5.11.3 Recommended Alternative 137
6.0 Design Details of Recommended Alternative 141
6.1 Typical Sections 141
6.2 Alignment 141
6.3 Design Exceptions and Variations 142
6.4 Drainage 143
6.4.1 Proposed Drainage Patterns 144
6.4.2 Cross Drains 148
6.5 Right-of-Way Requirements 148
6.6 Relocations 149
6.7 Traffic Operational Analysis 150
6.8 Bridge Analysis 153
6.9 Utilities 153
6.10 Lighting 153
6.11 Access Management 157
6.12 Conceptual Signing Plan 157
6.13 Production Schedule 157
6.14 Project Cost Estimates 158
7.0 Supplemental Technical Reports 159

LIST OF FIGURES

Figure 1.1 - Project Location Map 6
Figure 1.2 - Proposed Typical Section (6 GUL + 4 EL with rail envelope) – E. of Central Florida Pkwy. to SR 528 . 8
Figure 1.3 - Proposed Typical Section (6 GUL + 4 EL without rail envelope) – SR 528 to W. of SR 435 8
Figure 2.1 - Existing I-4 Typical Section 13
Figure 2.2 - Existing City Limits 14
Figure 2.3 - Existing Land Use 15
Figure 2.4 - Future Land Use 17
Figure 2.5 - Existing (Year 2011) Peak Hour Traffic Volumes (Sheet 1 of 3) 20
Figure 2.6 - Existing (Year 2011) Peak Hour Traffic Volumes (Sheet 2 of 3) 21
Figure 2.7 - Existing (Year 2011) Peak Hour Traffic Volumes (Sheet 3 of 3) 22
Figure 2.8 - Existing Bridge Locations 29
Figure 2.9 - Crash Distribution Along I-4 Segment 2 Corridor 33
Figure 2.10 – Soils Map 68
Figure 2.11 – Community Facilities and Services 73
Figure 5.1 – Proposed Express Lane Access Points 83
Figure 5.2 – 2040 Build Directional Peak Hour Traffic Volumes (Sheet 1 of 2) 90
Figure 5.3 – 2040 Build Directional Peak Hour Traffic Volumes (Sheet 2 of 2) 91
Figure 5.4 - FEMA Flood Insurance Map 97
Figure 5.5 - Surface Water and Wetland Impacts (Map 1 of 6) 101
Figure 5.6 – Surface Water and Wetland Impacts (Map 2 of 6) 102
Figure 5.7 – Surface Water and Wetland Impacts (Map 3 of 6) 103
Figure 5.8 – Surface Water and Wetland Impacts (Map 4 of 6) 104
Figure 5.9 – Surface Water and Wetland Impacts (Map 5 of 6) 105
Figure 5.10 – Surface Water and Wetland Impacts (Map 6 of 6) 106
Figure 5.11 – Listed Species Observations Map 109
Figure 5.12 – Newly Recorded Historic Resources within Southern Portion of I-4 Segment 2 APE 122
Figure 5.13 – Newly Recorded Historic Resources within Northern Portion of I-4 Segment 2 APE 123
Figure 5.14 – Potential Contamination Sites (Sheet 1 of 3) 125
Figure 5.15 – Potential Contamination Sites (Sheet 2 of 3) 126
Figure 5.16 – Potential Contamination Sites (Sheet 3 of 3) 127
Figure 5.17 – Noise Sensitive Areas Map 130
Figure 6.1 – Overall Drainage Map 146
Figure 6.2 – Overall Drainage Map 147

LIST OF TABLES

Table 1.1 – Population Projections for Counties in the I-4 Corridor 10
Table 1.2 - Employment Projections for Workforce Regions in the I-4 Corridor 10
Table 2.1 - Existing I-4 Vertical Alignments within Segment 2 18
Table 2.2 - Intersection Operational Analysis 24
Table 2.3 - I-4 Mainline Freeway Link Analysis 24
Table 2.4 - Pavement Conditions I-4 - Segment 2 24
Table 2.5 - Existing Cross Drains 27
Table 2.6 - Existing Bridge Structures 28
Table 2.7 - Current Structure Condition and Year of Construction 30
Table 2.8 - Horizontal Clearances at Bridges 30
Table 2.9 - Vertical Curve Data at Bridges 31
Table 2.10 - Vertical Clearances at Bridges 31
Table 2.11 – Crash Severity Summary 32
Table 2.12 - Crash Event Summary 34
Table 2.13 - Contributing Cause Summary 34
Table 2.14 - High Crash Segment Summary 35
Table 2.15 - Utility Contact information 36
Table 2.16 - Major Utilities 38
Table 2.17 - Soil Types 66
Table 2.18 - Community Demographics 70
Table 2.19 - Community Facilities and Services 72
Table 4.1 - Roadway Design Criteria 75
Table 5.1 - D Factor 89
Table 5.2 – I-4 and SR 482 (Sand Lake Road) Node Evaluation Results 92
Table 5.3 – I-4 and SR 482 (Sand Lake Road) Network Evaluation Results 93
Table 5.4 – I-4 and SR 528 (Beachline Expressway) 2040 Peak Period Network Performance (4 Hours) 95
Table 5.5 - Summary of Wetlands and Surface Waters 99
Table 5.6: Summary of Proposed Impacts to Wetlands/Other Surface 100
Table 5.7 - Summary of Available Mitigation Credits per Service Area 107
Table 5.8 - Protected Wildlife Species Observed within I-4 Segment 2 Corridor 108
Table 5.9 - Results of Phase I Archaeological Survey of the Proposed Ponds for the I-4 Segment 2 APE 119
Table 5.10 - Parcels along the APE that Contain Resources Constructed between 1971 and 1974. 120
Table 5.11 - Alternatives Evaluation Matrix 139
Table 6.1 – Proposed Horizontal Curve Data 142
Table 6.2 - Design Exceptions and Variations 142
Table 6.3 - Additional Design Elements 143

Table 6.4 - Summary of Recommended Pond and FPC Sites 145
Table 6.5 - Proposed Cross Drains 148
Table 6.6 - Right-of-way Acquisition for Roadway 148
Table 6.7 - Right-of-way Acquisition for Stormwater Facilities 149
Table 6.8: Potential Relocations 150
Table 6.9 – I-4 Segment 2 Basic Freeway Operational Analysis (HCS 2010) 151
Table 6.10 – I-4 Segment 2 Intersection Operational Analysis 152
Table 6.11 - Proposed Bridge Improvements 154
Table 6.12 - Proposed Utility Impacts 155
Table 6.13 - Estimated Project Costs for I-4 Segment 2 158

LIST OF APPENDICES

Appendix A - Concept Plans
Appendix B - Public Involvement Documentation/Coordination
Appendix C - Conceptual Signing Plan
Appendix D - Long Range Estimates (LRE)

1.0 Summary of Project

The Florida Department of Transportation (FDOT) is conducting an update/reevaluation of the Project Development and Environment (PD&E) studies for the extension of proposed express lanes for State Road 400 (SR 400)/Interstate 4 (I-4). The project limits in the original PD&E studies were:

- West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line, (29.5 miles)
- CR 532 (Polk/Osceola County Line) to West of SR 528 Beachline Expressway (13.7 miles), and
- West of SR 528 Beachline Expressway to SR 472 (43 miles).

The corresponding environmental documents associated with these PD&E studies include: Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for SR 400 (I-4) from West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line [Financial Project Number (FPN) 201210 (December 1998)] and from CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) [FPN 242526 and 242483 (December 1999)] and Final Environmental Impact Statement (FEIS) for I-4 from SR 528 (Beachline Expressway) to SR 472 [FPN 242486, 242592 and 242703 (August 2002, Record of Decision Pending)].

The project limits of the current SR 400 (I-4) PD&E reevaluation, herein referred to as I-4 Beyond the Ultimate (BtU) PD&E Reevaluation Study, include a total of approximately 43 miles of roadway sections east and west of the 21-mile, I-4 Ultimate project. The I-4 Ultimate project, which began construction in early 2015, is reconstruction to include new express lanes, of the section of I-4 that extends from west of SR 435 (Kirkman Road) to east of SR 434. For analysis purposes, the current I-4 BtU PD&E study has been divided into the following five segments:

- Segment 1: SR 400 (I-4) from West of CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) - Osceola County (92130) and Orange County (75280)
- Segment 2: SR 400 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) - Orange County (75280)
- Segment 3: SR 400 (I-4) from 1 Mile East of SR 434 to East of SR 15-600/US 17-92 (Seminole/Volusia County Line) - Seminole County (77160)
- Segment 4: SR 400 (I-4) from East of SR 15-600/US 17-92 (Seminole/Volusia County Line) to 1/2 Mile East of SR 472 - Volusia County (79110)
- Segment 5: SR 400 (I-4) from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County (16320)

Since no Record of Decision has been issued by the Federal Highway Administration (FHWA) for Segments 2, 3 and 4, the current PD&E BtU study for these three segments will update the original PD&E study. This preliminary engineering report was prepared for Segment 2 of the SR 400 (I-4) BtU PD&E Reevaluation Study and contains detailed engineering information that fulfills the

purpose and need for the SR 400 I-4), from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road), PD&E study.

The purpose of this preliminary engineering report is to document design changes in support of the PD&E update for the I-4 BtU Segment 2 portion of the FEIS for I-4 from SR 528 (Beachline Expressway) to SR 472 (FPN 242486-1, 242592-1 and 242703-1, August 2002, Record of Decision pending). This update includes environmental and engineering analysis of the original design concept, which showed six general use lanes (GULs) and two high occupancy vehicles (HOV) lanes (6+2), to the current proposed design, which includes six GULs and four express lanes (EL) operating under a variable price toll plan (6+4). Other changes being reanalyzed include stormwater management, access plan and interchange configurations.

1.1 Commitments

To minimize impacts of this project on the environment, FDOT is committed to the following mitigation measures for impacts resulting from the Recommended Alternative.

1. Displacements and Relocations - FDOT will carry out a relocation assistance program in accordance with The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended, for Federal and Federally Assisted Programs (23 CFR and 49 CFR, Part 24, Sections 334.048, 339.09 and 421.55, Florida Statutes Rule 14-66, Florida Administrative Code).

2. Cultural Resources - FDOT commits to documenting any structures that reach historic age prior to project completion as part of a supplemental CRAS.

3. Wildlife and Habitat - The utilization of the following specific wildlife and habitat commitments and mitigation measures for unavoidable impacts are recommended to minimize the overall impacts to wildlife from this project:
    a. As required by FDOT Standard Specifications, the construction equipment staging areas for storage of oils, greases, fuel, road bed material and equipment maintenance will be sited in previously disturbed areas not adjacent to any streams, wetlands, or surface water bodies. The staging areas will be surveyed for listed species prior to their use. Also as required by FDOT Standard Specifications, if protected species are identified unexpectedly within the construction area during construction, coordination will be initiated with the appropriate resource agencies to avoid or mitigate impacts.

b. Eastern indigo snake habitat has been identified within the project limits. Utilize the US Fish and Wildlife Service (USFWS) Standard Protection Measures for the Eastern Indigo Snake, at the US Fish and Wildlife Service Link: http://www.fws.gov/northflorida/IndigoSnakes/20130812_Eastern_indigo_snake_Standard_Protection_Measures.htm
c. During permitting, all potential gopher tortoise habitat that could be impacted by the project will be systematically surveyed according to the current guidelines published by the Florida Fish and Wildlife Conservation Commission (FFWCC). If gopher tortoise burrows are found, all practicable design measures will be employed to avoid impacts to the burrows. For burrows which cannot be avoided, a permit will be obtained from FFWCC for relocation of gopher tortoises and commensals, and relocation will be performed at a time as close as practicable to the start of construction activities at the site of the burrows.
d. During permitting, FDOT will coordinate with the permitting agencies to quantify and provide compensation for any unavoidable impacts to wood stork suitable foraging habitat (SFH). Mitigation for these impacts will be provided within the service area of a USFWS-approved wetland mitigation bank that provides an amount of habitat and foraging function equivalent to that of the impacted SFH in accordance with the *Corps of Engineers and U.S. Fish and Wildlife Service Effect Determination Key for the Wood Stork in Central and North Peninsular Florida*.
e. During permitting, FDOT will re-survey for listed species to ensure no changes have occurred since the completion of the PD&E Study.

4. Wetlands – The following commitments are proposed to ensure that the project does not result in adverse impacts to wetland communities and the functions they provide:
   a. During the permitting process, FDOT will coordinate with federal and state agency personnel to ensure minimization and reduction of adverse wetland impacts have been explored to the fullest extent of the project while meeting engineering standards and practice.
   b. Wetland impacts (direct and secondary) that will result from the construction of this project will be mitigated pursuant to requirements of Part IV. Chapter 373, F.S. and 33 U.S.C.s.1344, as appropriate. Where feasible, the FDOT is committed to minimize direct, secondary, and temporary impacts.
   c. During the development of the final design, a Quality Enhancement Strategies (QES) plan addressing the avoidance and minimization for losses of waters of the United States and alternative design changes to minimize wetland impacts (without jeopardizing safety) will be committed by others.

5. Contamination - Project commitments to address potential contamination sites include:
    a. FDOT commits to conducting Level II Contamination Screenings on all Medium and High Risk Rated sites before establishing a final determination. This will include investigating previous PD&E Studies and Design Projects covering the project area and its surroundings.
    b. All bridges and other structures which will require possible demolition or retrofit should be tested for asbestos containing materials, lead-based paint or any other hazardous materials prior to construction.
    c. Should any parcels containing medical facilities, doctor offices, hospitals, or drug stores be acquired, they should be tested for asbestos, lead-based paint, x-ray equipment, lead-lined walls, chemicals and pharmaceuticals prior to demolition.

6. Noise - FDOT is committed to the construction of feasible and reasonable noise abatement measures at Sea Isle and McKinley at Monterey Lakes, as shown on the Noise Maps contingent upon the following conditions:
    - Cost analysis indicates that the cost of the noise barriers will not exceed the cost-reasonable criterion.
    - Community input supporting types, heights and locations of noise barriers is provided to the District Office.
    - Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

7. Section 4(f) - FDOT commits to avoidance of any Section 4(f) resources along the I-4 BtU corridor. The staging of construction equipment, materials, or vehicles will be prohibited within these areas during the project.

8. Trails, Sidewalks, and Bicycle Lanes – FDOT commits that during the construction of the project, connectivity to trails, sidewalks, and bicycle lanes will be maintained.

1.2 Recommendations

The FDOT recommends improvements to widen the 3.9-mile segment of I-4 from west of SR 528 (Beachline Expressway) to west of SR 435 (Kirkman Road) in Orange County. This recommendation was developed based on engineering and environmental analysis conducted as part of the PD&E Update/Re-evaluation studies, community input and coordination with local governments and other agencies.

The recommended improvements, as shown in the Concept Plans in Appendix A and described in detail in Chapter 6 of this report, provide for six general purpose lanes and four express lanes

throughout the project limits, interchange modifications, grade-separated ramps, ramp-to-ramp auxiliary lanes, intersection modifications and/or other improvements. As a result of the Public Hearing, environmental and engineering analyses and interagency coordination, the Recommended Alternative is recommended for Location Design Concept Acceptance by the FHWA.

Typical Section

The recommended mainline typical section for I-4 Segment 2 will have a total of ten dedicated lanes (6 general use lanes + 4 express lanes) and a design speed of 70 miles per hour (mph) within a minimum 300-foot right-of-way. A future rail corridor has been preserved in the median of I-4 from the begin project limits north to SR 528, where the rail corridor alignment turns east to continue along the north side of SR 528. Auxiliary lanes or slip ramp connections will be provided to enter or exit the express lanes along both the I-4 and SR 528 corridors.

Interchanges

The recommended alternative for I-4 Segment 2 provides grade separations and/or interchanges at two locations:

- SR 528 (Systems Interchange),
- SR 482 (Diverging Diamond Interchange)

Bridges

A total of thirteen bridge structures are required for the I-4 Segment 2 recommended alternative. Eleven new bridges are proposed to be constructed along the corridor and two existing bridges will remain. The majority are multiple span structures while three bridges are single span structures. Four existing bridges will be demolished and replaced to support the proposed improvements.

Drainage

Stormwater management the recommended alternative for I-4 Segment 2 will involve collection of runoff by storm sewer systems or roadside ditches and routing to existing or proposed stormwater ponds. There is a total of ten basins within the project limits which will require 21 existing or proposed ponds to achieve water quality treatment and attenuation of project runoff.

1.3 Description of Proposed Action

FDOT is proposing to reconstruct and widen I-4 as part of the I-4 BtU concept. This involves the build-out of I-4 to its ultimate condition through Central Florida, including segments in Polk, Osceola, Orange, Seminole and Volusia Counties. The concept design proposes the addition of two new express lanes in each direction, resulting in a total of ten dedicated lanes. The project limits for the segment analyzed in this report are within a 3.9-mile segment of I-4 which extends from west of SR 528 (MP 5.650) to west of SR 435 (Kirkman Road) [MP 9.528] in Orange County (herein referred to as I-4 Segment 2), as shown in **Figure 1.1.** Although, the interstate is a designated east-west corridor, the alignment follows a north-south orientation through the majority of Segment 2.



Figure 1.1 - Project Location Map

The study area in this section from west of SR 528 to west of SR 435 (Kirkman Road) includes the interchanges at SR 528, Sand Lake Road and Universal Boulevard.

Two mainline typical sections are proposed for I-4 Segment 2. The typical section from the begin project limits east of Central Florida Parkway to SR 528 includes a 44-foot rail envelope in the median within a minimum 300-foot right-of-way (6+4 with rail envelope). The typical section from SR 528 to west of SR 435 does not include the rail corridor and also has a proposed minimum 300-foot right-of-way (6+4 without rail envelope). Both typical sections have a design speed of 70 miles per hour (mph) and will include three 12-foot general use lanes with a 10-foot inside shoulder and a 12-foot outside shoulder (10-foot paved) and two 12-foot express lanes with a 4-foot inside shoulder and a 10-foot outside shoulder, in each direction. A barrier wall between adjacent shoulders will separate the express lanes from the general use lanes. Additionally, up to three auxiliary lanes in either direction of travel will be provided in some areas. Figure 1.2 and Figure 1.3 illustrate the proposed mainline typical sections for I-4 Segment 2.

While the overall typical section remains consistent throughout Segment 2, there are some areas along the I-4 BtU corridor that will have special sections. Special cross sections were developed to meet the needs of the project due to right-of-way constraints, existing utility easements or other design considerations along the corridor. These special sections may include C-D roads, braided ramp systems, elevated express lanes or elevated general use lanes. Additionally, the median width may vary in certain locations to accommodate changes in the horizontal alignment due to crossroad support structures or other design features. The special sections within the Segment 2 corridor include a C-D system between Central Florida Parkway and SR 528; the eastbound C-D Road is at grade and the westbound C-D Road is elevated. The eastbound C-D Road extends approximately 1.9 miles between SR 528 in Segment 2 and the Daryl Carter Parkway interchange located within Segment 1 of the I-4 BtU corridor. The westbound C-D Road extends approximately 5.9 miles between SR 528 in Segment 2 and the Osceola Parkway interchange located within Segment 1 of the I-4 BtU corridor.

1.4 Purpose and Need

The proposed improvements to I-4 include widening the existing six-lane divided urban interstate to a ten-lane divided highway in order to improve traffic operations, enhance connectivity and improve mobility by providing travel choices to the motoring public. I-4 is an east-west limited access freeway which links the west and east coasts of Florida, from I-275 in Tampa to I-95 in Daytona Beach. I-4 spans across six counties in Central Florida, traversing many cities including Lakeland, Orlando, Altamonte Springs, Sanford and DeLand. I-4 is a critical component of Florida's Strategic Intermodal System (SIS) which links seaports, rail, airports and other intermodal facilities. This aspect of I-4's significance is evidenced through connectivity provided by major junctions with

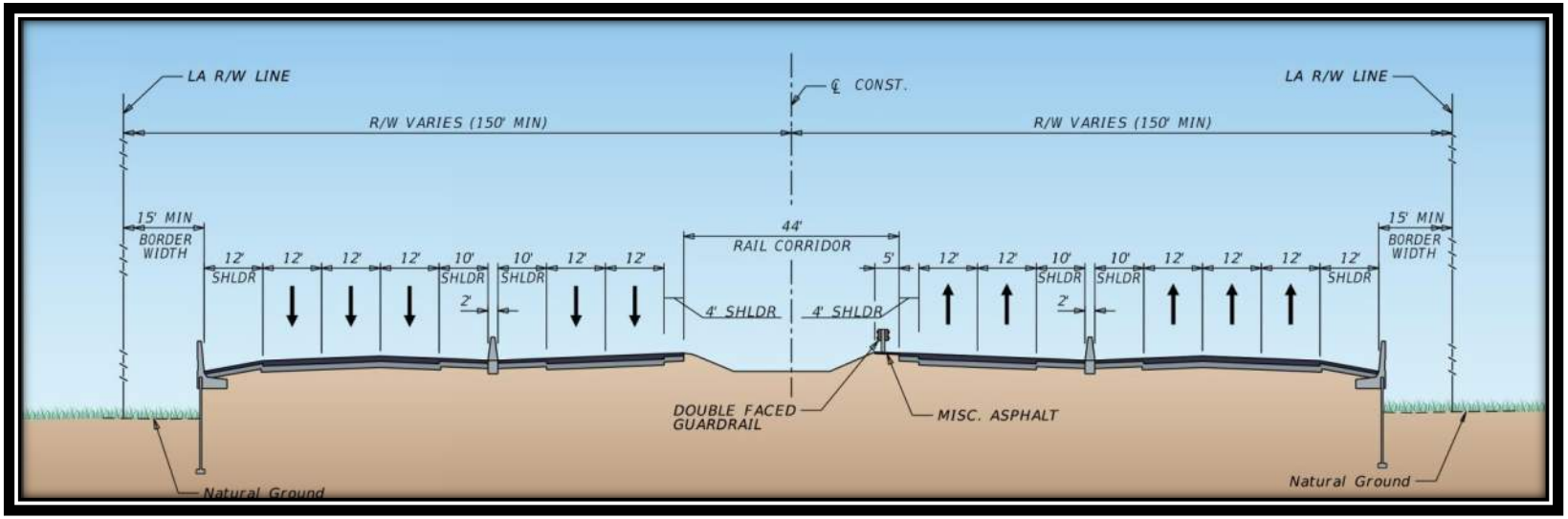


Figure 1.2 - Proposed Typical Section (6 GUL + 4 EL with rail envelope) – E. of Central Florida Pkwy. to SR 528

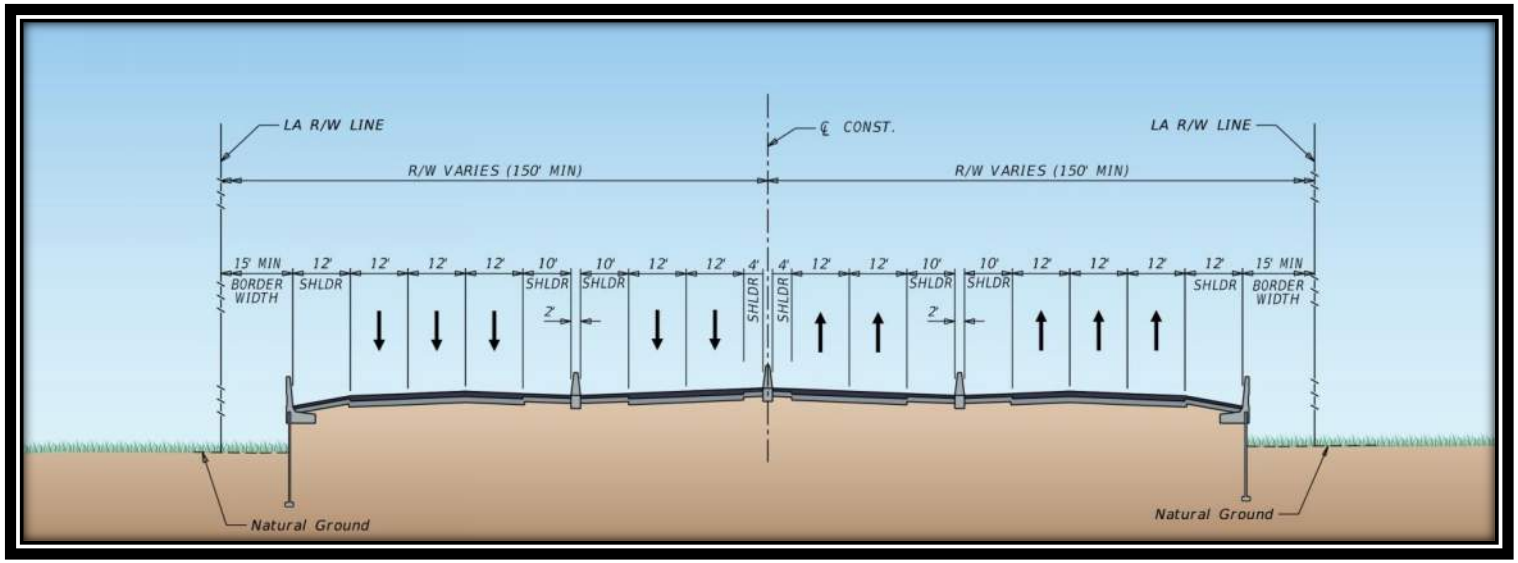


Figure 1.3 - Proposed Typical Section (6 GUL + 4 EL without rail envelope) – SR 528 to W. of SR 435

I-275 and I-75 in the Tampa Bay area, SR 429 (Daniel Webster Western Beltway), SR 417 (Southern Connector/Central Florida Greeneway/Seminole Expressway), SR 528 (Martin Andersen Beachline Expressway), SR 91 (Florida's Turnpike), SR 408 (Spessard Lindsay Holland East-West Expressway) in Central Florida and I-95 on the east coast.

I-4 serves as the primary corridor in the movement of people and freight between major population, employment and activity centers in the Central Florida region. When the entire Interstate was fully opened in the early 1960's, it was designed to serve intrastate and interstate travel by providing a critical link between the east and west coasts of Central Florida. Although this role continues to be a crucial transportation function of I-4, the highway also serves large volumes of local and commuter traffic with shorter trip distances. Today, the highway serves as the primary link between hotel/resort complexes and tourist attractions such as Walt Disney World, Universal Studios, Sea World, the International Drive Resort Area and downtown Orlando. Since I-4 is the only north-south limited access facility that is centrally located between the predominant employment centers and the major suburbs to the north, it has become the primary commuting corridor in the Central Florida metropolitan area.

Growth in Central Florida over the past decades has made it difficult for the transportation system to accommodate travel demand. Additionally, traffic congestion and crash incidents have resulted in major delays on the Interstate as well as other arterials surrounding the corridor. Increased congestion levels are experienced outside of the typical morning and afternoon rush-hour periods, affecting mobility levels for more hours of the day and impacting other non-commuter/non-weekday travel. The congestion on I-4 is further evidenced by the less than desirable levels of service on the Interstate as well as the crossroads.

Projections of future population and employment in the region indicate that travel demand will continue to increase well into the future. Table 1.1 and Table 1.2, respectively, provide a summary of the population and employment growth projections for counties surrounding the I-4 corridor. The ability to accommodate the new travel patterns resulting from growth must be provided to sustain the region's economy. Without the improvements, extremely congested conditions are expected to occur for extended periods of time in both the morning and evening peak periods. Due to these congested conditions, user travel times will continue to increase, the movement of goods through the urban area will be slower, and the deliveries of goods within the urban area will be forced to other times throughout the day.

The need for improvements to I-4 is illustrated by the important transportation roles I-4 serves to the Central Florida region and the State of Florida. If no improvements are made to the Interstate, a loss in mobility for the area's residents, visitors, and commuters can be expected, resulting in a severe threat to the continued viability of the economy and the quality of life.

This PD&E update involves revising the original design concept showing 6 GULs + 2 HOV lanes, as recommended in the FEIS for I-4 from SR 528 to SR 472 (FPN No. 242486, 242592 & 242703, August 2002, Record of Decision Pending), to the current proposed design of 6 GUL + 4 EL. The express lanes are tolled lanes and will extend the full length of the project. The access to/from the tolled lanes will be evaluated as part of this effort to determine if changes are needed from the previously approved concept for access to/from the HOV Lanes.

Table 1.1 – Population Projections for Counties in the I-4 Corridor

	April 1, 2013	2020	2030	2040
Flagler	97,843	124,863	160,705	191,861
Hillsborough	1,276,410	1,445,344	1,666,187	1,845,013
Lake	303,317	355,935	425,221	479,928
Orange	1,202,978	1,394,814	1,641,173	1,840,695
Osceola	288,361	360,478	452,651	532,472
Polk	613,950	691,355	794,061	883,393
Seminole	431,074	465,128	508,329	541,133
Sumter	105,104	138,220	181,846	219,396
Volusia	498,978	529,447	566,999	595,077
Total	4,818,015	5,505,584	6,397,172	7,128,968

Source: Florida Demographic Estimating Conference, February 2014 and the University of Florida, Bureau of Economic and Business Research, Florida Population Studies, Bulletin 168, April 2014

Table 1.2 - Employment Projections for Workforce Regions in the I-4 Corridor

	2014	2022	% Growth
Workforce Region	**Total, All Occupations**		
Flagler & Volusia Counties	200,541	224,127	11.8
Hillsborough County	699,877	789,163	12.8
Polk County	228,559	252,300	10.4
Lake, Orange, Osceola, Seminole and Sumter Counties	1,224,998	1,404,357	14.6

Source: Florida Department of Economic Opportunity

The original I-4 PD&E Studies involved physical separation between the general use lanes and the HOV lanes on I-4, with demand management in the HOV lanes. The original demand management strategy was to control the use of the lanes by requiring a minimum number of occupants per vehicle to maintain an acceptable level of service (Level of Service D). This update also addresses revising the demand management tool to convert the HOV lanes to tolled express lanes. The express lanes will be separated from the general use travel lanes by two shoulders with a barrier wall between the shoulders. A variable pricing tolling plan is proposed for the express lanes. The tolls will vary by time of day and day of week to maintain acceptable levels of service in the express lanes. The tolls will be collected electronically through existing E-Pass, SunPass and other systems

currently in place in the Central Florida area. The conversion to express lanes will maintain the same right-of-way limits as documented previously and will not change the impacts to the social, natural or physical environment. An update to the Systems Access Modification Report (SAMR) prepared in January 2013 is being completed in conjunction with this effort.

2.0 Existing Conditions

The existing conditions within the I-4 study corridor were evaluated by reviewing existing plans and documents, coordination with regulatory agencies and performing field investigations. The following sections provide detailed descriptions of existing roadway characteristics, traffic and bridge features, drainage, soils and other physical features and traffic and crash data within the project study area.

2.1 Roadway Classification

I-4 is classified by FDOT as an Urban Interstate and Strategic Intermodal System (SIS) corridor throughout the limits of Segment 2. I-4 is a designated evacuation route by the Florida Division of Emergency Management.

2.2 Typical Section

The existing typical section for the I-4 mainline consists of three 12-foot travel lanes in each direction. The outside and inside shoulders are 12 feet wide with 10 feet paved. From SR 528 to Sand Lake Road, both the eastbound and westbound directions have a 12-foot auxiliary lane. From Sand Lake Road to Kirkman Road, only the eastbound direction has a 12-foot auxiliary lane. The roadways are separated by a 64-foot median from SR 528 to Sand Lake Road and a varying width median (64- to 180-feet) from Sand Lake Road to Universal Boulevard. The existing right-of-way varies from 300-feet to 330-feet. Figure 2.1 illustrates the existing I-4 typical section.

2.3 Right-of-way

The existing right-of-way varies from 300-feet to 330-feet. The Concept Plans for this project, included in Appendix A, show the existing right-of-way along the corridor.

2.4 Existing Property Lines and Land Use

The existing property lines were obtained from the Orange County GIS database and are shown on the Concept Plans in Appendix A. Parcels affected by the proposed improvements are identified on the Concept Plans. The proposed improvements to the 3.9 mile I-4 corridor Segment 2, primarily lie within unincorporated Orange County, with a small portion of the segment in the City of Orlando as shown in Figure 2.2.

Existing Land Use

The existing land use map, shown in Figure 2.3, was created using information from FDOT 2014 parcel tax data records compiled by the Florida Geographic Data Library (FGDL). The existing land use along the I-4 Segment 2 corridor and within the City limits consists of retail/office, vacant nonresidential, vacant residential and acreage not zoned for agriculture uses. Land uses along the remainder of the corridor and within unincorporated Orange County consist largely of retail/office

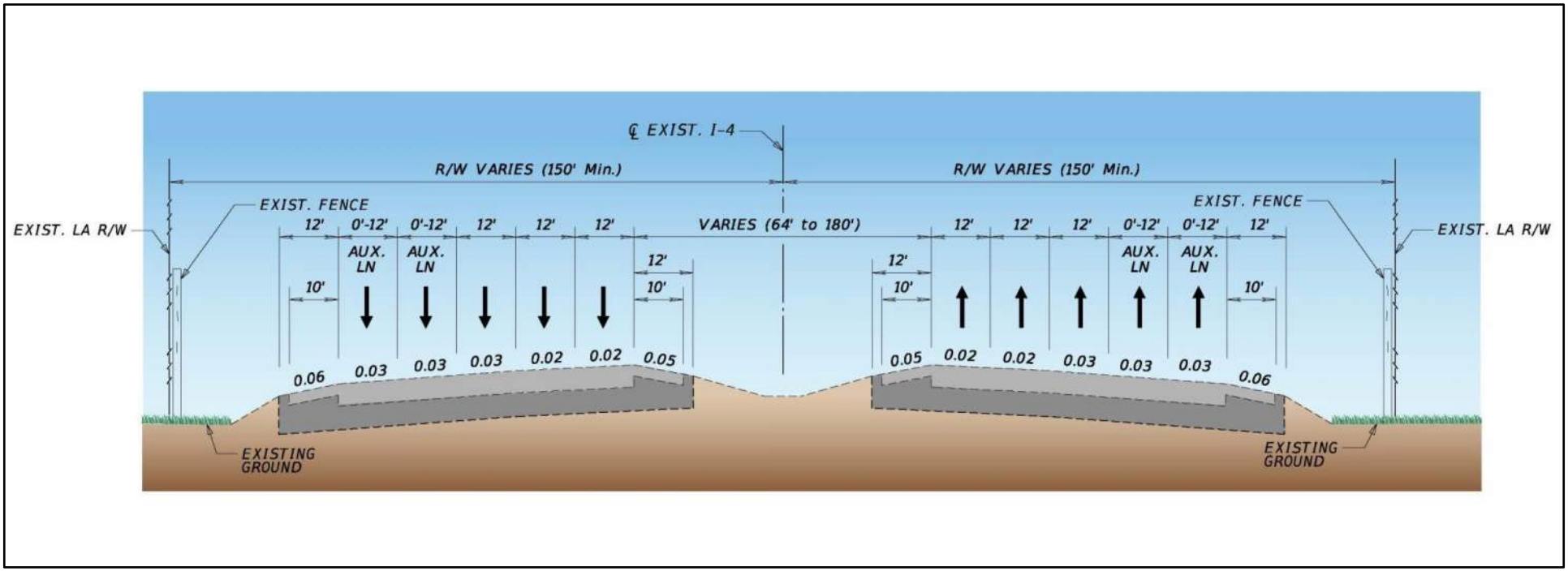


Figure 2.1 - Existing I-4 Typical Section

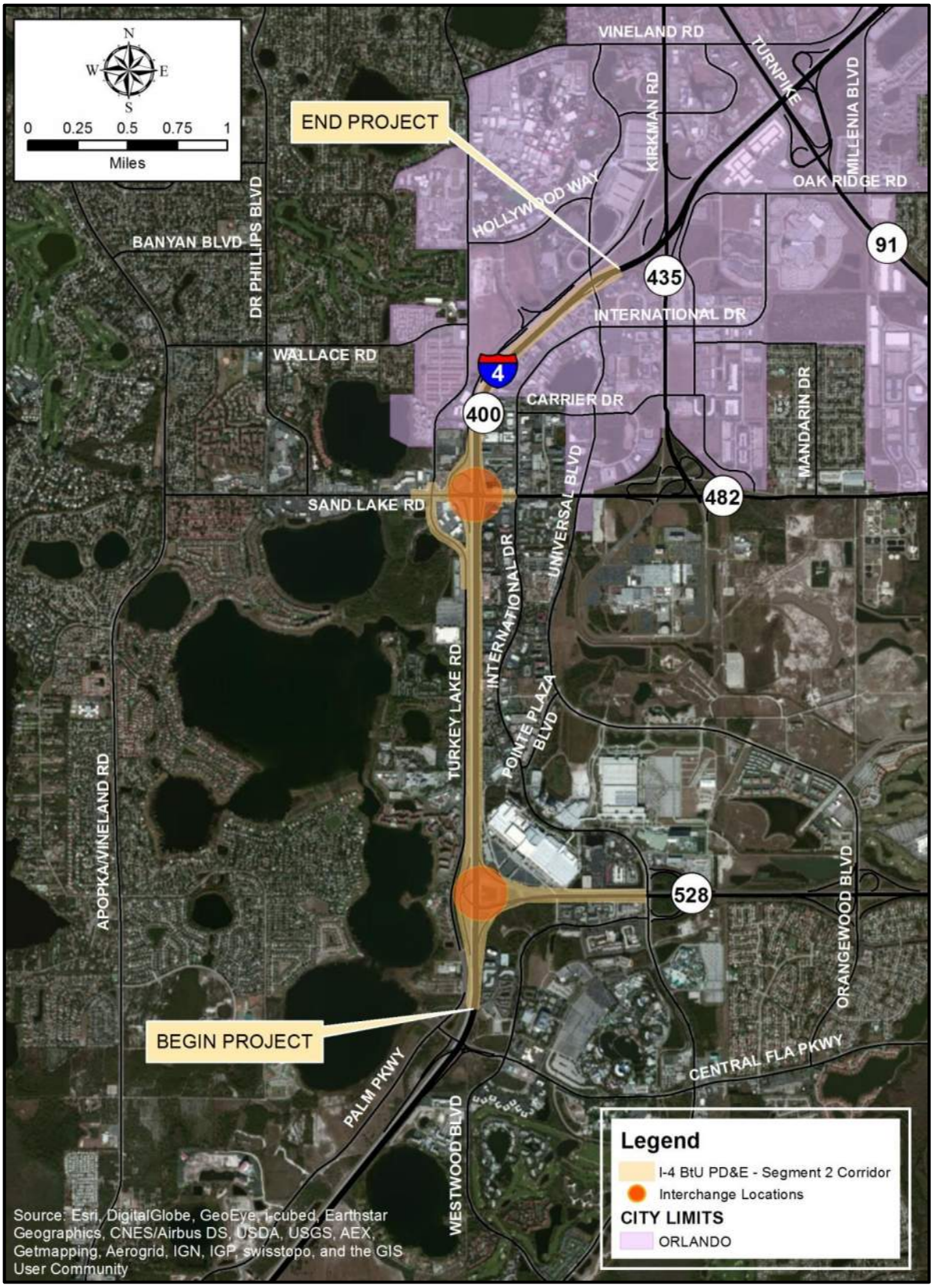


Figure 2.2 - Existing City Limits

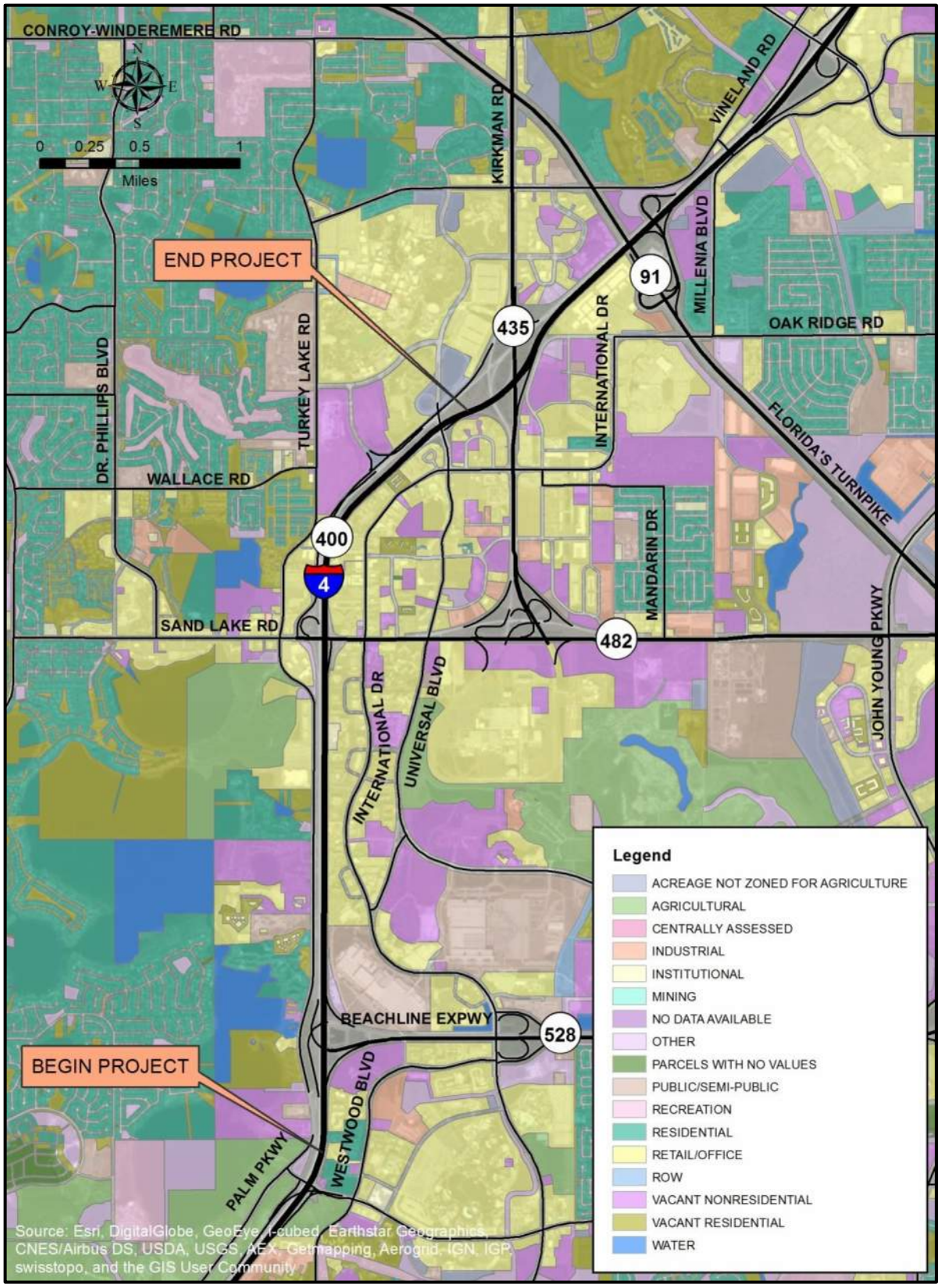


Figure 2.3 - Existing Land Use

and public/semi-public uses on the east side of I-4. The west side of I-4, within unincorporated Orange County, is a mixture of land uses including retail/office, vacant residential and nonresidential uses, some developed residential parcels and agricultural uses.

Future Land Use

The future land use map, shown in Figure 2.4, was created using FGDL future land use data from the adopted comprehensive plan amendments for each municipality within the project's limits Future land use along the I-4 corridor primarily consists of parcels designated for mixed-use on both sides of I-4, between Kirkman Road and Sand Lake Road. South of Sand Lake Road to SR 528, the mixed-use designation continues for parcels east of I-4. Along the west side of I-4, future land use includes commercial, high density residential and institutional.

2.5 Horizontal Alignment

The alignment on I-4 is typical of most interstate highways with long tangent sections connecting long, gradual curves and/or deflection angles, not requiring horizontal curves. There is one horizontal curve located east of Sand Lake Road at Station 1509+61.04 (PI Station from current Concept Plans, Appendix A). The degree of curvature is 02°00'00" to the right and the existing superelevation is 0.05 ft/ft.[1] Based on current design criteria per Table 2.9.1 of the FDOT Plans Preparation Manual, Revised January 2015 (PPM), this curve has a corresponding design speed of 55 mph. The existing pavement cross slope within the project limits has a downward slope of 0.02 ft/ft towards the outside (except in the superelevated sections of roadway). The superelevation rate, e, and radius for this curve are equivalent to a 55-mph design speed. The posted speed at this curve is 55 mph. The curve does not meet current design criteria for a 70-mph design speed, including stopping sight distance criteria. This is both a horizontal and vertical curvature problem. A superelevation of 0.07 is required by today's standards to meet a 70-mph design speed for this curve on this type of facility.

2.6 Vertical Alignment

Table 2.1 summarizes the vertical alignment of I-4 within the corridor study limits and the design speed associated with each curve based on current design criteria. There are 13 vertical curves along Segment 2. Based on the PPM standard for minimum lengths of vertical curves based on stopping sight distance, five crest curves and three sag curves were identified as not meeting today's standard for curve length and/or K-value. The vertical curves at PVI stationing 1405+00, 1434+00, 1451+00, 1480+25, 1505+00, 1513+00, 1537+00, and 1562+00 do not meet the current PPM standards. Reference location stationing is included on the Concept Plans included in Appendix A.

[1] Preliminary Engineering Report for the Interstate 4 (SR 400) Project Development and Environmental Study Section 2, August 2002, FPN: 242486-1, 242592-1,242703-1.

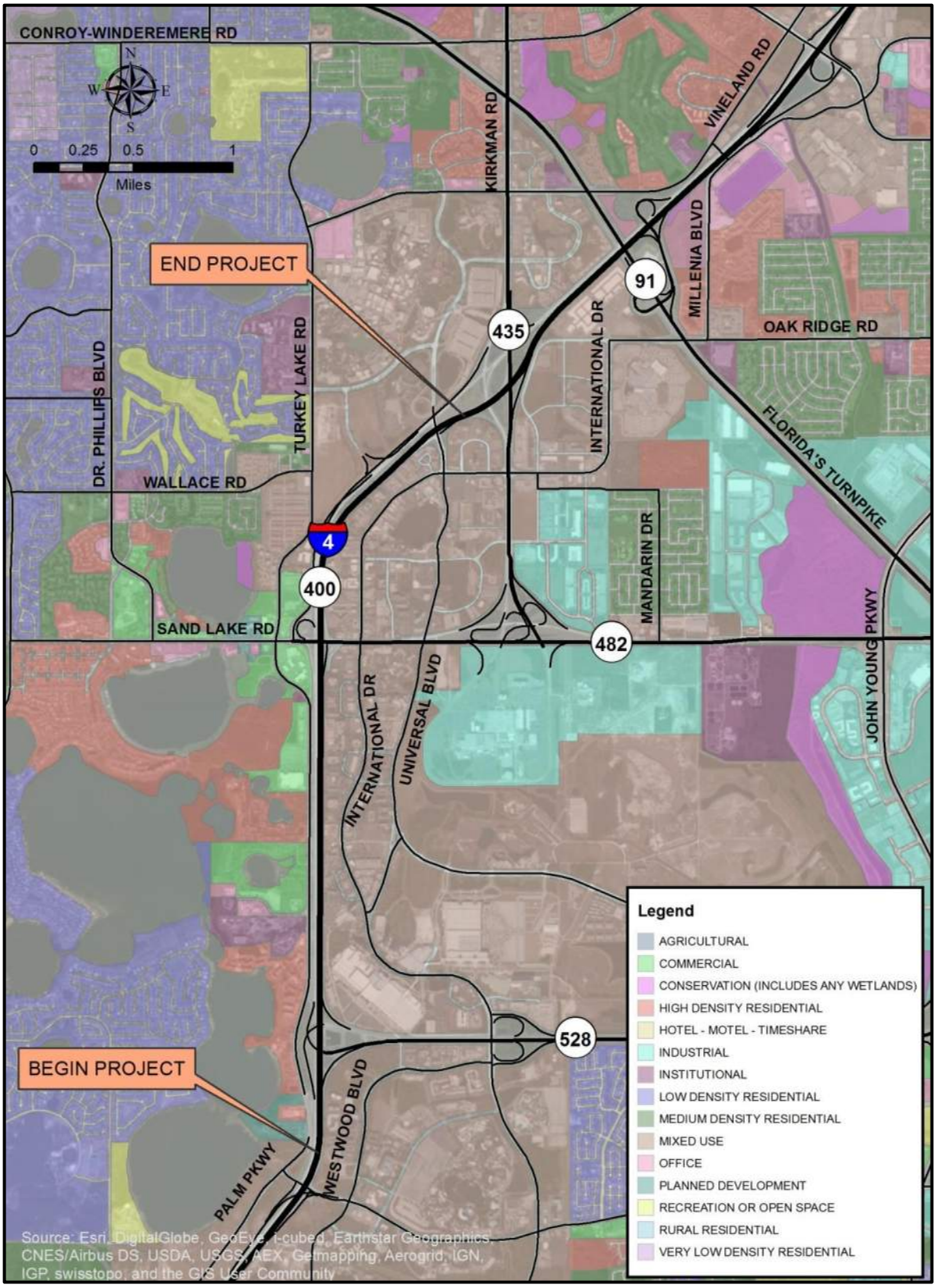


Figure 2.4 - Future Land Use

Table 2.1 - Existing I-4 Vertical Alignments within Segment 2

PVI Station	Location	At Inter-change (Y/N)	Crest or Sag Curve	Grade In (%)	Grade Out (%)	Existing Curve Length (Ft)	Existing K-Value	Equivalent Design Speed
1381+50	SR 528	Y	Sag	0.05	0.137	400	4612.4	70
1405+00		N	Crest	0.137	-0.172	400*	1294.5	70
1434+00		N	Sag	-0.172	0.765	400*	426.8	70
1451+00		N	Crest	0.765	-0.380	400*	349.4	60
1458+00		N	No VC	-0.380	-0.343	-	-	-
1466+75		N	Sag	-0.343	3.000	800	239.3	70
1480+25	Sand Lake Road	Y	Crest	3.000	-2.333	1800*	337.5	60
1492+25		N	Sag	-2.333	0.248	600	232.5	70
1505+00		N	Crest	0.248	-0.413	400*	605.7	70
1513+00		N	Crest	-0.413	-1.207	400*	503.5	65
1522+04.81		N	Crest	-1.207	-1.216	-	-	-
1537+00		N	Sag	-1.216	-0.206	400*	396.1	70
1547+00	Universal Blvd	Y	No VC	-0.206	-0.206	-	-	-
1562+00		N	Sag	-0.206	0.071	400*	1444.9	70
1574+00	SR 435	Y	Crest	0.071	-0.016	400	4621.7	70

*Curve does not meet current criteria per PPM.

2.7 Pedestrian and Bicycle Facilities

I-4 is a limited access interstate facility that accordingly prohibits bicycle and pedestrian traffic. Sidewalks and crosswalks are not provided at the SR 528 interchange. Sand Lake Road provides sidewalks on either side of the road and pedestrians have the ability to use crosswalks located at the I-4 eastbound and westbound ramp terminals. There are no bicycle facilities along Sand Lake Road. At the north end of the Adventure Way interchange, towards Universal Studios, there are crosswalks and sidewalks along the north side of Hollywood Way. At the Universal Boulevard interchange, there are sidewalks and crosswalks along the east side of the road that lead from International Drive to Universal Studios.

2.8 Design and Posted Speed

The design speed for I-4 is 60 miles per hour (MPH) and the posted speed limit along Segment 2 is 55 MPH.

2.9 Lighting

There is continuous lighting in both directions along the I-4 Segment 2 mainline from MP 5.650 to 9.562 except at the following locations:

- Both directions - MP 6.830 to MP 7.485 (0.655 Miles) [Station 1407+78.88 to Station 1442+37.28 on the Concept Plans]
- Eastbound - MP 7.485 to MP 7.885 (0.400 Miles) [Station 1442+37.28 to Station 1463+49.28 on the Concept Plans]

The existing lighting consists of conventional lighting along the mainline, except at the systems interchange at I-4 and SR 528, which has high mast lighting.

2.10 Railroad

There are no railroads located within the project area. A 44' rail corridor has been preserved in the median of I-4 between Tampa and the SR 528 Interchange, west of Orlando.

2.11 Existing Traffic

Existing (2011) traffic information including volume counts, geometry, signal timing plans and other pertinent data for the I-4 Segment 2 study corridor was provided in the *I-4 Beyond the Ultimate Systems Access Modification Report (SAMR) Re-Evaluation: I-4 Beyond the Ultimate Project South Section – from West of US 27 to West of SR 435 (Kirkman Road) [March 2017]*. This data was used to perform operational analyses of existing conditions using the latest VISSIM (Version 7.0) microsimulation software.

2.11.1 Traffic Volumes

Existing traffic volume data consists of year 2011 AM and PM peak hour counts compiled from FDOT's Florida Traffic Information (FTI) database, Florida's Turnpike Enterprise, Orange County count program, other agencies and field data collection. The existing (year 2011) traffic counts for the I-4 Segment 2 study corridor were obtained from the *I-4 Beyond the Ultimate Systems Access Modification Report (SAMR) Re-Evaluation: I-4 Beyond the Ultimate Project South Section – from West of US 27 to West of SR 435 (Kirkman Road) [March 2017]* and are depicted in Figure 2.5 through Figure 2.7.

2.11.2 Intersection Geometry and Signalization

There are three existing interchanges within the limits of I-4 Segment 2. The interchange configurations are depicted in Figure 2.5 through Figure 2.7 and are described in detail in the following sections.

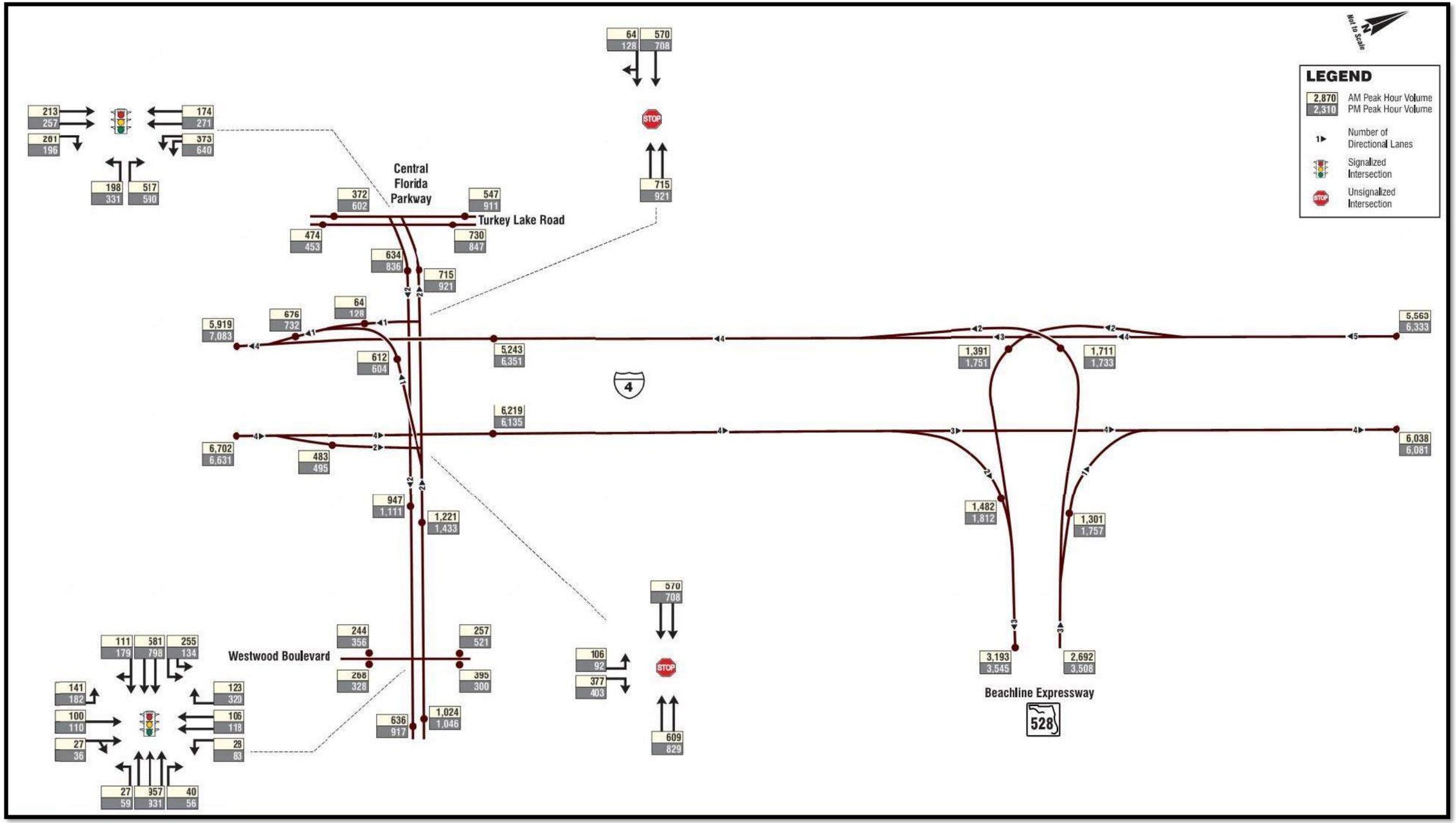


Figure 2.5 - Existing (Year 2011) Peak Hour Traffic Volumes (Sheet 1 of 3)

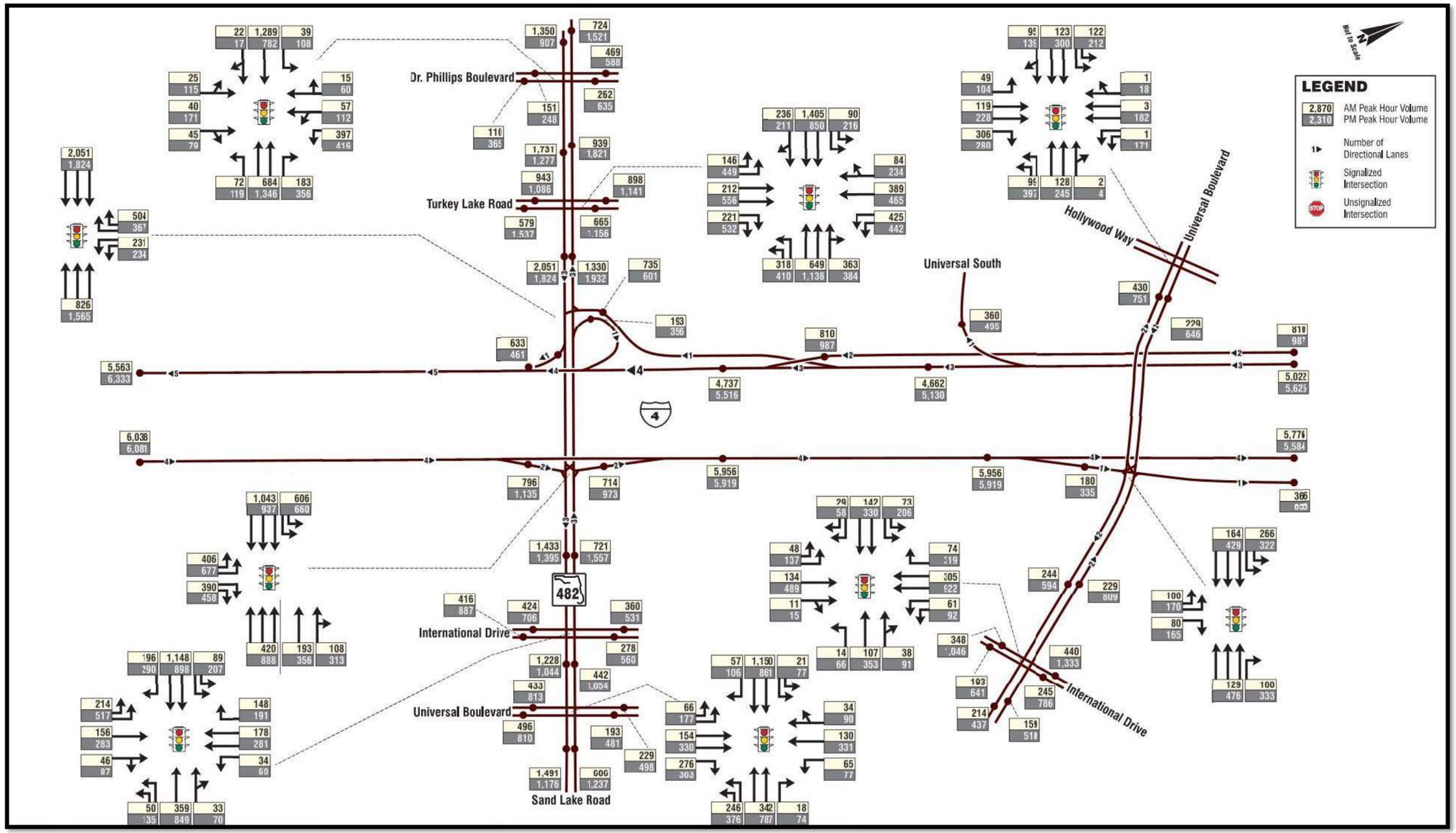


Figure 2.6 - Existing (Year 2011) Peak Hour Traffic Volumes (Sheet 2 of 3)

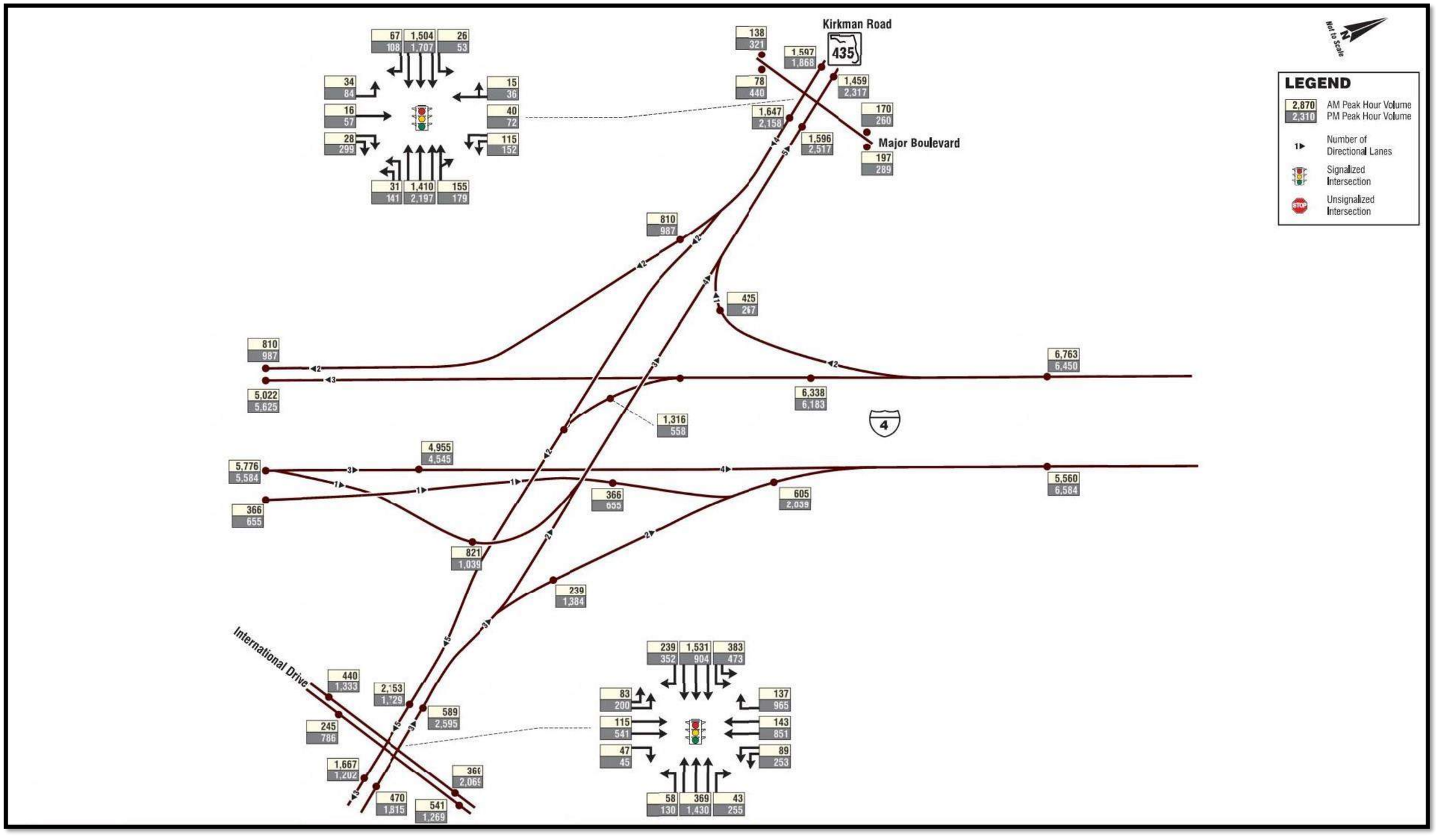


Figure 2.7 - Existing (Year 2011) Peak Hour Traffic Volumes (Sheet 3 of 3)

I-4 and SR 528 Interchange

SR 528 has its westerly terminus at the interchange with I-4, creating a three-leg, directional T-type interchange. The SR 528 west-to-south off ramp (I-4 westbound on-ramp) is a two-lane flyover ramp which passes over mainline I-4 and the I-4 westbound off-ramp. The outside lane ends on the flyover ramp prior to the merge with on-ramp for the I-4 westbound mainline. The I-4 south-to-east off ramp (SR 528 eastbound on-ramp) is a single lane ramp which crosses under the SR 528 westbound off-ramp and over the I-4 mainline.

I-4 and Sand Lake Road Interchange

The I-4 and Sand Lake Road Interchange is a partial cloverleaf interchange with a single loop ramp in the northwest quadrant which provides access from westbound Sand Lake Road onto I-4 westbound. The I-4 westbound off-ramp forms a T-intersection at the signalized ramp terminus. The I-4 eastbound on/off-ramps at Sand Lake Road are controlled by a single traffic signal; a raised median island restricts through movements between the off and on ramps.

I-4 and Universal Boulevard Interchange

Universal Boulevard crosses over the I-4 eastbound and westbound lanes. At this location, access to and from I-4 is provided only in the eastbound direction by way of a signalized intersection at the eastbound ramp terminal on Universal Boulevard. Access to and from Universal Boulevard for I-4 westbound traffic is provided at two locations: via the I-4 the entry/exit ramps at Adventure Way and via the Kirkman Road interchange, approximately 0.4 miles west and 0.5 miles east of the Universal Boulevard overpass, respectively. The Kirkman Road south to I-4 west ramp is a two-lane connector road which runs parallel to the I-4 westbound lanes and is joined by the southbound/westbound Adventure Way ramp before merging with I-4 westbound.

2.11.3 Traffic Operational Analyses

Existing conditions operational analyses were performed for the I-4 mainline and individual intersections using the calibrated VISSIM model (VISSIM, Version 7.0). The results of the operational analyses for I-4 Segment 2 are summarized in Table 2.2 and Table 2.3. The VISSIM intersection node evaluation indicates that the SR 482 (Sand Lake Road) and Turkey Lake Road intersection operates at LOS F during the AM peak hour and the Kirkman Road and International Drive intersection operates at LOS E during the PM peak hour. The link evaluation of freeway segments indicates that average speeds are in the 35-55 mph range near the SR 482 (Sand Lake Road) interchange area during the AM and PM peak hours. Detailed analyses and outputs from the software programs are provided in the supplemental report, *I-4 Beyond the Ultimate Systems Access Modification Report (SAMR) Re-Evaluation: I-4 Beyond the Ultimate Project South Section – from West of US 27 to West of SR 435 (Kirkman Road) [March 2017]*.

Table 2.2 - Intersection Operational Analysis

Primary Road	Secondary Road	Existing AM		Existing PM	
		Delay (sec)	LOS	Delay (sec)	LOS
Sand Lake Rd	Dr. Phillips Blvd	19.2	B	33.1	C
	Turkey Lake Rd	81.7	F	43.2	D
	WB off-ramp	11.4	B	18.3	B
	WB on-ramp	0.5	A	6.1	A
	EB Ramps	35.9	D	36.7	D
	International Dr	25.7	C	37.0	D
	Universal Blvd	27.8	C	40.3	D
Universal Blvd	Hollywood Way	12.0	B	21.3	C
	EB Ramps	13.4	B	18.7	B
	International Dr	14.9	B	31.9	C
Kirkman Rd	Major Blvd	9.3	A	16.1	B
	International Dr	22. 5	C	59.3	E

Intersections operating at or below LOS E.

Table 2.3 - I-4 Mainline Freeway Link Analysis

I-4 Segment 2	Average Speed (mph)	
	AM	PM
I-4 EB at Sand Lake Rd	55.5	38.9
I-4 WB at Sand Lake Rd	56.3	47.3

2.12 Pavement Conditions

Pavement condition surveys for the I-4 PD&E study area are conducted by FDOT and are rated on a scale of zero to 10, with a rating of six or less considered critical. The pavement surface and base conditions on I-4 throughout the study area were rated as "good" to "very good" based on high pavement survey ratings between 6.9 and 8.4. Table 2.4 provides the existing pavement condition ratings for 2013 and forecasted 2018 ratings.

Table 2.4 - Pavement Conditions I-4 - Segment 2

Begin MP	End MP	Side	Crack Rating 2013	Ride Rating 2013	Rut Rating 2013	Crack Rating 2018	Ride Rating 2018	Rut Rating 2018
4.414	5.971	L	9.0	7.9	9.0	7.5	7.6	8
4.585	6.018	R	6.5	7.2	9.0	5	6.9	8
5.971	6.482	L	9.5	8.1	9.0	8	7.8	8
6.018	6.482	R	9.0	7.5	9.0	7.5	7.2	8
6.482	8.264	R	7.5	6.9	9.0	6	6.6	8

Table 2.4 - Pavement Conditions I-4 - Segment 2

Begin MP	End MP	Side	Crack Rating 2013	Ride Rating 2013	Rut Rating 2013	Crack Rating 2018	Ride Rating 2018	Rut Rating 2018
6.482	8.278	L	9.0	7.8	9.0	7.5	7.5	8
8.264	8.844	R	9.0	8.4	9.0	7.5	8.1	8
8.844	9.277	R	9.5	8.2	9.0	7.5	7.9	8
9.277	10.173	R	6.5	7.6	9.0	5	7.3	8
8.278	10.445	L	-	-	-	10	8	9

Source: Florida Department of Transportation, *All System Pavement Condition Forecast* (2013 Ratings)

2.13 Drainage and Hydrology

Existing drainage characteristics in the study area were determined by reviewing FDOT construction plans, the Straight Line Diagrams of Road Inventory, South Florida Water Management District (SFWMD) drainage and permitting files, United States Geological Survey (USGS) Quadrangle Maps, Geographic Information System (GIS) maps, and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Field reviews were also conducted along the corridor. The study area lies within the jurisdiction of SFWMD.

2.13.1 Existing Drainage Patterns

The project is separated into ten drainage basins; all of the basins are open. The basins consist of the pond site and the full right-of-way. The stormwater runoff from the roadway is collected by roadside ditches and cross drains that either discharge to an existing pond or treatment swale for treatment, or discharge directly to the outfall, untreated. Most of the basins discharge to either Big Sand Lake or Little Sand Lake, which both outfall to Shingle Creek. Shingle Creek is not an Outstanding Florida Water (OFW). None of the basins discharge to a nutrient impaired water.

There are three basins (Basins 200, 201 and 202) within the project that discharge to the Central Florida Parkway Canal, which flows to Shingle Creek. In Basin 200, the treatment for the two lanes that were added during the I-4 Auxiliary project was compensated for in dry treatment swales in another area of the original project. In Basin 201, the stormwater runoff from the westbound roadway and ramps discharges untreated and the stormwater runoff from the eastbound lanes flows to the existing pond. In Basin 202, the stormwater runoff from the westbound roadway and ramps discharges untreated and the stormwater runoff from the eastbound lanes flows to an existing pond.

There are two basins (Basins 203 and 204) that serve SR 528 and the corresponding ramps and do not include any runoff from I-4. In Basin 203, the stormwater runoff from the roadway is collected by roadside ditches and flows east, where it discharges untreated to Newover Canal. Basin 204 includes runoff from a portion of International Drive and Back of House Road. Back of House Road

was intended as a temporary road that was built by Orange County to provide an entrance and exit for delivery trucks and shuttle buses. In Basin 204, the stormwater runoff from the roadway is collected by a series of ditches and storm sewer systems that flow to an existing pond, which discharges to Newover Canal.

There is one basin (Basin 205) that discharges to smaller lakes that discharge to Big Sand Lake and ultimately, to Shingle Creek. The stormwater runoff from the roadway on I-4 and the ramps to Sand Lake Road is collected by roadside ditches and cross drains that discharge untreated to two cross drains.

There are two basins (Basins 206 and 207) that discharge to Little Sand Lake and ultimately to Shingle Creek. Two existing ponds were constructed for treatment and attenuation. The stormwater runoff from the roadway is collected by roadside ditches and cross drains that flow to the existing ponds. In Basin 207, the existing pond was constructed over a sinkhole.

In Basin 208, the stormwater runoff from the roadway is collected by roadside ditches and cross drains that flow to an existing pond. Only ramps, not the I-4 mainline, are treated in the existing pond. The pond discharges east to the I-4 median swale, which ultimately drains to Shingle Creek.

In the final basin (Basin 209), the stormwater runoff from the roadway is collected by roadside ditches and cross drains that flow to the future ponds in the I-4 Ultimate project. The ponds are located at the Kirkman Road Interchange, east/north of the project terminus. The ponds were designed as interconnected wet detention ponds and discharge to Shingle Creek. Additional information on existing drainage patterns is presented in the *Pond Siting Report (August 2016).*

2.13.2 Cross Drains

There are three cross drains within the study area. Table 2.5 depicts the existing cross drain data pertinent to the project study area and obtained from the Straight Line Diagram of Road Inventory, as well as, original construction plans. In the case where original construction plans were not found, cross drain invert elevations were obtained from the original PD&E study *(Preliminary Engineering Report for the Interstate 4 (SR 400) Project Development and Environmental Study, Section 2, Orange, Seminole and Volusia County; Project Nos. 242486-1, 242592-1, 242703-1).* Therefore, field verification is needed to determine the upstream and downstream flow elevations for the cross drain located at Milepost 7.409. During the design phase, field verification will be necessary to determine the actual pipe lengths as well. Additional information on drainage conveyance is provided in the supplemental report, *Location Hydraulic Report (August 2016)* prepared for this project.

Table 2.5 - Existing Cross Drains

Milepost	Station	Description from Original Construction Plans						
		Count	Span (in)	Rise (in)	Type	Length (ft)	Elevation[1] (ft NAVD)	
							Left	Right
7.409	1434+46	1	42	42	RCP	230	110.49	110.12
8.028	1467+13	1	36	36	RCP	245	116.61	115.91
8.545	1494+90	1	30	30	RCP	228	130.81	129.11

[1]Upstream and downstream cross drain invert elevation
Abbreviations: RCP – Reinforced Concrete Pipe

2.14 Existing Bridges

Within Segment 2 of the I-4 study corridor, there are three existing bridge structures which cross I-4 and two existing mainline bridge structures which carry I-4 over local roads. There is an additional steel box girder bridge carrying a local road over SR 528 which may be impacted by changes to the I-4 and SR 528 interchange. The existing bridges are listed in Table 2.6 and depicted graphically in Figure 2.8.

2.14.1 Type of Structure

Mainline Bridges - The superstructures of the existing mainline I-4 bridges consist of a cast-in-place concrete deck carried by steel plate girders. The existing bridge features such as, span lengths, deck widths, shoulder/lane widths and superstructure types were summarized in Table 2.6.

Overpass Bridges - The superstructures for the bridges over I-4 consist of steel plate girders or American Association of State Highway and Transportation Officials (AASHTO) prestressed concrete beams.

2.14.2 Current Conditions and Year of Construction

Table 2.7 provides a description of the existing bridges within the I-4 study corridor. This information was obtained from existing plans and the most recent bridge inspection reports. The sufficiency rating is derived from a formula that evaluates factors that are indicative of the structure's ability to remain in service. A rating of 100 percent represents an entirely sufficient bridge and a rating of zero percent represents an entirely deficient bridge. Table 2.7 also provides data on the year of original construction and when the bridges were widened or replaced. This data was obtained from the most recent bridge inspection reports or approximated from the dates of the existing plans. The Sand Lake Road bridges were originally constructed in 1991. Neither of the Sand Lake Road bridges is classified as "functionally obsolete" or "structurally deficient." Both of the mainline bridges have a structural sufficiency rating above 90. Likewise, both bridges

carrying SR 528 as well as the bridge carrying Universal Boulevard over the mainline have a structural sufficiency rating above 90.

Table 2.6 - Existing Bridge Structures

Facility	Bridge No.	No. Of Spans	Bridge Length (Ft)[1]	Max Span Length (Ft)[1]	Deck Width (Ft)	Lane/ Shoulder Widths (Ft)	Super-Structure Type
SR 528 EB Over I-4	750180	4	307.1	107.0	30.2[1]	6' inside shldr. 1 lane @ 12' 6' outside shldr.	AASHTO Concrete Beam
SR 528 WB Over I-4	750087	8	621.1	101.4	43.08[1]	6' inside shldr. 2 lanes @ 12' 10' outside shldr.	AASHTO Concrete Beam
I-4 EB Over SR 482 (Sand Lake Road)	750336	1	164.7	164.7	58.7[1]	10' inside shldr. 3 lanes @ 12' 10' outside shldr.	Steel Plate Girder
I-4 WB Over SR 482 (Sand Lake Road)	750335	1	164.7	164.7	84.6[1]	10' inside shldr. 5 lanes @ 12' 10' outside shldr.	Steel Plate Girder
Universal Boulevard Over I-4[2]	750485	3	655.2	229.0	130.1	8' shldr. 7 lanes @ 12' 8' shldr. 8' sidewalk	Steel Plate Girder
West Entrance Drive Over SR 528	754128	5	944.8	205	42.0	7.5' sidewalk, 6' shldr., 2 lanes @ 11', 2.5' shldr.	Steel Box Girder

[1]Plans for bridge are not available. Data taken from Bridge Inspection Reports.
[2]Originally Republic Drive per existing bridge plans.



Figure 2.8 - Existing Bridge Locations

Table 2.7 - Current Structure Condition and Year of Construction

Facility	Bridge No.	Sufficiency Rating	Overall NBI Rating[1]				Year Built[2]	Year Replaced/ Widened[2]
			Deck	Superstr.	Substr.	Channel		
SR 528 EB Over I-4	750180	93.0	7	7	7	N/A	1973	N/A
SR 528 WB Over I-4	750087	96.5	7	7	7	N/A	1973	N/A
I-4 EB Over SR 482 (Sand Lake Road)	750336	98.0	7	7	7	N/A	1991	N/A
I-4 WB Over SR 482 (Sand Lake Road)	750335	98.0	7	7	7	N/A	1991	N/A
Universal Boulevard Over I-4 [3]	750485	99.1	7	7	7	N/A	1998	N/A
West Entrance Drive Over SR 528	754128	96.3	N/A	N/A	N/A	N/A	2003	N/A

[1] National Bridge Inventory (NBI) Rating: 9- Excellent; 8- Very Good; 7- Good; 6- Satisfactory; 5 – Fair
[2] Construction and widening years obtained from Bridge Inspection Reports.
[3] Originally Republic Drive per existing bridge plans.

2.14.3 Horizontal and Vertical Alignments of Structures

Existing clearances less than 16.5 feet are undesirable over the Interstate. The facilities carrying SR 528 over the mainline do not meet the minimum vertical clearance threshold while the facility carrying Universal Boulevard over the mainline provides adequate vertical clearance. Table 2.8 presents the pier locations and horizontal clearances for each of the bridges. Table 2.9 summarizes the vertical curve data at each location. Table 2.10 provides the vertical clearance information at each structure.

2.14.4 Span Arrangement

The existing span arrangement (number and length of spans) of the bridges within the project limits were previously listed in Table 2.6.

Table 2.8 - Horizontal Clearances at Bridges

Facility	Bridge No.	Horizontal Clearance to Substructure
SR 528 EB Over I-4	750180	30’clear to Pier 2
SR 528 WB Over I-4	750087	29.8’ clear to Pier 6
I-4 EB Over SR 482 (Sand Lake Road)	750336	13.0’ and 5.5’ clear to wall at End Bents 1 and 2
I-4 WB Over SR 482 (Sand Lake Road)	750335	13.0’ and 5.5’ clear to wall at End Bents 1 and 2
Universal Boulevard Over I-4[1]	750485	8’ clear to Pier 3 and wall at End Bent 4
West Entrance Drive Over SR 528	754128	16’ to EB 6, 17.6’ to Pier 3

[1]Originally Republic Drive per existing bridge plans.

Table 2.9 - Vertical Curve Data at Bridges

Facility	Bridge No.	Vertical Curve Length	Vertical Curve Grade In/Grade Out
SR 528 EB Over I-4	750180	600’	+3.00%/-2.520%
SR 528 WB Over I-4	750087	700’ (crest)	+3.50%/-3.50%
		500’ (sag)	-3.50%/-2.32%
I-4 EB Over SR 482 (Sand Lake Road)	750336	1800’	+3.00%/-2.333%
I-4 WB Over SR 482 (Sand Lake Road)	750335	1800’	+3.00%/-2.333%
Universal Boulevard Over I-4[1]	750485	900’	+2.750%/-5.000%
West Entrance Drive Over SR 528	754128	500	+4.800%/-3.162%
[1]Originally Republic Drive per existing bridge plans.			

Table 2.10 - Vertical Clearances at Bridges

Location	Bridge No.	Vertical Clearance
SR 528 EB Over I-4	750180	16.4
SR 528 WB Over I-4	750087	16.4
I-4 EB Over SR 482 (Sand Lake Road)	750336	17.1
I-4 WB Over SR 482 (Sand Lake Road)	750335	16.7
Universal Boulevard Over I-4[1]	750485	16.7
West Entrance Drive Over SR 528	754128	17.1
[1]Originally Republic Drive per existing bridge plans.		

2.14.5 Historical Significance

Existing bridges in Segment 2 of the I-4 study corridor carry no historical significance. Thus, this section is not applicable to this project.

2.14.6 Channel Dimensions

No water crossings exist in Segment 2 of the I-4 study corridor. Thus, this section is not applicable to this project.

2.14.7 Bridge Openings

Since the I-4 widening project does not involve any moveable bridges that fall within the study limits, this section is not applicable to this project.

2.14.8 Ship Impact Data

No water crossings exist in Segment 2 of the I-4 study corridor. Thus, this section is not applicable to this project.

2.15 Crash Data

The five-year crash data, between 2008 and 2012, was analyzed for the I-4 segment between west of SR 528 and west of Kirkman Road. The crash data was downloaded from the FDOT Crash Analysis Reporting System (CARS) system. The crash data includes data for the I-4 mainline as well as the ramps. The five-year crash data analysis showed that there were 575 crashes in the last five years within the I-4 Segment 2 study area. Out of those 575 crashes, there were four fatal crashes, 292 injury crashes and 279 property damage only crashes. Table 2.11 shows the summary of crashes by severity within the study area. Figure 2.9 shows the crash distribution by severity along the I-4 Segment 2 mainline within Orange County.

During the five-year study period, the highest numbers of crash events were rear end crashes (221 crashes) followed by angle collisions (63 crashes) and hitting guard rail (46 crashes). The highest numbers of contributing causes were careless driving (308 crashes) followed by improper lane change (70 crashes). Table 2.12 provides a summary of the types of crashes within the study area and Table 2.13 provides a summary of contributing causes.

Rear end collisions represent approximately 38% (221 crashes) of the total crashes occurring along the I-4 Segment 2 study corridor for the five-year period analyzed. Nearly half (106 crashes) of the rear end collisions occurred during "clear" weather conditions, approximately 62% (137 crashes) occurred on dry roadway surface conditions and approximately 61% (134 crashes) occurred during daylight lighting conditions. This data indicates that the high occurrence of rear end collisions may be due to peak periods of heavy congestion along the corridor.

As part of the crash data analysis, the FDOT District 5 High Crash Roadway Segments list was reviewed. Within I-4 Segment 2, the sections identified as high crash segments are summarized in Table 2.14. The actual crash rates on these segments were greater than the average statewide crash rate for urban interstate facility type for each of the five years of data analyzed.

Table 2.11 – Crash Severity Summary

Crash Severity	2008	2009	2010	2011	2012	Total
Fatal	-	2	1	-	1	4
Injury	46	53	63	51	79	292
Property Damage Only	48	50	65	45	71	279
Total	94	105	129	96	151	575

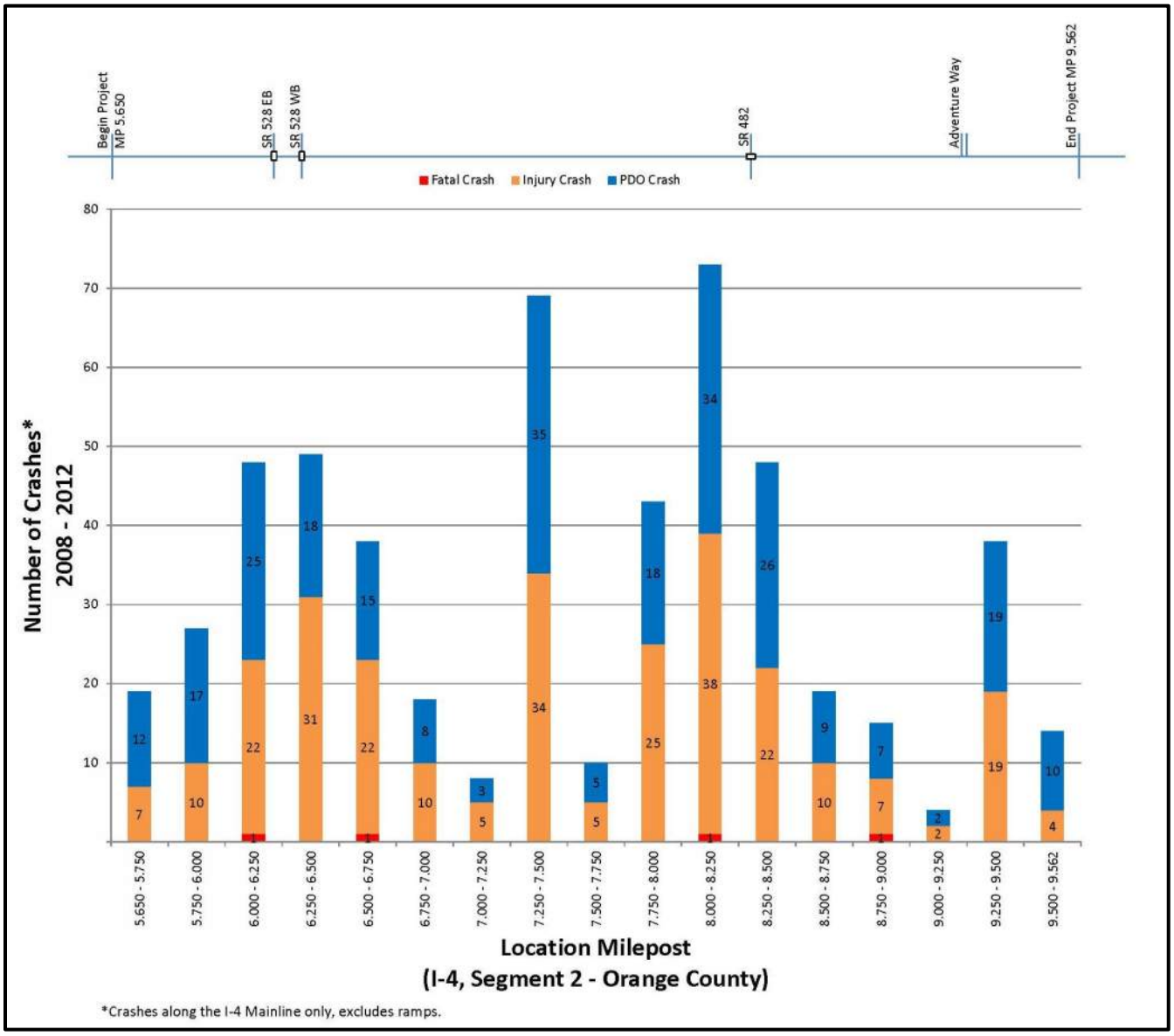


Figure 2.9 - Crash Distribution Along I-4 Segment 2 Corridor

Table 2.12 - Crash Event Summary

Harmful Event	2008	2009	2010	2011	2012	Total
All Other	10	7	7	6	11	41
Angle	15	13	15	8	12	63
Cargo Loss or Shift	1		2	1	1	5
Collision with Motor Vehicle on Road	2	1	12	8	14	37
Head-On	-	2	1	1	1	5
Hit Br/Pier/Abutment	-	-	-	1	-	1
Hit Concrete Barrier Wall	1	1	3	-	-	5
Hit Fence	-	-	1	-	1	2
Hit Guardrail	9	7	15	5	10	46
Hit Sign/Sign Post	-	2	-	-	1	3
Hit Tree/Shrub	-	1	1	-	-	2
Hit Utility Pole	-	1	-	-	-	1
Moveable Object	-	-	-	-	1	1
Occupant Fell from Vehicle	-	1	-	-	-	1
Overturned	9	1	7	5	6	28
Parked Car	1	1	-	1	1	4
Ran into Ditch/Culvert	2	1	2	2	-	7
Rear End	30	41	44	36	70	221
Sideswipe	11	19	14	-	-	44
Unknown/Not Coded	3	6	5	22	22	58
Total	94	105	129	96	151	575

Table 2.13 - Contributing Cause Summary

Contributing Cause	2008	2009	2010	2011	2012	Total
Alcohol/Drugs-Under Influence	1	-	-	-	-	1
Alcohol-Under Influence	2	1	1	-	-	4
All Other	9	3	7	10	28	57
Careless Driving	48	61	71	48	80	308
Disregarded Traffic Signal	1	-	-	-	-	1
Exceeded Safe Speed Limit	3	1	2	3	2	11
Failed to Maintain Equipment	1	1	2	-	-	4
Followed Too Closely	-	-	2	-	3	5
Failed to Yield Right-of-way	-	2	1	1	2	6
Improper Backing	-	-	1	1	-	2
Improper Lane Change	18	25	27	-	-	70
Improper Load	1	-	3	-	-	4
Improper Passing	2	-	2	-	-	4
No Improper Driving	6	7	8	10	14	45
Obstructing Traffic	1	-	1	-	-	2
Unknown/Not Coded	1	4	1	23	22	51
Total	94	105	129	96	151	575

Table 2.14 - High Crash Segment Summary

Year	Begin MP	End MP	Total # Crashes	ADT	Crash Rate	Average Statewide Crash Rate (Urban Interstate)
2008	7.200	7.300	13	166,481	2.139	0.417
	8.200	8.400	12	166,481	0.987	
2009	7.200	7.300	12	157,791	2.083	0.477
	8.200	8.400	14	157,791	1.215	
2010	6.400	6.600	14	163,974	1.169	0.519
	7.200	7.300	11	163,974	1.837	
	8.000	8.100	11	163,974	1.837	
2011	-	-	-	-	-	0.458
2012	6.000	6.200	12	135,500	1.213	0.497
	6.500	6.700	16	164,143	1.335	
	8.000	8.400	31	139,500	1.522	
	9.300	9.400	8	132,045	1.659	
-Milepost locations within I-4 Segment 2 do not appear on the "High Crash Roadway Segments for 2011" list.						

The following milepost locations within I-4 Segment 2 occur on the High Crash Roadway Segment list for three or more years of the five-year period from 2008 to 2012:

- MP 7.200 – MP 7.300
- MP 8.200 – MP 8.400

2.16 Utilities

The utilities located within the right-of-way were identified through the use of existing plans and by sending plans to all of the utility companies identified via the Sunshine State One call system. Table 2.15 provides a list of the utility companies and contact information. Table 2.16 provides approximate locations of the major utilities that are within the project corridor. The easements by utility type and owner are shown in the Concept Plans (Appendix A).

Table 2.15 - Utility Contact information

Utility	Contact Name	Address	Phone	E-Mail
American Traffic Solutions	Alfredo Arroyo	2719 Causeway Center Dr. Tampa, FL 33619	(813) 380-8565	alfredo.arroyo@atsol.com
AT&T Florida	Alan Reynolds	5100 Steyr Street Orlando, FL 32819	(407) 351-8180	AR2916@att.com
BrightHouse Networks	Marvin Usry	3767All American Blvd. Orlando, FL 32810	(407) 532-8509	Marvin.usry@mybrighthouse.com
City of Orlando	Jim Hunt	400 South Orange Ave. Orlando, FL 32810	(407) 246-3623	Jim.hunt@cityofolrando.net
CenturyLink	Jeff Griffin	33 N. Main St. Winter Garden, FL 34787	(407) 814-5344	Jeff.w.griffin@centurylink.com
Comcast Communications	Cesar Rivera	4305 Vineland Rd. Suite G-2 Orlando, FL 32811	(407) 849-3611	cesar_rivera@cable.comcast.com
Duke Energy-Distribution	Sharon Dear	3300 Exchange Place NP4A Lake Mary, FL 32746	(407) 942-9421	sharon.dear@duke-energy.com
Duke Energy-Transmission	Jennifer Williams	20525 Amberfield Drive Suite 201 Land O' Lakes, FL 34638	(813) 909-1210	jewilliams@ucseng.com
Enterprise Community Development District	Brian Smith	610 Sycamore St. Suite 140 Celebration, FL 34747	(407) 566-1935	brsmith@severntrentms.com
Florida Power and Light	Pete Washio	700 Universe Blvd. Department TS4/JW Juno Beach, FL 33408	(561) 904-3693	peter.h.washio@fpl.com
The Golf Channel	Bob Van Deering	7580 Golf Channel Dr. Orlando, FL 32819	(407) 355-4434	bvandeering@golfchannel.com

Table 2.15 - Utility Contact information

Utility	Contact Name	Address	Phone	E-Mail
Hotwire Communications	Marty Mohr	10360 USA Today Way Miramar, FL, 33205	(954) 628-7021	-
Level 3 Communications	Richard Simonton	380 S. Lake Destiny Dr. Orlando, FL 32810	(407) 254-9720	richard.simonton@level3.com
Orange County Utilities	Randy Brown	9150 Curry Ford Rd. Orlando, FL 32825	(407) 254-9720	edwin.brown@ocfl.net
Orlando Utilities Commission	Ric Dy-Liacco	100 W. Anderson St. Orlando, FL 32801	(407) 236-9651	rydyliacco@ouc.com
Smart City Solutions	David Cawley	3100 Bonnet Creek Rd. Lake Buena Vista, FL 32830	(407) 828-6648	dcawley@smartcity.com
TECO Peoples Gas	Bruce Stout	600 W. Robinson St. Orlando, FL 32801	(407) 420-2678	bstout@tecoenergy.com
Transcore	Eric Gordin	Milepost 263 Ocoee, FL 34761	(407) 264-3316	Eric.gordin@dot.state.fl.us
TW Telecom	Sean Moss	485 N. Keller Rd. Suite 551 Maitland, FL 32751	(407) 215-6895	sean.moss@twtelecom.com
Verizon	John McNeil	210 Recker Highway Auburndale, FL 33823	(863) 965-6438	John.mcneil@verizon.com
Water Conserv II	Phil Cross	17498 McKinney Rd. Winter Garden, FL 34787	(407) 656-2332	phil.cross@waterconservii.com

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Communication	American Traffic Solutions	2" Conduit	Crossing at intersection of International Dr. & Kirkman Rd.	West side of intersection
Communication	American Traffic Solutions	2" Conduit	Crossing at intersection of International Dr. & Kirkman Rd.	East side of intersection
Communication	American Traffic Solutions	Underground Telephone	Crossing at intersection of International Dr. & Kirkman Rd.	East side of intersection
Communication	American Traffic Solutions	Underground Telephone	From 240-ft north to 240-ft south of intersection of International Dr. & Kirkman Rd.	East side of road
Communication	ATT	Underground Fiber Optic	Crossing at intersection of Sand Lake Rd & International Dr.	West side of intersection
Communication	ATT	Underground Fiber Optic	From intersection of Sand Lake Rd & I-4 eastbound ramp to Sand Lake Rd east to intersection of International Dr. & Sand Lake Rd	South side of road
Communication	ATT	Underground Fiber Optic	From I-4 westbound ramp to Kirkman Rd northbound to 730-ft south of intersection of Major Blvd & Kirkman Rd	East side of road
Communication	ATT	Underground Fiber Optic	Two crossings of Kirkman Rd 730-ft south of intersection of Major Blvd & Kirkman Rd	N/A
Communication	ATT	Underground Fiber Optic	From 490-ft north to 1360-ft north of intersection of International Dr. & Kirkman Rd	East side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Communication	Comcast	Aerial Fiber Optic	From 230-ft east of intersection of Della Dr. & Sand Lake Rd east on Sand Lake Rd to 470-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	South side of road
Communication	Comcast	Aerial Fiber Optic	From 350-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd	North side of road
Communication	Comcast	Aerial Fiber Optic	Crossing at intersection of Turkey Lake Rd. & Sand Lake Rd.	West side of intersection
Communication	Comcast	Aerial Fiber Optic	From 750-ft west of intersection of International Dr. & Sand Lake Rd to intersection of Universal Blvd & Sand Lake Rd	North side of road
Communication	Comcast	Aerial Fiber Optic	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side of intersection
Communication	Comcast	Aerial Fiber Optic	From intersection of Universal Blvd & Sand Lake Rd east on Sand Lake Rd to 250-ft west to station 135+00 on Sand Lake Road	Center of road
Communication	Comcast	Underground Fiber Optic	Crossing of I-4 Corridor at Sand Lake Rd, I-4 Corridor underpass	West side of underpass
Communication	Comcast	Underground Fiber Optic	From 890-ft west to 230-ft east of intersection of Della Dr. & Sand Lake Rd.	South side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Communication	Comcast	Underground Fiber Optic	Crossing 470-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	N/A
Communication	Comcast	Underground Fiber Optic	From 470-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd on Sand Lake Rd to 290-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road
Communication	Comcast	Underground Fiber Optic	Crossing of Sand Lake Rd 750-ft west of intersection of International Dr. & Sand Lake Rd	N/A
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing of Sand Lake Rd. 670-ft west of intersection of International Dr. & Sand Lake Rd.	N/A
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing at intersection of International Dr. & Sand Lake Rd.	North side of intersection
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing at intersection of Canada Ave. & Sand Lake Rd.	North side of intersection
Communication	Level 3 Communication	Aerial Fiber Optic	From intersection of Canada Ave. & Sand Lake Rd. to station 135+00 on Sand Lake Road	Varies from north to center to south side of road
Communication	Level 3 Communication	Aerial Fiber Optic	From 370-ft east of intersection of Universal Blvd. & Sand Lake Rd. to station 132+50 on Sand Lake Road	Center of road
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing on Sand Lake Rd. at station 132+50	N/A

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of intersection
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at SR 528, International Dr. Underpass	West side of underpass
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From intersection of Turkey Lake Rd. & Sand Lake Rd. to 500-ft west of intersection of International Dr. & Sand Lake Rd. on Sand Lake Rd.	North side of road
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing 500-ft west of intersection of International Dr. & Sand Lake Rd.	West of intersection
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From 500-ft west of intersection of International Dr. & Sand Lake Rd. to intersection of Universal Blvd & Sand Lake Rd. on Sand Lake Rd.	South side of road
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Universal Blvd. & Sand Lake Rd.	West side of intersection
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Universal Blvd. & Sand Lake Rd.	West side of intersection
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Carrier Dr. & Universal Blvd	South side of intersection
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From 600-ft south of intersection of International Dr. & Kirkman Rd. to Intersection of Carrier Dr. & Kirkman Rd.	East side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	Crossing at intersection of Vineland Rd. & Kirkman Rd	North side of intersection
Communication	Level 3 Communication	1.25" Underground Fiber Optic	Crossing 1850-ft east of SR 528, I-4 Underpass	N/A
Communication	Level 3 Communication	1.25" Underground Fiber Optic	Crossing 1900-ft east of SR 528, I-4 Underpass	N/A
Communication	Level 3 Communication	2-1.25" Underground Fiber Optic	Crossing at intersection of International Dr. & Universal Blvd.	South side of intersection
Communication	SmartCity Solutions	Unknown Size Underground Fiber Optic	Crossing at SR 528, International Dr. Underpass	East side of underpass
Communication	TW Telecom	2.25" Underground Fiber Optic	Two Crossings at intersection of International Dr. & Universal Blvd	South side of intersection
Communication	Verizon (MCI)	Unknown Size Underground Fiber Optic	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side of intersection
Communication	Verizon (MCI)	Unknown Size Underground Fiber Optic	Crossing at intersection of Carrier Dr. & Universal Blvd	East side of intersection
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	From end of project limit on Universal Blvd north to intersection of Carrier Dr. & Universal Blvd	East side of road
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	From 1120-ft north of intersection of International Dr. & Kirkman Rd north to I-4 Corridor	East side of road
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	From 730-ft north of Kirkman Rd, I-4 Corridor north to intersection of Major Blvd & Kirkman Rd	East side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	Crossing at intersection of Vineland Rd. & Kirkman Rd	South side of intersection
Communication	Verizon (MCI)	Unknown Size Aerial Fiber Optic	Crossing at intersection of Vineland Rd. & Kirkman Rd	West side of intersection
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 1090-ft west of to 730-ft west of International Dr., SR 528 underpass	North side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two crossings of SR 528 Corridor at International Dr., SR 528 underpass	West side of underpass
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 1000-ft east of to 1750-ft east of International Dr., SR 528 underpass	South side of road, following ramp
Electricity	Duke Energy Distribution	13 KV Underground Electric	Three crossings of SR 528 Corridor 2070-ft east of International Dr., SR 528 underpass	N/A
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 880-ft west of intersection to intersection of Della Dr. & Sand Lake Rd on Sand Lake Rd	South side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From intersection of Della Dr. & Sand Lake Rd east to intersection of Dr. Phillips Blvd & Sand Lake Rd on Sand Lake Rd	North side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two lines from 900-ft west of to intersection of Dr. Phillips Blvd & Sand Lake Rd on Sand Lake Rd	North side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Electricity	Duke Energy Distribution	13 KV Underground Electric	From station 1339+00 on I-4 Corridor east to 1970-ft feet west of Sand Lake Rd, I-4 Corridor underpass	West side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 2120-ft west of to Sand Lake Rd & I-4 Corridor underpass on I-4 Corridor	East side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From Sand Lake Rd, I-4 Corridor underpass east on I-4 for 3290-ft	East side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 120-ft east of SR 528 westbound ramp to I-4 westbound east on I-4 Corridor for 1540-ft	East side of road
Electricity	Duke Energy Distribution	13 KV Underground Electric	Crossing at intersection of Sand Lake Rd & I-4 westbound to Sand Lake Rd	Diagonally across intersection
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	Two lines from 730-ft west of to 250-ft west of International Dr., SR 528 underpass	North side of road
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	Crossing of Sand Lake Rd, 300-ft west of intersection of Della Dr. & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	From 300-ft west of to intersection of Della Dr. & Sand Lake Rd	North side of road
Electricity	Duke Energy Distribution	7.2 KV Underground Electric	Crossing at intersection of Della Dr. & Sand Lake Rd	North side of intersection
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing of Sand Lake Rd, 300-ft west of intersection of Della Dr. & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	120 V Underground Electric	From 300-ft west of to intersection of Della Dr. & Sand Lake Rd	North side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Electricity	Duke Energy Distribution	120 V Underground Electric	From 880-ft west of to intersection of Della Dr. & Sand Lake Rd	South side of road
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing of Sand Lake Rd, 500-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	120 V Underground Electric	From intersection of Dr. Phillips Blvd & Sand Lake Rd east on Sand Lake Rd for 1370-ft	North side of road
Electricity	Duke Energy Distribution	120 V Underground Electric	From 500-ft east of to 1600-ft east of intersection of Dr. Phillips Blvd & Sand Lake Rd	South side of road
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing of Sand Lake Rd 1600-ft east of intersection of Turkey Lake Rd & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	120 V Underground Electric	From 260-ft west of to intersection of International Dr. & Sand Lake Rd	North side of road
Electricity	Duke Energy Distribution	120 V Underground Electric	From 350-ft west of intersection to intersection of International Dr. & Sand Lake Rd	North side of road
Electricity	Duke Energy Distribution	120 V Underground Electric	From 140-ft west of intersection to intersection of International Dr. & Sand Lake Rd	South side of road
Electricity	Duke Energy Distribution	120 V Underground Electric	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Electricity	Duke Energy Distribution	120 V Underground Electric	From intersection of Universal Blvd east on Sand Lake Rd for 350-ft	South side of road
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd 1500-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd. 1400-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd, 400-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	13 KV Aerial Electric	From 1140-ft west of to 380-ft west of intersection of Turkey Lake Blvd & Sand Lake Rd on Sand Lake Rd	South side of road
Electricity	Duke Energy Distribution	13 KV Aerial Electric	From 400-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd on Sand Lake Rd	North side of road
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Turkey Lake Rd & Sand Lake Rd	West side of intersection
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing of Sand Lake Rd 650-ft west of intersection of International Dr. & Sand Lake Rd	N/A
Electricity	Duke Energy Distribution	13 KV Aerial Electric	From 680-ft west of intersection of International Dr. & Sand Lake Rd. to 630-ft east of intersection of Canada Ave & Sand Lake Rd	North side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of International Dr. & Sand Lake Rd	West side of road
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Canada Ave & Sand Lake Rd	North side of road
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Universal & Sand Lake Rd	West side of intersection
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Universal Blvd & Sand Lake Rd	North side of intersection
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Crossing at intersection of Vineland Rd & Kirkman Rd	South side of intersection
Electricity	Duke Energy Distribution	13 KV Aerial Electric	Two crossings at intersection of Vineland Rd & Kirkman Rd	North side of intersection
Electricity	Duke Energy Distribution	7.2 KV Aerial Electric	Crossing of SR 528, 2200-ft east of International Dr., SR 528 underpass	N/A
Electricity	Duke Energy Distribution	120 V Aerial Electric	From 880-ft west of to 540-ft west of intersection of Della Dr. & Sand Lake Rd. on Sand Lake Road	North side of road
Electricity	Duke Energy Transmission	69 KV Underground Electric	Two crossings of Sand Lake Rd 370-ft east of intersection of Universal Blvd & Sand Lake Rd	N/A
Electricity	Duke Energy Transmission	230 KV Aerial Electric	Crossing of Kirkman Rd 130-ft north of intersection of Windhover Dr. & Kirkman Rd	Diagonally across road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Electricity	Duke Energy Transmission	69 KV Aerial Electric	Two crossings of SR 528 Corridor 1900-ft east of International Dr., SR 528 underpass	N/A
Electricity	Duke Energy Transmission	69 KV Aerial Electric	Two crossings of SR 528 Corridor 1960-ft east of International Dr., SR 528 underpass	N/A
Electricity	Duke Energy Transmission	69 KV Aerial Electric	From 370-ft east of intersection east to 720-ft east of Kirkman northbound, Sand Lake Rd underpass	Center of road
Electricity	Duke Energy Transmission	69 KV Aerial Electric	From intersection of Universal Blvd & Sand Lake Rd east 1600-ft on Sand Lake Rd.	North side of road
Electricity	Duke Energy Transmission	69 KV Aerial Electric	Two crossings of Kirkman Rd 140-ft north of intersection of Windhover Dr. & Kirkman Rd	Diagonally across road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From east side of Central Florida Pkwy, I-4 Underpass east to Kirkman Rd, I-4 Overpass	North side of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From east side of Central Florida Pkwy, I-4 Underpass east to Kirkman Rd, I-4 Overpass	South side of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Two crossings of I-4, 800-ft west of I-4 westbound ramp to SR 528 eastbound	N/A
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 800-ft west of I-4 westbound ramp, following I-4 eastbound ramp to SR 528 eastbound	South side of ramp

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 800-ft west of I-4 westbound ramp, following I-4 eastbound ramp to SR 528 eastbound	North side of ramp
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4 westbound ramp to SR 528 eastbound, 380-ft west of end of ramp.	Diagonally across road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From end of I-4 ramps to SR 528 eastbound east to International Dr., SR 528 underpass	South side of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing at SR 528, International Dr. Underpass	West side of underpass
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of International Dr. at intersection of International Dr. & International Dr. ramp to SR 528 eastbound	North side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of International Dr. at intersection of International Dr. & International Dr. ramp to SR 528 eastbound	West side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Three crossings of International Dr. at intersection of International Dr. & International Dr. ramp to SR 528 eastbound	East side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 870-ft west of to 60-ft west of West Entrance Dr. & SR 528 overpass along SR 528	Center of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of SR 528 westbound ramp to I-4 eastbound, 670-ft west of West Entrance Dr. & SR 528 overpass along SR 528	N/A
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Four Crossings at intersection of Destination Pkwy & International Dr.	North side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing at intersection of Destination Pkwy & International Dr.	South side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Two crossings at intersection of Destination Pkwy & International Dr.	East side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 220-ft south of to intersection of Destination Pkwy & International Dr. on International Dr.	East side of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From intersection of International Dr. & International Drive ramp to SR 528 eastbound east to end of project limits on SR 528	South side of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4, 5750-ft west of Sand Lake Rd, I-4 Underpass	N/A
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4 at Sand Lake Rd, I-4 Underpass	East side of underpass

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 300-ft east of intersection of Turkey Lake Rd & Sand Lake Rd east to intersection of Universal Blvd & Sand Lake Rd.	North side of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing at intersection of Universal Blvd & Sand Lake Rd	Diagonal across intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing at intersection of Universal Blvd & Sand Lake Rd	West side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing at intersection of International Dr. & Sand Lake Rd	West side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of Sand Lake Rd 190-ft west of intersection of Sand Lake Rd & International Dr.	Diagonally across road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of Sand Lake Rd 200-ft west of intersection of Sand Lake Rd & International Dr.	Diagonally across road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4 eastbound lanes, 3000-ft east of Sand Lake Rd, I-4 underpass	N/A
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 2750-ft east of to 3000-ft east of Sand Lake Rd, I-4 underpass along I-4	Center of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4 eastbound lanes at Adventure Way exit	N/A

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4 eastbound lanes 1350-ft west of Universal Blvd, I-4 overpass	N/A
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 1350-ft west of to 1390-ft east of intersection of Universal Blvd, I-4 overpass, along I-4.	Center of road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of Universal Blvd at intersection of I-4 eastbound ramp to Universal Blvd	Diagonally across road
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing at intersection of Universal Blvd & International Dr.	North side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Three Crossings at intersection of Universal Blvd & International Dr.	East side of intersection
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of I-4, 1090-ft west of Kirkman Rd, I-4 Overpass	N/A
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	From 1210-ft west of to intersection of Kirkman Rd, I-4 Overpass on I-4	South side of Westbound lanes
Intelligent Transportation Systems	Florida Department of Transportation	Intelligent Transportation Systems Cable	Crossing of Universal Blvd, 1610-ft south of intersection of Universal Blvd & Hollywood Way	N/A
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at SR 528, International Dr. Underpass	West side of intersection
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of International Dr. & Sand Lake Rd.	West side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From station 2+00 on Sand Lake Rd. to intersection of International Dr. & Sand Lake Rd.	South side of road
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From intersection of International Dr. & Sand Lake Rd. to intersection of Canada Ave. & Sand Lake Rd., on Sand Lake Rd.	Center of road
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of International Dr. & Universal Blvd.	North side of intersection
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From intersection of International Dr. & Universal Blvd. south on Universal Blvd. for 425-ft	West side of road
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of Vineland Rd. & Kirkman Rd	North side of intersection
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From intersection of Vineland Rd. & Kirkman Rd. to intersection of Major Blvd. & Kirkman Rd.	East side of road
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of Major Blvd. & Kirkman Rd.	East side of intersection
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing at intersection of International Dr. & Kirkman Rd.	North side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From 400-ft north of intersection of International Dr. & Kirkman Rd. to 1025-ft south of intersection of International Dr. & Kirkman Rd. on Kirkman Rd.	West side of road
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	Crossing 560-ft south of intersection of International Dr. & Kirkman Rd.	South of intersection
Natural Gas	Teco Peoples Gas	4" Natural Gas Main	From 560-ft south to 1050-ft south of intersection of International Dr. & Kirkman Rd.	East side of road
	Teco Peoples Gas	4" Natural Gas Main	From 340-ft west of intersection to intersection of International Dr. & Sand Lake Rd.	North side of road
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing 1120-ft west of intersection of Della Dr. & Sand Lake Rd.	West of intersection
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing at intersection of Della Dr. & Sand Lake Rd.	East side of intersection
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing 270-ft west of Little Sand Lake on Sand Lake Rd.	N/A
Natural Gas	Teco Peoples Gas	2" Natural Gas Main	Crossing 440-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	N/A
Television	BrightHouse Networks	Underground CATV	Crossing at SR 528, International Dr. Underpass	West side of underpass
Television	BrightHouse Networks	Underground CATV	From station 2+00 on Sand Lake Rd east to intersection of Della Dr. & Sand Lake Rd	South side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Della Dr. & Sand Lake Rd	West side of intersection
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Della Dr. & Sand Lake Rd	North side of intersection
Television	BrightHouse Networks	Underground CATV	From intersection of Della Dr. & Sand Lake Rd east to 1800-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road
Television	BrightHouse Networks	Underground CATV	From 1260-ft west of to 400-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road
Television	BrightHouse Networks	Underground CATV	From 400-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd on Sand Lake Rd	South side of intersection
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Turkey Lake Rd & Sand Lake Rd	West side of intersection
Television	BrightHouse Networks	Underground CATV	Crossing of I-4 Corridor at Sand Lake Rd underpass	South side of underpass
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Frontage Rd & Sand Lake Rd	South side of intersection
Television	BrightHouse Networks	Underground CATV	From 580-ft west of to intersection of Universal Blvd & Sand Lake Rd	South side of road
Television	BrightHouse Networks	Underground CATV	From station 2+00 to Station 4+90 on Sand Lake Road	North side of road
Television	BrightHouse Networks	Underground CATV	From intersection of Hollywood Way & Universal Blvd north 1600-ft on Hollywood Way	West side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Television	BrightHouse Networks	Underground CATV	Crossing of Universal Blvd 710-ft south of intersection of Major Blvd & Universal Blvd	N/A
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of International Dr. & Universal Blvd	South side of intersection
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of International Dr. & Universal Blvd.	East side of intersection
Television	BrightHouse Networks	Underground CATV	From 1370-ft south of to intersection of International Dr. & Universal Blvd	East side of road
Television	BrightHouse Networks	Underground CATV	From 990-ft south of to intersection of International Dr. & Kirkman Rd	West side of road
Television	BrightHouse Networks	Underground CATV	Crossing of Kirkman Rd 480-ft south of intersection of International Dr. & Kirkman Rd	N/A
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of International Dr. & Kirkman Rd.	West side of intersection
Television	BrightHouse Networks	Underground CATV	From intersection of International Dr. & Kirkman Rd north for 680-ft on Kirkman Rd	West side of road
Television	BrightHouse Networks	Underground CATV	From 500-ft south of to intersection of International Dr. & Kirkman Rd	East side of intersection
Television	BrightHouse Networks	Underground CATV	From intersection of International Dr. & Kirkman Rd north for 550-ft on Kirkman Rd	East side of road
Television	BrightHouse Networks	Underground CATV	From 940-ft south to intersection of Major Blvd & Kirkman Rd	East side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Television	BrightHouse Networks	Underground CATV	Crossing at intersection of Major Blvd & Kirkman Rd	East side of intersection
Television	BrightHouse Networks	Underground CATV	Crossing at Sand Lake Rd, I-4 Corridor underpass	South side of underpass
Television	BrightHouse Networks	Underground CATV	From station 1353+00 on the I-4 Corridor to station 1387+50 on the I-4 Corridor.	West side of road
Television	BrightHouse Networks	Aerial CATV	From intersection of Della Dr. & Sand Lake Rd east to 1500-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	South side of road
Television	BrightHouse Networks	Aerial CATV	From 400-ft west of to intersection of Turkey Lake Rd & Sand Lake Rd on Sand Lake Rd	North side of road
Television	BrightHouse Networks	Aerial CATV	From 1770-ft west to 1260-ft west of intersection of Turkey Lake Rd & Sand Lake Rd	North side of road
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd, 400-ft west of intersection of Turkey Lake Blvd & Sand Lake Rd	N/A
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd 650-ft west of intersection of International Dr. & Sand Lake Rd	N/A
Television	BrightHouse Networks	Aerial CATV	From 650-ft west of intersection of International Dr. & Sand Lake Rd east to 1560-ft east of intersection of Universal Blvd & Sand Lake Rd	North side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Television	BrightHouse Networks	Aerial CATV	From 420-ft west of intersection of International Dr. & Sand Lake Rd east to 560-ft west of intersection of Universal Blvd & Sand Lake Rd	South side of road
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Universal Blvd & Sand Lake Rd	East side to center of intersection
Television	BrightHouse Networks	Aerial CATV	From intersection of Universal Blvd & Sand Lake Rd east 900-ft on Sand Lake Rd	Center of road
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd west bound 900-ft east of intersection of Universal Blvd & Sand Lake Rd	N/A
Television	BrightHouse Networks	Aerial CATV	From intersection of Carrier Dr. & Universal Blvd north 850-ft on Universal Blvd	East side of road
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Carrier Dr. & Universal Blvd	North side of intersection
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Carrier Dr. & Universal Blvd	Diagonally across intersection
Television	BrightHouse Networks	Aerial CATV	From 180-ft south of to intersection of Carrier Dr. & Universal Blvd	West side of road
Television	BrightHouse Networks	Aerial CATV	From 1040-ft south of to intersection of Carrier Dr. & Kirkman Rd	West side of road
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Carrier Dr. & Kirkman Rd	South side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Television	BrightHouse Networks	Aerial CATV	From intersection of Carrier Dr. & Kirkman Rd north 870-ft north on Kirkman Rd	West side of intersection
Television	BrightHouse Networks	Aerial CATV	From intersection of International Dr. & Kirkman Rd north 2870-ft north on Kirkman Rd	East side of road following ramp
Television	BrightHouse Networks	Aerial CATV	From 1680-ft south to 940-ft south of intersection of Major Blvd & Kirkman Rd	East side of road following ramp
Television	BrightHouse Networks	Aerial CATV	Crossing at intersection of Vineland Rd & Kirkman Rd	North side of intersection
Television	BrightHouse Networks	Aerial CATV	From 1260-ft east of SR 528 ramp to I-4 westbound to 1470-ft west of Sand Lake Rd, I-4 Corridor underpass	West side of road
Wastewater/ Storm water	City of Orlando	16" Force Main	From station 9+00 on Universal Blvd to intersection of International Dr. & Universal Blvd	West side of road
Wastewater/ Storm water	City of Orlando	16" Force Main	Crossing at intersection of International Dr. & Universal Blvd.	West side of intersection
Wastewater/ Storm water	City of Orlando	14" Force Main	Crossing of I-4 at Adventure Way Exit	East side of exit
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	From 1830-ft east of to station 1579+00 on Segment 2, toward Kirkman Rd	West side of road
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	From 1800-ft south to intersection of intersection of Universal Blvd & International Dr.	Center of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	Crossing at intersection of Universal Blvd & International Dr.	South side of intersection
Wastewater/ Storm water	City of Orlando	24" Sanitary Main	Crossing at intersection of Universal Blvd & International Dr.	East side of intersection
Wastewater/ Storm water	City of Orlando	20" Sanitary Main	Crossing at intersection of Major Blvd & Universal Blvd	South side of intersection
Wastewater/ Storm water	City of Orlando	18" Sanitary Main	Crossing at intersection of Hollywood Way & Universal Blvd	Center of intersection
Wastewater/ Storm water	City of Orlando	18" Sanitary Main	From intersection of Hollywood Way & Universal Blvd north to intersection of Major Blvd & Universal Blvd	Center of road
Wastewater/ Storm water	City of Orlando	15" Sanitary Main	From station 9+00 to station14+00 on Universal Blvd	Center of road
Wastewater/ Storm water	City of Orlando	10" Sanitary Main	Crossing of Universal Blvd 920-ft north of intersection of Carrier Dr. & Universal Blvd	From center of road to west side of road
Wastewater/ Storm water	City of Orlando	10" Sanitary Main	Crossing at intersection of Major Blvd & Universal Blvd	South side of road
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing at intersection of Carrier Dr. & Universal Blvd	Center of intersection
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 300-ft north of intersection of Carrier Dr. & Universal Blvd	From center of road to east side of road
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 170-ft north of intersection of Carrier Dr. & Universal Blvd	From center of road to west side

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 500-ft north of intersection of Hollywood Way & Universal Blvd	From center of road to west side of road
Wastewater/ Storm water	City of Orlando	8" Sanitary Main	Crossing of Universal Blvd 250-ft north of intersection of Hollywood Way & Universal Blvd	From center of road to west side of road
Wastewater/ Storm water	Orange County Utilities	4" Abandoned Force Main	Crossing 350-ft east of intersection of International Dr. & Sand Lake Rd.	East of intersection
Wastewater/ Storm water	Orange County Utilities	48" Force Main	Crossing 2050-ft east of SR 528, International Dr. Underpass on SR 528	N/A
Wastewater/ Storm water	Orange County Utilities	42" Force Main	Crossing 3000-ft north of SR 528, I-4 Overpass on I-4 Corridor	N/A
Wastewater/ Storm water	Orange County Utilities	24" Force Main	Crossing 175-ft east of intersection of I-4 west bound ramp to Sand Lake Rd.	East of intersection
Wastewater/ Storm water	Orange County Utilities	24" Force Main	From intersection of Canada Ave. & Sand Lake Rd. to station 136+00 on Sand Lake Road	Varies from north to center of road
Wastewater/ Storm water	Orange County Utilities	24" Sanitary Main	From station 2+00 Sand Land Rd. to 400-ft east of intersection of International Dr. & Sand Lake Rd. on Sand Lake Rd.	Varies from north to center of road
Wastewater/ Storm water	Orange County Utilities	14" Force Main	Crossing at intersection of International Dr. & Sand Lake Rd.	West side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Wastewater/ Storm water	Orange County Utilities	8" Force Main	Crossing at intersection of Canada Ave. & Sand Lake Rd.	East side of intersection
Wastewater/ Storm water	Orange County Utilities	6" Force Main	Crossing at intersection of Della Dr. & Sand Lake Rd.	West side of road
Wastewater/ Storm water	Orange County Utilities	4" Force Main	Crossing on Sand Lake Rd. at Little Sand Lake	N/A
Wastewater/ Storm water	Orange County Utilities	4" Force Main	Crossing at intersection of International Dr. & Sand Lake Rd.	West side of intersection
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing at intersection of Dr. Phillips Blvd. & Sand Lake Rd.	West side of intersection
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing 290-ft east of intersection of Dr. Phillips Blvd. & Sand Lake Rd.	East of intersection
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing on Sand Lake Rd. at Little Sand Lake	N/A
Wastewater/ Storm water	Orange County Utilities	20" Sanitary Main	Crossing 310-ft east of intersection of Turkey Lake Rd. & Sand Lake Rd.	East of intersection
Wastewater/ Storm water	Orange County Utilities	Varying Size Force Main	From 330-ft west of intersection of Dr. Phillips Blvd & Sand Lake Rd to 380-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of road
Water	American Traffic Solutions	Unknown Size Water Main	Crossing at intersection of International Dr. & Kirkman Rd.	South side of intersection
Water	City of Orlando	24" Reclaim Main	Crossing at intersection of Major Blvd & Universal Blvd	South side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Water	City of Orlando	20" Reclaim Main	Crossing at intersection of Hollywood Way & Universal Blvd	Center to south side of intersection
Water	City of Orlando	20" Reclaim Main	From intersection of Hollywood Way & Universal Blvd north to intersection of Major Blvd & Universal Blvd	Center of road
Water	City of Orlando	4" Reclaim Main	Crossing of Universal Blvd 600-ft north of intersection of Hollywood Way & Universal Blvd	N/A
Water	City of Orlando	4" Reclaim Main	Crossing of Universal Blvd 470-ft north of intersection of Hollywood Way & Universal Blvd	N/A
Water	Orlando Utilities Commission	20" Water Main	Crossing at intersection of Major Blvd. & Universal Blvd on Universal Blvd	South side of intersection
Water	Orlando Utilities Commission	20" Water Main	Crossing at Universal Blvd. Bridge, 350-ft north of intersection of Major Blvd. & Universal Blvd	West side of road
Water	Orlando Utilities Commission	16" Water Main	Crossing at SR 528, International Dr. Underpass	Center of underpass
Water	Orlando Utilities Commission	16" Water Main	From 340-ft north to 550-ft south of intersection of International Dr. & Kirkman Rd.	Center of road
Water	Orlando Utilities Commission	16" Water Main	Crossing 450-ft south of intersection of International Dr. & Kirkman Rd.	From center to east side of road

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Water	Orlando Utilities Commission	16" Water Main	Crossing 340-ft north of intersection of International Dr. & Kirkman Rd.	From center to east side of road
Water	Orlando Utilities Commission	16" Water Main	Crossing 820-ft south of intersection of Major Blvd & Kirkman Rd. on Kirkman Rd.	N/A
Water	Orlando Utilities Commission	12" Water Main	Crossing 2100-ft north of Sand Lake Rd., I-4 Overpass on I-4 Corridor	N/A
Water	Orlando Utilities Commission	12" Water Main	Crossing 160-ft south of intersection of Vineland Rd. & Universal Blvd. on Universal Blvd.	South of intersection
Water	Orlando Utilities Commission	12" Water Main	From intersection of international Dr. & Universal Blvd to 580-ft south on Universal Blvd.	East side of road
Water	Orlando Utilities Commission	12" Water Main	Crossing at intersection of Major Blvd. & Kirkman Rd.	North side of intersection
Water	Orlando Utilities Commission	8" Water Main	From intersection of Hollywood Way & Adventure Way to end of I-4 west bound to Adventure Way ramp	South side of road
Water	Orlando Utilities Commission	8" Water Main	Crossing 270-ft west of end of I-4 westbound ramp to Adventure Way on Adventure Way	N/A
Water	Orlando Utilities Commission	8" Water Main	Crossing at intersection of International Dr. & Universal Blvd.	South side of intersection

Table 2.16 - Major Utilities

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side
Water	Orange County Utilities	Abandoned Water Main, Unknown Size	From station 2+00 on Sand Land Rd. to 550-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	Center of road
Water	Orange County Utilities	36" Reclaim Main	Crossing 5300-ft north of SR 528, I-4 Overpass on I-4 Corridor	N/A
Water	Orange County Utilities	16" Reclaim Main	From station 2+00 on Sand Land Rd. to intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of road
Water	Orange County Utilities	12" Reclaim Main	Crossing at SR 528, International Dr. Underpass	East side of underpass
Water	Orange County Utilities	12" Reclaim Main	Crossing 2000-ft east of SR 528, International Dr. Underpass on SR 528	N/A
Water	Orange County Utilities	12" Reclaim Main	Crossing 2000-ft east of SR 528, International Dr. Underpass on SR 528	N/A
Water	Orange County Utilities	12" Reclaim Main	Crossing at intersection of Della Dr. & Sand Lake Rd.	East side of intersection
Water	Orange County Utilities	12" Water Main	From 2700-ft south to 2100-ft south of SR 528, I-4 Overpass on I-4 Corridor	West side of road

2.17 Soils

A preliminary geotechnical review was conducted to evaluate stormwater management in the project corridor study area. Soils data from the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) and the United States Geological Society (USGS) Quadrangle Map was reviewed within the limits of the proposed improvements in Orange County to determine soil and groundwater conditions along the I-4 Segment 2 corridor. A large portion of the corridor segment is classified as Urban Land, which includes areas of developed land with buildings, streets and other types of impervious ground cover. Based on the NRCS survey, the soils within the project area are characterized as sands with variable silt content. The seasonal high water table levels for the majority of soils, in locations investigated along the project corridor, range from 0.5 to 3.5 feet below the existing ground surface. The predominant types of soils found in the study area and their corresponding properties are summarized in Table 2.17. The corresponding soils map is illustrated in Figure 2.10. Soil boring information, permeability test results and detailed soil survey information can be found in the *Report of Preliminary Geotechnical Engineering Investigation for Ponds, Segment 2: State road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) (December 2015),* completed for this project.

Table 2.17 - Soil Types

Soil Name	Depth (in)	Soil Description	Soil Classification (AASHTO)	Seasonal High Groundwater Depth (ft)	Hydrologic Group
Archbold Fine Sand, 0 to 5 percent slopes	0 - 80	Fine sand, sand	A-3	3.5 – 5.0	A
Basinger Fine Sand, depressional	0 – 7 7 - 80	Fine sand Fine sand, sand	A-3 A-2-4, A-3	+2.0 - 0.0	A/D
Candler Fine Sand, 5 to 12 percent slopes	0 – 69	Fine sand, sand	A-3	>6	A
	69 – 80	Fine sand, sand	A-3, A-2-4		
Apopka fine sand, 5 to 12 percent slopes	0 – 69	Fine sand, sand	A-3		
	69 – 80	Sandy clay loam, sandy loam	A-4, A-6, A-2-4, A-2-6		
Immokalee Fine Sand	0 – 5 5 – 35 35 – 67 67 - 80	Fine sand Fine sand, sand Fine sand, sand Fine sand, sand	A-3 A-3 A-2-4, A-3 A-3	0.5 - 1.0	B/D
Pomello Fine Sand, 0 to 5 percent slopes	0 -3 3 - 40 40 – 55 55 -80	Fine sand Fine sand, sand Fine sand, sand Fine sand, sand	A-3 A-3 A-2-4, A-3 A-3	2.0 -3.5	A

Table 2.17 - Soil Types

Soil Name	Depth (in)	Soil Description	Soil Classification (AASHTO)	Seasonal High Groundwater Depth (ft)	Hydrologic Group
St. Johns Fine Sand	0 – 12 12 – 24 24 – 44 44 – 80	Fine sand Fine sand, sand Fine sand, sand Fine sand, sand	A-3 A-3 A-2-4, A-3 A-3	0.5 - 1.0	B/D
St. Lucie Fine Sand (0 to 5 percent slopes)	0 – 2 2 - 80	Fine sand Fine sand, sand	A-3 A-3	>6	A
Smyrna fine sand	0 – 27 27 – 80	Fine sand, sand Fine sand, sand	A-2-4, A-3 A-3	0.5 – 1.5	A/D
Tavares Fine Sand (0 to 5 percent slopes)	0 – 6 6 – 80	Fine sand Fine sand, sand	A-3 A-3	3.5 – 6.0	A
Tavares Fine Sand (0 to 5 percent slopes)	0 – 80	Fine sand, sand	A-3	3.5 – 6.0	A
Millhopper fine sand, 0 to 5 percent slopes	0 – 64	Fine sand, sand	A-3, A-2-4	5.0 – 5.5	A
	64 – 76	Sandy loam, loamy sand, loamy fine sand	A-2-4		
	76 – 80	Sandy clay loam, sandy loam, fine sandy loam	A-4, A-2-4		
Urban Land	-	-	-	-	A

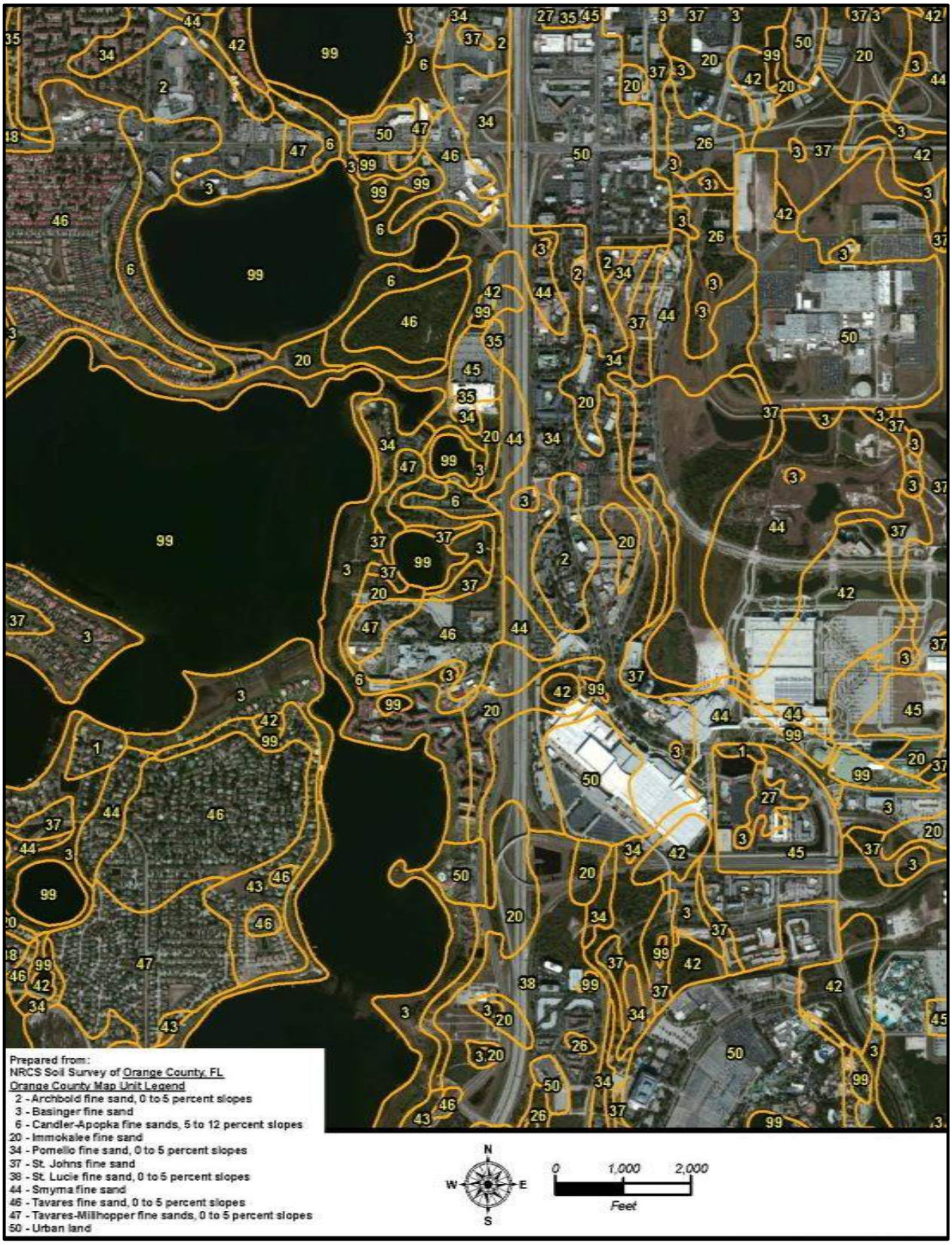


Figure 2.10 – Soils Map

2.18 Sociocultural Conditions

Sociocultural Effects (SCE) Evaluation is the process of determining and evaluating the effects a transportation action may have on a community and the quality of life of the citizenry. A community is defined as a geographic, manmade or natural boundary comprised of people and places which may share similar social, cultural, economic, political or other characteristics. This section of the report identifies community features and characteristics surrounding the project corridor, including a data inventory of existing community facilities.

2.18.1 Study Area

The SCE study area was determined by evaluating project plans, land use maps, local government comprehensive plans and other relevant resources. Segment 2 is located within the U.S. Census designated Orlando-Kissimmee Metropolitan Statistical Area. In this metro area, the corridor lies almost entirely within the U.S. Postal Service (USPS) zip code boundary of 32819 in unincorporated Orange County, with an approximate ¾ mile portion of the segment in the north end of the corridor in the City of Orlando. Nearby communities adjacent to the corridor include Tangelo Park to the east and Doctor Phillips to the west, both of which are outside of ½ mile of the project corridor.

2.18.2 Social Demographics

Orange County is the fifth most populous County in the State of Florida; with a 2014 population estimate of 1.2 million, the County represents approximately six percent of the total State population. [2] According to the U.S. Census Bureau, Orange County experienced a growth rate of 6.9% during the three-year period between 2010 and 2013, with a population increase of approximately 79,000. Over the ten-year period between the 2000 Census and the 2010 Census, the County population increased at a rate of approximately 2.8% per year from approximately 900,000 to 1.15 million. The population projection for Orange County for the year 2040 is approximately 1.84 million, a projected increase of approximately 50% over a 27-year period. [3]

With a 2014 estimated population of 255,636, the City of Orlando is ranked as the fourth largest city in Florida, and represents approximately 21% of the total population of Orange County. [4] Based on data compiled by the University of Florida Bureau of Economic and Business Research (BEBR), the City of Orlando ranks fourth in growth amongst all Florida cities with population greater

[2] *Orange County Profile*, Florida Legislature Office of Economic and Demographic Research, January 2015.
[3] *Florida Population Studies Bulletin 169,* University of Florida Bureau of Economic and Business Research, June 2014.
[4] *Florida Estimates of Population 2014,* University of Florida Bureau of Economic and Business Research, April 1, 2014.

or equal to 50,000, between 2010 and 2014. The growth projections for the City indicate an estimated population of 345,000 by 2040. [5]

Demographic statistics specific to the area surrounding the I-4 Segment 2 corridor were obtained from the U.S. Census Bureau's American Community Survey (ACS). The U.S. Census Bureau has developed Zip Code Tabulation Areas (ZCTAs) to represent USPS zip code service areas. Since USPS zip codes can cross state, county, census tract and census block boundaries, the Bureau has developed the ZCTAs to provide a correlation between postal zip codes and census bureau geographic boundaries. The demographic data for Orange County and U.S. Census ZCTA 32819 is summarized in Table 2.18.

Table 2.18 - Community Demographics

Community Characteristic	Orange County	ZCTA 32819
Total Population	1,145,956	24,976
% White	63.6	72.2
% Black or African American	20.8	12.8
% Other	15.6	15.0
% Hispanic or Latino (of Any Race)	26.9	14.6
% 65 Years and Over	9.7	12.1
% High School Graduate or Higher	86.9	92.4
% Bachelor's Degree or Higher	30.0	43.9
% Speak English Less Than "Very Well"	12.7	8.6
% Employed (Age 16 And Over)	62.8	60.6
% Unemployed	7.2	4.2
Commuting to Work		
% Car, Truck, Or Van -- Drove Alone	80.2	79.8
% Car, Truck, Or Van – Carpooled	9.8	9.1
% Public Transportation (Excluding Taxicab)	2.7	1.6
Mean Travel Time to Work (Minutes)	26.3	22.7
Average Household Size	2.72	2.75
Average Family Size	3.31	3.20
Median Household Income (Dollars)	49,731	65,526
Mean Household Income (Dollars)	68,054	97,743
Per Capita Income (Dollars)	25,494	35,997
Income Below the Poverty Level		
% All People	14.9	11.2
% 65 Years and Over	10.0	5.9
% Under 18 Years	19.8	12.7

[5] *Growth Management Plan 2013-2040 Growth Projections Report,* City of Orlando Economic Development Department, June 30, 2014.

2.18.3 Economics

According to the City of Orlando Economic Development Department's *Growth Management Plan 2013-2040 Growth Projections Report (June 30, 2014), t*he total employment in Orange County for 2010 was approximately 820,000. Total employment in the County is projected to increase by 67% over 30 years, with an estimated employment of 1,370,000 in 2040. The 2010 employment in Orlando was approximately 240,000 and the 2040 employment projection is approximately 340,000.

2.18.4 Existing Developments

The proposed I-4 Segment 2 improvements are within a segment of the Interstate that is characterized heavily by tourist/visitor activity and related hospitality-driven businesses and facilities. Attractions include Universal Studios Theme Park and Sea World Entertainment Park in the I-4/ Republic Drive Community Redevelopment Area (CRA) and Wet n Wild water park near the northern end of the corridor. The east side of the corridor is adjacent to the International Drive CRA which includes the Orange County Convention Center, the Pointe Orlando Shopping and Entertainment complex and numerous lodging facilities, ranging from small hotels to large-scale resorts.

A review of aerial photographs and land use/zoning maps indicates that the primary uses along the corridor are commercial (retail and general) with some PD (Planned Development). There are few existing parcels with residential uses within 500 feet of the centerline of the proposed corridor. These properties, which are located on the west side of I-4 approximately ¾ mile south of Sand Lake Road, are currently zoned R-CE (Rural Country Estate) are lakefront lots developed with single family residential use. Within one-half mile of the proposed corridor's centerline, a few residential developments exist along the west side of the corridor as follows:

- Toscana Units 1 & 2 (Townhomes and Condos)
- Spring Lake Villas (Single Family Residences)
- Sand Lake Private Residences Condos (Multi-Family)
- Westgate Resort (Condominium Time Share)

2.18.5 Community Facilities and Services

Existing community resources within the I-4 Segment 2 project study area were identified as part of the sociocultural analysis. The existing patterns of social activity revolve heavily around tourist and visitor activity in this corridor. The International Drive corridor, parallel to I-4 in the project's vicinity, is a large focal point of this community. Numerous community resources exist to serve the visiting population as well as the surrounding residential communities and neighborhoods. Table 2.19 provides a list of the locations of existing community facilities and services in the I-4 study area. Figure 2.11 illustrates the locations of community facilities and services.

Table 2.19 - Community Facilities and Services

Community Facility/Service	Address	Location	
		Within 500 feet of I-4	Within ½ mile of I-4
School/College/Daycare Facilities			
CCLC at Orlando	7113 Wallace Rd, Orlando		✓
Student Leadership University	7380 W Sand Lake Rd, Orlando		✓
Westgate Children's Learning & Development Center	7450 Sandlake Commons Blvd, Orlando		✓
Webster University	6750 Forum Dr, Orlando		✓
Health/Safety Facilities			
Dr. P. Phillips Hospital	9400 Turkey Lake Rd, Orlando		✓
Central Florida Behavioral Hospital	6601 Central Florida Pkwy, Orlando		✓
Orlando Police Department (International Dr. Team Office)	6731 S Kirkman Rd, Orlando		✓
Orange County Sheriff's Office Sector V	6825 Westwood Blvd, Orlando	✓	
Religious Facilities			
Ebon Temple Inc	7001 Wallace Rd, Orlando		✓
The Church of Life	7468 Universal Blvd, Orlando		✓
Parks/Recreation			
Orange Tree Golf Club	7450 Woodgreen Dr, Orlando		✓
Marriott's Grande Pines Golf Club	6351 International Dr, Orlando		✓
Other Community Facilities			
YMCA Aquatic and Family Center	8422 International Dr, Orlando	✓	
United States Post Office	10450 Turkey Lake Rd, Orlando	✓	
Pointe Orlando	9101 International Dr, Orlando		✓

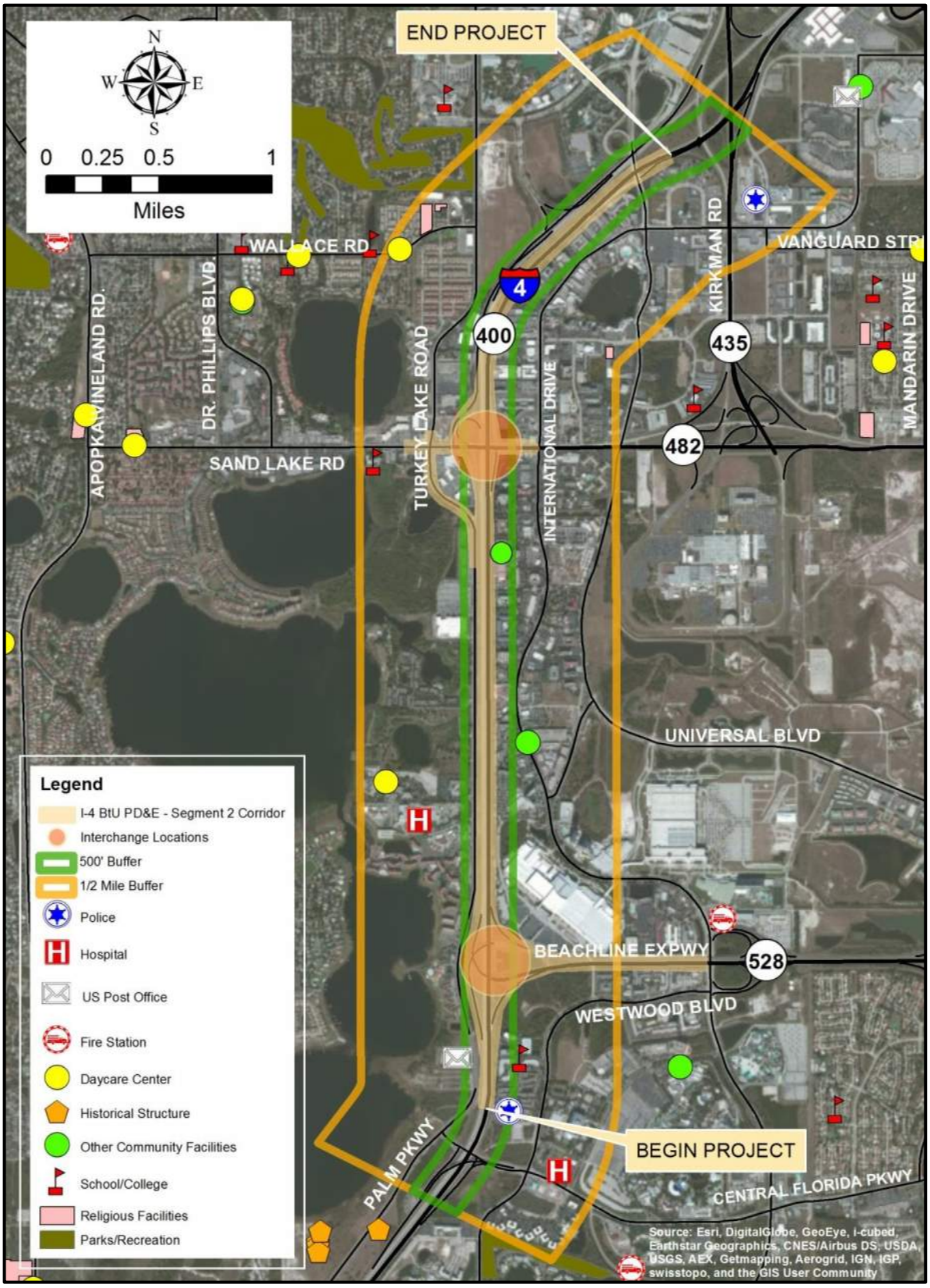


Figure 2.11 – Community Facilities and Services

3.0 Planning Phase/Corridor Analysis

The current PD&E study is an update of the previously approved PD&E study for I-4 from SR 528 (Beachline Expressway) to SR 472 [FM Nos.: 242486-1, 242592-1 and 242703-1 (FEIS – August 2002, Record of Decision Pending)]. The original project followed a multi-level screening process which involved preliminary evaluations of the I-4 corridor with respect to constructability, design speeds and type of physical separation between the special use (HOV in the original design concept and express lanes in the current design concept) and general use lanes. The preliminary evaluations were reviewed with FDOT, and the corridor was analyzed with the following project goals:

- Use the existing infrastructure to the maximum extent possible
- Evaluate a barrier-separated facility
- Refine concept plans to minimize traffic disruptions during construction
- Minimize construction costs and right-of-way requirements
- Avoid and/or minimize impacts especially for wetlands, floodplains, Section 4(f) properties and Section 106 properties

Since the proposed project is a widening project, no alternative alignments were evaluated.

4.0 Design Criteria and Standards

The I-4 BtU PD&E Reevaluation Study incorporates project elements with various design requirements. Table 4.1 presents the roadway design criteria established for each design element. The design criteria and standards are based on design parameters in accordance with A Policy on Geometric Design of *Highway and Streets* (AASHTO 2011), *Roadway Plans Preparation Manual (PPM), Volumes I and II* (FDOT, January 2015), and *Roadway and Traffic Design Standards* (FDOT, 2015).

Table 4.1 - Roadway Design Criteria

Design Element	Design Standard	Source(s)
Design Vehicle	WB-62FL	PPM, Pg. 1-19
Design Year	2040	FDOT Scope of Services
Design Speed Mainline I-4/Express Lanes Mainline I-4/Express Lanes Diamond Ramps Loop Ramp	 70 mph 60 mph 50 mph 30 mph (25 mph min as per AASHTO)	FDOT PPM, Table 1.9.1 and 2011 AASHTO, Page 10-89
Median Width I-4	64 ft. without barrier 26 ft. minimum with barrier	FDOT PPM, Table 2.2.1
Maximum Degree of Curve Mainline I-4/Express Lanes Direct Connection Ramp Loop Ramp	 3°00' 8°15' 24°45'	FDOT PPM, Table 2.8.3 (e MAX – 0.10)
Length of Horizontal Curves Mainline I-4/Express Lanes Ramps	 Desirable: 30(V)[1] Minimum: 15(V)[1] Desirable: 15(V)[1] Minimum: 400 ft.	FDOT PPM, Table 2.8.2a
Minimum Stopping Sight Distance Mainline I-4/Express Lanes (70 mph) Mainline I-4/Express Lanes (60 mph) Diamond Ramps Loop Ramp	 820 ft. 645 ft. 425 ft. 200 ft.	FDOT PPM, Table 2.7.1
Decision Sight Distance Mainline I-4/Express Lanes (70 mph) Mainline I-4/Express Lanes (60 mph) Diamond Ramps Loop Ramp	 1,445 ft. 1,280 ft. 910 ft. 490 ft	2011 AASHTO, Table 3-3, Page 3-7

Table 4.1 - Roadway Design Criteria

Design Element	Design Standard	Source(s)
Maximum Shoulder "Roll-Over" Maximum Lane "Roll-Over"	7% 4%	FDOT Roadway & Traffic Design Standard Index No. 510, 2011 AASHTO pg. 4-5
Superelevation Transition Tangent Curve Maximum Superelevation Mainline I-4 / Express Lanes Ramps	 80% desirable, 50% minimum 20% desirable, 50% maximum 10% 10%	FDOT PPM, Page 2-53
On- and Off-Ramp Design Diamond On-Ramps Diamond Off-Ramps Loop Ramp	 Taper Design with 50:1 (1200 ft) Taper Design with 3° to 5° (Parallel Design: 1,200' Accel + 300' Taper and 800' Decel + 300' Taper – District Preference)	FDOT Roadway & Traffic Design Standard Index No 525
Maximum Profile Grade Mainline I-4/Express Lanes (70 mph) Mainline I-4/Express Lanes (60 mph) Diamond Ramp Loop Ramp	 3% 3% 5% 7%	FDOT PPM, Table 2.6.1
Maximum Change in Grade without Vertical Curve Mainline I-4/Express Lanes (70 mph) Mainline I-4/Express Lanes (60 mph) Diamond Ramp Loop Ramp	 0.20% 0.40% 0.60% 1.00%	FDOT PPM, Table 2.6.2
Crest Vertical Curve Mainline I-4/Express Lanes (70 mph) (Open Highway) Mainline I-4/Express Lanes (60 mph) (Open Highway) Mainline I-4/Express Lanes (70 mph) (w/interchange) Mainline I-4/Express Lanes (60 mph) (w/interchange) Diamond Ramp Loop Ramp	 K=506, min. length 1,000ft. K=313, min. length 1,000ft. K=506, min. length 1,800 ft. K=313, min. length 1,800 ft. K=136, min. length 300 ft. K=31, min. length 3V[1]	FDOT PPM, Table 2.8.5

Table 4.1 - Roadway Design Criteria

Design Element	Design Standard		Source(s)
Sag Vertical Curve			
Mainline I-4/Express Lanes (70 mph)	K=206, min. length 800 ft.		FDOT PPM, Table 2.8.6
Mainline I-4/Express Lanes (60 mph)	K=157, min. length 800 ft.		
Diamond Ramp	K=96, min. length 200 ft.		
Loop Ramp	K=37, min. length 3V[1]		
Minimum Vertical Clearance			
Bridges over I-4	16'-6"[2]		FDOT PPM, Tables 2.10.1 and 2.10.2
I-4 Bridges over Cross Roads	16'-6"[2]		
Pedestrian Facilities over Rdwy	17'-6"[2]		
Overhead Signs	17'-6"[2]		
Roadway over Railroad	23'-6"[3]		
Lane Widths			
Mainline I-4/Express Lanes	12 ft. – Tangent		FDOT PPM, Tables 2.1.1, 2.1.2 and 2.1.3
One-Lane Ramp	15 ft. – Tangent		
Two-Lane Ramp	24 ft. – Tangent		
Lane Drop Taper			
Mainline I-4/Express Lanes	70:1 Desirable		2011 AASHTO, Page 10-80
Shoulder Width – Roadway – Inside (or Left)	Total	Paved	FDOT PPM, Table 2.3.1
Mainline I-4	12 ft.	10 ft.	
One-Lane Ramp	6 ft.	2 ft.	
Two-Lane Ramp	8 ft.	4 ft.	
Two-Lane Express Lane	6 ft.	6 ft.	
Shoulder Width – Roadway – Outside (or Right)	Total	Paved	FDOT PPM, Table 2.3.1
Mainline I-4	12 ft.	10 ft.	
Mainline with Auxiliary Lane	12 ft.	10 ft.	
One-Lane Ramp	6 ft.	4 ft.	
Two-Lane Ramp	12 ft.	10 ft.	
Two-Lane Express Lane	10 ft.	10 ft.	
Typical Roadway Cross Section			
Slopes			
Roadways:			FDOT PPM, Figure 2.1.1 and Table 2.3.1
2 Lanes in Same Direction	0.02		
Addition Lane in Same Direction	0.03		
Shoulders:			FDOT PPM, Figure 2.1.1 and Table 2.3.1
Inside Shoulder	0.05 (0.06 for 4 or more lanes)		
Outside Shoulder	0.06		

Table 4.1 - Roadway Design Criteria

Design Element	Design Standard	Source(s)
Recoverable Terrain (min. from edge of travel way)		
Mainline I-4 / Express Lanes (> 55mph)	36 ft.	FDOT PPM Table 2.11.11
Auxiliary Lane (> 55mph)	24 ft.	
One-Lane Ramp (50 mph)	14 ft.	
Two-Lane Ramp (50 mph)	24 ft.	
Loop Ramp (30 mph)	18 ft.	
Shoulder Width – Bridge Structures – Inside		
Mainline I-4	10 ft.	FDOT PPM, Figure 2.0.1
One-Lane Ramp	6 ft.	
Two-Lane Ramp	6 ft.	
Shoulder Width – Bridge Structures – Outside		
Mainline I-4	10 ft.	
Auxiliary Lanes	10 ft.	FDOT PPM, Figure 2.0.1
One-Lane Ramp	6 ft.	
Two-Lane Ramp	10 ft.	
Border Width[4]	94 ft.	FDOT PPM, Table 2.5.3

Notes:
[1] Where V = design speed of the roadway.
[2] Includes 6” allowance for resurfacing.
[3] Includes Rail Resurfacing (Track Raised): 12’ for conventional railroads.
[4] Measured from outside edge of travel way to right-of-way.

5.0 Alternatives Analysis

The original I-4 PD&E study (*Interstate 4 (SR 400) Project Development and Environmental Study, Section 2, Project Nos.: 242486-4, 242592-1, 242703-1; FEIS – August 2002, Record of Decision Pending*) was performed to address access, safety and capacity improvements. The update described herein adheres to the project development process by examining the various concepts considered for this project. The alternatives analysis will focus primarily on the interchanges and pond sites. The mainline typical section will be consistent with the approved typical section that is being implemented for the I-4 Ultimate from SR 435 (Kirkman Road) to SR 434, the section of I-4 that began construction in early 2015. The alternatives for the interchanges include no modifications to the existing interchange geometry (No Build), Transportation System Management and Operations (TSMO), Multimodal and Study (Build) Alternatives. The following sections describe in greater detail each of the alternatives proposed and the advantages and disadvantages of each.

5.1 No Project (No-Build) Alternative

The No-Build Alternative assumes no changes to the transportation facilities within the project corridor beyond currently planned and programmed projects already committed within Metro Plan Orlando's *2030 Long Range Transportation Plan* and the *Fiscal Year 2013/14 to 2017/18 Transportation Improvement Program*. The No-Build Alternative forms the basis of the comparative analysis for each of the viable Study Alternatives.

The benefits of the No-Build Alternative are the absence of construction-related and short-term operational impacts associated with the Build Alternatives. However, long-term benefits accrued from serving future traffic demands will not be realized with this alternative. Operating conditions are anticipated to worsen with time, while further increasing delays and congestion. Specifically, the No-Build Alternative will offer no benefits to address existing or future traffic congestion anticipated on I-4. Distinct advantages and disadvantages associated with the No-Build Alternative are as follows.

Advantages:

- No impedance to traffic flow during construction,
- No expenditure of funds for design, right-of-way acquisition, or construction,
- No impact to the adjacent natural, social, physical and cultural environments and
- No disruption to existing/future land uses due to construction-related activities.

Disadvantages:

- Increase in traffic congestion and road user costs, unacceptable level of service and an increase in accidents associated with an increase in travel times and traffic volumes due to excessive delays,
- Increase in carbon monoxide levels and other air pollutants caused by an increase in traffic congestion,
- Increase in maintenance costs due to roadway and structure deterioration,
- Increase in emergency service response time in addition to an increase in evacuation time during weather emergencies as a result of heavy congestion,
- Increase in delays to evacuation procedures throughout the state,
- Increase in safety-related accidents due to heavy congestion

The No-Build Alternative shall remain a viable alternative through the study. The final selection of an alternative will not be made until all impacts are considered and responses to the public hearing comments have been evaluated.

5.2 Transportation System Management and Operations

Transportation System Management and Operations (TSMO) Alternatives are defined as low capital cost transportation improvements designed to maximize the utilization and efficiency of the existing transportation system through improved system management. The various forms of TSMO activities include:

- Traffic signal improvements,
- Intersection/interchange improvements,
- Widening of parallel arterials,
- Ridesharing programs,
- Reversible flow roadway systems,
- Transit,
- ITS and
- Ramp-to-ramp auxiliary lanes.

Although the implementation of TSMO strategies would aid in localized operation of the existing roadway, the projected traffic volumes for the design year 2040 require I-4 to be widened to provide the additional capacity necessary to maintain or improve the existing and future levels of service. Therefore, the TSMO Alternative is not considered a viable alternative and no further evaluation of the TSMO Alternative will be conducted during this study.

5.3 Multi-Modal Alternatives

The project study area including arterial streets crossing I-4 is served by different modes of travel, both motorized and non-motorized. Increased connectivity for bicycle, pedestrian and transit users is an objective of the project.

5.3.1 Transit

A corridor for the future Florida High Speed Rail (FHSR) has been set aside in the median of I-4 within a portion of Segment 2. The rail corridor is located within the median of I-4 from Tampa to SR 528 (Beachline Expressway), where it would then turn east and be located within the SR 528 right-of-way. Design plans (60% Submittal) for the FHSR project were completed in 2011 and the project was discontinued.

Public transit is provided by LYNX bus service which operates several routes within the I-4 corridor, including along the Beachline Expressway, Central Florida Parkway, Universal Boulevard, Turkey Lake Road, Sand Lake Road and Kirkman Road. Service is provided via the following fixed routes:

- Link 21 - Universal Studios
- Link 37 - Pine Hills/Florida Mall
- Link 38 - Downtown Orlando/SeaWorld
- Link 50 - Downtown Orlando/Magic Kingdom

Non-stop express service along I-4 includes the following Link routes:

- Link 300 - Downtown Orlando/Hotel Plaza
- Link 301 - Pine Hills/Animal Kingdom
- Link 302 - Rosemont/Magic Kingdom
- Link 303 - Wash. Shores/Disney Hollywood Studios
- Link 304 - Rio Grande/Vistana Resort
- Link 305 - Metrowest/All Star Resorts

Other services provided by LYNX and pertinent to the I-4 Segment 2 corridor include: ACCESS LYNX and SunRail connections. The ACCESS LYNX program provides complementary service for eligible individuals who are not able to use the regular fixed route bus service because of a disability or other limitations. Connectivity to SunRail is provided through numerous Link routes that travel along Sand Lake Road, between I-4 and the SunRail station located to the east on Sand Lake Road at SR 527 (S. Orange Avenue). Commuter assistance is also provided through vanpool program which includes cost sharing, enabling participants to save money as well as time. The LYNX pre-tax savings program offers transit users tax incentives for participation in its Vanpool or Bus Pass programs.

The *LYNX Vision 2030 (Final Report, October 2011)* study identifies the SR 528 corridor from Walt Disney World (WDW) to Orlando International Airport (OIA) as a potential future Bus Rapid Transit (BRT) corridor. This 16.3-mile corridor extends from OIA to WDW along Sand Lake Road, SR 528 and I-4. Any improvements proposed as part of the Build Alternatives for I-4 Segment 2, will not preclude future LYNX transit plans.

5.3.2 Bicycles and Pedestrians

Bicycle lanes currently do not exist along Sand Lake Road, Turkey Lake Road, Adventure Way or Universal Boulevard. However, 7-foot bicycle lanes are being proposed with the planned improvements to Sand Lake Road on both the north and south sides of the roadway between Turkey Lake Road and International Drive. The Turkey Lake Road realignment areas, south of Sand Lake Road and north of Central Florida Parkway, will not include bicycle lanes due to constricted right-of-way and the inability to provide connectivity due to the absence of existing bicycle lanes along the facility, in the project study corridor. However, a 10-foot sidewalk in lieu of a bike lane will be provided along the west side of Turkey Lake Road, as requested by Orange County. Pedestrian accommodations do exist along Sand Lake Road, Turkey Lake Road and Universal Boulevard. The proposed build alternatives include further bicycle and pedestrian accommodations. Additionally, grade separated pedestrian crossings are being proposed by private landowners at the intersection of Sand Lake Road and International Drive. At the time of this study, the pedestrian bridges are only conceptual in nature.

5.4 Build Alternatives

The build alternative for the I-4 mainline involves widening from the existing 6-lane to the proposed 10-lane section with four, tolled express lanes. Accommodation for a future rail corridor is provided within the median south of SR 528. Access to and from the express lanes will be provided through direct access ramps at major interchanges or slip ramp connections between interchanges. Slip ramps provide access between the general use lanes and the express lanes, direct access ramps will provide access between the crossroads at the major interchanges and the express lanes and dual access ramps provide both access between GULs and ELs and major crossroads and ELs. The build alternative will provide one direct access ramp and one slip ramp along I-4 Segment 2, as shown in Figure 5.1. Detailed analysis on the development of express lanes access points and tolling concepts, is provided in the supplemental report, *Concept of Operations SR 400 (I-4) from West of SR 25/US 27 to East of SR 472 (April 2016),* prepared for this project.



Figure 5.1 – Proposed Express Lane Access Points

As outlined previously, the project objective is to develop and evaluate viable interchange alternatives to enhance the ability of the roadways to meet anticipated traffic demands, improve safety, and serve existing and future land uses along the I-4 corridor. The alternatives analysis will focus primarily on the interchanges and pond sites, since the mainline typical section (three general use lanes and two express lanes in each direction) will be consistent with the approved typical section that is being implemented from SR 435 (Kirkman Road) to SR 434.

The I-4 Beyond the Ultimate typical section which includes a 44-foot rail envelope was previously shown in Figure 1.2. A high-speed rail corridor was preserved in the median of I-4, west of the Beachline Expressway. At the Beachline, the rail corridor turns towards the east and follows the Beachline Expressway. The I-4 ultimate typical section which does not include a rail envelope was previously shown in Figure 1.3. The complete typical section package for the entire I-4 BtU corridor has been submitted under separate cover. Build alternatives were evaluated for the SR 528 interchange and Sand Lake Road interchange. No alternatives are proposed for the Adventure Way or the Universal Boulevard interchanges.

TSMO strategies which will be implemented into the Build alternatives include: a demand management tool which utilizes a variable price tolling plan to maintain LOS D in the express lanes, an electronic toll collection system, ramp to ramp auxiliary lanes to facilitate merge/diverge maneuvers from the freeway, preservation of a rail corridor within the median of the interstate, dedicated turn lanes at intersections within the corridor study area and enhanced pedestrian and bicycle facilities along arterial crossroads.

5.4.1 Design Speed

The design speed of I-4 from SR 528 to Kirkman Road (general use lanes and express lanes) and SR 528 is 70 mph. The design speed of I-4 between Kirkman Road and I-4 Ultimate is 60 mph. The

existing and proposed design speed of Sand Lake Road is 40 mph. The design speed of Adventure Way and Universal Boulevard were not evaluated since the concepts shown in this study tie in to the ramps at the gore locations.

5.4.2 Interchange Alternatives

The Build Alternatives for I-4 Segment 2 include new interchanges at SR 528 and Sand Lake Road, as well as widening Turkey Lake Road south of Sand Lake Road. The Concept Plans provided in Appendix A include detail sheets of the interchange alternatives described in the following sections.

SR 528 (Beachline Expressway) Interchange Alternatives

Seven interchange concepts were evaluated for the SR 528 interchange. All of the I-4 BtU interchange alternative concepts evaluated for SR 528 will tie in to the planned improvements for the *Beachline Expressway (SR 528 Widening from I-4 to Florida's Turnpike, FPN 406090-5-52-01)*. The proposed project will widen the existing four-lane expressway to an eight-lane facility by adding four express toll lanes within the median of SR 528.

Alternative 1, shown in Sheets 18-23 of the Concept Plans in Appendix A, maintains the freeway terminal junction design. This four-level interchange concept includes direct connect express lane ramps to/from the east and west on I-4, in addition to the direct general use lane ramps. A 44-foot rail corridor is maintained into the interchange from the west and turns east along SR 528. A two-lane entrance ramp from Central Florida Parkway onto I-4 eastbound will connect within the interchange. Also, a two-lane off ramp from I-4 westbound onto Central Florida Parkway will be provided. Due to the increased number of lanes and ramps on I-4, Turkey Lake Road will have to be realigned and right-of-way must be acquired along the west side of Turkey Lake Road.

Alternative 2, shown in Sheets 24-29 of the Concept Plans in Appendix A, maintains the same geometry as Alternative 1, but combines the general use and express lane ramps together. This design eliminates the need for a four-level flyover and decreases the number of bridges from seven to six. Alternative 2 is designed for drivers to determine direction of travel first and then choose between general use and express lanes. The same 44-foot rail corridor and ramps to/from Central Florida Parkway are maintained. Turkey Lake Road will have to be realigned and right-of-way must be acquired along the west side of Turkey Lake Road.

Alternative 3, shown in Sheets 30-35 of the Concept Plans in Appendix A, is a multi-level free flow Diverging Diamond Interchange (DDI). The westbound general use and express lanes bridge over the eastbound general use and express lanes, south and north of the interchange. Eastbound lanes will be on the west side of the interchange and westbound lanes will be on the east side of the interchange. This is a three-level interchange with a 44-foot rail corridor and ramps to/from

Central Florida Parkway. This design has less of an impact on Turkey Lake Road, but it still requires realignment and right-of-way acquisition along the west side of Turkey Lake Road.

Alternative 4, shown in Sheets 36-41 of the Concept Plans in Appendix A, is the same geometric design as Alternative 1. The I-4 mainline and SR 528 ramps shift west approximately 48 feet, such that there would be no right-of-way impacts along the east side of I-4. This shift will cause greater right-of-way impacts along the west side of I-4 and will require Turkey Lake Road to be realigned.

Alternative 5, shown in Sheets 42-47 of the Concept Plans in Appendix A, is the same geometry as Alternative 2, but the I-4 mainline is shifted westward so that no right-of-way will be needed along the eastbound side. The westbound general use and express lane exit ramps are combined and fly over I-4 as a third-level bridge. Westbound SR 528 will split into an eastbound I-4 on ramp and westbound I-4 on ramp. The eastbound ramp will further split into separate general purpose and express lane on ramps. The westbound ramp will be a second-level flyover and will split into a general use on ramp and an express lane on ramp. The eastbound I-4 to eastbound SR 528 will have separate ramps for general use and express lanes. The express ramp will elevate over the eastbound general purpose lanes and the ramp from Central Florida Pkwy to I-4 eastbound. The general use exit ramp will elevate and cross over the Central Florida Pkwy to I-4 eastbound on ramp. Right-of-way will have to be acquired along the southwest quadrant of the interchange. Turkey Lake Road will have to be realigned due to the widening of I-4.

Alternative 6, shown in Sheets 48-53 of the Concept Plans in Appendix A, maintains the freeway terminal junction design while providing direct connection to the SR 528 express lanes. I-4 exit ramps for westbound general use and express lanes will remain separate, and fly over I-4 and the ramps from SR 528 westbound to I-4 westbound. The I-4 westbound general use ramp will merge with the I-4 eastbound to SR 528 eastbound general use ramp. The I-4 westbound express lane ramp will merge with the I-4 eastbound to SR 528 eastbound express lane ramp. The SR 528 westbound general use lanes will split to eastbound and westbound ramps to I-4. The SR 528 westbound express lanes will also split to eastbound and westbound ramps to I-4. Right-of-way will have to be acquired along the southwest quadrant of the interchange. Turkey Lake Road will have to be realigned due to the widening of I-4.

Alternative 7, shown in Sheets 54-59 of the Concept Plans in Appendix A, combines the express lane ramps for I-4 westbound (to SR 528 eastbound express lanes) and I-4 eastbound (from SR 528 westbound express lanes) with the westbound exit ramp for the general use lanes (to SR 528 eastbound general use). This creates one flyover bridge instead of three separate bridges. The SR 528 westbound general use lanes will split, allowing for two lanes to go to I-4 eastbound and two lanes to fly over I-4 and merge with the I-4 westbound general use lanes. SR 528 westbound express to I-4 westbound express will contra flow between the I-4 eastbound general use lanes and

the combined express and general use ramp from I-4 eastbound to SR 528 eastbound. The I-4 eastbound express off ramp to SR 528 eastbound and the I-4 westbound express on ramp from SR 528 westbound combine together and bridge over the I-4 eastbound general use and express lanes. This alternative also provides a direct connect ramp from International Drive to the SR 528 westbound express lanes. Right-of-way will have to be acquired along the southwest quadrant of the interchange to accommodate the proposed improvements and Turkey Lake Road will have to be realigned due to the widening of I-4.

The build alternative identified in the original PD&E study/FEIS *(I-4 PD&E Study – Section 2, Final Environmental Impact Statement FEIS, August 2002*) for the SR 528 (Beachline Expressway, formerly known as the Bee Line Expressway) interchange proposed replacing the existing interchange with three-leg fully directional, three-level interchange with direct HOV access flyover ramps. Two-lane ramps were proposed to serve the I-4 eastbound to SR 528 eastbound, I-4 westbound to SR 528 eastbound and SR 528 westbound to I-4 westbound movements. Single-lane ramps were proposed for the remaining movements. The proposed improvements would result in the realignment of Turkey Lake Road near Sand Lake Hospital.

Sand Lake Road Interchange Alternatives

Four interchange concepts were evaluated for the Sand Lake Road interchange. All of the I-4 BtU interchange alternative concepts evaluated for Sand Lake Road will tie in to the planned improvements for *Sand Lake Road (SR 482 Widening from Turkey Lake Road to Universal Boulevard, FPN 407143-4-52-01)*. The proposed Sand Lake Road project will widen the existing four-lane roadway to a six-lane facility with exclusive turn lanes, drainage improvements, bike paths and sidewalks on both sides.

Alternative 1, shown in Sheets 60-63 of the Concept Plans in Appendix A, maintains the interchange geometry similar to today, which is a partial cloverleaf interchange with a two-lane loop ramp from Sand Lake Road westbound to I-4 westbound in the northwest quadrant. The design speed of the proposed Sand Lake Road improvements is 40 mph. As part of the proposed improvements, right-of-way will be required at the intersections of Sand Lake Road with Turkey Lake Road and International Drive. Additionally, the Sand Lake Road corridor east of International Drive will also require right-of-way. The right-of-way required for the Sand Lake Road project will be acquired as part of that project.

Alternative 2, shown in Sheets 64-67 of the Concept Plans in Appendix A, proposes a Diverging Diamond Interchange (DDI). The design speed of the DDI is 35 mph due to right-of-way constraints. Similar to Alternative 1, the DDI would connect to the proposed Sand Lake Road improvements. A design variation would be required for the Design Speed (Major Arterial should be designed for a design speed of 45 mph). A design variation will also be required for the roadway cross slope. The

cross slope proposed is +2% (Reverse Crown); however, per PPM, a cross slope of -2% (Normal Crown) is required.

Alternative 3, shown in Sheets 68-71 of the Concept Plans in Appendix A, proposes a Single Point Urban Interchange (SPUI). Both I-4 off ramps will have dual left turn lanes and dual right turn lanes onto Sand Lake Road. Each I-4 on ramp will have a single right turn lane and dual left turn lanes. The westbound on ramp will taper to one lane before merging with I-4 and the eastbound on ramp will taper to two lanes before merging with I-4.

Alternative 4, shown in Sheets 72-77 of the Concept Plans in Appendix A, proposes a DDI similar to Alternative 2, but adds a loop ramp in the northwest quadrant for westbound Sand Lake Road traffic to access Turkey Lake Road south of the interchange. Additionally, the I-4 westbound off ramp will split into two ramps north of Sand Lake Road. One ramp will continue to the Sand Lake Road DDI and the other will merge with the loop ramp from westbound Sand Lake Road. The two merged ramps will continue to the south until they intersect Turkey Lake Road. This additional ramp will eliminate the left turn movement from westbound Sand Lake Road onto southbound Turkey Lake Road. Additionally, a third northbound through lane will be added on Turkey Lake Road adjacent to the existing Phillips Crossing and Phillips Village shopping centers, south of Sand Lake Road.

The build alternative identified in the original PD&E study/FEIS *(I-4 PD&E Study – Section 2, Final Environmental Impact Statement FEIS, August 2002*) for the Sand Lake Road interchange proposed maintaining the existing partial cloverleaf interchange and modifying the westbound Sand Lake Road to westbound I-4 loop ramp to connect to eastbound Sand Lake Road to westbound I-4 ramp for a single access point on I-4 westbound.

Adventure Way Interchange Alternatives

No interchange alternatives were evaluated for Adventure Way. The existing one-lane west bound off ramp will continue to connect to the I-4 general use lanes. The westbound on ramp will continue to connect to the two-lane on ramp from Kirkman Road southbound to I-4 westbound.

Universal Boulevard Interchange Alternatives

No interchange alternatives were evaluated for Universal Boulevard. The existing two-lane eastbound off ramp will continue to connect to the I-4 general use lanes. The two-lane eastbound on ramp will continue to connect to the I-4 eastbound general use lanes.

5.5 Design Traffic

Development of project traffic for I-4 and surrounding arterials within the study limits of Segment 2 was based on the procedures outlined in the Methodology Letter of Understanding (MLOU) (October 2014 Update) and are provided in the *I-4 Beyond the Ultimate Systems Access*

Modification Report (SAMR) Re-Evaluation: I-4 Beyond the Ultimate Project South Section – from West of US 27 to West of SR 435 (Kirkman Road) [March 2017] prepared for this project.

5.5.1 Future Traffic Volumes

Travel demand modeling using the Central Florida Regional Planning Model (CFRPM version 5.01) was utilized to forecast Directional Design Hour Volumes (DDHV) for the I-4 Segment 2 project. The future traffic forecasts were determined for 2020 (opening year), 2030 (interim year) and 2040 (design years) for two build alternatives: Original Build and Modified Build. The Original Build alternative refers to the preferred interchange alternatives identified in the original I-4 SAMR dated April 2000 and approved by FHWA in June 2000 with subsequent update in 2003. The Modified Build alternative refers to the current I-4 SAMR Reevaluation and constitutes revised improvement concepts, which account for changing conditions over time. These changes include variation in traffic characteristics, modifications to express lane access points and other traffic and design considerations which led to the current proposed build alternatives.

5.5.2 Design Traffic Factors

The traffic volume outputs generated by the model represent Peak Season Weekday Average Daily Traffic (PSWADT). A Model Output Conversion Factor (MOCF) was used to convert the PSWADT to Average Annual Daily Traffic (AADT). A MOCF of 0.98 for I-4 and arterials in Orange County was used for this study. The K factor is used to convert the 24-hour AADT estimate to an hourly volume (DHV-Design Hour Volume). The Directional Distribution factor (D) is the percentage of total, two-way design traffic traveling in the peak direction.

K Factor

The K Factor is the ratio of the AADT that occurs during the design hour for the design year. Standard K factors have been adopted by FDOT based on area and facility type, with consideration to typical peak periods of the day. Due to the unique nature of the I-4 Segment 2 corridor and the corresponding multi-hour traffic peaking characteristics, a peak spreading methodology was developed to determine design traffic for this project. The use of peak spreading is needed in this section of the I-4 BtU corridor due to the high volume to capacity (v/c) ratios that result from using the FDOT standard "K." The approved peak spreading methodology is detailed in the *Methodology Letter of Understanding (MLOU)* (October 2014 Update).

D Factor

The Directional Distribution (D) is the percentage of total, two-way design traffic traveling in the peak direction. The design traffic factors were derived from all the count stations in Orange County for I-4 and the arterial roadways. The D factor used in the analysis for I-4 Segment 2 traffic, by facility type, is summarized in Table 5.1.

Table 5.1 - D Factor

Facility Type	D-Factor
Interstate 4	52.92
Arterials	53.66

T Factor

The percentage of trucks (T) using a roadway is the most critical factor in pavement design. The T factor used in traffic analysis for I-4 Segment 2 traffic was 5.4% for the AM peak hour and 3.0% for the PM peak hour.

5.5.3 Intersection/Interchange Traffic Volumes

Traffic volumes for intersections and interchanges within the I-4 Segment 2 corridor were developed for both Original Build and Modified Build conditions based on the procedures outlined in the *MLOU (October 2014 Update).* The CFRPM model was used to develop the existing, 2020 and 2030 forecasts. Year 2040 forecasts were developed by determining a growth rate from 2030 to 2035 (forecast year of the model) and using that growth rate to extrapolate volumes from 2030 to 2040. For the Original Build scenario, year 2040 peak hour volumes were adjusted based on reasonable growth rates for localized movements, current land-use patterns and future projected developments, population growth rate and, if needed, peak hour capacity of the proposed roadway configurations. Traffic volumes for the Modified Build scenario were developed based on the Original Build volumes. The redistribution of traffic between the Original Build and Modified Build was performed based on the current proposed interchange and freeway configurations. The resulting design year 2040 DDHVs for the Modified Build scenario, which is pertinent to the current reevaluation study, are shown in are shown in Figure 5.2 and Figure 5.3.

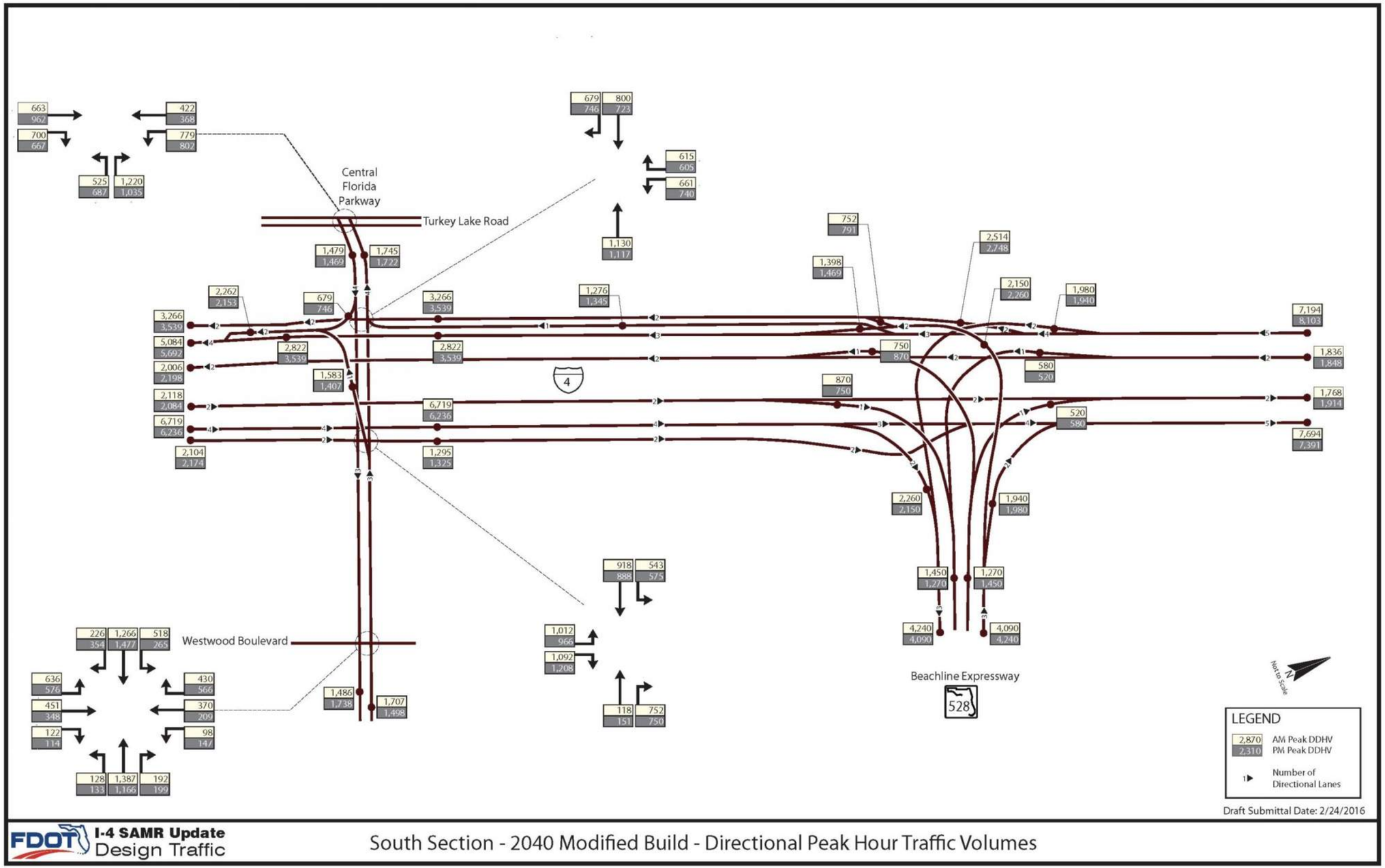


Figure 5.2 – 2040 Build Directional Peak Hour Traffic Volumes (Sheet 1 of 2)

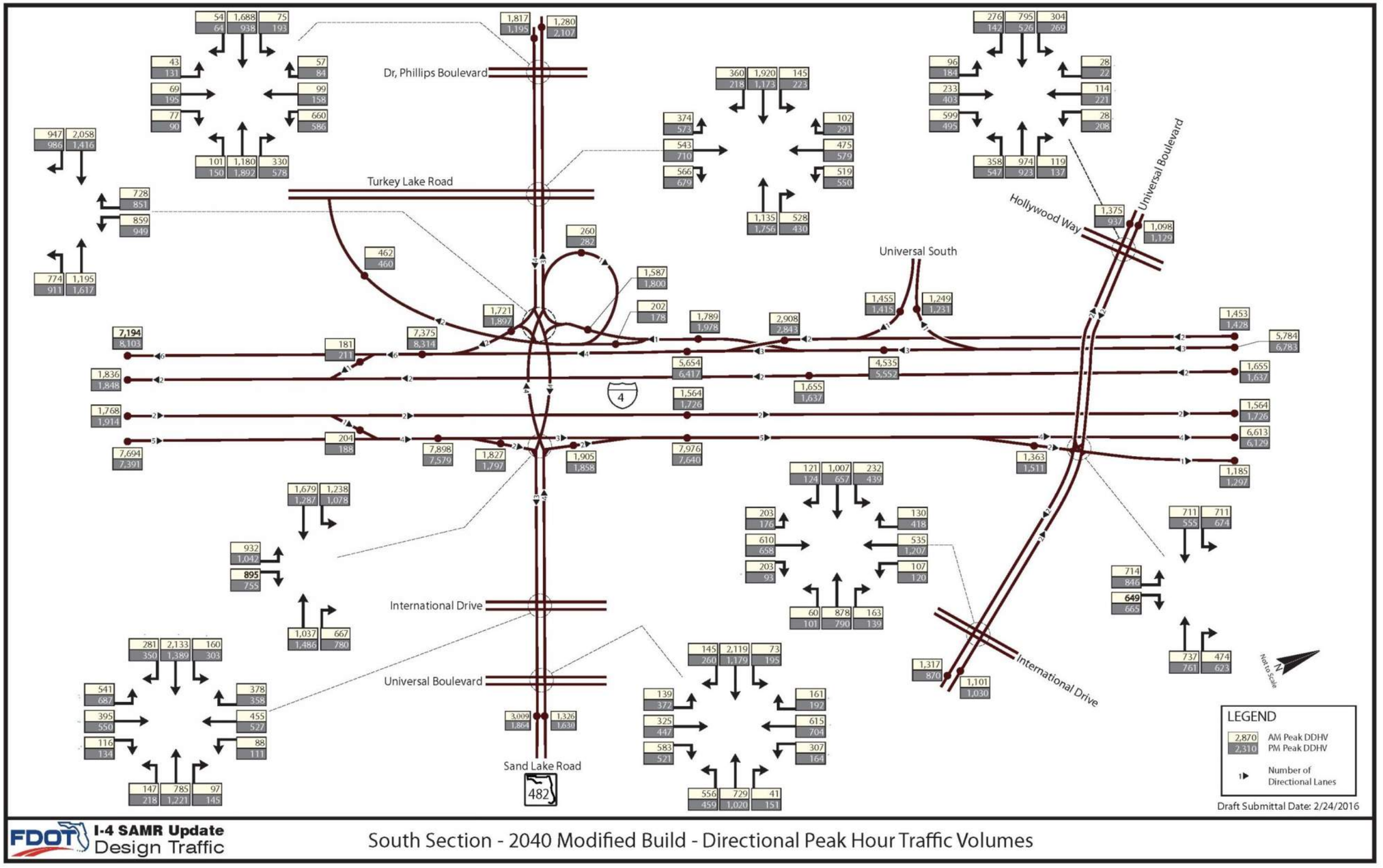


Figure 5.3 – 2040 Build Directional Peak Hour Traffic Volumes (Sheet 2 of 2)

5.5.4 Intersection Operational Analysis

As part of the development of interchange alternatives for I-4 Segment 2, traffic operational analyses of the intersections within or near the proposed interchange improvements were completed for No Build and Build alternatives. Some alternatives were removed from further consideration due to roadway geometric design constraints, operational deficiencies, inter-agency coordination indicating other preferences and/or being cost-prohibitive and no further traffic analysis was completed. Peak hour operational analysis of intersections/interchanges was completed using Synchro or VISSIM-version 5.4 software.

Sand Lake Road Interchange

Four interchange alternatives were developed for the SR 482 interchange, as previously described in Section 5.4.2 of this report. Traffic operational analyses based on Directional Peak Period Traffic volumes developed for the *I-4 Systems Access Modification Report (SAMR)* update were completed for the four Build alternatives as well as the No-Build alternative:

1. No-Build (existing interchange configuration)
2. Alternative 1 - Base Partial cloverleaf with loop ramp in Northwest quadrant
3. Alternative 2 - Diverging Diamond Interchange (DDI)
4. Alternative 3 - Single Point Diamond Urban Interchange (SPUI)
5. Alternative 4 - DDI with loop ramp in Northwest quadrant

AM and PM peak hour intersection analyses were completed using VISSIM for the No-Build condition. The results of the No-Build operational analyses indicating that adjacent intersections beyond the ramp terminals at the interchange were failing. Alternatives 1-3 were dismissed from further evaluation since they do not include further improvements beyond the interchange and along the remainder of the SR 482 study area corridor. Results of the intersection analyses, as shown in Table 5.2 indicate that all intersections along the corridor improve in operations for Alternative 4 when compared to the No-Build Alternative.

Table 5.2 – I-4 and SR 482 (Sand Lake Road) Node Evaluation Results

Intersection	2040 AM Peak				2040 PM Peak			
	No-Build		Alternative 4		No-Build		Alternative 4	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Sand Lake Road/Turkey Lake Road	289.0	F	155.9	F	267.7	F	128.1	F
Sand Lake Road /I-4 West Interchange	113.8	F	37.1	D	118.3	F	26.0	C
Sand Lake Road/I-4 East Interchange	107.1	F	36.2	D	113.2	F	23.6	C
Sand Lake Road/International Drive	237.9	F	51.5	D	308.0	F	51.4	D
Sand Lake Road/Universal Boulevard	121.7	F	128.7	F	288.2	F	88.3	F

Intersections operating at or below LOS E.

Operational analyses were further evaluated using network-wide performance measures to compare the No-Build and Alternative 4 Build conditions. Results of the network-wide performance measures, as shown in Table 5.3, indicate that the corridor improves in operations for Alternative 4 when compared to the No-Build Alternative.

Table 5.3 – I-4 and SR 482 (Sand Lake Road) Network Evaluation Results

	AM Peak		
Performance Measure	**No-Build**	**Alternative 4**	**Alternative 4 Improvement**
Total Travel Time (hr)	1,272	1,014	20%
Total Delay Time (hr)	1,063	716	33%
Average Delay Time (sec/veh)	355	187	47%
Latent Delay Time (hr)	472	65	86%
Number of Arrived Vehicles	9,274	12,600	36%
Latent Vehicles	3,985	635	84%
Total Delay + Latent Delay (hr)	1,535	781	49%
	PM Peak		
Total Travel Time (hr)	1,543	952	38%
Total Delay Time (hr)	1,343	612	54%
Average Delay Time (sec/veh)	460	141	69%
Latent Delay Time (hr)	632	9	99%
Number of Arrived Vehicles	8,837	14,529	64%
Latent Vehicles	5,525	67	99%
Total Delay + Latent Delay (hr)	1,975	621	69%

SR 528 Interchange

Seven interchange alternatives were developed for the SR 528 interchange, as previously described in Section 5.4.2 of this report. During development of the SR 528 alternatives, the project team, consisting of the design consultant and FDOT staff, coordinated extensively with the Florida's Turnpike Enterprise (FTE) to ensure continuity between the I-4 BtU project and the SR 528/ Beachline Expressway Widening (FPID 406090-5) project that will add two express lanes in each direction between I-4 and Florida's Turnpike Mainline. Alternatives 1-4 were eliminated due to cost and constructability issues. Alternative 5, which provides for direct connection between I-4 and SR 528 express lanes through an open access weave zone, was recommended for further evaluation and refinement. The FTE, in coordination with the project team, developed Alternatives 6 and 7 which built upon the concepts developed in Alternative 5. Alternative 6 provides direct connection between I-4 and SR 528 express lanes with continuous express lanes, and includes ingress/egress slip ramps between I-4 and International Drive interchanges along SR 528. Alternative 7 provides direct connection between I-4 and SR 528 express lanes with braided ramps

to International Drive. Traffic operational analyses for Alternatives 5, 6 and 7 were completed by FTE utilizing 2040 project traffic and microsimulation analysis. Various Measures of Effectiveness (MOEs) including speed, density and percent demand served were evaluated for all three alternatives. The initial MOEs indicated low travel speeds and queues extending along the I-4 mainline from SR 528 upstream to the next interchange to the south (SR 535). Thus, the three alternatives were evaluated for mitigated measures including widening the ramps. In the mitigated scenarios, Alternative 5 reported the lowest speeds along SR 528 during the PM peak period along with unfavorable weave conditions between the I-4 and International Drive interchanges. Alternatives 6 and 7 provided acceptable operating conditions along the same corridor limits with Alternative 7 having slightly improved weaving conditions. However, Alternative 7 had other disadvantages including higher cost and accessibility issues from key interchanges to the SR 528 express lanes. Based on these considerations, Alternative 6 was selected for further evaluation. Alternative 6 was further refined to develop Alternative 6B, which would provide an improved weave zone in the eastbound direction. The peak period performance measures for all alternatives evaluated are summarized in Table 5.4; detailed analysis is provided in *Technical Memorandum: Evaluation of the Proposed Ultimate S.R. 528 (Beachline Expressway) and I-4 Interchange Configurations – Alternatives 5, 6 and* 7 (November 2014).

5.6 Intersection Improvements

Intersection improvements, such as exclusive turn lanes and additional through lanes, based on the traffic operations analyses are proposed at or adjacent to the interchange at Sand Lake Road, including the Sand Lake Road intersections with Turkey Lake Road to the west of I-4 and with International Drive to the east of I-4. The Concept Plans for the proposed intersection concepts can be found in Appendix A. The proposed intersection improvements associated with the Sand Lake Road Alternatives 1, 2, 3 and 4 are shown on pages 60, 64, 68 and 74, respectively, of Appendix A.

Table 5.4 – I-4 and SR 528 (Beachline Expressway) 2040 Peak Period Network Performance (4 Hours)

2040 AM											
Performance Measure	Base Configuration			Mitigated Configuration				Diff %			
	Alt. 5	Alt. 6	Alt. 7	Alt. 5	Alt. 6	Alt. 6B	Alt. 7	Alt. 5	Alt. 6	Alt. 6B	Alt. 7
Total Travel Time (hr)	20,729	20,658	24,515	20,710	20,674	20,658	20,330	-0.1%	0.1%	0.0%	-17.1%
Total Delay Time (hr)	2,029	1,999	6,389	2,010	2,013	1,977	2,027	-0.9%	0.7%	-1.1%	-68.3%
Average Delay (secs/veh)	42	41	141	41	42	41	45	-0.9%	0.7%	-1.1%	-68.3%
Average Speed (mph)	54	55	45	54	55	55	55	0.1%	-0.1%	0.1%	21.9%
2040 PM											
Performance Measure	Base Configuration			Mitigated Configuration				Diff %			
	Alt. 5	Alt. 6	Alt. 7	Alt. 5	Alt. 6	Alt. 6B	Alt. 7	Alt. 5	Alt. 6	Alt. 6B	Alt. 7
Total Travel Time (hr)	21,813	21,678	24,571	21,806	21,755	21,955	22,071	0.0%	0.4%	1.3%	-10.2%
Total Delay Time (hr)	3,216	3,127	5,817	3,209	3,204	3,166	3,211	-0.2%	2.4%	1.3%	-44.8%
Average Delay (secs/veh)	67	65	120	67	67	66	66	-0.2%	2.4%	1.3%	-44.8%
Average Speed (mph)	52	52	46	52	52	52	52	0.0%	-0.3%	0.0%	11.9%

5.7 Environmental Impacts

5.7.1 Floodplains and Regulatory Floodways

FEMA has developed Flood Insurance Rate Maps (FIRM) for Orange County. According to FEMA Map Nos. 12095C0405F and 12095C0415F, none of the roadway or the existing ponds within this segment are located in the 100-year floodplain. The proposed ponds 200A, 200B, 205A, 205B, 205C and 205D are adjacent to the 100-year floodplain; however, there is no impact to the floodplain. There are no regulatory floodways within the project corridor.

The Geographical Information System (GIS) and FEMA FIRM data identified two floodplain zones present within the project study area. These zones are identified as follows:

- Zone A – Area of 1% annual chance of flood (100-year flood), no base flood elevation determined; and
- Zone AE – Area of 1% annual chance of flood (100-year flood), base elevation determined.

The FEMA Flood Insurance Rate Map for the project is shown in Figure 5.4. No floodplain impacts are associated with this project.

5.7.2 Wetlands

The jurisdictional wetland and surface waters limits and potential impacts were previously identified in the original PD&E Study (Interstate 4 Section 2 Wetland Evaluation Report for the Project Development & Environment Study from SR 528 (Bee Line Expressway) to SR 472 Interchange, May 2000). A *Wetland Evaluation Report Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) (July 2016)* in accordance with the PD&E Manual, Part 2, Chapter 18 (FDOT, 4/24/2013) has been prepared to reevaluate the jurisdictional limits of wetlands and surface waters within the project, assesses the potential for wetland and surface water impacts and provide conceptual mitigation using the Uniform Mitigation Assessment Method (UMAM). The jurisdictional extent of onsite wetlands and other surface water systems, within the project corridor, were evaluated through the review of current and historic aerial photography of the study area and ground-truth activities. Current and historical information reviewed included infrared digitally orthorectified quadrangle maps (DOQs), USGS Topographic Maps, National Wetlands Inventory (NWI) Maps, and Soil Survey Maps. Jurisdictional limits were identified and limits established in general accordance with the *1987 Corps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (November 2010)* and the State of Florida's *Delineation of the Landward Extent of Wetlands and Surface W*aters (Chapter 62-340, Florida Administrative Code). Wetlands

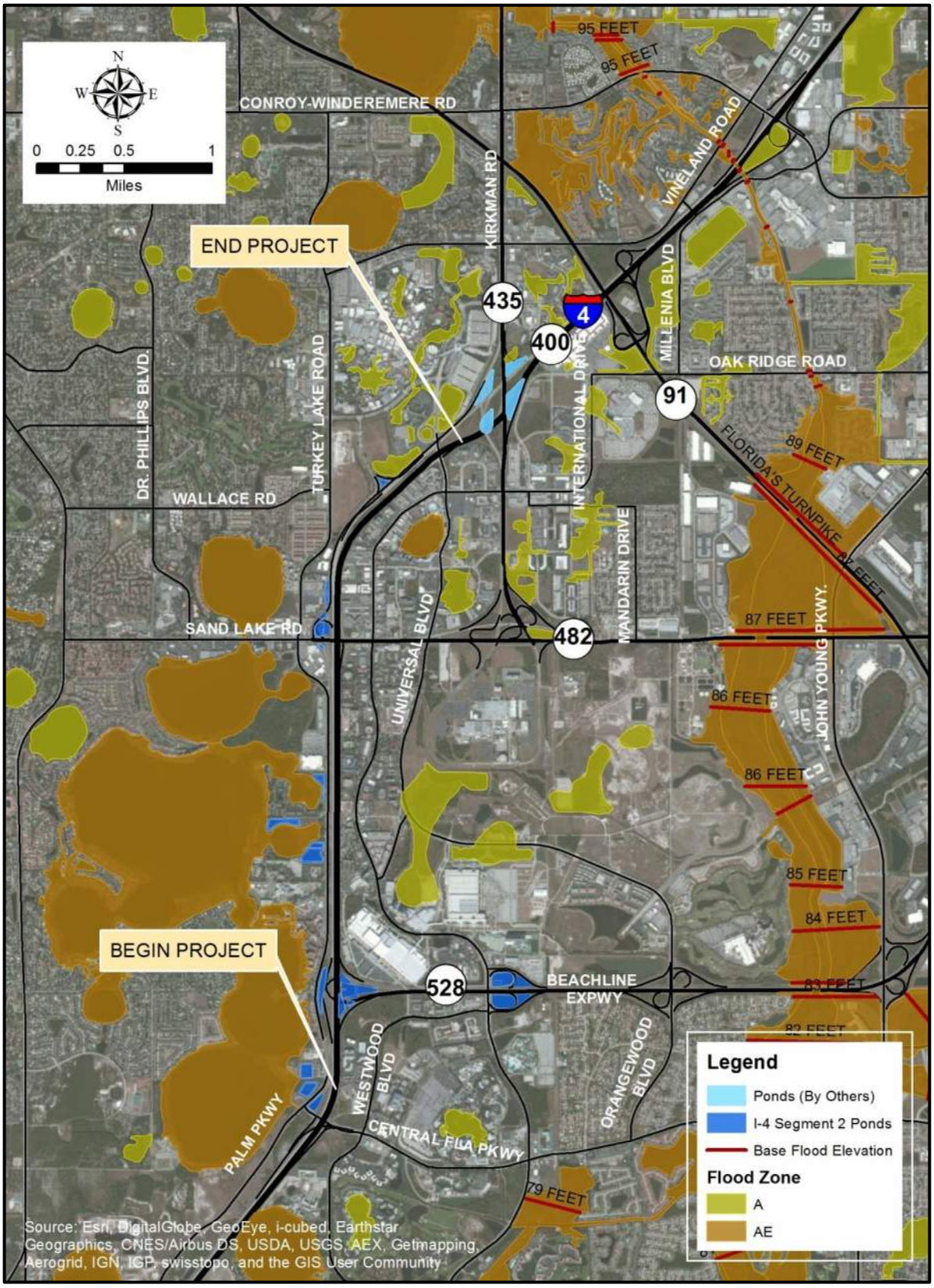


Figure 5.4 - FEMA Flood Insurance Map

and surface waters observed were classified using FDOT's *Florida Land Use, Cover and Forms Classification System (FLUCFCS)* and the USFWS classification system as described in *Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et. al, 1979).* In addition, field reviews of wetland and other surface waters were conducted along the project corridor using handheld Global Positioning Systems (GPS) devices to approximate each system's limits. For this study, jurisdictional systems were identified from west to east and were classified as either Wetland (WL-#) or Other Surface Water (SW-#) and included the direction of corresponding I-4 travel lanes (i.e. East (E) or West (W)). The term other surface water generally identifies ditches, swales or wet stormwater ponds associated with the existing drainage conditions of Interstate 4. A description of wetlands and other surface waters within the study area is summarized in Table 5.5. Detailed analysis of existing wetlands and other surface waters are provided in the *Wetland Evaluation Report (July 2016)* prepared for this project.

Preliminary estimates suggest that 4.43 acres of wetlands communities and 9.32 acres of other surface waters will be directly impacted by the proposed improvements associated with I-4 Segment 2. Impact estimates are assumed to be equivalent for all alternatives evaluated. These estimates are based on field assessment of jurisdictional limits and preliminary plan preparation for design. Impacts to jurisdictional areas will be refined as design details are finalized. The impact areas, quality of each system and likelihood of requiring mitigation for adverse impacts are summarized in Table 5.6 and depicted in Figure 5.5 through Figure 5.10. Impacts to wetlands and surface waters during construction will also be classified as temporary or permanent, depending on the proposed level of disturbance. The type and level of mitigation for impacts will be based on the final impact acreages, the nature of disturbance (temporary or permanent) and the overall quality of the systems.

Mitigation requirements are based on a compilation of wetland parameters including quality, type, function and size. Impacts to wetlands and other surface waters will be avoided and minimized to the maximum extent possible while maintaining safe and sound engineering and construction practices. Primarily, avoidance and minimization efforts are related to the proposed stormwater management pond locations. A mitigation plan that adequately offsets adverse impacts will be developed and implemented. Adverse wetland impacts that may result from the construction of this project will be mitigated, satisfying the requirements of Part IV Chapter 373, F.S. and 33 U.S.C.s.1344. Compensatory mitigation for this project will be completed through the use of mitigation banks and/or any other mitigation options that satisfy state requirements.

Table 5.5 - Summary of Wetlands and Surface Waters

ID	USFWS Classification*	FLUCFCS Code**	Description/ Vegetation Summary
SW-1(E)	PEM2E	5130	Upland-cut ditch
SW-2(E)	PEM2E	5130	Upland-cut ditch
SW-3(E)	PEM2E	5130	Upland-cut ditch
SW-5(E)	PEM2E	5130	Upland-cut ditch
SW-6(E)	PEM2E	5130	Upland-cut swale
SW-7(E)	PEM2E	5130	Upland-cut ditch
SW-8(E)	PEM2E	5130	Upland-cut ditch
SW-9(E)	PEM2E	5130	Upland-cut ditch
SW-10(E)	PEM2E	5130	Upland-cut swale
SW-11(E)	PEM2E	5130	Upland-cut swale
SW-12(E)	PEM2E	5130	Upland-cut ditch
SW-13(E)	PEM2E	5130	Upland-cut ditch
SW-14(E)	PEM2E	5130	Upland-cut swale
SW-15(E)	PEM2E	5130	Upland-cut ditch
SW-16(E)	PEM2E	5130	Upland-cut swale
SW-18(E)	PEM2E	5130	Upland-cut ditch
SW-1(W)	PEM2E	5130	Upland-cut swale
SW-2(W)	PEM2E	5130	Upland-cut swale
SW-3(W)	PEM2E	5130	Upland-cut ditch
SW-4(W)	PEM2E	5130	Upland-cut swale
WL-1(W)	PFO4A	6170	Mixed Wetland Hardwoods
WL-2(W)	PFO4A	6170	Mixed Wetland Hardwood
WL-3(W)	L2EMH	5230	Lakes
WL-4(W)	L2EMH	5210	Lakes

*United States Fish and Wildlife Service (USFWS) Classifications:
L2EMH: Lacustrine/Littoral/Emergent/Permanently Flooded; PEM2E: Palustrine/Emergent/Nonpersistent/Seasonally Flooded/Saturated PFO14E: Palustrine/Forested/Broad Leaved Deciduous/Needle-Leaved Evergreen/Seasonally Flooded/Saturated.
**Florida Land Use Cover and Forms Classification System (FLUCFCS): 5130 (Streams and Waterways); 5210 (Lakes larger than 500 acres); 5230 (Lakes larger than 10 acres but less than 100 acres); and 6170 (Mixed Wetland Hardwoods).

Table 5.6: Summary of Proposed Impacts to Wetlands/Other Surface

ID	FLUCFCS Code	Total Area within ROW (acres)	Proposed Impacts (acres)	Quality*	Mitigation Requirements (Y, N, N/A)**
Wetlands					
WL-1(W)	6170	0.66	0.66	Low	Y
WL-2(W)	6170	3.77	3.77	Low	Y
WL-3(W)	5230	0.00	0.00	Moderate	N/A
WL-4(W)	5210	0.00	0.00	Moderate	N/A
Subtotal Acres		4.43	4.43		
Subtotal Impacts			4.43		
Other Surface Waters (Upland-Cut Ditches and Swales)					
SW-1(E)	5130	2.60	2.60	Low	N
SW-2(E)	5130	0.28	0.28	Low	N
SW-3(E)	5130	0.17	0.17	Low	N
SW-5(E)	5130	0.06	0.06	Low	N
SW-6(E)	5130	0.18	0.18	Low	N
SW-7(E)	5130	0.24	0.24	Low	N
SW-8(E)	5130	0.73	0.73	Low	N
SW-9(E)	5130	0.17	0.17	Low	N
SW-10(E)	5130	0.15	0.15	Low	N
SW-11(E)	5130	0.26	0.26	Low	N
SW-12(E)	5130	0.25	0.25	Low	N
SW-13(E)	5130	0.51	0.51	Low	N
SW-14(E)	5130	0.25	0.25	Low	N
SW-15(E)	5130	0.17	0.17	Low	N
SW-16(E)	5130	0.30	0.30	Low	N
SW-18(E)	5130	0.21	0.21	Low	N
SW-1(W)	5130	1.50	1.50	Low	N
SW-2(W)	5130	0.48	0.48	Low	N
SW-3(W)	5130	0.03	0.03	Low	N
SW-4(W)	5130	0.78	0.78	Low	N
Subtotal Acres		9.32			
Subtotal Impacts			9.32		
Project Total		13.75	13.75		

*Low= UMAM Score between 0 and 0.49 Moderate= UMAM Score between 0.50 and 0.79 High= UMAM Score of 0.80 or better.
**Y= Jurisdictional/Mitigation Required N = Jurisdictional/No Mitigation Required N/A = No Mitigation Required

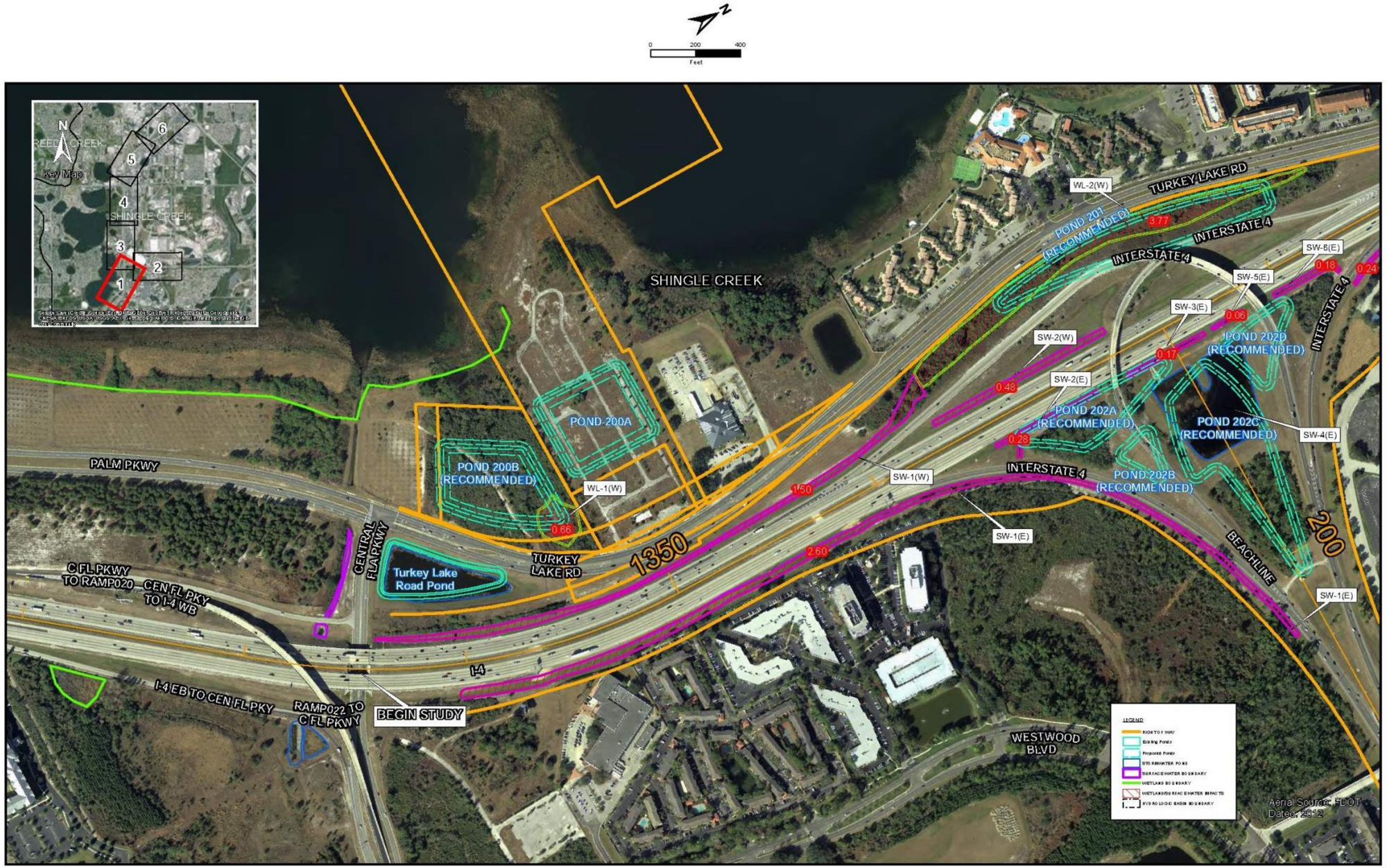


Figure 5.5 - Surface Water and Wetland Impacts (Map 1 of 6)

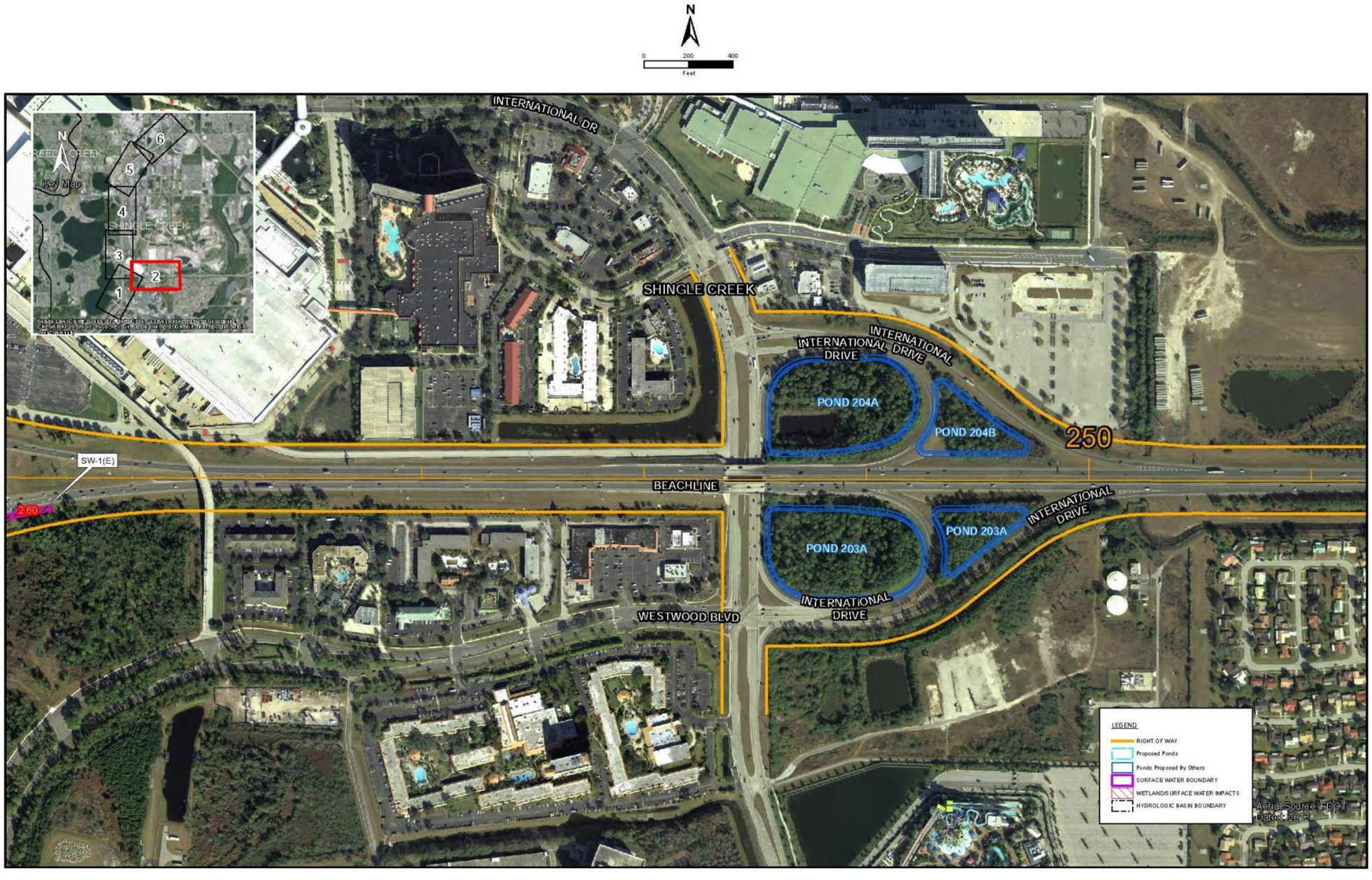


Figure 5.6 – Surface Water and Wetland Impacts (Map 2 of 6)



Figure 5.7 – Surface Water and Wetland Impacts (Map 3 of 6)

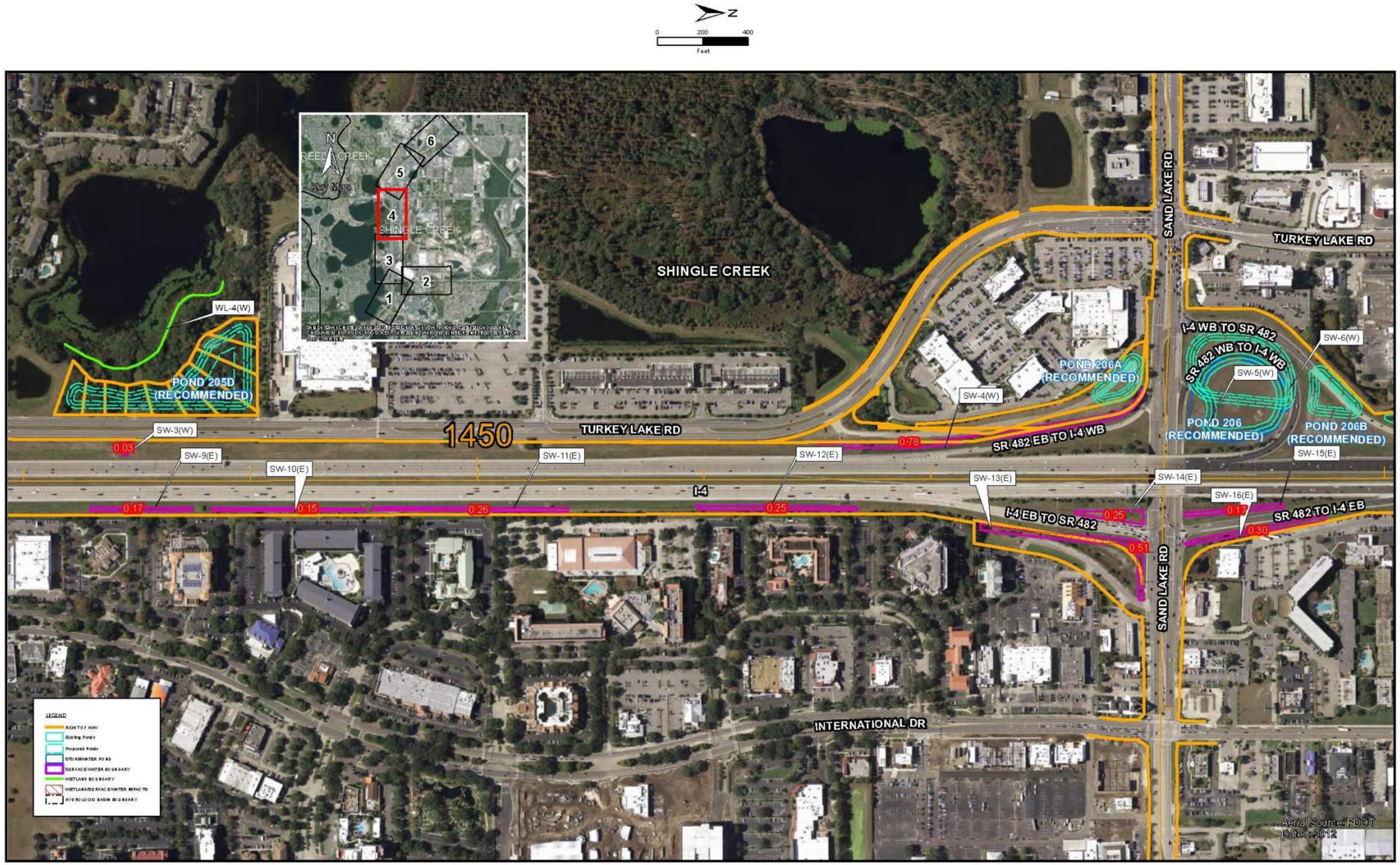


Figure 5.8 – Surface Water and Wetland Impacts (Map 4 of 6)



Figure 5.9 – Surface Water and Wetland Impacts (Map 5 of 6)

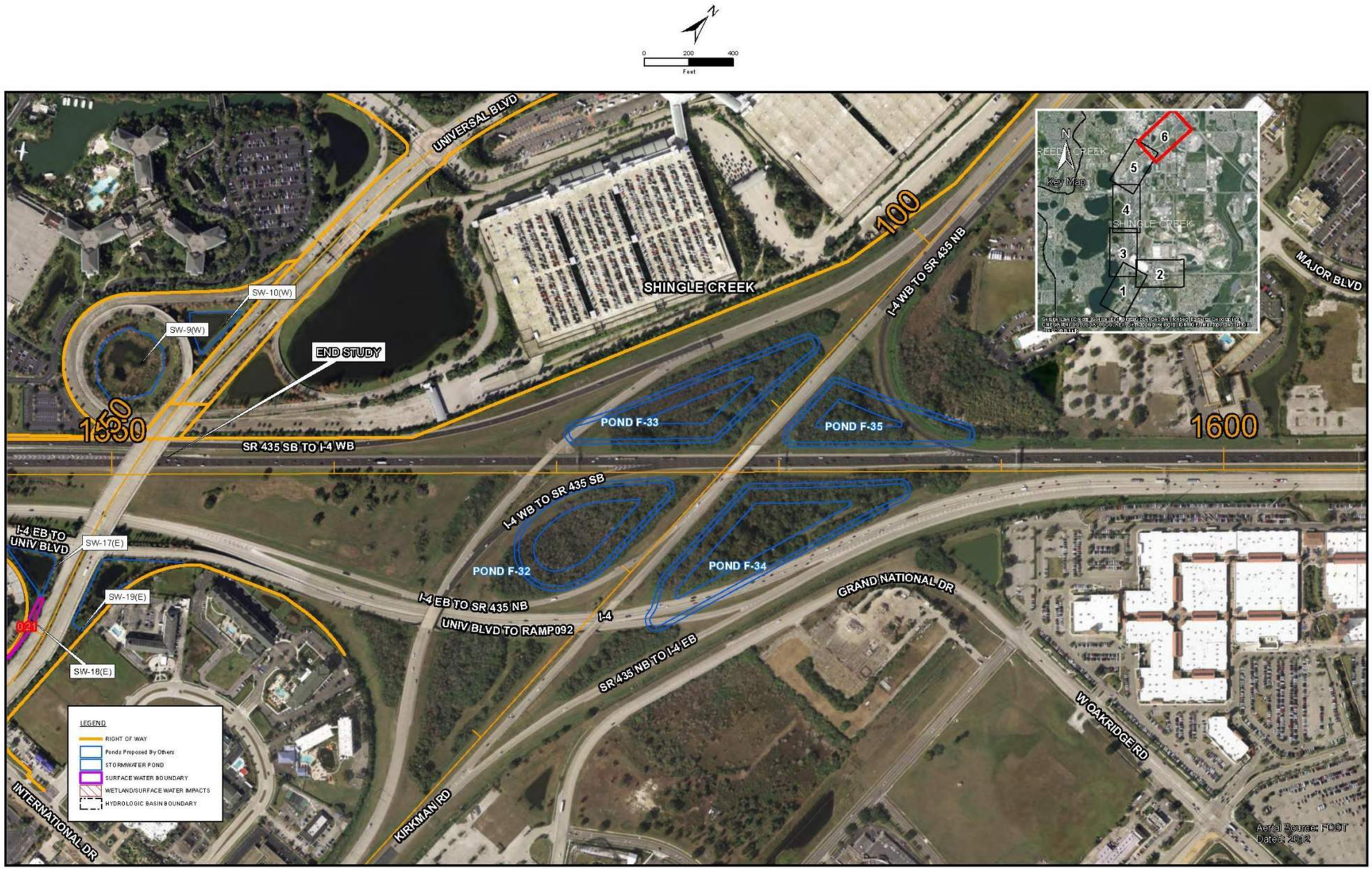


Figure 5.10 – Surface Water and Wetland Impacts (Map 6 of 6)

Preliminary estimates suggest that 4.43 acres of direct impacts to low-quality wetland systems will result from I-4 Segment 2 improvements; no secondary impacts are anticipated. Direct impacts will require approximately 3.1 mitigation credits (based on a 0.7 average UMAM score) to offset adverse wetland impacts. Mitigation banks with service areas within limits of the project and mitigation credit availability are listed in Table 5.7.

Table 5.7 - Summary of Available Mitigation Credits per Service Area

Mitigation Bank (MB)	Mitigation Service Area	Credit Availability*
Shingle Creek Mitigation Bank	Shingle Creek	15.76 UMAM Credits
Hatchineha Ranch Mitigation Bank	Shingle Creek	50 UMAM Credits
Southport Mitigation Bank	Shingle Creek	170 UMAM Credits
Reedy Creek Mitigation Bank	Shingle Creek	60 UMAM Credits
Collany Mitigation Bank	Shingle Creek	3.5 UMAM Credits
Bullfrog Bay Mitigation Bank	Shingle Creek	14 UMAM Credits

*Based on June 2014/September 2015 mitigation credit ledger review and coordination with Mitigation Marketing Resources, LLC and Florida Mitigation Technologies (2016).

5.7.3 Wildlife and Habitat

Potential environmental impacts include identifying impacts to wildlife and natural habitat within the proposed corridor. A supplemental report, *Endangered Species Biological Assessment, Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) (July 2016),* was prepared following guidelines presented in the PD&E Manual, Part 2, Chapter 27 (FDOT, 10/1/91) to identify wildlife species of known or potential occurrence and natural habitat types along the project corridor and to document potential project-related impacts. Particular attention was given to species that have been provided regulatory protection such as federal or state listed endangered, threatened or otherwise sensitive species, as well as suitable habitat for those species.

The study area for the project corridor included all potential pond sites, the existing right-of-way of I-4 and a buffer of 500 feet beyond the boundary of the current right-of-way. The methodology used to conduct the wildlife assessment included research of existing records and review of literature published by the Florida Natural Areas Inventory (FNAI), the Florida Committee on Rare and Endangered Plants and Animals (FCREPA), the Florida Fish and Wildlife Conservation Commission (FFWCC), the U.S. Fish and Wildlife Service (USFWS) and other relevant scientific publications. Based on these sources, 52 species of animals and 56 species of plants have been identified as potentially occurring in Orange County, though suitable habitat may not be available for all of them along the project corridor. Of these, 10 are federally listed animals, 12 are federally listed plants, 28 are state listed animals and 56 are state listed plants.

Field surveys were conducted within all suitable habitat in the proposed widening area and proposed stormwater pond sites to assess potential impacts to federal and state listed species. These surveys also included: gopher tortoise survey (April-June 2013, April 2014 and February 2015) and sand skink survey (April-May 2014). A formal scrub-jay survey was not conducted as the previously identified locations for scrub-jay habitat in the original PD&E study, *FEIS for I-4 from SR 528 to SR 472 [FPN 242486, 242592 and 242703 (2002)],* have since been developed and no potential habitat was currently identified within this segment of the project.

During the field investigation, individuals or evidence of at least 21 different mammal, bird and reptile species were identified along the project corridor; of these, six appear on protected species lists as shown in Table 5.8. Additional wildlife species observed during the field investigations included: Cuban brown anole, Cattle egret, Red tailed hawk, Red shouldered hawk, Killdeer, Black vulture, American crow, Blue jay, Mockingbird, Common grackle, Eastern gray squirrel and White Ibis. Numerous other wildlife and plant species, many of which are protected, have the potential to occur in Orange County. Although evidence of the occurrence of those species was not observed during field inspections of the existing right-of-way or proposed pond sites, suitable habitat might exist in those areas. Figure 5.11 shows the potential involvement with listed species and their habitat as a result of the project. Of the 21 observed species, only the gopher tortoise and wood stork would merit protective or other measures to address with the project. Other listed species with protective or other measures are the sand skink, bald eagle and Indigo snake (assessment directly related to gopher tortoise burrows). Details of the field surveys including species identification, soils and land use types, habitat locations and potential impacts to federal or state listed species and other sensitive species are included in the *Endangered Species Biological* Assessment *(July 2016)*. The following sections describe those species with the potential to occur within the study limits and to be impacted by the project.

Table 5.8 - Protected Wildlife Species Observed within I-4 Segment 2 Corridor

	FFWCC	USFWS	FNAI	FCREPA
American alligator	T(S/A)	T(S/A)	S4	-
Little blue heron	T	-	S4	SSC
Gopher tortoise	T	-	S3	T
Florida sandhill crane	T	-	S2S3	T
Wood stork	T	T	S2	T
Osprey*	-	-	-	-

Notes:		
	FFWCC	E= Endangered; T= Threatened; SSC= Species of Special Concern
	USFWS	E= Endangered; T= Threatened; (S/A)= Similarity of Appearance; (E/P)= Experimental Population; *CH = Critical Habitat; C= Candidate for Listing
	FNAI	S1= Critically Imperiled Due to Extreme Rarity; S2= Imperiled Due to Rarity; S3= Very Rare and Local; S4= Apparently Secure; SH= Historical Occurrence; ?= Tentative Ranking
	FCREPA	E= Endangered; T= Threatened; SSC= Species of Special Concern; R= Rare; SU= Status Undetermined
	*Protected federally under the Migratory Bird Treaty Act (MBTA) and is on the state list as SSC for only Monroe County.	

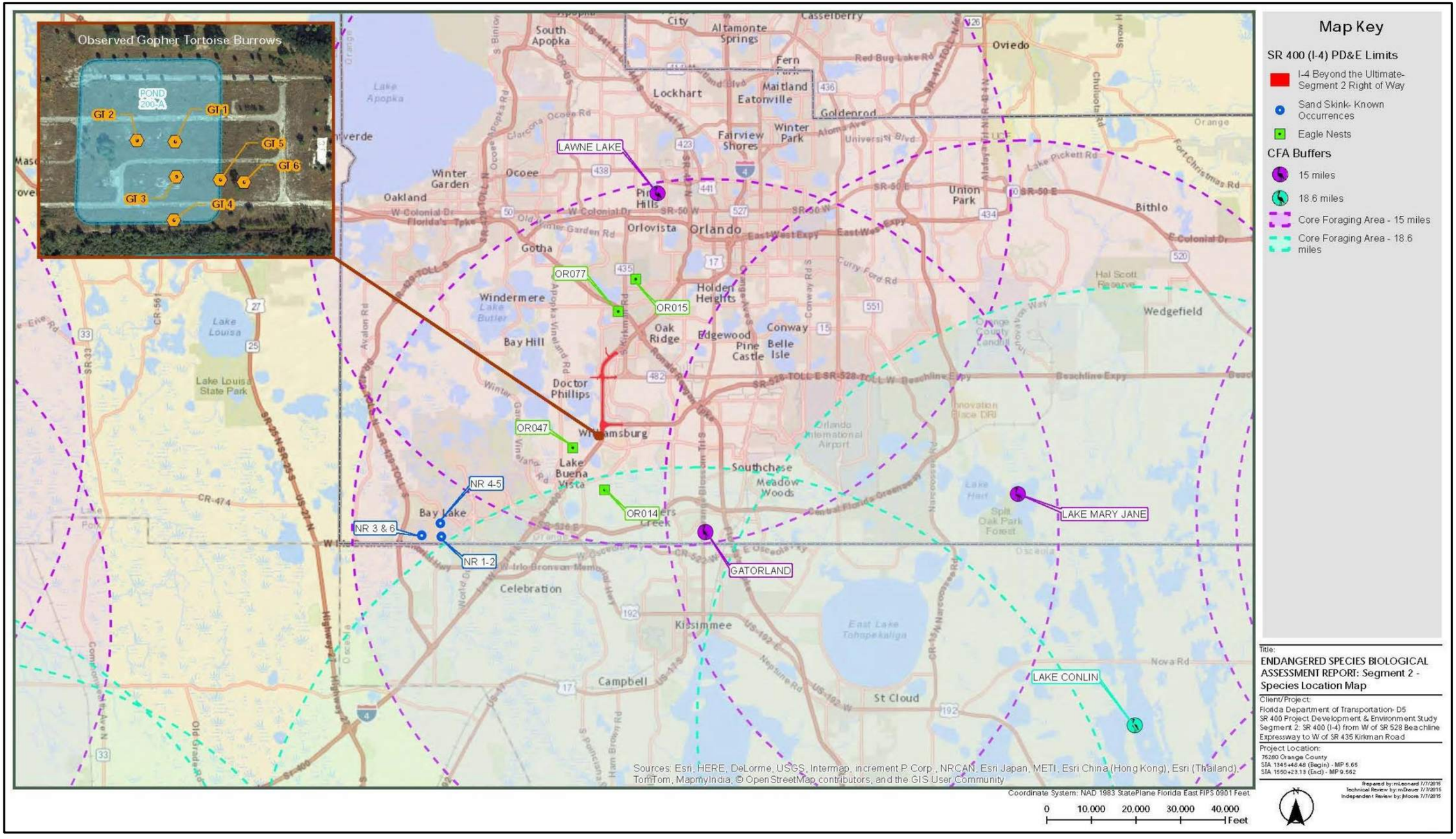


Figure 5.11 – Listed Species Observations Map

Federally Listed Species

Informal Consultation for federally listed species was completed with USFWS and the USFWS concurred with the proposed effects determinations described in the following paragraphs. All federally listed species within I-4 Segment 2 were granted either "No Effect" or "May Affect, but not Likely to Adversely Affect" determinations.

Reptiles

Eastern Indigo Snake - The eastern indigo snake, listed by both the FFWCC and the USFWS as Threatened, is a habitat generalist, using a variety of habitats from mangrove swamps to xeric uplands. These snakes are cold-sensitive and require gopher tortoise burrows, other animal holes, or stumps for protection during winter months. These snakes require large tracts of natural, undisturbed habitat, and prefer to forage in and around wetlands for their preferred prey - other snakes. Several burrows were located within the project area but the potential for indigo snakes is low due to the limited amount of habitat available in this developed area. No indigo snakes were observed during field studies and the closest documented sighting is located approximately 36 miles northeast of the project area (2008 sighting near Blue Springs State Park). If an eastern indigo snake is observed during construction, the contractor will be required to cease any operation that might cause harm to the snake. If the eastern indigo snake does not move away from the construction area, both FFWCC and USFWS will be contacted for further guidance. According to the USFWS Programmatic Key for the Eastern Indigo Snake (January 2010, updated August 2013), as the project will implement the Standard Protection Measures for the Eastern Indigo Snake (USFWS, 2013) which specify education of the construction contractor concerning avoidance of indigo snakes and post-construction reporting, will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) and there are less than 25 active and inactive gopher tortoise burrows and will have permits conditioned such that all active and inactive gopher tortoise burrows will be evacuated prior to site manipulation in the vicinity of the burrow; the project may affect but is not likely to adversely affect the eastern indigo snake.

Sand Skink – The sand skink is listed as Threatened by the USFWS and FFWCC. The three most important factors in determining the presence of skinks are location, elevation, and suitable soils. Sand skinks occur on sandy ridges of interior Central Florida, including Orange and Osceola County. They are found within these geographic areas typically at elevations of 82 feet above sea level and higher. They occur in excessively drained, well-drained, and moderately well-drained sandy soils, with suitable soil types including: Apopka, Arrendondo, Archbold, Astatula, Candler, Daytona, Duette, Florahome, Gainesville, Hague, Kendrick, Lake, Millhopper, Orsino, Paola, Pomello, Satellite, St. Lucie, Tavares, and Zuber. These soil types typically support scrub, sandhill, or xeric hammock natural communities, though these may be degraded by impacts to overgrown scrub, pine plantation, citrus grove, old field, or pasture. Skinks have been documented to occur in all

these degraded conditions where soil types are suitable regardless of vegetative cover. This makes habitat condition of secondary importance in determining if skinks are present. If a site has suitable soils at the appropriate elevation within the counties where skinks are known to occur, there is a likelihood of presence, and potential effects to skinks should be considered. As the project occurs within the USFWS consultation area for sand skinks, both a pedestrian survey and full coverboard survey were conducted. The survey occurred between April 10, 2014 and May 6, 2014. Results of the survey, which indicated that no skinks were observed within any of the survey areas, were sent to the USFWS to determine if impacts to the sand skink will occur as a result of the project. The USFWS has advised that the Service would agree that due to the fact that no direct or indirect observations of sand skinks were made during the survey, the project may affect but is not likely to adversely affect the sand skink. A subsequent meeting was held in December 2015 at the Jacksonville office of USFWS, where it was determined that no additional sand skink surveys would be required for this segment.

Avian

Florida Scrub-Jay – The Florida scrub-jay, listed as Threatened by both the FFWCC and USFWS, is an endemic species found in Florida scrub habitats. This gregarious jay is a habitat specialist and typically lives in scrub and scrubby flatwoods habitats. No suitable scrub habitat is located within the project corridor. The previous PD&E study (May 2000) conducted surveys for scrub-jays in two areas near Sand Lake Road and I-4. Both of these areas have been developed since that study, and no longer contain any scrub or scrub-like habitat. Regardless, cursory surveys for scrub-jays were conducted in April/May 2013 and April/May 2014, to evaluate the potential for the presence of this species. No scrub-jays were observed within any proposed right-of-way or pond site areas of Segment 2. The proposed widening and stormwater ponds are not expected to have any impact on scrub-jays or scrub-jay habitat. Therefore, this project will have no effect on this species.

Crested caracara – The crested caracara is listed by both the USFWS and the FFWCC as Threatened. This large raptor inhabits Florida's prairies and rangelands. They forage on many kinds of insects, fish, reptiles, birds, and mammals. They will feed on live captured prey, but also on roadkill. Nests are usually constructed within cabbage palms. Sensitivity to human disturbance varies in this species with many tolerating human activities, especially when human influence is already present within their home range. If a caracara nest is found to be within the project area, management practices outlined in *Habitat Management Guidelines for Audubon's Crested Caracara in Central and Southern Florida* should be employed. The project occurs at the northernmost edge of the consultation area for this bird in Central Florida. No birds, nests or suitable habitat have been observed or were documented within the project corridor either during the current study or the previous PD&E Study (May 2000), therefore, the project will have no effect on this species.

Snail kite – The snail kite is listed as Endangered by both the USFWS and the FFWCC. This non-migratory, medium-sized raptor utilizes large open freshwater marsh habitats and lakes with shallow water. Nests are usually located in a low tree or shrub at the water's edge. The main staple of their diet is the apple snail, lending to their name. The project does occur within the USFWS consultation area for the snail kite though no observations have been documented within or near the project corridor. Nesting snail kites have been documented well to the east of the project in Kissimmee at both Lake Tohopekaliga and East Lake Toho. No adequate nesting or foraging habitat is located adjacent to the project area, within the proposed right-of-way or pond site areas. Therefore, this project will have no effect on this species.

Red-Cockaded Woodpecker - This species is listed as Endangered by the USFWS and Threatened by the FFWCC. The colonial red-cockaded woodpecker (RCW) is a habitat specialist, requiring stands of over-mature pine that have contracted the red-heart disease. RCW's require diseased trees for cavity building, which they use for nest and roost cavities. Preferred pine stands need to have a fairly open canopy, with a sparse subcanopy to allow easy flight. RCWs must also have ample foraging habitat consisting of younger pines surrounding the cavity trees. No suitable nesting habitat was observed in the impact area within the project limits. The project occurs near (3.5 miles) to an area previously designated by USFWS as "Occurrence Area"; though the previous PD&E Study (May 2000) indicated no suitable habitat or any documented RCW sightings within the proposed right-of-way or pond sites. Additionally, no suitable habitat for nesting or foraging was identified within the vicinity of the project during field surveys. Therefore, this project will have no effect on the red-cockaded woodpecker.

Wood Stork – This species, now listed as Threatened by the USFWS, is the only true species of stork nesting in the United States. This reclassification does not change any conservation or protection measures for the wood stork under the Endangered Species Act (ESA), rather it recognizes the recovery and the positive impact that conservation efforts have had on breeding populations of storks. Feeding areas for wood storks include marshes, pools or ditches in which fish congregate. This species typically nests in mixed woodlands comprised of such overstory species as cypress, gum, and southern willow; pond apple and mangrove swamps may also be utilized for nesting. Based on the updated colony map prepared by the USFWS in June of 2014, the study area is located within the Core Foraging Areas (CFA - 15 miles from an active nesting colony in Central Florida) of two wood stork colonies, as previously shown in Figure 5.11. A wood stork was observed within the project area during field surveys, though foraging areas within the study area are limited to roadside swales and retention ponds. Utilizing the *Corps of Engineers and U. S. Fish and Wildlife Service Effect Determination Key for the Wood Stork in Central and North Peninsular Florida (2008);* the project is not within 2,500 feet of an active colony site, will likely impact Suitable Foraging Habitat (SFH) of greater than 0.5 acres, and is located within the CFA of two wood stork

colonies *(Lawne Lake and Gatorland)*. The estimated direct impacts to wetlands include approximately 4.43 acres of forested systems and 9.32 acres of other surface waters. Additionally, FDOT commits to provide SFH compensation within the Service Area of a Service-approved wetland mitigation bank(s) within the CFA, and the project is not contrary to the Service's *Habitat Management Guidelines for the Wood Stork in the Southeast Region* and is in accordance with the Clean Water Act section 404(b)(1) guidelines. There are nine currently permitted mitigation banks that include the project corridor within the bank service area that have credits available to offset impacts to SFH. FDOT will coordinate with the permitting agencies during the permitting phase of the project on compensatory mitigation and minimization of impacts to suitable foraging habitat. These actions should result in no net loss of foraging habitat; therefore, the project may affect but is not likely to adversely affect the wood stork.

Southern Bald Eagle – The southern bald eagle was delisted from both the U.S. Endangered Species Act and FFWCC imperiled list, though it is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act (MBTA). The USFWS issued the National Bald Eagle Management Guidelines in May 2007 while Florida adopted a Bald Eagle Management Plan (BEMP) in April 2008, written closely to follow the federal guidelines. The BEMP provides guidelines and recommendations to help people avoid violating state and federal eagle laws. The BEMP also outlines strategies to maintain the Florida population of bald eagles at or above current levels. The BEMP goal is to, "maintain a stable or increasing population of eagles in Florida in perpetuity." Bald eagles almost always nest in the tops of living or dead tall trees along or very near lakes and rivers; these water bodies provide fish, typically their preferred food. Bald eagles generally avoid areas with extensive human activity, so management guidelines must be considered before any construction can be initiated within 660 feet of an active southern bald eagle nest. Four bald eagle nests are recorded to be in the general vicinity (within one mile) of the project corridor (OR014, OR015, OR047 and OR077). However, none of these nests is located within 660 feet of the proposed right-of-way or any of the proposed pond sites. For that reason, the project will have no effect on the southern bald eagle.

Federally Listed Plant Species

A review of agency databases and a field review of the project corridor indicate that there have been few reported occurrences of federally listed plant species within the proposed project area. Twelve federally listed species have been demonstrated to have the potential to occur within Orange County, though not all habitat types are represented within the project area. Information from the previous PD&E Study (May 2000) indicated that one listed plant was observed, the scrub lupine. The observation was made west of Turkey Lake Road, to the west of the SR 528 Interchange at westbound I-4. A follow up protected plant field survey covering the area of proposed right-of-way widening and pond sites was conducted in (May 2013, April 2014 and

January 2015) by project botanists and other biologists. No federally listed plant species were identified within the proposed widening impact area or pond sites during the field investigations. Based on field work conducted, no direct or indirect impacts to federally listed plant species are likely to occur; the project may affect, but not likely to adversely affect any of the federally listed plant species.

State Listed Species

Mammals

Sherman's Fox Squirrel - The Sherman's fox squirrel, listed by the FFWCC as a Species of Special Concern, is the largest of the three fox squirrel subspecies that occur in Florida. They have large ranges that can span over 80 acres. Optimum habitat for this subspecies is predominantly longleaf pine-turkey oak sandhills, although they are also reported to occur in mesic forested areas, as well. Some potential habitat is present within the project area, although Sherman's fox squirrels were not observed during the site investigations for this project. The amount of potential habitat for this species impacted by the project will be minimal. Therefore, the proposed project is not likely to adversely affect the Sherman's fox squirrel.

Florida Black Bear - The Florida black bear is a very wide-ranging species formerly listed as Threatened by the FFWCC. Preferred habitat of the black bear includes dense forest, both upland and wetland, but the bear is often encountered in other areas during its seasonal movements. The bear was removed from the list in August 2012 after the approval of the Florida Black Bear Management Plan. The plan was implemented to set a strategy in place to address challenges in bear management, to manage for a sustainable bear population state-wide, and reduce human-bear conflicts. Going forward, FFWCC will continue to engage with landowners and regulating agencies to guide future land use to be compatible with the objectives of the Bear Management Plan. The plan divides the state into seven Bear Management Units (BMUs) which support the seven sub-populations of bear across the state. The unit closest to the project corridor is the Ocala/St. Johns Unit, though nearest Primary or Secondary Bear range within this unit is located in northwestern Orange County and not near the location of the project. As it is unlikely that a black bear will travel through the project corridor, and no further fragmentation of bear habitat is proposed, the project is not likely to adversely affect the Florida black bear.

Reptiles

Gopher Tortoise - The occurrence of this species, listed as Threatened by the FFWCC (and designated as a Candidate species for listing by the USFWS), is a key factor in the determination of habitat suitability for certain other listed species because of the large number of other animals that use tortoise burrows for one or more of their life requisites. While it is common to find gopher tortoise burrows in most types of upland communities, the preferred habitats include xeric uplands and disturbed, ruderal areas. Six gopher tortoise burrows were observed within pond site 200A,

and suitable habitat was identified at pond 200B. If impacts to these areas cannot be avoided, then relocation of the tortoises and their commensals will be necessary. During permitting, all potential gopher tortoise habitat that could be impacted by the project will be systematically surveyed according to the current guidelines published by the FFWCC. If gopher tortoise burrows are found, all practicable design measures will be employed to avoid impacts to the burrows. For burrows which cannot be avoided, a permit will be obtained from FFWCC for relocation of gopher tortoises and commensals, and relocation will be performed at a time as close as practicable to the start of construction activities at the site of the burrows (see Figure 5.11). Therefore, the project is not likely to adversely affect the gopher tortoise.

Florida Pine Snake – This snake, listed as Threatened by the FFWCC, is another tortoise burrow commensal organism, utilizing both tortoise burrows and also the tunnels of pocket gophers for feeding and shelter. Preferred habitat of the pine snake is xeric uplands, and to a lesser extent, flatwoods and other mesic uplands. Some habitat is available within the project, especially where gopher tortoise burrows were observed (see Figure 5.11). Both the pocket gophers and the pine snakes live nearly their whole lives underground and are very hard to observe directly. Earth work in suitable habitat may impact subterranean pine snakes. With the relocation of commensal organisms from gopher tortoise burrows if impacted, the project is not likely to adversely affect the Florida Pine Snake.

Short-tailed snake – The short-tailed snake, listed as Threatened by the FFWCC, belongs to a monotypic genus that is endemic to Florida. Rarely seen due to its earth-burrowing tendencies, it is restricted to xeric uplands, primarily longleaf pine-turkey oak sandhills and sand pine scrub, for its habitat requirements. Herpetologist Paul Moler (FFWCC - retired) reports short-tailed snakes occur in a wider range of ecosystems than indicated in the scant literature on the species, and may be found where prey (small snakes) and loose soils occur in North-Central Florida. Suitable habitat (sand pine scrub) is not present on this project, nor was any of these snakes observed during any field surveys. Due to the lack of xeric habitat, it is anticipated that this project is not likely to adversely affect the short-tailed snake.

Avian

Florida Burrowing Owl - The Florida burrowing owl is listed as Threatened by the FFWCC. The breeding range of the Florida burrowing owl includes Orange County. Preferred habitats are treeless areas on well-drained soil where herbaceous ground cover is fairly short, such as dry prairies and edges of depressional marshes during the dry season. Florida burrowing owls have also been observed along canal banks, pastures, golf courses, mowed residential lawns, and airports (Rodgers, 1996). No Florida burrowing owls or their burrows were observed during the field surveys and no direct or indirect impacts are anticipated for this species. Therefore, the project is not likely to adversely affect the Florida burrowing owl.

Florida Sandhill Crane – This non-migratory subspecies, listed as Threatened by the FFWCC, can often be seen foraging in improved pastures, open fields and along the roadside. During the winter months, it is distinguished from its migratory northern cousins by its smaller size and more delicate stature. Sandhill cranes nest in freshwater marshes and feed in adjacent fields and pastures. Some adequate nesting habitat is found within the freshwater marshes located adjacent to the project corridor, and foraging habitat was found within the project limits. Sandhill cranes were observed flying over the project area several times during multiple surveying events, however were not observed foraging or nesting within the project area. The proposed project is not likely to adversely affect the sandhill crane.

Southeastern American Kestrel – This resident subspecies of the kestrel, listed as Threatened by the FFWCC, can be distinguished from its cousin, *F. s. sparverius*, a winter migrant, by its smaller size. The Southeastern kestrel requires three components for optimal habitat: large, open fields for foraging, snags for nesting, and snags, fence lines or telephone poles as perching sites from which to hunt. No kestrels were observed along the project corridor, nor within any pond sites or along the portion of the project to be widened. Therefore, this project is not likely to adversely affect this species.

Least tern – Historically, least terns nested on sandy beaches and lakeshores, but presently, they nest almost exclusively on man-made substrates such as spoil islands and gravel rooftops. This small tern, listed as Threatened by the FFWCC, is still fairly common in localized areas. However, none have been reported in the project study area. Prime nesting areas are minimal, so this species has only a low possibility of occurring along the project corridor, therefore the proposed project will have no effect on the least tern.

Wading Birds – Wading bird rookeries were not observed and are not known to occur within or adjacent to the study area. Potential foraging habitat for the little blue heron, roseate spoonbill, reddish egret and tri-colored heron, all classified as Threatened by the FFWCC, occurs within the limits of the study area. Both little blue heron and white ibis were observed during field surveys. No wetlands providing critical foraging or nesting habitat for these avian species will be impacted by the proposed project and indirect impacts to wading birds are not anticipated. Therefore, the proposed project is not likely to adversely affect the wading bird population in the region.

State Listed Plant Species

A review of available information revealed that 57 state listed plant species have the potential to occur within the habitats located within the project area in Orange County. No state listed plant species were observed during the field assessment of project area, though during the previous PD&E Study (May 2000), nodding pinweed was observed along Turkey Lake Road. Improvements to Turkey Lake Road since this study have eliminated the habitat areas that this plant occurred in,

and no evidence of the plant was observed during the field surveys in May 2013. Therefore, the proposed project is not likely to adversely affect any state-listed plant species.

Other Sensitive Species

Migratory Birds

The Migratory Bird Conservation Commission was established on February 18, 1929 by the passage of the Migratory Bird Conservation Act. It was created and authorized to consider and approve any areas of land and/or water recommended by the Secretary of the Interior for purchase or rental by the USFWS under the Act. In 1989, the Commission acquired the additional responsibility to approve project funding under the North American Wetland Conservation Act. This Act provides for Federal funding to encourage partnerships to protect, enhance, restore and manage wetland and other habitats for migratory birds and other fish and wildlife to carry out the North American Waterfowl Management Plan. Waterfowl are the most prominent and economically important group of migratory birds of the North American Continent. National Migratory Bird Areas in Florida include Arthur R. Marshall, Caloosahatchee, Cedar Key, Chassahowitzka, Egmont Key, Great White Heron, Hobe Sound, J.N. Ding Darling, Lake Woodruff, Matlacha Pass, Merritt Island, Okeefenokee, Pine Island, Pinellas, St. Marks and St. Vincent. None of these National Migratory Bird Areas are located within a one-mile radius of the project corridor. If the project results in direct impacts to wetland habitat or surface water features (i.e. roadside ditches) that could be utilized by migratory birds, there may be an impact on these species. Impacts to wetlands will be mitigated for at approved mitigation sites within the affected watershed and will offset any potential impacts to migratory birds from this project.

The proposed project will avoid and minimize impacts to wildlife and their habitat to the greatest practicable extent. Unavoidable impacts will be mitigated through a combination of actions designed to enhance local and regional ecological and hydrologic connectivity where possible. Those actions constitute the current recommendations developed and refined by staff and consulting environmental scientists representing various federal and state agencies and nongovernmental organizations, using the most current record and project specific scientific information available. The FDOT routinely reevaluates PD&E Study results and commitments prior to and during the project design phase, and again prior to right-of-way acquisition and construction. Therefore, the wildlife recommendations proposed herein will be subject to reevaluation in the future. Appropriate modifications to the recommended actions may be made in the event that the latest science, design constraints or other relevant changes in circumstance so dictate.

5.7.4 Archaeological and Historical Resources

Archaeological and historical resources within the project area were document in the report, *Technical Memorandum: Cultural Resource Assessment Survey of Proposed Improvements to*

Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) (CRAS, December 2015). The CRAS was conducted to comply with Section 106 of the National Historic Preservation Act (as amended) and its implementing regulation 36 CFR Part 800 (Protection of Historic Properties). All work was performed in accordance with Part 2, Chapter 12, of the FDOT PD&E Manual (revised January 1999) and the Cultural Resource Management Handbook (revised November 2004) and is consistent with the Florida Division of Historical Resources (FDHR) recommendations for such projects as stipulated in the FDHR's *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The CRAS study also complies with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code.

The CRAS serves as an addendum to two previous reports: *I-4 (S.R. 400) Project Development and Environmental Study from C.R. 532 (Osceola-Polk Line Road) to S.R. 528 (Beeline Expressway) in Osceola and Orange Counties, Florida* (Florida Master Site File [FMSF] Survey No. 5287) (ACI 1998a), and *Cultural Resource Assessment Survey, Interstate 4 Section 2 Project Development and Environment Study from Bee Line Expressway (S.R. 528) to S.R. 472 Interchange, Orange, Seminole, and Volusia Counties, Florida* (FMSF Survey No. 5707) (ACI and Janus Research 1999).

The regional prehistory and history of the current project area are consistent with those described in the previous reports and were not repeated in the current study. The purpose of this survey is to update the previous I-4 corridor studies, which involves locating, identifying, and bounding archaeological resources within proposed pond locations, and updating the inventory of historic structures and potential districts within the project Area of Potential Effect (APE). Previously undocumented resources identified in the APE were assessed for their potential for listing in the National Register of Historic Places (NRHP).

The APE is defined as the area within which the roadway improvements and subsequent maintenance may have physical, visual, audible, or atmospheric effects on historic properties. The APE as defined for this project includes the existing and proposed ROW along I-4 and was extended to the back or side property lines of parcels adjacent to the corridor, limited to a distance of no more than 100 meters (330 feet) from the proposed ROW. The APE also includes the proposed pond footprints plus a 100-foot buffer.

Archaeological survey was conducted within the proposed pond footprints, and the architectural study included the entire APE. Field investigations consisted of pedestrian surface inspection and the excavation of 178 shovel tests within the footprint of the proposed ponds. Two Archaeological Occurrences (AOs) were identified, one each in Ponds 205A and 205B. These AOs do not meet the criteria for significance required for inclusion in the NRHP. The results of the archaeological field survey are summarized in Table 5.9.

Table 5.9 - Results of Phase I Archaeological Survey of the Proposed Ponds for the I-4 Segment 2 APE

Pond	Acreage	Number of Shovel Tests	Condition/ Location	Results
200A	4.07	20	Interchange of I-4 and SR 528	No archaeological sites or cultural material
200B	4.26	16	Interchange of I-4 and SR 528	No archaeological sites or cultural material
201	5.08	20	Interchange of I-4 and SR 528	No archaeological sites or cultural material
202A	2.89	3	Interchange of I-4 and SR 528	No archaeological sites or cultural material
202B	0.84	1	Interchange of I-4 and SR 528	No archaeological sites or cultural material
202C	6.10	6	Interchange of I-4 and SR 528	No archaeological sites or cultural material
202D	1.71	2	Interchange of I-4 and SR 528	No archaeological sites or cultural material
203A	6.39	4	Within the interchange of International Drive and SR 528	No archaeological sites or cultural material
203B	1.98	3	Within the interchange of International Drive and SR 528	No archaeological sites or cultural material
204A	6.19	6	Within the interchange of International Drive and SR 528	No archaeological sites or cultural material
204B	2.41	3	Within the interchange of International Drive and SR 528	No archaeological sites or cultural material
205A	6.27	38	Former orange grove, west of Turkey Lake Road	Archaeological Occurrence 1 (AO 1)
205B	5.48	22	Former orange grove, west of Turkey Lake Road	Archaeological Occurrence 2 (AO 2)
205C	3.68	10	Former orange grove, west of Turkey Lake Road	No archaeological sites or cultural material
205D	3.02	10	West of Turkey Lake Road	Previously recorded 8OR08763; no evidence of site encountered
206	3.12	6	Within ramp at intersection of I-4 and SR 482	No archaeological sites or cultural material
206A	0.66	2	Within ramp at intersection of I-4 and SR 482	No archaeological sites or cultural material
206B	0.85	2	Within ramp at intersection of I-4 and SR 482	No archaeological sites or cultural material
207	2.24	3	Existing pond	No archaeological sites or cultural material
208	1.41	1	Existing pond	No archaeological sites or cultural material

Table 5.9 - Results of Phase I Archaeological Survey of the Proposed Ponds for the I-4 Segment 2 APE

Pond	Acreage	Number of Shovel Tests	Condition/ Location	Results
F32	5.14	0	Existing pond	No archaeological sites or cultural material
F33	5.26	0	Existing pond	No archaeological sites or cultural material
F34	7.60	0	Existing pond	No archaeological sites or cultural material
F35	3.85	0	Existing pond	No archaeological sites or cultural material
Turkey Lake Rd.	2.36	0	Existing pond	Previously recorded 8OR01271; no evidence of site encountered
Total	**92.82**	**178**		

The architectural survey resulted in the identification of two historic structures (8OR10249, 9036 Turkey Lake Road and 8OR10250, 7400 International Drive) constructed before 1971 within the APE. Both resources lack the architectural distinction and significant historical associations necessary to be considered for listing in the NRHP and are recommended ineligible. No potential NRHP districts were identified due to the lack of concentration of historic structures.

In addition, examination of the Orange County Property Appraiser's records indicated that nine structures are located within the APE that date from 1971 to 1974, as shown in Table 5.10. Depending on the progression of the project (i.e., how much time elapses between the current study and the eventual design/construction of the project), it may become necessary to inventory and assess these resources. Figure 5.12 and Figure 5.13 shows the historic resources constructed before 1971 within the APE.

Table 5.10 - Parcels along the APE that Contain Resources Constructed between 1971 and 1974.

Parcel Number	Address	Date	Preliminary Evaluation*
12-24-28-9249-00-010	Places of Learning – Sea World Marketing (6817 Westwood Boulevard)	ca. 1973	Not eligible
25-23-28-7135-00-011	Quality Inn Hotel International (7600 International Drive)	ca. 1972	Not eligible
25-23-28-0000-00-029	Edwin Watts Golf (7024 International Drive)	ca. 1973	Not eligible
25-23-28-5404-02-010	Howard Johnson Inn (6603 International Drive)	ca. 1972	Not eligible

Table 5.10 - Parcels along the APE that Contain Resources Constructed between 1971 and 1974.

Parcel Number	Address	Date	Preliminary Evaluation*
25-23-28-5404-02-020	International Palms Resort Building 1 (6515 International Drive)	ca. 1973	Not eligible
25-23-28-5404-02-020	International Palms Resort Building 2 (6515 International Drive)	ca. 1974	Not eligible
25-23-28-5404-02-040	Rosen Inn (6327 International Drive)	ca. 1973	Not eligible
25-23-28-2001-01-010	The Metropolitan Express (6323 International Drive)	ca. 1973	Not eligible
25-23-28-5404-02-060	Monumental Hotel (6233 International Drive)	ca. 1974	Not eligible
*Based on desktop analysis			

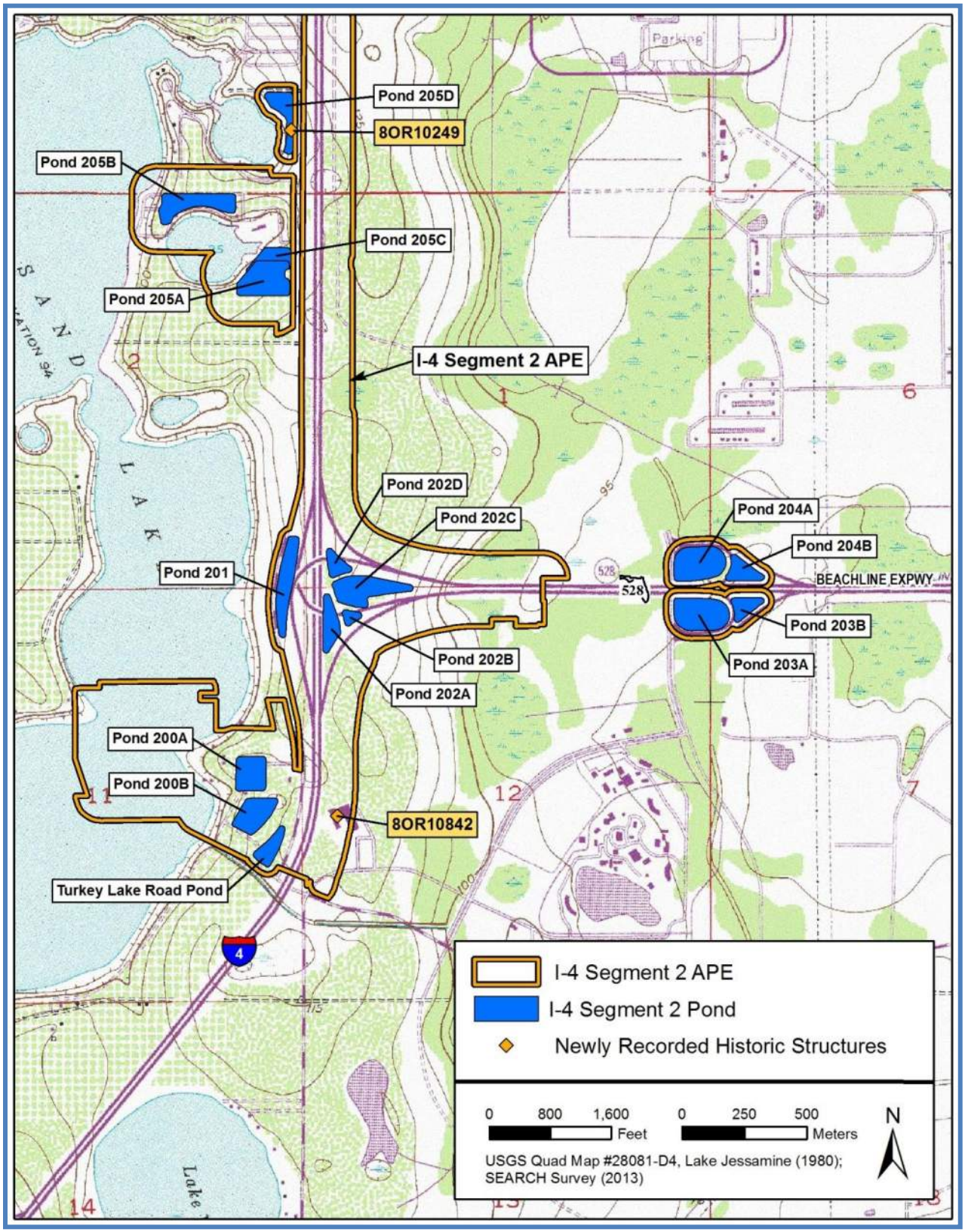


Figure 5.12 – Newly Recorded Historic Resources within Southern Portion of I-4 Segment 2 APE

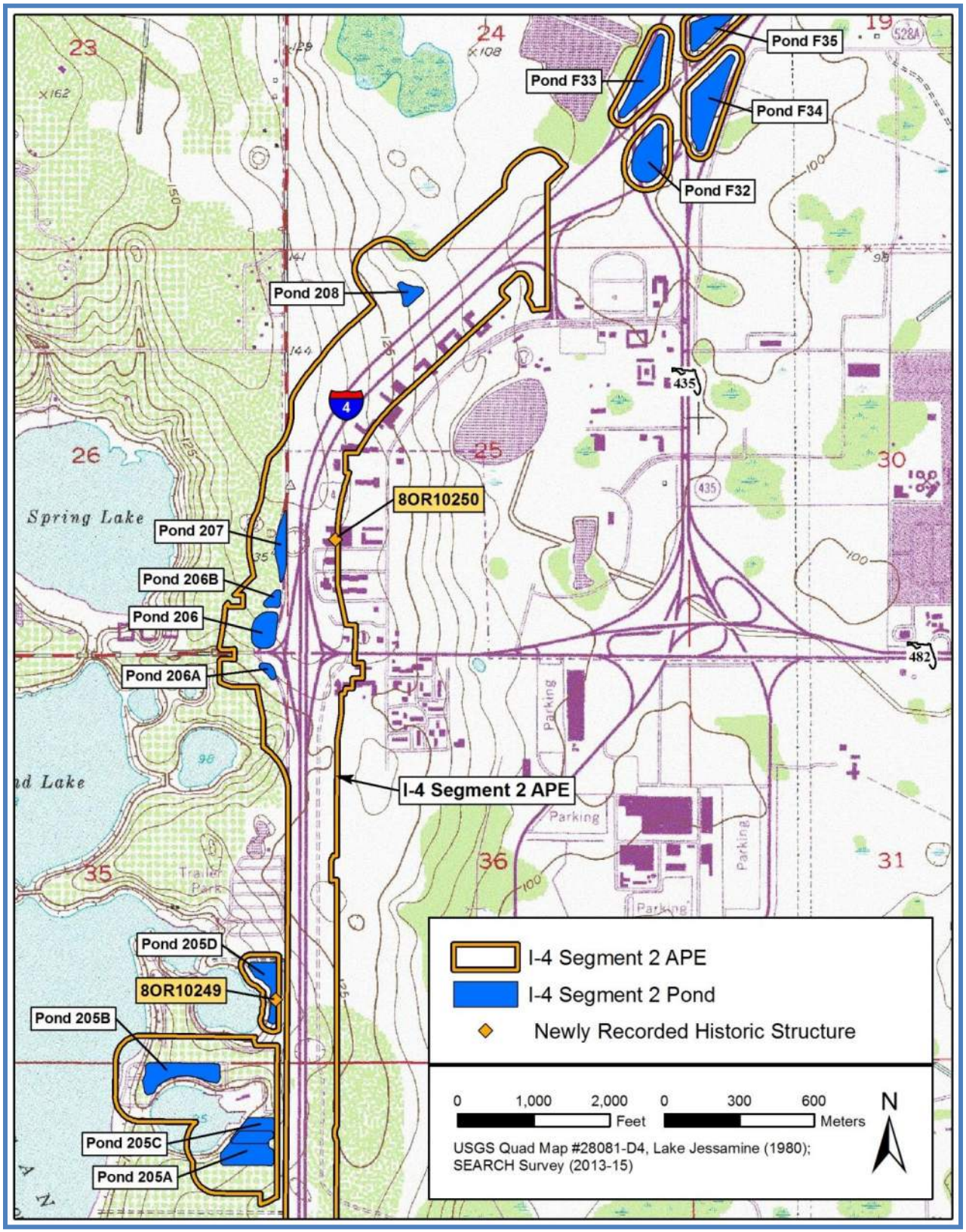


Figure 5.13 – Newly Recorded Historic Resources within Northern Portion of I-4 Segment 2 APE

5.7.5 Contamination

A *Contamination Screening Evaluation Report, Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) (CSER, July 2016)* was completed for the I-4 Segment 2 corridor and proposed pond sites. The purpose of the CSER is to identify and evaluate known or potential contamination problems, present recommendations concerning these problems, and discuss possible impacts to the proposed project. The CSER, completed in accordance with *Chapter 22 (January 17, 2008 revision) of the FDOT PD&E Manual* and *Federal Highway Administration (FHWA) Technical Advisory T6640.8A (October 30, 1987)* guidelines, contains results from a physical site investigation of the project corridor, a limited investigation of properties along the corridor adjacent to the ROW as viewed from areas of public access, a review of Florida Department of Environmental Protection (FDEP) files, Orange County records and available environmental databases.

As part of the CSER, a review of the FDEP Oculus Database was conducted to determine locations of contaminated sites followed by visual inspection of the corridor including pond sites and properties adjacent to and within ½ mile of the roadway. Known contamination sites and properties with potential contamination were identified and assigned a risk rating based on the degree of concern for potential contamination problems. A total of one hundred twenty-four (124) sites within the study area were identified as being potential handlers of hazardous materials or having some type of involvement with potential contamination. Of these sites, none had a high risk rating, nine had a medium risk rating and 115 sites received a no risk or low risk rating. It is recommended that any demolition or dewatering activities within or adjacent to any of the identified medium risk sites should require soil and groundwater testing before construction. The 124 identified sites/properties within 1/2 mile of the existing I-4 right-of-way and the proposed pond sites and their corresponding risk rating are shown on Figure 5.14 through Figure 5.16.

A groundwater contamination plume of ethylene dibromide (EDB) which encompasses sixteen (16) other listed sites, including pond sites 205A, 205B, 205C and 205D, was identified in the project corridor. These are the only four pond sites within the groundwater contamination plume and were the only pond sites identified as having a medium risk rating for contamination. In addition to the contamination plume, discarded debris such as building materials and shingles were discovered at pond sites 205A, 205B and 205C, which are combined with other adjacent vacant land. A structure, along with discarded or abandoned containers and other potential sources of contamination, was found at pond site 205D. These sites should be tested for asbestos containing materials and lead-based paint prior to construction.

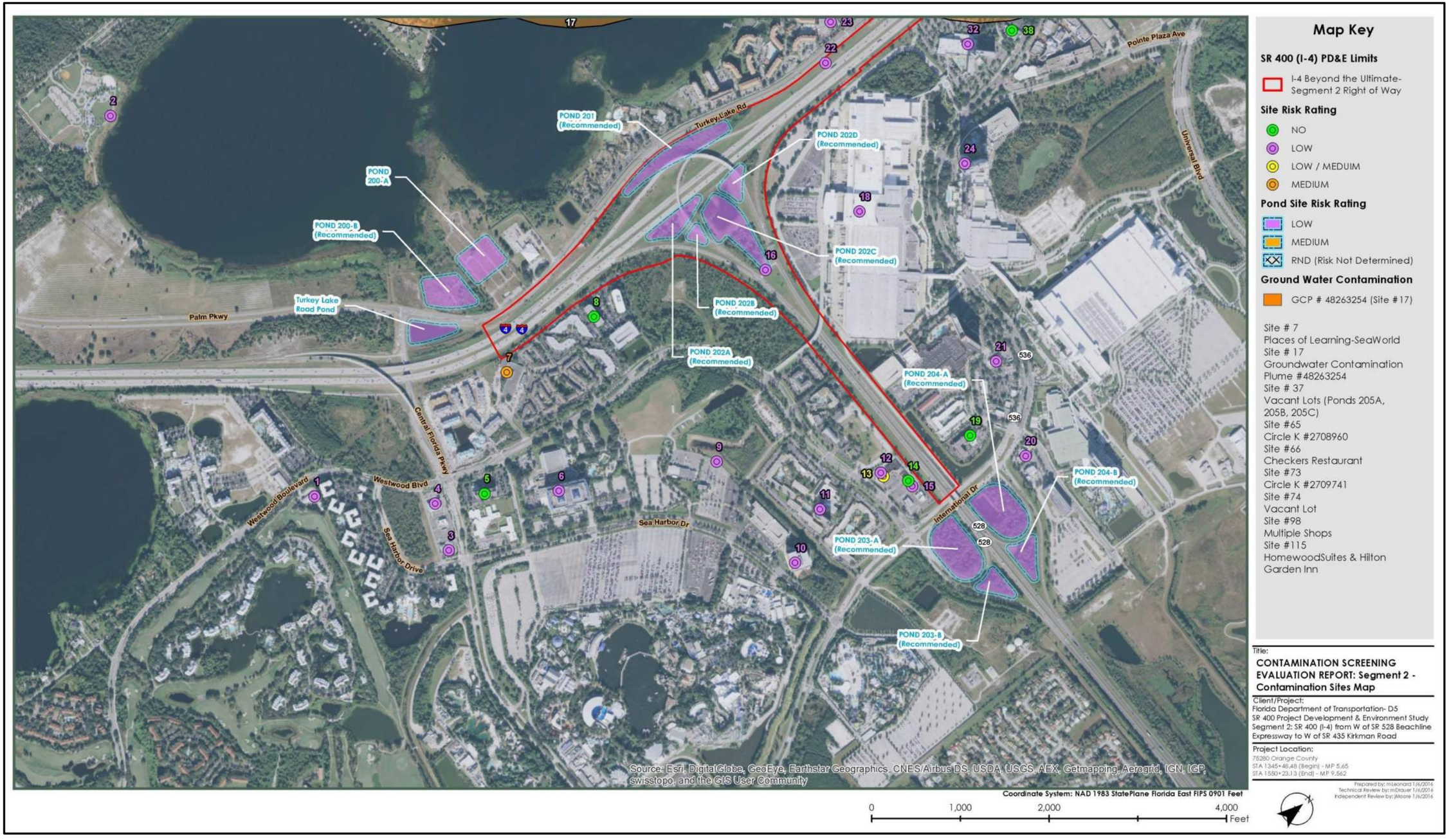


Figure 5.14 – Potential Contamination Sites (Sheet 1 of 3)

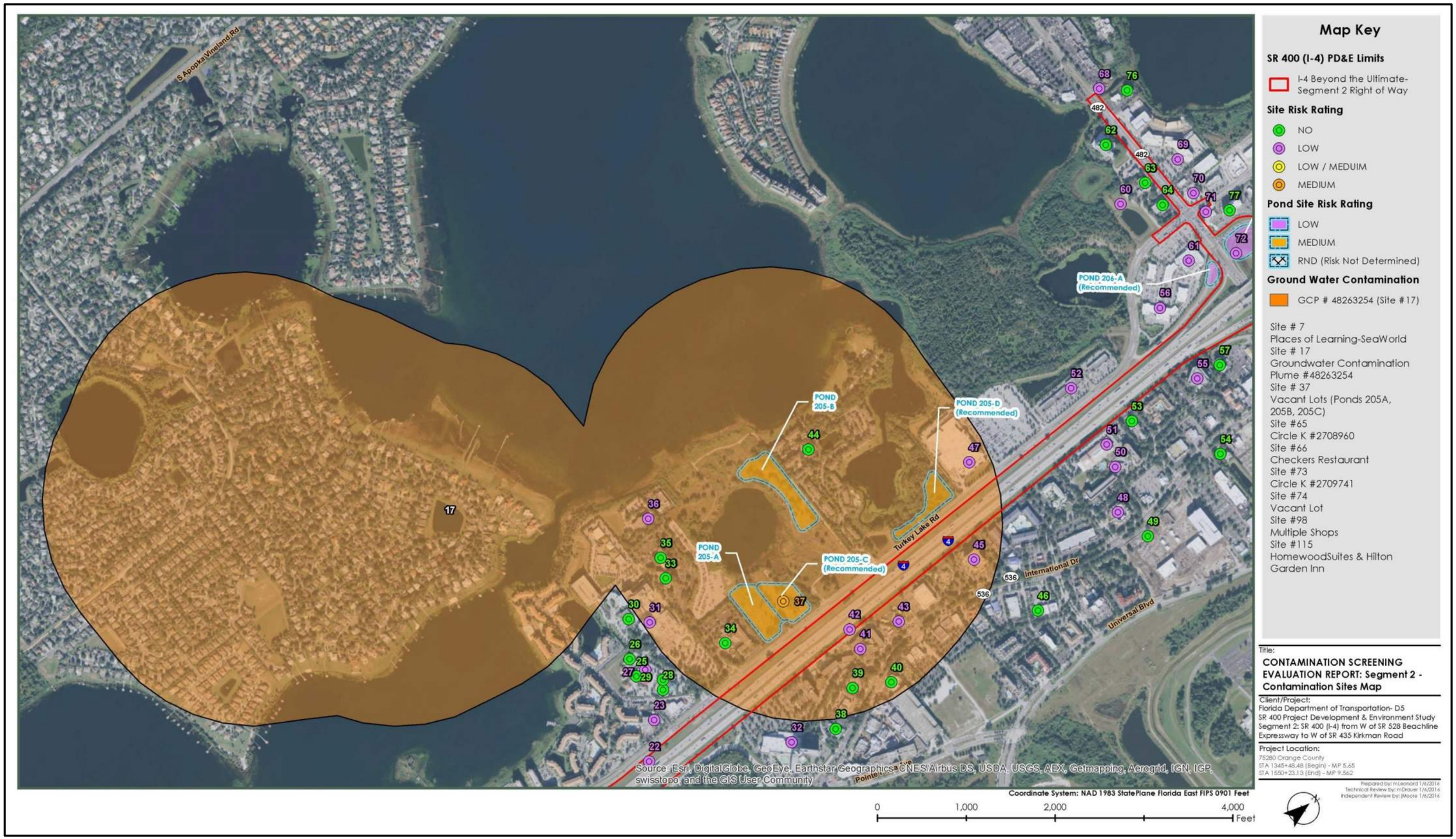
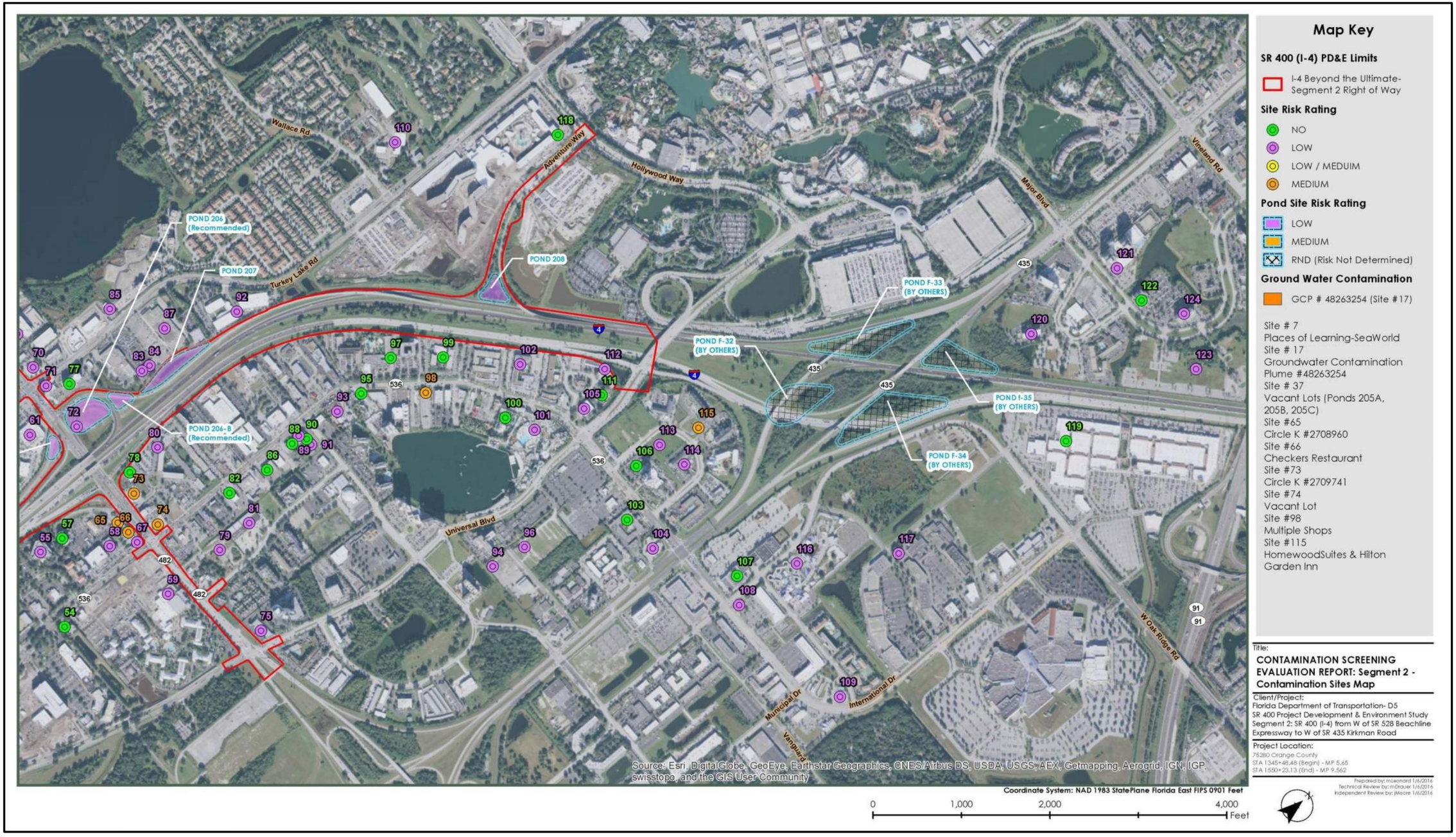


Figure 5.15 – Potential Contamination Sites (Sheet 2 of 3)



Map Key

SR 400 (I-4) PD&E Limits

I-4 Beyond the Ultimate-Segment 2 Right of Way

Site Risk Rating

- NO
- LOW
- LOW / MEDUIM
- MEDIUM

Pond Site Risk Rating

- LOW
- MEDIUM
- RND (Risk Not Determined)

Ground Water Contamination

GCP # 48263254 (Site #17)

Site # 7
Places of Learning-SeaWorld
Site # 17
Groundwater Contamination Plume #48263254
Site # 37
Vacant Lots (Ponds 205A, 205B, 205C)
Site #65
Circle K #2708960
Site #66
Checkers Restaurant
Site #73
Circle K #2709741
Site #74
Vacant Lot
Site #98
Multiple Shops
Site #115
HomewoodSuites & Hilton Garden Inn

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 2 - Contamination Sites Map

Client/Project:
Florida Department of Transportation- D5
SR 400 Project Development & Environment Study
Segment 2: SR 400 (I-4) from W of SR 528 Beachline Expressway to W of SR 435 Kirkman Road

Project Location:
75280 Orange County
STA 1345+48.48 (Begin) - MP 5.65
STA 1550+23.13 (End) - MP 9.562

Prepared by: mLeonard 1/6/2016
Technical Review by: mDrauer 1/6/2016
Independent Review by: jMoore 1/6/2016

Figure 5.16 – Potential Contamination Sites (Sheet 3 of 3)

A Level 2 assessment *(Level 2 Contamination Impact Assessment Report, March 2015)* was completed on all Medium and High Risk Rated sites identified in the CSER. The purpose of the Level 2 assessment was to verify the potential presence of chemical contaminants that could affect ROW acquisition, design and/or construction of the proposed roadway. If the presence of such contaminants is verified, further delineation of the horizontal and vertical extent of the soil and/or groundwater contaminant plumes may be needed to support ROW acquisition and associated liability protections. Such additional data may also be necessary to support stormwater management system design, foundation design and design of remedial strategies that may be necessary during construction to properly mitigate the impacted media without causing adverse impacts to workers and the environment.

The Level 2 assessment included investigation and analyses of the proposed locations for pond sites 205B, 205C and 205D, research of FDEP's Oculus database for pond sites 206, 206A and 206B and asbestos sampling at pond sites 205B and 205C.

As part of the assessment activities, a total of 32 soil screening borings were conducted at the Basin 205 pond sites investigated (205B – 13 borings, 205C – 9 borings and 205D – 10 borings). Soil and groundwater samples collected were submitted for analyses for arsenic, pesticides and herbicides. The laboratory analytical results indicated detections in the samples at levels below commercial and residential cleanup target levels listed in Chapter 62-777, FAC and Maximum Contaminant Levels listed in Chapter 62-550, FAC. Based on the results of the Level 2 Assessment, it appears that the soils and groundwater at proposed pond locations 205B, 205C and 205D have not been impacted at this time and would not require special handling, characterization and disposal provisions and no further is recommended contamination assessment at these locations.

Asbestos sampling was performed on debris piles within the vacant property containing Ponds 205B and 205C. Samples were taken from several debris piles and vinyl sheet flooring on a concrete slab. Non-friable asbestos containing materials were found within chimney flashing (2 square feet), heating ventilation and air conditioning (HVAC) duct mastic (10 square feet) and vinyl sheet flooring (1,200 square feet) onsite. Based on the results of the asbestos assessment, it appears that the debris at this location will require special handling, characterization and disposal provisions. Detailed analyses are provided in the Asbestos-Containing Material Survey which is provided in the Appendix of the *Level 2 Contamination Impact Assessment Report (March 2015)* prepared for the I-4 Segment 2 project.

Proposed pond sites 206, 206A and 206B were evaluated by researching FDEP's Oculus files. A 7-Eleven facility previously occupied the parcel located west of the proposed pond 206, and within the infield of the existing loop ramp in the northwest quadrant of the I-4 and Sand Lake Road interchange. The site previously contained three 10,000-gallon gasoline underground storage tanks

(USTs) that were removed in 1989. Removal of the USTs included excavation and removal of 522 tons of contaminated soil to a depth of six feet. However, no post-excavation groundwater documentation was available. Based on the potential for groundwater impacts at the historical 7-Eleven facility and the proposed wet detention design of Ponds 206, 206A and 206B, the historical 7-Eleven facility and pond sites should be considered a High Risk.

All bridges and other structures which will require possible demolition or retrofit should be tested for asbestos containing materials, lead-based paint or any other hazardous materials prior to construction.

Should any parcels containing medical facilities, doctor offices, hospitals, or drug stores be acquired, they should be tested for asbestos, lead-based paint, x-ray equipment, lead-lined walls, chemicals, and pharmaceuticals prior to demolition.

5.7.6 Noise

A *Noise Study Report (NSR, July 2016)* based on procedures established in Part 2, Chapter 17 "Noise," of the FDOT PD&E Manual was prepared to document predicted noise levels associated with the I-4 Segment 2 improvements. The NSR was completed to determine if noise levels will be likely to increase, if noise-sensitive receivers are (or will be) within the project area and if noise impacts will occur. If future design-year noise levels at noise sensitive receptors approach, meet or exceed the Noise Abatement Criteria established by FHWA in 23 CFR 772 or increase 15 dB(A) over existing noise levels as a direct result of the transportation improvement project, noise abatement must be considered. The FHWA's *Traffic Noise Modeling (TNM) Version 2.5* computer program was used to determine if noise abatement was warranted, and if so, considered reasonable and feasible for any noise-sensitive sites. The noise analysis was prepared using guidance based on regulatory material found in 23 Code of Federal Regulations (CFR), Part 772, and entitled "Procedures for Abatement of Highway Traffic Noise and Construction Noise" for FDOT noise assessments, regardless of funding. This regulation, pursuant to Rule Chapter 335.17, Florida Statutes (F.S.), is available from the FHWA and FDOT.

Eight noise sensitive areas (NSA) that have the potential to be impacted by the project were identified within the study corridor as shown in Figure 5.17. Seventy-seven potential noise-sensitive sites were identified for the study segment, and consist of: hotels, resorts, multi-family residences within the Sand Lake Private Residences, Sand Lake Village, McKinley at Monterey Lakes, Sea Isle and single-family residences at Toscana. One single family residence that appears abandoned is located directly on Turkey Lake Road, several hundred feet south of the Walmart. The TNM analysis of noise sensitive areas predicted no sites to be impacted within NSA C, NSA D or NSA H.

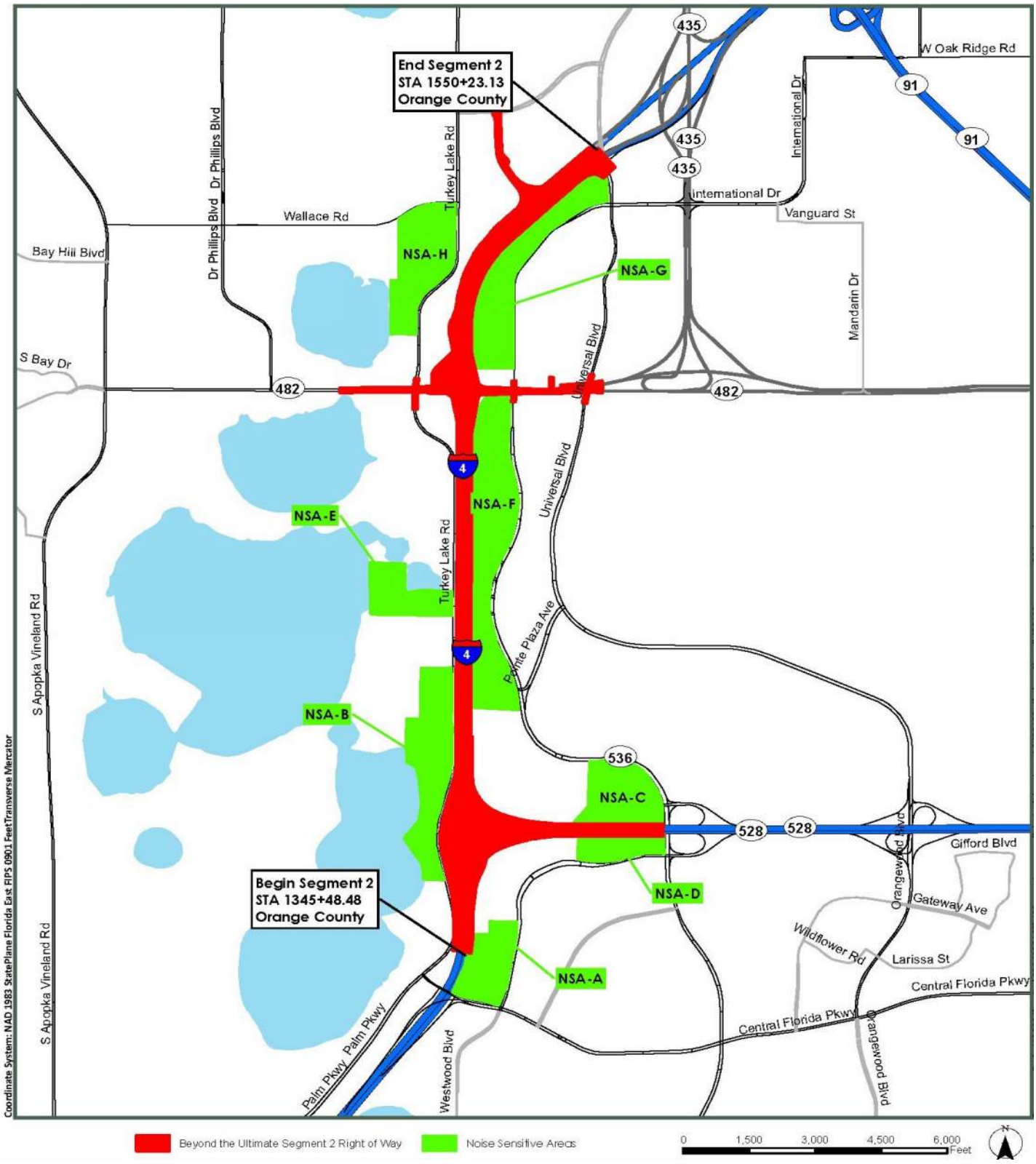


Figure 5.17 – Noise Sensitive Areas Map

The results of the noise barrier analysis indicate that two noise barriers within NSA A will provide the best noise abatement and meet the requirements as reasonable and feasible. The recommended barriers for these two sites include:

- a 22-foot tall, 440-foot long ground mounted barrier (estimated cost $290,000) for the McKinley at Monterey Lakes Apartments and
- a 14-foot tall, 931-foot long shoulder-mounted barrier (estimated cost $390,000) for the Sea Isle Luxury Apartments.

The barrier analysis also indicated that no reasonable or feasible measures are achievable for the remaining impacted sites within the impacted NSAs (NSA B, NSA E, NSA F and NSA G).

5.7.7 Air Quality

The proposed project was reviewed for air quality impacts consistent with the guidance provided by the FHWA in the supplemental report *Air Quality Analysis Technical Memorandum (July 2016)*. Orange County is an area currently designated as being attainment for the following air pollutants: ozone, nitrogen dioxide, particulate matter (2.5 microns in size and 10 microns in size), sulfur dioxide, carbon monoxide and lead.

The project was subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology and traffic. The FDOT's screening model, CO Florida 2012 (released March 12, 2012) uses the latest United States Environmental Protection Agency (USEPA) – approved software (*MOVES 2010a and CAL3QHC2*) to produce estimates of one-hour and eight-hour CO at default air quality receptor locations. The one-hour and eight-hour estimates can be directly compared to the one-hour and eight-hour National Ambient Air Quality Standards (NAAQS) for CO that are 35 parts per million (ppm) and 9 parts per million (ppm), respectively.

The roadway intersection forecast to have the highest total approach traffic volume (for both the Build and No-Build scenarios) is the intersection of Sand Lake Road and Turkey Lake Road. The design hour volumes for Build and No-Build scenarios for the opening year (2020) and the design year (2040) were evaluated.

Estimates of CO were predicted for the default receptors which are located 10 feet to 150 feet from the edge of the roadway. Based on the results from the screening model, the highest project-related CO one-hour and eight-hour levels are not predicted to meet or exceed the one-hour or eight-hour National Ambient Air Quality Standards (NAAQS) for this pollutant with either the Build or No-Build alternatives. As such, the project "passes" the screening model. The project is located in an area which is designated attainment for all of the National Ambient Air Quality Standards

under the criteria provided in the Clean Air Act. Therefore, the Clean Air Act conformity requirements do not apply to the project.

5.8 Section 4(f) Lands

In accordance with Section 4(f) of the Department of Transportation (DOT) Act of 1966 [Title 49, USC, Section 1653(f)] amended and codified in Title 49, USC, Section 303, the project was evaluated for potential Section 4(f) resources. Section 4(f) resources consist of publicly owned parks, recreation areas, wildlife refuges and public and private historic and archaeological sites. No Section 4(f) properties have been identified within the project corridor therefore, Section 4(f) does not apply.

5.9 Public Involvement Program

A comprehensive Public Involvement Program (PIP) was initiated as part of this PD&E Study. This program is in compliance with Part 1, Chapter 11 of the FDOT PD&E Manual which details various federal, state and local regulations including Section 339.155, Florida Statutes; Council of Environmental Quality (CEQ) Regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) and 23 Code of Federal Regulations (CFR) 771.

The public involvement program for I-4, Segment 2 included the publication of newsletters, meetings with government agencies, community outreach meetings and an Alternatives Public Workshop. A project website, www.i4express.com, was also developed to disseminate updated information about the project and allow the public to communicate with the project team and/or provide comments.

Alternatives Public Workshop

The Alternatives Public Workshop was held on Thursday, January 30, 2014, from 5:30 p.m. to 7:30 p.m. at the DoubleTree Hotel, 10100 International Drive. An invitational letter was mailed to property owners located within at least 300-ft on either side of the current project corridor, public officials, organizations and individuals interested in the project. An advertisement was placed in the Orlando Sentinel (full circulation) and a press release was distributed by FDOT to local media outlets. The Alternatives Public Workshop was held in an open house format with project display boards and an automated presentation which gave an overview of the proposed project, including a summary of the engineering and environmental considerations in development of the proposed alternatives. Twenty citizens and 13 project team members signed in at the public meeting. Project team attendees included the FDOT Project Manager, staff from FDOT Right-of-way and Environmental Management Offices, Metropolitan Planning Organization liaison and the project consultants. Public comment forms were made available to attendees; however, no written comments were received during or after the meeting. Verbal comments/questions received during

the public meeting consisted of discussions of future visions/development plans near the Sand Lake Road and International Drive intersection, questions regarding animal crossing and keeping the high-speed rail envelope within the corridor. No opposition against the project was received during the meeting.

Several additional meetings were held to discuss the proposed project improvements and PD&E study, as follows.

Meetings with Orange County:

- Orange County Partnering Meeting (August 12, 2014) – Presented alternative concepts to Orange County staff for both Sand Lake Road and SR 528
- Orange County Management Presentation (February 9, 2015) – Presented recommended alternative to Orange County management for Segments 1 and 2

Meetings with Florida's Turnpike Enterprise (FTE):

- Beachline and I-4 Coordination Meeting (February 7, 2014) – Discussed alternative concepts for the I-4/SR 528 interchange and collected information on the proposed widening for SR 528 by FTE
- I-4/Beachline Ramp Widening - Coordination (March 25, 2014) - Meeting to discuss the proposed interim ramp improvement for I-4 and SR 528/Beachline interchange concept- and traffic-wise
- FTE Coordination Meeting (May 2, 2014) – Discussion on proposed improvement concepts for SR 417 & SR 429 interchanges
- D-5/FTE Coordination Meeting, Beyond I-4 Ultimate PD&E (June 30, 2014)- Discussion on proposed improvement concepts for the SR 528/I-4 Interchange
- I-4/Beachline Interchange Future Traffic (July 17, 2014) – Discussion on traffic volumes to be used in the analysis for the SR 528 Interchange Operational Analysis Report (IOAR) being prepared by FTE
- I-4 and SR 528 Interchange Coordination (December 5, 2014) – FTE presented their recommended alternative for the SR 528 section of the I-4 improvements.

Public Hearing

A formal public hearing was conducted on October 10, 2016 to seek input on the Recommended Alternative. The hearing, provided an overview of the Recommended Alternative and impacts, the study schedule, and summary of the remaining steps in the study process. The hearing was held at the Wyndham Orlando Resort, 8001 International Drive, Orlando, FL 32819. The draft environmental and engineering reports were available for public review from September 19, 2016

through October 20, 2016 on the project website (www.i4express.com) and at the Orange County Public Library, Southwest Branch, located at 7255 Della Drive, Orlando, FL 32819.

A half-hour open house preceded the formal portion of the hearing. The public was given the opportunity to ask questions and provide comments to the FDOT representatives in a one-on-one setting. A court reporter was present to receive oral comments from the public, and written comments were also accepted. The Recommended Alternative for the overall I-4 corridor and each interchange was displayed on aerial photography of the study area. A matrix with potential environmental impacts and cost estimates was presented. An audiovisual presentation describing the engineering and environmental components of the Recommended Alternative was given. After the presentation, the public was given an opportunity to offer oral comments to the hearing moderator.

Per Chapter 11 of the PD&E Manual, all property owners within at least 300 feet of either side of the centerline of the Recommended Alternative were notified of the hearing by newsletter. Twenty-three (23) citizens and seventeen (17) project team members signed in at the public hearing. Project team attendees included the FDOT PD&E and Design Project Managers, staff from FDOT Public Information, Right-of-way and Environmental Management Offices and the project consultants. No public comment forms were received at the hearing or during the 10-day comment period following the hearing. Two public comments were provided during the oral comment period of the hearing. The public comments from the hearing are summarized as follows:

- A citizen expressed a need for clarification on the proposed improvements and identification of which property is needed for ponds from a specific parcel. Opposition to any land being used for FDOT ponds was also expressed.
- A citizen stated he was not opposed to progress; however, he also gave a lengthy comment suggesting to follow the “money trail” on the project. The citizen indicated he did not require a response.

Post Public Hearing Coordination

No written comments were received during the 10-day post-hearing comment period. The oral comments from the public hearing were either directly addressed by project team members during the public hearing or through follow-up letter/email responses provided by the FDOT Project Manager. The public involvement documentation for I-4 Segment 2, including official public hearing transcripts and public input comments with responses, are provided in Appendix B of this report.

5.10 Value Engineering (VE)

Value Engineering (VE) for the proposed improvements was conducted after the alternatives public workshop meeting in 2014. The VE study was held February 10-14, 2014; the VE team consisted of representatives from the FDOT D5 office in the Traffic Operations, Roadway Design, Right-of-way, Construction, Structures, Geotechnical, Maintenance, Project Management and Drainage departments. The VE team reviewed the preliminary concept plans and made recommendations based on overall value added to the project. The VE team made seven recommendations that would result in cost savings or added value to the project. The detailed recommendations are provided in the *Value Engineering for Transportation Improvements, Interstate 4 from West of State Road 528 (Beachline) to West of State Road 435 (Kirkman Road), Value Engineering Study Draft Report, February 2014* and are summarized as follows.

- Reduce the size of Pond 200B by a third and provide the remainder of the needed stormwater storage in Pond 200D that is located within FDOT right-of-way in the northeast quadrant of the intersection of I-4 and SR 528. The land is currently being leased to the Orange County Convention Center and is currently used for parking.
- Construct a new Pond 205C on the Yogi Bear Campground property in conjunction with Pond 205D on the residential lots south of Walmart. Combine Pond 205D with the existing Orange County pond. An FDOT easement for an outfall into Big Sand Lake already exists.
- Construct a new Pond 205C on the Yogi Bear Campground property in conjunction with Pond 205D on the residential lots south of Walmart. Construct stand-alone Pond 205D. An FDOT easement for an outfall into Big Sand Lake already exists.
- Realign the horizontal geometry of the SR 528 interchange pushing the overall footprint westward to eliminate all right-of-way takes on the east side of I-4 as shown in the SR 528 interchange Alternative 4 exhibit of the *Value Engineering Study Draft Report, February 2014.*
- The VE team recommends considering construction of a SPUI. This concept will reduce the number of signalized ramp intersections from two to one and will improve operations of the system and is more user friendly for pedestrians and bikes through the corridor.
- Eliminate the ramps to and from Central Florida Parkway.
- Construct combined ramps at the SR 528 interchange as follows:
    - I-4 eastbound (GUL & Express Lane) to SR 528 eastbound
    - I-4 westbound (GUL & Express Lane) to SR 528 eastbound
    - SR 528 westbound to I-4 westbound (GUL & Express Lane)
    - SR 528 westbound to I-4 eastbound (GUL & Express Lane)

The VE study recommendations and dispositions are an integral part of the engineering design process. As the project proceeds through various phases of preliminary design, the design

concepts are modified to reflect all aspects of engineering and environmental analyses. As such, some of the dispositions previously stated may have been modified during design and development of the concept plans.

5.11 Comparative Evaluation

The proposed improvements follow the existing alignment of I-4 and the typical section for the I-4 BtU corridor will be consistent with the I-4 Ultimate mainline typical section (three general use lanes and two express lanes in each direction). Thus, the alternatives analysis focused on the interchange design.

5.11.1 Evaluation Criteria

Each of the viable alternatives was evaluated based on several criteria, including: traffic operations, right-of-way impacts, natural and physical environment, social impacts, engineering design considerations and estimated project construction costs. The recommended alternative was based on the results of the engineering and environmental analysis and input from the public involvement program. The following provides a description of the evaluation criteria.

Community Impacts/Relocations

Community impacts anticipated from the proposed improvements may include adverse effects on neighborhoods and community cohesion. Potential relocations of residences and businesses that will be directly impacted are identified and quantified.

Environmental Impacts

Environmental impacts include identifying and quantifying, through literature research, field surveys and investigations, the archeological, historical and contamination sites impacted, as well as endangered species impacts. A cultural resources survey was conducted to identify historic sites in the study corridor and archaeological resources within proposed pond locations. The architectural study further assesses historic sites for their potential for listing in the NRHP. The contamination screening evaluation was completed to identify the number, location and risk potential of known or potential hazardous waste sites along the corridor. The endangered species biological assessment was completed to document the potential occurrence of natural habitats and wildlife within the proposed project corridor and recommend actions to avoid and/or minimize impacts to the greatest practicable extend.

Additional environmental impacts include identifying noise sensitive areas, air quality, wetlands and floodplain impacts along the project corridor. The noise study report evaluates future design traffic to determine if noise-sensitive receivers are within the project area, if noise levels are likely to increase and if noise impacts are anticipated to occur. Noise abatement measures are evaluated based on the analysis. Air pollutant quantities are estimated and compared to nationally-

established air quality standards to determine impacts from traffic for the project design year. Encroachment into existing wetlands or floodplains may result from the proposed improvements. The wetlands evaluation report identifies existing wetlands and surface water communities based on the USFWS Classification and functionality. Impacts due to the proposed construction and improvements are addressed by the use of mitigation banks and/or other mitigation options that satisfy state and federal requirements. Impacts to the 100-year floodplain from the proposed improvements will be mitigated by floodplain compensation ponds.

Project Costs

Project costs include construction and right-of-way costs. Construction cost estimates include roadway, structures, retaining walls, utility relocation, drainage improvements, maintenance of traffic and engineering design cost. Construction engineering and inspection is assumed to be 12% of total construction cost. Additionally, the project costs include right-of-way costs (to be provided by FDOT) for additional right-of-way necessary for each alternative to accommodate roadway and interchange improvements and stormwater management. Right-of-way costs also include residential and business relocations.

Public Involvement

A comprehensive public involvement program (PIP), as described in Section 5.9 of this report, including a series of meetings, workshops and other outreach activities was initiated as part of the I-4 BtU PD&E Reevaluation Study. As part of the PIP, an Alternatives Public Workshop was held on January 30, 2014 to present project information, to property owners, public officials, organizations and individuals interested in the project. The workshop was intended to provide details on the proposed design concepts and receive input from the public.

5.11.2 Evaluation Matrix

A summary of the estimated impacts resulting from the comparative evaluation of the alternatives considered is provided in Table 5.11. The table illustrates impacts from the proposed improvements to the I-4 mainline for the no-build, and build alternatives and comparatively shows any additional impacts from the various interchange alternative options.

5.11.3 Recommended Alternative

The FDOT District 5 has selected the recommended alternative based on analyses of potential environmental impacts, projected traffic operations, right-of-way acquisitions, estimated project costs, value engineering study and other engineering considerations. The following alternatives were selected as the recommended alternative to be presented at the Public Hearing:

- I-4 Mainline Build Alternative (Roadway reconstruction to include six general use lanes and four express lanes, with 44’ rail corridor from Begin Project limit to SR 528)

- I-4 Mainline Build Alternative with Elevated Westbound C-D Road between Begin Project limit and SR 528
- I-4 Mainline Build Alternative with at-grade Eastbound C-D Road between Begin Project limit and SR 528
- SR 528 Alternative 6 (Freeway Terminal Junction w/separate direct connect ramps between I4 ELs and SR 528 ELs and between I-4 GULs and SR 528 GULs)
- SR 482 (Sand Lake Road) Alternative 4 (DDI w/loop ramp in NW quadrant)

Table 5.11 - Alternatives Evaluation Matrix

Summary of Impacts‡	No Build	*I-4 Mainline*	SR 482 (Sand Lake Road) Interchange Alternative				SR 528 (Beachline Expressway) Interchange Alternative						
			1	2	3	***4***	1	2	3	4	5	***6***	7
			Base Parclo w/loop ramp in NW quadrant; some ramp modifications	DDI	SPUI	***DDI w/loop ramp in NW quadrant***	Freeway Terminal Junction w/separate direct connect ramps for ELs & GULs and four-level bridge	Freeway Terminal Junction w/combined direct connect ramps for ELs & GULs	Multi-level Diverging Diamond Interchange	Freeway Terminal Junction w/separate direct connect ramps for ELs & GULs; I-4 alignment shifted west	Freeway Terminal Junction w/combined direct connect ramps for ELs & GULs; I-4 alignment shifted west	***Freeway Terminal Junction w/separate direct connect ramps & direct connection to the SR 528 ELs***	Freeway Terminal Junction w/ combined ramps & a direct connection to International Drive
Roadway ROW Acquisition (Acres)	0.00	***0***	0	0	0	***1.82***	4.51	4.09	4.04	3.44	7.17	***7.34***	7.98
Pond ROW Acquisition (Acres)[1]	0.0	***16.0***	n/a	n/a	n/a	***0.0***	n/a	n/a	n/a	n/a	n/a	***0.0***	n/a
Impacted Noise Sensitive Sites	0	***77***	0	0	0	***0***	0	0	0	0	0	***0***	0
Wetland (WL & Surface Water (SW) Impacts[2] (acres)	0.00	***WL- 0.00 SW- 1.8 (low quality)***	WL - 0.00 SW- 2.01 (low quality)	WL - 0.00 SW- 2.01 (low quality)	WL - 0.00 SW- 2.01 (low quality)	***WL - 0.00 SW- 2.01 (low quality)***	WL- 4.43 (low quality) SW- 5.51 (low quality)	WL- 4.43 (low quality) SW- 5.51 (low quality)	WL- 4.43 (low quality) SW- 5.51 (low quality)	WL- 4.43 (low quality) SW- 5.51 (low quality)	WL- 4.43 (low quality) SW- 5.51 (low quality)	***WL- 4.43 (low quality) SW- 5.51 (low quality)***	WL- 4.43 (low quality) SW- 5.51 (low quality)
Floodplain Impacts (ac-ft.)	0	***0***	0	0	0	***0***	0	0	0	0	0	***0***	0
Section 4(f) Properties	0	***0***	0	0	0	***0***	0	0	0	0	0	***0***	0
Potential Historic Sites[3]	0	***Two historic structures (NRHP ineligible)***	0	0	0	***0***	0	0	0	0	0	***0***	0
Potential Contamination (Sites)	0	***10 Low Risk 3 Med. Risk[4]***	8 Low 4 Med.	8 Low 4 Med.	8 Low 4 Med.	***8 Low 4 Med.***	4 Low 1 Low/Med.	4 Low 1 Low/Med.	4 Low 1 Low/Med.	4 Low 1 Low/Med.	4 Low 1 Low/Med.	***4 Low 1 Low/Med.***	4 Low 1 Low/Med.
Potential Contamination (Ponds)[5,6]	0	***3 Low (200A, 200B, 208) 4 Med. (205A, 205B, 205C, 205D)***	4 Low (206, 206A, 206B, 207)	4 Low (206, 206A, 206B, 207)	4 Low (206, 206A, 206B, 207)	***4 Low (206, 206A, 206B, 207)***	9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)	9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)	9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)	9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)	9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)	***9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)***	9 Low (201, 202A, 202B, 202C, 202D, 203A, 203B, 204A, 204B)
Potential to Improve Traffic Operations	Low	***High***	Low	Low	Low	***High***	n/a[7]	n/a[7]	n/a[7]	n/a[7]	Low	***High***	Medium
Pedestrian Accommodations	Yes	***n/a***	Yes	Yes	Yes	***Yes***	n/a	n/a	n/a	n/a	n/a	***n/a***	n/a

Table 5.11 - Alternatives Evaluation Matrix

Summary of Impacts‡	No Build	*I-4 Mainline*	SR 482 (Sand Lake Road) Interchange Alternative				SR 528 (Beachline Expressway) Interchange Alternative						
			1	2	3	***4***	1	2	3	4	5	***6***	7
			Base Parclo w/loop ramp in NW quadrant; some ramp modifications	DDI	SPUI	***DDI w/loop ramp in NW quadrant***	Freeway Terminal Junction w/separate direct connect ramps for ELs & GULs and four-level bridge	Freeway Terminal Junction w/combined direct connect ramps for ELs & GULs	Multi-level Diverging Diamond Interchange	Freeway Terminal Junction w/separate direct connect ramps for ELs & GULs; I-4 alignment shifted west	Freeway Terminal Junction w/combined direct connect ramps for ELs & GULs; I-4 alignment shifted west	***Freeway Terminal Junction w/separate direct connect ramps & direct connection to the SR 528 ELs***	Freeway Terminal Junction w/ combined ramps & a direct connection to International Drive
Bicycle Accommodations	No	***n/a***	Yes	Yes	Yes	***Yes***	n/a	n/a	n/a	n/a	n/a	***n/a***	n/a
Parcels Impacted	0	***12***	0	0	0	***11***	9	9	8	6	7	***7***	12
Relocations	0	***1***	0	0	0	***0***	1	1	1	1	1	***1***	1
Constructability	N/A	***High***	High	High	High	***High***	High	High	High	High	High	***High***	High
Bridges (Area, SF)	0	***123,083***	38,368	51,919	78,280	***60,417***	233,398	224,750	390,332	346,893	183,627	***246,829***	245,957
Construction Cost[8]	$0	***$127.2M***	$14.9M	$29.7M	$31.0M	***$32.4M***	$110.4M	$106.7M	$160.9M	$141.6M	$100.1M	***$123.3M***	$139.5M

Notes:
‡This table illustrates impacts from the proposed improvements for the I-4 Mainline build alternative and comparatively shows any additional impacts from the various interchange alternative options.
Alternative # - designates the recommended alternative.
Abbreviations: Parclo-Partial Cloverleaf DDI- Diverging Diamond Interchange, SPUI- Single-Point Urban Interchange, ROW– Right-of-Way, ac-ft– acre-feet, SF- square feet.

[1]Based on preferred pond sites as determined in the *Pond Siting Report (August 2016)*.
[2]Low Quality, UMAM score between 0 and 0.49.
[3]Historic sites constructed before 1971 within APE (Area of Potential Effect), which includes existing ROW along I-4 and within 330' from proposed ROW and proposed pond footprints plus 100' buffer.
[4]One of these sites is a Ground Water Contamination Plume which contains numerous other sites in addition to ponds 205A, 205B, 205C & 205D.
[5]All pond sites listed are recommended, except Ponds 200A, 205A & 205B which are pond alternatives.
[6]Based on Level 2 CIAR, asbestos debris will require special handling, characterization and disposal provisions at Pond sites 205B & 205C; Pond sites 206, 206A & 206B considered high risk based on potential groundwater impacts at the historical 7-Eleven facility located near pond site 206.
[7]Some alternatives were removed from further consideration due to roadway geometric design constraints, operational deficiencies, inter-agency coordination indicating other preferences and/or being cost-prohibitive, and no further traffic analysis was completed.
[8]Construction costs are preliminary as determined by the Engineer's Estimate included in Appendix D; shown in millions of dollars.

6.0 Design Details of Recommended Alternative

Based on the preceding analysis, a recommended build alternative was identified and selected to meet the purpose and need for the I-4 BtU Segment 2 corridor. The Concept Plans for this project, included in Appendix A, are provided for all of the alternatives evaluated in this report. Design concept details and further analysis of the recommended build alternative are discussed in the following section of the report.

6.1 Typical Sections

A typical section package for the entire I-4 BtU corridor has been prepared and submitted under separate cover to FDOT. Two mainline typical sections have been identified for I-4 Segment 2, as previously shown in Figure 1.2 and Figure 1.3. Both typical sections provide for six general use lanes and four express lanes within a 300' minimum right-of-way and a design speed of 70 mph. Other common features of both typical sections include: 10' inside and 12' outside shoulders for the general use lanes, 4' inside and 10' outside shoulders for the express lanes and a 2 ft wide barrier wall between the general use and express lanes. The typical section from east of Central Florida Parkway to SR 528 provides for a 44' rail corridor within the median of I-4; the inside shoulder for the express lanes will be modified from 10' to 4' when rail is constructed and barrier wall is in place. The typical section from SR 528 to the end of the project limits, west of Kirkman Road will not contain a rail corridor.

While the overall typical section remains consistent throughout Segment 2, there are some areas along the Segment 2 corridor that will have special sections. Special cross sections were developed to meet the needs of the project due to right-of-way constraints, existing utility easements or other design considerations along the corridor. These special sections may include C-D roads, braided ramp systems, elevated express lanes or elevated general use lanes. Additionally, the median width may vary in certain locations to accommodate changes in the horizontal alignment due to crossroad support structures or other design features. The special sections along the Segment 2 corridor include a C-D system between Central Florida Parkway and SR 528; the eastbound C-D Road is at grade and the westbound C-D Road is elevated.

6.2 Alignment

Horizontal Alignment: In general, the proposed horizontal alignment of I-4 closely follows the existing I-4 alignment and meets the horizontal design criteria established in Section 4.0 of this report. There is one curve in Segment 2 with the proposed curve data shown in Table 6.1. The preliminary Concept Plans and baseline data submitted with this report illustrate in detail the proposed horizontal alignment for the I-4 mainline, ramps and interchange layouts.

Table 6.1 – Proposed Horizontal Curve Data

PC Station	1497+87.32
PT Station	1521+34.77
Degree of Curvature	3° 00' 00"
Curve Direction	Right
Design Speed (MPH)	60
Proposed Super-elevation (ft/ft)	0.077

Vertical Alignment: The proposed improvements require significant vertical alignment modifications to meet established criteria for the vertical alignment as outlined in Section 4.0 of this report. The proposed profile for I-4 needs to be modified in order to meet established criteria for stopping sight distances. A vertical alignment for a design speed of 70 mph will be developed during the line and grade phase. A listing of the known vertical curves and their design speeds can be found in Section 2.6.

6.3 Design Exceptions and Variations

From time to time, it may be necessary to deviate from the standard criteria used in the design process. If deemed necessary, two specific deviations may occur: (1) Design Exception or (2) Design Variation. A Design Exception is required when the design criteria applied falls below the minimums established by AASHTO. A Design Variation is required when design criteria applied falls below FDOT established criteria and the deviation is not covered by the Design Exception. The Sand Lake Road DDI requires a design speed and cross slope variation. In addition, the I-4 mainline will require a shoulder width variation. Table 6.2 summarizes the 13 design elements and specifies whether AASHTO or FDOT design criteria are satisfied, or if a design exception/variation is required for the specific design element for the proposed improvements.

Table 6.2 - Design Exceptions and Variations

Design Element	Design Exception < AASHTO	Design Variation < FDOT and > AASHTO
1. Design Speed	Satisfied	Required
2. Lane Width	Satisfied	Satisfied
3. Shoulder Width	Satisfied	Required
4. Bridge Width	Satisfied	Satisfied
5. Structural Capacity	Satisfied	Satisfied
6. Vertical Clearance	Satisfied	Satisfied
7. Grade	Satisfied	Satisfied
8. Cross Slope	Satisfied	Required

Table 6.2 - Design Exceptions and Variations

Design Element	Design Exception < AASHTO	Design Variation < FDOT and > AASHTO
9. Superelevation	Satisfied	Satisfied
10. Horizontal Alignment	Satisfied	Satisfied
11. Vertical Alignment	Satisfied	Satisfied
12. Stopping Sight Distance	Satisfied	Satisfied
13. Horizontal Clearance	Satisfied	Satisfied

Table 6.3 lists additional design elements that are not addressed by AASHTO but require a design variation by FDOT if the standards are not met.

Table 6.3 - Additional Design Elements

Design Element	Design Variation
Border Width	Required
Median Width	Satisfied
Length of Horizontal Curve	Satisfied
Length of Vertical Curve	Satisfied

A border width of 94 feet for freeways and interchange ramps is required by FDOT. In order to minimize impacts to adjacent properties and reduce right-of-way acquisition costs, a 15-foot border width has been used throughout the project limits. When necessary, standard concrete barrier wall will be placed at the edges of the outside shoulders. This will provide protection for motorists from objects that do not meet clear zone requirements and maintain the appropriate border width. The barrier wall will also be placed on top of any necessary retaining walls to provide protection from any drop offs.

6.4 Drainage

This project will make many improvements to the water quality along the roadway corridor. The stormwater runoff from the new impervious areas will be treated in existing and proposed stormwater facilities. In the existing condition, numerous areas along Segment 2 receive no stormwater runoff treatment or attenuation and discharge directly to an outfall; therefore, any treatment to the new impervious areas is expected to improve water quality in this corridor. The stormwater runoff will be collected by storm sewer systems and roadside ditches. The water quality treatment and attenuation will be achieved through the expansion and construction of offsite ponds, some of which will require acquisition of additional right-of-way.

The stormwater will be routed to existing and proposed stormwater ponds. There is a total of ten basins within the project limits. In areas with poor soils and high water table, only wet detention

ponds were considered. The ponds were sized based on the assumption that most of the offsite runoff would be drained through separate systems. For a majority of the ponds, the location of where the proposed basins begin and end is the same as the existing condition. The location of the outfall in the proposed condition is the same as in the existing. None of the basins discharge to an OFW or a nutrient impaired water.

The following is a summary of the findings documented in the *Location Hydraulic Report (August 2016)* and the *Pond Siting Report (August 2016)*. These documents contain more detailed information regarding the drainage along the project corridor.

6.4.1 Proposed Drainage Patterns

There are three basins (Basins 200, 201 and 202) within the project that discharge to the Central Florida Parkway Canal, which flows to Shingle Creek. Basin 200 needs one pond for treatment and attenuation, but has two alternatives. The recommended alternative is Pond 200B, which will impact one parcel for a total of 6.06 acres. Basin 201 requires one pond (Pond 201) for treatment and attenuation. Basin 202 requires four ponds (Ponds 202A, 202B, 202C and 202D) for treatment and attenuation. Ponds 201, 202A, 202B, 202C and 202D are located within the FDOT's existing right-of-way; therefore, no additional right-of-way is required for these ponds.

There are two basins (Basins 203 and 204) that serve SR 528 and the corresponding ramps and do not include any runoff from I-4. Both basins require two ponds each (Ponds 203A, 203B, 204A and 204B), for treatment and attenuation. All of the proposed ponds are already permitted, but they have not been constructed yet. The ponds will need to be reconfigured to accommodate the new ramp alignments and will discharge to the cross drain at the Newover Canal. All of the roadway east of this cross drain will continue to flow east to the future ponds. No additional right-of-way is required for any of the recommended ponds.

There is one basin (Basin 205) that discharges to smaller lakes that discharge to Big Sand Lake and ultimately to Shingle Creek. Basin 205 needs two ponds for treatment and attenuation, but has three alternatives. The recommended alternatives are Ponds 205C and 205D, which will impact 11 parcels for a total of 9.62 acres.

There are two basins (Basins 206 and 207) that discharge to Little Sand Lake and ultimately to Shingle Creek. Basin 206 needs three ponds for treatment and attenuation. Pond 206 is an existing pond that was reconfigured to accommodate the new ramp alignment. Ponds 206A and 206B are proposed ponds that are located within the FDOT's existing right-of-way; therefore, no additional right-of-way is required for these ponds. Pond 207 is an existing pond that does not need to be expanded or regraded. No additional right-of-way is required for any of the recommended ponds.

Basin 208 only encompasses the ramps, not the I-4 mainline. Pond 208 is an existing pond that does not need to be expanded or regraded. The pond will continue to discharge east to the I-4 median swale, which ultimately drains to Shingle Creek.

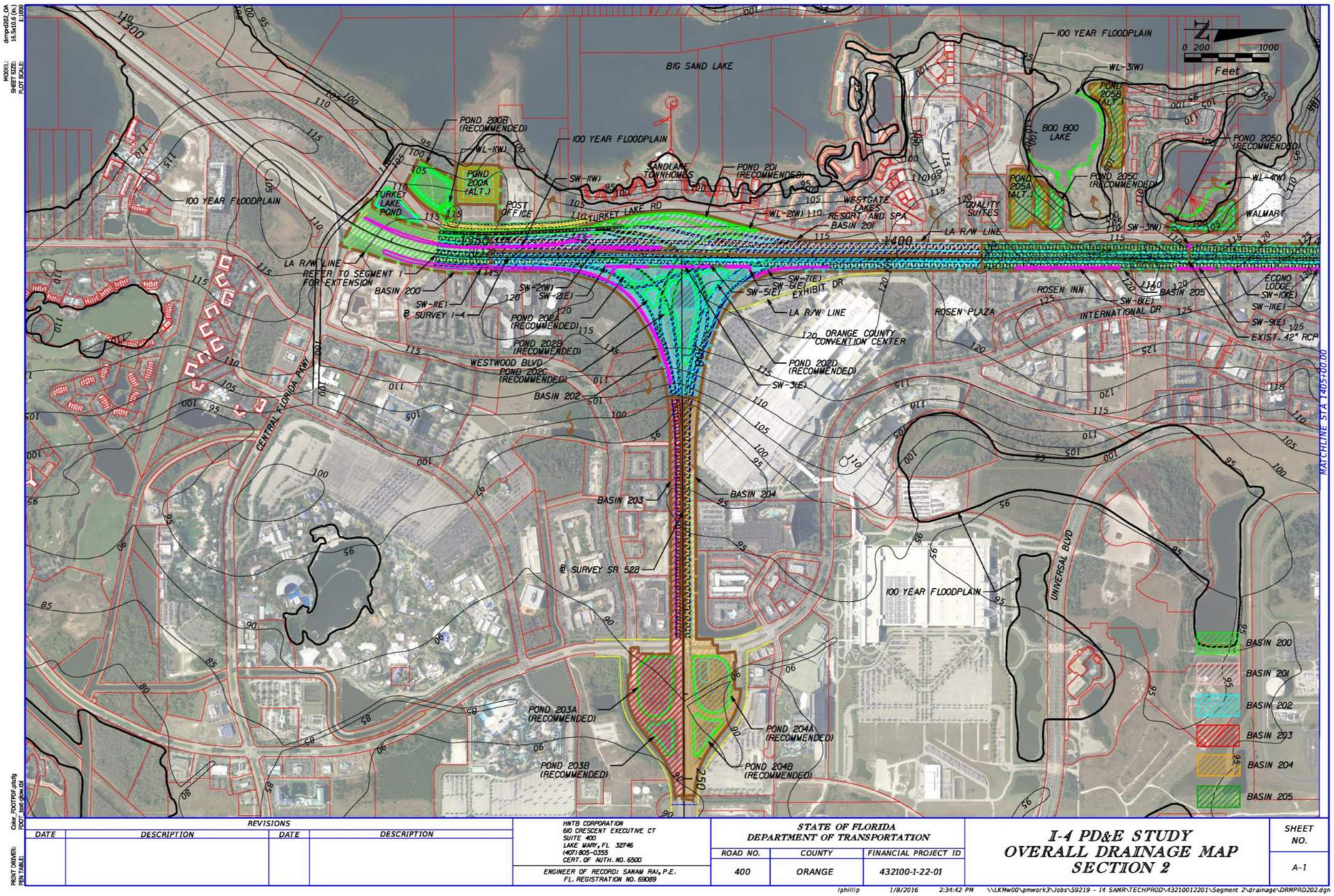
In the final basin (Basin 209), the stormwater runoff from the roadway is collected by roadside ditches and cross drains that flow to the future ponds in the I-4 Ultimate project. The ponds are located at the Kirkman Road Interchange, east/north of the project terminus. The ponds were designed as interconnected wet detention ponds and discharge to Shingle Creek. Additional information on proposed drainage patterns is presented in the *Pond Siting Report (August 2016).*

The *Pond Siting Report, Segment 2 (August 2016)* evaluated the alternatives and identified the recommended pond sites which are shown on the Concept Plans in Appendix A. Table 6.4 lists the recommended pond alternatives and pond construction costs for I-4 Segment 2. The overall drainage maps for the project are shown in Figure 6.1 and Figure 6.2.

Table 6.4 - Summary of Recommended Pond and FPC Sites

Recommended Pond Alternative	Total Pond Cost*
200B	$9,438,867
201	$938,679
202A, B, C, D	$1,445,764
203A & 203B	$22,860
204A & 204B	$22,860
205C	$8,533,822
205D	$8,196,224
206 & 206B	$653,352
207	$0
208	$0
F32-F35**	$0
Total =	**$29,252,427**

*Total pond cost, as determined in the Pond Siting Report Segment 2 (August 2016), includes stormwater management facility construction costs, costs associated with wetland impacts and parcel acquisition costs. When there are no proposed changes, the pond cost is $0.
**Future ponds by others, located at the Kirkman Road interchange.



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: SANAM RAI, P.E.
FL. REGISTRATION NO. 69089

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
OVERALL DRAINAGE MAP
SECTION 2

SHEET NO. A-1

\\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\drainage\DRMPRD202.dgn 1/8/2016 2:34:42 PM iphillip

Figure 6.1 – Overall Drainage Map

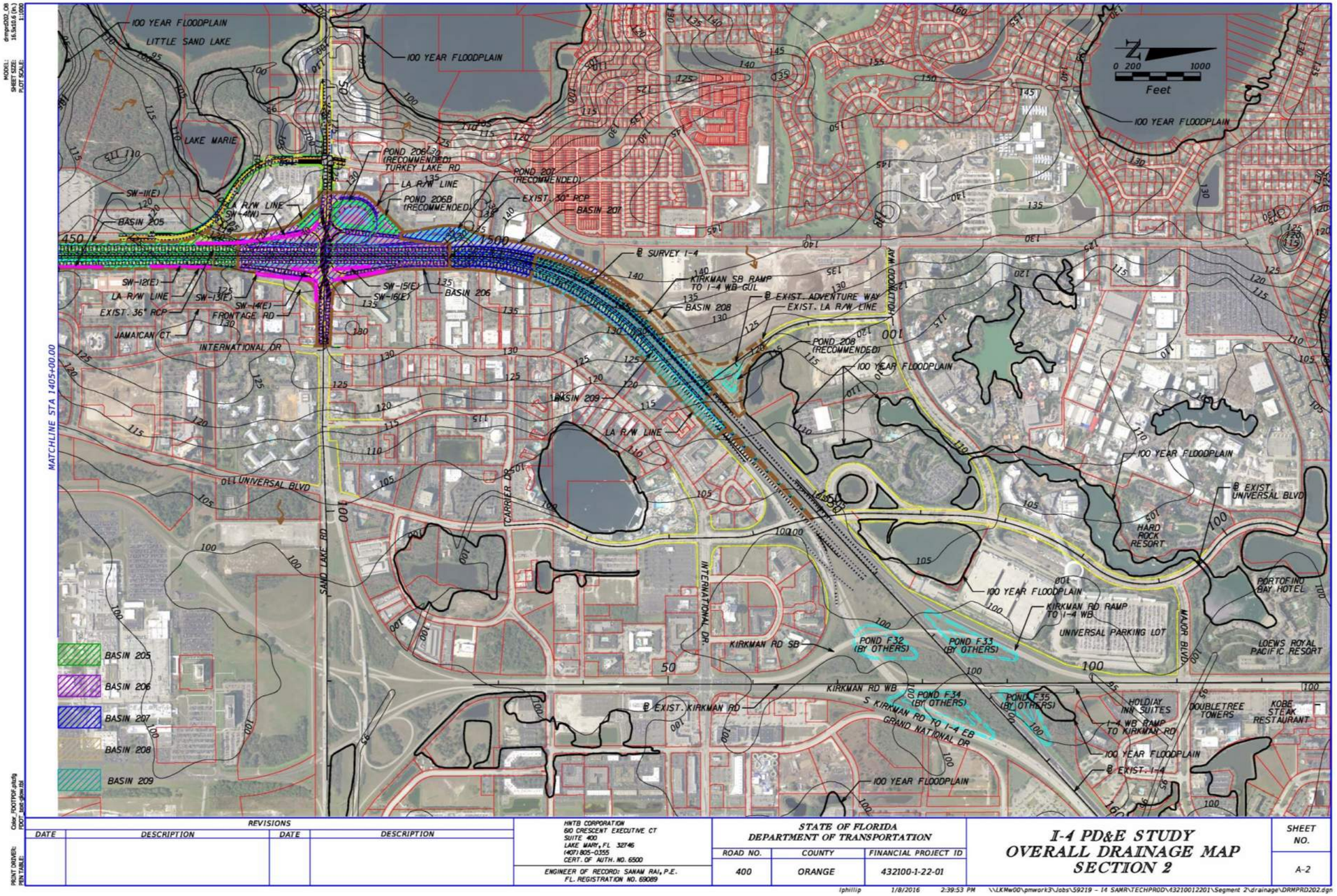


Figure 6.2 – Overall Drainage Map

6.4.2 Cross Drains

Through hydraulic analysis, it was determined that all three cross drains, Milepost 7.409, Milepost 8.028 and Milepost 8.545 will require larger pipe sizes. Table 6.5 presents the proposed cross drain data. Additional information is presented in the *Location Hydraulic Report (August 2016)* prepared for this study.

Table 6.5 - Proposed Cross Drains

Milepost	Station	Description from Original Construction Plans						
		Count	Span (in)	Rise (in)	Type	Length (ft)	Elevation[1] (ft NAVD)	
							Left	Right
7.409	1434+46	1	48	48	RCP	318	110.20	110.00
8.028	1467+13	1	42	42	RCP	290	116.20	115.30
8.545	1494+90	1	36	36	RCP	285	129.30	129.10

[1]Upstream and downstream cross drain invert elevation; Abbreviations: RCP – Reinforced Concrete Pipe

6.5 Right-of-Way Requirements

The proposed improvements to I-4 Segment 2 will follow the existing alignment and will require right-of-way for the roadway mainline, interchange improvements and stormwater management facilities. The anticipated right-of-way impacts involve full or partial acquisition of 30 parcels for a total of approximately 25 acres; some parcels may be impacted by both roadway and stormwater acquisitions. The right-of-way required for the roadway improvements for the recommended alternative, includes partial or full acquisition of 18 parcels totaling approximately 9.2 acres; the parcels impacted are listed in Table 6.6 and shown on the Concept Plans included in Appendix A.

Table 6.6 - Right-of-way Acquisition for Roadway

Parcel ID	Alternative	Size (Acres)*
35-23-28-0000-00-061	Sand Lake Road Alternative 4	1.551
35-23-28-7113-01-000	Sand Lake Road Alternative 4	0.046
35-23-28-0000-00-010	Sand Lake Road Alternative 4	0.023
35-23-28-7117-01-000	Sand Lake Road Alternative 4	0.002
35-23-28-0000-00-042	Sand Lake Road Alternative 4	0.007
35-23-28-0000-00-053	Sand Lake Road Alternative 4	0.083
35-23-28-7825-00-010	Sand Lake Road Alternative 4	0.004
35-23-28-7825-00-011	Sand Lake Road Alternative 4	0.030
35-23-28-0000-00-009	Sand Lake Road Alternative 4	0.003
35-23-28-0000-00-016	Sand Lake Road Alternative 4	0.000
35-23-28-7825-00-012	Sand Lake Road Alternative 4	0.071
11-24-28-0000-00-022	SR 528 Alternative 6	0.005

Table 6.6 - Right-of-way Acquisition for Roadway

Parcel ID	Alternative	Size (Acres)*
11-24-28-7878-01-000	SR 528 Alternative 6	0.247
11-24-28-0000-00-014	SR 528 Alternative 6	0.011
11-24-28-0000-00-013	SR 528 Alternative 6	0.873
11-24-28-0000-00-010	SR 528 Alternative 6	1.413
11-24-28-0000-00-004	SR 528 Alternative 6	0.612
-	SR 528 Alternative 6	4.184
	Total right-of-way required:	**9.162**
*Area proposed for take; -County or other municipality-owned, no parcel ID available		

The right-of-way required for stormwater facilities (full or partial acquisition), based on the recommended pond sites as determined in the *Pond Siting Report (August 2016)* is 16.02 acres. Table 6.7 shows the right-of-way required for recommended pond site alternatives 200B, 205C and 205D.

Table 6.7 - Right-of-way Acquisition for Stormwater Facilities

Pond Number	Parcel ID	Size (Acres)
200B	11-24-28-0000-00-004	6.40
205C	02-24-28-0000-00-005	4.91
205D	35-23-28-0000-00-029	0.47
205D	35-23-28-0000-00-028	0.32
205D	35-23-28-0000-00-031	0.30
205D	35-23-28-0000-00-027	0.31
205D	35-23-28-0000-00-033	0.41
205D	35-23-28-0000-00-039	0.43
205D	35-23-28-0000-00-038	0.71
205D	35-23-28-0000-00-037	0.79
205D	35-23-28-0000-00-041	0.58
205D	35-23-28-0000-00-025	0.39
Total right-of-way required:		**16.02**

6.6 Relocations

Right-of-way acquisition for the proposed improvements associated with I-4 Segment 2 involves partial or complete purchase of parcels within the project study area which may result in displacement of residential and non-residential land uses. In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, FDOT will carry out a Right-of-way and Relocation Program in accordance with state statutes and federal regulations. This includes advance notification to property owners of impending acquisitions, fair market value payment for property rights and financial assistance to relocated individuals or businesses. The recommended

alternative for I-4 Segment 2 is anticipated to impact two parcels which are developed/occupied and may require full or partial acquisitions, involving potential relocation of one existing residence (approximate 0.54-acre parcel) and one publicly-owned facility (approximate 6.8-acre parcel), as shown in Table 6.8. Additional information pertaining to the potentially displaced properties, including resources available to facilitate relocation and socio-economic impacts to the surrounding neighborhoods are identified in the *Conceptual Stage Relocation Plan SR 400 (I-4) Segment 2: West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) (January 2016),* prepared for this project.

Table 6.8: Potential Relocations

Parcel ID	Location	Parcel Size (Acres)	Proposed ROW Acquisition (Acres)
11-24-28-0000-00-013	10450 Turkey Lake Road, Orlando, FL 32819	6.796	0.873
35-23-28-0000-00-027	9036 Turkey Lake Road, Orlando, FL 32819	0.539	0.309
	Total:	7.335	1.182

6.7 Traffic Operational Analysis

Traffic operational analyses of the Recommended Build Alternative (referred to as Modified Build in the current I-4 SAMR Reevaluation) were completed. The operational analyses included Highway Capacity Analysis using Highway Capacity Software (HCS) 2010 for freeway, weave and ramp merge and diverge operations along the Interstate and Synchro software for arterial intersection operations. Additionally, microsimulation analyses were performed using VISSIM software to analyze the I-4 general and special use lanes and the study area intersections. Detailed analyses, including model runs and computer outputs, are provided in the future conditions analysis section of the supplemental report, *I-4 Beyond the Ultimate Systems Access Modification Report (SAMR) Re-Evaluation: I-4 Beyond the Ultimate Project South Section – from West of US 27 to West of SR 435 (Kirkman Road) [March 2017],* prepared for this project. The following sections provide a summary of the traffic operations analyses for the recommended alternative.

Basic Freeway Operations

The results of the HCM operational analyses of the basic freeway segments, as shown in Table 6.9, indicated that the majority of segments (general purpose lanes) would operate at LOS D or better. Within I-4 Segment 2, two segments in the eastbound direction and one segment in the westbound direction are projected to operate at LOS E during either the AM or PM peak hour for the projected 2040 traffic volumes. Network-wide performance was evaluated using VISSIM microsimulation analysis for the 2040 Build conditions. The network performance results indicate a significant

Table 6.9 – I-4 Segment 2 Basic Freeway Operational Analysis (HCS 2010)

Roadway/Segment		2040 AM Peak Hour			2040 PM Peak Hour		
		Avg Speed (mph)	Density (pc/mi/ln)	LOS	Avg Speed (mph)	Density (pc/mi/ln)	LOS
I-4 Basic Freeway Eastbound							
On Ramp from Daryl Carter Pkwy	SR 528 Off Ramp	63.1	31.2	D	65.7	27.6	D
SR 528 Off Ramp	On Ramp from Central Florida Pkwy	66.6	26.2	D	68.3	23.2	C
On Ramp from Central Florida Pkwy	On Ramp from EL at SR 528	67.2	25.1	C	68.4	23.0	C
On Ramp from EL at SR 528	On Ramp from SR 528	66.5	26.3	D	67.9	23.9	C
On Ramp from SR 528	SR 482 Off Ramp	55.6	41.7	E	58.4	37.7	E
SR 482 Off Ramp	On Ramp from SR 482	54.0	43.9	E	57.5	38.9	E
On Ramp from SR 482	Universal Blvd Off Ramp	64.8	28.9	D	66.2	26.8	D
I-4 Basic Freeway Westbound							
Universal-Adventure Way Off Ramp	SR 482 Off Ramp	66.2	26.8	D	59.6	36.1	E
SR 482 Off Ramp	On Ramp from Universal-Adventure Way	70.0	15.3	B	69.6	19.9	C
On Ramp from Universal-Adventure Way	On Ramp from SR 482	67.6	24.5	C	64.9	28.7	D
On Ramp from SR 482	Off Ramp to EL south of SR 482	69.3	20.8	C	68.1	23.6	C
Off Ramp to EL south of SR 482	SR 528 Off Ramp	67.2	25.1	C	64.6	29.1	D
SR 528 Off Ramp	Daryl Carter Pkwy - SR 535 Off Ramp	68.7	22.2	C	66.0	27.1	D
Daryl Carter Pkwy - SR 535 Off Ramp	Central Florida Pkwy Off Ramp	70.0	15.1	B	69.8	18.9	C
Central Florida Pkwy Off Ramp	On Ramp from SR 528	70.0	8.0	A	70.0	11.4	B
On Ramp from SR 528	On Ramp from Central Florida Pkwy	70.0	15.8	B	69.7	19.7	C
I-4 EL Eastbound							
On Ramp from CD south of SR 535	SR 528 Off Ramp	74.9	14.9	B	74.9	14.9	B
SR 528 Off Ramp	Off Ramp from I-4 at SR 528	75.0	9.0	A	75.0	9.5	A
Off Ramp from I-4 at SR 528	On Ramp from SR 528	75.0	5.0	A	75.0	5.4	A
On Ramp from SR 528	Grand National Dr Off Ramp	75.0	11.3	B	75.0	12.3	B
Grand National Dr Off Ramp	On Ramp from Grand National Dr	75.0	3.1	A	75.0	3.5	A
On Ramp from Grand National Dr	Study Terminus	75.0	11.3	B	75.0	12.6	B
I-4 EL Westbound							
Study Terminus	Grand National Dr Off Ramp	75.0	11.9	B	75.0	11.8	B
Grand National Dr Off Ramp	On Ramp from Grand National Dr	75.0	3.3	A	75.0	3.3	A
On Ramp from Grand National Dr	On Ramp to I-4 south of SR 482	75.0	11.6	B	75.0	11.5	B
On Ramp to I-4 south of SR 482	SR 528 Off Ramp	75.0	8.6	A	75.0	8.6	A
SR 528 Off Ramp	On Ramp from SR 528	75.0	8.8	A	75.0	9.3	A
On Ramp from SR 528	SR 536 Off Ramp to CD	75.0	14.1	B	74.7	15.5	B

Segments operating at LOS E or worse.

improvement in latent delay and latent demand between the Original Build and Modified Build alternatives with a reduction in total travel time and total delay time during the peak hours.

Intersection Operations

The results of the operational analyses, as shown in Table 6.10, indicates that the majority of study intersections (5 out of 9) within the project area are projected to operate at LOS E or worse during the AM and PM peak hours for the projected 2040 traffic volumes when utilizing the Synchro deterministic traffic analysis tool. Further evaluation of intersections using the VISSIM microscopic analysis reveals that four of the ten study intersections are projected to operate at LOS E or worse during one or both peak hours.

Table 6.10 – I-4 Segment 2 Intersection Operational Analysis

Synchro Analysis		2040 AM Peak Hour		2040 PM Peak Hour	
Primary Road	**Secondary Road**	**Delay (sec)**	**LOS**	**Delay (sec)**	**LOS**
SR 482 (Sand Lake Road)	Dr. Phillips Blvd	45.8	D	66.8	E
	Turkey Lake Rd	52.4	D	79.3	E
	WB Ramps	21.3	C	19.2	B
	EB Ramps	18.2	B	16.4	B
	International Dr	71.4	E	70.7	E
	Universal Blvd	166.1	F	68.3	E
Universal Boulevard	Hollywood Way	31.1	C	31.2	C
	EB Ramps	38.5	D	41.1	D
	International Dr	45.8	D	67.8	E
VISSIM Analysis		**2040 AM Peak Hour**		**2040 PM Peak Hour**	
Primary Road	**Secondary Road**	**Delay (sec)**	**LOS**	**Delay (sec)**	**LOS**
SR 482 (Sand Lake Road)	Turkey Lake Rd & New Proposed Ramp	10.20	B	12.79	B
	Dr. Phillips Blvd	36.79	D	125.76	F
	Turkey Lake Rd	39.52	D	64.21	E
	WB On Ramp	23.21	C	21.38	C
	EB Ramps	23.86	C	23.39	C
	International Dr	36.59	D	49.76	D
	Universal Blvd	89.46	F	58.75	E
Universal Boulevard	Hollywood Way	19.91	B	24.84	C
	EB Ramps	24.04	C	65.70	E
	International Dr	34.31	C	130.74	F

Intersections operating at LOS E or worse.

6.8 Bridge Analysis

An analysis of the existing bridge conditions and proposed improvements for each bridge structure was conducted as part of this PD&E study. There are five existing bridge structures along the I-4 Segment 2 mainline and one existing bridge structure along SR 528. As part of this study, each bridge was evaluated to determine if widening or replacement of the bridges is required or if the bridge may remain in place. Where practical, widening or retrofitting the existing structure is recommended. However, due to the proposed roadway geometrics and alignment, there are several structures which will require replacement. Based on the bridge analysis, eleven new bridge structures are recommended; the proposed improvements are summarized in Table 6.11. Vertical clearance requirements are based on minimum vertical clearance to the rail of a future high speed rail corridor. Coordination should occur in the design phase to ensure adequate clearance between highway sign panels and bridge deck structures along portions of the corridor where special typical sections with multi-level structures are proposed.

6.9 Utilities

Numerous utility companies have utilities located within the project corridor, as previously identified in Section 2.16 of this report. Utility impacts were carefully evaluated when considering the proposed roadway improvements and stormwater pond locations. The location of overhead utilities, existing power poles and access issues were also evaluated to minimize impacts. However, smaller utility lines and other buried utilities may involve relocation.

A *Utility Impact Report (April 2016)* has been prepared and submitted under separate cover. Table 6.12 provides a summary of potential utility impacts associated with the proposed improvements in the I-4 Segment 2 corridor for the recommended alternative. Exact locations of existing utilities will be determined in the final design of the proposed improvements. Coordination with the known utility companies during the final design phase will assist in minimizing relocation adjustments and disruptions of service to the public.

6.10 Lighting

Based on the lighting warrant criteria specified in AASHTO's Roadway Lighting Design Guide (October 2005) and as determined in the *SR 400 (I-4) Lighting Justification – West Section (US 27 to Kirkman Road) Memorandum (December 12, 2013)*, continuous freeway lighting is recommended along all of Segment 2.

Table 6.11 - Proposed Bridge Improvements

Facility	Bridge No.	Proposed Improvement	Proposed Bridge Length (ft.)	Proposed Bridge Width (ft.)	Proposed Minimum Vertical Clearance (ft.)	Depth of Structure (ft.)	Super-structure Type	No. Spans	Max Span Length (ft.)	Comments
SR 528 EB Over I-4	750180	Demolish	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bridge to be replaced to support proposed interchange system.
I-4 EB GUL Ramp to SR-528 EB	New Bridge	New Bridge	127.1	47	16.5	6	Prestressed Concrete Girders	1	127.1	
I-4 EB EL Ramp to SR-528 EB	New Bridge	New Bridge	1174.0	30	16.5	8	Steel Box Girder(s)	7	227.0	
I-4 WB EL Ramp to SR-528 EB	New Bridge	New Bridge	1212.9	30	16.5	8	Steel Box Girder(s)	8	207.0	
I-4 WB GUL Ramp to SR-528 EB	New Bridge	New Bridge	1309.1	43	16.5	7	Steel Box Girder(s)	8	165.0	
West Entrance Drive Over SR 528	754128	Remain	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SR 528 WB Over I-4	750087	Demolish	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bridge to be replaced to support proposed interchange system.
SR-528 WB Ramp to I-4 EB EL	New Bridge	New Bridge	474.8	30	16.5	8	Steel Box Girder(s)	3	180.0	
SR -528 WB Ramp to I-4 WB EL	New Bridge	New Bridge	730.5	30	16.5	8	Steel Box Girder(s)	5	213.0	
SR-528 WB Ramp to I-4 WB GUL	New Bridge	New Bridge	1874.0	51	16.5	8	Steel Box Girder(s)	9	208.0	
I-4 WB CD Elevated	New Bridge	New Bridge	2192.0	58	16.5	6	Concrete Box Girder	15	150.0	
I-4 WB Over SR 482 (Sand Lake Road)	750335	Demolish	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bridge to be replaced to support proposed interchange system.
I-4 EB Over SR 482 (Sand Lake Road)	750336	Demolish	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bridge to be replaced to support proposed interchange system.
I-4 Over SR-482 (Sand Lake Road)	New Bridge	New Bridge	186.0	256	16.5	5	Prestressed Concrete Girders	2	93.0	
I-4 WB off ramp to Turkey Lake Road	New Bridge	New Bridge	198.0	48	16.5	7	Steel I-Girders	1	198.0	
SR-482 (Sand Lake Road) WB Ramp to I-4 WB	New Bridge	New Bridge	98.0	31	16.5	5	Prestressed Concrete Girders	1	98.0	

Table 6.12 - Proposed Utility Impacts

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Station	End Station	Relocation Required
Communication	ATT	Underground Fiber Optic	From intersection of Sand Lake Rd & I-4 eastbound ramp to Sand Lake Rd east to intersection of International Dr. & Sand Lake Rd	South side of road	67+23	84+88	Yes, adjust to run parallel to road
Communication	Comcast	Aerial Fiber Optic	Crossing at intersection of Turkey Lake Rd. & Sand Lake Rd.	West side of intersection	57+61	57+61	Yes, relocation of poles required
Communication	Comcast	Aerial Fiber Optic	From Central Florida Parkway to Sand Lake Rd on Turkey Lake Rd	East side of Road	1345+48	1480+00	Yes, adjust to run parallel to proposed road
Communication	Comcast	Underground Fiber Optic	Crossing of I-4 Corridor at Sand Lake Rd, I-4 Corridor underpass	West side of underpass	66+79	73+59	Yes, adjust for bridge improvements
Communication	Comcast	Underground Fiber Optic	Crossing of Sand Lake Rd 750-ft west of intersection of International Dr. & Sand Lake Rd	N/A	73+59	73+61	Yes, extend across proposed Sand Lake Rd.
Communication	Level 3 Communication	Aerial Fiber Optic	Crossing of Sand Lake Rd. 670-ft west of intersection of International Dr. & Sand Lake Rd.	N/A	74+36	74+42	Yes, extend across proposed Sand Lake Rd.
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From intersection of Turkey Lake Rd. & Sand Lake Rd. to 500-ft west of intersection of International Dr. & Sand Lake Rd. on Sand Lake Rd.	North side of road	59+27	75+98	Yes, adjust for bridge improvements
Communication	Level 3 Communication	3-1.25" Underground Fiber Optic	From 500-ft west of intersection of International Dr. & Sand Lake Rd. to intersection of Universal Blvd & Sand Lake Rd. on Sand Lake Rd.	South side of road	81+45	96+82	Yes, adjust to run parallel to road
Television	BrightHouse Networks	Underground CATV	Crossing of I-4 Corridor at Sand Lake Rd underpass	South side of underpass	64+14	74+54	Yes, adjust to accommodate ramp and bridge improvements
Television	BrightHouse Networks	Underground CATV	Crossing at Sand Lake Rd, I-4 Corridor underpass	South side of underpass	64+14	76+88	Yes, adjust for bridge improvements
Television	BrightHouse Networks	Underground CATV	From station 1353+00 on the I-4 Corridor to station 1387+50 on the I-4 Corridor	West side of road	1353+00	1387+50	Yes, adjust to run parallel to road
Television	BrightHouse Networks	Aerial CATV	Crossing of Sand Lake Rd 650-ft west of intersection of International Dr. & Sand Lake Rd	N/A	74+40	74+45	Yes, relocation of poles required
Television	BrightHouse Networks	Aerial CATV	From 420-ft west of intersection of International Dr. & Sand Lake Rd east to 560-ft west of intersection of Universal Blvd & Sand Lake Rd	South side of road	76+99	97+98	Yes, adjust to run parallel to road

Table 6.12 - Proposed Utility Impacts

Type of Utility	Utility Owner	Type of Facility	Limits	Offset / Side	Begin Station	End Station	Relocation Required
Electricity	Duke Energy Distribution	13 KV Underground Electric	Two lines running from 1000-ft east of to 1750-ft east of International Dr., SR 528 underpass	South side of road, following ramp	244+21	254+96	Yes, adjust to run parallel to ramp
Electricity	Duke Energy Distribution	13 KV Underground Electric	From station 1339+00 on I-4 Corridor east to 1970-ft feet west of Sand Lake Rd, I-4 Corridor underpass	West side of road	1339+00	1459+01	Yes, adjust to run parallel to road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From 2120-ft west of to Sand Lake Rd & I-4 Corridor underpass on I-4 Corridor	East side of road	1459+07	1478+63	Yes, adjust to run parallel to road
Electricity	Duke Energy Distribution	13 KV Underground Electric	From Sand Lake Rd, I-4 Corridor underpass east on I-4 for 3290-ft	East side of road	1482+84	1513+85	Yes, adjust to run parallel to road
Electricity	Duke Energy Distribution	13 KV Underground Electric	Crossing at intersection of Sand Lake Rd & I-4 westbound to Sand Lake Rd	Diagonally across intersection	1481+17	1479+64	Yes, extend across proposed Sand Lake Rd.
Wastewater/ Storm water	Orange County Utilities	42" Force Main	Crossing 3000-ft north of SR 528, I-4 Overpass on I-4 Corridor	N/A	1403+45	1404+30	Yes, extend across proposed I-4 and provide steel casing
Wastewater/ Storm water	Orange County Utilities	16" Force Main	Crossing 175-ft east of intersection of I-4 west bound ramp to Sand Lake Rd.	East of intersection	64+67	64+78	Yes, extend across proposed Sand Lake Rd.
Wastewater/ Storm water	Orange County Utilities	Varying Size Force Main	From 330-ft west of intersection of Dr. Phillips Blvd & Sand Lake Rd to 380-ft west of intersection of Turkey Lake Rd. & Sand Lake Rd.	North side of road	22+61	54+71	Yes, Relocation from center of road from Turkey Lake Road to International Drive
Water	Orange County Utilities	12" Water Main	From 2700-ft south to 2100-ft south of SR 528, I-4 Overpass on I-4 Corridor	West side of road	1347+79	1353+15	Yes, adjust to run parallel to road

6.11 Access Management

Access management is the practice of controlling vehicular access to a roadway in order to increase roadway efficiency and improve travel safety by reducing the number of traffic conflicts encountered by roadway users. The State Highway System Access Management Act (F.S. 335.18) mandates the implementation of access management standards based on the Access Management Classification System developed in Administrative Rule 14-97. I-4 has been identified as Access Management Class 1 under this system.

Property access impacts were evaluated to determine whether access can be maintained in interchange areas via the local roadway network. Meetings were conducted with some property owners regarding property access.

Sand Lake Road is currently a Class 5 Access Management roadway between Turkey Lake Road (MP 0.000 and Universal Boulevard (MP 0.665). It is a major arterial that has many businesses and driveways along the study area between Turkey Lake Road and International Drive. The recommended alternative for Sand Lake Road maintains the existing driveways along Sand Lake Road within the right-of-way. The spacing between Turkey Lake Road and the I-4 Westbound off ramp has increased from 445 feet to 850 feet. This should provide more vehicle stacking where needed. The spacing of the signalized intersections for the I-4 ramps have decreased from 830 feet to 520 feet and the distance between the I-4 Eastbound ramps and International Drive have remained the same.

6.12 Conceptual Signing Plan

A conceptual signing plan for the recommended alternatives was developed for the I-4 BtU improvements. A critical aspect in development of the signing concepts is distinguishing between the general use and special use (express) lanes. This is achieved by employing the designated sign panel colors to distinguish between the two lane facility types. The conceptual signing plan includes static and dynamic message signs (DMS) which show entry/exit access points between the general use and express lanes, as well as vehicle eligibility restrictions and toll pricing amounts. The conceptual signing plan for I-4 Segment 2 is provided in Appendix C.

6.13 Production Schedule

The PD&E re-evaluation for Segment 2 is scheduled to be completed Summer of 2017. The preliminary design began in April 2015. The segment is projected to be procured as a Design-Bid-Build contract with right-of-way funded for 2022 and funded for construction in 2025.

6.14 Project Cost Estimates

The estimated cost of construction including Maintenance of Traffic (MOT) and contingency (5%) is $244.4 Million. Estimated Construction Engineering and Inspection (CEI) and Engineering Design costs are both expected to be an additional 8% each of the total construction cost. The complete Long Range Estimates (LRE) for Segment 2 are included in Appendix D. The total estimated cost for Segment 2 is $283.5 Million; Table 6.13 shows the breakdown of estimated project costs for I-4 Segment 2.

Table 6.13 - Estimated Project Costs for I-4 Segment 2

Item	Cost
LRE	$192,271,567
MOT (10%)	$19,227,157
Mobilization (10%)	$21,149,872
Project Unknowns (5%)	$11,632,430
Project Non-Bid Subtotal	$150,000
Construction Subtotal	**$244,431,025**
Design (8%)	$19,554,482
CEI (8%)	$19,554,482
Total	**$283,539,990**

7.0 Supplemental Technical Reports

A series of supporting documents including Technical Reports and Memorandums were prepared as part of the PD&E study for this project. Information from these reports was used to evaluate and develop the alternatives and design recommendations in this PER. These documents are listed here for reference.

1. *Air Quality Analysis Technical Memorandum Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [July 2016]

2. *Concept of Operations* - SR 400 (I-4) from West of SR 25/US 27 to East of SR 472 [June 2016]

3. *Conceptual Stage Relocation Plan* - Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) [January 2016]

4. *Contamination Screening Evaluation Report Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [July 2016]

5. *Endangered Species Biological Assessment Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road* [July 2016]

6. E*valuation and Assessment of the I-4 Ultimate and Beyond the Ultimate 2002 FEIS and RODs (2002 and 2005) [May 2017]*

7. *I-4 Beyond the Ultimate Systems Access Modification Report (SAMR) Re-Evaluation: I-4 Beyond the Ultimate Project South Section – from West of US 27 to West of SR 435 (Kirkman Road)* [March 2017]

8. *Interstate 4 from West of State Road 528 (Beachline) to West of State Road 435 (Kirkman Road) Value Engineering Study Recommendation Dispositions* [May 2015]

9. *Level 2 Contamination Impact Assessment Report:* - SR 400 (I-4) Project Development and Environment (PD&E) Study Segment 2 Ponds 205B, 205C, 205D, 206, 206A, and 206B (March 2015)

10. *Location Hydraulic Report Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [August 2016]

11. *Noise Study Report Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [July 2016]

12. *Orange County Sand Skink Memo* [September 2014]

13. *Pavement Type Selection Report* - Segment 2: SR 528 (Beachline Expressway) to SR 435 (Kirkman Road) [April 2014]

14. *Pond Siting Report Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [August 2016]

15. *Report of Preliminary Geotechnical Engineering Investigation for Ponds Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [December 2015]

16. *SR 400 (I-4) Lighting Justification Memorandum* – West Section (US 27 to Kirkman Road) [December 2013]

17. *Technical Memorandum: Cultural Resource Assessment Survey of Proposed Improvements to Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road* [December 2015]

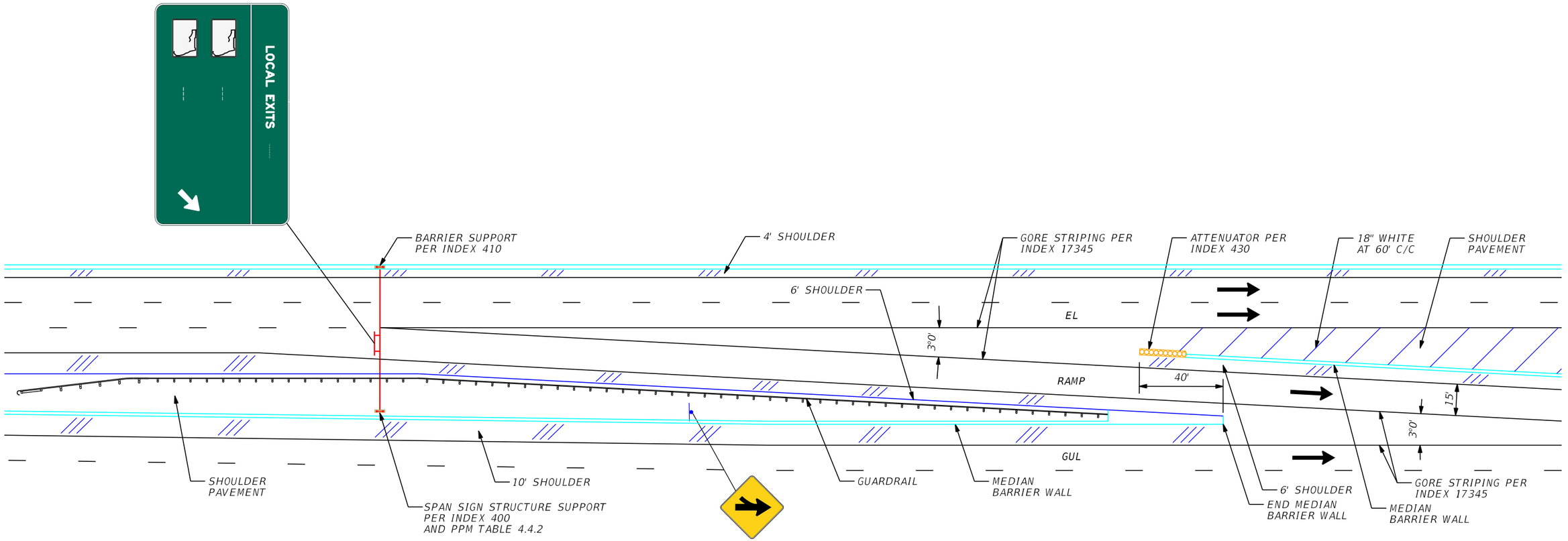
18. *Technical Memorandum: Evaluation of the Proposed Ultimate S.R. 528 (Beachline Expressway) and I-4 Interchange Configurations – Alternatives 5, 6 and* 7 [November 2014]

19. *Utility Impact Report Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [April 2016]

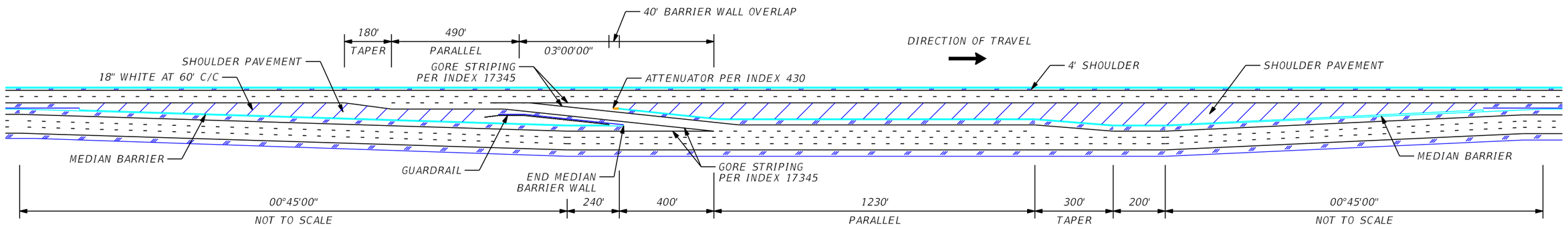
20. *Wetland Evaluation Report (WER) Segment 2: State Road 400 (SR 400)/Interstate 4 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road)* [July 2016]

Appendix A - **Concept Plans**

MODEL:
SHEET SIZE: nts
PLOT SCALE: 16.5x10.6 (in.) 1:400.008



SLIP RAMP DETAIL EGRESS FROM EXPRESS LANES



SLIP RAMP DETAIL EGRESS FROM EXPRESS LANES

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_GrayExistIng.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

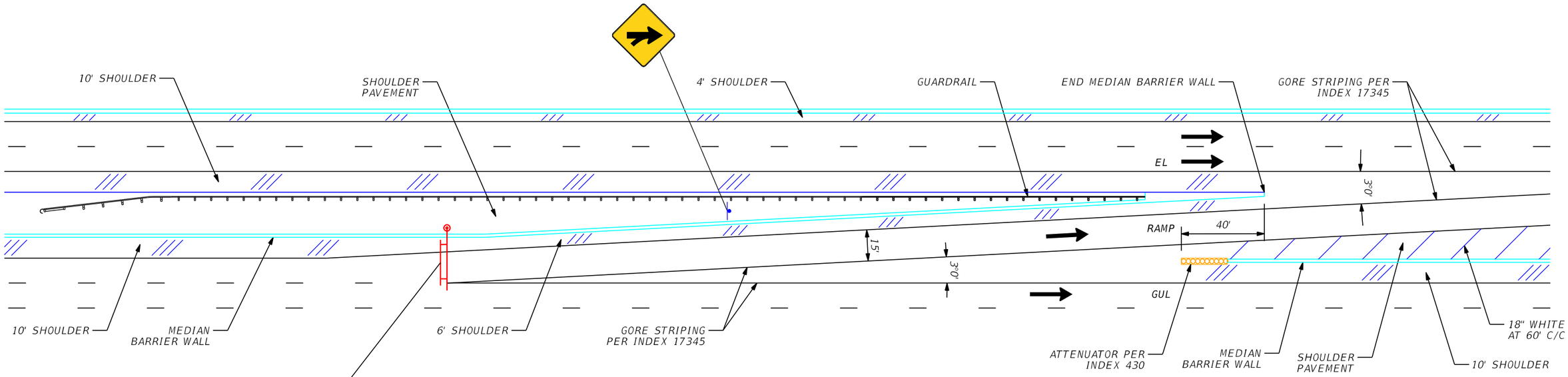
I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 1

A-1

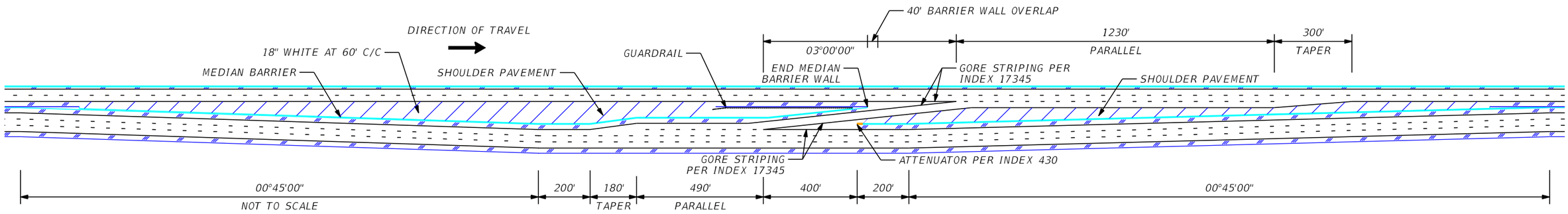
mbacal 11/1/2016 10:29:49 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\SlipRampDetail.DGN

MODEL:
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:400.008 nts



SLIP RAMP DETAIL INGRESS TO EXPRESS LANES





SLIP RAMP DETAIL INGRESS TO EXPRESS LANES

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_GrayExistIng.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

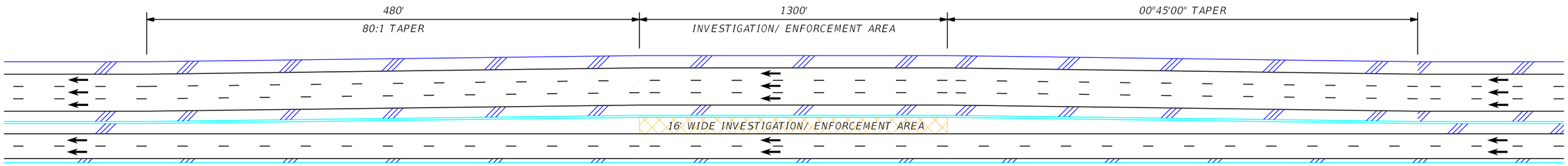
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

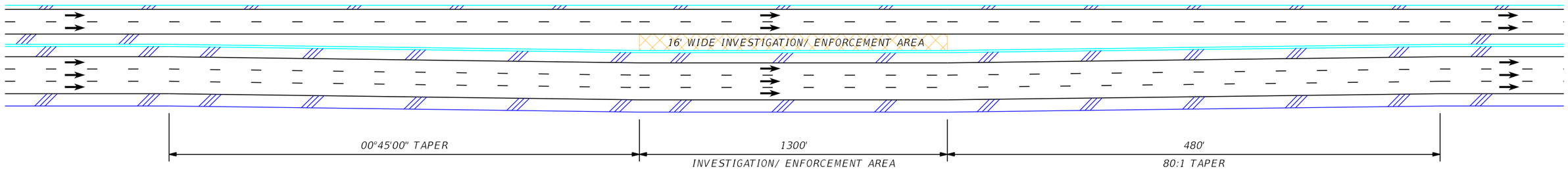
I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 2

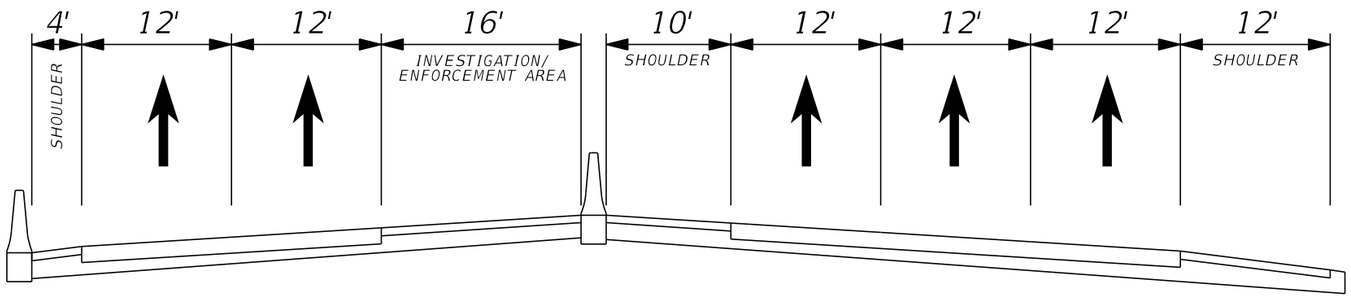
mbacal 11/1/2016 10:29:50 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\SlipRampDetail.DGN



WESTBOUND INVESTIGATION/ ENFORCEMENT AREA DETAILS



EASTBOUND INVESTIGATION/ ENFORCEMENT AREA DETAILS



INVESTIGATION/ ENFORCEMENT AREA TYPICAL SECTION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

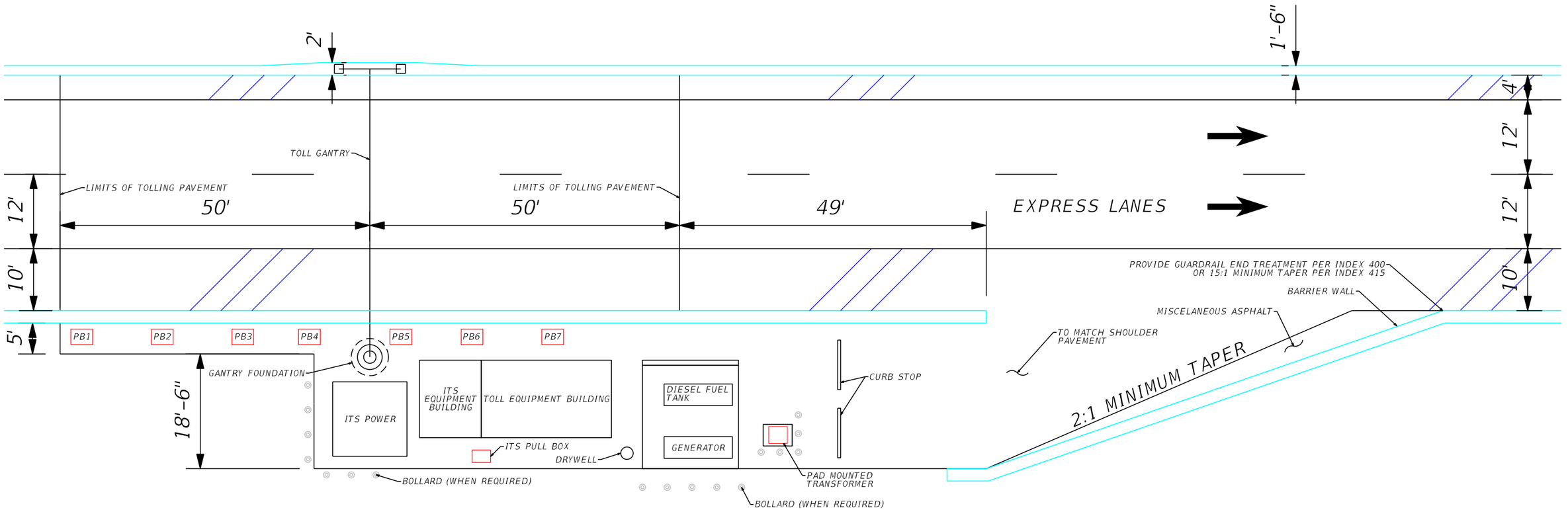
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 3

mts
16.5x10.6 (in.)
1:200.004
MODEL:
SHEET SIZE:
PLOT SCALE:
PRINT DRIVER:
PEN TABLE:
Color_FDOTPDF.dtcfg
FDOT_GrayExtdImg.tbl
mbacal 11/1/2016 10:29:50 AM
\\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122201\Segment 2\roadway\SlipRampDetail.DGN

MODEL:
SHEET SIZE: mts
PLOT SCALE: 16.5x10.6 (in.) 1:200.004



TYPICAL TOLL EQUIPMENT SITE BETWEEN ROADWAYS

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

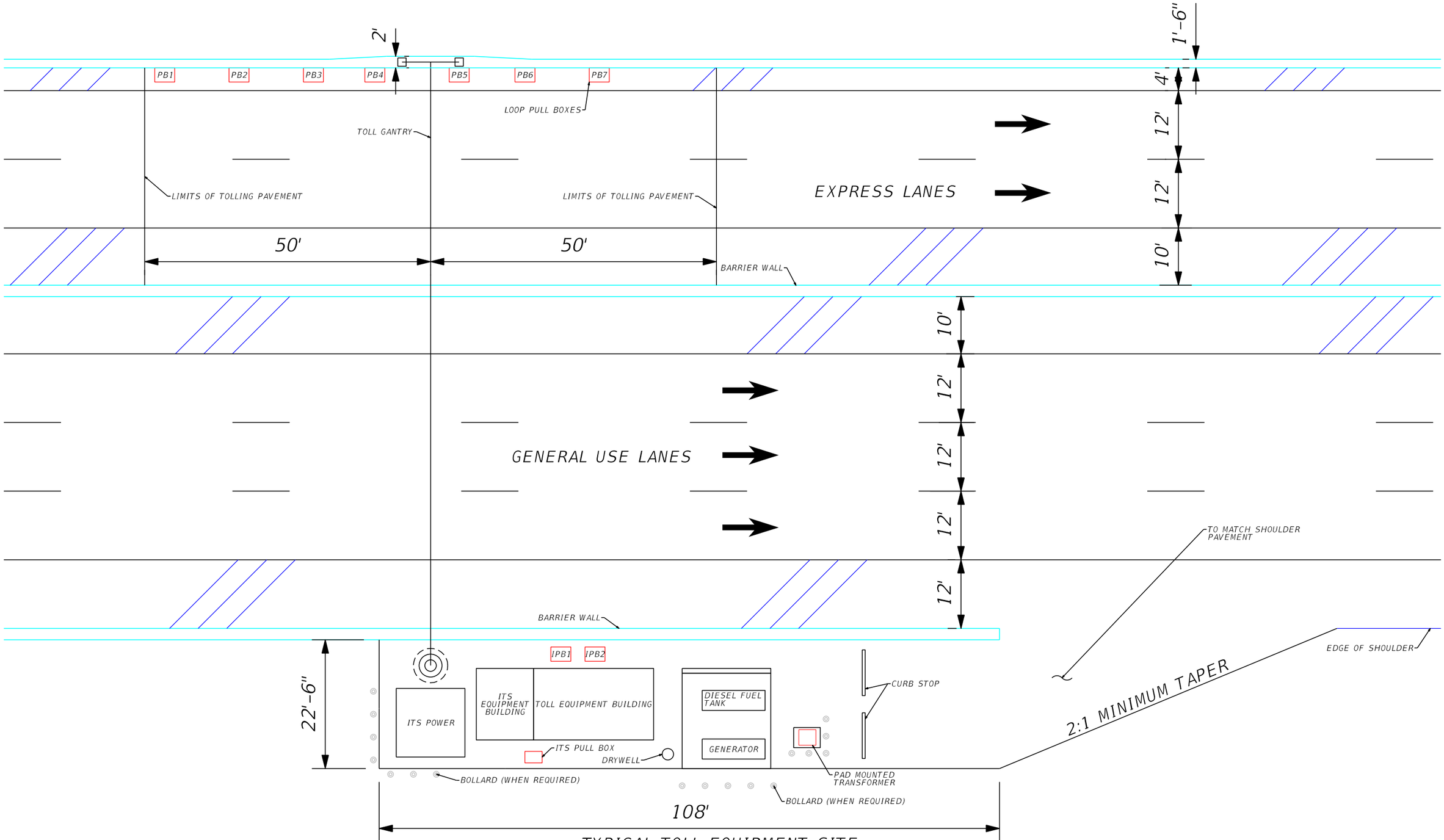
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 4

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_GrayExisting.tbl
mbacal 11/1/2016 10:29:51 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\SlipRampDetail.DGN

MODEL:
SHEET SIZE: mts
PLOT SCALE: 16.5x10.6 (in.) 1:200.004



TYPICAL TOLL EQUIPMENT SITE
ON OUTSIDE OF ROADWAY
(EXTENDED GANTRY)

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_GrayExistImg.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

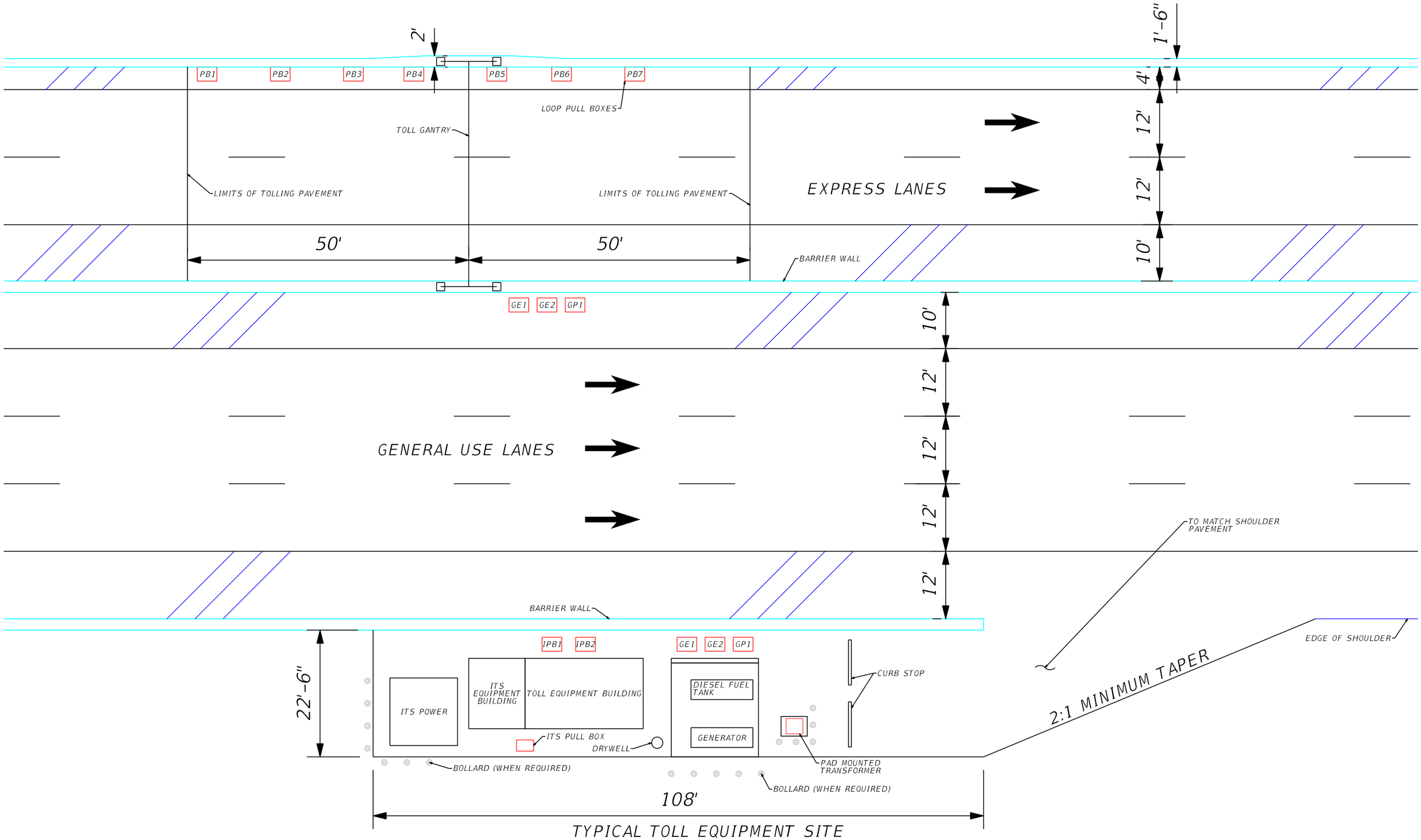
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 5

mbacal 11/1/2016 10:29:51 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\SlipRampDetail.DGN

MODEL:
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200.004
nts



TYPICAL TOLL EQUIPMENT SITE ON OUTSIDE OF ROADWAY (ISOLATED GANTRY)

PRINT DRIVER:
PEN TABLE:
Color_FDOTPDF.pltcfg
FDOT_GrayExistingLW.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

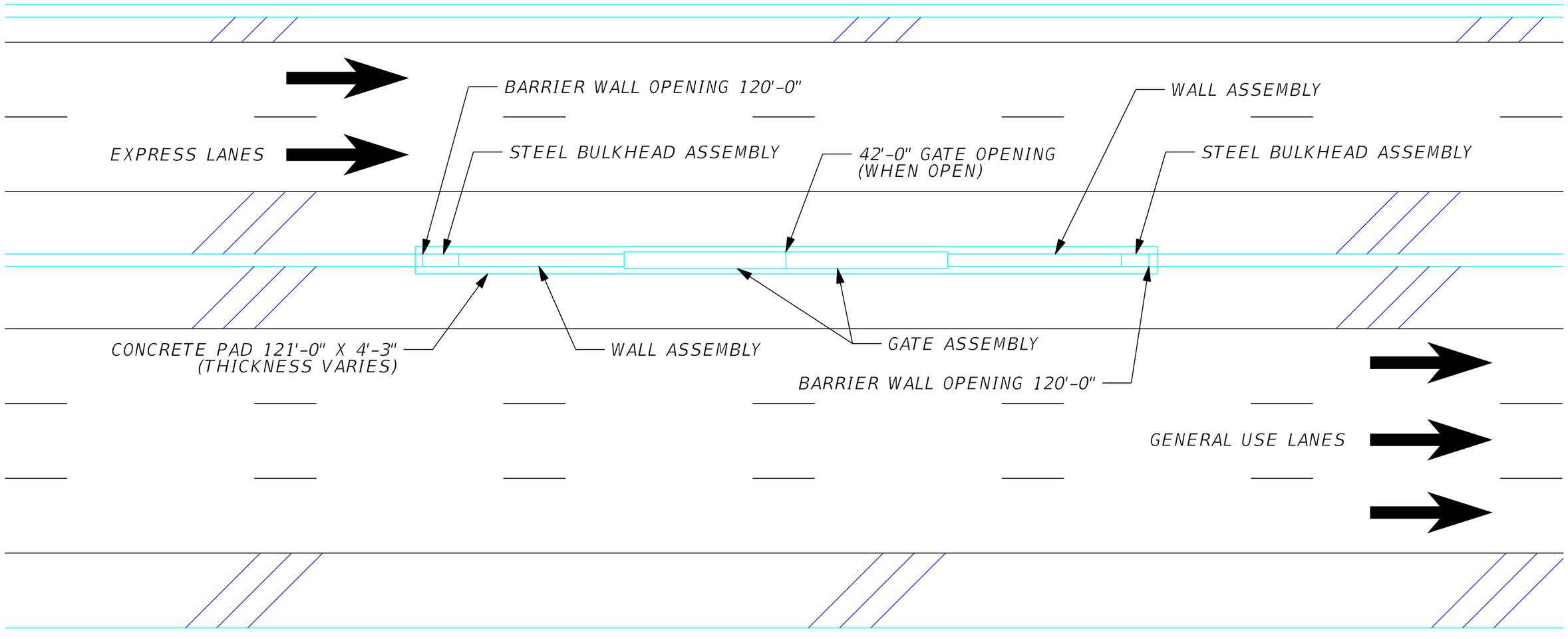
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 6

mbacal 11/1/2016 10:29:52 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\SlipRampDetail.DGN

MODEL:
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200.004 nts



TYPICAL EMERGENCY ACCESS GATE DETAILS

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SEGMENT 2

SHEET NO. 7

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_GrayExistIng.tbl

mbacal 11/1/2016 10:29:52 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\SlipRampDetail.DGN

100 YEAR FLOODPLAIN
PROPOSED FDOT R/W LINE
100 YEAR FLOODPLAIN
POND 200A (ALTERNATE)
POND 200B (RECOMMENDED)
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 278,582 SF
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 26,643 SF
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 262,516 SF
100 YEAR FLOODPLAIN
PARCEL ID: 11-24-28-7878-01-000
AREA TAKING: 10,740 SF
PROPOSED FDOT R/W LINE
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 61,567 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 38,027 SF
PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 458 SF
TURKEY LAKE POND
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
POND 201 (RECOMMENDED)
WL-1(W)
80
41
50
49
47
48
POST OFFICE
TUKEY LAKE ROAD POND
PROPOSED FDOT LA R/W LINE
PARCEL ID: TURKEY LAKE ROAD
AREA TAKING: 182,234 SF
PARCEL ID: 11-24-28-0000-00-022
AREA TAKING: 215 SF
I-4 WB CD SYSTEM
I-4 WB TO CENTRAL FL
SR 528 WB TO I-4 WB GUL
SW-2(W)
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB GUL
I-4 WB EXPRESS LANE
SW-1(W)
1340
1345
1350
1355
1360
1365
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
SW-2(E)
I-4 EB GUL
POND 202A (RECOMMENDED)
I-4 EB GUL TO SR 528 EB
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SANDLAKE VILLAGE
SAND LAKE TOWN HOMES
0 50 200
Feet
MATCHLINE STA. 1369+00.00
BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE EXISTING CONDITIONS
42B
BEGIN 22' CONCRETE NOISE WALL
STA. 1345+90.48
ORANGE COUNTY SHERIFF COMMUNITY CENTER
43
MONTEREY LAKE APARTMENTS
44
WESTWOOD CENTER
SW-1(E)
℄ EXIST I-4
END 22' CONCRETE NOISE WALL
STA. 1351+27.89
45
MANUFACTURERS LIFE INSURANCE CO.
MARRIOTT VACATION CLUB
46
SW-1(E)
(SR 528 ALT 6 SHOWN)

PRINT DRIVER: C:\dot_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-sklow.tbl

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **8**

mbacal 11/1/2016 10:30:13 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd201-PREFERRED.dgn

MODEL: planrd02
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1369+00.00

MATCHLINE STA. 1399+00.00

SAND LAKE TOWN HOMES

100 YEAR FLOODPLAIN

EXISTING LA R/W LINE

WL-2(W)

BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20

100 YEAR FLOODPLAIN

WESTGATE LAKES
RESORT AND SPA

TURKEY LAKE RD

POND 201
(RECOMMENDED)

I-4 WB CD SYSTEM

I-4 WB GUL SR 528 EB

PARKWAY

I-4 WB GUL

SW-2(W)

1370 1375 1380 1385 1390 1395

℄ EXIST SR 528

I-4 WB EXPRESS LANE

I-4 EB EXPRESS LANE

SW-5(E)

SW-6(E)

I-4 EB GUL

CENTRAL FLORIDA PARKWAY TO I-4 EB GUL

SW-3(E)

SW-2(E)

POND 202A
(RECOMMENDED)

I-4 EB EXPRESS LANE TO SR 528 EB

I-4 WB EXPRESS LANE SR 528 EB

SR 528 WB TO I-4 WB EXPRESS

SR 528 WB TO I-4 WB GUL

SR 528 WB TO I-4 EB EXPRESS LANE

SR 528 WB TO I-4 EB GUL

POND 202D
(RECOMMENDED)

POND 202B
(RECOMMENDED)

POND 202C
(RECOMMENDED)

I-4 EB GUL TO SR 528 EB

195

℄ EXIST I-4

SW-7(E)

52

53

EXHIBIT DR

EXISTING LA R/W LINE

ORANGE COUNTY
CONVENTION CENTER

(SR 528 ALT 6 SHOWN)

MATCHLINE STA. 197+50.00

N

0 50 200
Feet

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 9

A-9

Color_FDOTPDF.pltcfg
FDOT_text-cglow.tbl
PRINT DRIVER:
PEN TABLE:

mbacal 11/1/2016 10:30:16 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122001\Segment 2\roadway\planrd201-PREFERRED.dgn

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

PARCEL ID: 02-24-28-0000-00-009
AREA TAKING: 237,294 SF
PROPOSED FDOT R/W LINE

BOO BOO LAKE
PARCEL ID: 02-24-28-0000-00-005
AREA TAKING: 123,81 SF

PROPOSED FDOT R/W LINE

100-YEAR FLOODPLAIN

PARCEL ID: 02-24-28-0000-00-005
AREA TAKING: 213,954 SF

PARCEL ID: 02-24-28-0000-00-005
AREA TAKING: 535,275 SF

0 50 200
Feet

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUEST DIAGNOSTIC

QUALITY SUITES

WESTGATE LAKES

POND 205A (ALTERNATE)

POND 205C (RECOMMENDED)

SPRINGVIEW TERRACE

RESORT CLUB

ALEA

81

82

EXISTING LA R/W LINE

TURKEY LAKE RD

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

SW-8(E)

EXISTING LA R/W LINE

℄ EXIST I-4

ROSEN INN

ROSEN PLAZA

AIR FLORIDA HELICOPTER CHARTERS

INTERNATIONAL DR

53 54 55 56 57

EXISTING LA R/W		GENERAL USE LANES	
PROPOSED LA R/W		EXPRESS LANES	
PROPOSED FDOT R/W		EXISTING BRIDGE	
EXISTING R/W		PROPOSED BRIDGE	
PARCEL LINES		RAIL CORRIDOR (AERIAL)	
BARRIER WALL		FUTURE EXISTING CONDITION	

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **10**

Color_FDOTPDF.pltcfg
FDOT_text-qkow.tbl
PRINT DRIVER:
PEN TABLE:

mbacal 11/1/2016 10:30:19 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-PREFERRED.dgn

PARCEL ID: 35-23-28-0000-00-033
AREA TAKING: 17,757 SF
PARCEL ID: 35-23-28-0000-00-027
AREA TAKING: 13,449 SF
PARCEL ID: 35-23-28-0000-00-031
AREA TAKING: 13,171 SF
PARCEL ID: 35-23-28-0000-00-028
AREA TAKING: 13,929 SF
BIG SAND LAKE
WL-4(W)
PARCEL ID: 35-23-28-0000-00-039
AREA TAKING: 18,907 SF
PARCEL ID: 35-23-28-0000-00-038
AREA TAKING: 30,943 SF
PROPOSED FDOT R/W LINE
PARCEL ID: 35-23-28-0000-00-025
AREA TAKING: 17,163 SF
PARCEL ID: 35-23-28-0000-00-041
AREA TAKING: 25,305 SF
PARCEL ID: 35-23-28-0000-00-037
AREA TAKING: 34,342 SF
WALMART
TURKEY LAKE ROAD POND
POND 205D (RECOMMENDED)
PHILLIPS VILLAGE
N
0 50 200
Feet
PARCEL ID: 35-23-28-0000-00-029
AREA TAKING: 20,656 SF
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
SW-3(W)
TURKEY LAKE RD
I-4 WB GUL
I-4 WB EXPRESS LANES
I-4 EB EXPRESS LANES
I-4 EB GUL
1430 1435 1440 1445 1450 1455
MATCHLINE STA. 1429+00.00
MATCHLINE STA. 1459+00.00
SW-9(E)
EXISTING 42" RCP
℄ EXIST I-4
SW-10(E)
EXISTING LA R/W LINE
SW-11(E)
DAVE AND BUSTERS
OLIVE GARDEN
EMBASSY SUITES
AVANTI RESORT
COURTYARD BY MARRIOTT
YMCA
GREAT WESTERN AQUATIC PLAZA
INTERNATIONAL DR
FRIENDLYS
57 58 59 60 61 62 63 64 65 66 67 68 69 83 84 85 86

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500
ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 11

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl
PRINT DRIVER:
PEN TABLE:
mbacal 11/1/2016 10:30:23 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-PREFERRED.dgn

planrd05
16.5x10.6 (in.)
1:200
MODEL:
SHEET SIZE:
PLOT SCALE:

MATCHLINE STA. 1459+00.00

MATCHLINE STA. 1489+00.00

100 YEAR FLOODPLAIN
LAKE MARIE
PARCEL ID: 35-23-28-0000-00-053
AREA TAKING: 3,598 SF
PARCEL ID: 35-23-28-7825-00-010
AREA TAKING: 185 SF
PARCEL ID: 35-23-28-7825-00-011
AREA TAKING: 1,324 SF
PARCEL ID: 35-23-28-0000-00-061
AREA TAKING: 67,540 SF
PHILLIPS VILLAGE
EXISTING LA R/W LINE
PARCEL ID: 35-23-28-7825-00-012
AREA TAKING: 3,072 SF
TURKEY LAKE RD
TURKEY LAKE POND
TURKEY LAKE POND
EXIST. R/W LINE
PARCEL ID: 35-23-28-7113-01-000
AREA TAKING: 1,848 SF
PROPOSED LA R/W LINE
PHILLIPS CROSSING
WHOLE FOODS
PARCEL ID: 35-23-28-7113-01-000
AREA TAKING: 170 SF
℄ EXIST SAND LAKE RD
SAND LAKE ROAD
TO I-4 WB GUL
SW-4(W)
POND 206A
(RECOMMENDED)
POND 206
(RECOMMENDED)
POND 206B
(RECOMMENDED)
7-ELEVEN
DRURY HOTEL
SAND LAKE ROAD WB
TO TURKEY LAKE ROAD SB
N
0 50 200
Feet
I-4 WB GUL TO
SAND LAKE ROAD
I-4 WB GUL TO
TURKEY LAKE ROAD SB
I-4 WB GUL
I-4 WB EXPRESS LANES
I-4 EB EXPRESS LANES
I-4 EB GUL
1460
1465
1470
1475
1480
1485
SW-12(E)
EXISTING 36" RCP
℄ EXIST I-4
EXISTING LA R/W LINE
SW-13(E)
I-4 EB GUL TO
SAND LAKE ROAD
SW-14(E)
SW-15(E)
SW-16(E)
ROSEN
MEDICAL
CENTER
SAND LAKE ROAD
TO I-4 EB GUL
RADISSON
LAQUINTA INN
EMBASSY SUITES
COMFORT INN
FRONTAGE ROAD
I-5
JAMAICAN CT
STRIP CENTER
INTERNATIONAL DR
FOGO DE CHAO
BEST WESTERN
FRIDAYS SPORTS GRILL
& BARGAIN WORLD
GOLDEN CORRAL
BP GASS
STATION
SHELL/CIRCLE K
QUALITY INN
WALGREENS
EXIST. R/W LINE
MCDONALDS
(SAND LAKE ROAD ALT 4 SHOWN)
CHECKERS
69
70
71
72
73
74
75
76
89
90
95
96
97
100

EXISTING LA R/W
PROPOSED LA R/W
PROPOSED FDOT R/W
EXISTING R/W
PARCEL LINES
BARRIER WALL
GENERAL USE LANES
EXPRESS LANES
EXISTING BRIDGE
PROPOSED BRIDGE
RAIL CORRIDOR (AERIAL)
FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500
ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 12

Color_FDOTPDF.pltcfg
FDOT_text-gBlw.tbl
PRINT DRIVER:
PEN TABLE:
mbacal 11/1/2016 10:30:27 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-PREFERRED.dgn

BAY HILL PLAZA
KMART
EDWIN WATTS
UNIVERSAL CITY DEVELOPMENT PARTNERS
LOEWS HOTEL SERVICES
TURKEY LAKE ROAD
EXISTING LA R/W LINE
ADVENTURE WAY TO I-4 WB GUL
UNIVERSAL CITY DEVELOPMENT PARTNERS
EXIST. LA R/W LINE
POND 207 (RECOMMENDED)
1490
1495
1500
1505
1510
1515
I-4 WB GUL
I-4 WB EXPRESS LANES
I-4 EB EXPRESS LANES
I-4 EB GUL
℄ EXIST I-4
EXISTING 30" RCP
HOLIDAY INN EXPRESS
ECONOLODGE HOTEL
EDWIN WATTS GOLF
EXISTING LA R/W LINE
HOWARD JOHNSONS
INTERNATIONAL PALMS RESORT
MATCHLINE STA. 1519+00.00
MATCHLINE STA. 1489+00.00
HAMPTON INN & SUITES
COCO KEY RESORT HOTEL
QUALITY INN
TIKI ISLAND ADVENTURE GOLF
TRAVELOG
PIZZA HUT
BUFFALO WILD WINGS
INTERNATIONAL DR
76
77
78
79
N
0 50 200
Feet

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 13

mbacal 11/1/2016 10:30:31 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-PREFERRED.dgn

MODEL: planrd07
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1519+00.00

MATCHLINE STA. 1549+00.00

UNIVERSAL CITY DEVELOPMENT PARTNERS

℄ EXIST ADVENTURE WAY

EXIST. R/W LINE

UNIVERSAL CITY DEVELOPMENT PARTNERS

100 YEAR FLOODPLAIN

100 YEAR FLOODPLAIN

ROYAL PACIFIC RESORT

0 50 200
Feet

EXIST. R/W LINE

END SEGMENT 2 EB GUL
FPID 432100-1-22-1
BEGIN I-4 ULTIMATE EB GUL
FPID 242484-3-52-01
STA. 1523+00.00

120

POND 208
(RECOMMENDED)

END SEGMENT 2 WB EXPRESS LANES
FPID 432100-1-22-1
BEGIN I-4 ULTIMATE WB EXPRESS LANES
FPID 242484-3-52-01
STA. 1531+34.03

EXISTING LA R/W LINE

KIRKMAN_SB_RAMP_TO_I-4_WB_GUL

1520 1525 I-4 WB GUL 1530 1535 1540 1545

I-4 WB EXPRESS LANES

℄ EXIST I-4

I-4 EB EXPRESS LANES

I-4 EB GUL

EXISTING LA R/W LINE

I-4 EB GUL TO UNIVERSAL BLVD

GEORGE'S MUSIC

VISITORS CIRCLE

℄ EXIST UNIVERSAL BLVD

INTERNATIONAL PALMS RESORT

ROSEN INN

THE METROPOLITAN EXPRESS

UNIVERSAL SHOPS

ORLANDO CONTINENTAL PLAZA HOTEL

MONUMENTAL HOTEL

SKY VENTURE
SW-18(E)

GIFT SHOPS

KFC

WALGREENS

INTERNATIONAL DR

45

40

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **14**

mbacal 11/1/2016 10:30:41 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-PREFERRED.dgn

MODEL: planrd08
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1549+00.00

100 YEAR FLOOD PLAIN
℄ EXIST UNIVERSAL BLVD
100 YEAR FLOOD PLAIN
EXIST. R/W LINE
100 YEAR FLOODPLAIN
LA R/W LINE PENDING FINAL AGREEMENT
END SEGMENT 2 EB EXPRESS LANES
FPID 432100-1-22-1
BEGIN I-4 ULTIMATE EB EXPRESS LANES
FPID 242484-3-52-01
STA. 1550+23.13
60
55
50
N
0 50 200
Feet
UNIVERSAL STUDIOS
EXISTING LA R/W LINE
KIRKMAN SB RAMP TO I-4 WB GUL
POND F33
BY OTHERS
1550
1555
I-4 WB GUL
1560
1565
1570
1575
I-4 WB
I-4 WB EXPRESS LANES
℄ EXIST I-4
I-4 EB EXPRESS LANES
I-4 EB GUL
KIRKMAN SB
I-4 WB RAMP TO KIRKMAN SB
85
KIRKMAN NB
℄ EXIST KIRKMAN RD
END SEGMENT 2 WB GUL
FPID 432100-1-22-1
BEGIN I-4 ULTIMATE WB GUL
FPID 242484-3-52-01
STA. 1572+69.84 R 3
POND F34
BY OTHERS
UNIVERSAL BLVD TO I-4 EB GUL
EXISTING LA R/W LINE
POND F32
BY OTHERS
I-4 EB RAMP TO KIRKMAN NB
80
I-4 EB
HOMEWOOD SUITES
BY HILTON
MOTEL 6
75
KIRKMAN NB RAMP TO I-4 EB
GRAND NATIONAL DRIVE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl
PRINT DRIVER:
PEN TABLE:

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 MAINLINE
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 15

mbacal 11/1/2016 10:30:46 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\plandr201-PREFERRED.dgn

MODEL: plan-528-300
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:300

AREA TAKING: 262,516 SF
POND 200A (ALTERNATE)
100 YEAR FLOODPLAIN
24-28-0000-00-004
278,582 SF
PROPOSED FDOT R/W LINE
POST OFFICE
ID: 11-24-28-0000-00-010
KING: 61,567 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 38,027 SF
PARCEL ID: 11-24-28-7878-01-000
AREA TAKING: 10,740 SF
TURKEY LAKE POND
PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 458 SF
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
SANDLAKE VILLAGE
SAND LAKE TOWN HOMES
SAND LAKE TOWN HOMES
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
WL-2(W)
BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20
TURKEY LAKE RD
100 YEAR FLOODPLAIN
WESTGATE LAKES RESORT AND SPA
0 75 300
Feet
POND 201 (RECOMMENDED)
I-4 WB CD SYSTEM
I-4 WB TO CENTRAL FLORIDA PARKWAY
SR 528 WB TO I-4 WB GUL
I-4 WB GUL
SW-2(W)
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE
I-4 WB GUL SR 528 EB
I-4 WB GUL
SW-2(W)
@ EXIST SR 528
I-4 WB EXPRESS LANE
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
I-4 EB GUL
SW-5(E)
SW-6(E)
I-4 EB GUL
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SW-2(E)
SW-3(E)
SW-2(E)
POND 202A (RECOMMENDED)
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
@ EXIST I-4
@ EXIST I-4
SW-7(E)
I-4 EB GUL TO SR 528 EB
POND 202D (RECOMMENDED)
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 EB EXPRESS LANE
I-4 WB EXPRESS LANE SR 528 EB
POND 202B (RECOMMENDED)
POND 202C (RECOMMENDED)
I-4 WB EXPRESS LANE TO SR 528 EB
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 EB GUL
EXISTING LA R/W LINE
EXHIBIT DR
WESTWOOD CENTER
MANUFACTURERS LIFE INSURANCE CO
MARRIOTT VACATION CLUB
ORANGE COUNTY CONVENTION CENTER
SW-1(E)
I-4 EB GUL TO SR 528 EB
I-4 WB GUL & EXPRESS TO SR 528 EB
SR 528 WB TO I-4 EB GUL & EXPRESS
(SR 528 ALT 6 SHOWN)
SW-1(E)
EXISTING LA R/W LINE
SW-1(E)
EXHIBIT DR
WEST ENTRANCE DR
(SR 528 ALT 6 SHOWN)

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qkvw.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 6 INTERCHANGE (RECOMMENDED ALTERNATIVE) SEGMENT 2

SHEET NO. **16**

mbacal 11/1/2016 10:30:51 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd201-PREFERRED.dgn

MODEL:rpllanrd-SANDLAKE-300
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:300

N

0 75 300
Feet

PARCEL ID: 35-23-28-0000-00-009
AREA TAKING: 125 SF

PARCEL ID: 35-23-28-0000-00-010
AREA TAKING: 996 SF

PARCEL ID: 35-23-28-0000-00-042
AREA TAKING: 289 SF

100 YEAR FLOODPLAIN

LAKE MARIE

PARCEL ID: 35-23-28-0000-00-053
AREA TAKING: 3,598 SF

PARCEL ID: 35-23-28-7825-00-010
AREA TAKING: 185 SF

EXIST. R/W LINE

TURKEY LAKE RD

PARCEL ID: 35-23-28-7825-00-011
AREA TAKING: 1,324 SF

TURKEY LAKE POND

PARCEL ID: 35-23-28-0000-00-061
AREA TAKING: 67,540 SF

PHILLIPS VILLAGE

PARCEL ID: 35-23-28-7825-00-012
AREA TAKING: 3,072 SF

EXISTING LA R/W LINE

TURKEY LAKE RD

PARCEL ID: 35-23-28-7113-01-000
AREA TAKING: 1,848 SF

PHILLIPS CROSSING

@ EXIST SAND LAKE RD

SAND LAKE ROAD TO I-4 WB GUL

SW-4(W)

TURKEY LAKE POND

PARCEL ID: 35-23-28-7113-01-000
AREA TAKING: 170 SF

WHOLE FOODS

POND 206A (RECOMMENDED)

POND 206 (RECOMMENDED)

SURFACE WATER

SW-6(W)

SAND LAKE ROAD WB TO TURKEY LAKE ROAD SB

DRURY HOTEL

7-ELEVEN

BAY HILL PLAZA

KMART

EDWIN WATTS

POND 206B (RECOMMENDED)

I-4 WB GUL TO SAND LAKE ROAD

POND 207 (RECOMMENDED)

EXISTING 30" RCP

I-4 WB GUL TO TURKEY LAKE ROAD SB

SW-5(W)

I-4 WB GUL

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

1460 1465 1470 1475 1480 1485 1490 1495 1500

SW-14(E)

SW-15(E)

SW-16(E)

SW-12(E)

EXISTING 36" RCP

@ EXIST I-4

EXISTING LA R/W LINE

SW-13(E)

I-4 EB GUL TO SAND LAKE ROAD

SAND LAKE ROAD TO I-4 EB GUL

FRONTAGE ROAD

COMFORT INN

EMBASSY SUITES

LAQUINTA INN

RADISSON

JAMAICAN CT

STRIP CENTER

INTERNATIONAL DR

FOGO DE CHAO

BEST WESTERN

GOLDEN CORRAL

FRIDAYS SPORTS GRILL & BARGAIN WORLD

BP GASS STATION

WALGREENS

EXIST. R/W LINE

CHECKERS

SHELL/CIRCLE K

QUALITY INN

ROSEN MEDICAL CENTER

MCDONALDS

(SAND LAKE ROAD ALT 4 SHOWN)

TIKI ISLAND ADVENTURE GOLF

HAMPTON INN & SUITES

COCO KEY RESORT HOTEL

HOLIDAY INN EXPRESS

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SAND LAKE INTERCHANGE (RECOMMENDED ALTERNATIVE) SEGMENT 2

SHEET NO. 17

A-17

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-cglow.tbl

mbacal 11/1/2016 10:30:55 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-PREFERRED.dgn

MODEL:
SHEET SIZE: SR528 BASE 1 16.5x10.6 (in.)
PLOT SCALE: 1:200

0 50 200
Feet

N

LAKEVUE SHORES APARTMENTS

SAND LAKE TOWN HOMES

EXISTING LA R/W LINE

PROPOSED FDOT R/W LINE

POST OFFICE

PARCEL ID: 11-24-28-0000-00-009
AREA TAKING: 1,716 SF

WL-1(W)

WL-2(W)

PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 21,201 SF

PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 18,285 SF

PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 38,085 SF

TURKEY LAKE RD

PROPOSED LA R/W LINE

SR 528 WB TO I-4 WB GUL

SW-2(W)

I-4 WB TO CENTRAL FLORIDA PARKWAY

I-4 WB GUL

SW-1(W)

SR 528 WB TO I-4 WB EXPRESS LANE

I-4 WB EXPRESS LANE

I-4 EB EXPRESS LANES

I-4 EB EXPRESS LANE TO SR 528 EB

SW-2(E)

I-4 EB GUL

℄ EXIST I-4

BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE
EXISTING CONDITIONS
PARCEL ID: 12-24-28-9249-00-010
AREA TAKING: 3,607 SF

SW-1(E)

PARCEL ID: 12-24-28-0000-00-022
AREA TAKING: 12,664 SF

PARCEL ID: 12-24-28-9655-00-010
AREA TAKING: 18,784 SF

PARCEL ID: 12-24-28-9655-00-021
AREA TAKING: 33,976 SF

CENTRAL FLORIDA PARKWAY TO I-4 EB GUL

PROPOSED LA R/W LINE

I-4 EB GUL TO SR 528 EB

PARCEL ID: 12-24-28-9655-00-022
AREA TAKING: 48,276 SF

SW-1(E)

ORANGE COUNTY SHERIFF COMMUNITY CENTER

MONTEREY LAKE APARTMENTS

WESTWOOD CENTER

MANUFACTURERS LIFE INSURANCE CO

MATCHLINE STA. 1369+00.00

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407)805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 1 (1 OF 5)
SEGMENT 2

SHEET NO. 18

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-glow.tbl

mbacal 11/1/2016 10:31:08 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_BASE.dgn

MODEL: SR528 BASE 2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200.008

MATCHLINE STA. 1369+00.00

MATCHLINE STA. 1399+00.00

SAND LAKE TOWN HOMES

WESTGATE LAKES RESORT AND SPA

TURKEY LAKE RD

0 50 200 Feet

WL-2(W)

EXISTING LA R/W LINE

I-4 WB TO CENTRAL FLORIDA PARKWAY

SR 528 WB TO I-4 WB GUL

I-4 WB GUL TO SR 528 WB GUL

I-4 WB GUL

SW-2(W)

SR 528 WB TO I-4 WB EXPRESS LANE

I-4 WB EXPRESS LANE TO SR 528 EB EXPRESS LANE

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

SW-5(E)

SW-6(E)

℄ EXIST SR 528

SW-2(E)

SW-3(E)

I-4 EB GUL TO I-4 EB EXPRESS LANE

℄ EXIST I-4

SW-7(E)

SR 528 WB TO I-4 EB GUL

EXISTING LA R/W LINE

I-4 EB EXPRESS LANE TO SR 528 EB

I-4 EB GUL TO SR 528 EB

CENTRAL FLORIDA PARKWAY TO I-4 EB GUL

ORANGE COUNTY CONVENTION CENTER

53

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-glow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 1 (2 OF 5)
SEGMENT 2

SHEET NO. 19

mbacal 11/1/2016 10:31:25 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_BASE.dgn

MODEL: SR528 BASE 3
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUALITY SUITES

WESTGATE LAKES

SAGE RESORT (PERMIT EXPIRED)

81

EDEN SPRINGS RESORT (PERMIT EXPIRED)

SPRINGVIEW BUILDING

PROPOSED FDOT R/W LINE

PROPOSED FDOT R/W LINE

POND 205-B

RESORT CLUB AREA

0 50 200

Feet

82

ROAD TO POND 205-B

EXISTING LA R/W LINE

TURKEY LAKE RD

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

B EXIST I-4

SW-8(E)

EXISTING LA R/W LINE

ROSEN INN

AIR FLORIDA HELICOPTER CHARTERS

ROSEN PLAZA

53

54

55

56

PIZZA HUT

INTERNATIONAL DR

SIZZLER STEAK HOUSE

MING COURT

HAWAIIAN RUMBLE ADVENTURE GOLF

ICE BAR

MILLERS ALE HOUSE

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 1 (3 OF 5)
SEGMENT 2

SHEET NO. 20

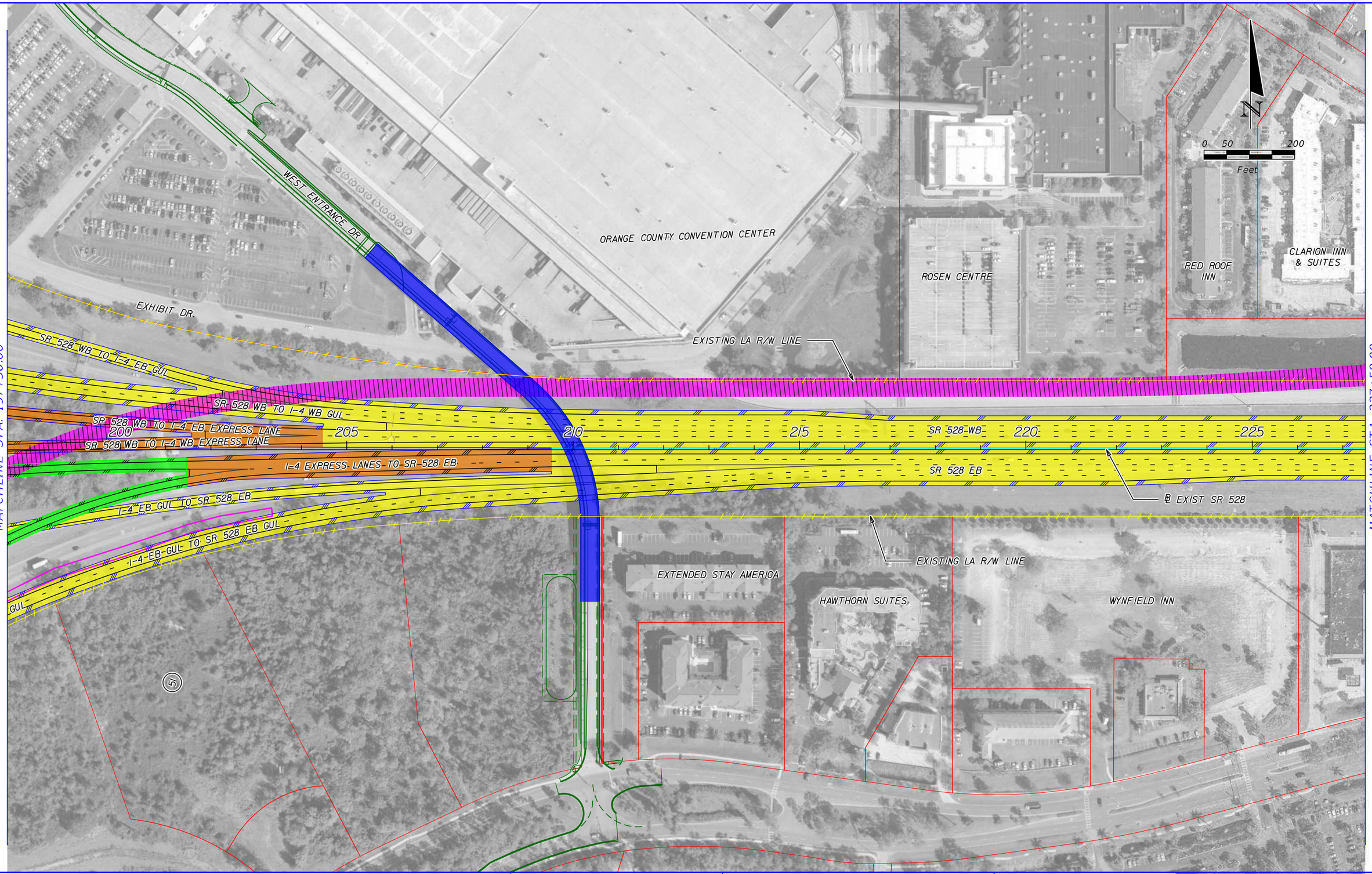
PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qkow.tbl

mbacal 11/1/2016 10:31:29 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd202_SR528_BASE.dgn

MODEL: SR528 BASE 4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00



EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 1 (4 OF 5)
SEGMENT 2

SHEET NO. **21**

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:31:32 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122201\Segment 2\roadway\planrd202_SR528_BASE.dgn

MODEL: SR528 BASE 5
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-I-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

DAYS INN
CIVIC CENTER

INTERNATIONAL DR

PRELIMINARY TOLLING SIGN LOCATION

INTERNATIONAL DR TO SR 528 WB

SR 528 WB TO INTERNATIONAL DR

EXISTING LA R/W LINE

EXISTING LA R/W LINE

PRELIMINARY TOLLING SIGN LOCATION

MATCHLINE STA. 227+50.00

230 235 240 SR 528 WB 245 250 255

SR 528 EB

℄ EXIST SR 528

EXISTING LA R/W LINE

INTERNATIONAL TOWN DISCOUNT CENTER

SR 528 EB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

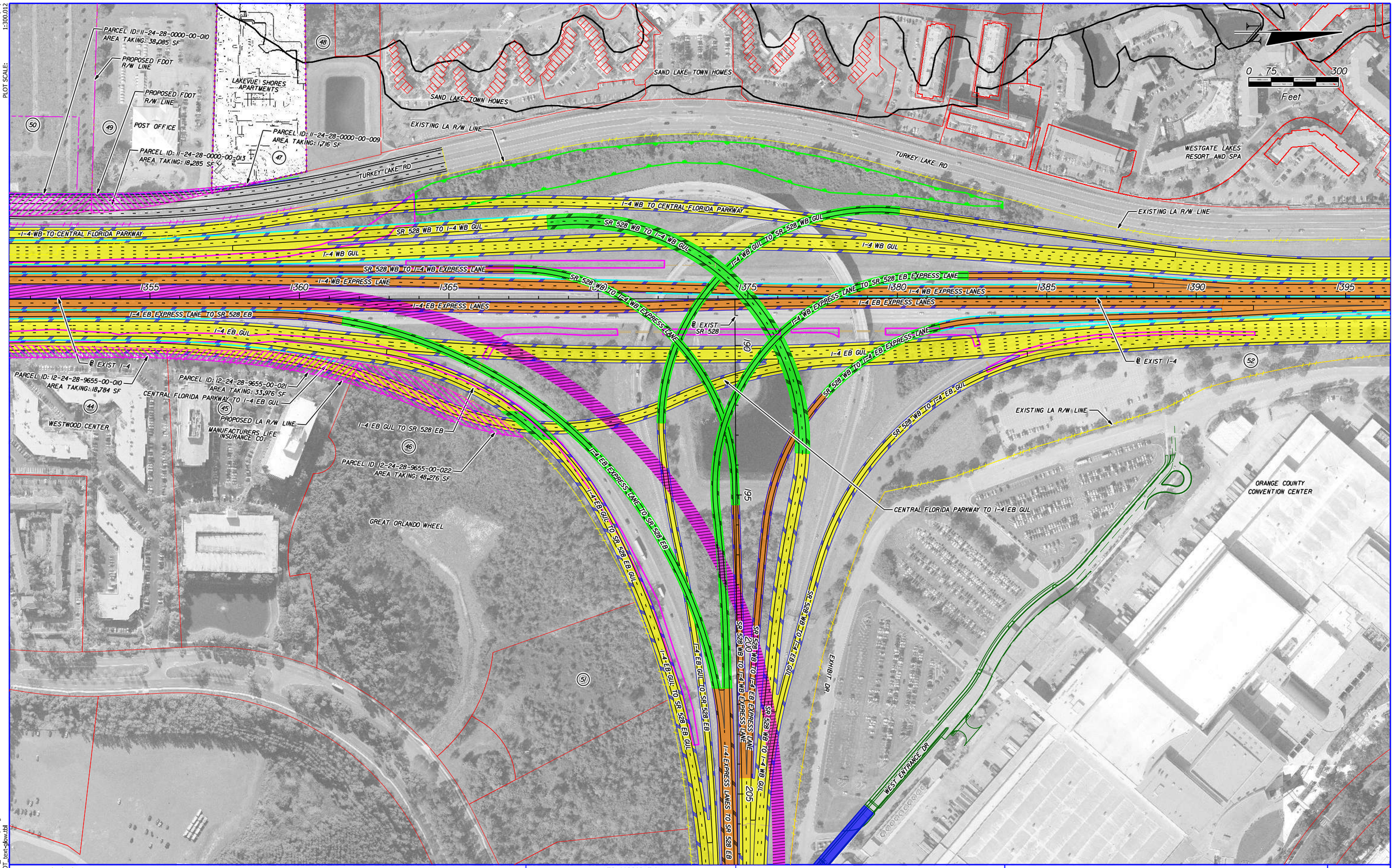
I-4 PD&E STUDY
SR 528 ALT 1 (5 OF 5)
SEGMENT 2

SHEET NO. 22

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:31:36 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd202_SR528_BASE.dgn

MODEL:
SHEET SIZE: PLAN-SR528-200 16.5x10.6 (in.)
PLOT SCALE: 1:300.012



Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4/SR 528 ALT 1 INTERCHANGE
SEGMENT 2

SHEET NO. **23**

mbacal 11/1/2016 10:31:40 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_BASE.dgn

100 YEAR FLOODPLAIN
100 YEAR FLOODPLAIN
100 YEAR FLOODPLAIN
0 50 200
Feet
SAND LAKE TOWN HOMES
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
PROPOSED FDOT R/W LINE
POST OFFICE
PARCEL ID: 11-24-28-0000-00-009
AREA TAKING: 4,343 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 20,978 SF
WL-1(W)
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 8,343 SF
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 27,268 SF
PROPOSED FDOT R/W LINE
I-4 WB TO CENTRAL FLORIDA PARKWAY
SR 528 WB TO I-4 WB GUL
I-4 WB GUL
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE
SW-1(W)
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
SW-2(E)
I-4 EB GUL
BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE
EXISTING CONDITIONS
℄ EXIST I-4
SW-1(E)
PARCEL ID: 12-24-28-0000-00-022
AREA TAKING: 12,664 SF
PARCEL ID: 12-24-28-9655-00-010
AREA TAKING: 18,784 SF
PARCEL ID: 12-24-28-9655-00-021
AREA TAKING: 33,976 SF
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
PARCEL ID: 12-24-28-9249-00-010
AREA TAKING: 3,607 SF
I-4 EB GUL TO SR 528 EB
SW-1(E)
PARCEL ID: 12-24-28-9655-00-022
AREA TAKING: 48,276 SF
ORANGE COUNTY SHERIFF COMMUNITY CENTER
MONTEREY LAKE APARTMENTS
WESTWOOD CENTER
MANUFACTURERS LIFE INSURANCE CO.
MATCHLINE STA. 1369+00.00

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 2 (1 OF 5)
SEGMENT 2

SHEET NO. 24

Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl
PRINT DRIVER:
PEN TABLE:
mbacal 11/1/2016 10:31:50 AM
\\hntbw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-SR528_ALT2-RAMPS-COMBINED.dgn

MODEL: SR528_2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

SAND LAKE TOWN HOMES
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
WL-2(W)
BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20
TURKEY LAKE RD
100 YEAR FLOODPLAIN
WESTGATE LAKES RESORT AND SPA
N
0 50 200
Feet
I-4 WB GUL SR 528 EB
I-4 WB EXPRESS LANE SR 528 EB
I-4-WB-TO-CENTRAL FLORIDA PARKWAY
I-4_WB_GUL
I-4-WB-GUL
SW-2(W)
1370
1375
I-4 WB EXPRESS LANE
1380
1385
1390
I-4 WB EXPRESS LANE
1395
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE
SW-5(E)
SW-6(E)
℄ EXIST SR 528
SW-3(E)
SW-2(E)
I-4 EB GUL
190
I-4 EB GUL
℄ EXIST I-4
SW-7(E)
52
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SR 528 WB TO I-4 EB EXPRESS LANE
SR 528 WB TO I-4 EB GUL
SR 528 WB TO I-4 WB (GUL & EXPRESS LANE)
I-4 WB (GUL & EXPRESS LANE) TO SR 528 EB
I-4 EB (GUL & EXPRESS LANE) TO SR 528 EB
53
EXISTING LA R/W LINE
ORANGE COUNTY CONVENTION CENTER
195
MATCHLINE STA. 1369+00.00
MATCHLINE STA. 1399+00.00
MATCHLINE STA. 197+50.00

EXISTING LA R/W	GENERAL USE LANES		
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 2 (2 OF 5)
SEGMENT 2

SHEET NO. 25

mbacal 11/1/2016 10:32:00 AM w00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-SR528_ALT2-RAMPS-COMBINED.dgn

MODEL:
SHEET SIZE: SR528_3
PLOT SCALE: 16.5x10.6 (in.) 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUALITY SUITES

WESTGATE LAKES

81

SPRINGVIEW BUILDING

82

RESORT CLUB AREA

0 50 200
Feet

EXISTING LA R/W LINE

TURKEY LAKE RD

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

B EXIST I-4

SW-8(E)

EXISTING LA R/W LINE

ROSEN INN

AIR FLORIDA HELICOPTER CHARTERS

ROSEN PLAZA

53

54

55

56

INTERNATIONAL DR

EXISTING LA R/W		GENERAL USE LANES	
PROPOSED LA R/W		EXPRESS LANES	
PROPOSED FDOT R/W		EXISTING BRIDGE	
EXISTING R/W		PROPOSED BRIDGE	
PARCEL LINES		RAIL CORRIDOR (AERIAL)	
BARRIER WALL		FUTURE EXISTING CONDITION	

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 2 (3 OF 5)
SEGMENT 2

SHEET NO. 26

mbacal 11/1/2016 10:32:03 \\HNTBMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-SR528_ALT2-RAMPS-COMBINED.dgn

MODEL: SR528_4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00

ORANGE COUNTY CONVENTION CENTER

ROSEN CENTRE

RED ROOF INN

CLARION INN & SUITES

EXTENDED STAY AMERICA

HAWTHORN SUITES

WYNFIELD INN

WEST ENTRANCE DR.

EXHIBIT DR.

EXISTING LA R/W LINE

SR 528 WB TO I-4 EB (GUL & EXPRESS)

SR 528 WB TO I-4 WB (GUL & EXPRESS)

I-4 WB (GUL & EXPRESS) AND I-4 EB EXPRESS TO SR 528 EB

I-4 EB GUL TO SR 528 EB

SW-1(E)

SR 528 WB

SR 528 EB

℄ EXIST SR 528

200 205 210 215 220 225

0 50 200
Feet

N

5

Color_FDOTPDF.ctb
FDOT_text-glow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 2 (4 OF 5)
SEGMENT 2

SHEET NO. 27

A-27

mbacal 11/1/2016 10:32:06 \\HNTBw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd201-SR528_ALT2-RAMPS-COMBINED.dgn

MODEL: SR528_5
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-1-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

DAYS INN
CIVIC CENTER

INTERNATIONAL DR

PRELIMINARY
TOLLING SIGN
LOCATION

SR 528 WB TO INTERNATIONAL DR

EXISTING LA R/W LINE

INTERNATIONAL DR
TO SR 528 WB

EXISTING LA R/W LINE

PRELIMINARY TOLLING
SIGN LOCATION

MATCHLINE STA. 227+50.00

230 235 240 SR 528 WB 245 250 255

SR 528 EB

℄ EXIST SR 528

EXISTING LA R/W LINE

INTERNATIONAL
TOWN DISCOUNT
CENTER

SR 528 EB TO
INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

Color_FDOTPDF.pltcfg
FDOT_text-gdiow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

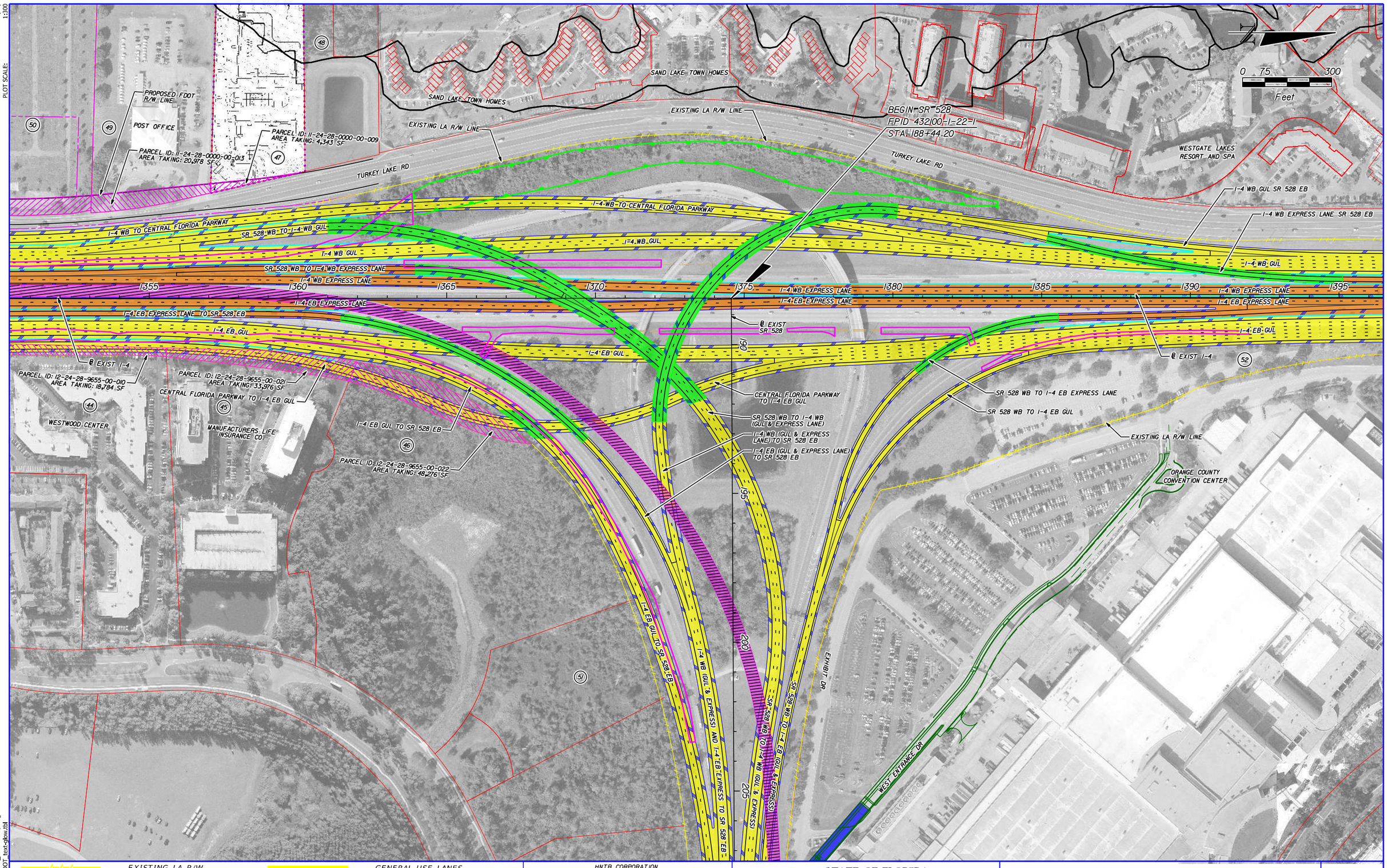
I-4 PD&E STUDY
SR 528 ALT 2 (5 OF 5)
SEGMENT 2

SHEET NO.
28

mbacal 11/1/2016 10:32:08 \\HNTBMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd201-SR528_ALT2-RAMPS-COMBINED.dgn

PLAN-300
16.5x10.6 (in.)
1:300

MODEL:
SHEET SIZE:
PLOT SCALE:



EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 2 INTERCHANGE
SEGMENT 2

SHEET NO. **29**

Color_FDOTPDF.pltcfg
FDOT_text-qkw.tbl

PRINT DRIVER:
PEN TABLE:

mbacal 11/1/2016 10:32:10 AM \\tlhmw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd201-SR528_ALT2-RAMPS-COMBINED.dgn

MODEL:
SHEET SIZE: SR528 ALT DDI 1 16.5x10.6 (in.)
PLOT SCALE: 1:200

100 YEAR FLOODPLAIN
100 YEAR FLOODPLAIN
100 YEAR FLOODPLAIN
0
50
200
Feet
N
SAND LAKE TOWN HOMES
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
48
47
49
50
41
80
WL-1(W)
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 33,562 SF
PROPOSED FDOT
R/W LINE
POST OFFICE
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 10,529 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 14,659 SF
PROPOSED FDOT
LA R/W LINE
SW-1(W)
SW-2(W)
I-4 WB TO CENTRAL FLORIDA PARKWAY
I-4 EB EXPRESS LANE
I-4 EB GUL
I-4 WB GUL
SR 528 WB TO I-4 WB GUL
1340
1345
1350
1355
1360
1365
I-4 WB EXPRESS LANE
SR 528 WB TO I-4 WB EXPRESS LANE
SW-2(E)
I-4 WB EXPRESS LANE
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
HIGH SPEED RAIL LINE
SW-2(E)
I-4 EB GUL
I-4 EB GUL TO SR 528 EB
℄ EXIST I-4
BEGIN SEGMENT 2
STA. 1345+48.48
MATCH TO FUTURE
EXIST. CONDITIONS
42B
SW-1(E)
PARCEL ID: 12-24-28-9655-00-021
AREA TAKING: 33,976 SF
PARCEL ID: 12-24-28-0000-00-022
AREA TAKING: 12,664 SF
PARCEL ID: 12-24-28-9655-00-010
AREA TAKING: 18,784 SF
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
PROPOSED FDOT LA R/W LINE
I-4 EB GUL & EXPRESS LANE TO SR 528 EB
PARCEL ID: 12-24-28-9249-00-010
AREA TAKING: 3,607 SF
ORANGE COUNTY SHERIFF
COMMUNITY CENTER
MONTEREY LAKE
APARTMENTS
43
44
WESTWOOD CENTER
MANUFACTURERS LIFE
INSURANCE CO
45
46
PARCEL ID: 12-24-28-9655-00-022
AREA TAKING: 48,276 SF
SW-1(E)
MATCHLINE STA. 1369+00.00

Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 3 (1 OF 5)
SEGMENT 2

SHEET NO.
30

A-30

mbacal 11/1/2016 10:32:17 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\plan\rd202_SR528_ALT3_DDI.dgn

MODEL: SR528 ALT DDI 2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

SAND LAKE TOWN HOMES
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
100 YEAR FLOODPLAIN
WESTGATE LAKES RESORT AND SPA
N
0 50 200
Feet

BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20

MATCHLINE STA. 1369+00.00

I-4 WB TO CENTRAL FLORIDA PARKWAY
I-4 EB EXPRESS LANES
I-4 EB GUL
SW-2(W)
℄ EXIST I-4
1370
1375
1380
1385
1390
1395
I-4 WB GUL
I-4 EB EXPRESS LANES
SW-5(E)
I-4 WB GUL TO SR 528 EB
I-4 WB GUL
SW-3(E)
I-4 WB EXPRESS LANE
190
I-4 WB EXPRESS LANE TO SR 528 EB
SW-6(E)
I-4 EB GUL
SW-7(E)
52
SR 528 WB TO I-4 WB GUL
℄ EXIST SR 528
SR 528 WB TO I-4 WB EXPRESS LANE
SR 528 WB TO I-4 EB EXPRESS LANE
SR 528 WB TO I-4 EB GUL
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
EXISTING LA R/W LINE
53
HIGH SPEED RAIL LINE
ORANGE COUNTY CONVENTION CENTER
195
SR 528 TO I-4 WB (GUL & EXPRESS LANE)

MATCHLINE STA. 197+50.00

MATCHLINE STA. 1399+00.00

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 3 (2 OF 5)
SEGMENT 2

SHEET NO. 31

A-31

Color_FDOTPDF.pltcfg
FDOT_text-gkw.tbl
PRINT DRIVER:
PEN TABLE:

mbacal 11/1/2016 10:32:21 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\plandr202_SR528_ALT3_DDI.dgn

MODEL: SR528 ALT DDI 3
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUALITY SUITES

WESTGATE LAKES

81

SPRINGVIEW BUILDING

RESORT CLUB AREA

82

0 50 200
Feet

℄ EXIST I-4

EXISTING LA R/W LINE

I-4 WB GUL

1400 1405 1410 I-4 WB EXPRESS LANE 1415 1420 1425

I-4 EB EXPRESS LANE

I-4 EB GUL

SW-8(E)

ROSEN INN

EXISTING LA R/W LINE

AIR FLORIDA HELICOPTER CHARTERS

56

55

ROSEN PLAZA

54

53

INTERNATIONAL DR

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 3 (3 OF 5)
SEGMENT 2

SHEET NO. 32

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:32:24 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT3_DDI.dgn

MODEL: SR528 ALT DDI 4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00

N

0 50 200
Feet

WEST ENTRANCE DR.

ORANGE COUNTY CONVENTION CENTER

ROSEN CENTRE

RED ROOF INN

CLARION INN & SUITES

EXHIBIT DR.

EXISTING LA R/W LINE

SR-528 WB TO I-4 EB (GUL & EXPRESS)

SR-528 WB TO I-4 WB (GUL & EXPRESS)

200 205 210 215 SR 528-WB 220 225

I-4 (WB GUL & WB-EXPRESS LANE) TO SR 528 EB

SR 528 EB

℄ EXIST SR 528

I-4-(EB GUL & EB-EXPRESS LANE) TO SR-528-EB

SW-I(E)

SW-I(E)

EXTENDED STAY AMERICA

EXISTING LA R/W LINE

HAWTHORN SUITES

WYNFIELD INN

5

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500 ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 3 (4 OF 5)
SEGMENT 2

SHEET NO. **33**

Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl
PRINT DRIVER:
PEN TABLE:

mbacal 11/1/2016 10:32:27 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\plandr202_SR528_ALT3_DDI.dgn

MODEL: SR528 ALT DDI 5
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-I-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

DAYS INN
CIVIC CENTER

INTERNATIONAL DR

PRELIMINARY TOLLING SIGN LOCATION

SR 528 WB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 WB

EXISTING LA R/W LINE

EXISTING LA R/W LINE

PRELIMINARY TOLLING SIGN LOCATION

MATCHLINE STA. 227+50.00

230 235 240 SR 528 WB 245 250 255

SR 528 EB

℄ EXIST SR 528

EXISTING LA R/W LINE

INTERNATIONAL TOWN DISCOUNT CENTER

SR 528 EB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 3 (5 OF 5)
SEGMENT 2

SHEET NO. 34

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:32:28 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT3_DDI.dgn

MODEL: PLAN-SR528-DDI-300
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:300

0 75 300
Feet

SAND LAKE TOWN HOMES
SAND LAKE TOWN HOMES
EXISTING LA R/W LINE
EXISTING LA R/W LINE
TURKEY LAKE RD
TURKEY LAKE RD
WESTGATE LAKES RESORT AND SPA
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 33,562 SF
PROPOSED FDOT R/W LINE
POST OFFICE
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 14,659 SF
BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20
I-4 WB TO CENTRAL FLORIDA PARKWAY
I-4 EB EXPRESS LANES
I-4 WB GUL
I-4 EB GUL
I-4 WB EXPRESS LANE
I-4 EB EXPRESS LANE
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
I-4 EB GUL TO SR 528 EB
HIGH SPEED RAIL LINE
@ EXIST I-4
@ EXIST SR 528
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB GUL TO SR 528 EB
I-4 WB EXPRESS LANE TO SR 528 EB
SR 528 WB TO I-4 EB EXPRESS LANE
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SR 528 WB TO I-4 EB GUL
PARCEL ID: 12-24-28-9655-00-010
AREA TAKING: 18,784 SF
PARCEL ID: 12-24-28-9655-00-021
AREA TAKING: 33,976 SF
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
PROPOSED FDOT LA R/W LINE
I-4 EB GUL & EXPRESS LANE TO SR 528 EB
MANUFACTURERS LIFE INSURANCE CO
WESTWOOD CENTER
PARCEL ID: 12-24-28-9655-00-022
AREA TAKING: 48,276 SF
HIGH SPEED RAIL LINE
EXISTING LA R/W LINE
ORANGE COUNTY CONVENTION CENTER
SR 528 TO I-4 WB (GUL & EXPRESS LANE)
I-4 EB GUL & EB EXPRESS LANE TO SR 528 EB
I-4 WB GUL & WB EXPRESS LANE TO SR 528 EB
SR 528 WB TO I-4 EB (GUL & EXPRESS)
SR 528 WB TO I-4 WB (GUL & EXPRESS)
EXHIBIT DR
WEST ENTRANCE DR
1355 1360 1365 1370 1375 1380 1385 1390 1395
190 195 200 205
44 45 46 47 48 49 50 51 52

Color_FDOTPDF.pltcfg
FDOT_text-qkw.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 3 INTERCHANGE
SEGMENT 2

SHEET NO. **35**

mbacal 11/1/2016 10:32:36 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT3_DDI.dgn

MODEL: SR528 ALT4 WestShift 1
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

100 YEAR FLOODPLAIN

100 YEAR FLOODPLAIN

100 YEAR FLOODPLAIN

N

0 50 200
Feet

SAND LAKE TOWN HOMES

PARCEL ID: 11-24-28-0000-00-009
AREA TAKING: 10,752 SF

PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 404 SF

EXISTING LA R/W LINE

PROPOSED FDOT R/W LINE

POST OFFICE

WL-1(W)

WL-2(W)

PARCEL ID: 11-24-28-0000-00-022
AREA TAKING: 14,395 SF

PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 25,694 SF

PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 37,343 SF

PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 61,28 SF

TURKEY LAKE RD

PROPOSED FDOT R/W LINE

SR 528 WB TO I-4 WB GUL

SW-2(W)

I-4 WB TO CENTRAL FLORIDA PARKWAY

I-4 WB GUL

EXISTING LA R/W LINE

SW-1(W)

SR 528 WB TO I-4 WB EXPRESS LANE

I-4 WB EXPRESS LANE

RAIL CORRIDOR

I-4 EB EXPRESS LANE TO SR 528 EB

SW-2(E)

I-4 EB GUL TO SR 528 EB

I-4 EB GUL

CENTRAL FLORIDA PARKWAY TO I-4 EB GUL

B EXIST I-4

SW-1(E)

BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE
EXISTING CONDITIONS

EXISTING LA R/W LINE

SW-1(E)

ORANGE COUNTY SHERIFF COMMUNITY CENTER

MONTEREY LAKE APARTMENTS

WESTWOOD CENTER

MANUFACTURERS LIFE INSURANCE CO

MATCHLINE STA. 1369+00.00

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 4 (1 OF 5)
SEGMENT 2

SHEET NO. 36

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:32:42 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT4_WestShift.dgn

MODEL: SR528 ALT4 WestShift 2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1369+00.00

MATCHLINE STA. 1399+00.00

SAND LAKE TOWN HOMES

100 YEAR FLOODPLAIN

EXISTING LA R/W LINE

WL-2(W)

BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20

TURKEY LAKE RD

100 YEAR FLOODPLAIN

WESTGATE LAKES
RESORT AND SPA

N

0 50 200
Feet

I-4 WB TO CENTRAL FLORIDA PARKWAY

SR 528 WB TO I-4 WB GUL

I-4 WB GUL

I-4 WB GUL SR 528 EB

SW-2(W)

I-4 WB EXPRESS LANE

I-4 WB EXPRESS LANE SR 528 EB

I-4 WB GUL

I-4 WB EXPRESS LANE

I-4 EB EXPRESS LANE

SW-5(E)

SW-6(E)

I-4 EB GUL

SW-3(E)

SW-2(E)

℄ EXIST SR 528

I-4 EB EXPRESS LANE

I-4 EB GUL

CENTRAL FLORIDA PARKWAY TO I-4 EB GUL

SR 528 WB TO I-4 EB EXPRESS LANE

℄ EXIST I-4

SW-52(E)

I-4 EB EXPRESS LANE TO SR 528 EB

I-4 EB GUL TO SR 528 EB

SR 528 WB TO I-4 EB GUL

EXISTING LA R/W LINE

ORANGE COUNTY
CONVENTION CENTER

MATCHLINE STA. 197+50.00

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: C:\dot_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-sjkw.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 4 (2 OF 5)
SEGMENT 2

SHEET NO. 37

mbacal 11/1/2016 10:32:46 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122012\Segment 2\roadway\planrd202_SR528_ALT4_WestShift.dgn

MODEL: SR528 ALT4 WestShift 3
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUALITY SUITES

WESTGATE LAKES

81

82

SPRINGVIEW BUILDING

RESORT CLUB AREA

100-YEAR FLOODPLAIN

0 50 200

Feet

EXISTING LA R/W LINE

TURKEY LAKE RD

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

℄ EXIST I-4

SW-8(E)

EXISTING LA R/W LINE

ROSEN INN

AIR FLORIDA HELICOPTER CHARTERS

ROSEN PLAZA

53

54

55

56

INTERNATIONAL DR

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 4 (3 OF 5)
SEGMENT 2

SHEET NO. 38

mbacal 11/1/2016 10:32:49 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT4_WestShift.dgn

MODEL: SR528 ALT4 WestShift 4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00

ORANGE COUNTY CONVENTION CENTER

WEST ENTRANCE DR

EXHIBIT DR.

ROSEN CENTRE

RED ROOF INN

CLARION INN & SUITES

0 50 200
Feet

N

EXISTING LA R/W LINE

SR 528 WB TO I-4 EB GUL

SR 528 WB TO I-4 WB GUL

SR 528 WB TO I-4 EB EXPRESS LANE

SR 528 WB TO I-4 WB EXPRESS LANE

I-4 EXPRESS LANES TO SR 528 EB

I-4 EB GUL TO SR 528 EB

200 205 210 215 SR 528 WB 220 225

SR 528 EB

℄ EXIST SR 528

SW-I(E)

EXTENDED STAY AMERICA

HAWTHORN SUITES

WYNFIELD INN

EXISTING LA R/W LINE

SW-I(E)

5

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 4 (4 OF 5)
SEGMENT 2

SHEET NO. 39

mbacal 11/1/2016 10:32:52 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT4_WestShift.dgn

MODEL: SR528 ALT4 WestShift 5
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-1-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

DAYS INN
CIVIC CENTER

INTERNATIONAL DR

PRELIMINARY TOLLING SIGN LOCATION

INTERNATIONAL DR TO SR 528 WB

SR 528 WB TO INTERNATIONAL DR

EXISTING LA R/W LINE

PRELIMINARY TOLLING SIGN LOCATION

EXISTING LA R/W LINE

MATCHLINE STA. 227+50.00

230 235 240 SR 528 WB 245 250 255

SR 528 EB

℄ EXIST SR 528

EXISTING LA R/W LINE

INTERNATIONAL TOWN DISCOUNT CENTER

SR 528 EB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl

PRINT DRIVER:
PEN TABLE:

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 4 (5 OF 5)
SEGMENT 2

SHEET NO. 40

mbacal 11/1/2016 10:32:54 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT4_WestShift.dgn

MODEL: PLAN-ALT4 WestShift-200
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:300

PARCEL ID: 11-24-28-0000-00-009
AREA TAKING: 10,752 SF
PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 404 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 37,343 SF
PROPOSED FDOT R/W LINE
POST OFFICE
SAND LAKE TOWN HOMES
SAND LAKE TOWN HOMES
EXISTING LA R/W LINE
EXISTING LA R/W LINE
BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20
TURKEY LAKE RD
TURKEY LAKE RD
WESTGATE LAKES RESORT AND SPA
0 75 300
Feet
I-4 WB TO CENTRAL FLORIDA PARKWAY
I-4 WB TO CENTRAL FLORIDA PARKWAY
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 WB GUL
I-4 WB GUL SR 528 EB
I-4 WB GUL
I-4 WB GUL
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE
RAIL CORRIDOR
I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE SR 528 EB
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE
I-4 EB GUL
I-4 EB GUL
I-4 EB EXPRESS LANE TO SR 528 EB
I-4 EB GUL TO SR 528 EB
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SR 528 WB TO I-4 WB EXPRESS LANE
@ EXIST SR 528
@ EXIST I-4
@ EXIST I-4
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SR 528 WB TO I-4 EB EXPRESS LANE
SR 528 WB TO I-4 EB GUL
I-4 EB EXPRESS LANE TO SR 528 EB
I-4 EB GUL TO SR 528 EB
EXISTING LA R/W LINE
EXISTING LA R/W LINE
WESTWOOD CENTER
MANUFACTURERS LIFE INSURANCE CO
ORANGE COUNTY CONVENTION CENTER
I-4 EXPRESS LANES TO SR 528 EB
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 EB EXPRESS LANE
SR 528 WB TO I-4 EB GUL
EXHIBIT DR
WEST ENTRANCE DR
48
49
50
47
44
45
46
51
52
1355
1360
1365
1370
1375
1380
1385
1390
1395
195
205

Color: FDOTPDF.pltcfg
FDOT_text-xlow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES		
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 4 INTERCHANGE SEGMENT 2

SHEET NO. **41**

mbacal 11/1/2016 10:32:56 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT4_WestShift.dgn

MODEL: SR528 ALT COMB. RAMPS 1
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

100 YEAR FLOODPLAIN
100 YEAR FLOODPLAIN
100 YEAR FLOODPLAIN
PROPOSED FDOT R/W LINE
PROPOSED FDOT R/W LINE
EXISTING LA R/W LINE
WL-1(W)
80
50
49
POST OFFICE
PARCEL ID: 11-24-28-0000-00-009
AREA TAKING: 4,343 SF
47
48
WL-2(W)
TURKEY LAKE RD
SAND LAKE TOWN HOMES
0 50 200
Feet
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 8,343 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 20,978 SF
41
PROPOSED FDOT R/W LINE
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 27,268 SF
I-4 WB TO CENTRAL FLORIDA PARKWAY
SR 528 WB TO I-4 WB GUL
I-4 WB GUL
SW-2(W)
SW-1(W)
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE
1340
1345
1350
1355
1360
1365
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
SW-2(E)
I-4 EB GUL
I-4 EB GUL TO SR 528 EB
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
MATCHLINE STA. 1369+00.00
B EXIST I-4
SW-1(E)
BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE
EXISTING CONDITIONS
42B
43
44
45
46
ORANGE COUNTY SHERIFF COMMUNITY CENTER
MONTEREY LAKE APARTMENTS
WESTWOOD CENTER
MANUFACTURERS LIFE INSURANCE CO
SW-1(E)

EXISTING LA R/W	GENERAL USE LANES		
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

Color_FDOTPDF.pltcfg
FDOT_text-qblow.tbl
PRINT DRIVER:
PEN TABLE:

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500
ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 5 (1 OF 5)
SEGMENT 2

SHEET NO. **42**

mbacal 11/1/2016 10:33:04 AM w00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT5_RAMPS COMBINED.dgn

MODEL: SR528 ALT COMB. RAMPS 2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

SAND LAKE TOWN HOMES
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
WL-2(W)
BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20
TURKEY LAKE RD
100 YEAR FLOODPLAIN
WESTGATE LAKES
RESORT AND SPA
N
0 50 200
Feet

MATCHLINE STA. 1369+00.00

I-4 WB TO CENTRAL FLORIDA PARKWAY
I-4 WB GUL SR 528 EB
I-4 WB EXPRESS LANE SR 528 EB
I-4 WB GUL
SW-2(W)
1370
1375
1380
1385
1390
1395
I-4 WB EXPRESS LANE
I-4 EB EXPRESS LANE
℄ EXIST SR 528
SW-5(E)
SW-6(E)
I-4 EB GUL
SW-2(E)
SW-3(E)
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
℄ EXIST I-4
SW-7(E)
52
53
I-4 EB EXPRESS LANE TO SR 528 EB
I-4 EB GUL TO SR 528 EB
SR 528 WB TO I-4 WB GUL & EXPRESS LANE
SR 528 WB TO I-4 EB EXPRESS LANE
SR 528 WB TO I-4 EB GUL
EXISTING LA R/W LINE
ORANGE COUNTY
CONVENTION CENTER

MATCHLINE STA. 197+50.00

MATCHLINE STA. 1399+00.00

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-gllow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 5 (2 OF 5)
SEGMENT 2

SHEET NO. **43**

mbacal 11/1/2016 10:33:12 AM w00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122001\Segment 2\roadway\planrd202_SR528_ALT5_RAMPS COMBINED.dgn

MODEL: SR528 ALT COMB. RAMPS 3
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUALITY SUITES

WESTGATE LAKES

81

82

RESORT CLUB AREA

SPRINGVIEW POND

0 50 200

Feet

100-YEAR FLOODPLAIN

EXISTING LA R/W LINE

TURKEY LAKE RD

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

SW-8(E)

EXISTING LA R/W LINE

B EXIST I-4

ROSEN INN

AIR FLORIDA HELICOPTER CHARTERS

ROSEN PLAZA

53

54

55

56

INTERNATIONAL DR

EXISTING LA R/W		GENERAL USE LANES	
PROPOSED LA R/W		EXPRESS LANES	
PROPOSED FDOT R/W		EXISTING BRIDGE	
EXISTING R/W		PROPOSED BRIDGE	
PARCEL LINES		RAIL CORRIDOR (AERIAL)	
BARRIER WALL		FUTURE EXISTING CONDITION	

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 5 (3 OF 5)
SEGMENT 2

SHEET NO. **44**

mbacal 11/1/2016 10:33:16 AM w00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT5_RAMPS COMBINED.dgn

MODEL: SR528 ALT COMB. RAMPS 4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00

N

0 50 200
Feet

ORANGE COUNTY CONVENTION CENTER

ROSEN CENTRE

RED ROOF INN

CLARION INN & SUITES

WEST ENTRANCE DR

EXHIBIT DR.

EXISTING LA R/W LINE

SR 528 WB TO I-4 EB (GUL & EXPRESS)

SR 528 WB TO I-4 WB (GUL & EXPRESS)

I-4 WB (GUL & EXPRESS) AND I-4 EB EXPRESS TO SR 528 EB

I-4 EB GUL TO SR 528 EB

200 205 210 215 SR 528 WB 220 225

SR 528 EB

℄ EXIST SR 528

SW-I(E)

SW-I(E)

EXISTING LA R/W LINE

EXTENDED STAY AMERICA

HAWTHORN SUITES

WYNFIELD INN

5

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-glow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 5 (4 OF 5)
SEGMENT 2

SHEET NO. 45

mbacal 11/1/2016 10:33:19 AM w00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT5_RAMPS COMBINED.dgn

MODEL: SR528 ALT COMB. RAMPS 5
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-1-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

DAYS INN
CIVIC CENTER

INTERNATIONAL DR

PRELIMINARY TOLLING SIGN LOCATION

INTERNATIONAL DR TO SR 528 WB

SR 528 WB TO INTERNATIONAL DR

EXISTING LA R/W LINE

PRELIMINARY TOLLING SIGN LOCATION

EXISTING LA R/W LINE

MATCHLINE STA. 227+50.00

230 235 240 SR 528 WB 245 250 255

SR 528 EB

℄ EXIST SR 528

EXISTING LA R/W LINE

INTERNATIONAL TOWN DISCOUNT CENTER

SR 528 EB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

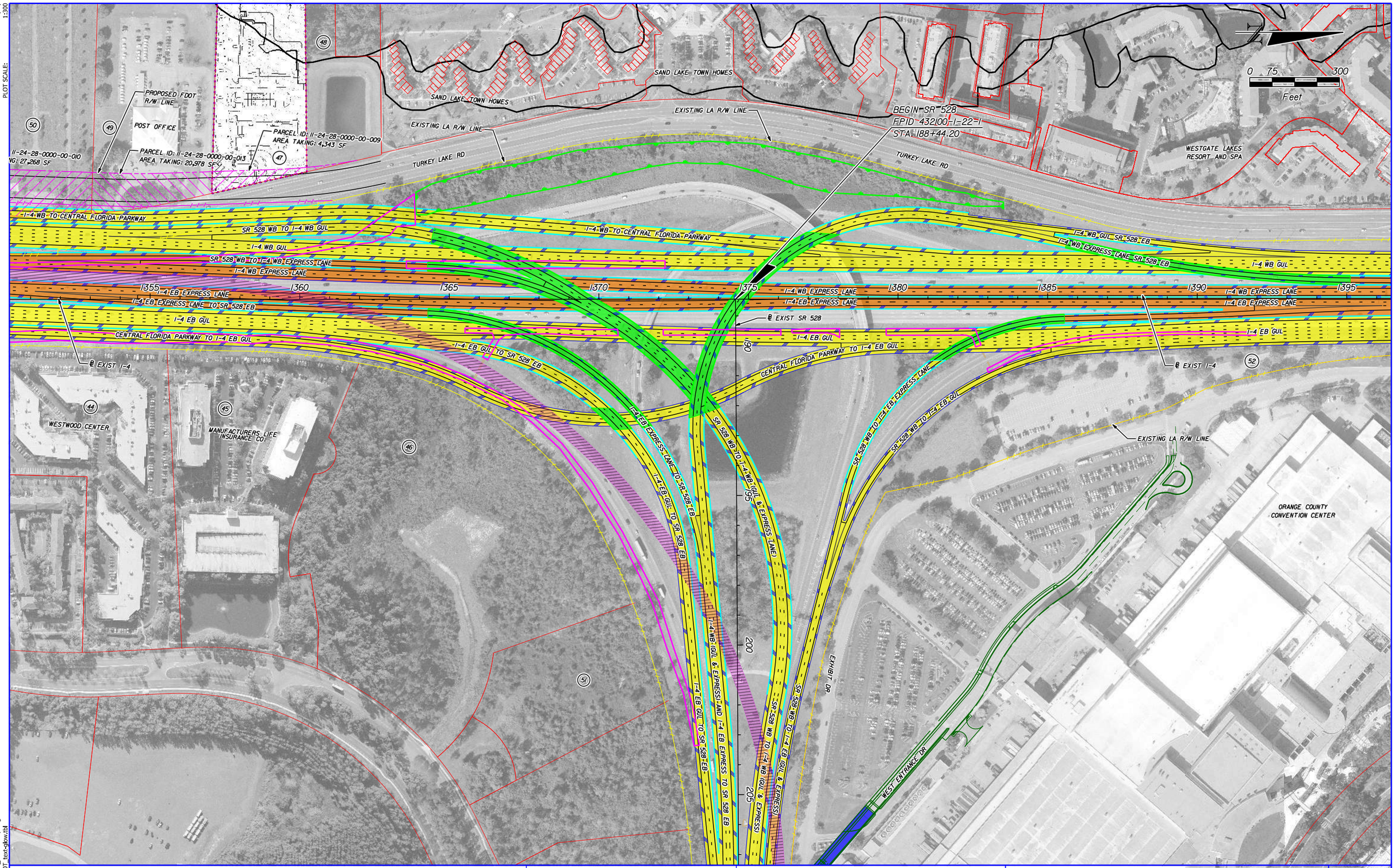
I-4 PD&E STUDY
SR 528 ALT 5 (5 OF 5)
SEGMENT 2

SHEET NO. 46

mbacal 11/1/2016 10:33:22 AM w00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT5_RAMPS COMBINED.dgn

PLAN-300
16.5x10.6 (in.)
1:300

MODEL:
SHEET SIZE:
PLOT SCALE:



Color_FDOTPDF.pltcfg
FDOT_text-cplow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 5 INTERCHANGE
SEGMENT 2

SHEET NO.
47

mbacal 11/1/2016 10:33:23 \\Lamw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT5_RAMPS COMBINED.dgn

SR528 ALT6 TPK 1
16.5x10.6 (in.)
MODEL:
SHEET SIZE:
1:200
PLOT SCALE:

100 YEAR FLOODPLAIN
PROPOSED FDOT R/W LINE
100 YEAR FLOODPLAIN
POND 200A (ALTERNATE)
POND 200B (RECOMMENDED)
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 262,516 SF
100 YEAR FLOODPLAIN
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 278,582 SF
PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 26,643 SF
PROPOSED FDOT R/W LINE
PARCEL ID: 11-24-28-7878-01-000
AREA TAKING: 10,740 SF
PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 458 SF
SANDLAKE VILLAGE
SAND LAKE TOWN HOMES
0 50 200
Feet
N
WL-1(W)
80
41
50
49
48
47
POST OFFICE
TURKEY LAKE POND
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
POND 201 (RECOMMENDED)
TUKEY LAKE ROAD POND
PROPOSED FDOT LA R/W LINE
PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 61,567 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 38,027 SF
I-4 WB CD SYSTEM
PARCEL ID: TURKEY LAKE ROAD
AREA TAKING: 182,234 SF
PARCEL ID: 11-24-28-0000-00-022
AREA TAKING: 215 SF
SR 528 WB TO I-4 WB GUL
I-4 WB TO CENTRAL FL
SW-2(W)
I-4 WB GUL
SR 528 WB TO I-4 WB EXPRESS LANE
SW-1(W)
I-4 WB EXPRESS LANE
1340
1345
1350
1355
1360
1365
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
I-4 EB GUL
SW-2(E)
I-4 EB GUL TO SR 528 EB
POND 202A (RECOMMENDED)
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
℄ EXIST I-4
END 22' CONCRETE NOISE WALL
STA. 1351+27.89
SW-1(E)
BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE
EXISTING CONDITIONS
42B
BEGIN 22' CONCRETE NOISE WALL
STA. 1345+90.48
43
44
45
46
ORANGE COUNTY SHERIFF COMMUNITY CENTER
MONTEREY LAKE APARTMENTS
WESTWOOD CENTER
MANUFACTURERS LIFE INSURANCE CO
MARRIOTT VACATION CLUB
SW-1(E)
(SR 528 ALT 6 SHOWN)
MATCHLINE STA. 1369+00.00

Color_FDOTPDF.pltcfg
FDOT_text-qkw.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 6 (1 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **48**

mbacal 11/1/2016 10:33:30 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_PREFERRED.dgn

MODEL: SR528 ALT6 TPK 2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

SAND LAKE TOWN HOMES
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
WL-2(W)
BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20
TURKEY LAKE RD
POND 201
(RECOMMENDED)
I-4 WB CD SYSTEM
I-4 WB GUL SR 528 EB
I-4 WB GUL
I-4 WB EXPRESS LANE
I-4 EB EXPRESS LANE
SW-5(E)
SW-6(E)
I-4 EB GUL
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
℄ EXIST SR 528
℄ EXIST I-4
SW-7(E)
SW-2(W)
SW-3(E)
SW-2(E)
POND 202A
(RECOMMENDED)
I-4 EB EXPRESS LANE TO SR 528 EB
SR 528 WB TO I-4 WB EXPRESS
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 EB EXPRESS LANE
SR 528 WB TO I-4 EB GUL
I-4 WB EXPRESS LANE SR 528 EB
POND 202D
(RECOMMENDED)
POND 202B
(RECOMMENDED)
POND 202C
(RECOMMENDED)
I-4 EB GUL TO SR 528 EB
EXHIBIT DR
EXISTING LA R/W LINE
ORANGE COUNTY
CONVENTION CENTER
WESTGATE LAKES
RESORT AND SPA
100 YEAR FLOODPLAIN
0 50 200
Feet
370 375 380 385 390 395
195
52
53
(SR 528 ALT 6 SHOWN)

MATCHLINE STA. 136+00.00
MATCHLINE STA. 139+00.00
MATCHLINE STA. 197+50.00

Color_FDOTPDF.pltcfg
FDOT_text-cglow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 6 (2 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 49

mbacal 11/1/2016 10:33:33 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd202_PREFERRED.dgn

MODEL: SR528 ALT6 TPK 3
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

PARCEL ID: 02-24-28-0000-00-009
AREA TAKING: 237,294 SF
PROPOSED FDOT R/W LINE

BOO BOO LAKE
PARCEL ID: 02-24-28-0000-00-005
AREA TAKING: 123,811 SF

PROPOSED FDOT R/W LINE

100-YEAR FLOODPLAIN

PARCEL ID: 02-24-28-0000-00-005
AREA TAKING: 213,954 SF

PARCEL ID: 02-24-28-0000-00-005
AREA TAKING: 535,275 SF

0 50 200
Feet

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUEST DIAGNOSTIC

QUALITY SUITES

WESTGATE LAKES

POND 205A (ALTERNATE)

POND 205C (RECOMMENDED)

SPRINGVIEW TERRACE

RESORT CLUB

ACCESS

81

82

TURKEY LAKE RD

EXISTING LA R/W LINE

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

SW-8(E)

EXISTING LA R/W LINE

B EXIST I-4

ROSEN INN

ROSEN PLAZA

53 54 55 56 57

AIR FLORIDA HELICOPTER CHARTERS

INTERNATIONAL DR

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 6 (3 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **50**

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:33:36 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_PREFERRED.dgn

MODEL: SR528 ALT6 TPK 4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00

ORANGE COUNTY CONVENTION CENTER

WEST ENTRANCE DR.

EXHIBIT DR.

ROSEN CENTRE

RED ROOF INN

CLARION INN & SUITES

0 50 200
Feet

N

LA R/W LINE

EXISTING LA R/W LINE

SR 528 WB GUL TO I-4 EB AND WB GUL

SR 528 WB EXPRESS TO I-4 EB AND WB EXPRESS

POND 202C (RECOMMENDED)

200 205 210 215 220 225

SR 528 WB

SR 528 WB EXPRESS

SR 528 EB EXPRESS

SR 528 EB

I-4 EB AND WB EXPRESS TO SR 528 EB EXPRESS

I-4 EB AND WB GUL TO SR 528 EB GUL

℄ EXIST SR 528

SW-I(E)

EXISTING LA R/W LINE

EXTENDED STAY AMERICA

HAWTHORN SUITES

EXISTING LA R/W LINE

WYNFIELD INN

METRO PC & NEXTELL SO

WESTWOOD STUDIO PLUS

SHIRAZ GRILL

BEST WESTERN

VILLAGE INN PANCAKE HOUSE

SW-I(E)

5

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 6 (4 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **51**

mbacal 11/1/2016 10:33:39 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_PREFERRED.dgn

MODEL: SR528 ALT6 TPK 5
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 227+50.00

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-1-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

INTERNATIONAL DR TO SR 528 WB GUL

PRELIMINARY TOLLING SIGN LOCATION

SR 528 WB TO INTERNATIONAL DR

DAYS INN CIVIC CENTER

INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 WB

POND 204A (RECOMMENDED)

POND 204B (RECOMMENDED)

EXISTING LA R/W LINE

EXISTING LA R/W LINE

PRELIMINARY TOLLING SIGN LOCATION

230 235 240 245 250 255

SR 528 WB
SR 528 WB EXPRESS
SR 528 EB EXPRESS
SR 528 EB

℄ EXIST SR 528

POND 203B (RECOMMENDED)

EXISTING LA R/W LINE

INTERNATIONAL TOWN DISCOUNT CENTER

POND 203A (RECOMMENDED)

SR 528 EB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 6 (5 OF 5)
(RECOMMENDED ALTERNATIVE) SEGMENT 2

SHEET NO. **52**

mbacal 11/1/2016 10:33:42 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_PREFERRED.dgn

OVERALL 16.5x10.6 (in.) 1:300
MODEL:
SHEET SIZE:
PLOT SCALE:

PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 262,516 SF
100 YEAR FLOODPLAIN
PROPOSED FDOT R/W LINE
POST OFFICE
PARCEL ID: 11-24-28-7878-01-000
AREA TAKING: 10,740 SF
PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 458 SF
PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 38,027 SF
TURKEY LAKE POND
EXISTING LA R/W LINE
WL-2(W)
TURKEY LAKE RD
SANDLAKE VILLAGE
SAND LAKE TOWN HOMES
SAND LAKE TOWN HOMES
100 YEAR FLOODPLAIN
EXISTING LA R/W LINE
WL-2(W)
BEGIN SR 528
FPID 432100-1-22-1
STA 188+44.20
100 YEAR FLOODPLAIN
WESTGATE LAKES RESORT AND SPA
0 75 300
Feet
TURKEY LAKE RD
POND 201 (RECOMMENDED)
I-4 WB CD SYSTEM
I-4 WB TO CENTRAL FLORIDA PARKWAY
I-4 WB GUL SR 528 EB
SR 528 WB TO I-4 WB GUL
I-4 WB GUL
I-4 WB GUL
SW-2(W)
SR 528 WB TO I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE
I-4 WB EXPRESS LANE
SW-2(W)
@ EXIST SR 528
I-4 EB EXPRESS LANE
I-4 EB EXPRESS LANE TO SR 528 EB
SW-5(E)
SW-6(E)
I-4 EB GUL
I-4 EB GUL
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
SW-2(E)
I-4 EB GUL TO SR 528 EB
SW-3(E)
SW-2(E) POND 202A (RECOMMENDED)
I-4 EB EXPRESS LANE TO SR 528 EB
SR 528 WB TO I-4 WB GUL
SR 528 WB TO I-4 WB EXPRESS
POND 202D (RECOMMENDED)
CENTRAL FLORIDA PARKWAY TO I-4 EB GUL
@ EXIST I-4
@ EXIST I-4
SW-7(E)
POND 202B (RECOMMENDED)
POND 202C (RECOMMENDED)
SR 528 WB TO I-4 EB GUL
EXISTING LA R/W LINE
EXHIBIT DR
WESTWOOD CENTER
MANUFACTURERS LIFE INSURANCE CO.
MARRIOTT VACATION CLUB
SW-1(E)
(SR 528 ALT 6 SHOWN)
SW-(E)
I-4 EB GUL TO SR 528 EB
I-4 WB (GUL & EXPRESS) AND I-4 EB EXPRESS TO SR 528 EB
SR 528 WB TO I-4 WB (GUL & EXPRESS)
EXISTING LA R/W LINE
SW-1(E)
EXHIBIT DR
ORANGE COUNTY CONVENTION CENTER
WEST ENTRANCE DR

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W		GENERAL USE LANES	
PROPOSED LA R/W		EXPRESS LANES	
PROPOSED FDOT R/W		EXISTING BRIDGE	
EXISTING R/W		PROPOSED BRIDGE	
PARCEL LINES		RAIL CORRIDOR (AERIAL)	
BARRIER WALL		FUTURE EXISTING CONDITION	

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 6 INTERCHANGE (RECOMMENDED ALTERNATIVE) SEGMENT 2

SHEET NO. 53

mbacal 11/1/2016 10:33:44 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_PREFERRED.dgn

SR528 ALT7-1
16.5x10.6 (in.)
1:200

MODEL:
SHEET SIZE:
PLOT SCALE:

100 YEAR FLOODPLAIN

100 YEAR FLOODPLAIN

100 YEAR FLOODPLAIN

N

0 50 200
Feet

SAND LAKE TOWN HOMES

PARCEL ID: 11-24-28-0000-00-009
AREA TAKING: 10,752 SF

PARCEL ID: TURKEY LAKE ROAD
AREA TAKING: 157,539 SF

PARCEL ID: 11-24-28-0000-00-014
AREA TAKING: 404 SF

EXISTING LA R/W LINE

PROPOSED FDOT R/W LINE

POST OFFICE

WL-1(W)

WL-2(W)

TURKEY LAKE RD

PARCEL ID: 11-24-28-0000-00-004
AREA TAKING: 26,157 SF

PARCEL ID: 11-24-28-0000-00-022
AREA TAKING: 215 SF

PARCEL ID: 11-24-28-0000-00-010
AREA TAKING: 61,127 SF

PARCEL ID: 11-24-28-0000-00-013
AREA TAKING: 37,342 SF

PROPOSED FDOT LA R/W LINE

I-4 WB TO CENTRAL FLORIDA PARKWAY

SR 528 WB TO I-4 WB GUL

SW-2(W)

I-4 WB GUL

I-4 WB EXPRESS LANE

SW-1(W)

I-4 WB EXPRESS

I-4 EB EXPRESS

1340

1345

1350

1355

1360

1365

I-4 EB EXPRESS LANE

I-4 EB GUL

SW-2(E)

I-4 EB GUL & EXPRESS LANES TO SR 528 EB & INTERNATIONAL DR

FROM I-4 EB TO INTERNATIONAL DR

MATCHLINE STA. 1369+00.00

℄ EXIST I-4

SW-1(E)

BEGIN SEGMENT 2
STA. 1345+48.48
MATCH FUTURE
EXISTING CONDITIONS

PARCEL ID: 12-24-28-9249-00-010
AREA TAKING: 13,058 SF

PARCEL ID: 12-24-28-9249-00-011
AREA TAKING: 19,020 SF

ORANGE COUNTY SHERIFF
COMMUNITY CENTER

PARCEL ID: 12-24-28-0000-00-022
AREA TAKING: 5,907 SF

MONTEREY LAKE
APARTMENTS

PARCEL ID: 12-24-28-9655-00-010
AREA TAKING: 9,007 SF

PROPOSED FDOT LA R/W LINE

WESTWOOD CENTER

PARCEL ID: 12-24-28-9655-00-021
AREA TAKING: 7,004 SF

MANUFACTURERS LIFE
INSURANCE CO.

41 42B 43 45 46 47 48 49 50

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 7 (1 OF 5)
SEGMENT 2

SHEET NO.
54

mbacal 11/1/2016 10:33:57 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT7_HDR.dgn

MODEL: SR528 ALT7-2
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1369+00.00

MATCHLINE STA. 1399+00.00

SAND LAKE TOWN HOMES

100 YEAR FLOODPLAIN

EXISTING LA R/W LINE

WL-2(W)

BEGIN SR 528
FPID 432100-1-22-1
STA. 188+44.20

TURKEY LAKE RD

100 YEAR FLOODPLAIN

WESTGATE LAKES
RESORT AND SPA

N

0 50 200
Feet

I-4 WB TO CENTRAL FLORIDA PARKWAY

I-4 WB GUL SR 528 EB

I-4 WB GUL

I-4 WB EXPRESS LANE

I-4 WB EXPRESS LANE SR 528 EB

SR 528 WB EXPRESS LANES TO I-4 EB EXPRESS LANES

I-4 EB EXPRESS LANE

SW-2(W)

1370 1375 1380 1385 1390 1395

℄ EXIST SR 528

I-4 EB GUL

SW-3(E)
SW-2(E)

SW-5(E)

SW-6(E)

SW-7(E)

℄ EXIST I-4

190

SR 528 EXPRESS LANES TO I-4 WB EXPRESS LANES

SR 528 WB TO I-4 WB GUL

SR 528 WB TO I-4 EB GUL

I-4 EB TO SR 528
EB EXPRESS LANES

I-4 EB TO
SR 528 EB

195

EXISTING LA R/W LINE

53

ORANGE COUNTY
CONVENTION CENTER

FROM I-4 EB TO INTERNATIONAL

MATCHLINE STA. 197+50.00

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 7 (2 OF 5)
SEGMENT 2

SHEET NO. **55**

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-cglow.tbl

mbacal 11/1/2016 10:34:01 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT7_HDR.dgn

MODEL: SR528 ALT7-3
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 1399+00.00

MATCHLINE STA. 1429+00.00

WORLD CARE CENTER

DR. P. PHILLIPS HOSPITAL

QUALITY SUITES

WESTGATE LAKES

81

82

SPRINGVIEW BUILDING

RESORT CLUB AREA

100-YEAR FLOODPLAIN

0 50 200

Feet

EXISTING LA R/W LINE

TURKEY LAKE RD

I-4 WB GUL

1400 1405 1410 1415 1420 1425

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

SW-8(E)

EXISTING LA R/W LINE

B EXIST I-4

ROSEN INN

AIR FLORIDA HELICOPTER CHARTERS

ROSEN PLAZA

53

54

55

56

INTERNATIONAL DR

EXISTING LA R/W		GENERAL USE LANES	
PROPOSED LA R/W		EXPRESS LANES	
PROPOSED FDOT R/W		EXISTING BRIDGE	
EXISTING R/W		PROPOSED BRIDGE	
PARCEL LINES		RAIL CORRIDOR (AERIAL)	
BARRIER WALL		FUTURE EXISTING CONDITION	

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 7 (3 OF 5)
SEGMENT 2

SHEET NO. **56**

mbacal 11/1/2016 10:34:04 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT7_HDR.dgn

MODEL: SR528 ALT7- 4
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:200

MATCHLINE STA. 197+50.00

MATCHLINE STA. 227+50.00

ORANGE COUNTY CONVENTION CENTER

WEST ENTRANCE DR.

EXHIBIT DR.

ROSEN CENTRE

RED ROOF INN

CLARION INN & SUITES

0 50 200
Feet

N

EXISTING LA R/W LINE

SR 528 WB

SR 528 WB TO I-4 EB GUL

SR 528 EXPRESS LANES TO I-4 WB EXPRESS LANES

SR 528 EXPRESS LANES TO I-4 EB EXPRESS LANES

SR 528 WB EXPRESS LANES

SR 528 EB EXPRESS LANES

SR 528 EB

I-4 EB &-WB-RAMP TO INTERNATIONAL DR

FROM I-4 WB

FROM I-4 EB

FROM I-4 EB

FROM I-4 WB

FROM I-4 EB TO INTERNATIONAL DR

200 205 210 215 220 225

℄ EXIST SR 528

SW-I(E)

EXISTING LA R/W LINE

EXTENDED STAY AMERICA

HAWTHORN SUITES

WYNFIELD INN

SW-I(E)

DR

5

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SR 528 ALT 7 (4 OF 5)
SEGMENT 2

SHEET NO. 57

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-glow.tbl

mbacal 11/1/2016 10:34:07 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT7_HDR.dgn

MODEL:
SHEET SIZE: SR528 ALT7-5 16.5x10.6 (in.)
PLOT SCALE: 1:200

END I-4/BEACHLINE INTERCHANGE CONNECTION
FPID 432100-I-22-01
BEGIN TURNPIKE WIDENING
FPID 406090-5-52-01
STA 233+56.03

N

0 50 200
Feet

DAYS INN
CIVIC CENTER

INTERNATIONAL DR

PRELIMINARY TOLLING SIGN LOCATION

INTERNATIONAL DR TO SR 528 WB

SR 528 WB-TO-INTERNATIONAL-DR

INTERNATIONAL DR TO SR 528 WB EXPRESS LANES

EXISTING LA R/W LINE

PRELIMINARY TOLLING SIGN LOCATION

EXISTING LA R/W LINE

SR 528 WB

SR 528 WB EXPRESS LANES

SR 528 EB EXPRESS LANES

SR 528 EB

230 235 240 245 250 255

MATCHLINE STA. 227+50.00

@ EXIST SR 528

EXISTING LA R/W LINE

INTERNATIONAL TOWN DISCOUNT CENTER

I-4 EB & WB TO INTERNATIONAL DR

INTERNATIONAL DR TO SR 528 EB

EXISTING LA R/W LINE

EXISTING LA R/W	GENERAL USE LANES		
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

Color_FDOTPDF.pltcfg
FDOT_text-gkw.tbl
PRINT DRIVER:
PEN TABLE:

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

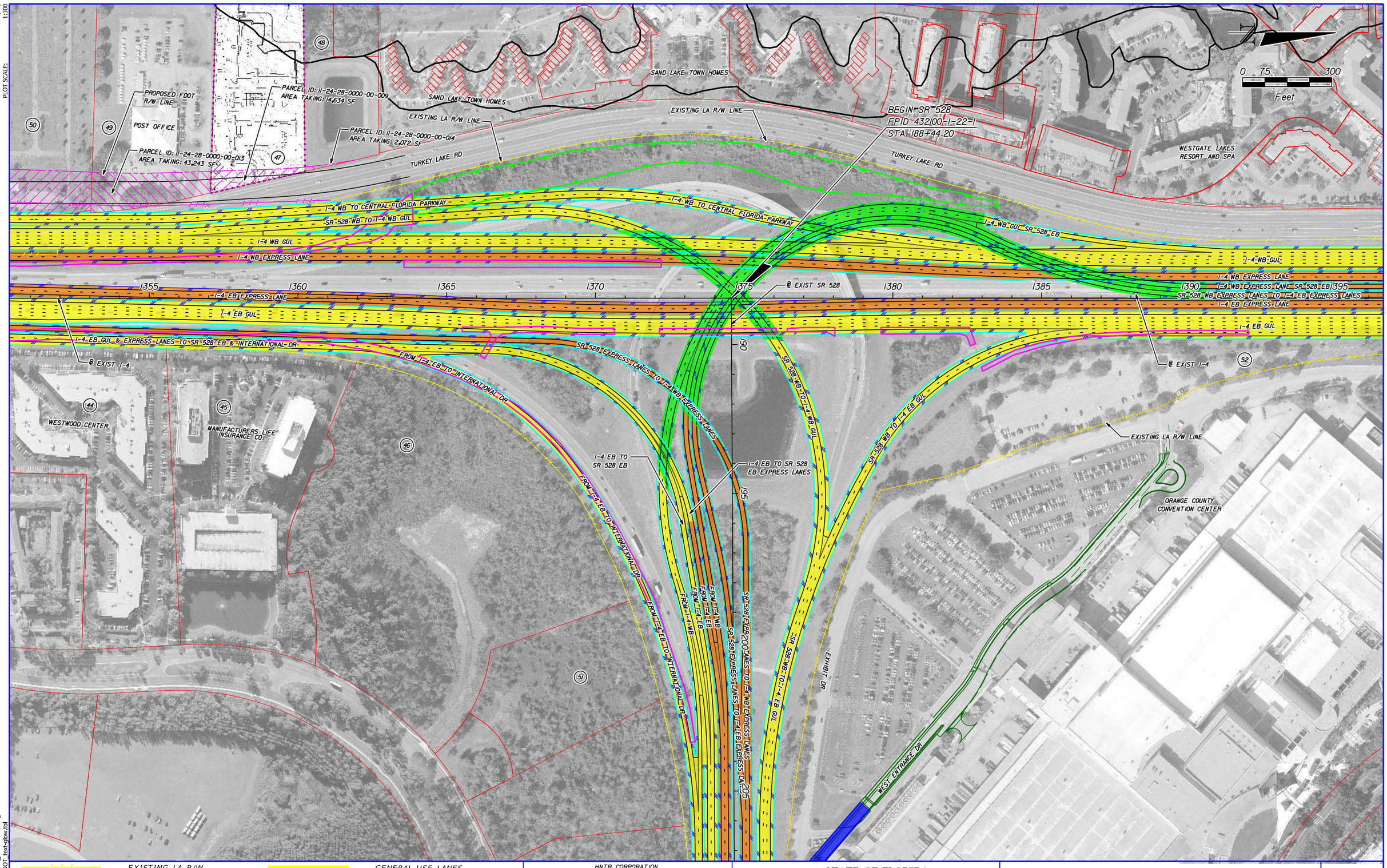
I-4 PD&E STUDY
SR 528 ALT 7 (5 OF 5)
SEGMENT 2

SHEET NO.
58

mbacal 11/1/2016 10:34:10 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT7_HDR.dgn

PLAN-300
16.5x10.6 (in.)
1:300

MODEL:
SHEET SIZE:
PLOT SCALE:



Color_FDOTPDF.pltcfg
FDOT_text-qkw.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SR 528 ALT 7 INTERCHANGE
SEGMENT 2

SHEET NO.
59

A-59

mbacal 11/1/2016 10:34:12 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd202_SR528_ALT7_HDR.dgn

MODEL: SAND-01(Base-1of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

RIALTO OF ORLANDO SHOPPING PLAZA

MY NEIGHBORHOOD STORAGE CENTER

DRURY HOTEL

N

0 20 100

Feet

BEGIN PD&E STUDY LIMIT
SAND LAKE RD
STA. 53+00.00

CHICK-FIL-A

CHEVRON GAS STATION

7-ELEVEN

FLIPPERS PIZZERIA

EXIST. R/W LINE

50

55

60

EXIST. R/W LINE

℄ EXIST SAND LAKE RD.

EXIST. R/W LINE

MCDONALDS

FIRST OFFICE PLACE

BANK OF AMERICA

BB&T BANK

RESORT FINANCE AMERICA

EXIST. R/W LINE

TURKEY LAKE RD.

MATCHLINE STA. 62+00.00

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 1 (1 OF 3)
SEGMENT 2

SHEET NO. **60**

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:34:17 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd203_ALT1_SandLakeBase.dgn

MODEL: SAND-02(Base-2of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MATCHLINE STA. 62+00.00

MATCHLINE STA. 77+00.00

I-4 WB GUL RAMP TO SAND LAKE RD

EXISTING LA R/W LINE

SAND LAKE WB TO I-4 WB GUL RAMP

℄ EXIST I-4

SAND LAKE RD RAMP TO I-4 EB GUL

ROSEN MEDICAL CENTER

EXISTING LA R/W LINE

SHELL/CIRCLE K

N

0 20 100

Feet

1485

1480

65

70

75

SAND LAKE ROAD

℄ EXIST SAND LAKE RD.

WHOLE FOODS

SAND LAKE RD EB RAMP TO I-4 WB GUL

EXISTING LA R/W LINE

PHILLIP'S CROSSING SHOPPING PLAZA

I-4 WB GUL

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

BP GAS STATION

FRONTAGE ROAD

EXISTING LA R/W LINE

I-4 EB GUL RAMP TO SAND LAKE RD

EXIST. R/W LINE

GOLDEN CORRAL

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 1 (2 OF 3)
SEGMENT 2

SHEET NO. 61

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:34:21 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd203_ALT1_SandLakeBase.dgn

MODEL: SAND-03(Base-3of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MATCHLINE STA. 77+00.00

BURGER KING

INTERNATIONAL DR

7-11 CONVENIENCE STORE

CANADA AVE.

N

0 20 100
Feet

MCDONALDS

MCDONALDS (OLD MOBIL STATION)

PERKINS RESTAURANT

PERKINS RESTAURANT

FISH BONES RESTAURANT

END PD&E STUDY LIMIT
SAND LAKE RD
STA. 87+00.00

MARRIOTT RESIDENCE INN

EXIST. R/W LINE

EXIST. R/W LINE

POPEYE CHICKEN

EXIST. R/W-LINE

80

85

90

℄ EXIST SAND LAKE RD

EXIST. R/W LINE

EXIST. R/W LINE

BP GAS STATION

CHECKERS

INTERNATIONAL SQUARE CENTER

WYNDHAM RESORT

WALGREENS

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

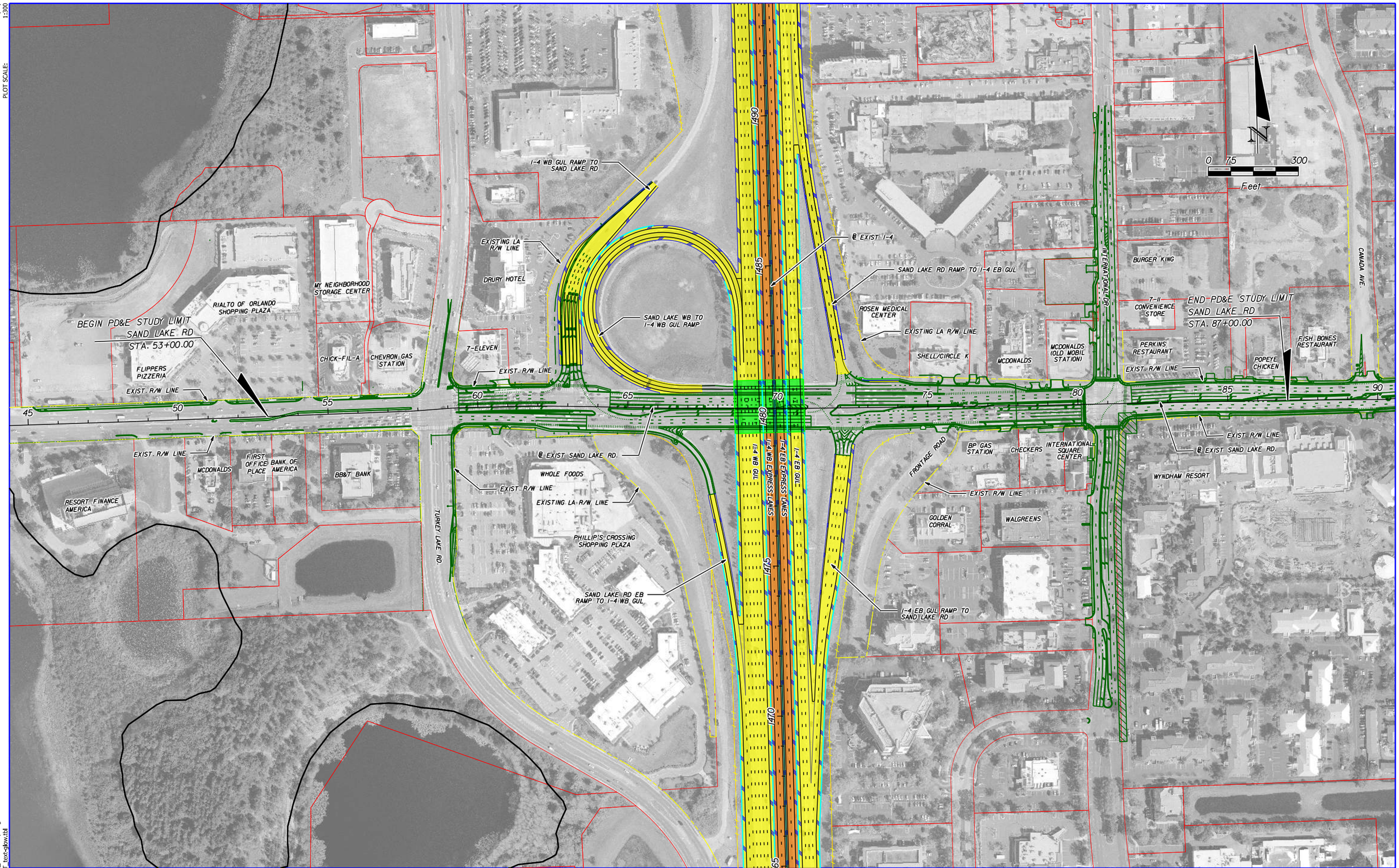
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 1 (3 OF 3)
SEGMENT 2

SHEET NO. **62**

mbacal 11/1/2016 10:34:25 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd203_ALT1_SandLakeBase.dgn

MODEL:
SHEET SIZE: plan-300
PLOT SCALE: 16.5x10.6 (in.) 1:300



Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SAND LAKE RD ALT 1
SEGMENT 2

SHEET NO. 63

mbacal 11/1/2016 10:34:28 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd203_ALT1_SandLakeBase.dgn

MODEL: SAND-01(DD)-1of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

DRURY HOTEL

MY NEIGHBORHOOD STORAGE CENTER

RIALTO OF ORLANDO SHOPPING PLAZA

N

0 20 100
Feet

BEGIN PD&E STUDY LIMIT
SAND LAKE RD
STA. 53+00.00

CHICK-FIL-A

CHEVRON GAS STATION

7-ELEVEN

FLIPPERS PIZZERIA

EXIST. R/W LINE

EXIST. R/W LINE

50

55

60

℄ EXIST SAND LAKE RD.

EXIST. R/W LINE

MCDONALDS

FIRST OFFICE PLACE

BANK OF AMERICA

BB&T BANK

RESORT FINANCE AMERICA

TURKEY LAKE RD.

EXIST. R/W LINE

MATCHLINE STA. 62+00.00

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 2 (1 OF 3)
SEGMENT 2

SHEET NO. **64**

PRINT DRIVER: Cdot_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:34:37 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT2_SandLakeDDI.dgn

MODEL: SAND-02(DDI- 2of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MATCHLINE STA. 62+00.00

MATCHLINE STA. 77+00.00

I-4 WB GUL RAMP TO SAND LAKE RD

EXISTING LA R/W LINE

℄ EXIST I-4

SAND LAKE RD RAMP TO I-4 EB GUL

ROSEN MEDICAL CENTER

EXISTING LA R/W LINE

SHELL/CIRCLE K

N

0 20 100

Feet

1485

65

70

75

1480

I-4 WB GUL

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

℄ EXIST SAND LAKE RD.

WHOLE FOODS

SAND LAKE RD EB RAMP TO I-4 WB GUL

EXISTING LA R/W LINE

PHILLIP'S CROSSING SHOPPING PLAZA

BP GAS STATION

FRONTAGE ROAD

EXISTING LA R/W LINE

EXIST. R/W LINE

I-4 EB GUL RAMP TO SAND LAKE RD

GOLDEN CORRAL

Color_FDOTPDF.pltcfg
FDOT_text-qkw.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 2 (2 OF 3)
SEGMENT 2

SHEET NO. **65**

mbacal 11/1/2016 10:35:01 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT2_SandLakeDDI.dgn

MODEL: SAND-03(DDI- 3of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

BURGER KING
7-11 CONVENIENCE STORE
INTERNATIONAL DR.
CANADA AVE.
N
0 20 100
Feet
MCDONALDS
MCDONALDS (OLD MOBIL STATION)
PERKINS RESTAURANT
FISH BONES RESTAURANT
END PD&E STUDY LIMIT
SAND LAKE RD
STA. 87+00.00
MARRIOTT RESIDENCE INN
EXIST. R/W LINE
POPEYE CHICKEN
MATCHLINE STA. 77+00.00
80
85
90
℄ EXIST SAND LAKE RD.
BP GAS STATION
CHECKERS
INTERNATIONAL SQUARE CENTER
WYNDHAM RESORT
WALGREENS

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500 ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 2 (3 OF 3)
SEGMENT 2

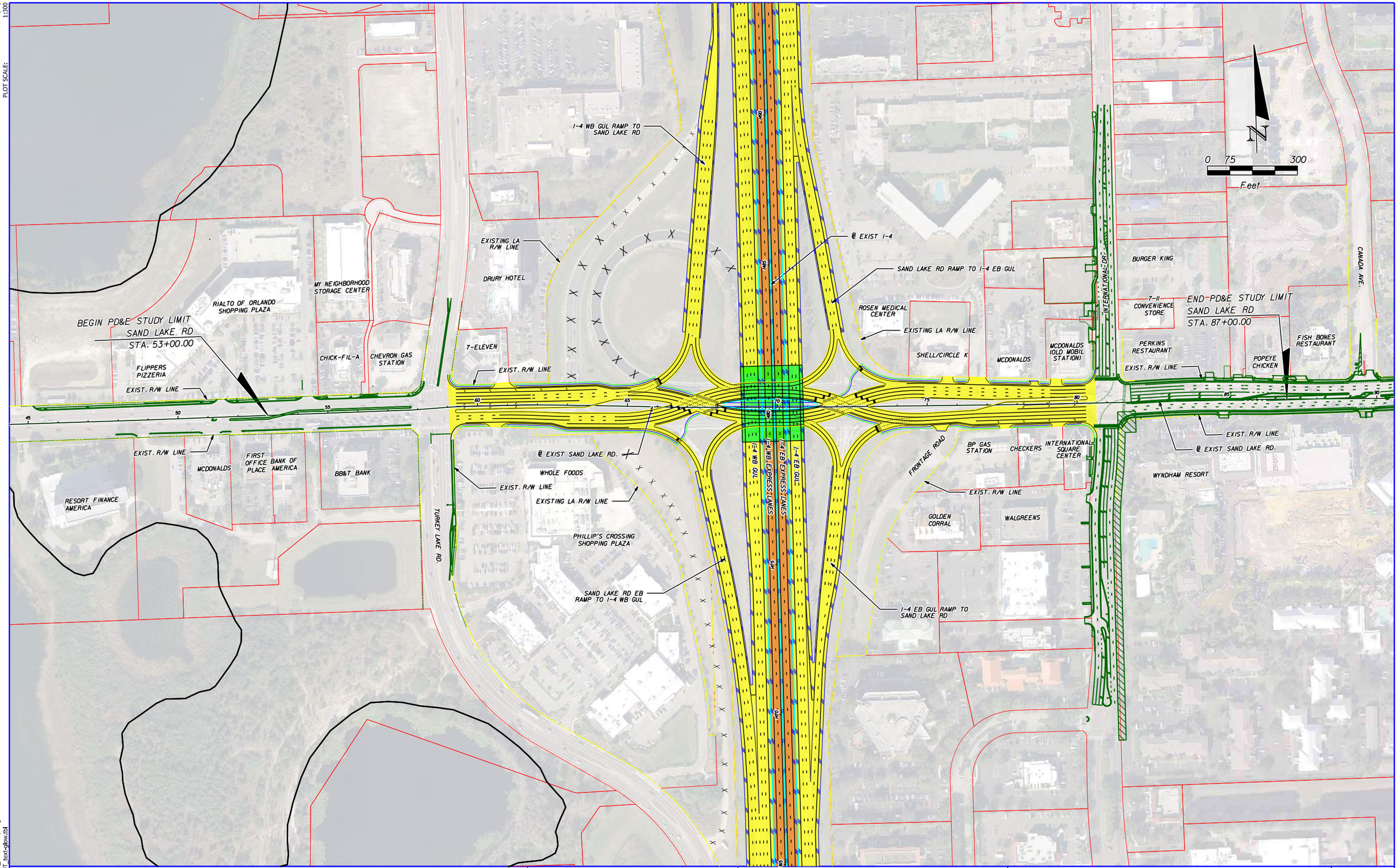
SHEET NO. 66

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:35:19 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd207_ALT2_SandLakeDDI.dgn

PLAN-300
16.5x10.6 (in.)
1:300

MODEL:
SHEET SIZE:
PLOT SCALE:



Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SAND LAKE RD ALT 2
SEGMENT 2

SHEET NO. **67**

mbacal 11/1/2016 10:35:35 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT2_SandLakeDDI.dgn

MODEL: SAND-01(SPUI-1of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MY NEIGHBORHOOD STORAGE CENTER

DRURY HOTEL

RIALTO OF ORLANDO SHOPPING PLAZA

N

0 20 100
Feet

BEGIN PD&E STUDY LIMIT
SAND LAKE RD
STA. 53+00.00

CHICK-FIL-A

CHEVRON GAS STATION

7-ELEVEN

FLIPPERS PIZZERIA

EXIST. R/W LINE

EXIST. R/W LINE

50

55

60

℄ EXIST SAND LAKE RD.

EXIST. R/W LINE

MCDONALDS

FIRST OFFICE PLACE

BANK OF AMERICA

BB&T BANK

RESORT FINANCE AMERICA

EXIST. R/W LINE

TURKEY LAKE RD.

MATCHLINE STA. 62+00.00

Color_FDOTPDF.pltcfg
FDOT_text-gdiw.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 3 (1 OF 3)
SEGMENT 2

SHEET NO. **68**

mbacal 11/1/2016 10:36:00 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT3_SandLakeSPUI.dgn

MODEL: SAND-02(SPUI- 2of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MATCHLINE STA. 62+00.00

MATCHLINE STA. 77+00.00

EXISTING LA R/W LINE

I-4 WB GUL RAMP TO SAND LAKE RD

SAND LAKE RD RAMP TO I-4 EB GUL

℄ EXIST I-4

ROSEN MEDICAL CENTER

EXISTING LA R/W LINE

SHELL/CIRCLE K

N

0 20 100

Feet

1485

1480

65

70

75

℄ EXIST SAND LAKE RD.

WHOLE FOODS

EXISTING LA R/W LINE

SAND LAKE RD EB RAMP TO I-4 WB GUL

PHILLIP'S CROSSING SHOPPING PLAZA

I-4 WB GUL

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

BP GAS STATION

FRONTAGE ROAD

EXISTING LA R/W LINE

I-4 EB GUL RAMP TO SAND LAKE RD

EXIST. R/W LINE

GOLDEN CORRAL

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 3 (2 OF 3)
SEGMENT 2

SHEET NO. 69

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:36:02 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd207_ALT3_SandLakeSPUI.dgn

MODEL: SAND-03(SPUI- 3of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

BURGER KING
INTERNATIONAL DR
7-11 CONVENIENCE STORE
PERKINS RESTAURANT
MCDONALDS
MCDONALDS (OLD MOBIL STATION)
EXIST. R/W LINE
POPEYE CHICKEN
FISH BONES RESTAURANT
CANADA AVE.
END PD&E STUDY LIMIT
SAND LAKE RD
STA. 87+00.00
MARRIOTT RESIDENCE INN
EXIST. R/W LINE
N
0 20 100
Feet
MATCHLINE STA. 77+00.00
80
85
90
℄ EXIST SAND LAKE RD
EXIST. R/W LINE
BP GAS STATION
CHECKERS
INTERNATIONAL SQUARE CENTER
EXIST. R/W LINE
WYNDHAM RESORT
WALGREENS

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 3 (3 OF 3)
SEGMENT 2

SHEET NO. **70**

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

mbacal 11/1/2016 10:36:05 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122O1\Segment 2\roadway\planrd207_ALT3_SandLakeSPUI.dgn

PLAN-300
16.5x10.6 (in.)
1:300

MODEL:
SHEET SIZE:
PLOT SCALE:

I-4 WB GUL RAMP TO SAND LAKE RD

1490

1485

@ EXIST I-4

SAND LAKE RD RAMP TO I-4 EB GUL

0 75 300

Feet

N

EXISTING LA R/W LINE

DRURY HOTEL

MY NEIGHBORHOOD STORAGE CENTER

RIALTO OF ORLANDO SHOPPING PLAZA

BEGIN PD&E STUDY LIMIT
SAND LAKE RD
STA. 53+00.00

FLIPPERS PIZZERIA

CHICK-FIL-A

CHEVRON GAS STATION

7-ELEVEN

EXIST. R/W LINE

ROSEN MEDICAL CENTER

EXISTING LA R/W LINE

SHELL/CIRCLE K

MCDONALDS

MCDONALDS (OLD MOBIL STATION)

INTERNATIONAL DR.

BURGER KING

7-11 CONVENIENCE STORE

END PD&E STUDY LIMIT
SAND LAKE RD
STA. 87+00.00

PERKINS RESTAURANT

FISH BONES RESTAURANT

POPEYE CHICKEN

CANADA AVE.

EXIST. R/W LINE

45 50 55 60 65 70 75 80 85 90

EXIST. R/W LINE

MCDONALDS

FIRST OFFICE BANK OF PLACE AMERICA

BB&T BANK

RESORT FINANCE AMERICA

@ EXIST SAND LAKE RD.

WHOLE FOODS

EXIST. R/W LINE

EXISTING LA R/W LINE

PHILLIP'S CROSSING SHOPPING PLAZA

TURKEY LAKE RD.

SAND LAKE RD EB RAMP TO I-4 WB GUL

I-4 WB GUL

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

1475

1470

595

FRONTAGE ROAD

BP GAS STATION

CHECKERS

INTERNATIONAL SQUARE CENTER

EXIST. R/W LINE

GOLDEN CORRAL

WALGREENS

I-4 EB GUL RAMP TO SAND LAKE RD

EXIST. R/W LINE

@ EXIST SAND LAKE RD.

WYNDHAM RESORT

Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES		
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SAND LAKE RD ALT 3
SEGMENT 2

SHEET NO. **71**

mbacal 11/1/2016 10:36:07 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122201\Segment 2\roadway\planrd207_ALT3_SandLakeSPUI.dgn

MODEL: SAND-01(DD)-1of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MY NEIGHBORHOOD STORAGE CENTER

DRURY HOTEL

RIALTO OF ORLANDO SHOPPING PLAZA

N

0 20 100

Feet

BEGIN PD&E STUDY LIMIT
SAND LAKE RD
STA. 53+00.00

CHICK-FIL-A

CHEVRON GAS STATION

7-ELEVEN

FLIPPERS PIZZERIA

88

EXIST. R/W LINE

EXIST. R/W LINE

50

55

SAND LAKE ROAD

60

℄ EXIST SAND LAKE RD.

EXIST. R/W LINE

PARCEL ID: 35-23-28-0000-00-016
AREA TAKING: 5 SF

PARCEL ID: 35-23-28-0000-00-009
AREA TAKING: 125 SF

MCDONALDS

FIRST OFFICE PLACE

BANK OF AMERICA

BB&T BANK

99

98

87

RESORT FINANCE AMERICA

EXIST. R/W LINE

PARCEL ID: 35-23-28-0000-00-010
AREA TAKING: 996 SF

93

PARCEL ID: 35-23-28-7117-01-000
AREA TAKING: 73 SF

PARCEL ID: 35-23-28-0000-00-042
AREA TAKING: 289 SF

MATCHLINE STA. 62+00.00

MATCHLINE 1

Color_FDOTPDF.pltcfg
FDOT_text-sjkw.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W		GENERAL USE LANES	
PROPOSED LA R/W		EXPRESS LANES	
PROPOSED FDOT R/W		EXISTING BRIDGE	
EXISTING R/W		PROPOSED BRIDGE	
PARCEL LINES		RAIL CORRIDOR (AERIAL)	
BARRIER WALL		FUTURE EXISTING CONDITION	

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 4 (1 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **72**

mbacal 11/1/2016 10:36:12 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT4_SandLakeDDI-L00P.dgn

MODEL: SAND-02(DDI- 2of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MATCHLINE STA. 62+00.00

MATCHLINE STA. 77+00.00

I-4 WB GUL RAMP TO SAND LAKE RD

EXISTING LA R/W LINE

POND 206 (RECOMMENDED)

SAND LAKE WB TO SB TURKEY LAKE RD

℄ EXIST I-4

SAND LAKE RD RAMP TO I-4 EB GUL

ROSEN MEDICAL CENTER

N

0 20 100

Feet

EXISTING LA R/W LINE

SHELL/CIRCLE K

WB SAND LAKE ROAD

WB SAND LAKE ROAD

EB SAND LAKE ROAD

EB SAND LAKE ROAD

65

70

75

1485

0847

℄ EXIST SAND LAKE RD.

PARCEL ID: 35-23-28-7113-01-000
AREA TAKING: 170 SF

POND 206A (RECOMMENDED)

75

WHOLE FOODS

SAND LAKE RD RAMP TO I-4 WB GUL

EXISTING R/W LINE

PROPOSED LA R/W LINE

74

PHILLIP'S CROSSING SHOPPING PLAZA

I-4 WB GUL

I-4 WB EXPRESS LANES

I-4 EB EXPRESS LANES

I-4 EB GUL

BP GAS STATION

FRONTAGE ROAD

89

EXISTING LA R/W LINE

I-4 EB GUL RAMP TO SAND LAKE RD

EXIST. R/W LINE

GOLDEN CORRAL

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl
PRINT DRIVER:
PEN TABLE:

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 4 (2 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 73

mbacal 11/1/2016 10:36:14 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122201\Segment 2\roadway\planrd207_ALT4_SandLakeDDI-L00P.dgn

MODEL: SAND=03(DDI- 3of3)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

MATCHLINE STA. 77+00.00

BURGER KING
INTERNATIONAL DR.
7-11 CONVENIENCE STORE
PERKINS RESTAURANT
MCDONALDS
MCDONALDS (OLD MOBIL STATION)
92
EXIST. R/W LINE
POPEYE CHICKEN
FISH BONES RESTAURANT
CANADA AVE.
END PD&E STUDY LIMIT
SAND LAKE RD
STA. 87+00.00
MARRIOTT RESIDENCE INN
EXIST. R/W LINE
N
0 20 100
Feet
80
85
90
SAND LAKE ROAD
℄ EXIST SAND LAKE RD
EXIST. R/W LINE
BP GAS STATION
CHECKERS
INTERNATIONAL SQUARE CENTER
90
91
EXIST. R/W LINE
WYNDHAM RESORT
WALGREENS

Color_FDOTPDF.pltcfg
FDOT_text-qlow.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

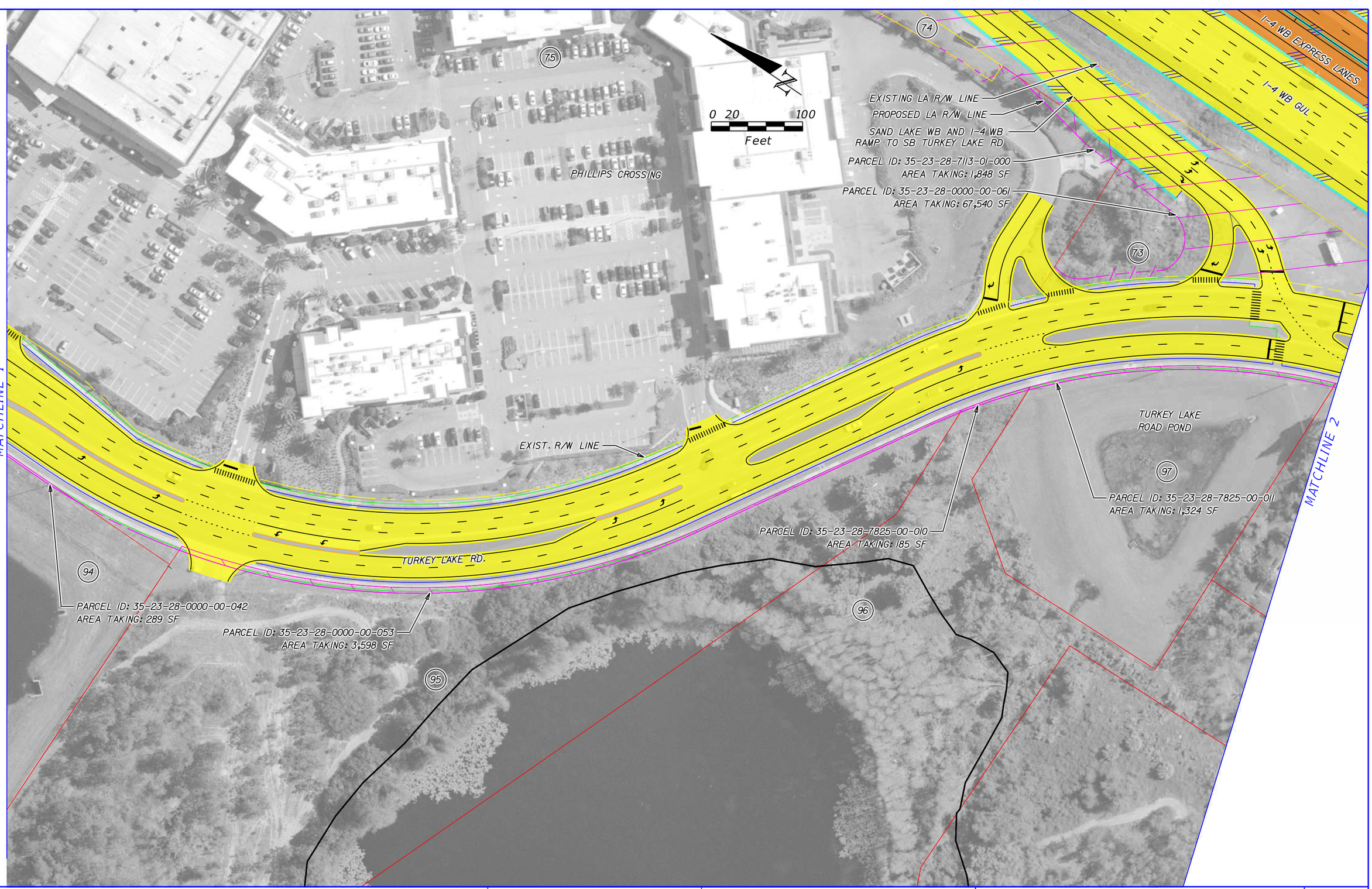
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 4 (3 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. **74**

mbacal 11/1/2016 10:36:16 AM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT4_SandLakeDDI-L00P.dgn

MODEL: SAND-04 (DD1-6of5)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100



EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
SAND LAKE RD ALT 4 (4 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO.
75

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-gkw.tbl

mbacal 11/1/2016 10:36:18 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\roadway\planrd207_ALT4_SandLakeDDI-L00P.dgn

MODEL: SAND-05 (DDI-5of5)
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:100

I-4 EB GUL

I-4 EB EXPRESS LANES

I-4 WB EXPRESS LANES

I-4 WB GUL

1455

1450

EXISTING LA R/W LINE

TURKEY LAKE RD.

PARCEL ID: 35-23-28-0000-00-061
AREA TAKING: 67,540 SF

PARCEL ID: 35-23-28-7825-00-012
AREA TAKING: 3,072 SF

PHILLIPS VILLAGE

MATCHLINE 2

N

0 20 100
Feet

EXISTING LA R/W	GENERAL USE LANES		
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR (AERIAL)		
BARRIER WALL	FUTURE EXISTING CONDITION		

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

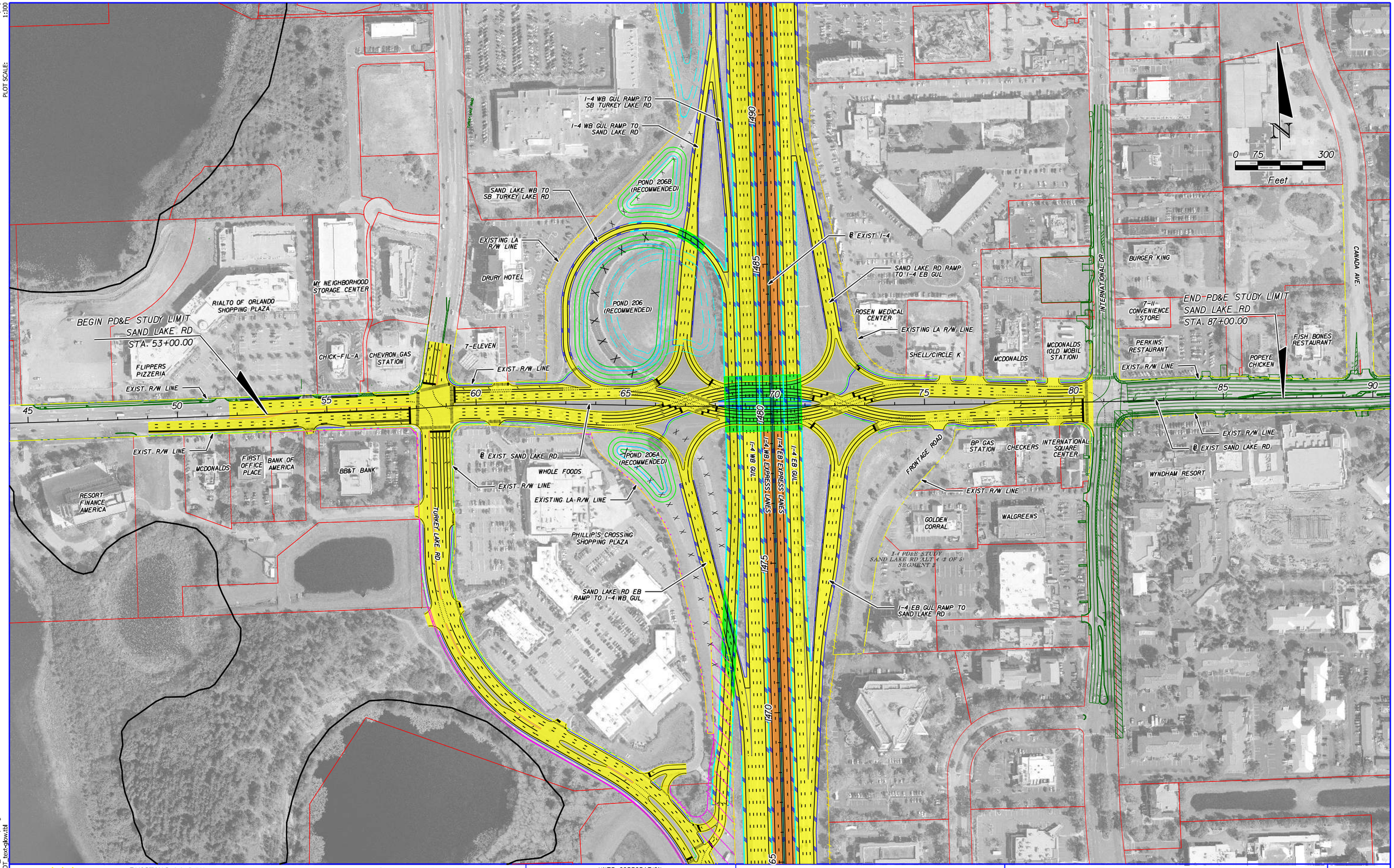
I-4 PD&E STUDY
SAND LAKE RD ALT 4 (5 OF 5)
(RECOMMENDED ALTERNATIVE)
SEGMENT 2

SHEET NO. 76

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT_text-qlow.tbl

PLAN-300
16.5x10.6 (in.)
1:300

MODEL:
SHEET SIZE:
PLOT SCALE:



Color_FDOTPDF.pltcfg
FDOT_text-glow.tbl

PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR (AERIAL)
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407)805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
I-4 / SAND LAKE RD ALT 4 (RECOMMENDED ALTERNATIVE) SEGMENT 2

SHEET NO.
77

mbacal 11/1/2016 10:36:24 AM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\432100122201\Segment 2\roadway\planrd207_ALT4_SandLakeDDI-LOOP.dgn

Appendix B - **Public Involvement Documentation/Coordination**



Public Hearing

I-4, from West of the Beachline Expressway/SR 528 to West of Kirkman Road/SR 435

October 10, 2016
5:30 p.m. to 7:30 p.m.
Wyndham Orlando Resort - International Drive
8001 International Drive
Orlando, FL 32819

PUBLIC HEARING NOTICE – I-4 Beyond the Ultimate Project Development and Environment (PD&E) Reevaluation Study

Financial Project ID Number: 432100-1-22-01 Design Project ID Number: 242484-7-32-01 Federal Aid Project Number: 0041-227-I

The Florida Department of Transportation (FDOT) is holding a public hearing for the "I-4 Beyond the Ultimate" PD&E Study. This study focuses on the concept of adding express lanes on Interstate 4 (I-4), from west of US 27 to west of Kirkman Road/State Road (SR) 435 to the west, and from east of SR 434 to east of SR 472 to the east; a distance of approximately 40 miles. At this meeting we will present the recommended design alternative for adding express lanes on the segment of I-4 from West of the Beachline Expressway/SR 528 to West of Kirkman Road/SR 435 in Orange County. This hearing is being conducted to give interested persons an opportunity to express their views concerning the location, conceptual design, and social, economic, and environmental effects of the proposed improvements.

The hearing will be Monday, October 10, 2016, from 5:30 p.m. to 7:30 p.m. at the Wyndham Orlando Resort International Drive, located at 8001 International Drive, Orlando, FL 32819. It will begin as an open house at 5:30 p.m. with a formal presentation at 6:00 p.m., followed by a public comment period. Persons wishing to submit written statements, in place of or in addition to oral statements, may do so at the hearing or by sending them to Beata Stys-Palasz, P.E. at 719 South Woodland Boulevard, DeLand, Florida 32720, by phone 386-943-5418, or by email to beata.stys-palasz@dot.state.fl.us. All statements postmarked no later than October 20, 2016 will become a part of the public hearing record.

The draft environmental and engineering reports developed by the Department will be available for public review from September 19, 2016 through October 20, 2016 at the Orange County Public Library, Southwest Branch, located at 7255 Della Drive, Orlando, FL 32819 or on the study website - www.i4express.com.

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to FDOT compliance with Title VI may do so by contacting Jennifer Smith, FDOT District Five Title VI Coordinator by phone at 386-943-5367, or via email at jennifer.smith2@dot.state.fl.us.

Persons with disabilities who require special accommodations under the Americans with Disabilities Act or persons who require translation services (free of charge) should contact Beata Stys-Palasz, P.E., FDOT Project Manager, by phone at 386-943-5418, or via email at beata.stys-palasz@dot.state.fl.us at least seven (7) days prior to the hearing. If you are hearing or speech impaired, please contact us by using the Florida Relay Service, 1-800-955-8771 (TDD) or 1-800-955-8770 (Voice).

Florida Department of Transportation

RICK SCOTT
GOVERNOR

719 S. Woodland Boulevard
DeLand, FL 32720-6834

JIM BOXOLD
SECRETARY

September 16, 2016

Subject: "I-4 Beyond the Ultimate" Project Development and Environment (PD&E) Reevaluation Study
From the West of the Beachline Expressway/State Road (SR) 528 to West of Kirkman Road/SR 435
Orange County
Financial Project ID Number: 432100-1-22-01
Design Project ID Number: 242484-7-32-01
Federal Aid Project Number: 0041-227-I

Dear Stakeholder,

On behalf of the Florida Department of Transportation (FDOT), I invite you to attend a public hearing for the "I-4 Beyond the Ultimate" PD&E Study. This study focuses on the concept of adding express lanes on Interstate 4 (I-4), from west of US 27 to west of Kirkman Road/State Road (SR) 435 to the west, and from east of SR 434 to east of SR 472 to the east; a distance of approximately 40 miles. At this meeting we will present the recommended design alternative for adding express lanes on the segment of I-4 from west of the Beachline Expressway/SR 528 to west of Kirkman Road/SR 435 in Orange County. This hearing is being conducted to give interested persons an opportunity to express their views concerning the location, conceptual design, and social, economic, and environmental effects of the proposed improvements.

The hearing will be Monday, October 10, 2016, from 5:30 p.m. to 7:30 p.m. at the Wyndham Orlando Resort International Drive, located at 8001 International Drive, Orlando, FL 32819. It will begin as an open house at 5:30 p.m. with a formal presentation at 6:00 p.m., followed by a public comment period.

Persons wishing to submit written statements, in place of or in addition to oral statements, may do so at the hearing or by sending them to Beata Stys-Palasz, P.E. at 719 South Woodland Boulevard, DeLand, Florida 32720, by phone 386-943-5418, or by email to beata.stys-palasz@dot.state.fl.us. All statements postmarked no later than October 20, 2016 will become a part of the public hearing record.

The draft environmental and engineering reports developed by the Department will be available for public review from September 19, 2016 through October 20, 2016 at the following locations:

1. The Orange County Public Library, Southwest Branch, located at 7255 Della Drive, Orlando, FL 32819
2. The study website - www.i4express.com

Public participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. Persons wishing to express their concerns relative to FDOT compliance with Title VI may do so by contacting Jennifer Smith, FDOT District Five Title VI Coordinator by phone at 386-943-5367, or via email at jennifer.smith2@dot.state.fl.us.

Persons with disabilities who require special accommodations under the Americans with Disabilities Act or persons who require translation services (free of charge) should contact Beata Stys-Palasz, P.E., by phone at 386-943-5418, or via email at beata.stys-palasz@dot.state.fl.us at least seven (7) days prior to the hearing. If you are hearing or speech impaired, please contact us by using the Florida Relay Service, 1-800-955-8771 (TDD) or 1-800-955-8770 (Voice).

For information pertaining to this project, please contact Beata Stys-Palasz, P.E., FDOT Project Manager, by phone at 386-943-5418, or via email at beata.stys-palasz@dot.state.fl.us.

Sincerely,



Beata Stys-Palasz, P.E.
FDOT Project Manager

"BEYOND I-4 ULTIMATE" PD&E REEVALUATION STUDY

FROM THE BEACHLINE EXPRESSWAY TO KIRKMAN ROAD

Monday, October 10, 2016

Open House - 5:30 p.m. Formal Presentation - 6:00 p.m.

FPID: 432100-1-22-01

Name (PLEASE PRINT)	Mailing Address (PLEASE PRINT)	E-mail or Phone Number
MARK HAMILL	3180 W. SR 434 Suite 1150, Longwood FL 32779	markhamill@global-5.com
MATT HAMILL	"	matt@global-5.com
STEVE BOYLAN		S.BOYLAN@GAICONSULTANTS.COM
Steve Noppinger		steve.noppinger@aecom.com
~~Jennifer Vreeland~~	~~FDOT~~	
Hazem Ibrahim	GAI Consultants 618 E South Street, Orlando 32801	h.ibrahim@gaiconsultants.com
DEC KYLE GABBARD	OCSO	
Brian Sparks	4343 Anchor Plaza Pkwy, Suite 155, Tampa, FL 33634	bsparks@walshgroup.com
Thomas Ping	OCFRD	Thomas.Ping@OCFL.Net
Michelle Kendall	301 E. Pine St. St. 1020 Orlando, FL 32801	Kendall@ftworld.com
Brent A. Lacy	400 N. Ashley Drive, Ste 1900, Tampa FL 33602	blacy@vhb.com
Steve Ferrell	HDR	
Albert Gallo	Rose Hotels	
ROBERT NOWELL		
NANCY LUO	10150 Highland Manor Dr #470, Tampa, FL 33610	NANCY.LUO@US.MCD.COM
XAVIER ARROYO	16024 Citrus Knoll Drive, Winter Garden FL 34787	Xavier.arroyo@tylin.com
Hari Salkapuram	315 E Robinson St. Orlando, 32801	hari094@gmail.com
Brian Stanger		

"BEYOND I-4 ULTIMATE" PD&E REEVALUATION STUDY

FROM THE BEACHLINE EXPRESSWAY TO KIRKMAN ROAD

Monday, October 10, 2016

Open House - 5:30 p.m. Formal Presentation - 6:00 p.m.

FPID: 432100-1-22-01

Name (PLEASE PRINT)	Mailing Address (PLEASE PRINT)	E-mail or Phone Number
Jorge Colon Albertorio	719 S Woodland Blvd DeLand FL	
	Jorge.Colon@dot.State.fl.us	386-943-5023
Dana English	719 S. Woodland Blvd DeLand	dana.english@dot.state.fl.us 386 943 5030
JOSEPH F LIQUORI	" "	JOSEPH.LIQUORI@DOT.STATE.FL.US 386-943-5059
Michael Hart	mhart@olivegarden.com	804-349-7226
Darrell Sullivan	DXSullivan@Olive Garden.com	—
Amanda Alger	Aalger@olivegarden.com	321-695-1295
Dan Langley	dlangley@fishbacklaw.com	407-262-2440
Greg Smith	ORL, FL smithgt@pbworld.com	407. 587-7000
Abhay Thorat	2202 N. Westshore Blvd. Tampa, FL	Thorat@Pbworld.com/813-520 4358
Randy Miner		r.miner@gaiconsultants.com

Public Hearing **Wyndham Orlando Resort, 8001 International Drive, Orlando, FL**

"BEYOND I-4 ULTIMATE" PD&E REEVALUATION STUDY

FROM THE BEACHLINE EXPRESSWAY TO KIRKMAN ROAD

Monday, October 10, 2016

Open House - 5:30 p.m. Formal Presentation - 6:00 p.m.

FPID: 432100-1-22-01

PROJECT TEAM MEMBERS

Name (PLEASE PRINT)	Mailing Address (PLEASE PRINT)	E-mail or Phone Number
Beata Stys-Palasz	FDOT, 719 S. Woodland Blvd, DeLand, FL	Beata.stys-palasz@dot.state.fl.us
Heather Johnstone	FDOT, 719 S. Woodland Blvd, DeLand, FL	Heather.johnstone@dot.state.fl.us
Catalina Chacon	FDOT, 719 S. Woodland Blvd, DeLand, FL	Catalina.chacon@dot.state.fl.us
Luis Diaz	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	ldiaz@hntb.com
Robert Denney	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	rdenney@hntb.com
Colleen Jarrell	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	cjarrell@hntb.com
Deepika Fields	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	dkfields@hntb.com
Camila Amaya	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	smoss@hntb.com
Sanam Rai	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	srai@hntb.com
Mark Bacal	HNTB, 610 Crescent Executive Ct, Suite 400, Lake Mary	mbacal@hntb.com
John Moore	Stantec, 615 Crescent Executive Ct, 248, Lake Mary	John.moore@stantec.com
Mike Drauer	Stantec, 615 Crescent Executive Ct, 248, Lake Mary	Mike.drauer@stantec.com
Michael Dollery	FDOT, 719 S. Woodland Blvd, DeLand, FL	Michael.dollery@dot.state.fl.us
Steve Olson	FDOT, 719 S. Woodland Blvd, DeLand, FL	Steve.olson@dot.state.fl.us
Brian Stanger	FDOT, 719 S. Woodland Blvd, DeLand, FL	Brian.Stanger@dot.state.fl.us
Amy Sirmans	FDOT, 719 S. Woodland Blvd, DeLand, FL	Amy.sirmans@dot.state.fl.us
Mary McGehee	FDOT, 719 S. Woodland Blvd, DeLand, FL	Mary.mcgehee@dot.state.fl.us
Jack Crahan	FPC Group, 101 N. Woodland Blvd, DeLand, FL	Jack@fpc-group.com
Jennifer Smith	FDOT, 719 S. Woodland Blvd, DeLand, FL	Jennifer.smith2@dot.state.fl.us

Public Hearing — **Wyndham Orlando Resort, 8001 International Drive, Orlando, FL**

"BEYOND I-4 ULTIMATE" PD&E REEVALUATION STUDY

FROM THE BEACHLINE EXPRESSWAY TO KIRKMAN ROAD

Monday, October 10, 2016

Open House - 5:30 p.m. Formal Presentation - 6:00 p.m.

FPID: 432100-1-22-01

PROJECT TEAM MEMBERS

Name (PLEASE PRINT)	Mailing Address (PLEASE PRINT)	E-mail or Phone Number
Frank O'Dea	FDOT, 719 S. Woodland Blvd, DeLand, FL	Frank.odea@dot.state.fl.us
Jessica Ottaviano	FDOT, 719 S. Woodland Blvd, DeLand, FL	Jessica.keane@dot.state.fl.us
Jennifer Horton	FDOT, 719 S. Woodland Blvd, DeLand, FL	Jennifer.Horton@dot.state.fl.us
Loreen Bobo	FDOT, 719 S. Woodland Blvd, DeLand, FL	Loreen.Bobo@dot.state.fl.us
Jennifer Vreeland JV	FDOT, 719 S. Woodland Blvd, DeLand, FL	Jennifer.vreeland@dot.state.fl.us
DENNIS KYLE	11	DENNIS.KYLE@DOT.STATE.FL.US

Public Hearing **Wyndham Orlando Resort, 8001 International Drive, Orlando, FL**

SPEAKER REQUEST CARD

To be completed prior to making a recorded statement

PUBLIC HEARING – OCTOBER 10, 2016

I-4 BEYOND THE ULTIMATE PD&E STUDY

FROM WEST OF WEST OF SR 528 (BEACHLINE EXPRESSWAY)

TO WEST OF SR 435 (KIRKMAN ROAD)

FPID NO.: 432100-1-22-01

PLEASE PRINT

1

Name: Dan Langley

Address: 1947 Lee Road

Winter Park FL 32789

City State Zip

Affiliation: Attorney for Smith Dymmek, LLC

Note: In order to allow all persons the opportunity to speak, please limit your comments to 3 minutes. Public Participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. All verbal or written comments provided become part of the study's project file. This information may be provided to other individuals who make a public records request.

SPEAKER REQUEST CARD

To be completed prior to making a recorded statement

PUBLIC HEARING – OCTOBER 10, 2016

I-4 BEYOND THE ULTIMATE PD&E STUDY

FROM WEST OF WEST OF SR 528 (BEACHLINE EXPRESSWAY)

TO WEST OF SR 435 (KIRKMAN ROAD)

FPID NO.: 432100-1-22-01

PLEASE PRINT

2

Name: ROBERT NOWELL

Address: 115 WILTON PL.

DUP. FL 33837

City State Zip

Affiliation:

Note: In order to allow all persons the opportunity to speak, please limit your comments to 3 minutes. Public Participation is solicited without regard to race, color, national origin, age, sex, religion, disability or family status. All verbal or written comments provided become part of the study's project file. This information may be provided to other individuals who make a public records request.

407.423.9900
Fax 407.841.2779
Toll Free 855-MYDEPOS
MILESTONE I REPORTING COMPANY
TOMORROW'S TECHNOLOGY TODAY

I-4 BEYOND THE ULTIMATE

PD&E REEVALUATION STUDY

SEGMENT 2: FROM WEST OF STATE ROAD 528
TO WEST OF STATE ROAD 435
FDOT PROJECT NUMBER: 432100-1-22-01

COPY

_____/

PUBLIC HEARING

DATE: OCTOBER 10, 2016

REPORTER: KAYLYN REINHOLD

PLACE: WYNDHAM RESORT INTERNATIONAL DRIVE
8001 INTERNATIONAL DRIVE
ORLANDO, FLORIDA 32819

APPEARANCES

BEATA STYS-PALASZ, P.E.
FLORIDA DEPARTMENT OF TRANSPORTATION

DAN LANGLEY, ESQUIRE
ATTORNEY FOR SMITH DYMMEK, LLC

ROBERT NOWELL

COLLEEN JARRELL
HNTB CORPORATION

STIPULATION

THE PUBLIC HEARING HELD AT WYNDHAM RESORT INTERNATIONAL DRIVE, 8001 INTERNATIONAL DRIVE, ORLANDO, FLORIDA 32819 ON MONDAY, THE 10TH DAY OF OCTOBER, 2016 AT APPROXIMATELY 5:57 P.M., SAID PUBLIC HEARING WAS TAKEN PURSUANT TO THE FLORIDA RULES OF CIVIL PROCEDURE.

PROCEEDINGS

MS. STYS-PALASZ: And good evening, everybody. The Florida Department of Transportation would like to welcome you to a public hearing for the PD&E study for I-4 Beyond the Ultimate. My name is Beata Stys-Palasz and I am the design project manager for the PD&E section and also overlooking the design of I-4 BTU. This public hearing is relative to Financial Management Project Number 432100-1-22-01 and Federal Aid Project Number 0041-227-I. The proposed improvements involves widening Interstate 4 to ten lanes with three general-use lanes and two express lanes in each direction. This PD&E really extends from Polk County from west of US 27 all the way to Kirkman Road where we are meeting right now. I-4 Ultimate, this hearing is only for one section of this project, what is from west of State Road 528 to west of Kirkman. Here with me tonight is the design -- the PD&E consultant project manager, Luis Diaz, and all other representatives of the FDOT and consultant project design team. If you have any question about future purchases of right-of-way, our right-of-way staff is -- has its table at the back. I did not recognize any familiar faces, but I would like to recognize any federal, state, county, or

city official who may be present tonight. Anybody? Okay. I was right. Now, we will start our presentation. Thank you.

(WHEREUPON, A SLIDE SHOW WAS PLAYED)

NARRATOR: The State of Florida Department of Transportation, also known as FDOT, would like to welcome you to the public hearing for the Interstate 4 Beyond the Ultimate Project Development and Environment Study. This public hearing is being held relative to FDOT Financial Project ID Number 432100-1-22-01 and Federal Aid Project Number 0041-227-I. This public hearing was advertised consistent with federal and state requirements and is being conducted consistent with the Americans with Disabilities Act of 1990. Advertisements for this public hearing included letters to elected and agency officials, letters to the property owners, newspaper ads, notifying local media, and advertising in the Florida Administrative Register. The Florida Department of Transportation is required to comply with various nondiscrimination laws and regulations, including Title VI of the Civil Rights Act of 1964. This hearing is being held to give all interested persons the right to understand the project and comment on their concerns to the

department. Public participation at this hearing is solicited without regard to race, color, national origin, age, sex, religion, disability, or family status. Persons wishing to express their concerns about Title VI may do so by contacting the individuals listed on this slide, which is also provided in the project newsletter and on a board displayed at this hearing. The proposed improvement involves adding express lanes on I-4 from US 27 to Kirkman Road to the west and from State Road 434 to State Road 472 to the east. The purpose of this public hearing is to share information with the general public about the alternatives under consideration, the proposed improvements, and their potential environmental impacts. This public hearing also serves as an official forum providing an opportunity to the public to express their opinions and concerns regarding the location, conceptual design, and potential social, economic, and environmental effects of the proposed improvement on the community. There is a court reporter present at this hearing and tonight's proceedings are being recorded. An official transcript of the hearing will be produced. Following this presentation, the floor will be open

for public comments. All written material received at this public hearing and at the Florida Department of Transportation office postmarked no later than October 15, 2016 or through the project website will become a part of the public record for this hearing. The Project Development and Environment Study, or PD&E, is the second step of the project development process that the Florida Department of Transportation follows to evaluate social, cultural, economic, and environmental impacts associated with a planned transportation improvement project. The PD&E process was established by the FDOT as the state's procedure for complying with the National Environmental Policy Act, or NEPA, of 1969 and Florida statutes. NEPA is a United States environmental law that requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions. This phase involves the preparation of all preliminary engineering and environmental documentation required for study approval and subsequent funding. During a PD&E study, several alternatives are developed to meet the purpose and need for the project. These alternatives are developed with input from the public, local government, and environmental agencies

throughout the study process. Keeping the public involved and informed throughout the study is paramount to the success of a PD&E study. This study is a reevaluation of PD&E studies that were previously done 14 to 17 years ago. The section from State Road 435, Kirkman Road, to State Road 434 in Orange and Seminole Counties received approval from the Federal Highway Administration and are currently under construction to include the addition of express lanes. The study limits are along Interstate 4, from west of State Road 528 to west of State Road 435. This study proposes to widen the interstate from four to ten lanes; this includes six general-use lanes and four express lanes. The study corridor is approximately four miles in length and is located in Orange County. The MetroPlan Orlando Metropolitan Planning Organization works with the Florida Department of Transportation and local governments to fund and implement projects identified through various plans developed by the MPO. It should be noted that the I-4 Beyond the Ultimate Segment 2 was ranked number one on the MetroPlan Orlando priority list adopted September 14, 2016. This project segment is identified in the MetroPlan Orlando 2040 Long-Range Transportation

Plan. The project is consistent with the State Transportation Improvement Program and the transportation element of the Orange County and City of Orlando comprehensive plans. The purpose of this study is to accommodate future traffic needs based on anticipated population and employment growth, and enhance safety and mobility along the study corridor. The original PD&E study included high-occupancy vehicle, or HOV lanes, in the median. This re-evaluation includes six general-use lanes, three in each direction; and four express lanes, two in each direction. The widening of I-4 is proposed to meet the design year 2040 projected traffic volumes. The goal of the project is to maintain acceptable levels of service along the corridor for the design year 2040. Levels of service are measured on an A through F grading scale with A being the best and F failing. Drivers will experience levels of service E and F under the original build condition in the design year 2040 along some portions of the corridor. Levels of service can be improved to D or better with the express lanes' widening improvements of the recommended build alternative. Typical sections are detailed cross-section depictions of a roadway's

principal elements that are standard between certain segment limits and show typical conditions only. The existing typical section consists of three 12-foot travel lanes in each direction with 12-foot inside and outside shoulders. The existing right-of-way varies from 300 to 330 feet. The following is a summary of coordination, meetings, and presentations held with local agencies and stakeholders to discuss the study, which includes Orange County, MetroPlan Orlando, Florida's Turnpike Enterprise, utility companies, and South Florida Water Management District. A project website, www.i4express.com, was developed to allow the public to communicate with the study team and provide comments. An alternatives public meeting was held on January 30, 2014. 33 members of the public attended this meeting. No written comments were received. Public input from these meetings has factored into the study decision-making process. Today's hearing will provide the public with another opportunity to comment on the proposed improvements under consideration. A no- build and build alternative are being considered as part of this PD&E study. The no-build alternative maintains the existing facility as-is. No improvements are made

and there is no congestion relief along the corridor.

The no-build alternative is also evaluated as a baseline for comparison with the build alternative. We will now discuss the recommended build alternative, which proposes to widen Interstate 4 to ten lanes with five lanes in each direction: three general-use lanes and two express lanes. An evaluation matrix comparing the no- build alternative with the recommended roadway build alternative is on display here tonight. The proposed typical section consists of two 12-foot wide express lanes with 4-foot inside and 10-foot outside shoulders, and three 12-foot wide general-use lanes with 10-foot inside and 12-foot outside shoulders in each direction. A 2-foot wide barrier wall separates the general-use from the express lanes. The minimum right-of-way width required to accommodate this typical section is 300 feet. A 44-foot rail corridor is preserved within the median from east of Central Florida Parkway to State Road 528. The proposed horizontal alignment of I-4 Segment 2 closely follows the existing I-4 alignment. Right-of-way will be required for the roadway mainline improvements, stormwater management facilities, and floodplain compensation sites. The total anticipated right-of-way impacts involve full or

partial acquisition of 29 parcels for a total of approximately 25 acres. The recommended alternative for the State Road 528 interchange proposes a systems interchange, which maintains a freeway terminal junction design. The proposed design provides direct-connect access between the I-4 express lanes and general-use lanes and the State Road 528 express lanes and general-use lanes. Turkey Lake Road will be realigned with the recommended alternative. The recommended alternative for Sand Lake Road proposes modifying the existing partial cloverleaf interchange to a diverging diamond interchange, also known as a DDI. A DDI is designed so that each direction of traffic is split and crosses over itself. The traffic will temporarily drive on the opposite side of the roadway and cross back over on the other side of the interchange. In order to avoid wrong way movements through this type of interchange, the opposite directions of the roadway are intersected at an angle that is large enough to appear to the driver as if they are making a through movement and that the other side of the roadway is an intersecting street. A new ramp connection will be provided between I-4 westbound and Turkey Lake Road, eliminating the need for the westbound left turns at the Sand Lake Road and Turkey Lake Road intersection. The existing drainage systems

will be enhanced to accommodate stormwater runoff from the proposed roadway improvements. The stormwater management systems, proposed by this study, have been designed to meet the current requirements of the South Florida Water Management District and the Florida Department of Transportation. Stormwater treatment will be provided in wet detention ponds, located on- or off-site. The treatment facilities and locations are on exhibit here this evening, as well as in the documents on display. In accordance with current FDOT standards for road and bridge construction, all best management practices for erosion control and water quality considerations will be adhered to during the construction phase of the project. Pond siting evaluation criteria were developed to screen the various potential pond sites. Each of the criteria are evaluated for impacts, which are then used for comparison in order to identify overall suitability and select recommended ponds. Design criteria, as set forth by the South Florida Water Management District and FDOT, was used to determine pond sizing. The recommended pond sites for this study are labeled and illustrated on the design concept boards on display. To comply with various executive orders and other federal and state requirements, engineering and environmental information

was reviewed and evaluated to determine if there were any substantial impacts to social and economic, cultural, physical, and natural resources that may result from construction of the proposed improvements. The project improvements will have positive socioeconomic impacts on the study area as it improves mobility and relieves congestion. An archaeological survey was performed within the existing and proposed right-of-way. The results indicate that there are two archaeological occurrences within the study limits; neither are eligible for inclusion in the National Register of Historic Places. There are two historic resources constructed before 1971 within the study area; neither of these historic resources are recommended eligible for the National Register of Historic Places. No adverse effects to cultural resources are anticipated. The project was evaluated in accordance with Executive Order 11990 entitled "Protection of Wetlands." There are approximately 4.43 acres of direct wetland impacts and 9.32 acres of jurisdictional other surface water impacts associated with the recommended alternative. This project was evaluated for impacts to wildlife and habitat resources, including protected species, in accordance with Title 50, Code of Federal Regulations, Part 402 of the Endangered Species Act of

1973, as amended. It was determined that the project has either a "no effect" or "may affect," but is "not likely to adversely affect" any federal- or state-listed species. To avoid and/or minimize impacts to wildlife, FDOT will continue to coordinate with the US Fish and Wildlife Service and the Florida Fish and Wildlife Conservation Commission. FDOT will also conduct monitoring and assessment for specific species during the permitting phase. The proposed stormwater facilities will be designed to meet the current requirements of the South Florida Water Management District. Stormwater treatment will be provided by wet detention ponds, located on- or off-site. The pond locations are on exhibit here this evening, as well as in the documents on display. In accordance with Executive Order 11988 entitled "Floodplain Management," a floodplain analysis was performed. It was determined that no floodplain impacts are anticipated. Traffic noise impacts were evaluated in accordance with the Code of Federal Regulations, Part 772. Based on the results of a noise barrier evaluation, a noise barrier appears to be a reasonable and cost-feasible noise abatement method for the east side of I-4 adjacent to the McKinley at Monterey Lakes and the Sea Isle Luxury Apartments. Potentially contaminated sites in the vicinity of the

project corridor were identified and evaluated to determine if impacts would occur as a result of the proposed improvements. 124 potential contamination sites have been identified. None of the sites are rated as high risk, 19 are medium risk, and 115 are rated no risk or low risk of potential contamination. Additionally, of the 20 potential pond sites, none were rated as high risk, four were rated as medium risk, and 16 were rated as low risk. An air quality analysis was performed on the project. The analysis was conducted using the established FDOT air quality screening model. Air quality impacts are not expected to occur as a result of this project. Right-of-way acquisition is anticipated for the recommended alternative for roadway and drainage improvements. Approximately nine acres of additional right-of-way is anticipated for roadway improvements, and approximately 16 acres of additional right-of-way is anticipated for off-site ponds. In addition, there is a potential for two relocations. These anticipated relocations are displayed on the aerials available at tonight's hearing. All right-of-way acquisition will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970 and FDOT Real Estate Acquisition Process. Right-of-way requirements for the project are

on display here tonight. One of the unavoidable consequences on a project such as this is the necessary relocation of families or businesses. On this project, we anticipate the relocation of three families and one business. All right-of-way acquisition will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, commonly known as the Uniform Act. If you are required to make any type of move as a result of a Department of Transportation project, you can expect to be treated in a fair and helpful manner and in compliance with the Uniform Relocation Assistance Act. If a move is required, you will be contacted by an appraiser who will inspect your property. We encourage you to be present during the inspection and provide information about the value of your property. You may also be eligible for relocation advisory services and payment benefits. If you are being moved and you are unsatisfied with the department's determination of your eligibility for payment or the amount of that payment, you may appeal that determination. You will be promptly furnished necessary forms and notified of the procedures to be followed in making that appeal. A special word of caution -- if you move before you receive notification of the relocation benefits that you might be entitled

to, your benefits may be jeopardized. The relocation specialists who are supervising this program are here tonight. They will be happy to answer your questions and will also furnish you with copies of relocation assistance brochures. The estimated total cost for the recommended alternative will be approximately $401.3 million. This includes $308.5 million for construction and utility relocations, $43.4 million for right-of-way acquisition for roadway and pond improvements, and $48.4 million for final design and construction engineering and inspection. Over the next several months, FDOT will continue to finalize the analysis and will seek to approve the documents and improvements presented here at tonight's public hearing. Following approval, FDOT will continue with the design, right-of-way acquisition, and construction phases. Currently, there is no funding available for the construction phases. The study is anticipated to be completed in October 2016. Design is fully funded for this segment of I-4. Draft documents for this public hearing were available for review starting September 19, 2016 and will remain on display until October 20, 2016 at the Seminole County Public Library, Northwest Branch, and also on the study website www.i4express.com. These documents are also on display here tonight. No final decisions will be made until

after we review your comments. You may provide your comments in several ways. You may provide an oral statement to the court reporter present here tonight. Complete a speaker card and make an oral statement at the microphone during the public comment period. Complete a comment form and drop it in the comment box provided here at the hearing or mail your comments to the FDOT project manager at the address shown on the comment form. You may e-mail your comments to the FDOT at the address shown on the comment form or visit the project website and submit comments electronically. There is a dedicated page on the website for comments. All written material received at this public hearing and at the Florida Department of Transportation office, postmarked no later than ten days following the date of this public hearing, or through the project website, will become a part of the public record for this hearing. This concludes our presentation. Thank you.

(END OF SLIDE SHOW)

MS. STYS-PALASZ: I would like to add it that we have a small discrepancy in our script. The project is funded right now for construction in 2025 and also we are working to bring that -- maybe this date closer, but right now it's funded for construction in 2025.

MR. NOWELL: Can I ask you a question?

MS. STYS-PALASZ: That -- all that --

MR. NOWELL: Would you please repeat that? I -- the funding of 2025 blas, blasor something --

MS. STYS-PALASZ: The --

MR. NOWELL: Your --

MS. STYS-PALASZ: -- construction fund --

MR. NOWELL: The relation --

MS. STYS-PALASZ: -- the project construction is funded in 2025.

MR. NOWELL: Oh. That's -- I guess --

MS. STYS-PALASZ: And also, we are really impacting only one house. We understand we do not know how many people lives in the house. That was all. Thank you.

MS. JARRELL: So I have one public speaker card. If there's anybody else that wants to make a public statement?

MR. NOWELL: You need this thing to get a speaker card?

MS. JARRELL: No. Here, I'll give you a speaker card right here, sir. This --

MR. NOWELL: You need to translate. I didn't catch a lot of what she's said anyway. I don't know that I could hear his question on that -- set that

down there.

MS. JARRELL: Is there anybody else that would like a speaker card?

MR. NOWELL: Yes.

MS. JARRELL: We can go ahead and start with Dan Langley.

MR. LANGLEY: Is there a mic I'm supposed to speak in?

MS. JARRELL: Yeah, there is.

MR. NOWELL: If anybody else wants to --

MR. LANGLEY: Yes, sir.

MS. JARRELL: Do you think you can speak loud?

MR. LANGLEY: Yeah, I can speak loud. My name is Dan Langley. I -- I'm with Fishback Dominick law firm. I represent Se'Belle Smith Dymmek and Smith Dymmek, LLC for a property owner. Her clients are property owners. They own property located on Palm Parkway near Big Sand Lake, adjacent to that lake. This property has been in my client's family for generations. One of the great citrus grower families in central Florida. And they're slated for a -- one or two ponds. It's unclear from the documentation that we've gotten from DOT -- some differing information throughout the years, either slated for two ponds or one pond, which they're calling a 199B

or a 200B. My clients are strongly opposed to do any taking of their property. This is their homestead generational property. They have no interest in DOT taking any portion of their property for a pond and they would request that DOT find another location for any pond associated with this project. The last information we have, I guess on those boards, shows that it's 200B. So we would like that removed and we would like you to consider another location that's not on my client's property. Again, we're also unclear with the information that we've received from DOT, what segment this pond is being proposed. We've gotten different information, one being in Segment 1, one being in Segment 2, two different parcel numbers, multiple financial project numbers, every -- just about every correspondence that has been received from DOT has had different information. So I'm not sure why the financial project numbers have changed. I'm not sure why the pond numbers have changed. I'm not sure if there's more than one pond proposed on my client's property, whether there's a pond proposed in one phase and then another pond proposed in another phase. There's been information about whether part of the property in the north segment would be taken versus

the south portion, so my client's very unclear what you're proposing, but essentially what you're proposing will completely destroy any use of their property and they just don't want any part of it. Thank you.

MS. JARRELL: Okay. Thank you. All right. Mr. Nowell, do you have any?

MR. NOWELL: Yeah. Sure. I'm going -- I'm going to be brief and short. I'm not against progress, but I'll tell you this. I don't know how many -- how old are you-all? 63 or older? Anybody older than I am? 63 years? I was here when Disney was a swamp. They built a little trench around it to drain the water off of it. And then there was a deal -- a sweetheart deal made for I-4. That's how Disney came here. Disney said, "You give us tax-free and I-4 from coast-to-coast, we'll come here." Why aren't they paying the tax on this? Why are the taxpayers responsible? This imminent domain that you were just talking about, how many people did they rape for their properties that came through I-4 and Disney? Come on now. Who really reaps the benefit of this expansion project? Universal Studios, Disney, and SeaWorld. Will we really hardly see anything? Maybe to get home on time. We

don't make that money like they make. We need to rethink this and re-look at it. Who -- follow the dollar. You'll find out all these guys over here, big money. And then a nice video, nice video talking about numbers and this and that and another. Follow the money trail and you'll find out where the stink's at. I'm an old country boy and I don't shit in my back -- well, I didn't know somebody had a cow in their backyard and then I went back there and found out. But I'm going to tell you, you're going to find out there's a cow in the backyard because that's where the stink is. Follow the money trail and you will find out. I had a couple other questions, too. Where is everybody today? What, this didn't get on the news or something? I just happened to be walking by. And I just finished a divorce in Alabama and I'm back in Orlando where I was born 63 years ago. And I -- I was a -- you know, I'm a grassroots Navy kid. I don't know how many of you-all are implants, but I'm going to tell you what. I kind of like the hunting range that we used to have down here. Sand Lake used to be a dirt road. 192 was a clay road where they drove cattle up here. You-all just don't remember that, but I do. And then is see this and, all of a sudden, somebody

got to dig in their pocket to pay for this. Well, who's digging in their pocket to pay for this? The old taxpayer. I'm a Vietnam veteran and I -- I worked at NASA. And I worked construction all my life. I pay big taxes because I was single all my life until I was 58 and got married like a damn fool and was divorced at 61. But anyway, she had a better lawyer than I had. I should have gotten you. But anyway, I'm just telling you, follow the money trail, starting to make sense out of this thing. Because sometimes, some things that are proposals and slick presentations don't always mean it's right. I'm done.

MS. JARRELL: Thank you. Is there anyone else that wanted to make a public statement? No? Hearing none, then this closes the public hearing portion of the evening. If you have other questions -- I know you have other questions. There's a lot of team members around to answer them. If you want to talk drainage, we've got drainage staff here, too, to talk about that pond. Okay. Thank you.

(HEARING CONCLUDED AT 6:32 P.M.)

C E R T I F I C A T E

STATE OF FLORIDA)

COUNTY OF ORANGE)

I, KAYLYN REINHOLD , Court Reporter and Notary Public for the State of Florida at Large, do hereby certify that I was authorized to and did report the foregoing proceeding, and that said transcript is a true record of the testimony given by the witness.

I FURTHER CERTIFY that I am not of counsel for, related to, or employed by any of the parties or attorneys involved herein, nor am I financially interested in said action.

Submitted on: October 19, 2016

Kaylyn Reinhold

KAYLYN REINHOLD

Court Reporter, Notary Public

$

$308.5 18:7

$401.3 18:6

$43.4 18:8

$48.4 18:9

0

0041 5:11

0041-227-I 4:10

1

1 22:14

10 1:8

10-foot 11:12,14

10TH 3:4

115 16:5

11988 15:16

11990 14:18

12 10:3

124 16:3

12-foot 10:4 11:11,13,14

14 8:5,24

15 7:4

16 16:9,17

17 8:5

19 16:5 18:21 26:17

192 24:23

1964 5:23

1969 7:14

1970 16:24 17:8

1971 14:13

1973 15:1

1990 5:15

199B 21:25

2

2 1:3 8:22 11:21 22:14

20 16:7 18:22

200B 22:1,8

2014 10:16

2016 1:8 3:4 7:4 8:24 18:18,21,22 26:17

2025 19:22,25 20:4,10

2040 8:25 9:13,16,20

227-I 5:12

25 12:2

27 4:14 6:9

29 12:1

2-foot 11:15

3

30 10:16

300 10:6 11:18

32819 1:12 3:4

33 10:16

330 10:6

4

4 4:11 5:8 8:11 11:6

4.43 14:19

402 14:25

432100-1-22-01 1:5 4:9 5:11

434 6:10 8:6

435 1:4 8:6,12

44-foot 11:18

472 6:11

4-foot 11:12

5

5:57 3:5

50 14:24

528 1:3 4:17 8:11 11:20 12:3,7

58 25:6

6

6:32 25:22

61 25:7

63 23:11,12 24:18

7

772 15:20

8

8001 1:11 3:3

9

9.32 14:20

A

abatement 15:22

acceptable 9:15

access 12:6

accommodate 9:5 11:17 13:1

accordance 13:10 14:17,24 15:15,19 16:22 17:6

acquisition 12:1 16:13,22,24 17:5,7 18:9,15

acres 12:2 14:19,20 16:15,17

Act 5:15,23 7:14 14:25 16:24 17:8,12

action 26:15

actions 7:18

add 19:20

adding 6:9

addition 8:9 16:19

additional 16:16,17

Additionally 16:7

address 19:8,10

adhered 13:13

adjacent 15:23 21:18

Administration 8:8

Administrative 5:19
adopted 8:23
ads 5:18
adverse 14:16
adversely 15:3
advertised 5:12
Advertisements 5:15
advertising 5:19
advisory 17:17
aerials 16:21
affect 15:2,3
against 23:9
age 6:3
agencies 7:16,25 10:8
agency 5:17
ago 8:5 24:18
ahead 21:5
Aid 4:10 5:11
air 16:9,11,12
Alabama 24:17
alignment 11:21,22
allow 10:13
alternative 9:24 10:23,24 11:3,4,5,9,10 12:2,9 14:22 16:14 18:6
alternatives 6:13 7:22,24 10:15
am 4:6 23:12 26:12,14
amended 15:1
Americans 5:14
amount 17:20
analysis 15:17 16:9,10 18:12
and/or 15:4
angle 12:19
answer 18:3 25:19
anticipate 17:4
anticipated 9:6 11:25 14:17 15:18 16:14,16,18,20 18:18
anybody 5:1 20:17 21:2,10 23:11
anyone 25:14
anything 23:25
anyway 20:24 25:7,9
Apartments 15:24
appeal 17:21,23
appear 12:19
APPEARANCES 2:1
appears 15:21
appraiser 17:14
approval 7:21 8:7 18:14
approve 18:13
approximately 3:5 8:15 12:2 14:19 16:15,17 18:6
archaeological 14:7,10
area 14:6,13
aren't 23:18
as-is 10:25
assess 7:17
assessment 15:8
assistance 16:23 17:7,12 18:5
associated 7:10 14:21 22:6
attended 10:17
ATTORNEY 2:7
attorneys 26:14
authorized 26:8
available 16:21 18:17,20
avoid 12:16 15:4

B

backyard 24:9,11
barrier 11:15 15:21
based 9:5 15:20
baseline 11:4
Beata 2:3 4:5
become 7:5 19:17
benefit 23:23
benefits 17:18,25 18:1
best 9:18 13:11
better 9:22 25:8
Beyond 1:1 4:5 5:8 8:21
blas 20:4
blasor 20:4
board 6:7
boards 13:23 22:8
born 24:18
box 19:6
boy 24:7
Branch 18:23
bridge 13:11
brief 23:9
bring 19:23
brochures 18:5
BTU 4:8
build 9:20,24 10:22 11:4,5,9,10
built 23:13
business 17:5
businesses 17:3

C

card 19:4 20:17,20,22 21:3
catch 20:24
cattle 24:23
caution 17:24
central 11:19 21:21
certain 10:1
certify 26:8,12
changed 22:19,20
citrus 21:20
city 5:1 9:3
Civil 3:6 5:22
clay 24:23
clients 21:16 22:1
client's 21:19 22:10,21 23:1
closely 11:21
closer 19:24
closes 25:16
cloverleaf 12:11
coast-to-coast 23:17
Code 14:24 15:19
COLLEEN 2:11
color 6:2
comment 5:25 10:21 19:5,6,9,10
comments 7:1 10:15,17 19:1,2,7,9,11,12
Commission 15:7
commonly 17:8
communicate 10:14
community 6:21
companies 10:11
comparing 11:8
comparison 11:4 13:18
compensation 11:24
Complete 19:4,6
completed 18:18
completely 23:3
compliance 17:12
comply 5:21 13:23
complying 7:13
comprehensive 9:4
concept 13:23
conceptual 6:19
concerns 5:25 6:4,18
CONCLUDED 25:22
concludes 19:18
condition 9:20
conditions 10:2
conduct 15:7
conducted 5:14 16:10,22 17:6
congestion 11:1 14:7
connection 12:22
consequences 17:2
Conservation 15:7
consider 22:9
consideration 6:14 10:22
considerations 13:13
considered 10:23
consistent 5:13,14 9:1
consists 10:3 11:11
constructed 14:13
construction 8:9 13:11,14 14:4 18:7,10,16,17 19:22,25 20:7,9 25:4
consultant 4:19,21
contacted 17:13
contacting 6:5
contaminated 15:25
contamination 16:3,6
continue 15:5 18:12,15
control 13:12
coordinate 15:5
coordination 10:7
copies 18:4
CORPORATION 2:12
correspondence 22:16
corridor 8:15 9:8,15,21 11:2,18 16:1
cost 18:5
cost-feasible 15:22
counsel 26:12
Counties 8:7
country 24:7
county 4:14,25 8:16 9:3 10:10 18:22 26:4
couple 24:13
court 6:21 19:3 26:6,22
cow 24:8,11
criteria 13:15,16,19
cross 12:15

crosses 12:13
cross-section 9:25
cultural 7:9 14:3,16
current 13:4,10 15:10
currently 8:9 18:16

D

damn 25:6
Dan 2:6 21:6,14
date 1:8 19:15,24
DAY 3:4
days 19:15
DDI 12:12
deal 23:15
decision-making 10:19
decisions 7:18 18:25
dedicated 19:12
department 2:4 4:3 5:5,20 6:1 7:2,8 8:18 13:6 17:10 19:14
department's 17:19
depictions 9:25
design 4:6,7,19,21 6:19 9:13,16,20 12:5 13:19,23 18:10,15,18
designed 12:12 13:4 15:10
destroy 23:3
detailed 9:25
detention 13:7 15:13
determination 17:19,21
determine 13:21 14:1 16:2
determined 15:1,17
developed 7:22,24 8:20 10:13 13:15
development 5:8 7:6,7
diamond 12:11
Diaz 4:20
different 22:13,15,17
differing 21:23
dig 25:1
digging 25:2
direct 14:19
direct-connect 12:5
direction 4:13 9:11,12 10:4 11:7,15 12:13
directions 12:18
dirt 24:22
Disabilities 5:15
disability 6:3
discrepancy 19:21
discuss 10:9 11:5
Disney 23:12,16,22,24
display 11:10 13:10,23 15:15 17:1 18:21,24
displayed 6:8 16:20
District 10:12 13:5,20 15:12
diverging 12:11
divorce 24:17
divorced 25:7
documentation 7:20 21:22
documents 13:9 15:15 18:13,19,24
dollar 24:3
domain 23:19
Dominick 21:14
done 8:5 25:13
DOT 21:23 22:4,5,12,17
Draft 18:19
drain 23:14
drainage 12:25 16:15 25:20
drive 1:10,11 3:3 12:14
driver 12:19
Drivers 9:18
drop 19:6
drove 24:23
during 7:21 13:13 15:8 17:15 19:5
Dymmek 2:7 21:15,16

E

east 6:11 11:19 15:23
economic 6:19 7:10 14:2
effect 15:2
effects 6:20 7:17 14:16
either 15:2 21:24
elected 5:16
electronically 19:11
element 9:3
elements 10:1
eligibility 17:20
eligible 14:11,15 17:17
eliminating 12:23

else 20:17 21:2,10 25:14
e-mail 19:9
employed 26:13
employment 9:6
encourage 17:14
Endangered 14:25
engineering 7:20 13:25 18:10
enhance 9:7
enhanced 13:1
Enterprise 10:11
entitled 14:18 15:16 17:25
Environment 5:9 7:6
environmental 6:15,20 7:10,14,16,17, 20,25 13:25
erosion 13:12
ESQUIRE 2:6
essentially 23:2
established 7:12 16:11
Estate 16:24
estimated 18:5
evaluate 7:9
evaluated 11:3 13:17
14:1,17,22 15:19 16:1
evaluation 11:8 13:15 15:21
evening 4:2 13:9 15:14 25:17
everybody 4:2 24:14
executive 13:24 14:18 15:16
exhibit 13:9 15:14
existing 10:3,5,25 11:21 12:10,25 14:8
expansion 23:23
expect 17:11
expected 16:12
experience 9:19
express 4:13 6:4,9,17 8:10,14 9:11,23 11:8,12,16 12:6,7
extends 4:14

F

faces 4:24
facilities 11:24 13:8 15:10
facility 10:25
factored 10:19
failing 9:18
fair 17:11
familiar 4:24
families 17:3,4 21:20
family 6:3 21:19
FDOT 1:5 4:20 5:6,10 7:12 13:10,20 15:5,7 16:11,24 18:11,14 19:8,9
federal 4:10,25 5:11,13 7:16 8:8 13:24 14:24 15:3,20 16:23 17:6
feet 10:6 11:18
final 18:10,25
finalize 18:12
financial 4:9 5:10 22:15,18
financially 26:14
finished 24:16
firm 21:15
Fish 15:5,6
Fishback 21:14
five 11:7
floodplain 11:24 15:16,17,18
floor 6:25
Florida 1:12 2:4 3:4,6 4:3 5:5,19,20 7:2,8,15 8:18 10:11 11:19 13:5,20 15:6,11 19:14 21:21 26:3,7
Florida's 10:10
fool 25:6
foot 10:4
foregoing 26:9
form 19:6,9,10
forms 17:22
forth 13:19
forum 6:16
free 23:17
freeway 12:4
full 11:25
fully 18:19
fund 8:19 20:7
funded 18:19 19:22,24 20:10
funding 7:21 18:16 20:4
furnish 18:4
furnished 17:22
future 4:22 9:5

G

general 6:13 12:7
general-use 4:12 8:14 9:10

11:7,13,16 12:6
generational 22:3
generations 21:20
given 26:10
goal 9:14
gotten 21:23 22:13 25:8
government 7:25
governments 8:19
grading 9:17
grassroots 24:19
great 21:20
grower 21:20
growth 9:6
guess 20:11 22:7
guys 24:3

H

habitat 14:23
happened 24:16
happy 18:3
hardly 23:25
hear 20:25
hearing 1:7 3:2,5 4:4,8,16 5:7,9,12,16,23 6:1,8,12,16,22,24 7:2,5 10:20 16:21 18:14,20 19:7,13,16,18 25:16,22
held 3:2 5:10,23 10:8,15
helpful 17:11
hereby 26:7
herein 26:14
high 9:8 16:5,8
Highway 8:8
historic 14:12,14,15
HNTB 2:12
home 23:25
homestead 22:3
horizontal 11:20
house 20:13,14
HOV 9:9
hunting 24:21

I

I-4 1:1 4:5,8,16 6:9 8:21 9:12 11:21,22 12:6,22 15:23 18:19 23:15,17,21
ID 5:10
identified 8:20,24 16:1,4
identify 13:18
I'll 20:21 23:10
illustrated 13:22
I'm 21:7,14 22:18,19,20 23:8,9 24:7,10,17,19,20 25:3,9,13
imminent 23:19
impacting 20:13
impacts 6:15 7:10 11:25 13:17 14:2,6,20,21,22 15:4,18,19 16:2,12
implants 24:20
implement 8:19
improved 9:22
improvement 6:8,21 7:11 9:2
improvements 4:11 6:14 9:23 10:21,25 11:23 13:2 14:4,5 16:3,15,17 18:9,13
improves 14:6
include 8:9
included 5:16 9:8
includes 8:13 9:10 10:9 18:7
including 5:22 14:23
inclusion 14:11
indicate 14:9
individuals 6:6
information 6:12 13:25 17:16 21:24 22:7,11,13,18,24
informed 8:2
input 7:24 10:18
inside 10:5 11:12,14
inspect 17:14
inspection 17:15 18:11
interchange 12:3,4,11,12,16,17
interest 22:4
interested 5:24 26:15
INTERNATIONAL 1:10,11 3:3
intersected 12:18
intersecting 12:21
intersection 12:25
interstate 4:11 5:7 8:11,13 11:6
involve 11:25
involved 8:2

26:14
involves 4:11 6:9 7:19
Isle 15:24
it's 19:24 21:22 22:8 25:12

J

January 10:16
JARRELL 2:11 20:16,21 21:2,5,9,12 23:6 25:14
jeopardized 18:1
junction 12:4
jurisdictional 14:20

K

KAYLYN 1:9 26:6,21
kid 24:19
Kirkman 4:15,18 6:10 8:6
known 5:6 12:12 17:8

L

labeled 13:22
lake 12:8,10,23,24, 25 21:18 24:22
Lakes 15:24
lanes 4:12,13
6:9 8:10,13,14 9:9,10,11,23 10:4 11:6,7,8,12,13 ,16 12:6,7,8
Langley 2:6 21:6,7,11,13,1 4
large 12:19 26:7
last 22:7
later 7:3 19:15
law 7:16 21:14
laws 5:21
lawyer 25:8
length 8:15
letters 5:16,17
levels 9:15,16,19,21
Library 18:23
life 25:5,6
likely 15:3
limits 8:10 10:2 14:10
list 8:23
listed 6:6
little 23:13
lives 20:14
LLC 2:7 21:16
local 5:18 7:25 8:18 10:8
located 8:16 13:7 15:13 21:17
location 6:18 22:6,10
locations 13:8 15:14
Long-Range 8:25
lot 20:24 25:18
loud 21:12,13
low 16:6,9
Luis 4:19
Luxury 15:24

M

mail 19:7
mainline 11:23
maintain 9:14
maintains 10:24 12:4
management 4:9 10:12 11:23 13:3,5,11,20 15:11,16
manager 4:6,19 19:8
manner 17:11
married 25:6
material 7:1 19:13
matrix 11:8
may 5:1 6:5 14:3 15:2 17:16,21 18:1 19:1,2,9
maybe 19:23 23:25
McKinley 15:23
mean 25:12
measured 9:17
media 5:18
median 9:9 11:19
medium 16:5,8
meet 7:23 9:13 13:4 15:10
meeting 4:15 10:15,17
meetings 10:7,18
members 10:16 25:19
method 15:23
MetroPlan 8:16,23,25 10:10
Metropolitan 8:17
mic 21:7
microphone 19:5
miles 8:15
million 18:7,8,10
minimize 15:4
minimum 11:16
mobility 9:7 14:7
model 16:11
modifying 12:10
MONDAY 3:4

money 24:1,4,6,12 25:9
monitoring 15:8
Monterey 15:24
months 18:11
move 17:9,13,24
moved 17:18
movement 12:20
movements 12:17
MPO 8:21
multiple 22:15

N

NARRATOR 5:5
NASA 25:4
national 6:2 7:13 14:11,15
natural 14:3
Navy 24:19
necessary 17:2,22
neither 14:11,14
NEPA 7:14,15
news 24:15
newsletter 6:7
newspaper 5:18
nice 24:4
nine 16:15
no-build 10:24 11:3
noise 15:19,21,22
nondiscrimination 5:21
none 16:4,7 25:16
nor 26:14
north 22:25
Northwest 18:23
Notary 26:6,22
noted 8:21
notification 17:24
notified 17:22
notifying 5:18
Nowell 2:9 20:1,3,6,8,11,19,23 21:4,10 23:7,8

O

occupancy 9:9
occur 16:2,12
occurrences 14:10
October 1:8 3:4 7:4 18:18,22 26:17
office 7:3 19:14
official 5:1 6:16,23
officials 5:17
off-site 15:13 16:18
of-way 10:6 11:17
Oh 20:11
Okay 5:2 23:6 25:21
old 23:11 24:7 25:3
older 23:11,12
open 6:25
opinions 6:18
opportunity 6:17 10:21
opposed 22:1
opposite 12:15,18
oral 19:2,4
Orange 8:7,16 9:3 10:10 26:4
order 12:16 13:18 14:18 15:16
orders 13:24
Organization 8:17
origin 6:3
original 9:8,20
Orlando 1:12 3:3 8:16,23,25 9:4 10:10 24:17
outside 10:5 11:12,14
overall 13:18
overlooking 4:7
owner 21:16
owners 5:17 21:17

P

P.E 2:3
P.M 3:5 25:22
page 19:12
Palm 21:17
paramount 8:3
parcel 22:15
parcels 12:1
Parkway 11:20 21:18
partial 12:1,11
participation 6:1
parties 26:13
pay 25:1,2,5
paying 23:18
payment 17:18,20
PD&E 1:2 4:4,7,13,19 7:7,12,22 8:3,4 9:8 10:24
people 20:14 23:20
performed 14:8 15:17 16:10
period 19:5
permitting 15:9
persons 5:24

6:4
phase 7:18 13:14 15:9 22:22,23
phases 18:16,17
physical 14:3
Places 14:12,15
Plan 9:1
planned 7:11
Planning 8:17
plans 8:20 9:4
PLAYED 5:4
please 20:3
pocket 25:1,2
Policies 17:8
Policy 7:14
Polk 4:14
pond 13:14,16,21 15:13 16:7 18:9 21:25 22:5,6,12,20,21,22,23 25:21
ponds 13:7,19 15:13 16:18 21:22,25
population 9:6
portion 22:4 23:1 25:17
portions 9:21
positive 14:5
postmarked 7:3 19:15
potential 6:15,19 13:16 16:3,6,7,19
Potentially 15:25
practices 13:12
preliminary 7:19
preparation 7:19
present 5:1 6:22 17:15 19:3
presentation 5:3 6:25 19:18
presentations 10:8 25:12
presented 18:13
preserved 11:19
previously 8:5
principal 10:1
prior 7:18
priority 8:23
procedure 3:6 7:13
procedures 17:22
proceeding 26:9
proceedings 4:1 6:23
process 7:8,12 8:1 10:19 16:25
produced 6:24
program 9:2 18:2
progress 23:10
project 1:5 4:6,9,10,17,19,21 5:8,10,11,25 6:7 7:4,6,7,11,23 8:24 9:1,14 10:12 13:14 14:5,17,22 15:1 16:1,10,13,25 17:2,3,10 19:8,11,16,22 20:9 22:7,15,19 23:23
projected 9:13
projects 8:19
promptly 17:21
properties 23:21
property 5:17 16:23 17:7,14,16 21:16,17,19 22:2,3,4,10,21,25 23:4
proposals 25:11
proposed 4:11 6:8,14,20 7:17 9:12 10:21 11:11,20 12:5 13:2,3 14:4,8 15:9 16:3 22:13,21,22,23
proposes 8:12 11:6 12:3,10
proposing 23:2,3
protected 14:23
Protection 14:18
provide 10:14,20 17:15 19:1,2
provided 6:7 12:22 13:7 15:12 19:7
provides 12:5
providing 6:16
public 1:7 3:2,5 4:4,8 5:7,9,12,16 6:1,12,13,15,17 7:1,2,5,25 8:1 10:13,15,16,18,20 18:14,20,22 19:5,13,16,17 20:16,18 25:15,16 26:7,22
purchases 4:22
purpose 6:11 7:23 9:4
PURSUANT 3:6

Q

quality 13:12 16:9,11,12
question 4:22 20:1,25

questions 18:3 24:14 25:17,18

R

race 6:2

rail 11:18

ramp 12:22

range 24:21

ranked 8:22

rape 23:21

rated 16:4,5,8,9

Real 16:23,24 17:7

realigned 12:8

really 4:13 20:12 23:22,24

reaps 23:22

reasonable 15:22

receive 17:24

received 7:1 8:7 10:18 19:13 22:12,17

recognize 4:24,25

recommended 9:24 11:5,9 12:2,9 13:19,21 14:14,21 16:14 18:6

record 7:5 19:17 26:10

recorded 6:23

reevaluation 8:4

re-evaluation 9:10

REEVALUATION 1:2

regard 6:2

regarding 6:18

Register 5:19 14:12,15

regulations 5:22 14:25 15:20

REINHOLD 1:9 26:6,21

related 26:13

relation 20:8

relative 4:8 5:10

relief 11:1

relieves 14:7

religion 6:3

relocation 16:23 17:3,4,7,12,17,25 18:1,4

relocations 16:19,20 18:8

re-look 24:2

remain 18:21

remember 24:24

removed 22:9

repeat 20:3

report 26:8

reporter 1:9 6:22 19:3 26:6,22

represent 21:15

representatives 4:20

request 22:5

required 5:20 7:20 11:17,22 17:9,13

requirements 5:13 13:4,25 15:11 16:25

requires 7:16

RESORT 1:10 3:2

resources 14:3,13,14,16,23

responsible 23:19

result 14:4 16:2,13 17:9

results 14:9 15:20

rethink 24:2

review 18:20 19:1

reviewed 14:1

right-of 16:21

right-of-way 4:22,23 11:22,25 14:9 16:13,16,18,25 17:5 18:8,15

Rights 5:22

risk 16:5,6,8,9

road 1:3,4 4:15,17 6:10,11 8:6,11,12 11:20 12:3,7,8,10,23,24,25 13:11 24:23

roadway 11:9,23 12:15,18,21 13:2 16:14,16 18:9

roadway's 9:25

ROBERT 2:9

RULES 3:6

runoff 13:1

S

safety 9:7

Sand 12:10,24 21:18 24:22

scale 9:17

screen 13:15

screening 16:11

script 19:21

Sea 15:24

SeaWorld 23:24

Se'Belle 21:15

second 7:7

section 4:7,16 8:5 10:3 11:11,18

sections 9:24

seek 18:12

segment 1:3 8:22,24 10:2 11:21 18:19 22:12,14,25
select 13:19
Seminole 8:7 18:22
sense 25:10
separates 11:15
September 8:23 18:21
serves 6:16
service 9:15,16,19,22 15:6
services 17:17
several 7:22 18:11 19:2
sex 6:3
share 6:12
she's 20:24
shit 24:7
short 23:9
shoulders 10:5 11:13,14
shown 19:8,10
shows 22:8
single 25:5
sir 20:22 21:11
site 13:8
sites 11:24 13:16,22 15:25 16:4,7
siting 13:14
six 8:13 9:10
sizing 13:21
slated 21:21,24
slick 25:12
slide 5:4 6:6 19:19
small 19:21
Smith 2:7 21:15
social 6:19 7:9 14:2
socioeconomic 14:6
solicited 6:2
somebody 24:8,25
south 10:11 13:4,20 15:11 23:1
speak 21:8,12,13
speaker 19:4 20:16,20,22 21:3
special 17:23
specialists 18:2
species 14:24,25 15:4,8
specific 15:8
split 12:13
staff 4:23 25:20
stakeholders 10:9
standard 10:1
standards 13:10
start 5:2 21:5
starting 18:21 25:10
state 1:3,4 4:17,25 5:5,13 6:10,11 8:6,11,12 9:1 11:20 12:3,7 13:24 26:3,7
state-listed 15:3
statement 19:3,4 20:18 25:15
state's 7:13
States 7:15
status 6:4
statutes 7:15
step 7:7
stink 24:12
stink's 24:7
STIPULATION 3:1
stormwater 11:23 13:1,2,6 15:9,12
street 12:21
strongly 22:1
studies 8:4
Studios 23:24
Stys-Palasz 2:3 4:2,6 19:20 20:2,5,7,9,12
submit 19:11
Submitted 26:17
subsequent 7:21
substantial 14:2
success 8:3
sudden 24:25
suitability 13:18
summary 10:7
supervising 18:2
supposed 21:7
sure 22:18,19,20 23:8
surface 14:21
survey 14:8
swamp 23:13
sweetheart 23:15
systems 12:3,25 13:3

T

table 4:23
taking 22:2,4
talk 25:20,21
talking 23:20 24:5
tax 23:16,18
taxes 25:5

taxpayer 25:3
taxpayers 23:19
team 4:21 10:14 25:19
temporarily 12:14
ten 4:12 8:13 11:6 19:15
terminal 12:4
testimony 26:10
Thank 5:3 19:18 20:15 23:5,6 25:14,21
that's 20:11 22:10 23:15 24:12
there's 20:17 22:20,22,24 24:11 25:18
they're 21:21,25
throughout 8:1,2 21:24
Title 5:22 6:5 14:24
today 24:14
Today's 10:20
tonight 4:18 5:1 11:10 17:1 18:3,25 19:3
tonight's 6:22 16:21 18:14
total 11:25 12:1 18:5
traffic 9:5,13 12:13,14 15:18
trail 24:6,12 25:10
transcript 6:24 26:9
translate 20:23
transportation 2:4 4:3 5:6,20 7:3,9,11 8:18,25 9:2,3 13:6 17:10 19:14
travel 10:4
treated 17:11
treatment 13:6,8 15:12
trench 23:13
true 26:9
Turkey 12:8,23,24
Turnpike 10:10
turns 12:24
type 12:17 17:9
typical 9:24 10:2,3 11:11,17

U

Ultimate 1:1 4:5,16 5:8 8:22
unavoidable 17:1
unclear 21:22 22:11 23:1
understand 5:24 20:13
Uniform 16:23 17:6,8,12
United 7:15
Universal 23:23
unsatisfied 17:19
utility 10:11 18:8

V

value 17:16
varies 10:6
various 5:21 8:20 13:15,24
vehicle 9:9
versus 22:25
veteran 25:3
VI 5:22 6:5
vicinity 15:25
video 24:4
Vietnam 25:3
visit 19:10
volumes 9:14

W

walking 24:16
wall 11:15
water 10:12 13:5,12,20 14:21 15:11 23:14
ways 19:2
website 7:4 10:12 18:23 19:11,12,16
welcome 4:4 5:7
we'll 23:17
we're 22:11
west 1:3,4 4:14,17,18 6:10 8:11
westbound 12:22,24
wet 13:7 15:12
wetland 14:20
Wetlands 14:19
we've 21:23 22:12,13 25:20
WHEREUPON 5:4
whether 22:22,24
who's 25:2
wide 11:11,13,15
widen 8:12 11:6
widening 4:11 9:12,23
width 11:17
wildlife 14:23 15:4,6
wishing 6:4
witness 26:10
worked 25:4
working 19:23
works 8:17

written 7:1 10:17 19:13

wrong 12:16

www.i4express.com 10:13 18:24

WYNDHAM 1:10 3:2

Y

you-all 23:11 24:20,24

you'll 24:3,6

Florida Department of Transportation

RICK SCOTT
GOVERNOR

719 S. Woodland Boulevard
DeLand, FL 32720-6834

JIM BOXOLD
SECRETARY

January 30, 2017

Mr. Dan Langley
Smith Dymmek, LLC
1947 Lee Road
Winter Park, FL 32789

Subject: "I-4 Beyond the Ultimate" Project Development and Environment (PD&E) Reevaluation Study
From the West of the Beachline Expressway/State Road (SR) 528 to West of Kirkman Road/SR 435
Orange County
Financial Project ID Number: 432100-1-22-01
Design Project ID Number: 242484-7-32-01
Federal Aid Project Number: 0041-227-I

Dear Mr. Langley:

On behalf of the Florida Department of Transportation (FDOT), District Five, we would like to thank you for your involvement in the "I-4 Beyond the Ultimate" PD&E Study. The FDOT values your input and considers interaction with the public to be an essential component of transportation improvements.

We are writing you to thank you for the verbal comments you made during the public hearing. You were representing a property owner who has indicated they are not interested in FDOT taking any portion of their property for retention ponds and requested that alternative pond locations be considered.

A preliminary drainage analysis is performed during the PD&E study phase. Based on this analysis ponds (size and locations) are recommended in order to accommodate the widening of I-4. The project is moving into the design phase and a more detailed drainage analysis will be performed. Consideration will be given to the request of your client during the detailed design and FDOT will provide an update to the property owner on the progress.

Again, we sincerely appreciate your participation and input into this project. If you have additional questions or comments, please do not hesitate to contact me at 386-943-5418 or beata.stys-palasz@dot.state.fl.us.

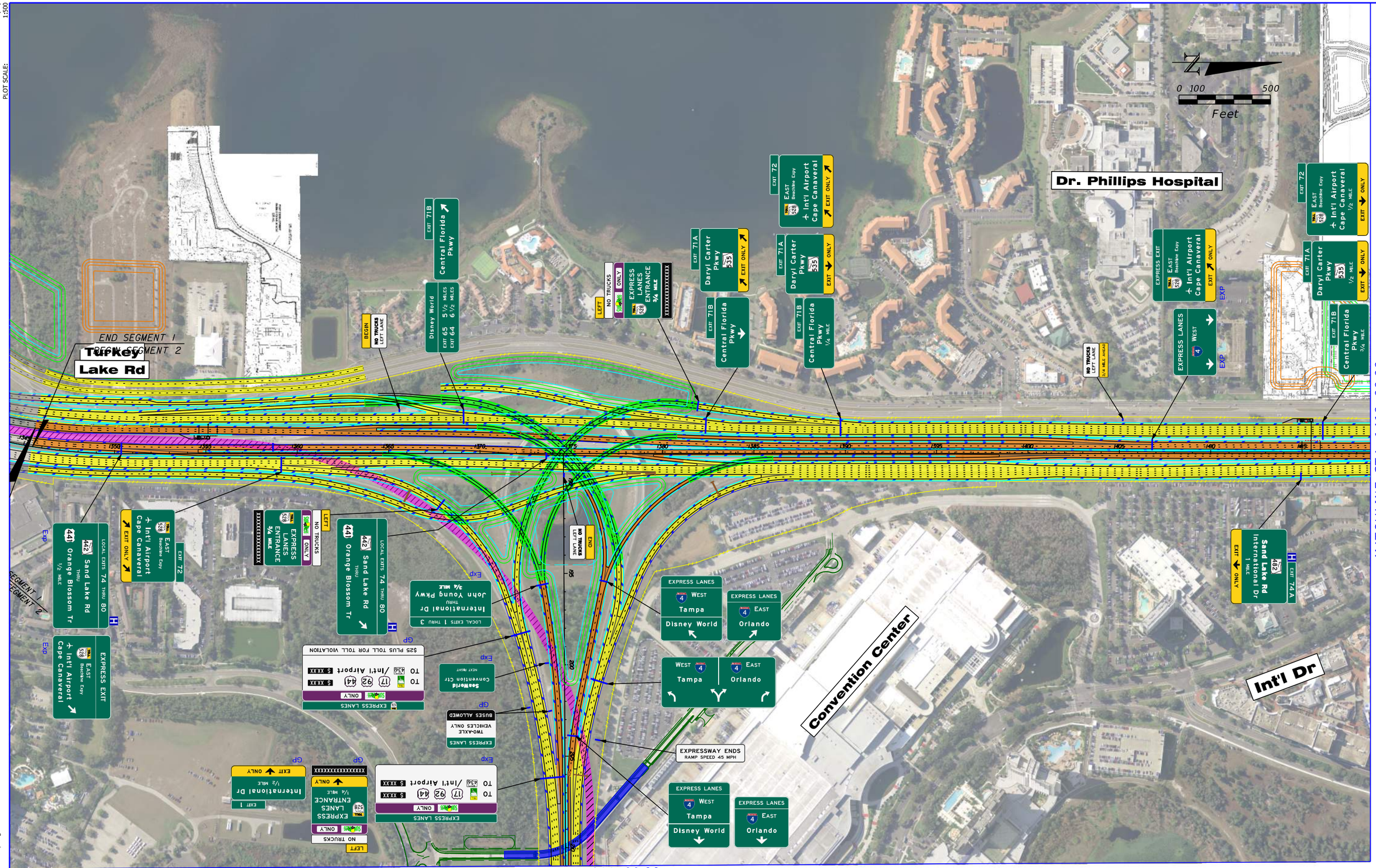
Sincerely,



Beata Stys-Palasz, P.E.
FDOT Project Manager

Appendix C - **Conceptual Signing Plan**

MODEL: plansp02
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500



EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR		
BARRIER WALL	FUTURE EXISTING CONDITION	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

C-1

Color_FDOTPDF.pltcfg
FDOT.tbl
PRINT DRIVER:
PEN TABLE:

dmsheets 5/24/2017 4:09:55 PM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\signing\PLANSP201-PREFERRED.dgn

MODEL: plansp01a
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500



EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT.tbl

dmsheets 5/24/2017 4:10:44 PM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\signing\PLANSP201-PREFERRED.dgn

MODEL: planspl03
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500

MATCHLINE STA. 1419+00.00

MATCHLINE STA. 1491+00.00

N

0 100 500

Feet

Turkey Lake Rd

Int'l Dr

Sand Lake Rd

EXPRESS EXIT
EAST 528 Beachline Expy
Int'l Airport Cape Canaveral
1/4 MILE
EXIT ONLY
EXP

EXPRESS EXIT
International Dr Convention Ctr SeaWorld
NEXT RIGHT
EXP

International Dr Convention Ctr SeaWorld
EXIT 72

LEFT | NO TRUCKS | ONLY | EXPRESS LANES ENTRANCE | XXXXXXXXXXXXXXX

EXPRESS LANES
ONLY
TO $ XXXX
TO Epcot Center Dr $ XXXX
$25 PLUS TOLL FOR TOLL VIOLATION

EXIT 72
EAST Beachline Expy 528
Int'l Airport Cape Canaveral
1 MILE
EXIT ONLY

EXIT 71
Central Florida Pkwy
1 MILE
EXIT ONLY

Disney World
Animal Kingdom
Wide World of Sports
7 MILES
EXIT 65

Disney World
Magic Kingdom
Hollywood Studios
8 MILES
EXIT 64

LEFT | NO TRUCKS | ONLY | EXPRESS LANES ENTRANCE 1/2 MILE | XXXXXXXXXXXXXXX

EXPRESS LANES
TWO-AXLE VEHICLES ONLY
BUSES ALLOWED
GP

EXPRESS EXIT
EAST Beachline Expy 528
Int'l Airport Cape Canaveral
1 MILE
EXP

N Turkey Lake Road
S Turkey Lake Road

EXPRESS LANES
ONLY
TO $ XXXX
TO Epcot Center Dr $ XXXX
$25 PLUS TOLL FOR TOLL VIOLATION

Tampa WEST
Orlando EAST LEFT LANES
RIGHT LANE

Sand Lake Rd

1/2 MILE JCT 4

Universal
N Turkey Lake Road NEXT RIGHT
S Turkey Lake Road

Tampa WEST
Orlando EAST LEFT 2 LANES
N Turkey Lake Road NEXT RIGHT

LEFT | NO TRUCKS | ONLY | EXPRESS LANES ENTRANCE 1 MILE | XXXXXXXXXXXXXXX

WEST 482
EAST 482 International Dr
Universal Universal Studios

FDOT FULL COLOR FULL MATRIX INCIDENT MGMT DMS

Hospitals Tourist Info Ctr EXIT 74A

Universal Studios EXIT 75 A

Sand Lake Rd 482 International Dr 1/2 MILE EXIT ONLY
EXIT 74A

Sand Lake Rd 482 International Dr EXIT ONLY
EXIT 74A

WEST 482 LEFT 2 LANES
Turkey Lake Road
EAST 482 International Dr

Universal Studios

Tourist Info Ctr
International Dr Convention Ctr
1 2

Universal Blvd International Dr 1 MILE
EXIT 75A

WEST Tampa LEFT 2 LANES
Turkey Lake Road RIGHT AHEAD
EAST Orlando

Turnpike Canry Rd John Young Pkwy S
2 3/4

WEST Tampa LEFT LANES
EAST Orlando NEXT RIGHT

JCT 4 1/2 MILE

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT.tbl

dmsheets 5/24/2017 4:10:49 PM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\signing\PLANSP201-PREFERRED.dgn

MODEL: plansp04
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500

Turkey Lake Rd

MATCHLINE STA. 1491+00.00

MATCHLINE STA. 1557+00.00

0 100 500
Feet

Sand Lake Rd
International Dr
EXIT 74B

Turkey Lake Road
EXIT 74A

Universal
EXIT 74B

Sand Lake Rd
International Dr
½ MILE
EXIT 74A

FDOT FULL COLOR FULL MATRIX INCIDENT MGMT DMS

END SEGMENT 2
BEGIN I-4 ULTIMATE

Turkey Lake Road
EXIT 74A

Universal Blvd
International Dr
¾ MILE
EXIT ONLY
EXIT 75A

Kirkman Rd
1 MILE
EXIT ONLY
EXIT 75B

FULL COLOR FULL MATRIX INCIDENT MGMT DMS

Miami
Ocala
2 MILES
Turnpike
SUN
EXIT 77

Universal
Orlando
EXIT 73A
Wet 'n Wild
EXIT 73S

To
Kirkman Rd
Grand Nat'l Dr
EXPRESS EXIT
1 MILE
LEFT

Kirkman Rd
½ MILE
EXIT ONLY
EXIT 75B

Universal Blvd
International Dr
¼ MILE
EXIT ONLY
EXIT 75A

Kirkman Rd
¼ MILE
EXIT ONLY
EXIT 75B

Universal Blvd
International Dr
EXIT ONLY
EXIT 75A

International Dr
Universal

To
Kirkman Rd
Grand National Dr
EXPRESS EXIT
½ MILE
LEFT

Wet 'n Wild

Int'l Dr

Universal Blvd

Universal
Islands of Adventure
City Walk

Universal Blvd
International Dr

Kirkman Rd
EXIT ONLY
EXIT 75B

Universal
Valencia College

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR
BARRIER WALL	FUTURE EXISTING CONDITION

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT.tbl

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

dmsheets 5/24/2017 4:11:25 PM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\432100122O1\Segment 2\signing\PLANSP201-PREFERRED.dgn

MODEL: plansp05
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500

MATCHLINE STA. 1557+00.00

Universal Studios

Universal Blvd

Universal Studios

Hospital
Tourist Info Ctr
EXIT 74A

EXIT 74B
Universal
1/2 MILE

Sand Lake Rd
3/4
3
EAST
Central Florida Pkwy
3
482
528

EXIT 75B
435
Kirkman Rd
International Dr
EXIT ONLY

EXIT 74B
Universal
3/4 MILE

EXIT 74A
482
Sand Lake Rd
1 1/4 MILE

Grand Nt'l

EXIT 75B
435
Kirkman Rd
International Dr
EXIT ONLY

LEFT
EXPRESS EXIT
Grand National Dr
TO 435 Kirkman Rd

NEXT EXIT 1 1/2 MILES
TO 4 WEST
TOLL $ ICKICK

FL Turnpike

0 100 500
Feet

Kirkman Dr

435 NORTH
Kirkman Rd

435 SOUTH
Kirkman Rd
International Dr

LEFT
EXPRESS EXIT
Grand National Dr
TO 435 Kirkman Rd
NEXT LEFT
EXP

LEFT
EXPRESS EXIT
Grand Nat'l Dr
TO 435 Kirkman Rd

GP
Miami
Ocala
1 MILE
FTE
Fla. Turnpike
EXIT 77

END SEGMENT 2
SIGNING PROJECT

Oak Ridge Rd

Int'l Dr

EXISTING LA R/W	GENERAL USE LANES	HNTB CORPORATION 610 CRESCENT EXECUTIVE CT SUITE 400 LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSED LA R/W	EXPRESS LANES		
PROPOSED FDOT R/W	EXISTING BRIDGE		
EXISTING R/W	PROPOSED BRIDGE		
PARCEL LINES	RAIL CORRIDOR	ENGINEER OF RECORD: ROBERT M. DENNEY, P.E. FL. REGISTRATION NO. 58593	
BARRIER WALL	FUTURE EXISTING CONDITION		

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

Color_FDOTPDF.pltcfg
FDOT.tbl
PRINT DRIVER:
PEN TABLE:

dmsheets 5/24/2017 4:12:09 PM \\LKMw00\pmwork3\Jobs\59219 - I4 SAMR\TECHPROD\43210012201\Segment 2\signing\PLANSP201-PREFERRED.dgn

MODEL: plansp06
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500

MATCHLINE STA. 211+00.00

MATCHLINE

SR 528

Int'l Dr

Aquatica Waterpark

Future High Speed Rail
Satation

0 100 500
Feet

N

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

C-6

PRINT DRIVER: Color_FDOTPDF.pltcfg
PEN TABLE: FDOT.tbl

dmsheets 5/24/2017 4:12:59 PM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\432100122O1\Segment 2\signing\PLANSP201-PREFERRED.dgn

MODEL: planspr07
SHEET SIZE: 16.5x10.6 (in.)
PLOT SCALE: 1:500

MATCHLINE

Universal Blvd

JOHN YOUNG PKWY

Orangewood Blvd

SR 528

END SEGMENT 2
SIGNING PROJECT

EAST EXPRESS LANES
ONLY
TO 435 Kirkman Rd $ XXXX
TO Kaley-Michigan $ XXXX
Exp

WEST EXPRESS LANES
ONLY
TO 536 /Attractions $ XXXX
$25 PLUS TOLL FOR TOLL VIOLATION
GP

EXPRESS LANES
WEST 4 EAST
Orlando
Tampa
Exp

LOCAL EXIT
WEST 4 EAST
Orlando
Tampa
1 MILE
EXIT ONLY
Exp

International Dr 1 2
4
GP

WEST EXPRESS LANES
ONLY
TO 536 /Attractions $ XXXX
Exp

N

0 100 500
Feet

Color_FDOTPDF.pltcfg
FDOT.tbl
PRINT DRIVER:
PEN TABLE:

EXISTING LA R/W	GENERAL USE LANES
PROPOSED LA R/W	EXPRESS LANES
PROPOSED FDOT R/W	EXISTING BRIDGE
EXISTING R/W	PROPOSED BRIDGE
PARCEL LINES	RAIL CORRIDOR
BARRIER WALL	FUTURE EXISTING CONDITION

HNTB CORPORATION
610 CRESCENT EXECUTIVE CT
SUITE 400
LAKE MARY, FL 32746
(407) 805-0355
CERT. OF AUTH. NO. 6500

ENGINEER OF RECORD: ROBERT M. DENNEY, P.E.
FL. REGISTRATION NO. 58593

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432100-1-22-01

I-4 PD&E STUDY
CONCEPTUAL SIGNING PLAN
SEGMENT 2

SHEET NO.

dmsheets 5/24/2017 4:13:45 PM \\LKMw00\pmwork3\Jobs\59219 - 14 SAMR\TECHPROD\43210012201\Segment 2\signing\PLANSP201-PREFERRED.dgn

Appendix D - **Long Range Estimates (LRE)**

Date: 8/12/2016 10:30:20 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 242484-7-52-01 **Letting Date:** 07/2024

Description: SR 400 I-4 FROM W OF SR528 BEACHLINE MP 5.650 TO W OF SR 435 KIRKMAN RD MP 9.249.

District: 05 **County:** 75 ORANGE **Market Area:** 08 **Units:** English
Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.900 MI

Project Manager: BSP

Version 29 Project Grand Total **$244,431,025.24**

Description: I-4 (SR 400) FROM W OF SR 528 (BEELINE) (Sta. 714+97, MP 5.65) TO W OF SR 435 (KIRKMAN RD) (Sta. 905+00, MP 9.249). HNTB January 2016 Update (New CD System) - A-List. HNTB August 2016 Update : Express Lanes with Asphalt Pavement

Sequence: 1 NDR - New Construction, Divided, Rural **Net Length:** 3.600 MI 19,008 LF

Description: Construct 3 GUL in each direction from station 1345+48.48 to station 1523+00 for a total distance of 17751.52'. This sequence includes the New elevated CD system.

Special Conditions: Sequence includes ITS for entire project Lighting Assumption: 200 foot pole spacing

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	150.00 / 150.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	3.600
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	130.91	AC	$10,000.00	$1,309,100.00
120-6	EMBANKMENT	124,509.44	CY	$7.00	$871,566.08
	Earthwork Component Total				$2,180,666.08

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	6
Roadway Pavement Width L/R	36.00 / 36.00
Structural Spread Rate	660

Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	244,992.00	SY	$3.25	$796,224.00
285-712	OPTIONAL BASE,BASE GROUP 12	154,851.84	SY	$20.00	$3,097,036.80
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	50,181.12	TN	$92.00	$4,616,663.04
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	6,082.56	TN	$125.00	$760,320.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-1	CONC TRAF RAIL BAR, JCT SLAB,32"F SHAPE	38,016.00	LF	$225.00	$8,553,600.00
	Comment: On MSE wall				

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	4

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	2,430.00	EA	$3.57	$8,675.10
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	28.80	NM	$939.29	$27,051.55
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	14.40	GM	$449.54	$6,473.38
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	28.80	NM	$3,138.35	$90,384.48
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	14.40	GM	$1,027.15	$14,790.96

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	440.00
Noise Barrier Wall Begin Height	22.00
Noise Barrier Wall End Height	22.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	34.00	TN	$235.00	$7,990.00
521-1	MEDIAN CONC BARRIER WALL	69,469.00	LF	$135.00	$9,378,315.00
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	9,680.00	SF	$25.00	$242,000.00
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	1,000.00	LF	$15.50	$15,500.00
536-85-22	GUARDRAIL END ANCHORAGE	2.00	EA	$2,257.65	$4,515.30

	ASSEMBLY- FLARED				
544-75-1	CRASH CUSHION	6.00	EA	$23,502.08	$141,012.48
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	38,016.00	LF	$9.90	$376,358.40

Roadway Component Total $28,136,910.49

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	52,081.92	SY	$14.00	$729,146.88
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	8,363.52	TN	$97.61	$816,363.19
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	7.20	PM	$1,625.39	$11,702.81

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	36,018.00	LF	$1.15	$41,420.70
104-11	FLOATING TURBIDITY BARRIER	900.00	LF	$9.87	$8,883.00
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	900.00	LF	$5.02	$4,518.00
104-15	SOIL TRACKING PREVENTION DEVICE	4.00	EA	$1,940.20	$7,760.80
104-18	INLET PROTECTION SYSTEM	22.00	EA	$85.00	$1,870.00
107-1	LITTER REMOVAL	87.26	AC	$24.31	$2,121.29
107-2	MOWING	87.26	AC	$54.17	$4,726.87

Shoulder Component Total $1,628,513.54

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	20.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	10.00 / 10.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

285-708	OPTIONAL BASE,BASE GROUP 08	43,633.92	SY	$14.00	$610,874.88
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	6,969.60	TN	$97.61	$680,302.66
521-1	MEDIAN CONC BARRIER WALL	38,016.00	LF	$135.00	$5,132,160.00
	Median Component Total				$6,423,337.54

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	64.80	CY	$750.00	$48,600.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	22.00	EA	$3,578.49	$78,726.78
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	2,880.00	LF	$70.00	$201,600.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,240.00	LF	$66.82	$82,856.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	1,072.00	LF	$103.45	$110,898.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	144.00	EA	$1,200.00	$172,800.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	7,200.00	SY	$56.70	$408,240.00
570-1-1	PERFORMANCE TURF	2,534.40	SY	$0.75	$1,900.80

Retention Basin 1

Description	Value
Size	2.5 AC
Multiplier	1
Depth	6.00
Description	Turkey Lake Rd Pond

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.50	AC	$10,000.00	$25,000.00
120-1	REGULAR EXCAVATION	24,200.00	CY	$4.50	$108,900.00
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	$750.00	$13,500.00
425-1-361	INLETS, CURB, TYPE P-6, <10'	1.00	EA	$3,450.72	$3,450.72
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$6,582.51	$6,582.51
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$230.08	$46,016.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,335.00	LF	$9.90	$13,216.50
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$2,671.64	$2,671.64
570-1-1	PERFORMANCE TURF	12,100.00	SY	$0.75	$9,075.00

Retention Basin 200

Description	Value
Size	10 AC
Multiplier	1
Depth	12.00
Description	Pond 200 Preferred

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	10.00	AC	$10,000.00	$100,000.00
120-1	REGULAR EXCAVATION	193,600.00	CY	$4.50	$871,200.00
400-2-2	CONC CLASS II, ENDWALLS	36.00	CY	$750.00	$27,000.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	2.00	EA	$3,229.00	$6,458.00
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,582.51	$13,165.02
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	104.00	LF	$127.25	$13,234.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$230.08	$92,032.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	2,780.00	LF	$9.90	$27,522.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	3.00	EA	$2,671.64	$8,014.92
570-1-1	PERFORMANCE TURF	48,400.00	SY	$0.75	$36,300.00

Retention Basin 201

Description	Value
Size	10 AC
Multiplier	1
Depth	12.00
Description	Pond 201

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	10.00	AC	$10,000.00	$100,000.00
120-1	REGULAR EXCAVATION	193,600.00	CY	$4.50	$871,200.00
400-2-2	CONC CLASS II, ENDWALLS	36.00	CY	$750.00	$27,000.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	2.00	EA	$3,229.00	$6,458.00
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,582.51	$13,165.02
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	104.00	LF	$127.25	$13,234.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$230.08	$92,032.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	2,780.00	LF	$9.90	$27,522.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	3.00	EA	$2,671.64	$8,014.92
570-1-1	PERFORMANCE TURF	48,400.00	SY	$0.75	$36,300.00

Retention Basin 202

Description	Value
Size	1.5 AC
Multiplier	1
Depth	12.00
Description	Pond 202A

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.50	AC	$10,000.00	$15,000.00
120-1	REGULAR EXCAVATION	29,040.00	CY	$4.50	$130,680.00
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	$750.00	$13,500.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$6,582.51	$6,582.51
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND,	200.00	LF	$230.08	$46,016.00

	60"S/CD				
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,025.00	LF	$9.90	$10,147.50
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$2,671.64	$2,671.64
570-1-1	PERFORMANCE TURF	7,260.00	SY	$0.75	$5,445.00

Retention Basin 203

Description	Value
Size	2.5 AC
Multiplier	1
Depth	12.00
Description	Pond 202B

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.50	AC	$10,000.00	$25,000.00
120-1	REGULAR EXCAVATION	48,400.00	CY	$4.50	$217,800.00
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	$750.00	$13,500.00
425-1-361	INLETS, CURB, TYPE P-6, <10'	1.00	EA	$3,450.72	$3,450.72
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$6,582.51	$6,582.51
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$230.08	$46,016.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,335.00	LF	$9.90	$13,216.50
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$2,671.64	$2,671.64
570-1-1	PERFORMANCE TURF	12,100.00	SY	$0.75	$9,075.00

Retention Basin 204

Description	Value
Size	5 AC
Multiplier	1
Depth	12.00
Description	Pond 202C

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$10,000.00	$50,000.00
120-1	REGULAR EXCAVATION	96,800.00	CY	$4.50	$435,600.00
400-2-2	CONC CLASS II, ENDWALLS	30.00	CY	$750.00	$22,500.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,582.51	$13,165.02
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$230.08	$92,032.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00	LF	$9.90	$18,414.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$2,671.64	$5,343.28
570-1-1	PERFORMANCE TURF	24,200.00	SY	$0.75	$18,150.00

Retention Basin 205

Description	Value

Size		5 AC
Multiplier		1
Depth		12.00
Description	Pond 202D	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$10,000.00	$50,000.00
120-1	REGULAR EXCAVATION	96,800.00	CY	$4.50	$435,600.00
400-2-2	CONC CLASS II, ENDWALLS	30.00	CY	$750.00	$22,500.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,582.51	$13,165.02
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$230.08	$92,032.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00	LF	$9.90	$18,414.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$2,671.64	$5,343.28
570-1-1	PERFORMANCE TURF	24,200.00	SY	$0.75	$18,150.00
	Drainage Component Total				$5,646,967.65

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	8.00	AS	$324.12	$2,592.96
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	87.00	AS	$1,117.07	$97,185.09
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	8.00	AS	$4,361.29	$34,890.32
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	22.00	AS	$4,865.75	$107,046.50
	Signing Component Total				$241,714.87

INTELLIGENT TRAFFIC SYSTEM (ITS) COMPONENT

Description of Work

Added at $750,000 per mile. Cost from FDOT D-5

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
ITS	ITS FOR ENTIRE PROJECT	3.90	MI	$108,600.00	$423,540.00
	Intelligent Traffic System (ITS) Component Total				$423,540.00

LIGHTING COMPONENT

Rural Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	210

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	42,000.00 LF	$6.35	$266,700.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	210.00 EA	$615.83	$129,324.30
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	126,000.00 LF	$1.94	$244,440.00
715-4-122	LIGHT POLE COMP, F&I, WS130, 45'	210.00 EA	$4,655.00	$977,550.00
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	210.00 EA	$498.00	$104,580.00
	Subcomponent Total			$1,722,594.30

High Mast Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	8

Pay Items

Pay item	Description	Quantity Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	4,000.00 LF	$6.35	$25,400.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00 EA	$615.83	$9,853.28
715-1-12	LIGHTING CONDUCTORS, F&I, INSUL,NO.8-6	4,000.00 LF	$1.40	$5,600.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	12,000.00 LF	$1.94	$23,280.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	1.00 EA	$10,862.88	$10,862.88
715-19-113	HIGH MAST LIGHT POLE,F&I,WS-150,120'	8.00 EA	$55,000.00	$440,000.00
715-500-2	POLE CABLE DISTRIBUTION SYS, HIGH MAST	8.00 EA	$292.36	$2,338.88
	Subcomponent Total			$517,335.04

Lighting Component Total	$2,239,929.34

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total	$2,347,457.18

BRIDGES COMPONENT

Bridge SR482

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	186.00
Width (LF)	254.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	24,643.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$175.13**
Basic Bridge Cost	**$7,972,425.00**

Description I-4 OVER SAND LAKE

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-3	REMOVAL OF EXISTING STRUCTURES/BRIDGES	24,643.00	SF	$25.00	$616,075.00
400-2-10	CONC CLASS II, APPROACH SLABS	564.44	CY	$350.00	$197,554.00
415-1-9	REINF STEEL- APPROACH SLABS	98,777.00	LB	$1.05	$103,715.85
	Bridge SR482 Total				$8,889,769.85

Bridge CD

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,926.00
Width (LF)	60.00
Type	Medium Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$169.37**
Basic Bridge Cost	**$19,500,750.00**

Description NEW ELEVATED CD SYSTEM

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	133.33	CY	$350.00	$46,665.50
415-1-9	REINF STEEL- APPROACH SLABS	23,332.75	LB	$1.05	$24,499.39
	Bridge CD Total				$19,571,914.89
	Bridges Component Total				$28,461,684.74

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	4,187.00
Begin height	16.50
End Height	16.50
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	69,085.50	SF	$27.00	$1,865,308.50
	Retaining Walls Component Total				$1,865,308.50

ARCHITECTURAL COMPONENT

EX-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
1	TOLL GANTRY, 80'	2.00	EA	$500,000.00	$1,000,000.00
	Comment: TWO 40' SPAN TOLL GANTRY				
	Architectural Component Total				$1,000,000.00

Sequence 1 Total $80,596,029.93

Sequence: 2 NDR - New Construction, Divided, Rural **Net Length:** 10.064 MI 53,139 LF

Description: Construct GUL Aux lanes in both directions for a length of 53139'.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	10.060
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	0 to 1 / 0 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	75,484.87	CY	$7.00	$528,394.09
	Earthwork Component Total				$528,394.09

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	0.00 / 12.00
Structural Spread Rate	660
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	188,938.58	SY	$3.25	$614,050.38
285-712	OPTIONAL BASE,BASE GROUP 12	74,748.83	SY	$20.00	$1,494,976.60
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	23,381.15	TN	$92.00	$2,151,065.80

337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	2,834.08	TN	$125.00	$354,260.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	80.51	NM	$939.29	$75,622.24
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	80.51	NM	$3,138.35	$252,668.56

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	931.00
Noise Barrier Wall Begin Height	14.00
Noise Barrier Wall End Height	14.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
534-72-101	SOUND/NOISE BARRIER-INC FOUNDATION, PERM	13,034.00	SF	$25.00	$325,850.00
	Roadway Component Total				$5,268,493.59

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	20.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	10.00 / 10.00
Paved Median Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	121,983.47	SY	$14.00	$1,707,768.58
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	19,484.29	TN	$97.61	$1,901,861.55
521-1	MEDIAN CONC BARRIER WALL	4,880.00	LF	$135.00	$658,800.00

Median Component Total $4,268,430.13

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $301,959.53

Sequence 2 Total $10,367,277.34

Sequence: 3 NDR - New Construction, Divided, Rural **Net Length:** 0.695 MI 3,670 LF

Description: SR 528 Beachline - Construct 4 travel lanes in each direction for a total of 3670' from Station 196+72.00 to 233+42.00.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	150.00 / 150.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.700
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	0 to 1 / 0 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	25.27	AC	$10,000.00	$252,700.00
120-6	EMBANKMENT	26,370.28	CY	$7.00	$184,591.96

Earthwork Component Total $437,291.96

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	10
Roadway Pavement Width L/R	48.00 / 48.00
Structural Spread Rate	660
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	58,722.05	SY	$3.25	$190,846.66
285-712	OPTIONAL BASE,BASE GROUP 12	39,686.32	SY	$20.00	$793,726.40
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	12,918.85	TN	$92.00	$1,188,534.20
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,565.92	TN	$125.00	$195,740.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-1	CONC TRAF RAIL BAR, JCT SLAB,32"F SHAPE	9,109.00	LF	$225.00	$2,049,525.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	8

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	845.00	EA	$3.57	$3,016.65
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.78	NM	$939.29	$2,611.23
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	5.56	GM	$449.54	$2,499.44
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	2.78	NM	$3,138.35	$8,724.61
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	5.56	GM	$1,027.15	$5,710.95

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
339-1	MISCELLANEOUS ASPHALT PAVEMENT	246.00	TN	$235.00	$57,810.00
521-1	MEDIAN CONC BARRIER WALL	21,487.00	LF	$135.00	$2,900,745.00
536-1-1	GUARDRAIL- ROADWAY, GEN TL-3	7,340.00	LF	$15.50	$113,770.00
536-8	GUARDRAIL- BRIDGE ANCHORAGE ASSEM, F&I	4.00	EA	$2,010.23	$8,040.92
544-75-1	CRASH CUSHION	5.00	EA	$23,502.08	$117,510.40
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	7,340.00	LF	$9.90	$72,666.00

Roadway Component Total $7,711,477.46

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	10,056.15	SY	$14.00	$140,786.10
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,614.86	TN	$97.61	$157,626.48
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	21.53	TN	$125.00	$2,691.25
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	1.39	PM	$1,625.39	$2,259.29

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	9,542.33	LF	$1.15	$10,973.68
104-11	FLOATING TURBIDITY BARRIER	173.78	LF	$9.87	$1,715.21
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	173.78	LF	$5.02	$872.38
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
104-18	INLET PROTECTION SYSTEM	5.00	EA	$85.00	$425.00
107-1	LITTER REMOVAL	16.85	AC	$24.31	$409.62
107-2	MOWING	16.85	AC	$54.17	$912.76
	Shoulder Component Total				$320,611.97

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	24.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	12.00 / 12.00
Paved Median Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	10,056.15	SY	$14.00	$140,786.10
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,614.86	TN	$97.61	$157,626.48
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	21.53	TN	$125.00	$2,691.25

Median Component Total $301,103.83

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	12.51	CY	$750.00	$9,382.50
425-1-551	INLETS, DT BOT, TYPE E, <10'	5.00	EA	$3,578.49	$17,892.45
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	560.00	LF	$70.00	$39,200.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	240.00	LF	$66.82	$16,036.80
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	208.00	LF	$103.45	$21,517.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	28.00	EA	$1,200.00	$33,600.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	1,390.20	SY	$56.70	$78,824.34
570-1-1	PERFORMANCE TURF	489.35	SY	$0.75	$367.01

Retention Basin 1

Description	Value
Size	5 AC
Multiplier	1
Depth	6.00
Description	POND 203A

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$10,000.00	$50,000.00
120-1	REGULAR EXCAVATION	48,400.00	CY	$4.50	$217,800.00
400-2-2	CONC CLASS II, ENDWALLS	30.00	CY	$750.00	$22,500.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,582.51	$13,165.02
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$230.08	$92,032.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00	LF	$9.90	$18,414.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$2,671.64	$5,343.28
570-1-1	PERFORMANCE TURF	24,200.00	SY	$0.75	$18,150.00

Retention Basin 2

Description	Value
Size	2 AC
Multiplier	1
Depth	12.00
Description	POND 203B

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	$10,000.00	$20,000.00
120-1	REGULAR EXCAVATION	38,720.00	CY	$4.50	$174,240.00
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	$750.00	$13,500.00

425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$6,582.51	$6,582.51
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$230.08	$46,016.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00	LF	$9.90	$11,682.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$2,671.64	$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00	SY	$0.75	$7,260.00

Retention Basin 3

Description	Value
Size	5 AC
Multiplier	1
Depth	12.00
Description	POND 204A

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	5.00	AC	$10,000.00	$50,000.00
120-1	REGULAR EXCAVATION	96,800.00	CY	$4.50	$435,600.00
400-2-2	CONC CLASS II, ENDWALLS	30.00	CY	$750.00	$22,500.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	2.00	EA	$6,582.51	$13,165.02
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	400.00	LF	$230.08	$92,032.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,860.00	LF	$9.90	$18,414.00
550-60-234	FENCE GATE,TYP B,SLIDE/CANT,18.1-20'OPEN	2.00	EA	$2,671.64	$5,343.28
570-1-1	PERFORMANCE TURF	24,200.00	SY	$0.75	$18,150.00

Retention Basin 4

Description	Value
Size	2 AC
Multiplier	1
Depth	12.00
Description	POND 204B

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	2.00	AC	$10,000.00	$20,000.00
120-1	REGULAR EXCAVATION	38,720.00	CY	$4.50	$174,240.00
400-2-2	CONC CLASS II, ENDWALLS	18.00	CY	$750.00	$13,500.00
425-1-541	INLETS, DT BOT, TYPE D, <10'	1.00	EA	$3,229.00	$3,229.00
425-2-71	MANHOLES, J-7, <10'	1.00	EA	$6,582.51	$6,582.51
430-175-142	PIPE CULV, OPT MATL, ROUND, 42"S/CD	56.00	LF	$127.25	$7,126.00
430-175-160	PIPE CULV, OPT MATL, ROUND, 60"S/CD	200.00	LF	$230.08	$46,016.00
550-10-220	FENCING, TYPE B, 5.1-6.0', STANDARD	1,180.00	LF	$9.90	$11,682.00
	FENCE GATE,TYP				

550-60-234	B,SLIDE/CANT,18.1-20'OPEN	1.00	EA	$2,671.64	$2,671.64
570-1-1	PERFORMANCE TURF	9,680.00	SY	$0.75	$7,260.00
	Drainage Component Total				$1,914,753.60

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$324.12	$648.24
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	17.00	AS	$1,117.07	$18,990.19
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$4,361.29	$8,722.58
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	5.00	AS	$4,865.75	$24,328.75
	Signing Component Total				$52,689.76

LIGHTING COMPONENT

High Mast Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	3,000.00	LF	$6.35	$19,050.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	12.00	EA	$615.83	$7,389.96
715-1-12	LIGHTING CONDUCTORS, F&I, INSUL,NO.8-6	3,000.00	LF	$1.40	$4,200.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	9,000.00	LF	$1.94	$17,460.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	1.00	EA	$10,862.88	$10,862.88
715-19-113	HIGH MAST LIGHT POLE,F&I,WS-150,120'	6.00	EA	$55,000.00	$330,000.00
715-500-2	POLE CABLE DISTRIBUTION SYS, HIGH MAST	6.00	EA	$292.36	$1,754.16
	Subcomponent Total				$390,717.00
	Lighting Component Total				$390,717.00

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N
Landscaping Component Total	$467,509.37

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	8,250.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	165,000.00	SF	$27.00	$4,455,000.00
	Retaining Walls Component Total				$4,455,000.00

Sequence 3 Total $16,051,154.95

Sequence: 4 NUR - New Construction, Undivided, Rural **Net Length:** 0.287 MI 1,515 LF

Description: One lane ramps: SR 482 (SAND LAKE RD).

Special Conditions: Bridges: 100 ft Road: 1515 ft

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 30.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.287
Top of Structural Course For Begin Section	100.00
Top of Structural Course For End Section	124.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.04	AC	$10,000.00	$10,400.00
120-6	EMBANKMENT	64,177.18	CY	$7.00	$449,240.26
	Earthwork Component Total				$459,640.26

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	0.00 / 15.00
Structural Spread Rate	495
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

160-4	TYPE B STABILIZATION	4,544.50	SY	$3.25	$14,769.62
285-712	OPTIONAL BASE,BASE GROUP 12	2,580.26	SY	$20.00	$51,605.20
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	624.87	TN	$92.00	$57,488.04
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	100.99	TN	$125.00	$12,623.75

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.57	NM	$939.29	$535.40
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.57	NM	$3,138.35	$1,788.86
	Roadway Component Total				$138,810.88

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	6.00 / 6.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	6.00 / 6.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	2,130.86	SY	$14.00	$29,832.04
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	222.18	TN	$97.61	$21,686.99

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,938.56	LF	$1.15	$4,529.34
104-11	FLOATING TURBIDITY BARRIER	71.72	LF	$9.87	$707.88
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	71.72	LF	$5.02	$360.03
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
107-1	LITTER REMOVAL	3.48	AC	$24.31	$84.60
107-2	MOWING	3.48	AC	$54.17	$188.51
	Shoulder Component Total				$59,329.59

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	5.16	CY	$750.00	$3,870.00
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	232.00	LF	$70.00	$16,240.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	56.00	LF	$103.45	$5,793.20
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	12.00	EA	$1,200.00	$14,400.00
570-1-1	PERFORMANCE TURF	201.98	SY	$0.75	$151.49
	Drainage Component Total				$40,454.69

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$324.12	$324.12
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	6.00	AS	$1,117.07	$6,702.42
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$4,361.29	$4,361.29
	Signing Component Total				$11,387.83

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N
Landscaping Component Total	$38,515.75

BRIDGES COMPONENT

Bridge TURKEY

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	100.00
Width (LF)	30.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$180.61**
Basic Bridge Cost	**$506,250.00**
Description	WB SAND LAKE RD TO TURKEY LAKE RD LOOP.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

400-2-10	CONC CLASS II, APPROACH SLABS	66.67	CY	$350.00	$23,334.50
415-1-9	REINF STEEL- APPROACH SLABS	11,667.25	LB	$1.05	$12,250.61
	Bridge TURKEY Total				$541,835.11
	Bridges Component Total				$541,835.11

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	30.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	600.00	SF	$27.00	$16,200.00

Retaining Wall 2

Description	Value
Length	30.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	600.00	SF	$27.00	$16,200.00
	Retaining Walls Component Total				$32,400.00

Sequence 4 Total $1,322,374.11

Sequence: 5 NUR - New Construction, Undivided, Rural **Net Length:** 1.402 MI 7,400 LF

Description: Two lane ramps: CFP RAMPS AT SR 528.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	47.00 / 47.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	1.401
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00

Horizontal Elevation For End Section	100.00
Front Slope L/R	0 to 1 / 0 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	15.97	AC	$10,000.00	$159,700.00
120-6	EMBANKMENT	30,526.11	CY	$7.00	$213,682.77
	Earthwork Component Total				$373,382.77

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	495
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	59,199.36	SY	$3.25	$192,397.92
285-712	OPTIONAL BASE,BASE GROUP 12	40,008.90	SY	$20.00	$800,178.00
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	9,767.89	TN	$92.00	$898,645.88
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,578.65	TN	$125.00	$197,331.25

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	946.00	EA	$3.57	$3,377.22
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	5.61	NM	$939.29	$5,269.42
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	4.20	GM	$449.54	$1,888.07
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	5.61	NM	$3,138.35	$17,606.14
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	4.20	GM	$1,027.15	$4,314.03
	Roadway Component Total				$2,121,007.93

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	20,275.78	SY	$14.00	$283,860.92
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,170.64	TN	$97.61	$211,876.17
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	43.41	TN	$125.00	$5,426.25

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	19,239.79	LF	$1.15	$22,125.76
104-11	FLOATING TURBIDITY BARRIER	350.38	LF	$9.87	$3,458.25
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	350.38	LF	$5.02	$1,758.91
104-15	SOIL TRACKING PREVENTION DEVICE	2.00	EA	$1,940.20	$3,880.40
107-1	LITTER REMOVAL	16.99	AC	$24.31	$413.03
107-2	MOWING	16.99	AC	$54.17	$920.35
	Shoulder Component Total				$533,720.04

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	25.23	CY	$750.00	$18,922.50
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,128.00	LF	$70.00	$78,960.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	240.00	LF	$103.45	$24,828.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	57.00	EA	$1,200.00	$68,400.00
570-1-1	PERFORMANCE TURF	986.66	SY	$0.75	$740.00
	Drainage Component Total				$191,850.50

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	3.00	AS	$324.12	$972.36
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	29.00	AS	$1,117.07	$32,395.03
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	3.00	AS	$4,361.29	$13,083.87

Signing Component Total $46,451.26

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $97,992.38

Sequence 5 Total $3,364,404.88

Sequence: 6 NUR - New Construction, Undivided, Rural **Net Length:** 0.417 MI 2,200 LF

Description: Three lane ramp. SR 528 WB to I4 WB.

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.420
Top of Structural Course For Begin Section	100.00
Top of Structural Course For End Section	124.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	1 to 1 / 1 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	87,848.17	CY	$7.00	$614,937.19

Earthwork Component Total $614,937.19

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	18.00 / 18.00
Structural Spread Rate	495
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	14,667.84	SY	$3.25	$47,670.48
285-712	OPTIONAL BASE,BASE GROUP 12 SUPERPAVE ASPH CONC, TRAF	8,962.05	SY	$20.00	$179,241.00

334-1-25	E, PG76-22,PMA	2,178.17	TN	$92.00	$200,391.64
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	352.03	TN	$125.00	$44,003.75

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	225.00	EA	$3.57	$803.25
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.83	NM	$939.29	$779.61
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.83	GM	$449.54	$373.12
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	0.83	NM	$3,138.35	$2,604.83
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.83	GM	$1,027.15	$852.53
	Roadway Component Total				$476,720.21

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	12.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	6,028.48	SY	$14.00	$84,398.72
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	645.38	TN	$97.61	$62,995.54

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,720.46	LF	$1.15	$6,578.53
104-11	FLOATING TURBIDITY BARRIER	104.18	LF	$9.87	$1,028.26
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	104.18	LF	$5.02	$522.98
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
107-1	LITTER REMOVAL	5.05	AC	$24.31	$122.77
107-2	MOWING	5.05	AC	$54.17	$273.56

Shoulder Component Total $157,860.56

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	336.00	LF	$70.00	$23,520.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	72.00	LF	$103.45	$7,448.40

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
425-1-901	INLETS, SPECIAL, <10'	7.00	EA	$10,802.53	$75,617.71
	Comment: TOTAL DIST/300' INTERVAL				

Drainage Component Total $106,586.11

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$324.12	$324.12
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	9.00	AS	$1,117.07	$10,053.63
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$4,361.29	$4,361.29

Signing Component Total $14,739.04

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $41,125.29

Sequence 6 Total $1,411,968.40

Sequence: 7 NUU - New Construction, Undivided, Urban **Net Length:** 0.338 MI 1,783 LF

Description: Turkey Lake Road

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	50.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1

Distance	0.340
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.10	AC	$10,000.00	$41,000.00
120-6	EMBANKMENT	13,174.77	CY	$7.00	$92,223.39
	Earthwork Component Total				$133,223.39

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	250
Friction Course Spread Rate	160

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	10,531.92	SY	$3.25	$34,228.74
285-712	OPTIONAL BASE,BASE GROUP 12	9,509.63	SY	$20.00	$190,192.60
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	1,188.70	TN	$92.00	$109,360.40
337-7-6	ASPH CONC FC, INC BIT/RUB, FC12.5, FC-6	760.77	TN	$112.61	$85,670.31

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	3

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	228.00	EA	$3.57	$813.96
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.70	NM	$939.29	$2,536.08
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	2.03	GM	$449.54	$912.57
	Roadway Component Total				$423,714.66

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 7.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,783.06	LF	$18.00	$32,095.08
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,783.06	LF	$18.00	$32,095.08
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	990.59	SY	$32.38	$32,075.30
570-1-1	PERFORMANCE TURF	1,981.17	SY	$0.75	$1,485.88

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,566.11	LF	$1.15	$4,101.03
104-11	FLOATING TURBIDITY BARRIER	84.42	LF	$9.87	$833.23
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	84.42	LF	$5.02	$423.79
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
104-18	INLET PROTECTION SYSTEM	18.00	EA	$85.00	$1,530.00
107-1	LITTER REMOVAL	4.09	AC	$24.31	$99.43
107-2	MOWING	4.09	AC	$54.17	$221.56
	Shoulder Component Total				$106,900.58

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	6.08	CY	$750.00	$4,560.00
425-1-351	INLETS, CURB, TYPE P-5, <10'	13.00	EA	$4,457.50	$57,947.50
425-1-451	INLETS, CURB, TYPE J-5, <10'	4.00	EA	$5,590.00	$22,360.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	2.00	EA	$2,667.22	$5,334.44
425-2-41	MANHOLES, P-7, <10'	2.00	EA	$3,067.50	$6,135.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,784.00	LF	$66.82	$119,206.88
570-1-1	PERFORMANCE TURF	102.66	SY	$0.75	$77.00
	Drainage Component Total				$215,620.82

INTERSECTIONS COMPONENT

Intersection 1

Description	Value
Mainline No. of Left Turn Lanes	2
Mainline No. of Right Turn Lanes	1
Mainline Design Speed	40
Cross Street Thru Lanes	4
Cross Street No. of Left Turn Lanes	1
Cross Street No. of Right Turn Lanes	0

Cross Street Design Speed	40
T-Intersection?	Y
Multiplier	1
Description	Turkey Lake and Central Fl Parkway

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	0.59	AC	$10,000.00	$5,900.00
120-1	REGULAR EXCAVATION	865.43	CY	$4.50	$3,894.44
160-4	TYPE B STABILIZATION	1,402.67	SY	$3.25	$4,558.68
160-4	TYPE B STABILIZATION	2,306.10	SY	$3.25	$7,494.83
285-709	OPTIONAL BASE,BASE GROUP 09	2,306.10	SY	$16.00	$36,897.60
285-712	OPTIONAL BASE,BASE GROUP 12	1,402.67	SY	$20.00	$28,053.40
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	317.09	TN	$96.29	$30,532.60
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	175.33	TN	$92.00	$16,130.36
337-7-6	ASPH CONC FC, INC BIT/RUB, FC12.5, FC-6	112.21	TN	$112.61	$12,635.97
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	92.24	TN	$110.00	$10,146.40
520-1-10	CONCRETE CURB & GUTTER, TYPE F	504.00	LF	$18.00	$9,072.00
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	280.00	SY	$32.38	$9,066.40
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	86.94	SY	$50.48	$4,388.73
570-1-1	PERFORMANCE TURF	280.00	SY	$0.75	$210.00
	Intersections Component Total				$178,981.41

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	7.00	AS	$324.12	$2,268.84
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	1.00	AS	$1,117.07	$1,117.07
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	1.00	AS	$4,865.75	$4,865.75
	Signing Component Total				$8,251.66

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MAX

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	1,783.06	LF	$6.35	$11,322.43
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	232.68	LF	$17.14	$3,988.14
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	8.00	EA	$615.83	$4,926.64
	LIGHTING CONDUCTORS, F&I,				

715-1-13	INSUL, NO.4-2	6,047.19 LF	$1.94	$11,731.55
715-4-111	LIGHT POLE COMP, F&I, WS150, 40'	8.00 EA	$3,723.28	$29,786.24
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	8.00 EA	$498.00	$3,984.00
	Subcomponent Total			$65,738.99
	Lighting Component Total			$65,739.00

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $33,972.95

Sequence 7 Total $1,166,404.47

Sequence: 9 NDR - New Construction, Divided, Rural **Net Length:** 3.780 MI 19,958 LF

Description: 2 Express lanes in each direction from station 1345+48.48 to station 1540+50

Special Conditions: August 2016 Update: Express Lanes with Asphalt Pavement

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 0.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	3.780
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	84,520.13	CY	$7.00	$591,640.91
	Earthwork Component Total				$591,640.91

ROADWAY COMPONENT

User Input Data

Description	Value

Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	660
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	168,533.14	SY	$3.25	$547,732.70
285-712	OPTIONAL BASE,BASE GROUP 12	109,369.14	SY	$20.00	$2,187,382.80
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	35,125.85	TN	$92.00	$3,231,578.20
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	4,257.68	TN	$125.00	$532,210.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	8
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	1,531.00	EA	$3.57	$5,465.67
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	60.48	NM	$939.29	$56,808.26
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	15.12	GM	$449.54	$6,797.04

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Roadway Component Total $6,567,974.68

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	10.00 / 10.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	10.00 / 10.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	45,814.40	SY	$14.00	$641,401.60
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	7,317.89	TN	$97.61	$714,299.24
546-72-51	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	7.56	PM	$1,625.39	$12,287.95
	Shoulder Component Total				$1,367,988.79

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	8.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	4.00 / 4.00
Paved Median Shoulder Width L/R	4.00 / 4.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	19,203.91	SY	$14.00	$268,854.74
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	2,927.15	TN	$97.61	$285,719.11
	Median Component Total				$554,573.85

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	68.04	CY	$750.00	$51,030.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	23.00	EA	$3,578.49	$82,305.27
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	3,024.00	LF	$70.00	$211,680.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,304.00	LF	$66.82	$87,133.28
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	1,120.00	LF	$103.45	$115,864.00
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	152.00	EA	$1,200.00	$182,400.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	7,559.80	SY	$56.70	$428,640.66
570-1-1	PERFORMANCE TURF	2,661.05	SY	$0.75	$1,995.79
	Drainage Component Total				$1,161,049.00

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	8.00	AS	$324.12	$2,592.96
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	91.00	AS	$1,117.07	$101,653.37
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	8.00	AS	$4,361.29	$34,890.32
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	23.00	AS	$4,865.75	$111,912.25
	Signing Component Total				$251,048.90

LIGHTING COMPONENT

High Mast Lighting Subcomponent

Description	Value
Multiplier (Number of Poles)	8

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	4,000.00	LF	$6.35	$25,400.00
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	16.00	EA	$615.83	$9,853.28
715-1-12	LIGHTING CONDUCTORS, F&I, INSUL,NO.8-6	4,000.00	LF	$1.40	$5,600.00
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	12,000.00	LF	$1.94	$23,280.00
715-7-11	LOAD CENTER, F&I, SECONDARY VOLTAGE	1.00	EA	$10,862.88	$10,862.88
715-19-113	HIGH MAST LIGHT POLE,F&I,WS-150,120'	8.00	EA	$55,000.00	$440,000.00
715-500-2	POLE CABLE DISTRIBUTION SYS, HIGH MAST	8.00	EA	$292.36	$2,338.88
	Subcomponent Total				$517,335.04
	Lighting Component Total				$517,335.04

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total	$330,348.34
Sequence 9 Total	$11,341,959.51

Sequence: 10 NDR - New Construction, Divided, Rural **Net Length:** 2.298 MI 12,135 LF

Description: Express lanes aux lanes.

Special Conditions: August 2016 Update: Express Lanes with Asphalt Pavement

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 0.00

Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	2.298
Top of Structural Course For Begin Section	103.00
Top of Structural Course For End Section	103.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	0 to 1 / 0 to 1
Median Slope L/R	0 to 1 / 0 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
120-6	EMBANKMENT	15,162.31	CY	$7.00	$106,136.17
	Earthwork Component Total				$106,136.17

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	1
Roadway Pavement Width L/R	12.00 / 12.00
Structural Spread Rate	660
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	32,360.06	SY	$3.25	$105,170.20
285-712	OPTIONAL BASE,BASE GROUP 12	34,139.87	SY	$20.00	$682,797.40
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	10,678.82	TN	$92.00	$982,451.44
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	1,294.40	TN	$125.00	$161,800.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	18.39	NM	$939.29	$17,273.54
	Roadway Component Total				$1,949,492.58

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 0.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	0.00 / 0.00
Structural Spread Rate	330
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	31,551.06	LF	$1.15	$36,283.72
104-11	FLOATING TURBIDITY BARRIER	574.57	LF	$9.87	$5,671.01
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	574.57	LF	$5.02	$2,884.34
104-15	SOIL TRACKING PREVENTION DEVICE	3.00	EA	$1,940.20	$5,820.60
104-18	INLET PROTECTION SYSTEM	14.00	EA	$85.00	$1,190.00
107-1	LITTER REMOVAL	55.71	AC	$24.31	$1,354.31
107-2	MOWING	55.71	AC	$54.17	$3,017.81
	Shoulder Component Total				$56,221.79

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	41.37	CY	$750.00	$31,027.50
425-1-551	INLETS, DT BOT, TYPE E, <10'	14.00	EA	$3,578.49	$50,098.86
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	1,840.00	LF	$70.00	$128,800.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	792.00	LF	$66.82	$52,921.44
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	688.00	LF	$103.45	$71,173.60
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	92.00	EA	$1,200.00	$110,400.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	4,596.60	SY	$56.70	$260,627.22
570-1-1	PERFORMANCE TURF	1,618.00	SY	$0.75	$1,213.50
	Drainage Component Total				$706,262.12

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	5.00	AS	$324.12	$1,620.60
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	56.00	AS	$1,117.07	$62,555.92
	MULTI- POST SIGN, F&I GM, 31-50				

700-2-14	SF	5.00 AS	$4,361.29	$21,806.45
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	14.00 AS	$4,865.75	$68,120.50
	Signing Component Total			$154,103.47

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $89,166.48

Sequence 10 Total $3,061,382.61

Sequence: 11 NUR - New Construction, Undivided, Rural **Net Length:** 0.833 MI 4,400 LF

Description: Two lane ramps: I-4 to/from SR 528

Special Conditions: Roadway length: 4400 ft

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 47.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.833
Top of Structural Course For Begin Section	110.00
Top of Structural Course For End Section	110.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	0 to 1 / 0 to 1
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.75	AC	$10,000.00	$47,500.00
120-6	EMBANKMENT	50,125.28	CY	$7.00	$350,876.96
	Earthwork Component Total				$398,376.96

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	495
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	17,599.30	SY	$3.25	$57,197.72
285-712	OPTIONAL BASE,BASE GROUP 12	11,894.19	SY	$20.00	$237,883.80
334-1-25	SUPERPAVE ASPH CONC, TRAF E, PG76-22,PMA	2,903.88	TN	$92.00	$267,156.96
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	469.31	TN	$125.00	$58,663.75

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	Y
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	1
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	1
Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	112.00	EA	$3.57	$399.84
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	1.67	NM	$939.29	$1,568.61
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.83	GM	$449.54	$373.12
711-11-111	THERMOPLASTIC, STD, WHITE, SOLID, 6"	1.67	NM	$3,138.35	$5,241.04
711-11-131	THERMOPLASTIC, STD, WHITE, SKIP, 6"	0.83	GM	$1,027.15	$852.53
	Roadway Component Total				$629,337.38

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	0.00 / 12.00
Structural Spread Rate	220
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	O
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-708	OPTIONAL BASE,BASE GROUP 08	6,027.76	SY	$14.00	$84,388.64
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	645.31	TN	$97.61	$62,988.71
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	12.91	TN	$125.00	$1,613.75

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

104-10-3	SEDIMENT BARRIER	11,439.54	LF	$1.15	$13,155.47
104-11	FLOATING TURBIDITY BARRIER	208.32	LF	$9.87	$2,056.12
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	208.32	LF	$5.02	$1,045.77
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
107-1	LITTER REMOVAL	10.10	AC	$24.31	$245.53
107-2	MOWING	10.10	AC	$54.17	$547.12
	Shoulder Component Total				$167,981.31

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	15.00	CY	$750.00	$11,250.00
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	672.00	LF	$70.00	$47,040.00
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	144.00	LF	$103.45	$14,896.80
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	34.00	EA	$1,200.00	$40,800.00
570-1-1	PERFORMANCE TURF	586.64	SY	$0.75	$439.98
	Drainage Component Total				$114,426.78

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$324.12	$648.24
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	17.00	AS	$1,117.07	$18,990.19
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$4,361.29	$8,722.58
	Signing Component Total				$28,361.01

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N
Landscaping Component Total	$1,299,423.90

BRIDGES COMPONENT

Bridge EBTOEB

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	108.00
Width (LF)	47.00

Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$179.73**
Basic Bridge Cost	**$856,575.00**
Description	I-4 EB GUL TO SR 528 EB GUL

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	104.44	CY	$350.00	$36,554.00
415-1-9	REINF STEEL- APPROACH SLABS	18,277.00	LB	$1.05	$19,190.85
	Bridge EBTOEB Total				$912,319.85

Bridge WBTOWB

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,450.00
Width (LF)	51.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$169.57**
Basic Bridge Cost	**$12,479,062.50**
Description	SR 528 WB GUL TO I-4 WB GUL

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	113.33	CY	$350.00	$39,665.50
415-1-9	REINF STEEL- APPROACH SLABS	19,832.75	LB	$1.05	$20,824.39
	Bridge WBTOWB Total				$12,539,552.39

Bridge WBTOEB

Description	**Value**
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,361.00
Width (LF)	43.00
Type	High Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$169.62**
Basic Bridge Cost	**$9,875,756.25**
Description	I-4 WB GUL TO SR 528 EB GUL

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	95.56	CY	$350.00	$33,446.00
415-1-9	REINF STEEL- APPROACH SLABS	16,723.00	LB	$1.05	$17,559.15
	Bridge WBTOEB Total				$9,926,761.40

Bridge 2

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,174.00
Width (LF)	31.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$169.76**
Basic Bridge Cost	**$6,141,487.50**
Description	

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	68.89	CY	$350.00	$24,111.50
415-1-9	REINF STEEL- APPROACH SLABS	12,055.75	LB	$1.05	$12,658.54
	Bridge 2 Total				$6,178,257.54

Bridge 3

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	1,190.00
Width (LF)	30.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$169.75**
Basic Bridge Cost	**$6,024,375.00**
Description	

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.67	CY	$350.00	$23,334.50
415-1-9	REINF STEEL- APPROACH SLABS	11,667.25	LB	$1.05	$12,250.61
	Bridge 3 Total				$6,059,960.11

Bridge 5

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	480.00
Width (LF)	30.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$171.22**
Basic Bridge Cost	**$2,430,000.00**
Description	

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.67	CY	$350.00	$23,334.50
415-1-9	REINF STEEL- APPROACH SLABS	11,667.25	LB	$1.05	$12,250.61
	Bridge 5 Total				$2,465,585.11

Bridge 6

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	730.00
Width (LF)	30.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$170.37**
Basic Bridge Cost	**$3,695,625.00**
Description	

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	66.67	CY	$350.00	$23,334.50
415-1-9	REINF STEEL- APPROACH SLABS	11,667.25	LB	$1.05	$12,250.61
	Bridge 6 Total				$3,731,210.11
	Bridges Component Total				$41,813,646.51

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00

Retaining Wall 2

Description	Value
Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00

Retaining Wall 3

Description	Value
Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00

Retaining Wall 4

Description	Value
Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00

Retaining Wall 5

Description	Value
Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00

Retaining Wall 6

Description	Value

Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00
	Retaining Walls Component Total				$162,000.00

Sequence 11 Total $44,613,553.85

Sequence: 12 NDR - New Construction, Divided, Rural **Net Length:** 0.677 MI 3,573 LF

Description: TWO LANE RAMPS: SAND LAKE INTERCHANGE

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.677
Top of Structural Course For Begin Section	100.00
Top of Structural Course For End Section	124.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	4.10	AC	$10,000.00	$41,000.00
120-6	EMBANKMENT	176,424.39	CY	$7.00	$1,234,970.73
	Earthwork Component Total				$1,275,970.73

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	2
Roadway Pavement Width L/R	0.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	20,643.86	SY	$3.25	$67,092.54

285-709	OPTIONAL BASE,BASE GROUP 09	9,789.95	SY	$16.00	$156,639.20
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,572.11	TN	$97.61	$153,453.66
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	381.12	TN	$125.00	$47,640.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	91.00	EA	$3.57	$324.87
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	2.71	NM	$939.29	$2,545.48
	Roadway Component Total				$427,695.76

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	8.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 0.00
Paved Outside Shoulder Width L/R	8.00 / 12.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	8,201.96	SY	$11.00	$90,221.56
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	436.70	TN	$97.61	$42,626.29
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	317.60	TN	$125.00	$39,700.00

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-8-1	CONC TRAF RAIL BAR, JCT SLAB,32"F SHAPE	3,500.00	LF	$225.00	$787,500.00

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	9,289.74	LF	$1.15	$10,683.20
104-11	FLOATING TURBIDITY BARRIER	169.18	LF	$9.87	$1,669.81
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	169.18	LF	$5.02	$849.28
104-15	SOIL TRACKING PREVENTION	1.00	EA	$1,940.20	$1,940.20

	DEVICE			
104-18	INLET PROTECTION SYSTEM	5.00 EA	$85.00	$425.00
107-1	LITTER REMOVAL	16.40 AC	$24.31	$398.68
107-2	MOWING	16.40 AC	$54.17	$888.39
	Shoulder Component Total			$976,902.41

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	8.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	0.00 / 8.00
Paved Median Shoulder Width L/R	0.00 / 8.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	3,306.99	SY	$11.00	$36,376.89
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	174.68	TN	$97.61	$17,050.51
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	127.04	TN	$125.00	$15,880.00
	Median Component Total				$69,307.40

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	12.18	CY	$750.00	$9,135.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	5.00	EA	$3,578.49	$17,892.45
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	232.00	LF	$66.82	$15,502.24
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	28.00	EA	$1,200.00	$33,600.00
	Drainage Component Total				$76,129.69

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	2.00	AS	$324.12	$648.24
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	17.00	AS	$1,117.07	$18,990.19
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	2.00	AS	$4,361.29	$8,722.58
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	5.00	AS	$4,865.75	$24,328.75
	Signing Component Total				$52,689.76

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $139,575.02

BRIDGES COMPONENT

Bridge TURK2

Description	Value
Estimate Type	SF Estimate
Primary Estimate	YES
Length (LF)	200.00
Width (LF)	50.00
Type	Low Level
Cost Factor	1.25
Structure No.	
Removal of Existing Structures area	0.00
Default Cost per SF	$135.00
Factored Cost per SF	$168.75
Final Cost per SF	**$174.68**
Basic Bridge Cost	**$1,687,500.00**
Description	2 LANE RAMP OVER WB I-4 GUL ON RAMP.

Bridge Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-10	CONC CLASS II, APPROACH SLABS	111.11	CY	$350.00	$38,888.50
415-1-9	REINF STEEL- APPROACH SLABS	19,444.25	LB	$1.05	$20,416.46
	Bridge TURK2 Total				$1,746,804.96
	Bridges Component Total				$1,746,804.96

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	50.00
Begin height	20.00
End Height	20.00
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-12	RET WALL SYSTEM, PERM, EX BARRIER	1,000.00	SF	$27.00	$27,000.00
	Retaining Walls Component Total				$27,000.00

Sequence 12 Total $4,792,075.73

Sequence: 13 NDR - New Construction, Divided, Rural **Net Length:** 0.230 MI 1,214 LF

Description: 3 LANE RAMPS: SAND LAKE INTERCHANGE

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.229
Top of Structural Course For Begin Section	100.00
Top of Structural Course For End Section	124.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.39	AC	$10,000.00	$13,900.00
120-6	EMBANKMENT	64,814.21	CY	$7.00	$453,699.47
	Earthwork Component Total				$467,599.47

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	3
Roadway Pavement Width L/R	0.00 / 36.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	7,283.23	SY	$3.25	$23,670.50
285-709	OPTIONAL BASE,BASE GROUP 09	4,944.51	SY	$16.00	$79,112.16
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	801.16	TN	$97.61	$78,201.23
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	194.22	TN	$125.00	$24,277.50

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2

Skip Stripe No. of Stripes	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	62.00	EA	$3.57	$221.34
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.92	NM	$939.29	$864.15
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.46	GM	$449.54	$206.79
	Roadway Component Total				$206,553.67

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 2.00
Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,393.26	SY	$11.00	$15,325.86
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	74.18	TN	$97.61	$7,240.71
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	53.95	TN	$125.00	$6,743.75
570-1-1	PERFORMANCE TURF	269.75	SY	$0.75	$202.31

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,156.07	LF	$1.15	$3,629.48
104-11	FLOATING TURBIDITY BARRIER	57.48	LF	$9.87	$567.33
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	57.48	LF	$5.02	$288.55
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
104-18	INLET PROTECTION SYSTEM	2.00	EA	$85.00	$170.00
107-1	LITTER REMOVAL	5.57	AC	$24.31	$135.41
107-2	MOWING	5.57	AC	$54.17	$301.73
	Shoulder Component Total				$36,545.33

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	6.00
Performance Turf Width	0.00
Total Median Shoulder Width L/R	0.00 / 6.00
Paved Median Shoulder Width L/R	0.00 / 4.00

Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	584.01	SY	$11.00	$6,424.11
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	29.67	TN	$97.61	$2,896.09
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	21.58	TN	$125.00	$2,697.50
	Median Component Total				$12,017.70

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.14	CY	$750.00	$3,105.00
425-1-551	INLETS, DT BOT, TYPE E, <10'	2.00	EA	$3,578.49	$7,156.98
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	184.00	LF	$70.00	$12,880.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	80.00	LF	$66.82	$5,345.60
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	72.00	LF	$103.45	$7,448.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	10.00	EA	$1,200.00	$12,000.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	459.80	SY	$56.70	$26,070.66
570-1-1	PERFORMANCE TURF	161.85	SY	$0.75	$121.39
	Drainage Component Total				$74,128.03

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$324.12	$324.12
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	6.00	AS	$1,117.07	$6,702.42
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$4,361.29	$4,361.29
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00	AS	$4,865.75	$9,731.50
	Signing Component Total				$21,119.33

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $24,538.91

Sequence 13 Total $842,502.44

Sequence: 14 NDR - New Construction, Divided, Rural **Net Length:** 0.242 MI 1,277 LF

Description: 4 LANE RAMPS: SAND LAKE INTERCHANGE

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	0.00 / 50.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.242
Top of Structural Course For Begin Section	100.00
Top of Structural Course For End Section	124.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	5.00 % / 5.00 %
Outside Shoulder Cross Slope L/R	6.00 % / 6.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.47	AC	$10,000.00	$14,700.00
120-6	EMBANKMENT	74,490.57	CY	$7.00	$521,433.99
	Earthwork Component Total				$536,133.99

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	0.00 / 48.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	9,366.37	SY	$3.25	$30,440.70
285-709	OPTIONAL BASE,BASE GROUP 09	6,905.57	SY	$16.00	$110,489.12
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	1,123.96	TN	$97.61	$109,709.74
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	272.48	TN	$125.00	$34,060.00

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt

Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	2
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	98.00	EA	$3.57	$349.86
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	0.97	NM	$939.29	$911.11
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	0.97	GM	$449.54	$436.05
	Roadway Component Total				$286,396.58

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	0.00 / 12.00
Total Outside Shoulder Perf. Turf Width L/R	0.00 / 2.00
Paved Outside Shoulder Width L/R	0.00 / 10.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	1,465.98	SY	$11.00	$16,125.78
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	78.05	TN	$97.61	$7,618.46
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	56.77	TN	$125.00	$7,096.25
570-1-1	PERFORMANCE TURF	283.83	SY	$0.75	$212.87

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	3,320.80	LF	$1.15	$3,818.92
104-11	FLOATING TURBIDITY BARRIER	60.48	LF	$9.87	$596.94
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	60.48	LF	$5.02	$303.61
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
104-18	INLET PROTECTION SYSTEM	2.00	EA	$85.00	$170.00
107-1	LITTER REMOVAL	5.86	AC	$24.31	$142.46
107-2	MOWING	5.86	AC	$54.17	$317.44
	Shoulder Component Total				$38,342.93

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	6.00

Performance Turf Width	0.00
Total Median Shoulder Width L/R	0.00 / 6.00
Paved Median Shoulder Width L/R	0.00 / 4.00
Structural Spread Rate	110
Friction Course Spread Rate	80
Total Width (T) / 8" Overlap (O)	T
Rumble Strips No. of Sides	0

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
285-704	OPTIONAL BASE,BASE GROUP 04	614.49	SY	$11.00	$6,759.39
334-1-12	SUPERPAVE ASPHALTIC CONC, TRAFFIC B	31.22	TN	$97.61	$3,047.38
337-7-22	ASPH CONC FC,INC BIT,FC-5,PG76-22,PMA	22.71	TN	$125.00	$2,838.75
	Median Component Total				$12,645.52

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	4.35	CY	$750.00	$3,262.50
425-1-551	INLETS, DT BOT, TYPE E, <10'	2.00	EA	$3,578.49	$7,156.98
430-174-124	PIPE CULV, OPT MATL, ROUND,24"SD	200.00	LF	$70.00	$14,000.00
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	88.00	LF	$66.82	$5,880.16
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	72.00	LF	$103.45	$7,448.40
430-984-129	MITERED END SECT, OPTIONAL RD, 24" SD	10.00	EA	$1,200.00	$12,000.00
524-1-1	CONCRETE DITCH PAVT, NR, 3"	483.80	SY	$56.70	$27,431.46
570-1-1	PERFORMANCE TURF	170.30	SY	$0.75	$127.72
	Drainage Component Total				$77,307.23

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	1.00	AS	$324.12	$324.12
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	6.00	AS	$1,117.07	$6,702.42
700-2-14	MULTI- POST SIGN, F&I GM, 31-50 SF	1.00	AS	$4,361.29	$4,361.29
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00	AS	$4,865.75	$9,731.50
	Signing Component Total				$21,119.33

LANDSCAPING COMPONENT

User Input Data

Description	Value

Cost %	3.00
Component Detail	N

Landscaping Component Total $29,158.37

Sequence 14 Total $1,001,103.95

Sequence: 15 NDU - New Construction, Divided, Urban **Net Length:** 0.530 MI 2,800 LF

Description: SR 482 (SAND LAKE RD) DDI ROADWAY

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	75.00 / 75.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.530
Top of Structural Course For Begin Section	105.00
Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	9.64	AC	$10,000.00	$96,400.00
120-6	EMBANKMENT	75,844.93	CY	$7.00	$530,914.51

Earthwork Component Total $627,314.51

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	8
Roadway Pavement Width L/R	58.00 / 58.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	39,299.33	SY	$3.25	$127,722.82
285-709	OPTIONAL BASE,BASE GROUP 09	36,088.68	SY	$16.00	$577,418.88
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	5,954.63	TN	$96.29	$573,371.32
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	1,443.55	TN	$110.00	$158,790.50

X-Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount

521-8-1	CONC TRAF RAIL BAR, JCT SLAB,32"F SHAPE	4,195.50	LF	$225.00	$943,987.50

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	6

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	501.00	EA	$3.57	$1,788.57
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	4.24	NM	$939.29	$3,982.59
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	6.36	GM	$449.54	$2,859.07

Peripherals Subcomponent

Description	Value
Off Road Bike Path(s)	0
Off Road Bike Path Width L/R	0.00 / 0.00
Bike Path Structural Spread Rate	0
Noise Barrier Wall Length	0.00
Noise Barrier Wall Begin Height	0.00
Noise Barrier Wall End Height	0.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
521-1	MEDIAN CONC BARRIER WALL	4,835.00	LF	$135.00	$652,725.00
544-75-1	CRASH CUSHION	2.00	EA	$23,502.08	$47,004.16
550-10-150	FENCING, TYPE A, 8.1-10.0', STANDARD	5,600.00	LF	$10.00	$56,000.00

Roadway Component Total $3,145,650.41

SHOULDER COMPONENT

User Input Data

Description	Value
Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,799.98	LF	$18.00	$50,399.64
520-1-10	CONCRETE CURB & GUTTER, TYPE F	2,799.98	LF	$18.00	$50,399.64
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	3,111.09	SY	$32.38	$100,737.09
570-1-1	PERFORMANCE TURF	3,111.09	SY	$0.75	$2,333.32

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	5,599.97	LF	$1.15	$6,439.97
104-11	FLOATING TURBIDITY BARRIER	132.57	LF	$9.87	$1,308.47
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	132.57	LF	$5.02	$665.50
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
104-18	INLET PROTECTION SYSTEM	28.00	EA	$85.00	$2,380.00
107-1	LITTER REMOVAL	13.50	AC	$24.31	$328.18
107-2	MOWING	13.50	AC	$54.17	$731.30
	Shoulder Component Total				$217,663.32

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	5.34

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	5,599.97	LF	$17.42	$97,551.48
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	605.00	LF	$36.63	$22,161.15
570-1-1	PERFORMANCE TURF	1,661.32	SY	$0.75	$1,245.99
	Median Component Total				$120,958.62

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	9.55	CY	$750.00	$7,162.50
425-1-351	INLETS, CURB, TYPE P-5, <10'	20.00	EA	$4,457.50	$89,150.00
425-1-451	INLETS, CURB, TYPE J-5, <10'	6.00	EA	$5,590.00	$33,540.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	3.00	EA	$2,667.22	$8,001.66
425-2-41	MANHOLES, P-7, <10'	3.00	EA	$3,067.50	$9,202.50
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	1,408.00	LF	$66.82	$94,082.56
430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	128.00	LF	$103.45	$13,241.60
570-1-1	PERFORMANCE TURF	161.21	SY	$0.75	$120.91
	Drainage Component Total				$254,501.73

INTERSECTIONS COMPONENT

Intersection 1

Description	Value
Mainline No. of Left Turn Lanes	1
Mainline No. of Right Turn Lanes	0
Mainline Design Speed	40

Cross Street Thru Lanes	4
Cross Street No. of Left Turn Lanes	2
Cross Street No. of Right Turn Lanes	2
Cross Street Design Speed	50
T-Intersection?	N
Multiplier	1
Description	SAND LAKE RD AND TURKEY LAKE RD

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	3.28	AC	$10,000.00	$32,800.00
120-1	REGULAR EXCAVATION	2,483.51	CY	$4.50	$11,175.80
160-4	TYPE B STABILIZATION	822.56	SY	$3.25	$2,673.32
160-4	TYPE B STABILIZATION	6,358.92	SY	$3.25	$20,666.49
285-709	OPTIONAL BASE,BASE GROUP 09	822.56	SY	$16.00	$13,160.96
285-709	OPTIONAL BASE,BASE GROUP 09	6,358.92	SY	$16.00	$101,742.72
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	135.72	TN	$96.29	$13,068.48
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	1,049.22	TN	$96.29	$101,029.39
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	32.90	TN	$110.00	$3,619.00
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	254.36	TN	$110.00	$27,979.60
520-1-7	CONCRETE CURB & GUTTER, TYPE E	202.84	LF	$17.42	$3,533.47
520-1-10	CONCRETE CURB & GUTTER, TYPE F	1,230.00	LF	$18.00	$22,140.00
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	305.00	LF	$36.63	$11,172.15
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	580.00	LF	$36.63	$21,245.40
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	683.33	SY	$32.38	$22,126.23
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	173.89	SY	$50.48	$8,777.97
570-1-1	PERFORMANCE TURF	683.33	SY	$0.75	$512.50

Intersection 2

Description	Value
Mainline No. of Left Turn Lanes	0
Mainline No. of Right Turn Lanes	0
Mainline Design Speed	40
Cross Street Thru Lanes	1
Cross Street No. of Left Turn Lanes	0
Cross Street No. of Right Turn Lanes	0
Cross Street Design Speed	40
T-Intersection?	N
Multiplier	1
Description	WEST DDI INTERSECTION.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.49	AC	$10,000.00	$14,900.00
120-1	REGULAR EXCAVATION	430.92	CY	$4.50	$1,939.14
160-4	TYPE B STABILIZATION	353.22	SY	$3.25	$1,147.97
160-4	TYPE B STABILIZATION	1,103.36	SY	$3.25	$3,585.92
285-709	OPTIONAL BASE,BASE GROUP 09	353.22	SY	$16.00	$5,651.52

285-709	OPTIONAL BASE,BASE GROUP 09	1,103.36	SY	$16.00	$17,653.76
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	58.28	TN	$96.29	$5,611.78
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	182.05	TN	$96.29	$17,529.59
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	14.13	TN	$110.00	$1,554.30
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	44.13	TN	$110.00	$4,854.30
520-1-7	CONCRETE CURB & GUTTER, TYPE E	202.84	LF	$17.42	$3,533.47
520-1-10	CONCRETE CURB & GUTTER, TYPE F	490.00	LF	$18.00	$8,820.00
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	272.22	SY	$32.38	$8,814.48
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	173.89	SY	$50.48	$8,777.97
570-1-1	PERFORMANCE TURF	272.22	SY	$0.75	$204.17

Intersection 3

Description	Value
Mainline No. of Left Turn Lanes	0
Mainline No. of Right Turn Lanes	0
Mainline Design Speed	40
Cross Street Thru Lanes	1
Cross Street No. of Left Turn Lanes	0
Cross Street No. of Right Turn Lanes	0
Cross Street Design Speed	40
T-Intersection?	N
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.49	AC	$10,000.00	$14,900.00
120-1	REGULAR EXCAVATION	430.92	CY	$4.50	$1,939.14
160-4	TYPE B STABILIZATION	353.22	SY	$3.25	$1,147.97
160-4	TYPE B STABILIZATION	1,103.36	SY	$3.25	$3,585.92
285-709	OPTIONAL BASE,BASE GROUP 09	353.22	SY	$16.00	$5,651.52
285-709	OPTIONAL BASE,BASE GROUP 09	1,103.36	SY	$16.00	$17,653.76
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	58.28	TN	$96.29	$5,611.78
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	182.05	TN	$96.29	$17,529.59
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	14.13	TN	$110.00	$1,554.30
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	44.13	TN	$110.00	$4,854.30
520-1-7	CONCRETE CURB & GUTTER, TYPE E	202.84	LF	$17.42	$3,533.47
520-1-10	CONCRETE CURB & GUTTER, TYPE F	490.00	LF	$18.00	$8,820.00
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	272.22	SY	$32.38	$8,814.48
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	173.89	SY	$50.48	$8,777.97
570-1-1	PERFORMANCE TURF	272.22	SY	$0.75	$204.17

Intersections Component Total $626,580.22

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	13.00	AS	$324.12	$4,213.56
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,117.07	$2,234.14
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00	AS	$4,865.75	$9,731.50
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	2.00	AS	$9,752.50	$19,505.00
	Signing Component Total				$35,684.20

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.35	$4,445.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$17.14	$5,142.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,579.66	$5,579.66
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$615.83	$13,548.26
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,774.12	$1,774.12
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.78	$226.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,061.02	$1,061.02
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,915.67	$1,915.67
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$39,152.20	$156,608.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00	AS	$917.52	$18,350.40
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$612.71	$4,901.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$213.53	$4,270.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,006.10	$20,122.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$210.60	$1,684.80
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$21,799.81	$21,799.81
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$148.48	$593.92

Signalization 2

Description	Value
Type	6 Lane Mast Arm

Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.35	$4,445.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$17.14	$5,142.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,579.66	$5,579.66
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$615.83	$13,548.26
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,774.12	$1,774.12
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.78	$226.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,061.02	$1,061.02
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,915.67	$1,915.67
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$39,152.20	$156,608.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00	AS	$917.52	$18,350.40
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$612.71	$4,901.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$213.53	$4,270.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,006.10	$20,122.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$210.60	$1,684.80
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$21,799.81	$21,799.81
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$148.48	$593.92

Signalization 3

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.35	$4,445.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$17.14	$5,142.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,579.66	$5,579.66
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$615.83	$13,548.26
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,774.12	$1,774.12
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.78	$226.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,061.02	$1,061.02
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,915.67	$1,915.67
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$39,152.20	$156,608.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00	AS	$917.52	$18,350.40

653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$612.71	$4,901.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$213.53	$4,270.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,006.10	$20,122.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$210.60	$1,684.80
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$21,799.81	$21,799.81
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$148.48	$593.92

Signalization 4

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.35	$4,445.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$17.14	$5,142.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,579.66	$5,579.66
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$615.83	$13,548.26
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,774.12	$1,774.12
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.78	$226.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,061.02	$1,061.02
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,915.67	$1,915.67
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$39,152.20	$156,608.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00	AS	$917.52	$18,350.40
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$612.71	$4,901.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$213.53	$4,270.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,006.10	$20,122.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$210.60	$1,684.80
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$21,799.81	$21,799.81
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$148.48	$593.92
	Signalizations Component Total				$1,048,098.16

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	2,799.98	LF	$6.35	$17,779.87
	CONDUIT, F& I, DIRECTIONAL				

630-2-12	BORE	555.75 LF	$17.14	$9,525.56
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	19.00 EA	$615.83	$11,700.77
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	10,226.31 LF	$1.94	$19,839.04
715-4-111	LIGHT POLE COMP, F&I, WS150, 40'	19.00 EA	$3,723.28	$70,742.32
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	19.00 EA	$498.00	$9,462.00
	Subcomponent Total			$139,049.56
	Lighting Component Total			$139,049.56

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total $227,315.29

RETAINING WALLS COMPONENT

Retaining Wall 1

Description	Value
Length	2,940.00
Begin height	16.50
End Height	16.50
Multiplier	1

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
548-14	RETAINING WALL SYSTEM,PERM-WID, ATTACHED	48,510.00	SF	$28.07	$1,361,675.70
	Retaining Walls Component Total				$1,361,675.70

Sequence 15 Total $7,804,491.72

Sequence: 16 NDU - New Construction, Divided, Urban **Net Length:** 0.858 MI 4,532 LF

Description: TURKEY LAKE RD

EARTHWORK COMPONENT

User Input Data

Description	Value
Standard Clearing and Grubbing Limits L/R	75.00 / 75.00
Incidental Clearing and Grubbing Area	0.00
Alignment Number	1
Distance	0.858
Top of Structural Course For Begin Section	105.00

Top of Structural Course For End Section	105.00
Horizontal Elevation For Begin Section	100.00
Horizontal Elevation For End Section	100.00
Front Slope L/R	6 to 1 / 6 to 1
Median Shoulder Cross Slope L/R	4.00 % / 4.00 %
Outside Shoulder Cross Slope L/R	2.00 % / 2.00 %
Roadway Cross Slope L/R	2.00 % / 2.00 %

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	15.60	AC	$10,000.00	$156,000.00
120-6	EMBANKMENT	97,081.37	CY	$7.00	$679,569.59
	Earthwork Component Total				$835,569.59

ROADWAY COMPONENT

User Input Data

Description	Value
Number of Lanes	4
Roadway Pavement Width L/R	24.00 / 24.00
Structural Spread Rate	330
Friction Course Spread Rate	80

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
160-4	TYPE B STABILIZATION	29,366.22	SY	$3.25	$95,440.22
285-709	OPTIONAL BASE,BASE GROUP 09	24,169.73	SY	$16.00	$386,715.68
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	3,988.01	TN	$96.29	$384,005.48
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	966.79	TN	$110.00	$106,346.90

Pavement Marking Subcomponent

Description	Value
Include Thermo/Tape/Other	N
Pavement Type	Asphalt
Solid Stripe No. of Paint Applications	2
Solid Stripe No. of Stripes	4
Skip Stripe No. of Paint Applications	2
Skip Stripe No. of Stripes	2

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	348.00	EA	$3.57	$1,242.36
710-11-111	PAINTED PAVT MARK,STD,WHITE,SOLID,6"	6.87	NM	$939.29	$6,452.92
710-11-131	PAINTED PAVT MARK,STD,WHITE,SKIP, 6"	3.43	GM	$449.54	$1,541.92
	Roadway Component Total				$981,745.48

SHOULDER COMPONENT

User Input Data

Description	Value

Total Outside Shoulder Width L/R	12.25 / 12.25
Total Outside Shoulder Perf. Turf Width L/R	5.00 / 5.00
Sidewalk Width L/R	5.00 / 5.00

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-10	CONCRETE CURB & GUTTER, TYPE F	4,531.82	LF	$18.00	$81,572.76
520-1-10	CONCRETE CURB & GUTTER, TYPE F	4,531.82	LF	$18.00	$81,572.76
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	5,035.36	SY	$32.38	$163,044.96
570-1-1	PERFORMANCE TURF	5,035.36	SY	$0.75	$3,776.52

Erosion Control

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
104-10-3	SEDIMENT BARRIER	9,063.65	LF	$1.15	$10,423.20
104-11	FLOATING TURBIDITY BARRIER	214.58	LF	$9.87	$2,117.90
104-12	STAKED TURBIDITY BARRIER-NYL REINF PVC	214.58	LF	$5.02	$1,077.19
104-15	SOIL TRACKING PREVENTION DEVICE	1.00	EA	$1,940.20	$1,940.20
104-18	INLET PROTECTION SYSTEM	44.00	EA	$85.00	$3,740.00
107-1	LITTER REMOVAL	21.84	AC	$24.31	$530.93
107-2	MOWING	21.84	AC	$54.17	$1,183.07
	Shoulder Component Total				$350,979.49

MEDIAN COMPONENT

User Input Data

Description	Value
Total Median Width	22.00
Performance Turf Width	5.34

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
520-1-7	CONCRETE CURB & GUTTER, TYPE E	9,063.65	LF	$17.42	$157,888.78
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	493.00	LF	$36.63	$18,058.59
570-1-1	PERFORMANCE TURF	2,688.88	SY	$0.75	$2,016.66
	Median Component Total				$177,964.03

DRAINAGE COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
400-2-2	CONC CLASS II, ENDWALLS	15.45	CY	$750.00	$11,587.50
425-1-351	INLETS, CURB, TYPE P-5, <10'	31.00	EA	$4,457.50	$138,182.50
425-1-451	INLETS, CURB, TYPE J-5, <10'	9.00	EA	$5,590.00	$50,310.00
425-1-521	INLETS, DT BOT, TYPE C, <10'	5.00	EA	$2,667.22	$13,336.10
425-2-41	MANHOLES, P-7, <10'	5.00	EA	$3,067.50	$15,337.50
430-175-124	PIPE CULV, OPT MATL, ROUND, 24"S/CD	2,272.00	LF	$66.82	$151,815.04

430-175-136	PIPE CULV, OPT MATL, ROUND, 36"S/CD	208.00 LF	$103.45	$21,517.60
430-175-148	PIPE CULV, OPT MATL, ROUND, 48"S/CD	4,296.00 LF	$165.33	$710,257.68
570-1-1	PERFORMANCE TURF	260.92 SY	$0.75	$195.69
	Drainage Component Total			$1,112,539.61

INTERSECTIONS COMPONENT

Intersection 1

Description	Value
Mainline No. of Left Turn Lanes	0
Mainline No. of Right Turn Lanes	0
Mainline Design Speed	50
Cross Street Thru Lanes	3
Cross Street No. of Left Turn Lanes	2
Cross Street No. of Right Turn Lanes	1
Cross Street Design Speed	35
T-Intersection?	Y
Multiplier	1
Description	NEW INTERSECTION. RAMP AND TURKEY LAKE RD.

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
110-1-1	CLEARING & GRUBBING	1.18	AC	$10,000.00	$11,800.00
120-1	REGULAR EXCAVATION	927.23	CY	$4.50	$4,172.54
160-4	TYPE B STABILIZATION	382.56	SY	$3.25	$1,243.32
160-4	TYPE B STABILIZATION	2,374.13	SY	$3.25	$7,715.92
285-709	OPTIONAL BASE,BASE GROUP 09	382.56	SY	$16.00	$6,120.96
285-709	OPTIONAL BASE,BASE GROUP 09	2,374.13	SY	$16.00	$37,986.08
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	63.12	TN	$96.29	$6,077.82
334-1-13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	391.73	TN	$96.29	$37,719.68
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	15.30	TN	$110.00	$1,683.00
337-7-43	ASPH CONC FC,TRAFFIC C,FC-12.5,PG 76-22	94.97	TN	$110.00	$10,446.70
520-1-7	CONCRETE CURB & GUTTER, TYPE E	202.84	LF	$17.42	$3,533.47
520-1-10	CONCRETE CURB & GUTTER, TYPE F	473.00	LF	$18.00	$8,514.00
520-5-11	TRAF SEP CONC-TYPE I, 4' WIDE	145.00	LF	$36.63	$5,311.35
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	262.78	SY	$32.38	$8,508.82
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	86.94	SY	$50.48	$4,388.73
570-1-1	PERFORMANCE TURF	262.78	SY	$0.75	$197.08
	Intersections Component Total				$155,419.48

SIGNING COMPONENT

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
700-1-11	SINGLE POST SIGN, F&I GM, <12 SF	21.00	AS	$324.12	$6,806.52
700-1-12	SINGLE POST SIGN, F&I GM, 12-20 SF	2.00	AS	$1,117.07	$2,234.14
700-2-15	MULTI- POST SIGN, F&I GM, 51-100 SF	2.00	AS	$4,865.75	$9,731.50
700-2-16	MULTI- POST SIGN, F&I GM, 101-200 SF	2.00	AS	$9,752.50	$19,505.00
	Signing Component Total				$38,277.16

SIGNALIZATIONS COMPONENT

Signalization 1

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.35	$4,445.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$17.14	$5,142.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,579.66	$5,579.66
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$615.83	$13,548.26
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,774.12	$1,774.12
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.78	$226.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,061.02	$1,061.02
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,915.67	$1,915.67
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$39,152.20	$156,608.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00	AS	$917.52	$18,350.40
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$612.71	$4,901.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$213.53	$4,270.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,006.10	$20,122.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$210.60	$1,684.80
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$21,799.81	$21,799.81
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$148.48	$593.92

Signalization 2

Description	Value
Type	6 Lane Mast Arm
Multiplier	1
Description	

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	700.00	LF	$6.35	$4,445.00
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	300.00	LF	$17.14	$5,142.00
632-7-1	SIGNAL CABLE- NEW OR RECO, FUR & INSTALL	1.00	PI	$5,579.66	$5,579.66
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	22.00	EA	$615.83	$13,548.26
639-1-112	ELECTRICAL POWER SRV,F&I,OH,M,PUR BY CON	1.00	AS	$1,774.12	$1,774.12
639-2-1	ELECTRICAL SERVICE WIRE, F&I	60.00	LF	$3.78	$226.80
641-2-11	PREST CNC POLE,F&I,TYP P-II,PEDESTAL	1.00	EA	$1,061.02	$1,061.02
649-1-10	STEEL STRAIN POLE, F&I, PEDESTAL	1.00	EA	$1,915.67	$1,915.67
649-31-105	M/ARM,F&I, WS-150,SINGLE ARM,W/0 LUM-78	4.00	EA	$39,152.20	$156,608.80
650-1-311	TRAFFIC SIGNAL,F&I,3 SECT,1 WAY,ALUMINUM	20.00	AS	$917.52	$18,350.40
653-191	PEDESTRIAN SIGNAL, F&I, LED-COUNT DWN, 1	8.00	AS	$612.71	$4,901.68
660-1-102	LOOP DETECTOR INDUCTIVE, F&I, TYPE 2	20.00	EA	$213.53	$4,270.60
660-2-106	LOOP ASSEMBLY, F&I, TYPE F	20.00	AS	$1,006.10	$20,122.00
665-1-11	PEDESTRIAN DETECTOR, F&I, STANDARD	8.00	EA	$210.60	$1,684.80
670-5-111	TRAF CNTL ASSEM, F&I, NEMA, 1 PREEMPT	1.00	AS	$21,799.81	$21,799.81
700-3-101	SIGN PANEL, F&I GM, UP TO 12 SF	4.00	EA	$148.48	$593.92
	Signalizations Component Total				$524,049.08

LIGHTING COMPONENT

Conventional Lighting Subcomponent

Description	Value
Spacing	MIN

Pay Items

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
630-2-11	CONDUIT, F& I, OPEN TRENCH	4,531.82	LF	$6.35	$28,777.06
630-2-12	CONDUIT, F& I, DIRECTIONAL BORE	899.50	LF	$17.14	$15,417.43
635-2-11	PULL & SPLICE BOX, F&I, 13" x 24"	31.00	EA	$615.83	$19,090.73
715-1-13	LIGHTING CONDUCTORS, F&I, INSUL, NO.4-2	16,551.46	LF	$1.94	$32,109.83
715-4-111	LIGHT POLE COMP, F&I, WS150, 40'	31.00	EA	$3,723.28	$115,421.68
715-500-1	POLE CABLE DIST SYS, CONVENTIONAL	31.00	EA	$498.00	$15,438.00
	Subcomponent Total				$226,254.73
	Lighting Component Total				$226,254.73

LANDSCAPING COMPONENT

User Input Data

Description	Value
Cost %	3.00
Component Detail	N

Landscaping Component Total	$132,083.96

Sequence 16 Total	$4,534,882.61

Date: 8/12/2016 10:30:26 AM

FDOT Long Range Estimating System - Production

R3: Project Details by Sequence Report

Project: 242484-7-52-01 **Letting Date:** 07/2024

Description: SR 400 I-4 FROM W OF SR528 BEACHLINE MP 5.650 TO W OF SR 435 KIRKMAN RD MP 9.249.

District: 05 **County:** 75 ORANGE **Market Area:** 08 **Units:** English

Contract Class: 1 **Lump Sum Project:** N **Design/Build:** N **Project Length:** 3.900 MI

Project Manager: BSP

Version 29 Project Grand Total **$244,431,025.24**

Description: I-4 (SR 400) FROM W OF SR 528 (BEELINE) (Sta. 714+97, MP 5.65) TO W OF SR 435 (KIRKMAN RD) (Sta. 905+00, MP 9.249). HNTB January 2016 Update (New CD System) - A-List. HNTB August 2016 Update : Express Lanes with Asphalt Pavement

Project Sequences Subtotal			**$192,271,566.50**
102-1	Maintenance of Traffic	10.00 %	$19,227,156.65
101-1	Mobilization	10.00 %	$21,149,872.32
Project Sequences Total			**$232,648,595.47**
Project Unknowns		5.00 %	$11,632,429.77
Design/Build		0.00 %	$0.00

Non-Bid Components:

Pay item	Description	Quantity	Unit	Unit Price	Extended Amount
999-25	INITIAL CONTINGENCY AMOUNT (DO NOT BID)		LS	$150,000.00	$150,000.00
Project Non-Bid Subtotal					**$150,000.00**
Version 29 Project Grand Total					**$244,431,025.24**

Engineer's Estimate

I-4 Segment 2

(Mainline I-4) STA. 1420+57.88 TO 1451+71.40

(Mainline I-4) STA. 1494+28.37 TO 1550+23.13

(Mainline SR 528) STA. 216+93.79 TO 245+00.00

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	133	$ 1,023,937	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	888	$ 20,921	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	282,349	$ 818,811	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	58,521	$ 801,152	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	151,907	$ 2,129,736	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	6,437	$ 561,821	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	25,065	$ 2,185,919	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	16,710	$ 1,497,884	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	6,266	$ 734,375	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
350 1 3	Plain Cement Conc Pavt, 8"	SY	$ 55.00	167,036	$ 9,186,998	Express Lanes
521 72 10	Barrier Wall	LF	$ 243	96,723	$ 23,522,066	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	66	$ 208,597	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	3	$ 54,983	At gores
	Fencing	LF	$ 10.00	23,029	$ 230,290	LA R/W fence
	Embankment	CY	$ 5.94	449,385	$ 2,669,348	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	69,087	$ 2,348,956	Roadway raised 3' x length of section x 2 sides
	Bridge	SF	$ 160.00	123,083	$ 19,693,280	Concrete
	Wetland Mitigation	AC	$ 108,000.00	0	$ -	Used 25' from edge of shoulder for impacts
	Toll Gantry	EA	$ 500,000.00	2	$ 1,000,000	
	Subtotal Cost	LS			$ 68,689,075	
	Compensable Utility Relocation	LS			$ 3,434,454	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 6,868,908	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 6,868,908	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 3,434,454	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 3,434,454	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 13,737,815	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 3,434,454	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 686,891	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 110,589,411	
	Contingency	LS			$ 16,588,412	Assume 15% of Construction Subtotal
	Grand Total				**$ 127,177,823**	

SR 528 ALT 1

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,411	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-4
160 4	Stabilization Type B LBR 40	SY	$ 2.90	169,130	$ 490,476	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	106,655	$ 1,460,104	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	221,363	$ 3,103,512	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	11,732	$ 1,023,971	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	36,525	$ 3,185,339	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	24,350	$ 2,182,730	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	9,131	$ 1,070,180	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	16,297	$ 3,963,146	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	36	$ 115,895	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	7	$ 128,293	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	451,013	$ 2,679,016	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	8,844	$ 300,696	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	233,398	$ 37,343,680	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 59,616,405	
	Compensable Utility Relocation	LS			$ 2,980,820	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 5,961,641	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 5,961,641	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 2,980,820	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 2,980,820	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 11,923,281	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 2,980,820	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 596,164	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 95,982,413	
	Contingency	LS			$ 14,397,362	Assume 15% of Construction Subtotal
	Grand Total				**$ 110,379,775**	

SR 528 ALT 2

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,646	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	163,589	$ 474,409	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	55,843	$ 764,488	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	151,907	$ 2,129,736	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	6,143	$ 536,135	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	17,778	$ 1,550,434	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	11,852	$ 1,062,423	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	4,445	$ 520,900	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	36,986	$ 8,994,504	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	30	$ 94,567	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	7	$ 128,293	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	436,238	$ 2,591,253	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	7,773	$ 264,282	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	224,750	$ 35,960,000	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 57,641,025	
	Compensable Utility Relocation	LS			$ 2,882,051	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 5,764,103	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 5,764,103	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 2,882,051	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 2,882,051	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 11,528,205	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 2,882,051	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 576,410	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 92,802,051	
	Contingency	LS			$ 13,920,308	Assume 15% of Construction Subtotal
	Grand Total				**$ 106,722,358**	

SR 528 ALT 3

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,646	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	168,623	$ 489,006	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	60,165	$ 823,660	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	108,458	$ 1,520,575	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	6,618	$ 577,633	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	17,895	$ 1,560,666	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	11,930	$ 1,069,435	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	4,474	$ 524,338	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	43,749	$ 10,639,319	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	32	$ 102,918	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	6	$ 109,966	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	449,660	$ 2,670,983	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	51,975	$ 1,767,150	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	390,332	$ 62,453,120	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 86,878,371	
	Compensable Utility Relocation	LS			$ 4,343,919	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 8,687,837	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 8,687,837	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 4,343,919	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 4,343,919	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 17,375,674	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 4,343,919	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 868,784	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 139,874,177	
	Contingency	LS			$ 20,981,127	Assume 15% of Construction Subtotal
	Grand Total				**$ 160,855,304**	

SR 528 ALT 4

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,646	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	161,229	$ 467,564	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	54,289	$ 743,222	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	106,940	$ 1,499,293	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	5,972	$ 521,222	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	17,645	$ 1,538,823	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	11,763	$ 1,054,467	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	4,411	$ 516,999	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	36,986	$ 8,994,504	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	32	$ 102,590	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	7	$ 128,293	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	429,944	$ 2,553,867	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	7,706	$ 262,004	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	346,893	$ 55,502,880	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 76,455,330	
	Compensable Utility Relocation	LS			$ 3,822,767	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 7,645,533	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 7,645,533	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 3,822,767	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 3,822,767	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 15,291,066	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 3,822,767	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 764,553	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 123,093,081	
	Contingency	LS			$ 18,463,962	Assume 15% of Construction Subtotal
	Grand Total				**$ 141,557,043**	

SR 528 ALT 5

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,646	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	157,325	$ 456,244	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	61,284	$ 838,973	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	96,042	$ 1,346,506	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	6,741	$ 588,372	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	15,847	$ 1,382,008	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	10,565	$ 947,010	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	3,962	$ 464,314	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	30,606	$ 7,443,073	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	29	$ 93,244	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	8	$ 146,621	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	419,535	$ 2,492,035	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	173,250	$ 5,890,500	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	183,627	$ 29,380,320	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 54,038,821	
	Compensable Utility Relocation	LS			$ 2,701,941	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 5,403,882	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 5,403,882	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 2,701,941	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 2,701,941	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 10,807,764	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 2,701,941	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 540,388	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 87,002,502	
	Contingency	LS			$ 13,050,375	Assume 15% of Construction Subtotal
	Grand Total				**$ 100,052,877**	

SR 528 ALT 6

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,646	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	119,329	$ 346,053	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	7,608	$ 104,154	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	111,721	$ 1,566,322	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	837	$ 73,043	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	18,434	$ 1,607,620	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	12,289	$ 1,101,609	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	4,608	$ 540,113	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	47,165	$ 11,470,056	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	40	$ 125,688	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	5	$ 91,638	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	318,209	$ 1,890,164	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	165,000	$ 5,610,000	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	246,829	$ 39,492,640	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 66,588,701	
	Compensable Utility Relocation	LS			$ 3,329,435	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 6,658,870	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 6,658,870	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 3,329,435	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 3,329,435	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 13,317,740	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 3,329,435	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 665,887	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 107,207,809	
	Contingency	LS			$ 16,081,171	Assume 15% of Construction Subtotal
	Grand Total				**$ 123,288,981**	

SR 528 ALT 7

(Tie-in) STA. 1345+48.48 TO 1420+57.88

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	128	$ 988,646	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	38,476	$ 906,495	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	207,089	$ 600,558	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	77,237	$ 1,057,381	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	129,852	$ 1,820,520	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	8,496	$ 741,541	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	21,426	$ 1,868,520	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	14,284	$ 1,280,389	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	5,356	$ 627,768	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	66,729	$ 16,227,704	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	41	$ 131,377	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	11	$ 201,604	At gores
	Fencing	LF	$ 10.00	21,330	$ 213,300	LA R/W fence
	Embankment	CY	$ 5.94	552,238	$ 3,280,292	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	165,000	$ 5,610,000	Roadway raised 3' x length of section x 2 sides
	SR 528 Bridge	SF	$ 160	245,957	$ 39,353,120	Concrete
	Wetland Mitigation	AC	$ 108,000.00	4	$ 461,160	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 75,370,375	
	Compensable Utility Relocation	LS			$ 3,768,519	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 7,537,038	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 7,537,038	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 3,768,519	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 3,768,519	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 15,074,075	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 3,768,519	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 753,704	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 121,346,305	
	Contingency	LS			$ 18,201,946	Assume 15% of Construction Subtotal
	Grand Total				**$ 139,548,250**	

Sand Lake Road - Alt. 1

(Alignment I-4) STA. 1451+71.40 TO 1494+28.37

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	4	$ 31,520	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	24,595	$ 579,458	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	19,752	$ 57,280	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	6,373	$ 87,243	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	13,379	$ 187,570	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	701	$ 61,184	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	2,207	$ 192,516	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	1,472	$ 131,920	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	552	$ 64,680	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	373	$ 90,710	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	4	$ 11,256	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	1	$ 18,328	At gores
	Fencing	LF	$ 10.00	5,600	$ 56,000	LA R/W fence
	Embankment	CY	$ 5.94	19,752	$ 117,324	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	7,194	$ 244,596	Roadway raised 3' x length of section x 2 sides
	Sand Lake Bridge	SF	$ 160	38,368	$ 6,138,880	Concrete
	Wetland Mitigation	AC	$ 108,000.00	0	$ -	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 8,070,465	
	Compensable Utility Relocation	LS			$ 403,523	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 807,046	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 807,046	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 403,523	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 403,523	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 1,614,093	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 403,523	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 80,705	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 12,993,448	
	Contingency	LS			$ 1,949,017	Assume 15% of Construction Subtotal
	Grand Total				**$ 14,942,466**	

Sand Lake Road - Alt. 2

(Alignment I-4) STA. 1451+71.40 TO 1494+28.37

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	11	$ 82,718	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	24,595	$ 579,458	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	51,834	$ 150,319	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	6,071	$ 83,118	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	45,763	$ 641,593	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	668	$ 58,291	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	7,551	$ 658,509	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	5,034	$ 451,238	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	1,888	$ 221,240	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	13,471	$ 3,276,012	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	19	$ 60,454	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	1	$ 18,328	At gores
	Fencing	LF	$ 10.00	8,520	$ 85,200	LA R/W fence
	Embankment	CY	$ 5.94	51,531	$ 306,097	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	25,560	$ 869,040	Roadway raised 3' x length of section x 2 sides
0520 1 10	Concrete Curb & Gutter, Type F	LF	$ 13.00	11,974	$ 155,662	New DDI construction
0522 1	Sidewalk Conc (4" Thk)	SY	$ 21.90	1,936	$ 42,401	New construction
	Sand Lake Bridge	SF	$ 160	51,919	$ 8,307,040	Concrete
	Wetland Mitigation	AC	$ 108,000.00	0	$ -	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 16,046,717	
	Compensable Utility Relocation	LS			$ 802,336	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 1,604,672	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 1,604,672	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 802,336	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 802,336	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 3,209,343	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 802,336	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 160,467	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 25,835,215	
	Contingency	LS			$ 3,875,282	Assume 15% of Construction Subtotal
	Grand Total				**$ 29,710,497**	

Sand Lake Road - Alt. 3

(Alignment I-4) STA. 1451+71.40 TO 1494+28.37

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	11	$ 82,718	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	24,595	$ 579,458	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	51,541	$ 149,468	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	6,308	$ 86,352	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	45,233	$ 634,165	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	694	$ 60,559	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	7,463	$ 650,885	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	4,976	$ 446,014	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	1,866	$ 218,678	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	-	$ -	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	9	$ 28,293	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	2	$ 36,655	At gores
	Fencing	LF	$ 10.00	5,600	$ 56,000	LA R/W fence
	Embankment	CY	$ 5.94	21,016	$ 124,833	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	24,948	$ 848,232	Roadway raised 3' x length of section x 2 sides
0520 1 10	Concrete Curb & Gutter, Type F	LF	$ 13.00	14,350	$ 186,550	New DDI construction
0522 1	Sidewalk Conc (4" Thk)	SY	$ 21.90	2,373	$ 51,961	New construction
	Sand Lake Bridge	SF	$ 160	78,280	$ 12,524,800	Concrete
	Wetland Mitigation	AC	$ 108,000.00	0	$ -	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 16,765,623	
	Compensable Utility Relocation	LS			$ 838,281	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 1,676,562	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 1,676,562	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 838,281	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 838,281	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 3,353,125	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 838,281	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 167,656	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 26,992,653	
	Contingency	LS			$ 4,048,898	Assume 15% of Construction Subtotal
	Grand Total				**$ 31,041,551**	

Sand Lake Road - Alt. 4

(Alignment I-4) STA. 1451+71.40 TO 1494+28.37

Item	Description	Unit	Unit Cost	Quantity	Total Cost	Remarks
0110 1 1	Clearing & Grubbing	AC	$ 7,724	11	$ 82,718	Total Area of mainline section - R/W to R/W
0110 3	Removal of Existing Structure	SF	$ 24	24,595	$ 579,458	Area of existing bridge - SR 528 over I-Drive
160 4	Stabilization Type B LBR 40	SY	$ 2.90	86,850	$ 251,865	Total Area of mainline section
285 706	Base optional (base group 6) ML	SY	$ 13.69	11,096	$ 151,904	Total Shldr area
285 712	Base optional (base group 12) ML	SY	$ 14.02	75,754	$ 1,062,071	Total Roadway area
334 1 12	Superpave asphaltic concrete (Traff B)	TN	$ 87.28	1,221	$ 106,530	Used 110 lb /sy*inch lift (2" thk) - Shoulder
334 1 14	Superpave asphaltic concrete (Traff D)	TN	$ 87.21	12,499	$ 1,090,074	Used 110 lb /sy*inch lift (3" thk) - Roadway
334 1 24	Superpave asphaltic concrete (Traff D-PG 76-22)	TN	$ 89.64	8,333	$ 746,965	Used 110 lb /sy*inch lift (2" thk) - Roadway
337 7 22	Asphaltic Conc friction course (FC-5) (PG 76-22)	TN	$ 117.20	3,125	$ 366,233	Used 110 lb /sy*inch lift (0.75" thk) - Roadway
521 72 10	Barrier Wall	LF	$ 243	4,835	$ 1,175,702	Concrete, Double face
	Thermoplastic, White, Striping	NM	$ 3,178	15	$ 48,703	EOP and lane lines
	Vehicle Impact Attenuator	EA	$ 18,327.63	2	$ 36,655	At gores
	Fencing	LF	$ 10.00	5,600	$ 56,000	LA R/W fence
	Embankment	CY	$ 5.94	11,405	$ 67,744	Assume 3' over entire roadway area
	MSE wall	SF	$ 34.00	48,510	$ 1,649,340	Roadway raised 3' x length of section x 2 sides
0520 1 10	Concrete Curb & Gutter, Type F	LF	$ 13.00	21,675	$ 281,775	New DDI construction
0522 1	Sidewalk Conc (4" Thk)	SY	$ 21.90	4,173	$ 91,391	New construction
	Sand Lake Bridge	SF	$ 160	60,417	$ 9,666,720	Concrete
	Wetland Mitigation	AC	$ 108,000.00	0	$ -	Used 25' from edge of shoulder for impacts
	Subtotal Cost	LS			$ 17,511,850	
	Compensable Utility Relocation	LS			$ 875,592	Assume 5% of Construction Subtotal Cost
	Mobilization	LS			$ 1,751,185	Assume 10% of Construction Subtotal Cost
	Maintenance of Traffic (MOT)	LS			$ 1,751,185	Assume 10% of Construction Subtotal Cost
	Lighting	LS			$ 875,592	Assume 5% of Construction Subtotal Cost
	Signage	LS			$ 875,592	Assume 5% of Construction Subtotal Cost
	Drainage	LS			$ 3,502,370	Assume 20% of Construction Subtotal Cost
	ITS	LS			$ 875,592	Assume 5% of Construction Subtotal Cost
	Erosion Control	LS			$ 175,118	Assume 1% of Construction Subtotal Cost
	Construction Subtotal	LS			$ 28,194,078	
	Contingency	LS			$ 4,229,112	Assume 15% of Construction Subtotal
	Grand Total				**$ 32,423,189**	