Preliminary Engineering Report

State Road 417 (Seminole Expressway) Sanford Airport Connector
Project Development and Environment Study
From SR 417 to Red Cleveland Boulevard
Seminole County, Florida

CFX Project Number: 417-246A

Prepared for:
Central Florida Expressway Authority
4974 ORL Tower Road
Orlando, FL 32807

Submitted by:
Ardurra Group, Inc.
3452 Lake Lynda Dr., Suite 200
Orlando, FL 32817

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

Contents

1. Project Summary 1

1.1 Project Background and Description 1

1.2 Purpose and Need 4

1.2.1 Enhance Regional Connectivity 4

1.2.2 Accommodate Anticipated Transportation Demand 5

1.2.3 Provide Additional Capacity 6

1.2.4 Improve Safety 7

1.2.5 Support Modal Connectivity 7

1.2.6 Serve Social and Economic Growth 7

1.3 Consistency with Regional and Local Transportation Planning 8

1.4 Commitments 8

1.5 Surrounding Projects 8

1.6 Alternatives Considered 9

1.6.1 Viable Alternatives 10

1.6.2 Preferred Alternative 19

1.6.3 No-Build Alternative 19

2. Existing Conditions 20

2.1 Existing Roadway Conditions 20

2.1.1 Functional Classification 20

2.1.2 Access Management 20

2.1.3 Roadway Typical Section 21

2.1.4 Context Classification 22

2.1.5 Pedestrian and Bicycle Facilities 23

2.1.6 Design and Posted Speeds 25

2.1.7 Right-of-Way 25

2.1.8 Geometric Elements 25

2.1.9 Intersections and Signalization 28

2.1.10 Crash Data 29

2.1.11 Existing Traffic Characteristics 30
2.1.13 Drainage and Hydrology 36
2.1.14 Floodplains and Regulatory Floodways 36
2.1.15 Geotechnical Investigation 38
2.1.17 Utilities 38
2.1.18 Existing Pavement Conditions 40
2.2 Existing Bridges 40
2.2.1 Overview 40
2.3 Existing Environmental Characteristics 40
2.3.1 Land Use 40
2.3.2 Cultural Features and Community Services 43
2.3.3 Natural Environment 49
2.3.4 Physical Environment 53
3. Future Conditions 58
3.1 Future Land Use 58
3.2 Future Context and Functional Classification 60
3.3 Future Traffic Demand 60
3.3.1 Future Design Traffic Factors 60
3.3.2 Traffic Analysis 63
4. Design Controls and Criteria 67
4.1 Design Controls 67
4.2 Design Criteria 67
5. Alternatives Analysis 73
5.1 No-Build Alternative 73
5.1.1 Advantages of No-Build 73
5.1.2 Disadvantages of No-Build 73
5.3 Multimodal Considerations 73
5.4 Alternatives Analyzed 74
5.4.1 Typical Section and Alignment Analysis 74

5.5 Preferred Alternative 89
5.6 User Benefits 89
5.7 Displacements 89
5.8 Aesthetics and Landscaping 89
5.9 Utility Impacts 90
5.10 Safety 92
5.11 Pedestrian and Bicycle Facilities 93
5.12 Wetlands 93
5.13 Threatened and Endangered Species and Habitat 96
5.13.1 Federally Listed Species 96
5.13.2 State Listed Species 96
5.13.3 Protected Plant Species 97
5.13.3 Essential Fish Habitat 97
5.13.4 Air Quality 97
5.13.5 Noise 97
5.13.6 Contamination Sites and Facilities 98
6. Public Involvement and Project Coordination 100
6.1.1 Environmental Advisory Group 100
7. Design Features of the Preferred Alternative 111
7.1 Engineering Details of the Preferred Alternative 111
7.1.1 Roadway Typical Sections 111
7.2 Interchange Refinements 112
7.2.1 Proposed Interchange at East Lake Mary Boulevard 112
7.2.2 Bridges and Structures 113
7.3 Horizontal and Vertical Alignment 117
7.3.2 Vertical Alignment 118
7.3.3 Design Deviation 118
7.4 Access Management 118
7.5 Drainage 118

7.6 Maintenance of Traffic 121
7.7 Preliminary Cost Estimates 121
7.8 Toll Conditions 121
7.8.1 Future Tolling at the SR 417 Lake Jesup Plaza 121

Figures

Figure 1-1 General Project Location 2
Figure 1-2: Project Study Area 3
Figure 1-3 Map of Surrounding Projects 9
Figure 1-4 Map of Alignment Alternatives 10
Figure 1-5 Alignment 1 11
Figure 1-6 Alignment 2 13
Figure 1-7 Alignment 2A 14
Figure 1-8 Alignment 3A 16
Figure 1-9 Alignment 3D 17
Figure 1-10 Alignment 4 18
Figure 2-1 Existing Typical Section – East Lake Mary Boulevard 22
Figure 2-2 Existing Pedestrian and Bicycle Facilities 24
Figure 2-3 Number of Crashes by Year on SR 417 30
Figure 2-4 SR 417 One-Way 2024 AADT Distribution 35
Figure 2-5 FEMA Floodplain Areas 37
Figure 2-6 Existing Land Use and Developments 42
Figure 2-7 Location of Historic Resources within the APE 44
Figure 2-8 Existing Community Facilities 46
Figure 2-9 Existing Pedestrian and Bicycle Facilities 48
Figure 2-10 Existing Natural Constraints 51
Figure 3-1 Future Land Use Map 59
Figure 3-2 2030 and 2050 No Build Alternative Lane Geometry 64
Figure 3-3 2030 and 2050 Build Alternative Lane Geometry 65
Figure 3-4 Proposed Sanford Airport Connector and Lake Mary Boulevard SPUI 66
Figure 5-1 Proposed Connector Typical Section (2-Lane) 74
Figure 5-2 Proposed Bridge Typical Section (2-Lane) 75
Figure 5-3 Map of Alignment Alternatives 76
Figure 5-4 Alignment 1 77
Figure 5-5 Alignment 2 79

Figure 5-6 Alignment 2A 80
Figure 5-7 Alignment 3A 82
Figure 5-8 Alignment 3D 83
Figure 5-9 Alignment 4 84
Figure 5-10 Wetlands & Other Surface Waters Within the Preferred Alternative (North) 94
Figure 5-11 Wetlands & Other Surface Waters Within the Preferred Alternative (South) 95
Figure 7-1 Two Lane Proposed Connector Typical Section 111
Figure 7-2 Proposed Connector Bridge Typical Section 112
Figure 7-3 Proposed Interchange at East Lake Mary Boulevard 113

Tables

Table 2-1 Functional Classifications 20
Table 2-2 Access Management Classifications 21
Table 2-3 Context Classifications 23
Table 2-4 Design Speed and Posted Speed 25
Table 2-5 Existing right-of-way widths 25
Table 2-6 Horizontal Curves 26
Table 2-7 Vertical Curves 27
Table 2-8 Interchanges, Intersections, and Signalization 28
Table 2-9 2024 Existing AADT for Roadway Segments 31
Table 2-10 Hose Count Locations 32
Table 2-11 Intersection Turn Movement Counts Locations 33
Table 2-122 Florida's Turnpike Enterprise Toll Transactions Data Locations 33
Table 2-13 Existing Utilities 39
Table 2-14 WBID Water Quality Summary 52
Table 2-15 Potential Contamination Site Summary 54
Table 3-1 Future Design Traffic Factors 62
Table 4-1 SR 417 Sanford Airport Connector Design Criteria 67
Table 5-1 Alternative Alignment Lengths 85
Table 5-2 Evaluation Matrix 87
Table 5-3 Utility Impacts 90
Table 5-4 Proposed Impacts to SJRWMD Easements from the Preferred Alternative 95
Table 5-5 Potential Contamination Site Summary 98
Table 5-6 Pond Potential Risk Rating 99
Table 7-1 Proposed Bridges 114
Table 7-2 Proposed Horizontal Geometry 117

Table 7-3 Proposed Vertical Geometry 118
Table 7-4 Evaluated Pond Options 120
Table 7-5 Preferred Alternative Cost Estimate 121

Appendices

Appendix A Concept Plans
Appendix B Typical Section Package
Appendix C Estimated Project Costs
Appendix D CFX Tolling Commitment

1. Project Summary

1.1 Project Background and Description

The Project Development and Environment (PD&E) Study for the State Road (SR) 417 (Seminole Expressway) Sanford Airport Connector was initiated by the Central Florida Expressway Authority in May 2024 to further develop and evaluate transportation alternatives to provide direct access from SR 417 to the Orlando Sanford International Airport (also known as SFB by their International Air Transport Association Airport Code). The goal of the project is to identify a recommended improvement to provide better connectivity from SR 417 to the airport and to help address roadway capacity needs associated with anticipated future traffic growth in the area. This PD&E Study evaluates a new expressway connection from SR 417 to SFB and alternative mobility programs within the project corridor, including multimodal and intermodal facilities. **Figure 1-1** shows the general project location and **Figure 1-2** shows the project study area. The study area has been expanded beyond the study area for the Concept, Feasibility & Mobility (CF&M) Study for this project to include the area along East Lake Mary Boulevard to SR 417 for a new elevated expressway along East Lake Mary Boulevard from SR 417 to the airport.

The objective of the PD&E Study is to evaluate each mobility option based on engineering, traffic, economic and environmental evaluations and to identify a recommended improvement. This study includes the evaluation of the physical, natural, social and cultural environment, right-of-way considerations and cost estimates, as well as the following goals:

- Identify transportation mobility options and promote regional connectivity
- Enhance direct access to the Orlando Sanford International Airport
- Enhance mobility for the area's growing population and economy
- Provide consistency with local plans and policies
- Fulfill the recommendation of Seminole Board of County Commissioners to re-evaluate this corridor

Figure 1-1 General Project Location

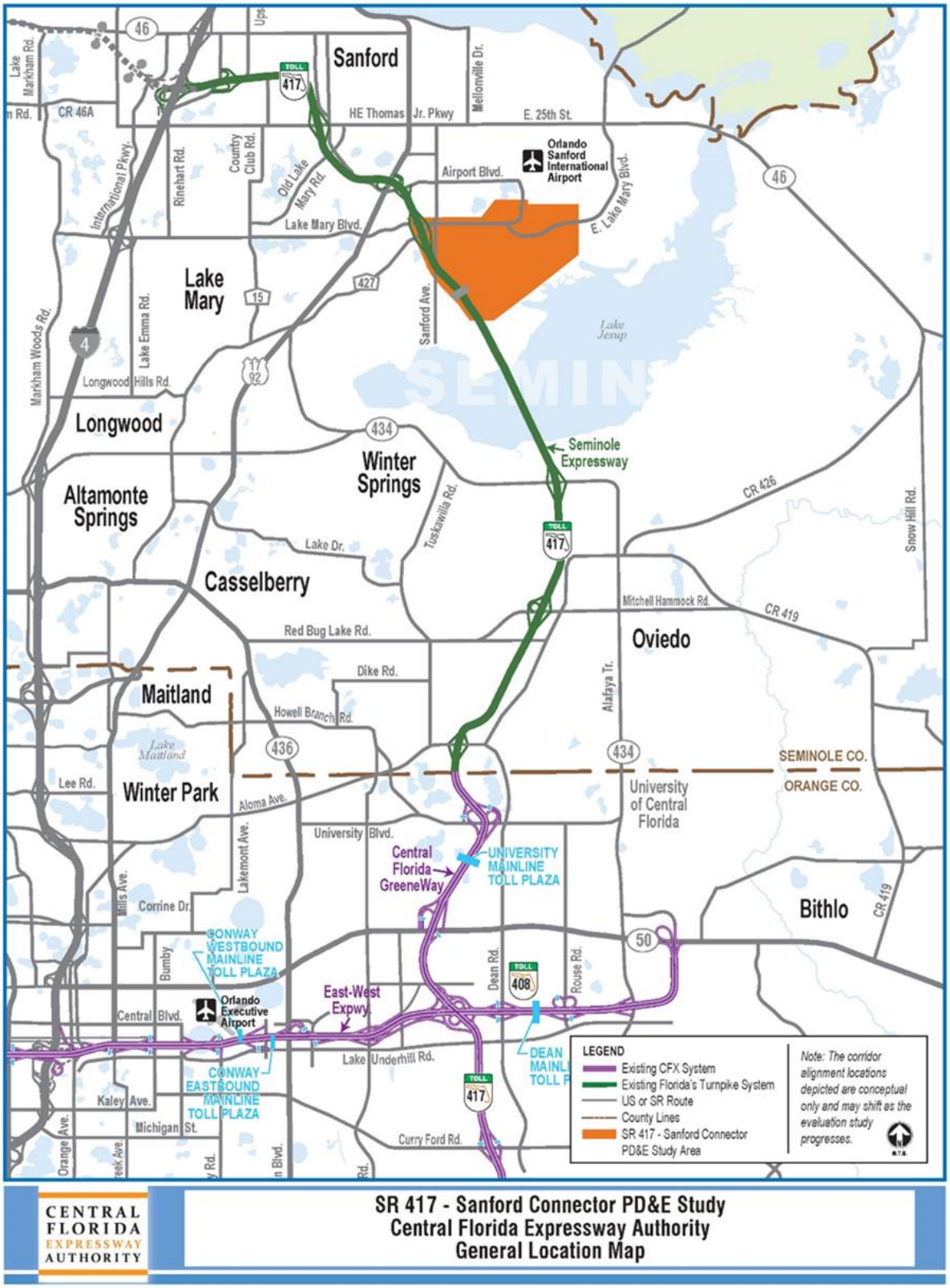
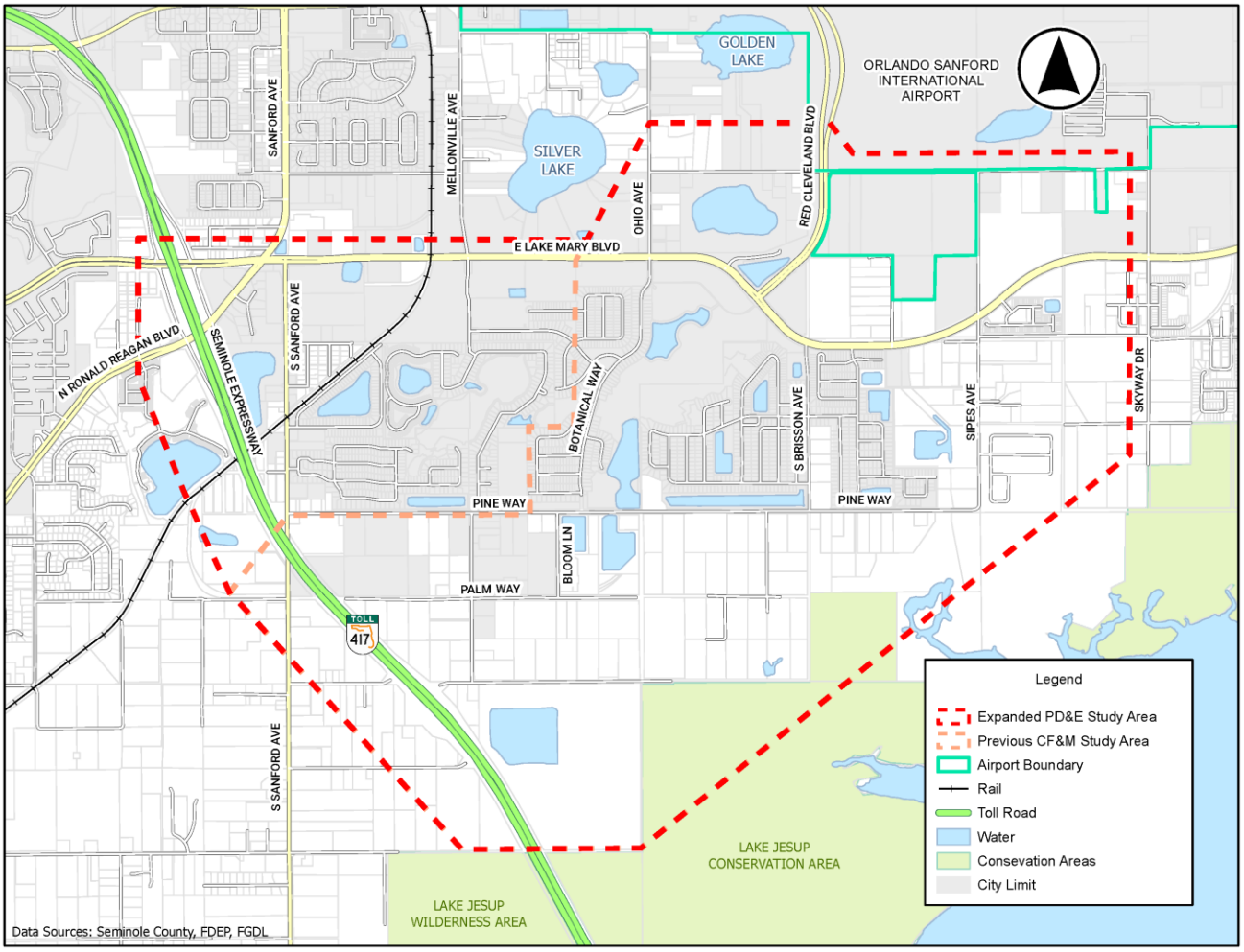


Figure 1-2: Project Study Area



1.2 Purpose and Need

The purpose of the proposed SR 417 (Seminole Expressway) Sanford Airport Connector is to provide a direct, limited access connection between SR 417 and SFB to provide better connectivity and accommodate future traffic growth in the area. The primary access to the airport is along East Lake Mary Boulevard via Red Cleveland Boulevard, which extends north from the airport entrance to the airport terminal. A proposed connector would provide a limited access connection directly to SFB from SR 417, thereby reducing the demand along East Lake Mary Boulevard and improving travel time for all users. The proposed improvements are to 1) enhance regional connectivity, 2) accommodate anticipated transportation demand, 3) provide additional capacity, 4) improve safety, 5) support modal connectivity and 6) serve social and economic growth.

1.2.1 Enhance Regional Connectivity

SFB is a designated Strategic Intermodal System (SIS) Strategic Growth Commercial Service Airport. SR 417 serves as a SIS Highway Corridor providing regional connectivity west of the airport and connects to two designated SIS Strategic Growth Highway Connectors: East Lake Mary Boulevard between SR 417 and Red Cleveland Boulevard and Red Cleveland Boulevard between East Lake Mary Boulevard and Airport Boulevard. Airport passengers using East Lake Mary Boulevard are intermixed with local, non-airport traffic. For example, northbound SR 417 traffic exiting the interchange at Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard, travel though three signalized intersections within 0.3 mile of the SR 417 northbound off-ramp, impeding traffic flow and increasing travel time for airport users. In addition to the designated SIS route, airport access to the passenger terminal is also provided via Airport Boulevard from SR 46/Sanford Avenue.

Results from traffic analyses conducted for the CF&M Study are summarized throughout this section and are presented in a memorandum titled SR 417 to Orlando Sanford International Airport Connector Concept Traffic Analysis Memorandum (CDM Smith 2023). A desktop travel time analysis was conducted to compare travel times between the existing route from SR 417 northbound to SFB via East Lake Mary Boulevard and the proposed connector to SFB. Both routes started on northbound SR 417 at the Lake Jesup mainline toll plaza and terminated at the SFB terminal building. The analysis found that the proposed connector could reduce the travel distance by 28% and reduce travel time to SFB by as much as 51% during the PM peak period. In addition, travel time savings are expected to be higher in future conditions when traffic demand is anticipated to increase, and congestion worsens at the SR 417 and Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange. A direct connection from SR 417 to SFB is expected to enhance regional connectivity by improving access to the airport, increasing mobility options and providing enhanced system linkage between the SIS facilities.

1.2.2 Accommodate Anticipated Transportation Demand

As part of the CF&M traffic analysis, an origin and destination evaluation was performed to identify travel patterns for trips originating from SR 417 south and north of the Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange to the SFB terminal, using data from StreetLight Data, Inc. Review of the one-way 2022 Average Annual Daily Traffic indicates that 5% of the trips from northbound SR 417 access the airport terminal through either Airport Boulevard (2%) and Red Cleveland Boulevard (3%), while 9% continue travel on East Lake Mary Boulevard, east of Red Cleveland Boulevard. Origin and destination data indicate that no trips from southbound SR 417 enter the airport terminal but that 3% of the trips continue on East Lake Mary Boulevard, east of Red Cleveland Boulevard. It is expected that 17% (or 4,400 vehicles per day one-way) of northbound and southbound SR 417 trips would potentially be diverted to the proposed connector if it was in place in year 2022. Based on the traffic analysis, the Annual Average Daily Traffic along SR 417, south of the Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange, is anticipated to increase from 61,150 in year 2022 to 118,100 by 2050 (93% increase). In addition, AADT at the SR 417 and Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange ramps to/from the south is anticipated to increase from 17,750 to 33,100 by 2050 (87% increase). The analysis also indicates that the proposed connector could potentially divert as much as 51% (17,000 AADT) of traffic in year 2050 from the SR 417 and Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange ramps to/from the south, thereby reducing congestion and improving operations at the existing interchange.

The traffic analysis also indicates that AADT along East Lake Mary Boulevard, west of Red Cleveland Boulevard, is anticipated to increase from 23,800 to 36,500 by 2050 (53% increase). However, the analysis indicates that the proposed connector is anticipated to reduce traffic demand along this segment of East Lake Mary Boulevard, by as much as 46% (or 17,000 AADT) in 2050. East of Red Cleveland Boulevard, the AADT along East Lake Mary Boulevard is anticipated to increase from 23,000 in 2022 to 35,400 in 2050 (54% increase). The proposed connector is also anticipated to divert 3,800 trips from Airport Boulevard, east of Sanford Avenue, as well as 17,000 trips from Ronald Reagan Boulevard (CR 427), south of Lake Mary Boulevard, in 2050.

As documented in the 2021 Airport Master Plan Update for SFB, the number of passengers in 2017 was 1,436,224. The plan also forecasts the number of passengers to nearly double to 2,747,325 by 2037, further indicating that traffic demand along East Lake Mary Boulevard and Red Cleveland Boulevard is likely to increase in future years. The plan also notes that the air freight tonnage through the airport in 2017 totaled 332 tons, with an expected increase to 1,671 tons by the year 2037 (WS Atkins, Inc. 2021).

The FDOT Florida Traffic Online website indicates that the 2021 Average Annual Daily Truck Traffic along Airport Boulevard is 274 or 6% of total traffic, and 2860 or 13% along East Lake Mary

Boulevard (FDOT n.d.). Based on the forecasted increase in air freight tonnage through the airport, it is anticipated that truck traffic will also increase.

1.2.3 Provide Additional Capacity

The existing traffic demand (2022) analysis shows that westbound East Lake Mary Boulevard (west of Red Cleveland Boulevard) experiences a Level of Service D Volume to Capacity ratio of 0.8 during the AM peak hour, which increases to 0.9 east of Red Cleveland Boulevard. The existing traffic operations analysis also indicates extended delays and long queues during peak periods at the SR 417 and Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange. The adjacent intersections at East Lake Mary Boulevard at Ronald Reagan Boulevard (CR 427) and Sanford Avenue (CR 425) also operate unacceptably and impact operations at the interchange. Congestion mostly occurs along the facilities approaching and within the interchange footprint including the SR 417 northbound off-ramp, East Lake Mary Boulevard and Ronald Reagan Boulevard (CR 427). Providing additional capacity with a direct connection from SR 417 to the airport is anticipated to alleviate congestion at the existing interchange.

Review of the future 2050 No-Action analysis indicates that the Volume to LOS D Maximum Service Volumes ratio during the PM Peak Hours at SR 417 for the northbound exit ramp at the Ronald Reagan Boulevard (CR 427) and East Lake Mary Boulevard interchange is 1.0. The future 2050 Build analysis indicates that the proposed connector is expected to divert northbound traffic away from the interchange and reduce the Volume to LOS D MSV ratio to 0.5 in 2050, and further indicates that the proposed connector could reduce traffic along the following arterial segments:

- Lake Mary Boulevard, west of Red Cleveland Boulevard
- Airport Boulevard, east of Sanford Avenue
- CR 427, south of Lake Mary Boulevard

The future 2050 No-Action analysis indicates the Volume to LOS D MSV ratios at these arterial segments are expected to be between 1.1 to 1.2. However, the future 2050 Build analysis indicates that the Volume to LOS D MSV ratios are expected to be reduced to between 0.6 and 0.9.

The future 2050 No-Action analysis indicates that the westbound through movements for the East Lake Mary Boulevard and Red Cleveland Boulevard intersection are expected to operate at LOS F during the AM peak period. However, the future 2050 Build indicates that the overall operations are expected to operate at an LOS E during the AM peak period. Because of the existing constrained capacity and expected increase in traffic volumes, additional capacity is anticipated to be needed for satisfactory traffic operations in future years.

1.2.4 Improve Safety

Because of the three signalized intersections within 0.3 mile of the SR 417 northbound off-ramp, traffic at the SR 417 northbound off-ramp occasionally backs up onto the SR 417 mainline, impacting safety and operations along SR 417. The proposed connector would divert traffic from the SR 417 and Ronald Reagan Boulevard (CR 427) and Lake Mary Boulevard interchange, thereby enhancing safety and operations at the interchange.

1.2.5 Support Modal Connectivity

The U.S. Department of Transportation Federal Aviation Administration National Plan of Integrated Airport Systems 2023-2027 published September 30, 2022, designates SFB as a Small Hub, Primary Commercial Service airport facility. Primary Commercial Service airports are publicly owned airports that receive scheduled air carrier service with 10,000 or more passenger boardings per year. Small Hub airports are defined as accounting for 0.05% and 0.25% of total U.S. passengers. The 2021 Airport Master Plan Update for SFB forecasts enplanements to increase 91%, and air freight tonnage to increase 400% by the year 2037. The proposed connector is anticipated to support mobility to other modes of travel at SFB.

1.2.6 Serve Social and Economic Growth

According to the University of Florida's Bureau of Economics and Business Research (BEBR) Florida Population:

2020 Census Summary, Seminole County's population grew from 422,718 in 2010 to 470,856 in 2020, or 11.4%. The BEBR data also showed that the city of Sanford experienced a 14% increase in population over the same period (BEBR 2021). Further, BEBR estimates that Seminole County's population is projected to grow approximately 21% by the year 2050 (BEBR 2022).

Land use in the area is primarily comprised of residential, agricultural and undeveloped lands. However, a review of planned developments in the study area shows that the region is undergoing extensive land use changes, resulting in increased traffic generators. As of July 2023, the city of Sanford's Building Division Online Permitting Service noted there are 10 residential, commercial and industrial planned developments in the study area (City of Sanford 2023). These planned developments account for 55% of the undeveloped lands in the study area, or 349 acres of 637 acres of undeveloped lands. Of the planned developments, five are residential developments, which are expected to create an additional 849 single-family houses and townhomes in the study area.

As a result, local traffic along East Lake Mary Boulevard and surrounding roadways is expected to increase. The proposed connector is expected to divert traffic from East Lake

Mary Boulevard, providing local traffic with increased mobility to and from the existing and planned development in the area.

1.3 Consistency with Regional and Local Transportation Planning

Planning consistency of the proposed project is documented in various local planning documents. A brief explanation of each follows. Consistency with the following local comprehensive plans is being coordinated during the PD&E Study:

- **CFX**: The SR 417 Sanford Airport Connector is listed as a new expressway in the CFX 2045 Master Plan (December 2022) and the CFX *Five-Year Work Plan for FY 2026 - FY 2030 (June 2025)*. The PD&E study from SR 417 to East Lake Mary Blvd. is anticipated to be completed in Fall 2025; however, no future phases are funded at the time of this PD&E.
- **MetroPlan Orlando**. The project is listed as a new expressway in MetroPlan Orlando's 2045 *Metropolitan Transportation Plan Cost Feasible Plan*. The existing TIP: 2024 - 2029 (as of 9/11/2024) is funded for $2.000 (in millions of dollars).

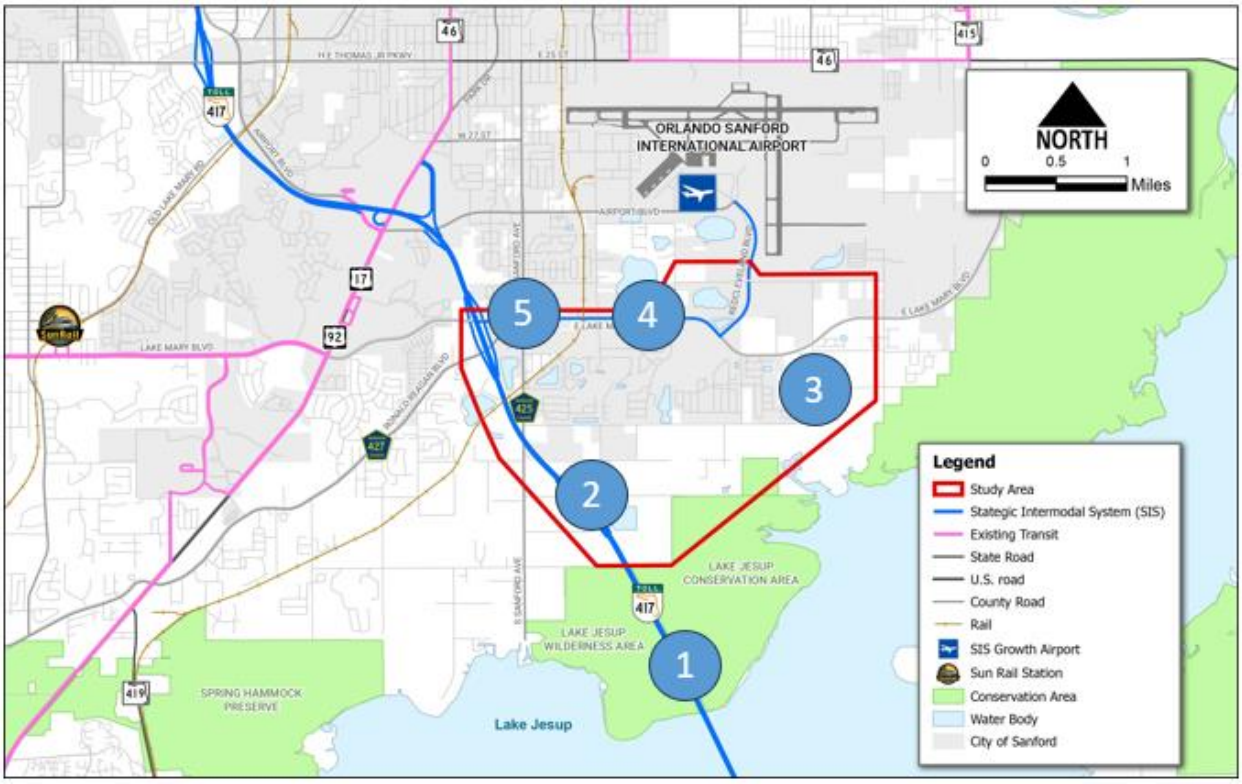
1.4 Commitments

Pending commitments identified following the public hearing.

1.5 Surrounding Projects

Related projects within and around the study area were identified within the FDOT 5-Year Work Program, Seminole County's Capital Improvement Program, and MetroPlan Orlando's Cost Feasible Plan. Key projects identified include (1) the widening of SR 417 to 8 lanes which is currently under design, (2) an all-electronic tolling conversion of SR 417 which has been completed, (3) safety and operation improvements along Pine Way and Sipes Avenue, (4) a shared-use path along East Lake Mary Blvd., and (5) intersection improvements at East Lake Mary Boulevard/CR 427/Sanford Avenue. **Figure 1-3** shows a map depicting the study area, along with the five numbered markers of surrounding projects in the vicinity of the SR 417 Sanford Airport Connector.

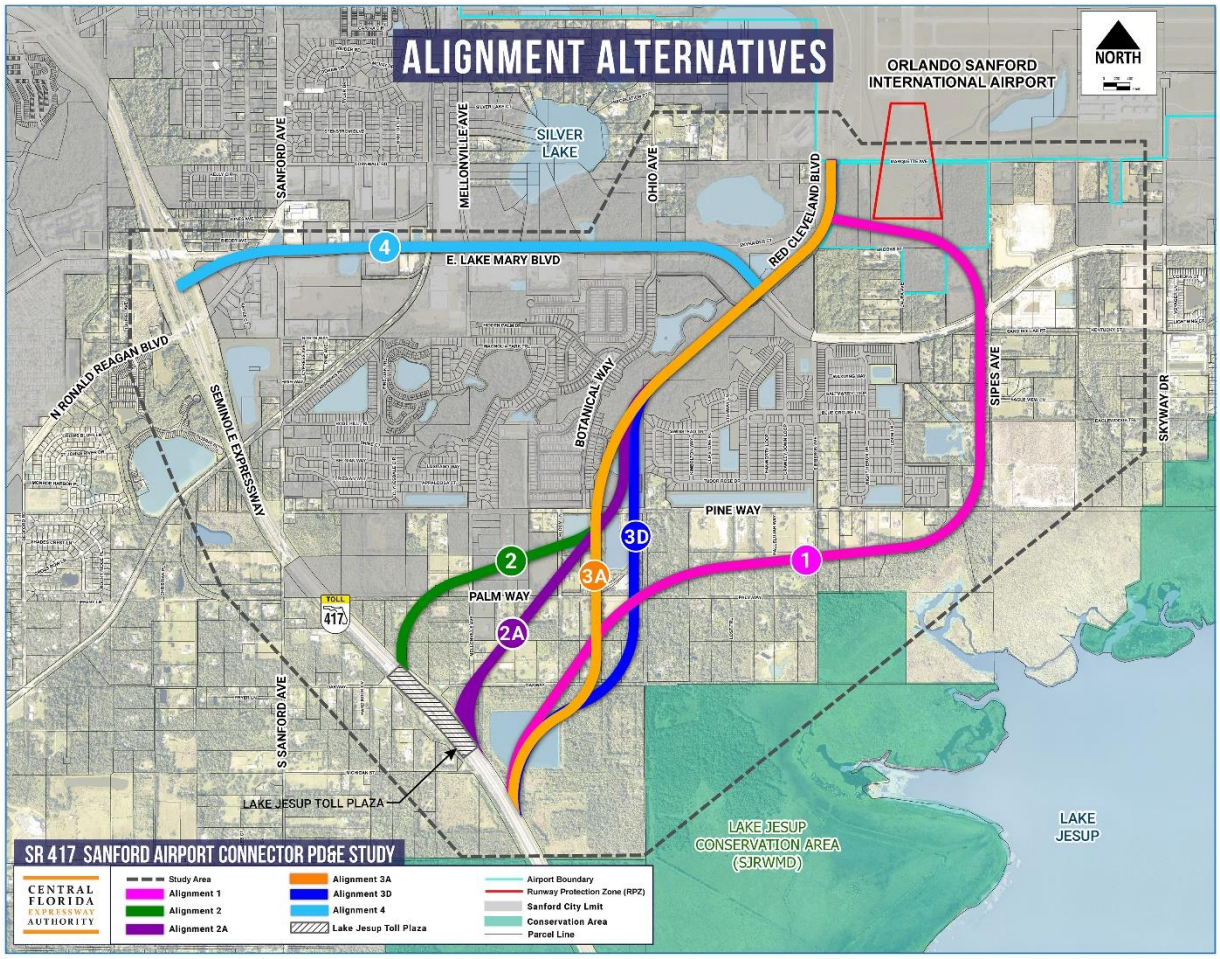
Figure 1-3 Map of Surrounding Projects



1.6 Alternatives Considered

The PD&E study is evaluating a new expressway connection from SR 417 north of Lake Jesup to the Orlando Sanford International Airport. Five alternatives were initially considered. Alignments 1, 2, 3A, 3D, 4, as well as the no-build option initially evaluated and presented at the Alternatives Public Meeting. Following the Alternatives Public Meeting, a new alternative, Alignment 2A, was created and presented to the public. **Figure 1-4** depicts the alternatives evaluated.

Figure 1-4 Map of Alignment Alternatives



1.6.1 Viable Alternatives

Alignment 1

Alignment 1 is the longest alignment and has the fewest direct residential impacts. Alignment 1 is shown in **Figure 1-5**, and travels from SR 417 south of the Lake Jesup Toll Plaza east-bound to East Lake Mary Boulevard east of Sipes Avenue and connects at Red Cleveland Boulevard south of the Orlando Sanford International Airport.

Alignment 1 was eliminated for the following reasons:

- Longest overall route with second highest overall cost
- Highest right-of-way costs
- Highest number of residential and non-residential parcels impacted
- Issues with new road adjacent to the Airport's Runway Protection Zone

Figure 1-5 Alignment 1

Alignment 2

Alignment 2 is the shortest alignment and is located farther away from the Lake Jesup Conservation Area than Alignments 1, 3A and 3D. Alignment 2 travels from SR 417 north of the Lake Jesup Toll Plaza to the north and east and connects to East Lake Mary Boulevard at Red Cleveland Boulevard. Alignment 2 has the least anticipated environmental impacts and is shown in **Figure 1-6**.

Alignment 2 is proposed to be further evaluated for:

- Shortest and most direct route
- Lowest overall cost
- Second lowest overall number of residential parcels impacted
- Connection to SR 417 farther from Lake Jesup Conservation Area than other alignments

Alignment 2 Refinement (Alignment 2A)

Alignment 2 moved the interchange with SR 417 away from the Lake Jesup Conservation Area and utilized the pavement and right of way at the toll plaza. A refinement of Alignment 2 was considered that moves the connection to SR 417 farther south, but still north of the Lake Jesup Conservation Area, to provide a more direct connection from SR 417 to Red Cleveland Boulevard. This change was considered significant enough that it should be considered as a new alternative, designated as Alignment 2A. **Figure 1-7** depicts Alignment 2.

Figure 1-6 Alignment 2

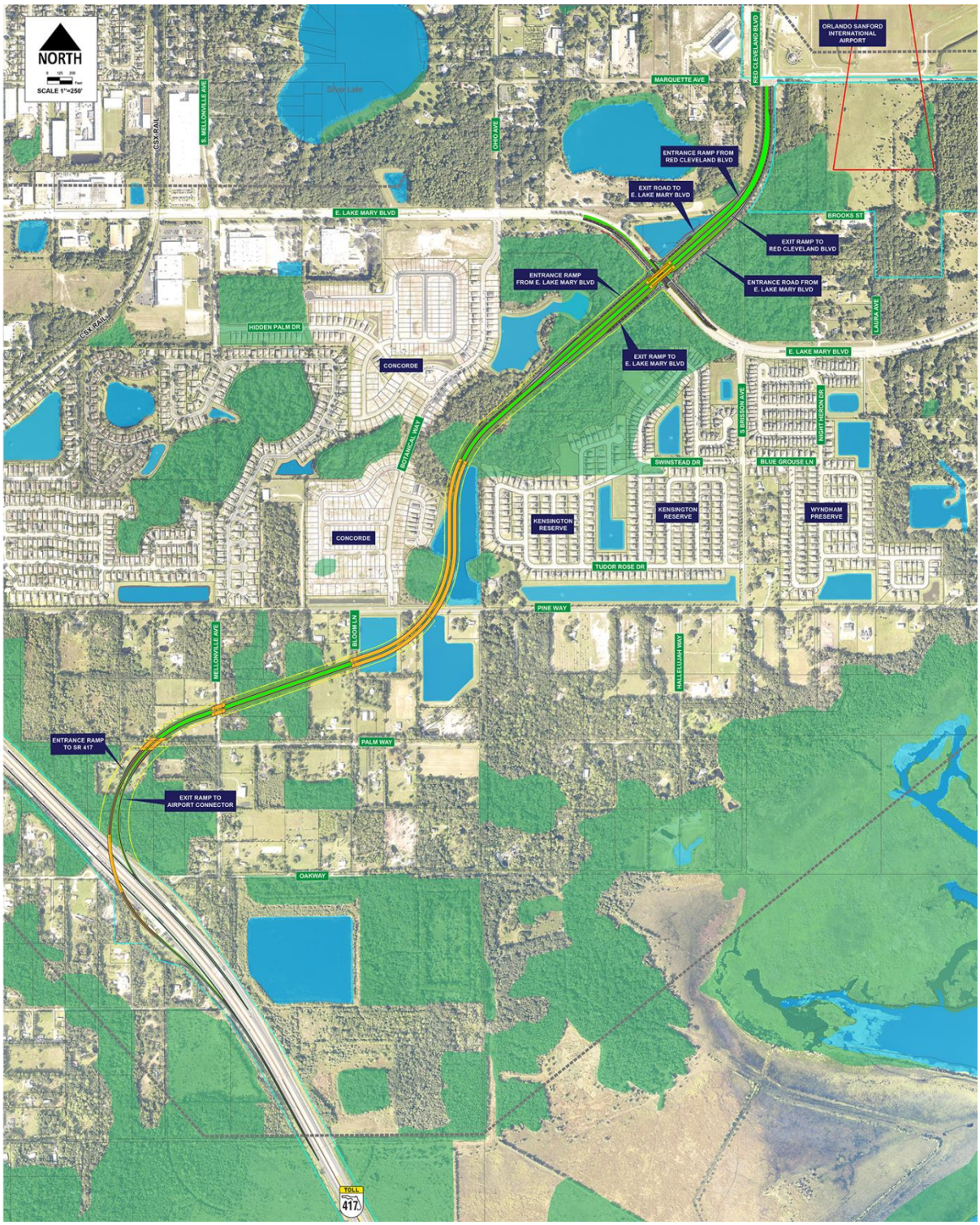
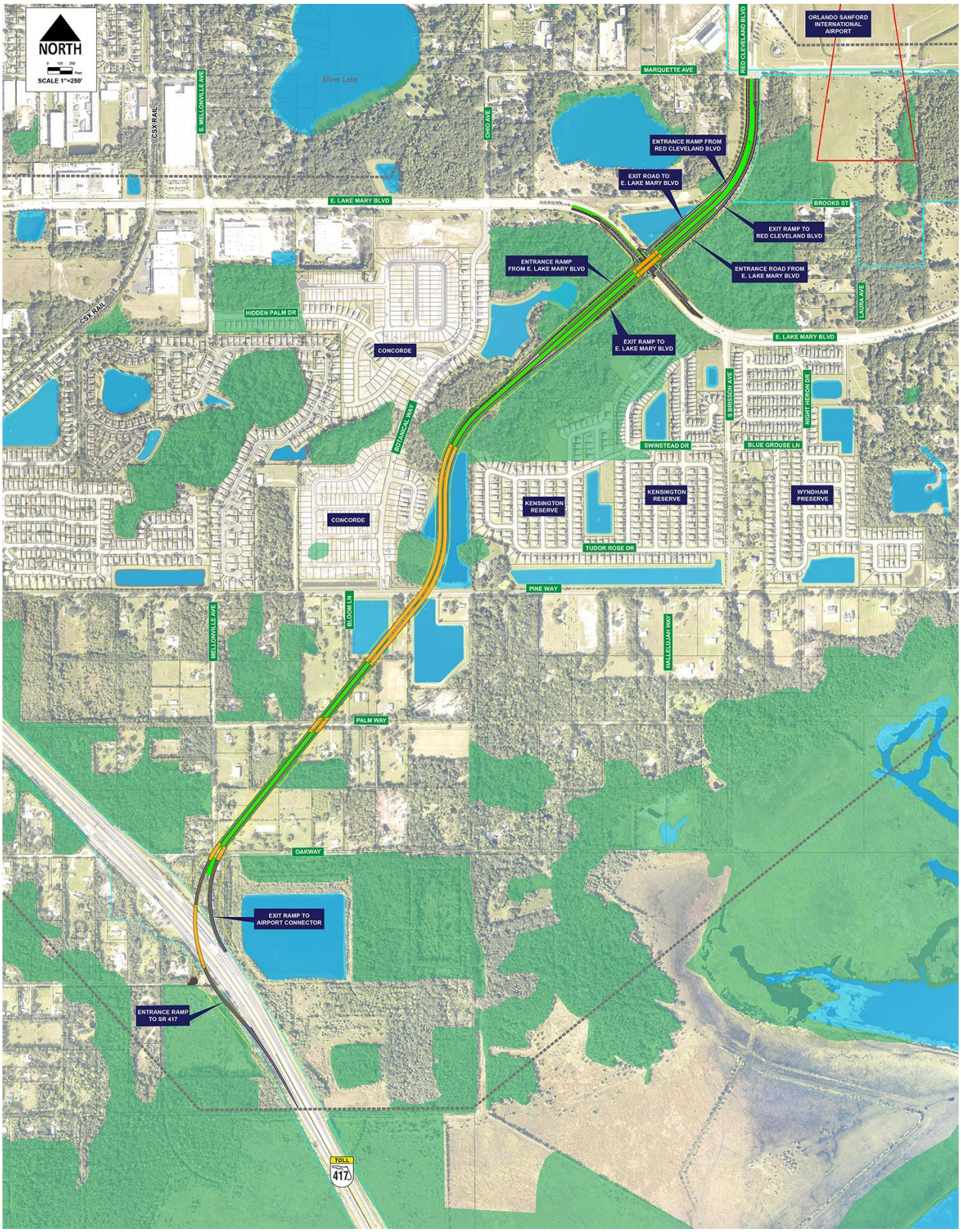


Figure 1-7 Alignment 2A



Alignments 3A and 3D

Alignments 3A and 3D attempt to balance the direct impacts to the existing and planned residential developments as well as environmentally sensitive land. They both begin at SR 417 south of the Lake Jesup Toll Plaza and head north to connect to East Lake Mary Boulevard at Red Cleveland Boulevard. Alignment 3A is located west of Alignment 3D and has the potential to impact residences north of Pine Way but avoids impacts to the existing stormwater ponds south of Pine Way. Alignment 3D is located east of Alignment 3A and avoids direct residential impacts north of Pine Way. Alignments 3A and 3D are shown on **Figures 1-8** and **1-9**.

Alignment 3A was eliminated for the following reasons:

- Second most residential parcels impacted
- Directly impacts new houses in Concorde development
- Higher cost than Alignment 2
- Connection to SR 417 is closer to Lake Jesup Conservation Area than Alignment 2

Alignment 3D was eliminated for the following reasons:

- Higher cost than Alignments 2 and 3A
- Requires more bridges over private retention ponds than Alignment 3A
- Connection to SR 417 is closer to Lake Jesup Conservation Area than Alignment 2

Alignment 4

Alignment 4 is a viaduct, or an elevated bridged roadway, that would begin at SR 417 in the area of the existing interchange with County Road 427 and Lake Mary Boulevard and run east along the median of East Lake Mary Boulevard to Red Cleveland Boulevard. Alignment 4 attempts to utilize the existing East Lake Mary Boulevard roadway corridor to minimize impacts to the environment and residences. Alignment 4 is shown on **Figure 1-10**.

Alignment 4 was eliminated for the following reasons:

- Significantly higher cost than all other alternatives
- Significantly lower projected ridership than all other alternatives

Figure 1-8 Alignment 3A

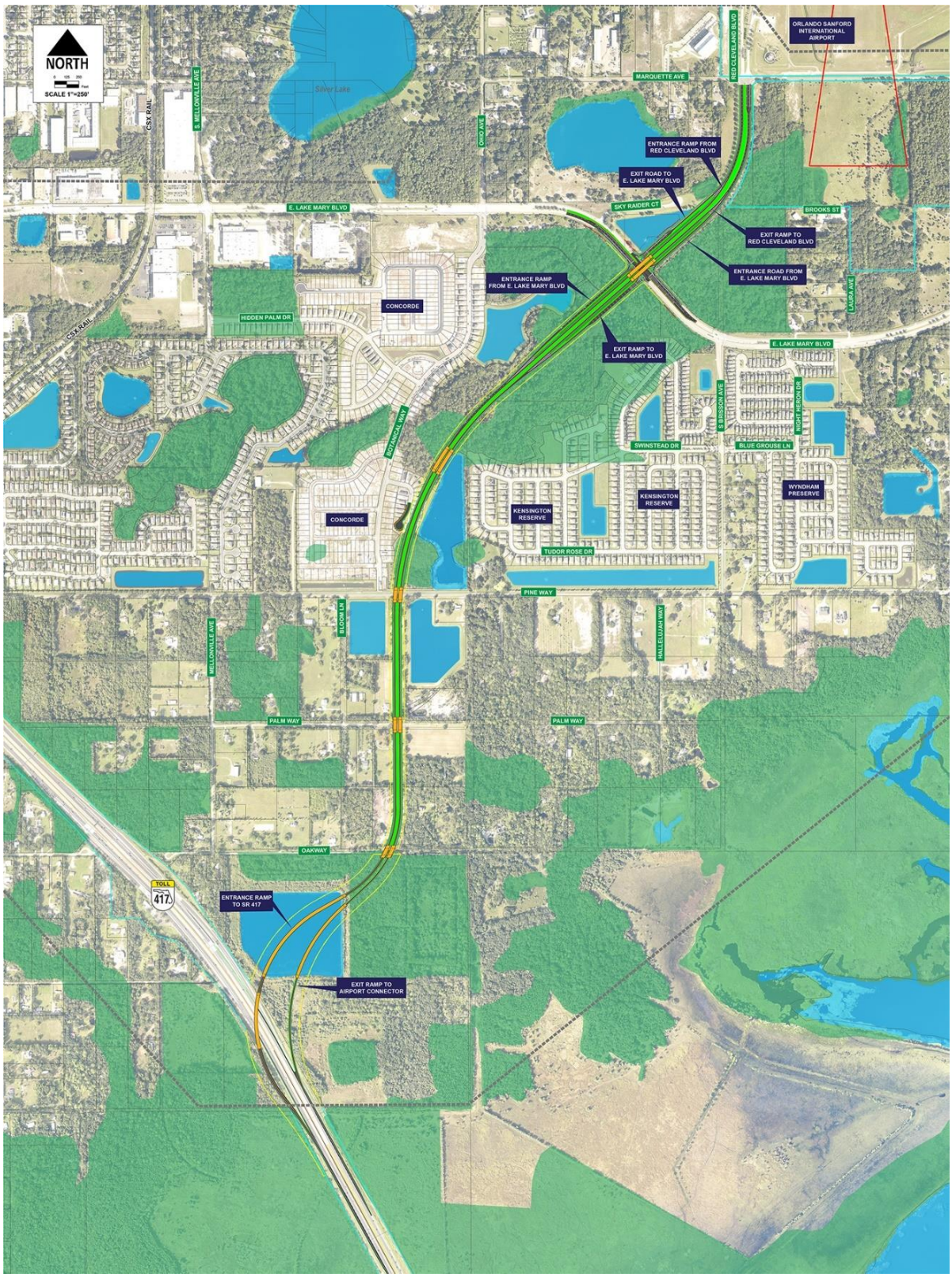


Figure 1-9 Alignment 3D

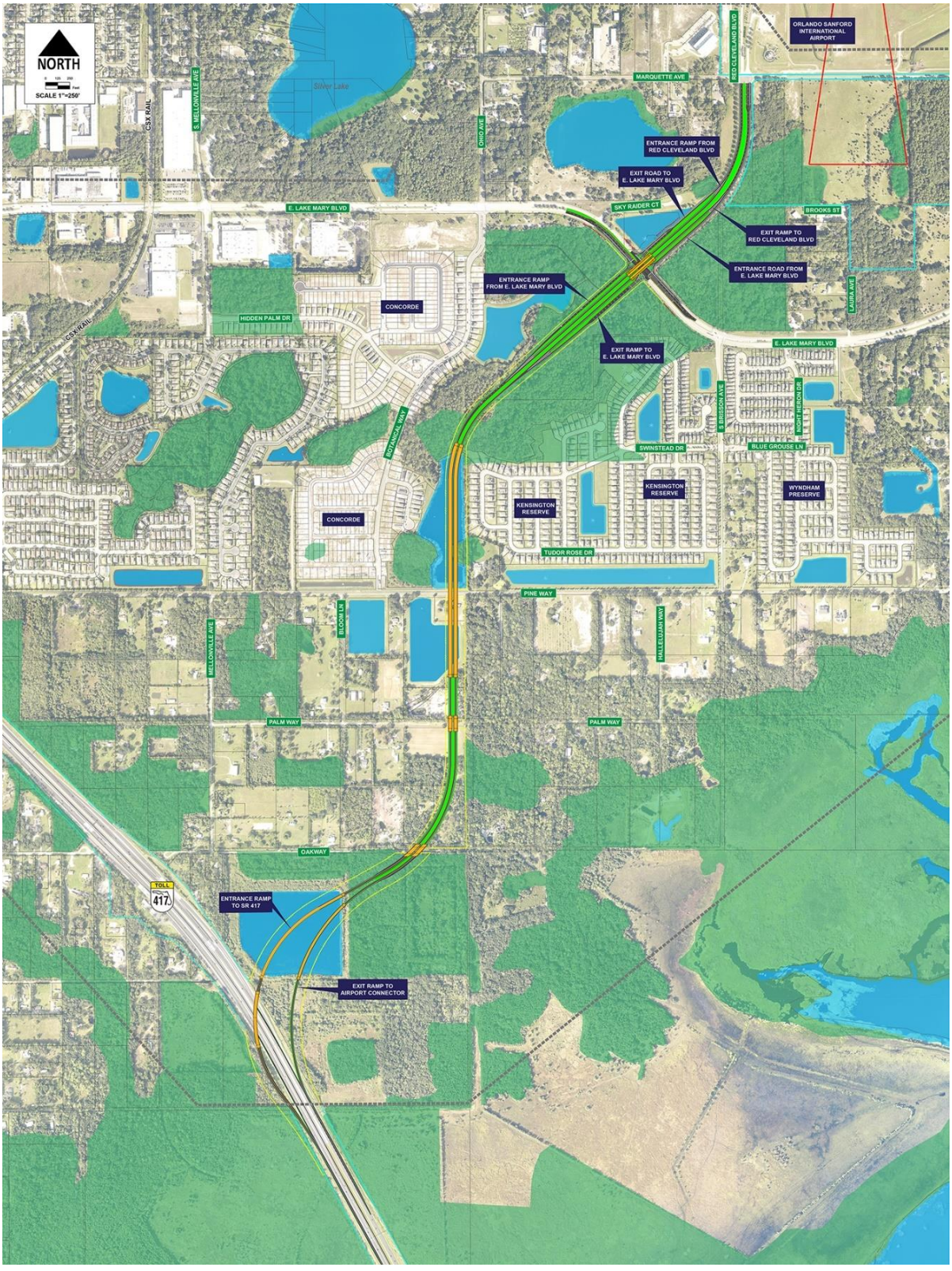
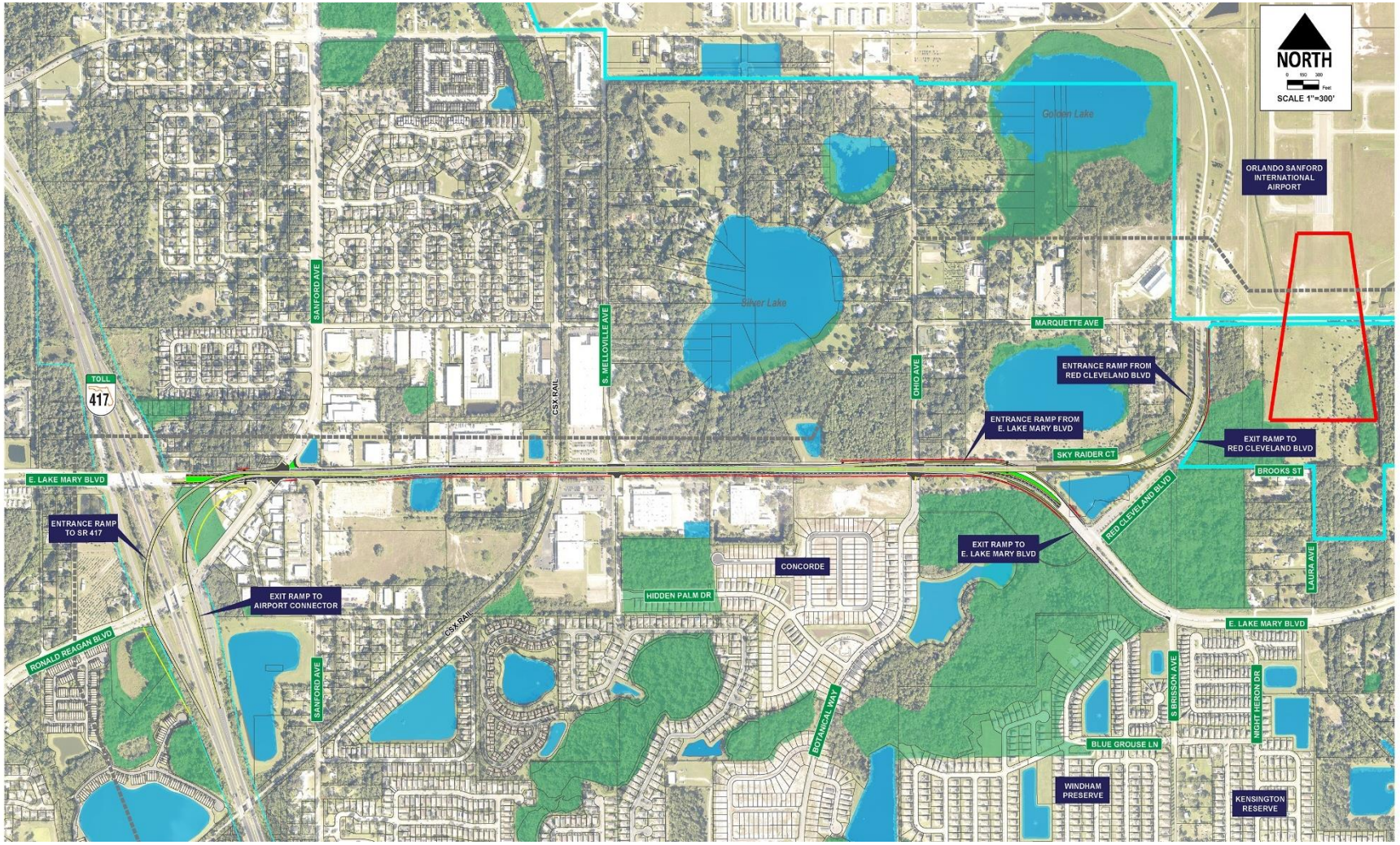


Figure 1-10 Alignment 4



1.6.2 Preferred Alternative

Alignment 2A was selected as the Preferred Alternative because it is the shortest and most direct route, has the lowest impact to wetlands, and includes an optimized roadway geometry to improve safety. Alignment 2A also allows for the future addition of ramps to/from the north on SR 417 and received support from stakeholders such as SFB, Seminole County, and Florida's Turnpike Enterprise. The City of Sanford, Seminole County Chamber of Commerce, and the Orlando Economic Partnership have also provided general support for a direct connection between SR 417 and the airport.

1.6.3 No-Build Alternative

The No-Build Alternative assumes that no transportation improvements be made to SR 417 to provide direct access from SR 417 at the Lake Jessup Toll Plaza to SFB other than routine maintenance. The primary advantages of the No-Build Alternative are that it does not directly require any capital or expenditure, and it produces no physical, natural, or social impacts.

The No-Build Alternative will remain under consideration throughout the alternatives analysis and evaluation process.

1.6.3.1 Advantages of No-Build

Certain advantages would be associated with the implementation of the No-Build Alternative:

- No acquisition of right-of-way
- No design, right-of-way, or construction costs
- No inconvenience to the traveling public and property owners during construction
- No impacts to utilities
- No impacts to the adjacent natural, physical, and human environment

1.6.3.2 Disadvantages of No-Build

The potential disadvantages of the No-Build Alternative include:

- Does not meet the projects Purpose and Need
- Does not improve connectivity from SR 417 to SFB
- Does not address roadway capacity needs associated with anticipated future growth

2. Existing Conditions

2.1 Existing Roadway Conditions

The existing roadway network in the study area consists of an expressway, principal arterials, minor arterials and minor collector facilities as well as local roads. SR 417 is a major north/south corridor for commercial and private transportation. The study area includes two interchanges (SR 417 and CR 427/Lake Mary Boulevard), ten at-grade signalized intersections (SR 417 southbound ramps at East Lake Mary Boulevard and Ronald Reagan Boulevard, SR 417 northbound ramps at East Lake Mary Boulevard and Ronald Reagan Boulevard, East Lake Mary Boulevard at Ronald Reagan Boulevard, Sanford Avenue at East Lake Mary Boulevard, Mellonville Avenue at East Lake Mary Boulevard, Ohio Avenue (north)/ Silvervista (south) at East Lake Mary Boulevard, Red Cleveland Boulevard at East Lake Mary Boulevard, and Skyway Drive at East Lake Mary Boulevard) and six unsignalized at-grade intersections along East Lake Mary Boulevard at (Skyraider Court, Brisson Avenue, Night Heron Drive, Laura Avenue, Sipes Avenue, and Red Cleveland Boulevard at Marquette Avenue. The SR 417 project corridor has two existing bridges and one bridge culvert within the project study area.

2.1.1 Functional Classification

In the study area, SR 417 is functionally classified as a Principal Arterial – Expressway. The functional classifications for the other roadways in the area are listed in **Table 2-1.**

Table 2-1 Functional Classifications

Roadway	Functional Classification
SR 417	Principal Arterial – Expressway
East Lake Mary Boulevard	Principal Arterial – Other
CR 425/South Sanford Avenue	Minor Collector
Red Cleveland Boulevard	Major Collector

2.1.2 Access Management

The only roadway within the study area that falls under the FDOT access management guidelines is SR 417. The access management classification for SR 417 was identified using the FDOT Access Management geographic information system files (FDOT n.d.). The local

government-maintained roads were classified according to the FDOT *Access Management Guidebook* (FDOT 2019).

The Seminole County Comprehensive Plan (Transportation Element) implementation of the State Access Management Program and the control of access connections to the State Highway System are consistent with the FDOT Access Management guidelines and are coordinated with FDOT through the County's access permitting process (Seminole County 2022). **Table 2-2** lists the existing access management classifications for the roads within the study area.

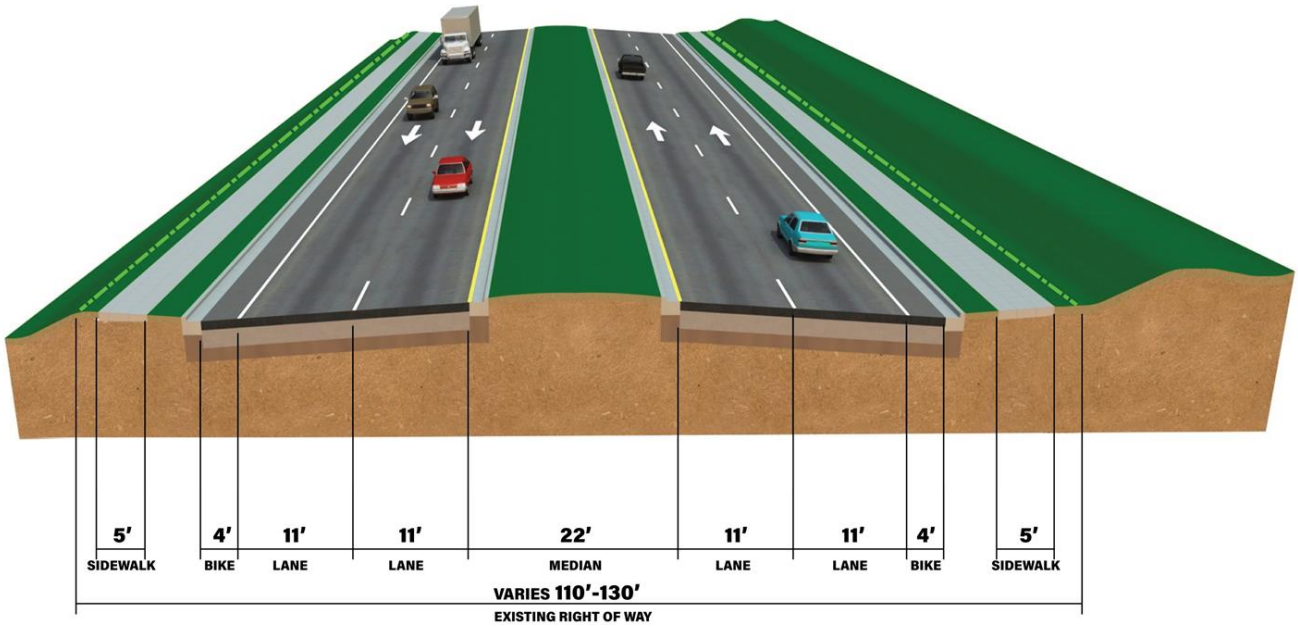
Table 2-2 Access Management Classifications

Roadway	Access Management Classification
SR 417	1 - Freeway
East Lake Mary Boulevard	3 - Restrictive with 660-foot Connection Spacing
CR 425/South Sanford Avenue	4 - Non-Restrictive with 2,640-foot Signal Spacing
Red Cleveland Boulevard	3 - Restrictive with 660-foot Connection Spacing

2.1.3 Roadway Typical Section

The existing typical section along East Lake Mary Boulevard consists of a four-lane divided roadway with 11-foot lanes and a 22-foot grassed median. There are also five-foot sidewalks on each side of the roadway and four-foot marked on-road bike lanes. **Figure 2-1** is a graphical representation of the existing typical section.

Figure 2-1 Existing Typical Section – East Lake Mary Boulevard



2.1.4 Context Classification

The FDOT context classification system applies to all FDOT highways functionally classified as arterials or collectors and ensures that projects along these highways harmonize with the surrounding land use characteristics and the intended uses of the roadway. By informing planners and engineers about the type and intensity of uses along various roadway segments, state roadways can be planned, designed and maintained to be supportive of safe and comfortable travel for their anticipated users.

Eight FDOT context classifications are used to describe unique land use contexts in Florida. The context classifications range from “C1 - Natural” to “C6 - Urban Core”. The context classification provides insight into the types of road users that can be expected, and corresponding design criteria reflect their diversity of needs. The only roadway within the study area that falls under the FDOT Context Classification guidelines is SR 417. The context classification for SR 417 was identified using the FDOT Straight-Line Diagram and the existing SR 417 Resurfacing Project Plans (FPID 440292-1-52-01 [FY 2021]).

The local government-maintained roads were also classified according to the FDOT Context Classification Guide (July 2020). **Table 2-3** summarizes the context classification determinations for the project as provided by FDOT.

Table 2-3 Context Classifications

Roadway	Context Classification
SR 417	Not Applicable (Limited Access Facility)
East Lake Mary Boulevard	C3C*
CR 425/South Sanford Avenue	C3R*
Red Cleveland Boulevard	C3C*

* Determined for non-State Highway System roadways

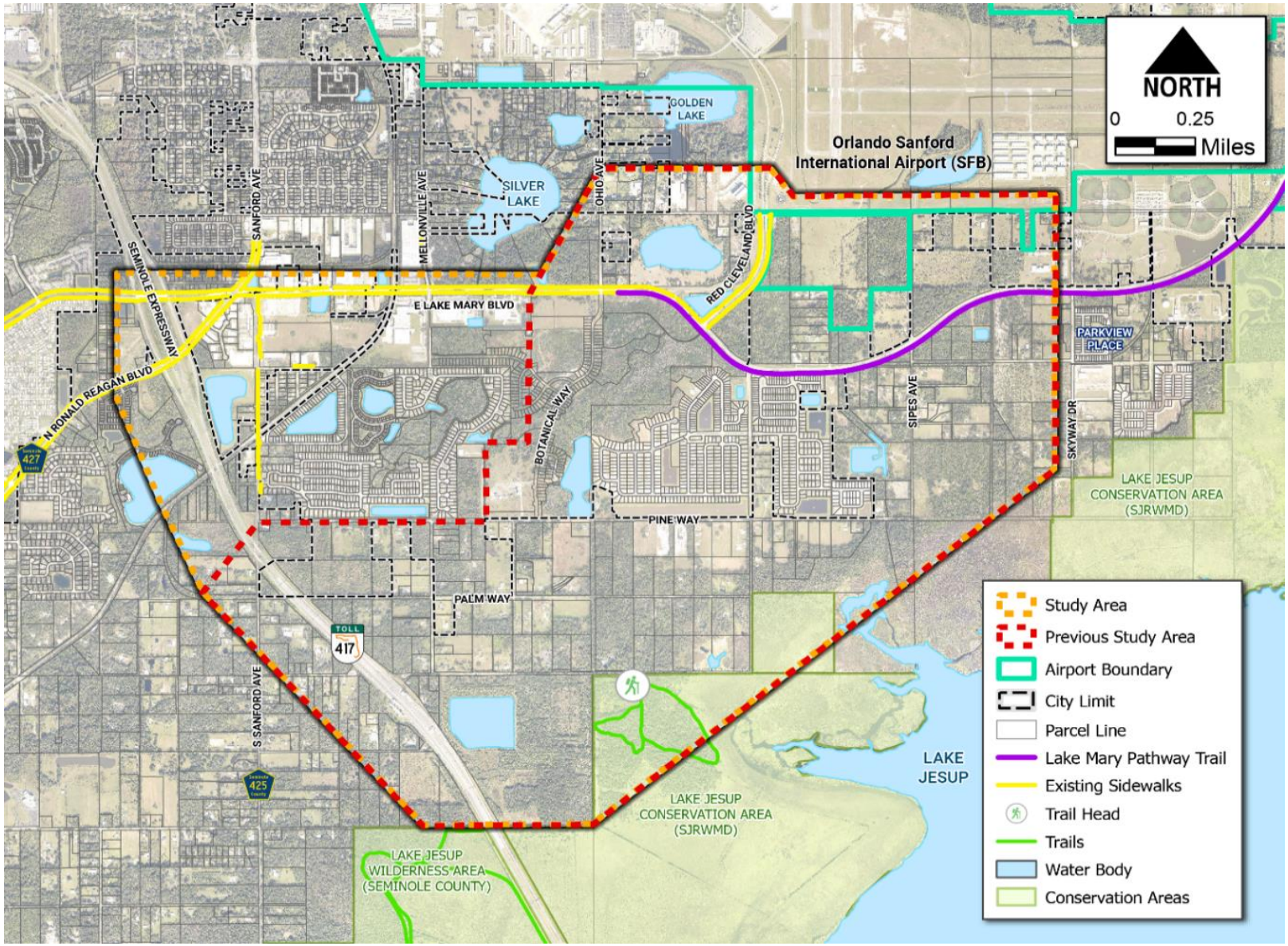
2.1.5 Pedestrian and Bicycle Facilities

Within the study area, contiguous 5-foot-wide sidewalks are present on both the north and south sides of East Lake Mary Boulevard. However, just east of Ohio Avenue, the sidewalk on the south side of East Lake Mary Boulevard transitions to the 8-foot-wide multi-use Lake Mary Pathway trail. Sidewalks are also present along many of the cross streets that intersect with East Lake Mary Boulevard.

There are two existing recreational trails, the Lake Jesup Conservation Area Trail, and the Lake Mary Boulevard Trail within the project study area. The Lake Jesup Conservation Area is designated as a Florida Natural Areas Inventory (FNAI) state managed conservation land. Local Florida parks and recreational facilities located within the study area include the Lake Jesup Park and Wilderness Area, and the Marl Bed Flats Tract Trailhead.

In addition, the Marl Beds Flat Trailhead and Trail is located within the Lake Jesup Conservation Area in the southern portion of the study area, at the eastern terminus of Oakway. The trail entrance contains undesignated parking for vehicles and is accessible only by Oakway. The trail is open to the public Monday through Sunday from 6 a.m. to 8 p.m. Existing pedestrian and bicycle facilities are shown on **Figure 2-2.**

Figure 2-2 Existing Pedestrian and Bicycle Facilities



2.1.6 Design and Posted Speeds

The design and posted speeds for SR 417 and East Lake Mary Boulevard are the same, at 70 mph (SR 417) and 50 mph (East Lake Mary Boulevard). The design speed for Red Cleveland Boulevard is 50 mph while its posted speed is 40 mph, and CR 425/South Sanford Avenue has a design speed of 40 mph* while its posted speed is 35 mph. **Table 2-4** provides the existing posted speed limits along the existing SR 417 corridor.

Table 2-4 Design Speed and Posted Speed

Roadway	Design Speed (mph)	Posted Speed (mph)
SR 417	70	70
East Lake Mary Boulevard	50	50
Red Cleveland Boulevard	50	40
CR 425/South Sanford Avenue	40*	35

* Assumed 5 mph greater than posted speed limit

2.1.7 Right-of-Way

The different roadways within the study area have different right-of-way widths, which are summarized in **Tabel 2-5** below. Note that the right-of-way width along SR 417 is typically 300 feet and gets wider at the existing Lake Jessup toll plaza. Existing right-of-way widths were determined from the SR 417 Resurfacing plans (FPID: 440292-1), the East Lake Mary Boulevard. 2002 construction plans (PS-0137) as well as from property appraiser GIS.

Table 2-5 Existing right-of-way widths

Roadway	Existing right-of-way width (ft)
SR 417	300 (Typ.)
East Lake Mary Boulevard	110 - 130
Red Cleveland Boulevard	135 (Min.)
CR 425/South Sanford Avenue	50 - 106

2.1.8 Geometric Elements

The Horizontal alignment of SR 417 in the study area, starting from the south, is a long tangent over Lake Jesup. The alignment includes two horizontal curves in the vicinity of the existing toll plaza and Sanford Avenue. The northern curve is superelevated at a rate of 0.037 ft./ft. while the southern curve is superelevated at a rate of 0.028 ft./ft. The alignment

continues on a tangent north to the East Lake Mary Boulevard Interchange. The Vertical profile of SR 417 is generally at grade from the bridge over Lake Jesup to just north of the existing toll plaza. The roadway then begins to elevate for the bridge crossings over Sanford Avenue, the CSX railroad crossing and the interchange at North Ronald Reagan Boulevard and East Lake Mary Boulevard.

The East Lake Mary Boulevard alignment runs on a tangent until the East Lake Mary Boulevard and Red Cleveland Boulevard intersection where there are two sharper horizontal curves east and west of that intersection which are both reverse crown. The vertical profile for East Lake Mary Boulevard is at grade and was designed utilizing a 'saw-tooth' profile with minimum grades in order to provide positive gutter grade.

The existing alignment for Red Cleveland Boulevard within the study area between the intersection with East Lake Mary Boulevard and Marquette Avenue contains two short tangents and a long horizontal curve which is superelevated at reverse crown. The vertical profile for the roadway is designed to provide minimum gutter grades. The profile is higher at the intersection at Marquette Avenue and lower at the intersection at East Lake Mary Boulevard.

Within the project limits, the Sanford Avenue alignment is a long horizontal tangent with no horizontal curves. The vertical profile is generally flat and at grade, with a slight dip at the SR 417 underpass.

The existing horizontal and vertical geometry is summarized in **Table 2-6**.

Table 2-6 Horizontal Curves

Roadway	Point of Intersection	Design Speed (mph)	Limits	Deflection (Degrees, Minutes, Seconds)	Radius (feet)	Length of Curve (feet)	Degree of Curve (Degrees, Minutes, Seconds)	Superelevation (e) (ft./ft.)
SR 417	MP 9.809	70	PC = MP 9.600 PT = MP 10.015	16°30'00"	7639	2,191.20	0°45'00"	0.028
	MP 10.655	70	PC = MP 10.412 PT = MP 10.890	25°15'00"	5730	2,523.84	1°00'00"	0.037
East Lake Mary Blvd.	Sta. 77+62.86	50	PC=Sta. 73+20.00 PT=Sta. 81+53.46	47°55'27"	996.45	833.46	5°45'00"	RC
	Sta. 95+99.58	50	PC=Sta. 91+55.51 PT=Sta. 99+91.00	48°02'27"	996.45	835.49	5°45'00"	RC

Red Cleveland Blvd	Sta. 23+94.24	50	PC=Sta. 18+86.00 PT=Sta. 28+42.74	47°50'13"	1145.92	956.74	5°00'00"	RC

PC = point of curve, PI = point of intersection, PT = point of tangent, Sta. = station

Florida's Turnpike Enterprise documented the existing SR 417 design characteristics as part of the 2007 PD&E Study conducted for the proposed widening of SR 417. **Table 2-7** summarizes the vertical alignment for SR 417 within the study limits.

Table 2-7 Vertical Curves

Mainline or Ramp Location	Approximate Location, PI Station[1]	Design Element	Existing Condition	AASHTO Criteria	FDOT Criteria	Variation (V) or Exception (E)	Remarks
Mainline	S. of Toll Plaza, STA 1794+00	Vertical Curve Length, sag	500'	n/a	800'	V	Does not meet FDOT minimum
	N. of Toll Plaza, STA 1802+25	Vertical Curve Length, sag	500'	n/a	800'	V	Does not meet FDOT minimum
	Lake Mary Blvd. Bridge, STA 1874+50	K-Value, crest	481'	247	506	V	Meets AASHTO minimum
	NB entrance ramp Lake Mary Blvd. STA 129+00	Vertical Curve Length, sag	150'	n/a	200'	V	Does not meet FDOT minimum
	NB entrance ramp Lake Mary Blvd. STA 136+68	Vertical Curve Length, crest	150'	n/a	300'	V	Does not meet FDOT minimum
Ramps	SB exit ramp, Lake Mary Blvd., STA 339+76	K-Value, sag	31.4	96	96	E	Does not meet AASHTO Minimum K-Value
	SB exit ramp, Lake Mary Blvd., STA 339+76	Vertical Curve Length, sag	100'	n/a	200'	V	Does not meet FDOT minimum
	SB exit ramp, Lake Mary Blvd., STA 343+26	K-Value, sag	52.1	96	96	E	Does not meet AASHTO Minimum K-Value

	SB exit ramp, Lake Mary Blvd., STA 343+26	Vertical Curve Length, sag	150'	n/a	200'	V	Does not meet FDOT minimum
	SB exit ramp Lake Mary Blvd. STA 345+52	K-Value, crest	129.9	84	136	V	Meets AASHTO minimum

1 – PI Stations based on existing construction plans

2.1.9 Intersections and Signalization

Ten signalized intersections are located at the northbound and southbound ramps for SR 417 at Lake Mary Boulevard and Ronald Reagan Boulevard, Lake Mary Boulevard at Ronald Reagan Boulevard, East Lake Mary Boulevard/Sanford Avenue, East Lake Mary Boulevard/Mellonville Avenue, East Lake Mary Boulevard/Ohio Avenue (north)/ Silvervista Boulevard (south), East Lake Mary Boulevard/Red Cleveland Boulevard, and Skyway Drive. There are also six unsignalized intersections within the study limits along East Lake Mary Boulevard at Skyraider Court, Brisson Avenue, Night Heron Drive, Laura Avenue, and Sipes Avenue, and on Red Cleveland Boulevard/Marquette Avenue. **Table 2-8** summarizes the SR 417 interchanges and the intersections and signalization along East Lake Mary Boulevard and Red Cleveland Boulevard.

Table 2-8 Interchanges, Intersections, and Signalization

Roadway	Intersection Type	Intersection Control	Turn Lanes (Left-Turn Directions)	Crosswalks
SR 417				
Lake Mary Boulevard	Half diamond interchange	Signalized	Three-Way Left-Turn Lanes (NBL, WBL, SBL)	East/West
Ronald Reagan Boulevard	Half diamond interchange	Signalized	Four-Way Left-Turn Lanes (EBL, SBL, NBL, WBL)	East/West
East Lake Mary Boulevard				
Sanford Avenue	Three-leg (southbound)	Three-Way Signalized	Two-Way Left-Turn Lanes (WBL, NBL)	East/West & North/South
Mellonville Avenue	Four-leg	Four-Way Signalized	Four-Way Left-Turn Lanes (EBL, WBL, NBL, SBL)	East/West & North/South
Ohio Avenue (north)/ Silvervista Blvd (south)	Four-leg	Four-Way Signalized	Three-Way Left-Turn Lanes (EBL, SBL, WBL)	East/West
Skyraider Court	Three-leg (southbound)	One-Way Stop	Two-Way Left-Turn Lanes (EBL, SBL)	East/West

Red Cleveland Boulevard	Three-leg (southbound)	Three-Way Signalized	Two-Way Left-Turn Lanes (EBL, SBL)	East/West & North/South
Brisson Avenue South	Three-leg (northbound)	Three-Way Signalized	Three-Way Left-Turn Lanes (EBL, WBL, NBL)	East/West
Night Heron Drive	Two-leg (northbound)	One-Way Stop	Right Turn Only	East/West
Laura Avenue	Three-leg (southbound)	One-Way Stop	Three-Way Left-Turn Lanes (EBL, WBL, SBL)	None
Sipes Avenue	Four-leg	Two-Way Stop	Four-Way Left-Turn Lanes (NBL, EBL, SBL, WBL)	East/West
Skyway Drive	Four-leg	Four-Way Signalized	Four-Way Left-Turn Lanes (NBL, EBL, SBL, WBL)	East/West
Red Cleveland Boulevard				
Marquette Avenue	Four-leg	Two-Way Stop	Four-Way Left-Turn Lanes (SBL, WBL, NBL)	None

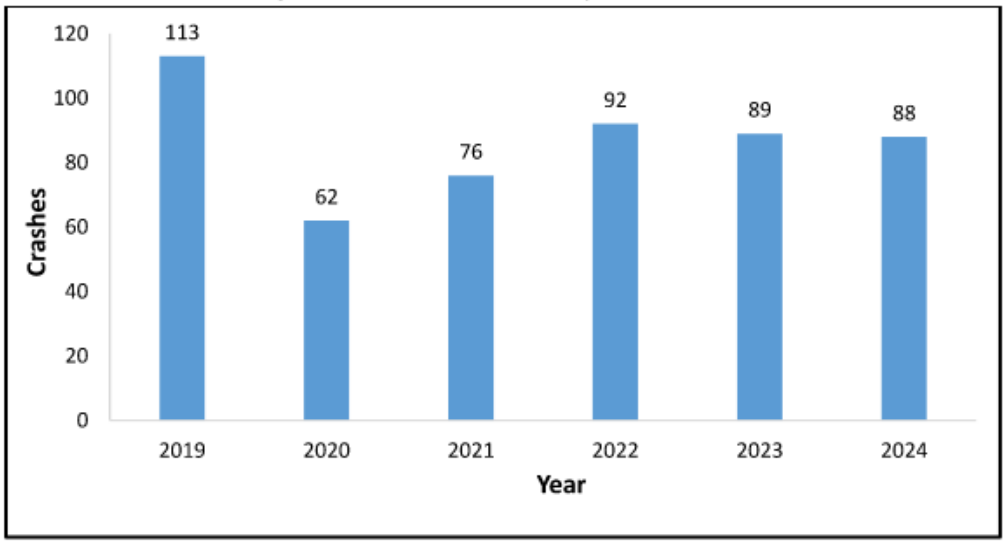
EBL =eastbound left NBL = northbound left SBL = southbound left WBL = westbound left

2.1.10 Crash Data

A traffic analysis was performed during this PD&E Study that documented the existing, opening, and design years. The analysis noted that the SR 417 mainline within the Area of Influence (AOI) operated at an acceptable level in the 2024 existing condition and that the interchange ramps had adequate capacity. However, field observations and the analysis showed long delays and queues during peak hours at the SR 417 and Ronald Reagan Boulevard (CR 427)/Lake Mary Boulevard interchange. The adjacent intersections on Lake Mary Boulevard at CR 427 and Sanford Avenue (CR 425) are also congested and impact the interchange operations.

Further, historical crash data analysis showed that there is a high concentration of rear end and angle crashes at the interchange and adjacent intersections, which are typical at locations with stop-and-go traffic conditions. The congestion and safety at the CR 427/Lake Mary Boulevard interchange and adjacent intersections is expected to worsen as traffic increases in the future.

Figure 2-3 Number of Crashes by Year on SR 417



Crash data for the SR 417 mainline within the study area were obtained from the Signal Four Analytics database for the period between 2019 and 2024. The data was reviewed for accuracy and updated where applicable. As shown in **Figure 2-3**, there was a decrease in the number of crashes on SR 417 from 2019 to 2020, followed by an increase from 2020 to 2022, and a slight decline in 2023 and 2024. The reduction in crashes from 2019 to 2020 can be attributed to COVID-19 pandemic impacts. In total, 520 crashes were reported on SR 417 within the study limits over the six-year period. On average, 87 crashes occurred per year between 2019 and 2024.

2.1.11 Existing Traffic Characteristics

To develop the 2024 existing Annual Average Daily Traffic (AADT) and peak hour volumes, an analysis was conducted using the raw daily hourly data collected for roadway segments and the 15-minute period data for intersections, to understand traffic patterns within the study limits. Since traffic patterns to/from SFB are unique, an initial analysis was conducted using the seven-day count at Red Cleveland Boulevard to identify peak days. The data showed that the peak travel days to SFB were Sunday, Monday, Thursday, and Friday. The Thursday and Friday volumes were generally higher and were used as the basis for calculating AADT at all roadway segment locations, to be conservative. For intersections, the peak hour volumes were calculated using data for the four highest consecutive 15-minute periods in the morning and evening at each count location. The Red Cleveland Boulevard count showed peak hours between 10:30 AM to 11:30 AM and 3:45 PM to 4:45 PM. The data for the other locations showed peak hours generally between 7:30 AM to 8:30 AM and 4:30 PM to 5:30 PM. Peak hour data at each location accounted for worst-case conditions at SFB and within the

study area. Seasonal and axle adjustment factors were applied to the data where applicable. The data were then aggregated and balanced to ensure continuity of flow and consistency. The final 2024 AADT for the SR 417 mainline, ramps, and arterial segments is provided in **Table 2-9**.

The data shows that the CR 427/Lake Mary Boulevard interchange ramps to/from south carry the highest daily traffic, while the ramps to/from north carry the lowest traffic within the study area. Along Lake Mary Boulevard, daily traffic volumes east and west of Red Cleveland Boulevard (which provides Airport access) are similar. The data also shows that daily traffic on Red Cleveland Boulevard is low.

Table 2-9 2024 Existing AADT for Roadway Segments

Location	SR 417	AADT
Airport Boulevard/US 17-92		9,300
		57,950
CR 427/Lake Mary Boulevard		8,350 18,500
Lake Jesup Mainline Toll Plaza		**68,100**
SR 434		9,250 12,700
		71,550

Arterials	
Lake Mary Boulevard - West of Red Cleveland Boulevard	25,400
Lake Mary Boulevard - East of Red Cleveland Boulevard	24,550
Lake Mary Boulevard - West of SR 417	19,100
Red Cleveland Boulevard - North of Lake Mary Boulevard	5,800
Airport Boulevard - East of Sanford Avenue	8,450
CR 427 - South of Lake Mary Boulevard	28,800
CR 427 - West of SR 417	25,800

2.1.11.1 Existing (2024) Traffic Counts

Traffic data collection for the project included daily hourly hose and Turn Movement Counts (TMC) for the locations listed in **Tables 2-10 and 2-11**, respectively. The counts were collected in accordance with the procedures from the FDOT 2021 Manual on Uniform Traffic Studies, Manual Number 750-020-007. The data was collected during the week of February 26th, 2024, a non-holiday week, under fair weather and dry pavement conditions. The TMC were collected for six hours between 6 AM and 9 AM, and 4 PM and 7 PM. Traffic volumes for SR 417 at the Lake Jesup mainline toll plaza and tolled ramps within the AOI were obtained from Florida's Turnpike Enterprise (FTE) transactions data for the same week the hose and TMC data were collected. The FTE's toll data locations are listed in **Table 2-12**. Supplemental traffic data was obtained from the FDOT Florida Traffic Online (FTO) database and the Seminole County traffic count program for verification purposes.

Table 2-10 Hose Count Locations

Hose Count Location	Count Period and Type
Red Cleveland Boulevard, north of Lake Mary Boulevard	7-Day Hose Directional Volume Count
Lake Mary Boulevard, west of Red Cleveland Boulevard	72-Hour Hose Directional Class Count
SR 417 Southbound Off-ramp to SR 434	72-Hour Hose Directional Volume Count
SR 417 Northbound On-ramp from SR 434	72-Hour Hose Directional Volume Count
SR 417 Southbound On-ramp from CR 427	72-Hour Hose Directional Volume Count
SR 417 Southbound On-ramp from Airport Boulevard/US 17-92	72-Hour Hose Directional Volume Count
SR 417 Northbound Off-ramp to Airport Boulevard/US 17-92	72-Hour Hose Directional Volume Count
CR 427/Ronald Reagan Boulevard, west of SR 417	72-Hour Hose Directional Volume Count
CR 427/Ronald Reagan Boulevard, east of SR 417	72-Hour Hose Directional Volume Count
CR 427/Ronald Reagan Boulevard, north of Lake Mary Boulevard	72-Hour Hose Directional Volume Count
Lake Mary Boulevard, west of SR 417	72-Hour Hose Directional Volume Count
Lake Mary Boulevard, east of SR 417	72-Hour Hose Directional Volume Count
Lake Mary Boulevard, east of Red Cleveland Boulevard	72-Hour Hose Directional Volume Count
Airport Boulevard, east of Sanford Avenue	72-Hour Hose Directional Volume Count

Table 2-11 Intersection Turn Movement Counts Locations

Intersection TMC – 6 Hours (6-9 AM and 4-7 PM)	Control Type
SR 417 Southbound Ramps at SR 434	Signalized
SR 417 Northbound Ramps at SR 434	Signalized
SR 417 Southbound Ramps/Frontage Road at CR 427/Ronald Reagan Boulevard	Signalized
SR 417 Northbound Ramps/Frontage Road at CR 427/Ronald Reagan Boulevard	Signalized
SR 417 Southbound Ramps/Frontage Road at Lake Mary Boulevard	Signalized
SR 417 Northbound Ramps/Frontage Road at Lake Mary Boulevard	Signalized
Lake Mary Boulevard at CR 427/Ronald Reagan Boulevard	Signalized
Lake Mary Boulevard at Sanford Avenue	Signalized
Lake Mary Boulevard at Mellonville Avenue	Signalized
Lake Mary Boulevard at Ohio Avenue	Signalized
Lake Mary Boulevard at Red Cleveland Boulevard	Signalized
Lake Mary Boulevard at Brisson Avenue	Signalized

Table 2-12 Florida's Turnpike Enterprise Toll Transactions Data Locations

Toll Transactions Data	Count Period
SR 417 at the Lake Jesup Mainline Toll Plaza	7 Days
SR 417 Southbound On-ramp from SR 434	7 Days
SR 417 Northbound Off-ramp to SR 434	7 Days
SR 417 Southbound Off-ramp to Lake Mary Boulevard	7 Days
SR 417 Northbound On-ramp from Lake Mary Boulevard	7 Days

Signal timing plans for signalized intersections were obtained from Seminole County and verified. Field observations and a desktop review of existing traffic conditions were conducted within the study area, and congestion within the SR 417 and CR 427/Lake Mary Boulevard interchange footprint was documented. The adjacent intersections on Lake Mary Boulevard at CR 427 and Sanford Avenue also operate unacceptably and impact operations at the interchange. During the morning commute, the congestion is mainly along Lake Mary Boulevard in the westbound direction approaching the interchange.

In the evening, the main congestion is at the SR 417 northbound off-ramp, where queues sporadically back up to the freeway mainline. Unacceptable operations primarily cause the

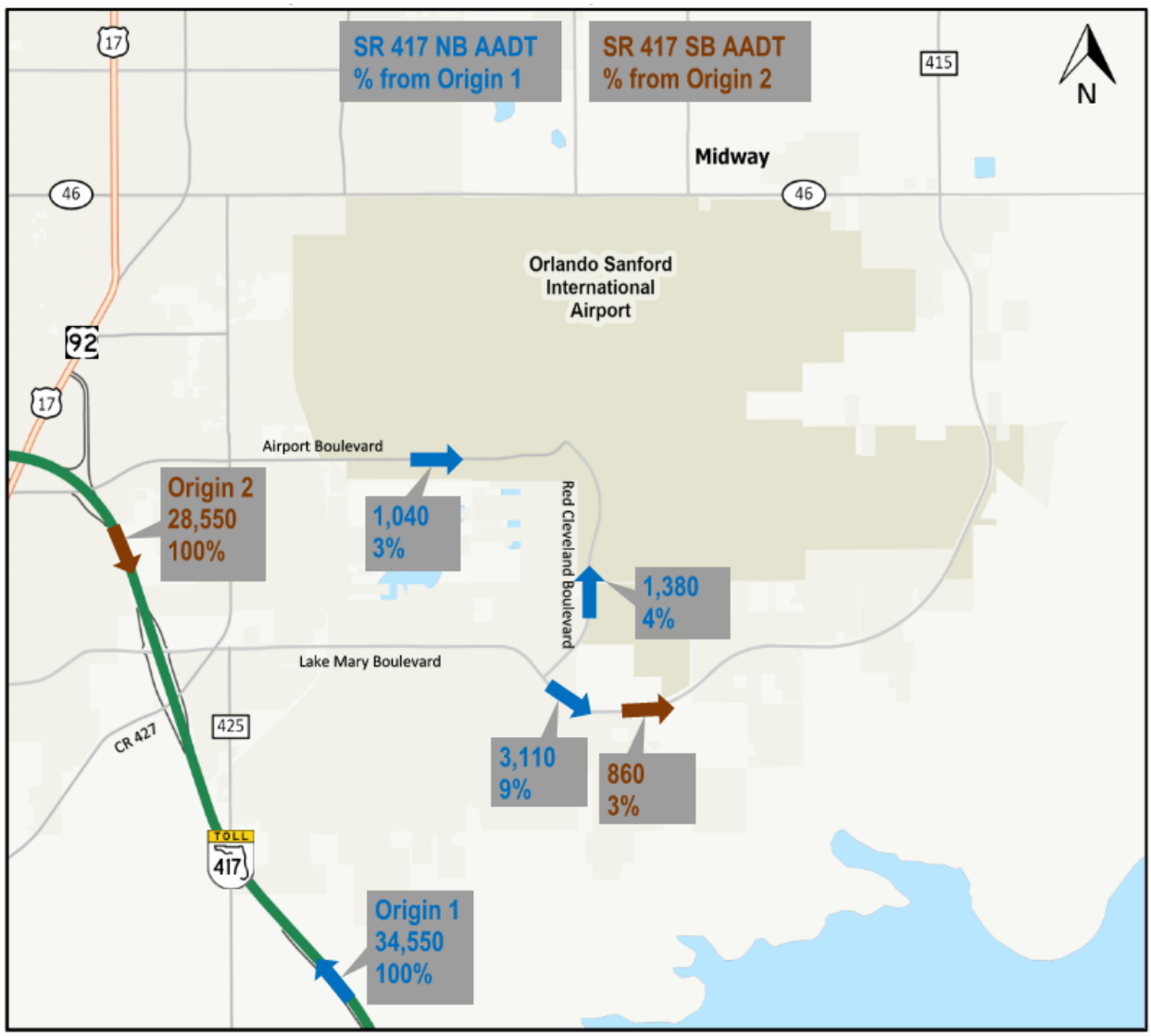
queues at the off-ramp and downstream intersections on Lake Mary Boulevard at CR 427 and Sanford Avenue.

2.1.11.2 2024 Annual Average Daily Traffic (AADT)

StreetLight data was used to identify travel patterns for trips originating from SR 417, both south and north of the CR 427/Lake Mary Boulevard interchange, to the SFB passenger terminal and Lake Mary Boulevard east of Red Cleveland Boulevard. The analysis aimed to estimate the amount of traffic that could be diverted to the proposed SR 417 connector. **Figure 2-4** illustrates the distribution of SR 417 northbound and southbound 2024 one-way AADT to the specified destinations. The SR 417 northbound data indicates that 1,040 (three percent) and 1,380 (four percent) daily trips access the SFB terminal via Airport Boulevard and Red Cleveland Boulevard, respectively. An estimated 3,110 trips (nine percent) continue on Lake Mary Boulevard east of Red Cleveland Boulevard. In total, 5,530 one-way (11,060 two-way) daily trips would be eligible to use the proposed SR 417 connector if it were in place by 2024. However, some of the eligible trips would not be diverted and would continue using Lake Mary Boulevard and Airport Boulevard as congestion decreases due to traffic shifts.

The StreetLight data did not indicate that any SR 417 southbound trips would access SFB via Red Cleveland Boulevard. There were 860 (three percent) daily trips from SR 417 southbound exiting at the Lake Mary Boulevard interchange and traveling east past Red Cleveland Boulevard. It is anticipated that most of the SR 417 southbound trips north of the Airport Boulevard/US 17-92 interchange would continue to use Airport Boulevard to access the SFB as the proposed Connector would be located approximately two and a half miles to the south and would be tolled.

Figure 2-4 SR 417 One-Way 2024 AADT Distribution



2.1.12 Existing Intelligent Transportation Systems Equipment

The Metroplan Orlando Intelligent Transportation Systems (ITS) Master Plan (May 2017) identifies fiber optic lines along East Lake Mary Boulevard managed by Seminole County. There are no Closed-Circuit Television Cameras (CCTV) or Dynamic Messaging Signs (DMS) identified in the study area that are managed by Seminole County. As noted in the Master Plan, CCTV coverage is provided predominantly by FDOT cameras installed on state facilities, and adaptive control systems employ both video detection and in-ground loops. Traffic signals are equipped for Transit Signal Priority (TSP) and use Infrared detection for emergency preemption functions. These systems may exist but are not managed by Seminole County.

The CFX ITS Master Plan (February 2022) details the existing ITS infrastructure along SR 417. This includes CCTV, DCS, and Traffic Management Stations (TMS). Additionally, CFX has installed an interconnected fiber optic backbone along both sides of SR 417.

2.1.13 Drainage and Hydrology

The existing drainage system within the study area is comprised of an open system where runoff ultimately drains to Lake Jesup. The study area drains primarily to two named waterways (Six Mile Creek and Phelps Creek/Navy Canal) and various channelized ditches which then discharge to Lake Jesup. As this area is highly developed, runoff generally flows from north to south, and drains into existing ponds, roadside ditches, and swales before discharging into Lake Jesup. Existing SMFs along the corridor include wet detention ponds, dry retention ponds, and linear swales.

Surface water runoff from Alignment 2A discharges within the Navy Canal (WBID 2982) basin, which is within the Middle St. Johns Watershed. The Navy Canal WBID is impaired for bacteria (fecal coliform).

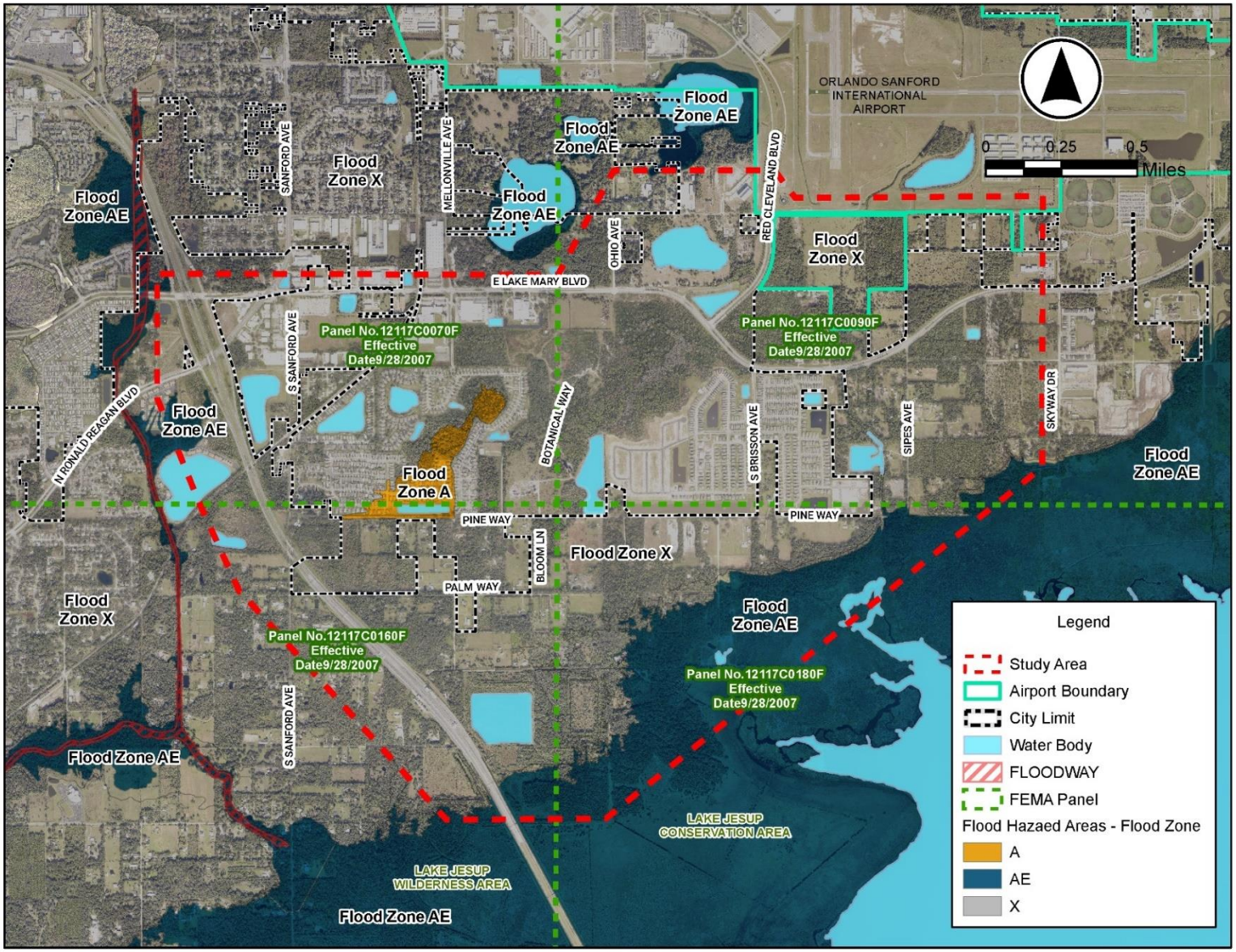
The entire project limits are located within the Lake Jesup BMAP which has an established Total Phosphorous (TP) loading target. There are no OFWs within the study area. The project is located within the jurisdiction of the SJRWMD.

2.1.14 Floodplains and Regulatory Floodways

The Federal Emergency Management Agency (FEMA) has determined the 100-year floodplain limits in the vicinity of the project limits in the form of Flood Insurance Rate Maps (FIRM). In **Figure 2-5**, the 100-year floodplain limits are presented from Seminole County and Incorporated Areas panels 12117C0070F, 12117C0090F, 12117C0160F and 12117C0180F effective 9/09/2007.

Within the study area, flood zones classified as Zone X, Zone A, and Zone AE are present. Along and adjacent to Alignment 2A, there are only areas of Zone X, which are areas of minimal flood hazard and are determined to be outside the 100-year floodplain. There are no regulated floodways within the study area.

Figure 2-5 FEMA Floodplain Areas



2.1.15 Geotechnical Investigation

The study area can exhibit artesian groundwater flow conditions that would affect deep excavations or drilled shafts for any proposed alignment. In addition, flowing wells used by farmers for irrigation are shown throughout the study area on the USGS quadrangle map mostly in the western portion of the area of interest.

The shallow soils are predominantly poorly drained fine to excessively well drained sands with varying silt content (AASHTO Soil Classifications A-3, A-2-4) to approximately 6.5 feet deep. However, several soils include sandy loam to sandy clay loam (AASHTO Soil Classifications A-2-6, A-4, A-6) from approximately 2.5 feet to 6.5 feet below ground surface.

Seasonal high groundwater level estimates for the majority of the soils are within 2 feet of the ground surface; several listed soils have up to 2 feet of standing water during the wet season. A few soil types (in the north-central portion of the study area) are reported with seasonal high groundwater ranging between 2 and 6 feet deep.

The sandy soils are generally suitable for roadway construction and are classified by FDOT as Select material. The clayey soils are classified by FDOT as Plastic materials. Plastic soils are not typically suitable for use as fill for embankment construction and excavation backfill because of the increased difficulty with handling, moisture conditioning, and compacting these soils.

2.1.16 Lighting

The existing lighting in the study area is limited. A recommendation from the East Lake Mary Boulevard Small Area Study suggested adding pedestrian-scale lighting along East Lake Mary Boulevard.

2.1.17 Utilities

The Utility Agency/Owners (UAOs) in the study area were determined using a variety of sources. First, a Sunshine 811 Design Ticket was made to identify the utility providers and operators registered with the locate service. All utilities were verified with the utility providers and operators during the coordination process for the project. A list of the UAOs identified on the project are summarized in **Table 2-13**. There is one at-grade CSX railroad crossing on East Lake Mary Boulevard within the study area located west of Mellonville Avenue.

Table 2-13 Existing Utilities

Company	Contact	Email Address	Phone #	Utilities in Corridor
AT&T Florida-Distribution	Kirby Spencer	ks2488@att.com	386-366-4588	Yes
Charter/Spectrum	Troy Pfeiffer	troy.pfeiffer@charter.com	910-409-5390	Yes
City of Sanford Public Works-Lighting	Jeff Davis	JEFF.DAVIS@Sanfordfl.gov	Unknown	No
City of Sanford-Utilities Dept-Water/Sewer/Reclaimed	Donovan Tucker	donovan.tucker@sanfordfl.gov	407-271-2174	Yes
Florida Power & Light-Distribution	Christopher Buonanni	Christopher.buonanni@fpl.com	407-328-1911	Yes
Florida Public Utilities Gas	Emily Ahn	EAhn@chpk.com	352-636-7056	Yes
Florida's Turnpike North-Traffic Eng. and Maint.-FTE Fiber (Not a UAO)	Kevin McCaffrey	Unknown	863-399-0501	No Response
Seminole County-Traffic Eng. (Not a UAO)	Charles Wetzel	cwetzel@seminolecountyfl.gov	407-665-5686	Yes
Seminole County Utilities Eng. Div.	James Van Alstine	jvanalstine@seminolecountyfl.gov	407-665-2014	No Response
Uniti Fiber	James Mosley	James.Mosley@uniti.com	251-654-8216	No
Zayo	Kate Peters	ZayoFLRelocations@zayo.com	815-274-7274	No

2.1.18 Existing Pavement Conditions

A Pavement Survey and Evaluation Report was completed for SR 417 as part of the pavement design package for the resurfacing project (FPID: 440292-1-52-01). The evaluation found that the pavement conditions along SR 417 mainline in the study area ranged from poor to good based on visual observation (Tierra 2018), with visible cracking observed. Based on Google Earth and field reviews, pavement conditions along East Lake Mary Boulevard, CR 425/South Sanford Avenue and Red Cleveland Boulevard are good.

2.2 Existing Bridges

2.2.1 Overview

There are ten existing bridges and one bridge culvert within the project study area. Bridge No.'s 770043 and 770044 carry southbound and northbound SR 417 over CR 425/South Sanford Avenue, Bridge No.'s 770047 and 770048 carry SR 417 southbound and northbound over East Lake Mary Boulevard, Bridge No.'s 770045 and 770046 carry SR 417 southbound and northbound over CR 427/North Ronald Reagan Boulevard, and Bridge No.'s 770042 and 770941 carry SR 417 southbound and northbound over the CSX railroad.

2.2.2 Current Condition and Year of Construction

While the bridge inspection reports were not readily available, FDOT Florida Bridge Information did not note any structural deficiencies or that they were functionally obsolete. The Sufficiency Rating and Health Index of all the bridges identified were greater than 90%.

A bridge concrete box culvert was identified on East Lake Mary Boulevard. The culvert is located approximately 200 feet east of Laura Avenue and conveys water along the Naval Canal/Phelps Creek. A bridge number was not found on the structure, and no records of the bridge culvert are documented in the FDOT Florida Bridge Information data. However, the bridge culvert is identified in the East Lake Mary Boulevard Construction Plans from September 2002 (Seminole County Public Works Department PS-0137) as X-4. The bridge culvert is a triple barrel culvert that spans 33.75 feet and is 6 feet high. According to the construction plans, the length of the bridge box culvert is approximately 130 feet.

2.3 Existing Environmental Characteristics

2.3.1 Land Use

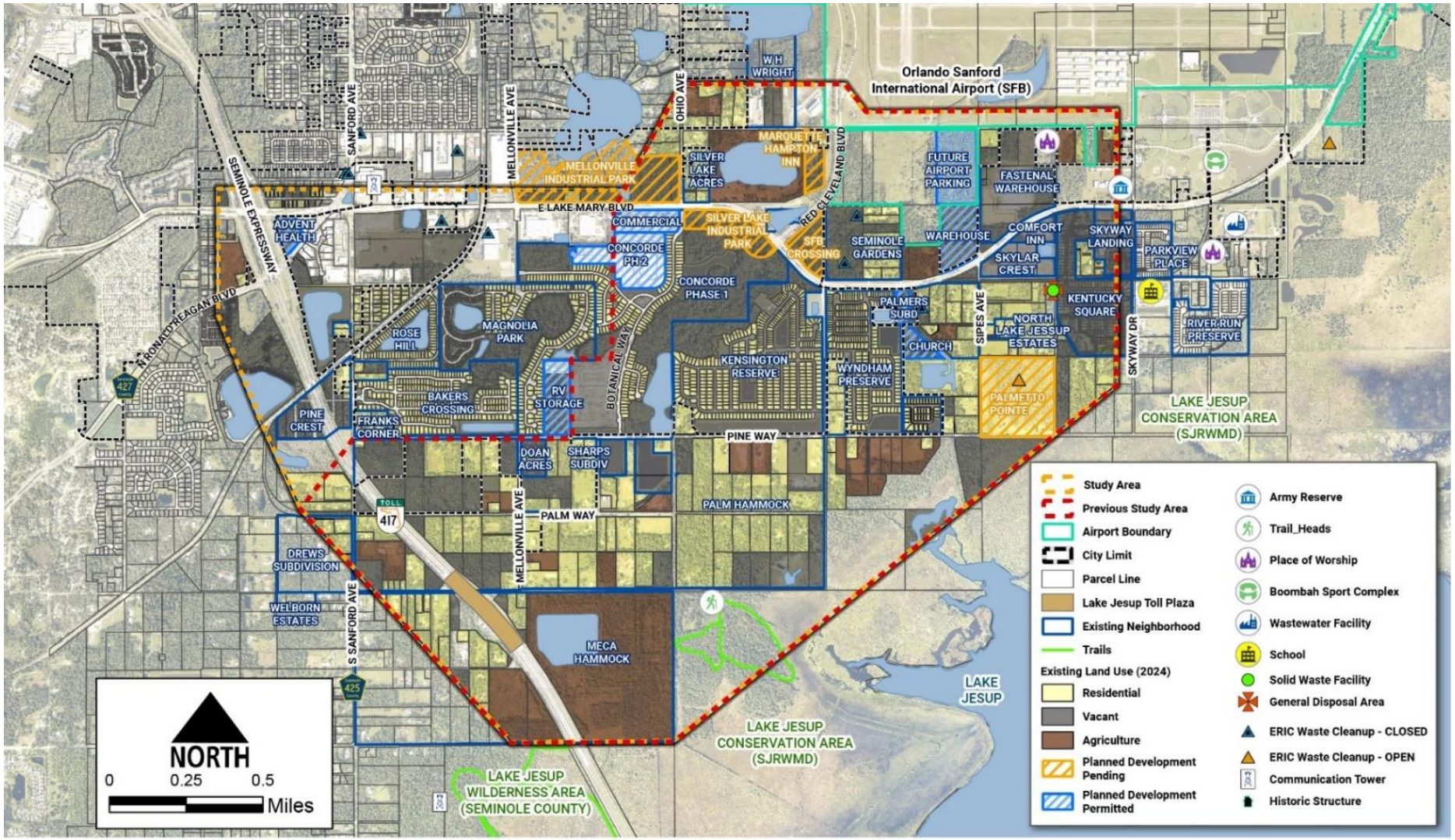
Existing generalized land uses within the project study area mainly consist of residential (37.9%), vacant residential (16.66%), public/semi-public (10.69%), agricultural (10.44%), and vacant nonresidential (5.82%), with remaining land uses made up of small percentages of other types.

The Seminole County Future Land Use Map identifies the following dominant land uses within the study area: Suburban Estates (SE), Preservation/Managed Lands (PML), and Low Density Residential (LDR).

The northeast portion of the study area near the Orlando Sanford International Airport is under the jurisdiction of the City of Sanford. Future land uses designated by the City of Sanford within the project area include: Low Density Residential (LDR), Suburban Estates (SE), Resource Protection (RP), and General Commercial (GC).

The following developments are under construction or have been approved by the City of Sanford for future construction within the project study area: Sylvestri Estates (Concorde Phase 2), Park View Place Phase 3 (Skyway Townhomes), Comfort Inn, and Skylar Crest. Existing land uses, neighborhoods, and planned developments are shown on **Figure 2-6**.

Figure 2-6 Existing Land Use and Developments



2.3.2 Cultural Features and Community Services

2.3.2.1 Cultural Resources

A Cultural Resource Assessment Survey (CRAS) (June 2025), conducted in accordance with 36 CFR Part 800, was performed for the project. Background research revealed that no historic resources were previously recorded within the Area of Potential Effect (APE). As a result of the historic/architectural field survey, six historic resources (8SE03401, 8SE03403, 8SE03404, 8SE03405, 8SE03406, and 8SE03407) were newly identified, recorded, and evaluated within the APE. Identified resources are shown on **Figure 2-7**. These include one linear resource, the Palm Hammock Allotment Drainage System (8SE03401), four Frame Vernacular style buildings (8SE03403, 8SE03404, 8SE03405, and 8SE03407), and one mobile home with no style (8SE03406), constructed between ca. 1910 and ca. 1972. Overall, the newly identified buildings have been altered, lack sufficient architectural features, and are not significant embodiments of a type, period, or method of construction.

Background research did not reveal any historic associations with significant persons and/or events. In addition, the newly identified linear resource is a common example of drainage systems found throughout Florida without unique design or engineering features and background research did not reveal any historic associations with significant persons and/or events. As such, the segments within the APE do not appear eligible for listing in the NRHP, either individually or as a part of a historic district; however, there is insufficient information to evaluate NRHP eligibility for the resource as a whole as the drainage system extends outside of the APE.

Archaeological background research, including a review of the Florida Master Site File (FMSF) and the NRHP digital databases, indicated that no previously recorded archaeological sites are within the APE, but one site has been recorded within one mile. The Cardinal Site (8SE01769) is a campsite dating to the St. Johns period (700 BCE-1500 CE) that was determined ineligible for listing in the NRHP by the State Historic Preservation Officer (SHPO). A review of relevant site locational information for environmentally similar areas within Seminole County and the surrounding area indicated a variable probability for pre-Contact and historic archaeological sites within the APE. Background research also indicated that sites, if present, would most likely be small lithic/artifact scatters, or possibly sites associated with the naval stores or timber industries during the early 20th century. As a result of the field survey, which included surface reconnaissance and the excavation of 35 shovel tests, no archaeological sites were discovered. Of the 35 shovel test excavated, two were completed by Janus Research in 2006, 12 by ACI in 2020, and 21 by ACI in 2025.

Figure 2-7 Location of Historic Resources within the APE

2.3.2.2 Population

The Environmental Screening Tool (EST) Sociocultural Data Report (SDR) was used for demographic data (the SDR can be found within the Community Coordination section of the EST). The SDR uses the Census 2018-2022, American Community Survey (ACS) data and reflects the approximation of the population based on the project study area intersecting the Census Block Groups along the project corridor.

The SDR identified the population within the project study area as 58.8% minority population. This is higher than the 42.94% identified in Seminole County. Population age 65 and over is 9.98% of the study area, and 3.88% of the population is below the poverty level. Additionally, 8.17% of the population 20 to 64 years of age have a disability. Among households in the study area that are limited English speaking, eight speak Spanish, four speak Indo-European, and 18 speak Asian and Pacific Island languages.

2.3.2.3 Planned Developments

The following developments are under construction or have been approved by the City of Sanford for future construction within the project study area: Sylvestri Estates (Concorde Phase 2), Park View Place Phase 3 (Skyway Townhomes), Comfort Inn, and Skylar Crest. Existing land uses, neighborhoods, and planned developments are shown above on **Figure 2-6**.

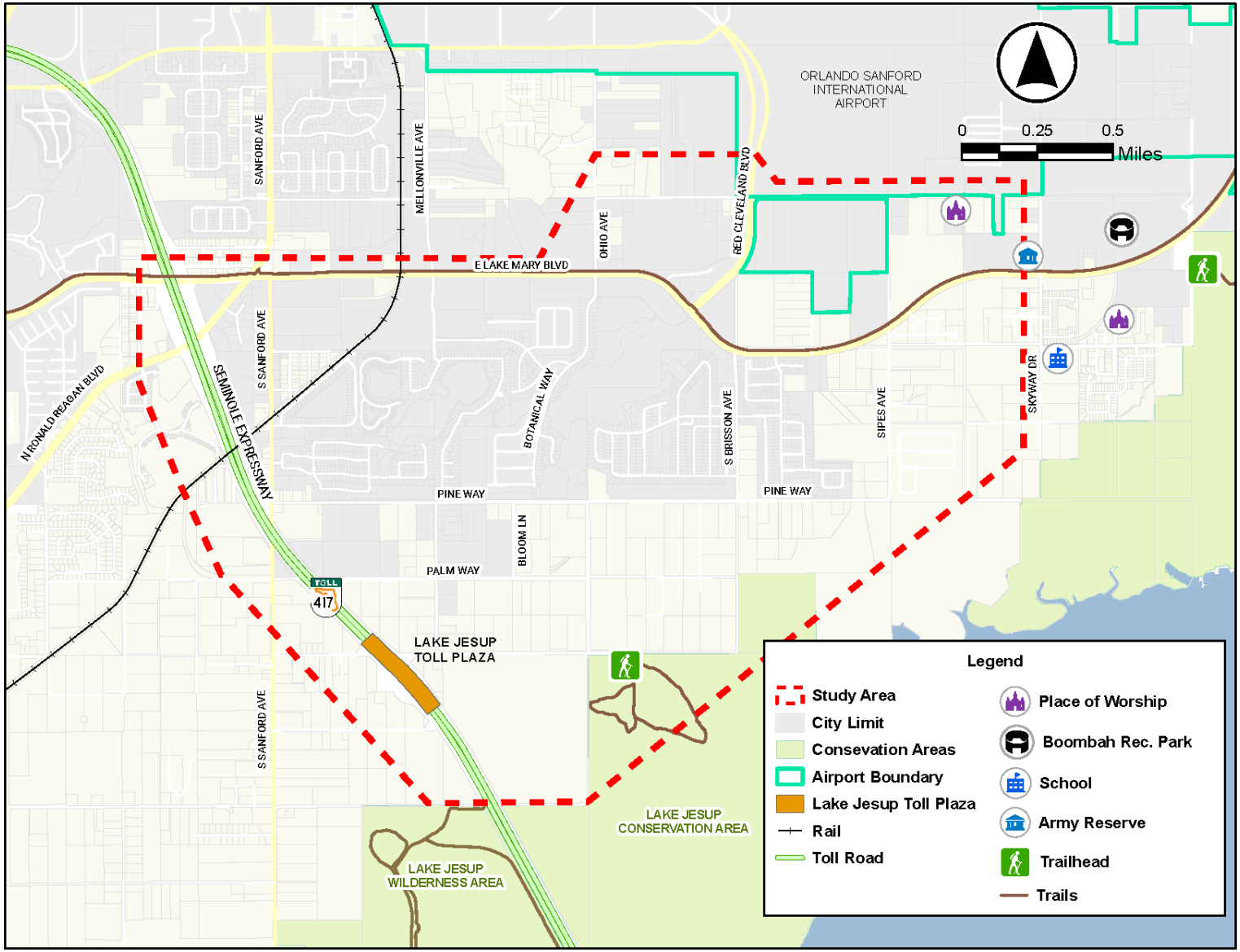
2.3.2.4 Community Facilities

Community focal points are public or private locations or organizations important to local residents and communities. Community focal points include schools, places of worship, community centers, civic centers, cultural centers, parks, cemeteries, fire stations, law enforcement facilities, government buildings, healthcare facilities, hospitals, daycares, and social service facilities.

Within the project study area there is one place of worship, Iglesia Cristiana Bethel. Just outside of the project study boundary is one recreation center (Boombah Recreation Park), one school (Galileo School for Gifted Learning), and the Sanford Army Reserve Center.

There are two existing recreational trails, the Lake Jesup Conservation Area Trail and the Lake Mary Boulevard Trail, within the project study area. The Lake Jesup Conservation Area is designated as a Florida Natural Areas Inventory (FNAI) state managed conservation land. Local Florida parks and recreational facilities located within the study area include the Lake Jesup Park and Wilderness Area, and the Marl Bed Flats Tract Trailhead. **Figure 2-8** identifies the existing community facilities.

Figure 2-8 Existing Community Facilities

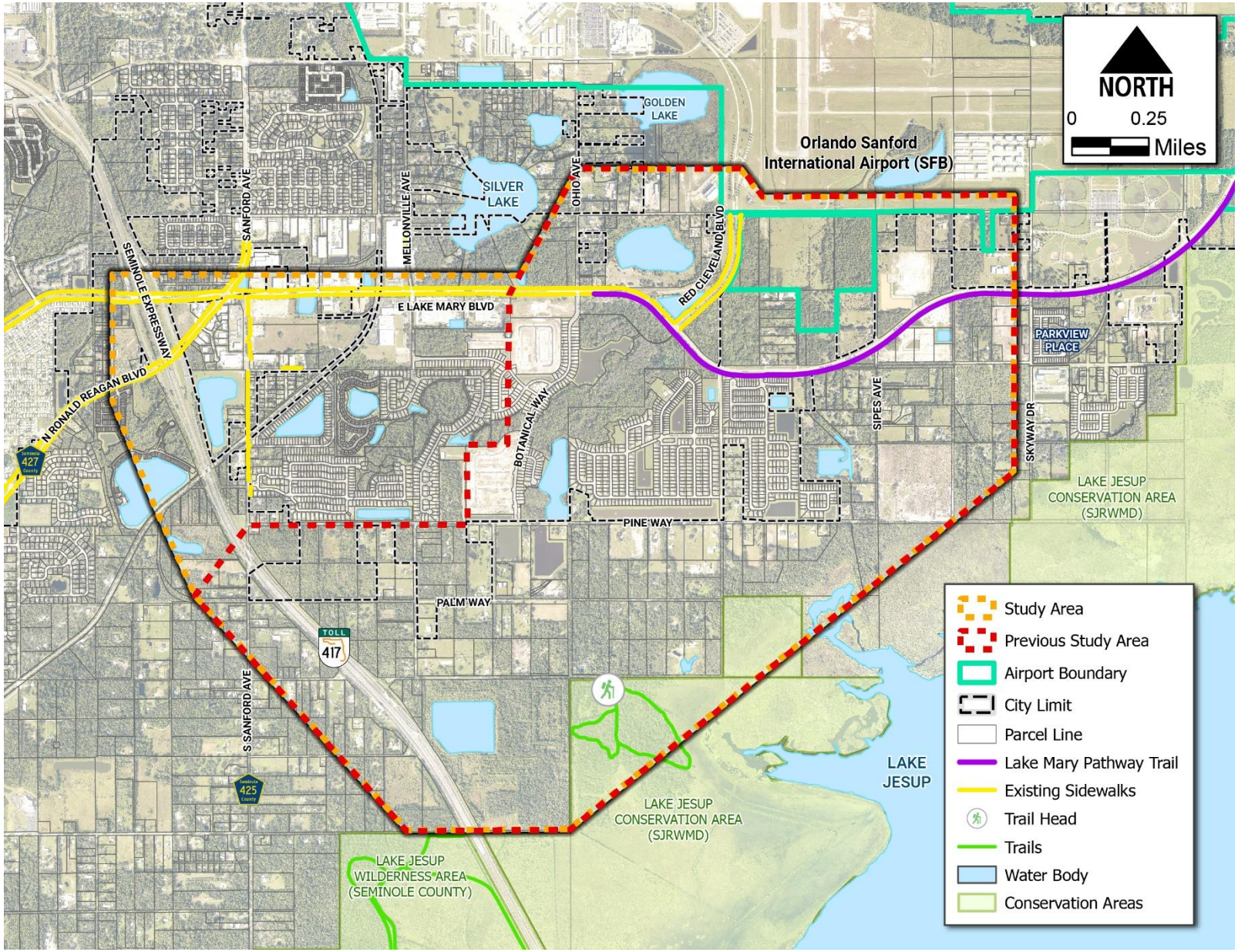


2.3.2.5 Pedestrians and Bicyclists

Within the study area, contiguous 5-foot-wide sidewalks are present on both the north and south sides of East Lake Mary Boulevard. However, just east of Ohio Avenue, the sidewalk on the south side of East Lake Mary Boulevard transitions to the 8-foot-wide multi-use Lake Mary Pathway trail. Sidewalks are also present along many of the cross streets that intersect with East Lake Mary Boulevard.

In addition, the Marl Beds Flat Trailhead and Trail is located within the Lake Jesup Conservation Area in the southern portion of the study area, at the eastern terminus of Oak Way. The trail entrance contains undesignated parking for vehicles and is accessible only by Oak Way. The trail is open to the public Monday through Sunday from 6 a.m. to 8 p.m. Existing pedestrian and bicycle facilities are shown on **Figure 2-9.**

Figure 2-9 Existing Pedestrian and Bicycle Facilities



2.3.2.7 Transit

The Sanford Orlando International Airport is located adjacent to the project study limits. There are no public transit facilities (Lynx, SunRail, etc.) located within the study area.

2.3.3 Natural Environment

2.3.3.1 Wetlands & Other Surface Waters

A Natural Resources Evaluation (NRE) was prepared (June 2025) as part of this PD&E Study. The wetland evaluation included GIS analysis, agency database search, and a field review. Ecologists familiar with Florida's natural plant communities performed an assessment of the study area to identify wetland vegetation, wetland hydrology, and hydric indicators to determine the presence of wetlands and other surface waters within the study area. A formal wetland delineation to determine jurisdictional boundaries was not performed; however, the general limits of wetlands and other surface waters were identified in the field using the criteria established in Rule 62-340, F.A.C. The wetland limits have not been reviewed by the regulatory agencies. Wetlands and other surface waters were classified per the FLUCFCS (FDOT 1999), and the classification of Wetlands and Deepwater Habitats of the US (NWI) (Cowardin et al. 1979). The Uniform Mitigation Method (UMAM) was utilized, per Chapter 62-345, F.A.C, for the functional assessment of wetlands within the study area.

Additional information regarding wetlands and other surface waters can be found in the NRE under separate cover.

2.3.3.2 Listed Species

An NRE Report (June 2025) was prepared for this study. Ecologists used online resources and field surveys to determine whether protected species occur or have the potential to occur in the study area. According to the information obtained during the preliminary data collection, twenty-eight protected species have the potential to occur. Potentially occurring state and federally listed species or listed species that were observed during the field investigation are also shown in **Figure 2-10**.

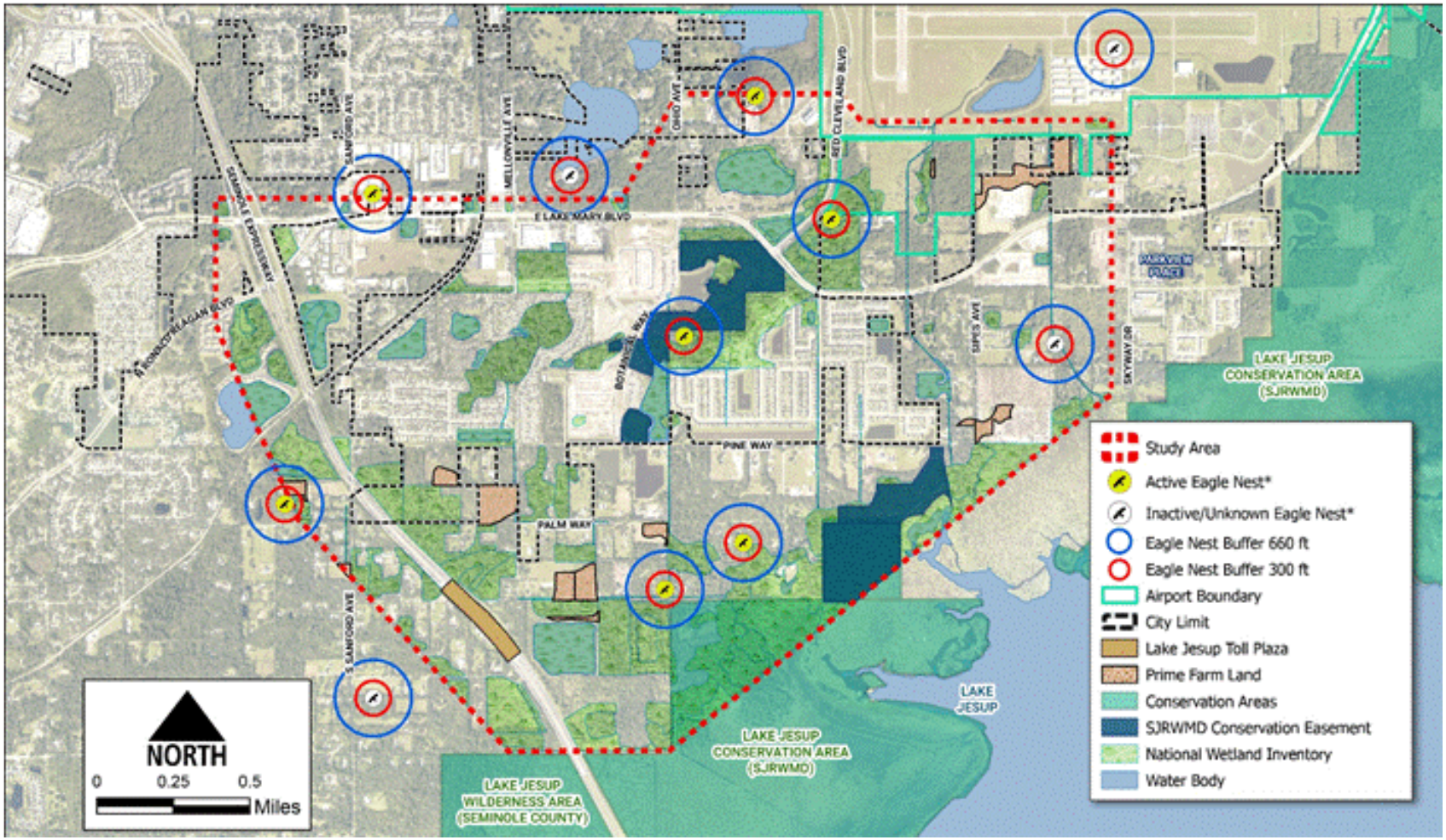
There are six fauna and two flora species listed as federally endangered or threatened, with the potential to occur within the project area. The project area is within the USFWS's designated consultation area for the Florida scrub jay (*Aphelocoma coerulescens*), Audubon's crested caracara (*Caracara plancus audubonii*), eastern black rail (*Laterallus jamaicensis jamaicensis*), Everglade snail kite (*Rostrhamus sociabilis*), pygmy fringe tree (*Chionanthus pygmaeus*), and Okeechobee gourd (*Cucurbita okeechobeensis* ssp.). The Florida Fish and Wildlife Conservation Commission (FWC) lists eight fauna and ten flora species as state endangered or threatened, with the potential to occur within the project area.

Suitable nesting and foraging habitat for the bald eagle was observed within the project study area. Several adult bald eagles were observed flying, as well as one pair flying into a pine tree and perching next to a nest (Nest SE078a) during the field review of the study area. According to FWC's Eagle Nest Locator and the Audubon Florida Eagle Watch Nest website (EagleWatch), there are two recorded active eagle nests (SE078a and SE026) and one destroyed eagle nest (SE078). For projects or activities within 660 ft of a bald eagle's nest, a USFWS eagle take permit may be necessary. Consultation regarding the bald eagle will occur during the design phase.

The Preferred Alternative is not anticipated to impact the Florida black bear. These two species or groups of animals, which may occur in the project vicinity, are not listed as threatened or endangered but receive other legal protection.

Additional information regarding listed species can be found in the NRE under separate cover.

Figure 2-10 Existing Natural Constraints



2.3.3.2 Water Resources

The project study area is within the Lake Jesup Basin, which is in the Middle St. Johns River Basin and within the jurisdiction of the St. Johns River Water Management District (SJWMD). The Lake Jesup Basin discharges into Lake Jesup, which ultimately outfalls to the north into the St. Johns River. The entire project study area is located within the Surficial Aquifer System of Florida.

Surface water runoff from this project discharges within five WBID basins which ultimately discharges to the St. Johns River. The WBIDs are Lake Jesup Drain (WBID 2981B1), Lake Jesup Drain (WBID 2981C), Phelps Creek/Navy Canal (WBID 2982), Six Mile Creek (WBID 2984) and a small portion of Chub Creek (2985). Three waterbodies are verified impaired: Phelps Creek/Navy Creek (WBID 2982), Chub Creek (WBID 2984) and Six Mile Creek (WBID 2984). Lake Jesup (WBID 2981) has been delisted from the impaired waterbodies list, however, all the project WBIDs are on the Waters Not Attaining Standards Study List except Lake Jesup Drain (WBID 2981C). **Table 2-14** presents a summary of the WBID water quality for the watersheds to which the project basins will discharge.

The entire project limits are located within the Lake Jesup Basin Management Action Plan (BMAP) which has established Total Maximum Daily Loads (TMDLs) for specific pollutants (such as nitrogen and phosphorous). The project is located within the jurisdiction of the SJRWMD and is within the Middle St. Johns Watershed. There are no Outstanding Florida Waters or Outstanding Florida Springs within the project study area.

Table 2-14 WBID Water Quality Summary

Basin	WBID	Group Name	BMAP	TMDL	Waters Not Attaining Standards	
					Verified Impaired[(1)]	Study List[(2)]
Lake Jesup Drain	2981B1	Middle St. Johns	Lake Jesup	--	--	DO
Lake Jesup Drain	2981C			--	--	--
Phelps Creek / Navy Canal	2982			--	FC	FC
Six Mile Creek	2984			--	FC	FC
Chub Creek	2985			--	FC & DO	FC, DO, TN & TP
Lake Jesup	2981			TN & TP	--	TN & TP

Water Quality Parameters:
FC – Fecal Coliform/ Bacteria; DO – Dissolved Oxygen; TN – Total Nitrogen: TP- Total Phosphorous
Notes: (1) Impaired waterbodies per FDEP Comprehensive Verified List (November 2022) (2) Other waters not attaining standards per FDEP Comprehensive Study List (November 2022

2.3.4 Physical Environment

2.3.4.1 Air Quality

The proposed project is located in Seminole County, which is currently designated as being in attainment for the following Clean Air Act National Ambient Air Quality Standards (NAAQS): ozone, nitrogen dioxide, particulate matter (2.5 microns in size and 10 microns in size), sulfur dioxide, carbon monoxide (CO), and lead. Because the county is in attainment, the Clean Act conformity requirements do not apply to the project.

2.3.4.2 Noise

The project study area is a rapidly growing high development section of Seminole County. Most noise sensitive land uses within the study corridor fall under NAC-B - Residential. The NAC-C land uses within the study corridor includes neighborhood recreation facilities. There are no NAC-E land uses within the study corridor. This project does not require analysis of NAC-A land uses. An analysis of interior noise levels (NAC-D) is not warranted as all NAC-C locations have areas of exterior use. A permit search was conducted on April 29, 2025, to identify any active building permits for noise sensitive land uses. The only area with active residential building permits is in the Concorde subdivision. These permitted homesites were included in the noise analysis.

Additional information regarding noise impacts can be found in the Noise Study Report (NSR) (June 2025) under separate cover.

2.3.4.3 Contamination

Data provided by FDEP, USGS, and the NRCS was evaluated to determine potential contamination site impacts. Within the project study area, there are eleven hazardous waste facilities, three petroleum contamination monitoring sites, six storage tank contamination monitoring, and four super act risk sources. There are also forty-nine USEPA National Pollutant Discharge Elimination System (NPDES) locations and one Brownfield location. The following four solid waste facilities are located within the project study area: Brisson Road Dump, Kentucky Avenue Dump, Marquette Shores Borrow Pit, and the Sunland Park debris and staging area. Additional concerns include a historical railroad alignment and historical agricultural land uses (citrus groves and row crops).

The contamination potential risk rating system was developed by FOOT and is included in Part 2, Chapter 20 of the PD&E Manual, dated July 31, 2024. The rating system incorporates four levels of risk:

1. No - A review of available information on the property and a review of the conceptual or design plans indicates there is no potential contamination impact to the project. It is possible that contaminants have been handled on the property. However, findings from the Level I evaluation indicate that contamination impacts are not expected.

2. Low - A review of available information indicates that past or current activities on the property have an ongoing contamination issue; the site has a hazardous waste generator identification (ID) number, or the site stores, handles, or manufactures hazardous materials. However, based on the review of conceptual or design plans and/or findings from the Level I evaluation, it is not likely that there would be any contamination impacts to the project.

3. Medium - After a review of conceptual or design plans and findings from a Level I evaluation, a potential contamination impact to the project has been identified. If there is insufficient information (such as regulatory records or site historical documents) to make a determination as to the potential for contamination impact, and there is reasonable suspicion that contamination may exist, the property should be rated at least as a "Medium." Properties used historically as gasoline stations and which have not been evaluated or assessed by regulatory agencies, sites with abandoned in place underground petroleum storage tanks or currently operating gasoline stations should receive this rating.

4. High - After a review of all available information and conceptual or design plans, there is appropriate analytical data that shows contamination will substantially impact construction activities, have implications to ROW acquisition or have other potential transfer of contamination related liability to the FDOT.

Of the sites identified, fourteen are ranked as Low, twelve are ranked as Medium, and one site is ranked as High. Details on each site are provided in **Table 2-15.**

Additional information can be found in the Contamination Screening Evaluation Report (CSER) (June 2025) under separate cover.

Table 2-15 Potential Contamination Site Summary

Site No.	Facility Name and Address	Facility ID	Concerns	Risk Rating
1	Seminole County Main Expressway Plaza 875 Oakway	9400810	This site maintains a 500-gallon aboveground emergency generator diesel tank. No complaints, violations, or discharges have been recorded at this site.	Low
2	Acousticfab Inc 110 Keyes Avenue	FLR000098988	This site is registered as a conditionally exempt small quantity hazardous waste generator. A May 2003 inspection did not find any violations.	Low
3	Kemco Industries Inc 70 Keyes Avenue	FLD984262741	This site is a former very small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site.	Low

Site No.	Facility Name and Address	Facility ID	Concerns	Risk Rating
4	Barry Wehmiller 3795 South Sanford Avenue	FLD984179804	This site is a former small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site.	Low
5	7-Eleven Food Store #32766 7500 CR 427	9801629	This site is an active gas station. A discharge was reported in August 2006 and received a Site Rehabilitation Completion Order in March 2008.	Medium
6	Kangaroo Express Inc #1226 7499 CR 427	8732155; FLD984199935	This site is an active gas station. A discharge was recorded at this site in January 1992 and received a No Further Action status in December 1993. This site is also a conditionally exempt small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site regarding hazardous waste.	Medium
7	Ryder Truck Rental #070 3651 South Sanford Avenue	8516718; FLD134224161	A Site Rehabilitation Completion Order was rescinded in January 2022 due to groundwater and soil petroleum exceedances found in April 2021. No further remediation activities have occurred. This site is also a conditionally exempt small quantity hazardous waste generator and was in compliance in November 2011.	Medium
8	Cardinal Industries 3701 South Sandford Avenue	8732703; FLD122417009	This site has ongoing remediation activities for groundwater exceedances located about 3 feet to 15 feet below ground surface and 40 feet south of South Sanford Avenue. This site is also a former small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site regarding hazardous waste.	Medium
9	Cobia Boat Co Silver Lake Road (East Lake Mary Boulevard)	FLD067859231	A complaint was filed at this former small quantity hazardous waste generator in July 1983, and the site returned to compliance in April 1987.	Low
10	American Bronze Foundry 1650 East Lake Mary Boulevard	FLR000096628	A complaint regarding dumping was reported at this site in October 2002 and the site returned to compliance in June 2005.	Low

Site No.	Facility Name and Address	Facility ID	Concerns	Risk Rating
11	RL Best; 1775 East Lake Mary Boulevard Brownfield Site and Area	BF591601000; BF591601001; ERIC_11194; FLR000017285	This Brownfield Site received a Site Rehabilitation Completion Order in November 2019. Aluminum-impacted groundwater extends north, under East Lake Mary Boulevard and could impact potential dewatering in this area. This site is also a former conditionally exempt small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site regarding hazardous waste.	Medium
12	Cobia Boat Co; Aronow Powerboats Inc 500 Silver Lake Drive (East Lake Mary Boulevard)	8631279; FLD984182964	Two 2,000-gallon underground storage tanks were removed from this site in February 1991. Contaminated soil was removed, and no groundwater impacts were found. This site is also a former small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site.	Low
13	Datamax Corporation 1770 East Lake Mary Boulevard	FLD984234542	This site is a former small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site.	Low
14	Ultra Brake 501 Silver Lake Drive (East Lake Mary Boulevard)	FL0000871798	This site is a former small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site.	Low
15	Quality Automotive Co 1875 East Lake Mary Boulevard	FLR000060707	This site is a former conditionally exempt small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded at this site.	Low
16	Andrew's Pit Andrews Road	8840660	This site formerly maintained a 500-gallon aboveground diesel tank. A July 1986 Preliminary Contamination Survey for **Site No. 17** reported low levels of carbon disulfide in the groundwater at this site.	Medium
17	Rush Hampton Part A-1985; Emerson Electric Co 1201 Silver Lake Drive (East Lake	ERIC_5813; FLD982088924	A July 1986 Preliminary Contamination Survey reports contamination impacts at **Site No. 16**, and did not find any impacts at this site. This site is also a former small quantity hazardous waste generator. No complaints, violations, or discharges have been recorded	Low

Site No.	Facility Name and Address	Facility ID	Concerns	Risk Rating
	Mary Boulevard)		at this site.	
18	Invacare Corp 2101 East Lake Mary Boulevard	FLD981466972	A complaint was filed at this former small quantity hazardous waste generator in July 1997 regarding a leaking chemical tank, and a follow up inspection did not find any violations or spills.	Low
19	Montfort Food Distribution Co 2301 East Lake Mary Boulevard	8838745	Two 10,000-gallon underground storage tanks were removed in October 1998. No soil or groundwater contamination impacts were found upon their removal.	Low
20	Marquette Shores Borrow Pit C&D Marquette Avenue and Ohio Avenue	27164	This site was a construction demolition debris disposal site, that received a No Further Action status. Debris may remain on-site.	Medium
21	Sanford Airport FUDS Site	FL49799F467500	This site is a former Naval Air Station with the potential for soil and groundwater impacts.	Medium
22	Brisson Road/Avenue Landfill/Dump 2861 East Lake Mary Boulevard	ERIC_8881; ERIC_5591; ERIC_5562; 83721	This site is an abandoned landfill. An April 2015 Supplemental Site Assessment Report found high methane soil exceedances, metal groundwater exceedances, and remaining solid waste debris on-site. An October 2015 Addendum recommends a No Further Action for the groundwater due to low levels of exceedances. Landfill debris remains on-site. Additional areas of contamination impacts could exist.	High
23	Kentucky Avenue Dump Kentucky Avenue	87854	This site is a former landfill and received a No Further Action status in July 2001 due to low groundwater contaminants. Debris remains on-site. Additional areas of contamination impacts could exist.	Medium
24	Kentucky Square Kentucky Street at Skyway Drive	ERIC_11200	Arsenic groundwater exceedances exist in the groundwater at the site, and are stable and below Natural Attenuation Default Concentrations.	Medium
	Historical Citrus		Typical concerns associated with citrus groves and row crops include pesticide/herbicide storage and usage, grove heating during cooler winter months (smudge pots and other grove heating equipment), tractor and	

Site No.	Facility Name and Address	Facility ID	Concerns	Risk Rating
25	Groves and Row Crops	N/A	equipment maintenance and fueling, underground and aboveground fuel storage tanks, irrigation pumps and maintenance, and asbestos irrigation lines.	Medium
26	Historical Railroad	N/A	Historical railroads have the potential for residual arsenic, creosote, polynuclear hydrocarbon, and pesticide and herbicide impacts.	Medium
27	Sunland Park Debris Staging Area 180 Collins Drive	98048	This is an inactive disaster debris management area with no recorded contamination impacts.	Low

3. Future Conditions

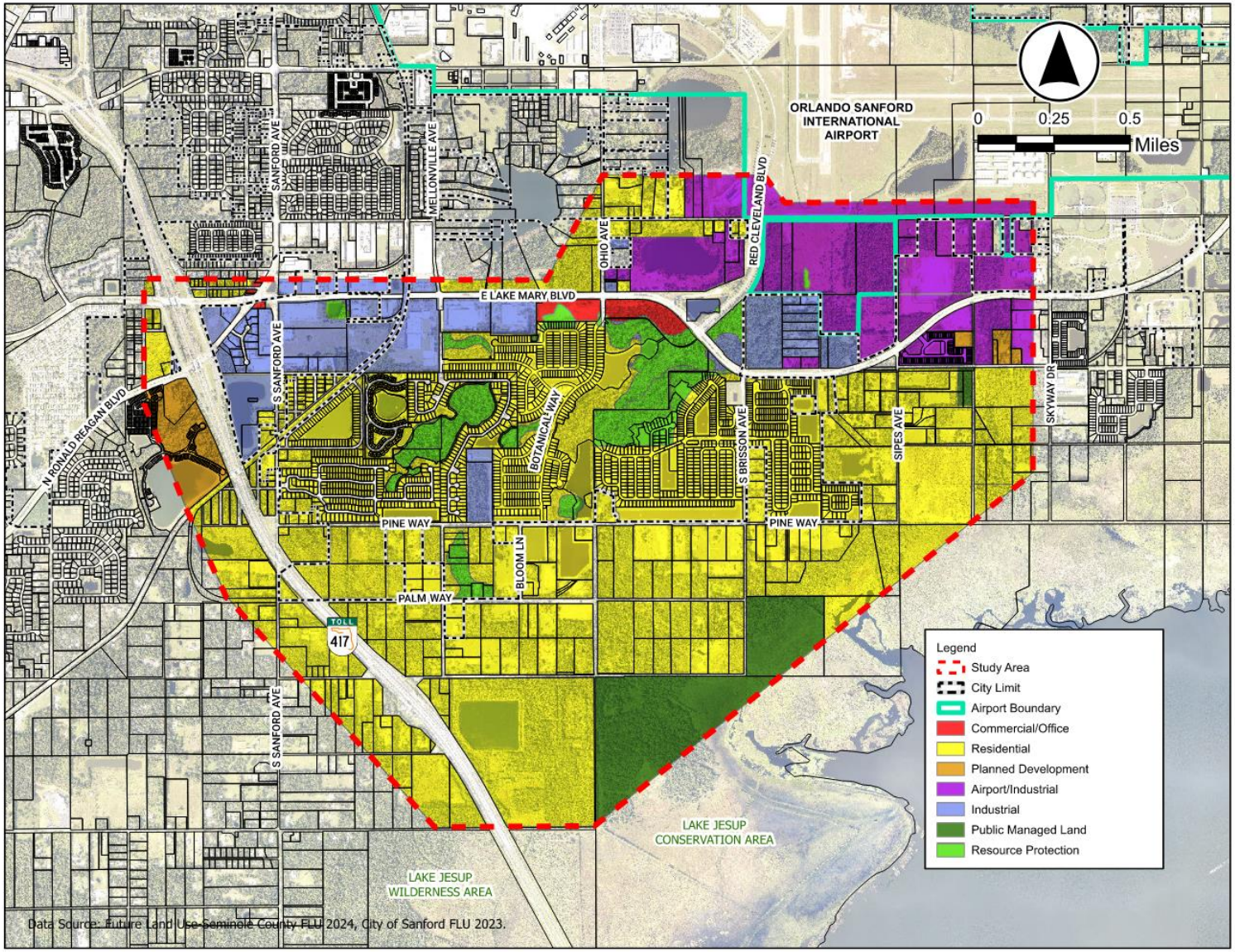
3.1 Future Land Use

Future Land Use within the study area was determined based on the Seminole County's 2027 Future Land Use data and the city of Sanford's 2030 Future Land Use data. **Figure 3-1** presents the Future Land Use map. The majority of the future land use within the study area is residential. The commercial/office and industrial land uses along East Lake Mary Boulevard within the study area are undeveloped land. However, multiple commercial and industrial developments are also present.

The Seminole County Future Land Use Map identifies the following dominant land uses within the study area: Suburban Estates (SE), Preservation/Managed Lands (PML), and Low Density Residential (LDR).

The northeast portion of the study area near the Orlando Sanford International Airport is under the jurisdiction of the City of Sanford. Future land uses designated by the City of Sanford within the project area include: Low Density Residential (LDR), Suburban Estates (SE), Resource Protection (RP), and General Commercial (GC).

Figure 3-1 Future Land Use Map



3.2 Future Context and Functional Classification

The proposed SR 417 Connector will connect the existing limited-access SR 417 facility north of Lake Jesup, which has a functional classification of Principal Arterial Expressway, to Red Cleveland Boulevard, which has a functional classification of Major Collector. The future functional classification of the SR 417 extension is anticipated to be a Principal Arterial. Context classification does not apply to limited-access facilities.

3.3 Future Traffic Demand

3.3.1 Future Demand Model

The latest version of the FDOT District 5 Central Florida Regional Planning Model (CFRPM) - version 7 - was used as the basis for the traffic analysis. The CFRPM v7 has a base year of 2015 and a horizon year of 2045 with interim years of 2020, 2025, 2030, 2035, and 2040. The full model covers the nine counties in District 5 (Orange, Seminole, Osceola, Lake, Sumter, Marion, Volusia, Flagler, and Brevard Counties), as well as connected portions of Polk and Indian River Counties. A review of the entire model was conducted, and updates and revisions were made in the CFRPM v7 within the study area to further refine inputs and parameters and enhance the accuracy of the traffic forecasts.

The travel demand model development years for this study were determined to be 2021 (base), 2030 (opening) and 2045 (horizon). It should be noted that the CFRPM v7 has a 2045 horizon year and therefore, traffic forecast for the 2050 design year for the PD&E Study operational analysis was developed through extrapolation. It is also important to note that traffic forecasts produced from the CFRPM v7 are Peak Season Weekday Average Daily Traffic (PSWADT) and were converted to AADT by applying a Model Output Conversion Factor (MOCF) of 0.97. The overall volume to count ratio by facility type is 1.01 for the study area, with a deviation of 0.5 percent. Most of the facility type groups' deviations are within the preferrable deviation range and all are within the acceptable range.

3.3.1 Future Design Traffic Factors

The future design traffic factors for this study are presented in **Table 3-1**. For future conditions, the K Factor (Design Hour Factor) is the proportion of the AADT expected to occur during the design hour. The Directional Distribution Factor (D) is the proportion of traffic expected to travel in the peak direction during the design hour. For future conditions, the K and D factors represent the traffic demand a roadway is typically designed to accommodate.

To ensure a conservative design and maintain consistency, the selection of future K and D factors in this study generally followed the guidelines outlined in the 2024 FDOT Project Traffic Forecasting Handbook. For the SR 417 mainline, a design (standard) K factor of 10.5

percent was used, consistent with its designation as a toll facility. The proposed SR 417 connector, also a toll facility, was assigned a K factor of 11.0 percent, consistent with CFX's planning and design practices for new toll roads. For arterials, K factors were kept within the recommended range of 7.5 to 9.5 percent for urbanized areas. Ramp K factors were derived from the mainline and arterial values, factoring in design hour traffic balancing. These K factors were applied to the major design hour—AM, PM, or both—based on existing conditions and anticipated future traffic patterns. Slight adjustments were made to account for peak spreading in the design year and to ensure proper traffic balancing. Overall, future design K factors were set higher than existing K values to yield conservative volume estimates for lane geometry determination. D factors were initially calculated using existing conditions and adjusted as needed based on future projections to reflect anticipated changes in traffic patterns. Final D factors were confirmed to fall within FDOT's recommended ranges.

The PHF is the ratio of total peak hour volume to the peak rate of flow within the hour, typically based on the highest 15-minute period. The PHF accounts for the variability of traffic within the peak hour. A PHF of 0.95 was used for all facilities in the future conditions analysis. The Design Hour Truck (DHT) factor is the proportion of trucks expected during the design hour and was assumed to be half of the daily truck (T24) percentage, rounded up to the nearest whole number. Truck factors (DHT and T24) estimated for existing conditions were generally maintained in the future conditions analysis.

Table 3-1 Future Design Traffic Factors

Facility/Segment	K Factor		D Factor		PHF	PHT	T_{24}
	AM	PM	AM	PM	AM/PM	AM/PM	
SR 417 Freeway Mainline	10.5%	10.5%	51.0%	51.0%	0.95	8.0%	15.5%
SR 417 to Sanford Airport Connector Mainline	10.5%	11.0%	52.9%	56.9%	0.95	8.0%	15.5%
SR 417 & Airport Boulevard/US 17-92 Interchange Ramps							
Southbound On-Ramp and Northbound Off-Ramp	10.1%	10.2%	61.0%	58.5%	0.95	8.0%	15.5%
SR 417 & CR 427/Lake Mary Boulevard Interchange Ramps							
Southbound Off-Ramp and Northbound On-Ramp	9.7%	9.7%	59.0%	59.0%	0.95	8.0%	15.5%
Southbound On-Ramp and Northbound Off-Ramp	10.0%	10.2%	53.9%	57.2%	0.95	8.0%	15.5%
SR 417 & Sanford Airport Connector Interchange Ramps							
Southbound On-Ramp and Northbound Off-Ramp	10.5%	11.0%	52.9%	56.9%	0.95	8.0%	15.5%
SR 417 & SR 434 Interchange Ramps							
Southbound Off-Ramp and Northbound On-Ramp	9.5%	9.5%	62.9%	62.9%	0.95	8.0%	15.5%
Southbound On-Ramp and Northbound Off-Ramp	10.0%	10.0%	61.5%	61.5%	0.95	8.0%	15.5%
Arterials							
Lake Mary Boulevard	7.5 - 9.5%		61.8%	61.5%	0.95	5.0%	8.7%
Red Cleveland Boulevard			60.7%	56.7%	0.95	5.0%	8.7%
Airport Boulevard			50.7%	57.1%	0.95	2.0%	2.3%
CR 427			55.7%	56.0%	0.95	5.0%	8.5%

3.3.2 Traffic Analysis

The detailed future conditions operations and safety analysis documented in the Interchange Justification Report (IJR) prepared for this study were conducted for the following alternatives:

- **No Build Alternative** – Included the existing lane geometry along with the following planned or programmed improvements within the AOI:
  - FTE's design project (FPID: 437952-1)
    - Widen SR 417 mainline to eight lanes from SR 434 to Lake Mary Boulevard
    - CR 427/Lake Mary Boulevard interchange
      - ➢ Widen the southbound off-ramp, northbound off-ramp, and southbound on-ramp to two lanes
      - ➢ Add a southbound right turn lane at the intersection of the southbound frontage road/on-ramp and CR 427
      - ➢ Add a third westbound through lane on CR 427 from east of the northbound frontage road/CR 427 off-ramp to west of the southbound frontage road/on-ramp
  - Seminole County proposed intersection improvements at the Lake Mary Boulevard and CR 427 and Sanford Avenue intersections
    - Add a second northbound right turn lane at the Lake Mary Boulevard and CR 427/Sanford Avenue intersection
    - Convert the Sanford Avenue intersection at Lake Mary Boulevard into a right-in/right-out (T-intersection)
    - Extend the storage length for dual westbound left turn lanes
    - …Extend the storage length for the eastbound left turn lane at 1750 East Lake Mary Boulevard and signalize the intersection

The lane geometry for the No Build alternative is presented in **Figure 3-2**.

Build Alternative – Included all improvements from the No Build alternative, plus the proposed Connector (Alignment 2A), featuring a partial interchange at SR 417 with ramps to/from the south only, and a SPUI at Lake Mary Boulevard/Red Cleveland Boulevard. The lane geometry for the full Build alternative is depicted in **Figure 3-3**. The geometry for the proposed Connector and interchanges was developed based on traffic analysis. The proposed lane configuration for the SPUI is depicted in **Figure 3-4**.

Figure 3-2 2030 and 2050 No Build Alternative Lane Geometry

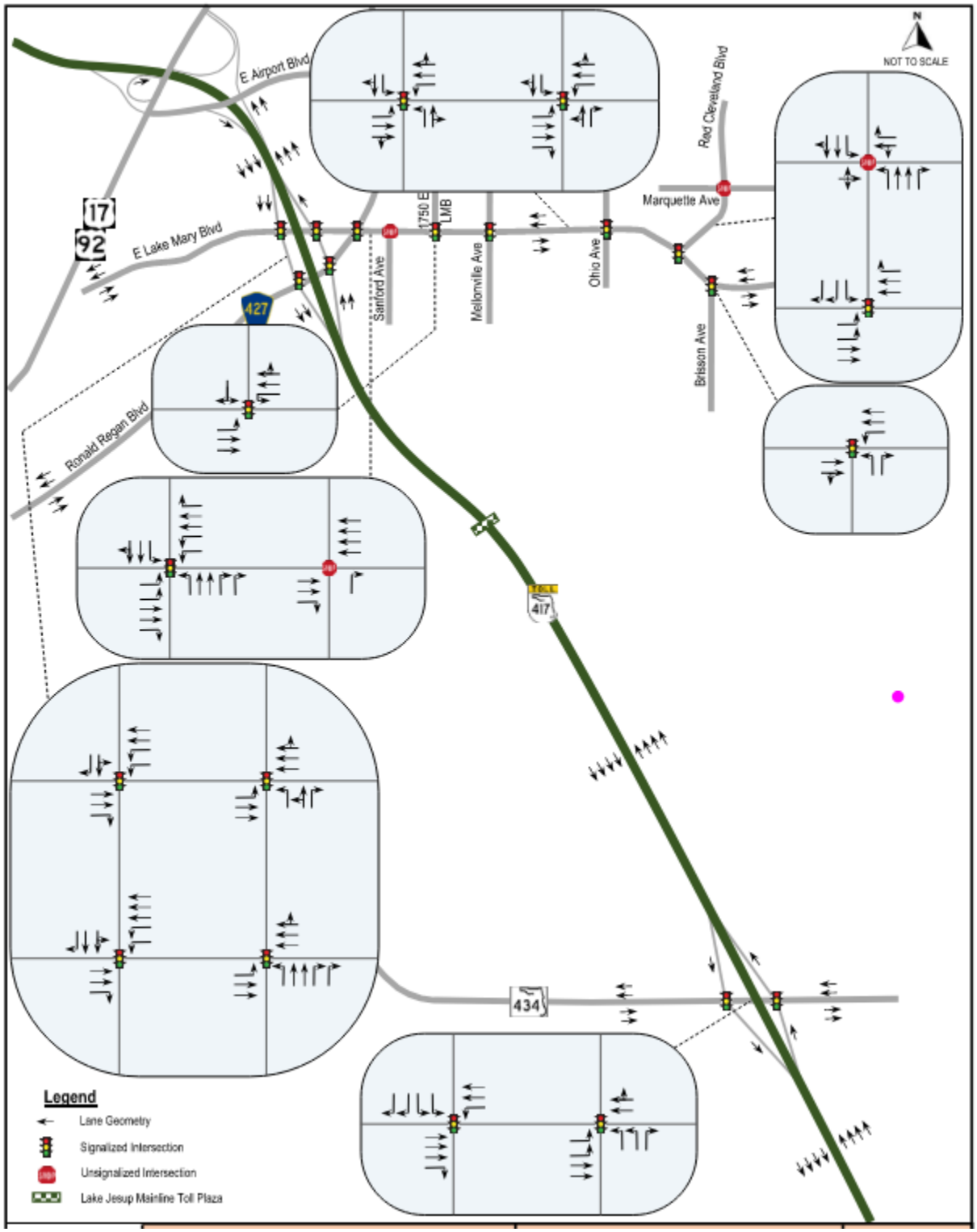


Figure 3-3 2030 and 2050 Build Alternative Lane Geometry

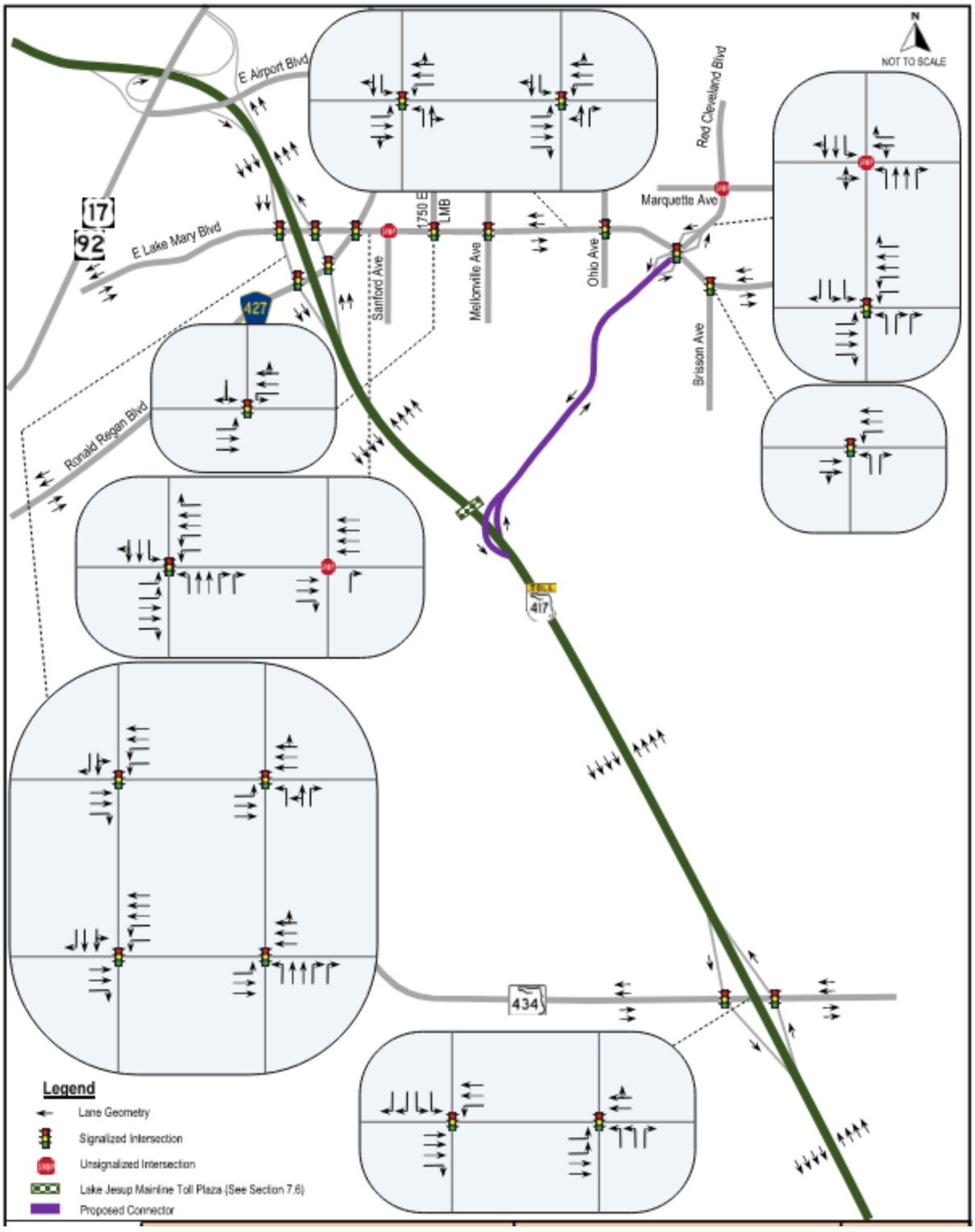
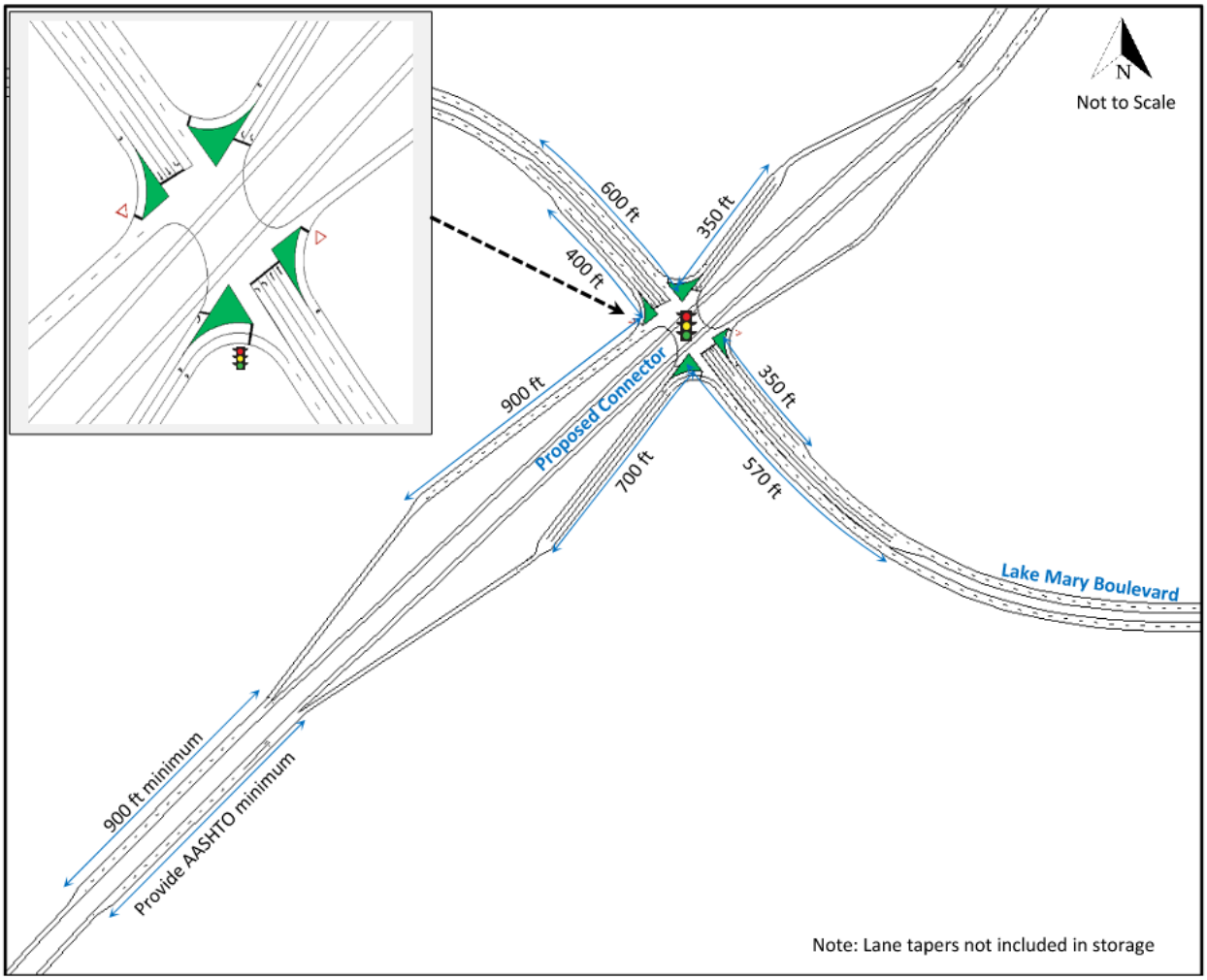


Figure 3-4 Proposed Sanford Airport Connector and Lake Mary Boulevard SPUI



4. Design Controls and Criteria

4.1 Design Controls

The design concepts for the SR 417 Sanford Connector PD&E Study incorporate project elements with various design requirements. The existing East Lake Mary Boulevard will remain an at-grade principal arterial, and the existing Red Cleveland Boulevard will remain an at-grade major collector with local access. East Lake Mary Boulevard and Red Cleveland Boulevard will continue to be maintained by FDOT and applying FDOT standards. The proposed expressway connector will be a limited-access facility and will apply CFX standards. The development of this project will be guided by the CFX, American Association of State and Highway Transportation Officials, FDOT and National Cooperative Highway Research Program design criteria and guidance listed below:

- CFX Design Guidelines (2025)
- CFX Signing and Pavement Marking Details and CADD Files (2025)
- CFX ITS Design Standards (2025)
- Manual on Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways, State of Florida (2023).
- FDOT Design Manual, Florida Department of Transportation (2025)
- A Policy on Geometric Design of Highways and Streets, AASHTO (2018)
- Drainage Manual, Florida Department of Transportation (2024)
- Standards for Road Construction FY 2025-2026, Florida Department of Transportation
- Quality/Level of Service Handbook, Florida Department of Transportation (2023)

4.2 Design Criteria

Design criteria used to develop the proposed alternatives are provided in **Table 4-1.**

Table 4-1 SR 417 Sanford Airport Connector Design Criteria

Design Element	Design Standard	Source
Design Year		
	2045	Scope of Services
Design Vehicle		
	WB-62FL/WB-67	FDM 201.6
Design Speed		
Rural Freeway	70 mph	FDM Table 201.5.1 FDM Table 201.5.2
Urban Freeway	50-70 mph	
Urban Arterial (C4 Urban General)	25-45 mph	

Design Speed					
Rural Arterial (C2)	55-70 mph				
Other					
Frontage Road	45 mph				
Service Road	50 mph				
Access Road	As appropriate				
Ramp					
Loops & Semi-Direct	30 mph				
Outer Cloverleaf	35 mph				
Intermediate Portions of Long Ramp	40 mph				
Direct Connect	50 mph				
Lane Widths					
Freeway	12-ft				FDM Table 210.2.1 , FDM 211.2 & 211.2.1
Ramp					
1-lane	15-ft				
2-lane	24-ft				
Turning Roadway	Case dependent				
Arterial (45 mph)	11-ft				
Collector/Service Road	12-ft				
Cross Slope (lanes 1-way)					
Roadway					FDM Figure 211.2.1
2-lane (2)	-0.02 ft / ft (2)				
3-lane (3)	-0.02 ft / ft (2), -0.03 ft /ft (1)				
4-lane (4)	+0.02 ft /ft (1), -0.02 ft / ft (2), -0.03 (2)				
Bridge Section	-0.02 (typical, uniform, no slope break)				
Max. Lane Adjacent Lane Breakover					
	4.0%				FDM Figure 211.2.1, Table 211.2.2
DS < 35 mph	6.0% (between through lane and aux. lane)				
DS ≥ 35 mph	5.0% (between through lane and aux. lane)				
Median Width					
Freeway					FDM Table 210.3.1, Table 211.3.1
DS ≥ 60 mph	60-ft				
DS < 60 mph	40-ft				
All, With Barrier	26-ft				
Arterial & Collector					
DS = 40-45 mph	22-ft				
DS = 25-35 mph	40-ft				
	Total (ft)		**Paved (ft)**		
	Outside	**Left**	**Outside**	**Left**	
Shoulder Width (lanes 1-way)					
Freeway					FDM 210.4.1. CFX Section 211.4, FDM Figure 411.4.1, FDM Figure 211.4.2
3-lane or more	14	14	12	12	
2-lane	14	14	12	12	

Shoulder Width (lanes 1-way)					
Ramp					
1-lane	6	6	4	2	
2-lane	10	8	8	4	
Aux. Lane	12	N/A	10	N/A	
Arterial & Collector					
2-lane divided	10	8	5	0	
1-lane undivided	10	N/A	5	N/A	
Service Road, 2-Lane, 2-Way, Undivided	10	10	5	5	
Shoulder Cross Slope (ft/ft)					
	0.06	0.05	-	-	
Max. Shoulder Break over					
	7.0%	7.0%	-	-	
Bridge section (lanes 1-way)					
2-lane	10	6	-	-	FDM Figure 260.1.1, 260.1.2, 260.1.3, 260.1.4
3-lane or more	10	10	-	-	
1-lane ramp	6	6	-	-	
2-lane ramp	10	6	-	-	
Service Road, 2-Lane, 2-Way, Undivided	10	10	-	-	
Border Width					
Freeway	94-ft, (94-ft desirable)				FDM 211.6
Ramp	94-ft, (Back of Retaining wall plus 10-ft Min.)				
Arterial/Collector (C4 & C4)					
DS = 45 mph	14-ft (12-ft with bike lane)				
DS = 25 – 40 mph	12-ft (10-ft with bike lane)				
Roadside Slopes					
	Fill Height (ft)		**Rate**		
Front slope	0.0-5		1:6		FDM 215.2.6, FDM Table 215.2.3, CFX 215.2.6
	5-10		1:6 to CZ & 1:4		
	10-20		1:6 to CZ & 1:3		
	> 20		1:3 with guardrail & maintenance/landscape berm		
			(Use 10-ft bench at half the height of fill)		
Front slope (curb & gutter)	All		1:2 not flatter than 1:6		
Back slope	All		1:4 or 1:3 w/ standard width trap, ditch & 1:6 front slope		
Back slope (curb& gutter)	All		1:2 not flatter than 1:6		
Max. Grade/Max. Change in Grade					
	Max Grade		**Max Change in Grade**		
Freeway (Rural/Urban)	3.0%		0.20% / 0.40%		FDM 210.10.1, FDM Table 210.10.1

Max. Grade/Max. Change in Grade			
Ramp			
Directional	5.0%	0.60%	
Loop	7.0%	1.00%	
Arterial			
Rural (C1, C2) (50 & 55 mph)	4.0%	0.60%/0.50%	
Urban (C3, C4) (45 mph)	6.0%	0.70%	
Min. Grade Curb & Gutter			
	0.3%	-	FDOT Drainage Manual (3.8.1)
Minimum Stopping Sight Distance (Grades ≤ 2.0%)			
	Design Speed (mph)	**Distance (ft)**	
	70	730	FDM Table 210.11.1
	60	570	
	55	495	
	50	425	
	45	360	
	30	200	
Decision Sight Distance (Per avoidance maneuver)			
	Design Speed (mph)	**Distance (ft)**	
	70	780-1445	AASHTO Exh. 3-3
	60	610-1280	
	Design Speed (mph)	**Distance (ft)**	
	55	535-1135	
	50	465-1030	
	45	395-930	
	30	220-620	
Horizontal Curve Length (V = Design Speed)			
Freeway	30V (15V min.)		FDM 211.7.2
Others	15V (400-ft min.)		FDM 210.8.2
Max. Curvature (Degree of Curve)			
Freeway			FDM 210.8.2
DS = 70 mph Rural	3° 30' 00"		
DS = 60 mph Urban	5° 15' 00"		
Arterial			
DS = 55 mph Rural	6° 30' 00"		
DS = 45 mph Urban	8° 15' 00"		
Collector			
DS = 45 mph Frontage Road	8° 15' 00"		
DS = 50 mph Service Road	8° 15' 00"		
Ramp			
DS = 50 mph Directional	8° 15' 00"		
DS = 30 mph Loop	24° 45' 00"		
Superelevation Transition			
Tangent	80% (50% min)		FDM 210.9.1, CFX 211.7
Curve	20% (50% min)		

Superelevation Transition			
Spirals (Mainline)	(Curves <1°30'00" do not use spirals)		
Spirals (Ramp)	(Curves <3°00'00" do not use spirals)		
Superelevation Rates			
	e_{max}	**SE Trans. Rate**	
Freeway			FDM Table 210.9.1, 210.9.2, FDOT Standard Plans Index 000-510, 000-511
DS = 70 mph Rural	0.10	1:200	
DS = 60 mph Urban	0.10	1:225	
Arterial			
DS = 55 mph Rural	0.10	1:225	
DS = 45 mph Urban	0.05	1:150	
Collector			
DS = 45 mph Frontage Road	0.05	1:150	
DS = 50 mph Service Road	0.10	1:200	
Ramp			
DS = 50 mph Directional	0.10	1:200	
DS = 30 mph Loop	0.10	1:150	
Vertical Curves (Length, L = KA)			
	Design Speed	**K-value**	
	(mph)	**Crest** / **Sag**	FDM Table 210.10.3
	70	401 / 181	
	60	245 / 136	
	55	185 / 115	
	50	136 / 96	
	45	98 / 79	
	30	31 / 37	
Vertical Curve Minimum Lengths			
	Crest	**Sag**	
Freeway			FDM Table 210.10.4
DS = 70 mph Rural	500-ft	400-ft	
DS = 60 mph Urban	400-ft	300-ft	
Arterial			
DS = 55 mph Rural	350-ft	250-ft	
DS = 45 mph Urban	135-ft	135-ft	
Collector			
DS = 45 mph Frontage Road	135-ft	135-ft	
DS = 50 mph Service Road	300-ft	200-ft	
Ramp			
DS = 50 mph Directional	300-ft	200-ft	
DS = 30 mph Loop	90-ft	90-ft	
Ramps			
	Entrance	**Exit**	
Ramp Terminals	"Parallel-Type"	"Taper-Type"	AASHTO Pg. 850-856
Length	900 to 1200-ft	550-ft	
Taper	300-ft (25:1)	(2° to 5°, 3° desirable)	

Ramps		
Minimum Spacing		FDM Figure 211.12.1
Entrance to Exit	1,600 to 2,000-ft	
Exit to Entrance	500-ft	
Entrance to Entrance/ Exit to Exit	1,000 ft	
Turning Roadways	800 ft	
Lane Drop Taper		
	L = WS (DS = 45 mph)	AASHTO Pg. 818
	$L = WS^2/60$ (DS ≤ 40 mph)	
	50:1 min, 70:1 desirable (freeways)	
Clear Zone		
Freeway		FDM Table 215.2.1, Section 215.2.4
DS ≥ 60 mph Rural	36-ft	
DS = 55 mph Urban	30-ft	
Arterial		
DS = 45 mph Urban	4-ft (Curb & Gutter)	
Collector		
DS = 45 mph Frontage Road	4-ft (Curb & Gutter)	
DS = 50 mph Service Road	24-ft	
Ramp		
DS = 50 mph Directional	14-ft to 24-ft	
1 to 2-lane		
DS = 30 mph Loop	10-ft to 18-ft	
1 to 2-lane		
Vertical Clearance		
Over Roadway	16'-6"	FDM 260.6, 260.8
Over Railroad	23'-6"	
Sign over Roadway	17"-6"	
Over Water	6’ over MHW or Control Elevation	
Limited-Access Limits		
Rural	300-ft min.	
Urban	100-ft min.	
Crossroad overpass/no interchange	200-ft	
Ramp Operations		
a. Two thousand (2,000) ft. between entrance and exit terminals - full freeways.		
b. Six hundred (600) ft. between exit and entrance terminals.		
c. Entrance Ramp Taper of 900 ft. (1° - convergence).		
d. Exit Ramp Taper of 550 ft. (3° - divergence).		
Right-of-Way		
e. Ten (10) ft. from back of walls or limit of construction.		
f. Two (2) ft. from back of sidewalk on frontage roads.		
g. Drainage and construction easements as required.		
h. Ninety-four (94) ft. from ramp or mainline traveled way desirable for limited-access ROW.		
i. Limited-access ROW limits per Index 450.		

5. Alternatives Analysis

5.1 No-Build Alternative

The No-Build Alternative assumes that no transportation improvements be made to SR 417 to provide direct access from SR 417 at the Lake Jessup Toll Plaza to SFB other than routine maintenance. The primary advantages of the No-Build Alternative are that it does not directly require any capital or expenditure, and it produces no physical, natural, or social impacts.

The No-Build Alternative will remain under consideration throughout the alternatives analysis and evaluation process.

5.1.1 Advantages of No-Build

Certain advantages would be associated with the implementation of the No-Build Alternative:

- No acquisition of right-of-way
- No design, right-of-way, or construction costs
- No inconvenience to the traveling public and property owners during construction
- No impacts to utilities
- No impacts to the adjacent natural, physical, and human environment

5.1.2 Disadvantages of No-Build

The potential disadvantages of the No-Build Alternative include:

- Does not meet the projects Purpose and Need
- Does not improve connectivity from SR 417 to SFB
- Does not address roadway capacity needs associated with anticipated future growth

5.3 Multimodal Considerations

This project maintains consistency with the CFX Master Plan to identify potential multimodal and intermodal opportunities with regional partners. Regional coordination with the Sanford Airport Authority and other transportation agencies was initiated to identify potential changes in the regional network. No existing or planned connections from LYNX or SunRail to the airport were identified during the study, and no transit envelope is planned along SR 417. A passenger rail envelope is not planned in the area; however, the proposed connector would not preclude future rail connections. Further, the proposed connector will not impact existing transit (LYNX) connectivity.

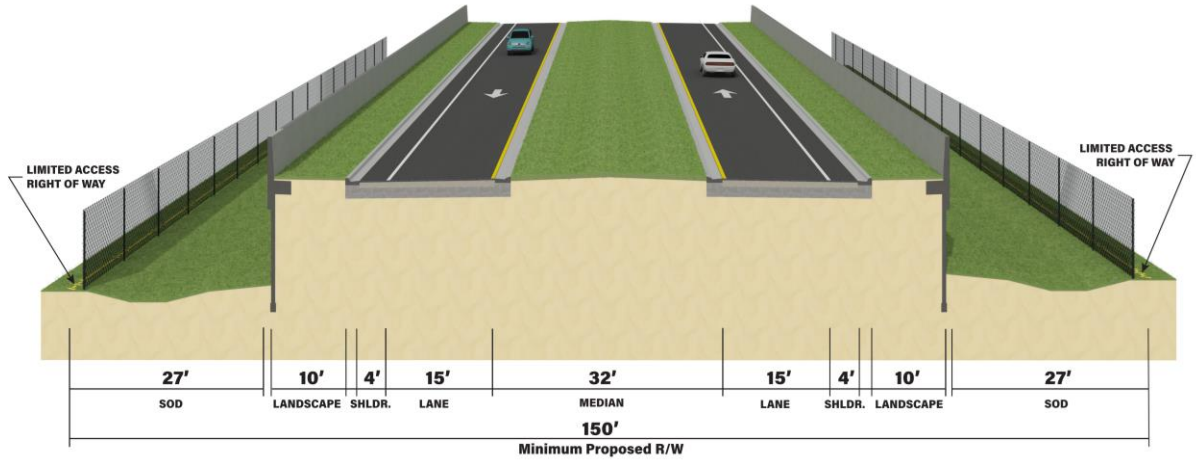
The proposed connector would provide connections to Red Cleveland Boulevard as well as planned and existing intermodal centers within and around SFB. It is recommended to review potential park-and-ride locations by assessing the undeveloped properties within SFB. Undeveloped lands around the southern end of SFB are quickly being developed and the options for intermodal facilities outside of SFB are dwindling. It is further recommended to plan for and accommodate a future autonomous shuttle service (for example, Beep) along East Lake Mary Boulevard for future multimodal connections to and from SFB.

5.4 Alternatives Analyzed

5.4.1 Typical Section and Alignment Analysis

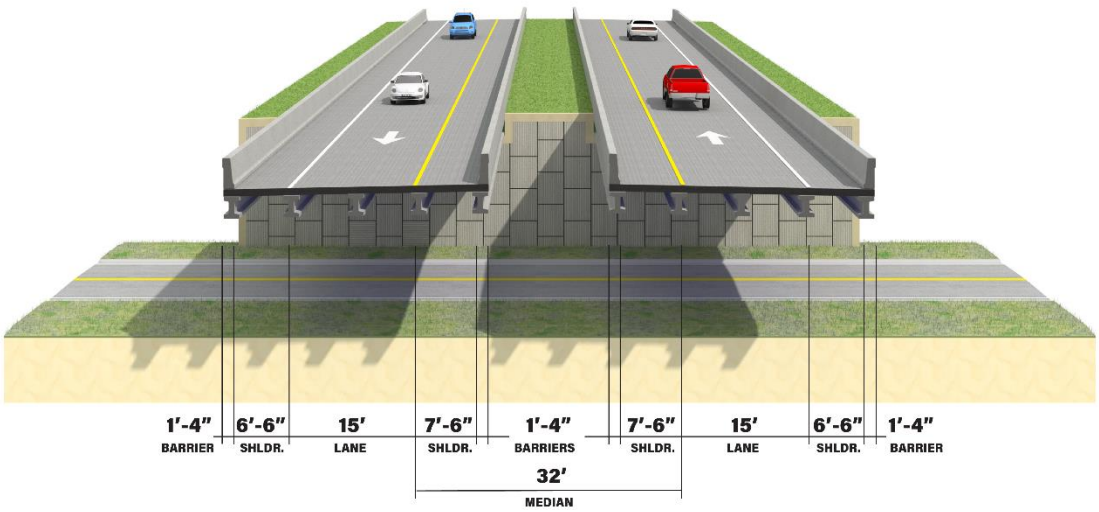
One typical section was evaluated for the length of the project and is shown in **Figure 5-1**. The proposed typical section consists of a divided roadway with two 15-foot travel lanes, a grassed 32-foot median, 4-foot paved shoulders, and 10-foot landscaping strips on each side of the roadway. Retaining walls run adjacent to the roadway and are separated from a wildlife fence by 27-feet of grass on each side. This typical section is expandable to four lanes in the future, with widening to the median. It should be noted that adequate right-of-way to accommodate future expandability will be acquired in the initial phase of the project.

Figure 5-1 Proposed Connector Typical Section (2-Lane)



The proposed bridge typical section consists of two separate bridges with one 15-foot travel lane, a 6-foot 6-inch outside shoulder, a 7-foot 6-inch inside shoulder, and a 1-foot 4-inch barrier on both sides of each bridge. This typical section is expandable to four lanes in the future with widening to the median and is shown in **Figure 5-2.**

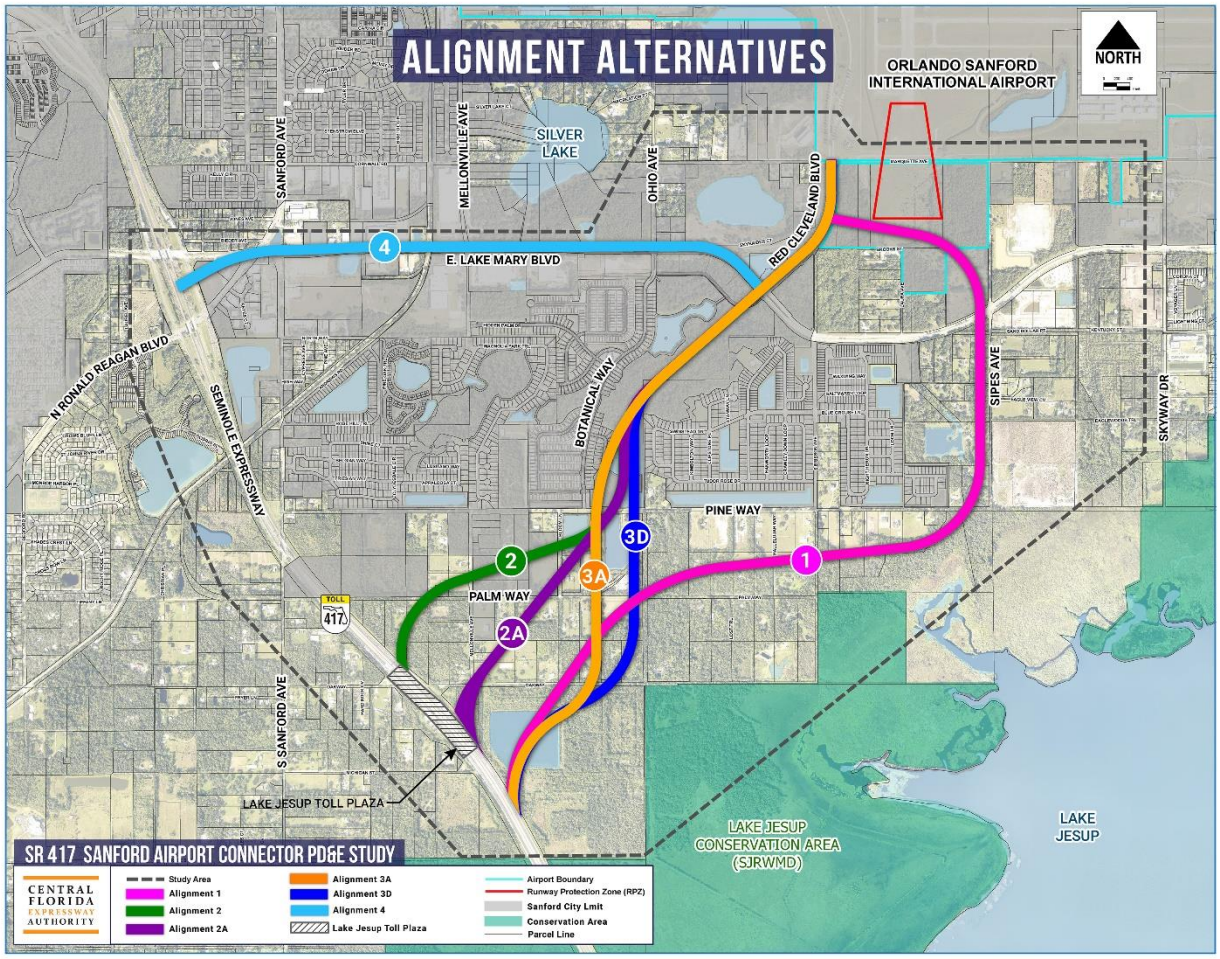
Figure 5-2 Proposed Bridge Typical Section (2-Lane)



In 2023, CFXcompleted a CF&M Study to evaluate a new direct expressway connection between SR 417 and SFB. During that study, four corridor alternatives were developed and evaluated, and each of these four alternatives was found to be feasible based on a fatal flaw analysis.

This CFX PD&E Study began in May 2024. The project team evaluated the four alternatives that were recommended by the CF&M Study team, plus a fifth alternative, an elevated viaduct that runs along East Lake Mary Boulevard. A sixth alternative was also presented to the public and evaluated during this study. The alternatives evaluated during this study are described below. **Figure 5-3** depicts the evaluated alternatives.

Figure 5-3 Map of Alignment Alternatives



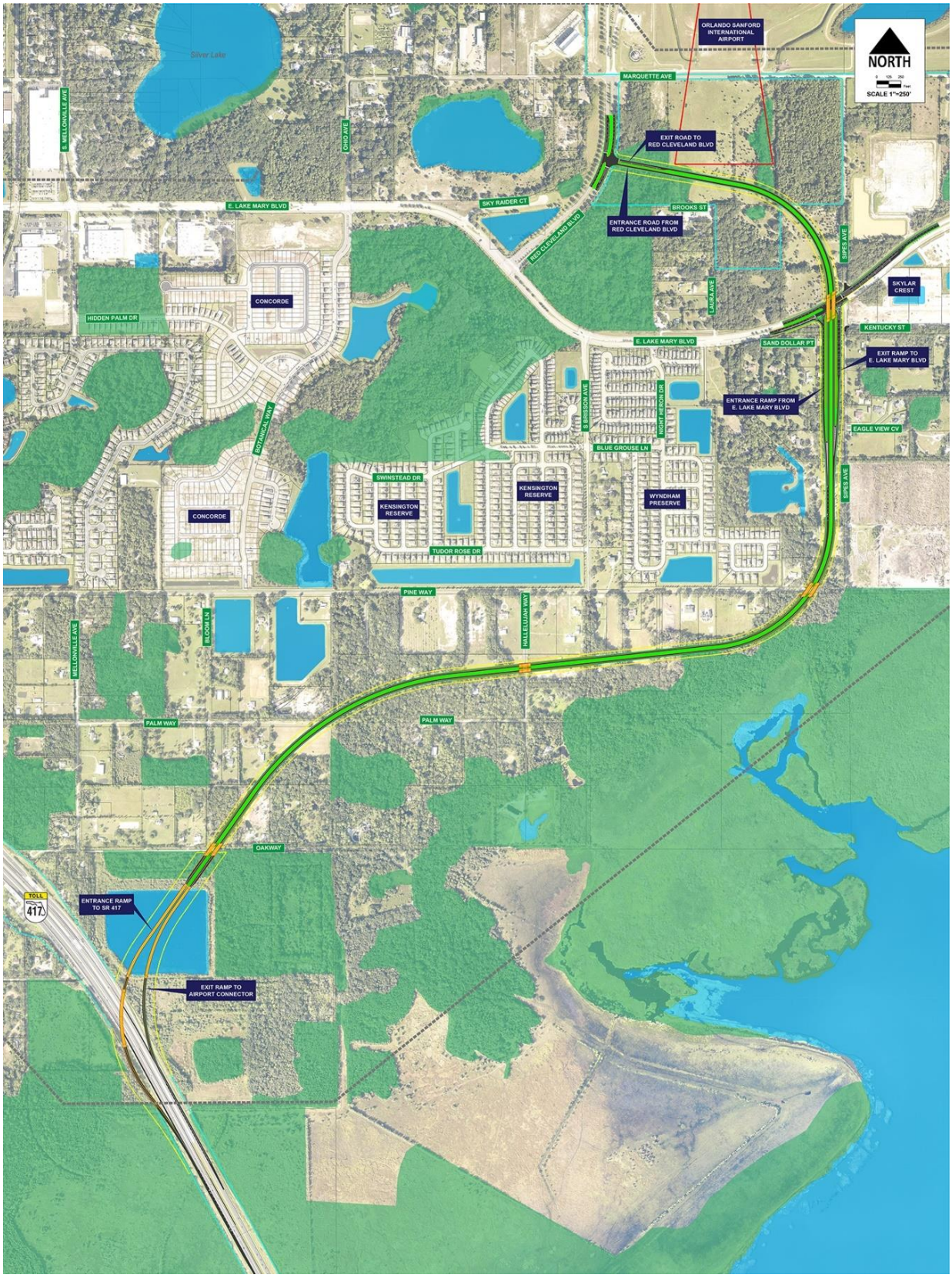
Alignment 1

Alignment 1 is the longest alignment and has the fewest direct residential impacts. Alignment 1 is shown in **Figure 5-4**, and travels from SR 417 south of the Lake Jesup Toll Plaza east-bound to East Lake Mary Boulevard east of Sipes Avenue and connects at Red Cleveland Boulevard south of the Orlando Sanford International Airport.

Alignment 1 was eliminated for the following reasons:

- Longest overall route with second highest overall cost
- Highest right-of-way costs
- Highest number or residential and non-residential parcels impacted
- Issues with new road adjacent to the Airport's Runway Protection Zone

Figure 5-4 Alignment 1



Alignment 2

Alignment 2 is the shortest alignment and is located farther away from the Lake Jesup Conservation Area than Alignments 1, 3A and 3D. Alignment 2 travels from SR 417 north of the Lake Jesup Toll Plaza to the north and east and connects to East Lake Mary Boulevard at Red Cleveland Boulevard. Alignment 2 has the least anticipated environmental impacts and is shown in **Figure 5-5**.

Alignment 2 is proposed to be further evaluated for:

- Shortest and most direct route
- Lowest overall cost
- Second lowest overall number of residential parcels impacted
- Connection to SR 417 farther from Lake Jesup Conservation Area than other alignments

Alignment 2 Refinement (Alternative 2A)

Alignment 2 moved the interchange with SR 417 away from the Lake Jesup Conservation Area and utilized the pavement and right of way at the toll plaza. A refinement of Alignment 2 was considered that moves the connection to SR 417 farther south, but still north of the Lake Jesup Conservation Area, to provide a more direct connection from SR 417 to Red Cleveland Boulevard. This change was considered significant enough that it should be considered as a new alternative, designated as Alignment 2A. **Figure 5-6** depicts Alignment 2A.

Figure 5-5 Alignment 2

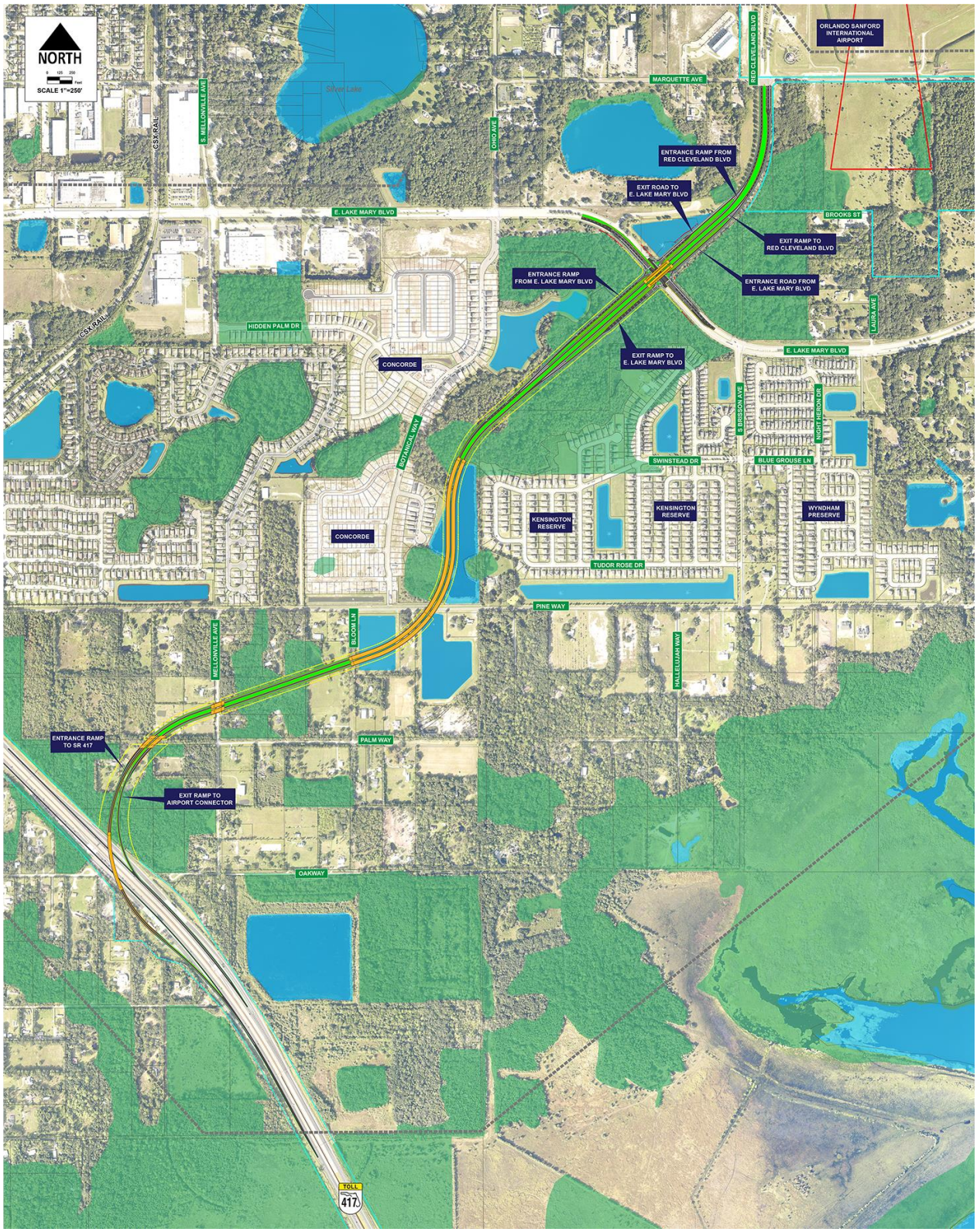
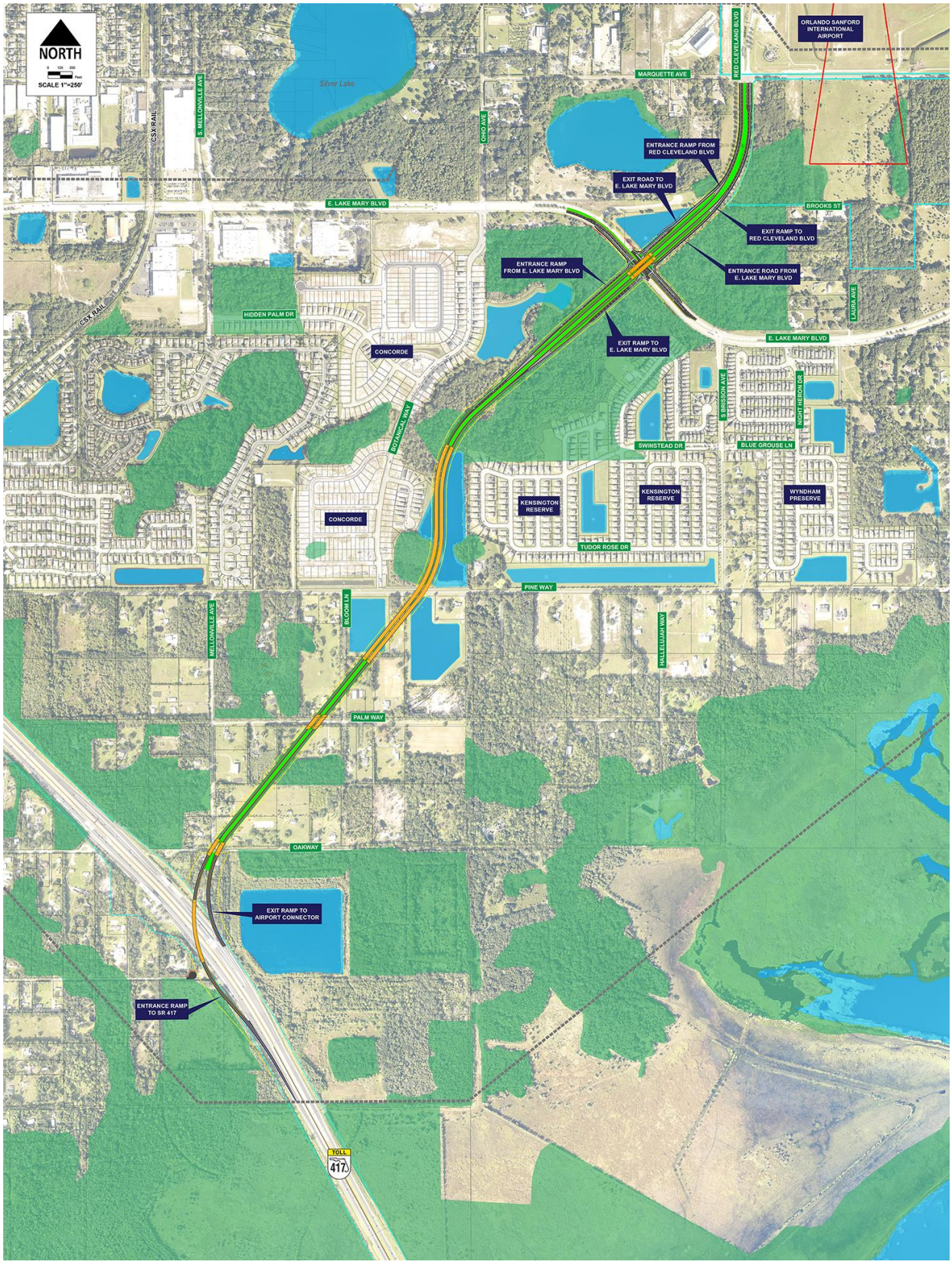


Figure 5-6 Alignment 2A



Alignments 3A and 3D

Alignments 3A and 3D attempt to balance the direct impacts to the existing and planned residential developments as well as environmentally sensitive land. They both begin at SR 417 south of the Lake Jesup Toll Plaza and head north to connect to East Lake Mary Boulevard at Red Cleveland Boulevard. Alignment 3A is located west of Alignment 3D and has the potential to impact residences north of Pine Way but avoids impacts to the existing stormwater ponds south of Pine Way. Alignment 3D is located east of Alignment 3A and avoids direct residential impacts north of Pine Way. Alignments 3A and 3D are shown on **Figures 5-7** and **5-8**.

Alignment 3A was eliminated for the following reasons:

- Second most residential parcels impacted
- Directly impacts new houses in Concorde development
- Higher cost than Alignment 2
- Connection to SR 417 closer to Lake Jesup Conservation Area than Alignment 2

Alignment 3D was eliminated for the following reasons:

- Higher cost than Alignments 2 and 3A
- Requires more bridges over private retention ponds than Alignment 3A
- Connection to SR 417 closer to Lake Jesup Conservation Area than Alignment 2

Alignment 4

Alignment 4 is a viaduct, or an elevated bridged roadway, that would begin at SR 417 in the area of the existing interchange with County Road 427 and Lake Mary Boulevard and run east along the median of East Lake Mary Boulevard to Red Cleveland Boulevard. Alignment 4 attempts to utilize the existing East Lake Mary Boulevard roadway corridor to minimize impacts to the environment and residences. Alignment 4 is shown on **Figure 5-9**.

Alignment 4 was eliminated for the following reasons:

- Significantly higher cost than all other alternatives
- Significantly lower projected ridership than all other alternatives

Figure 5-7 Alignment 3A

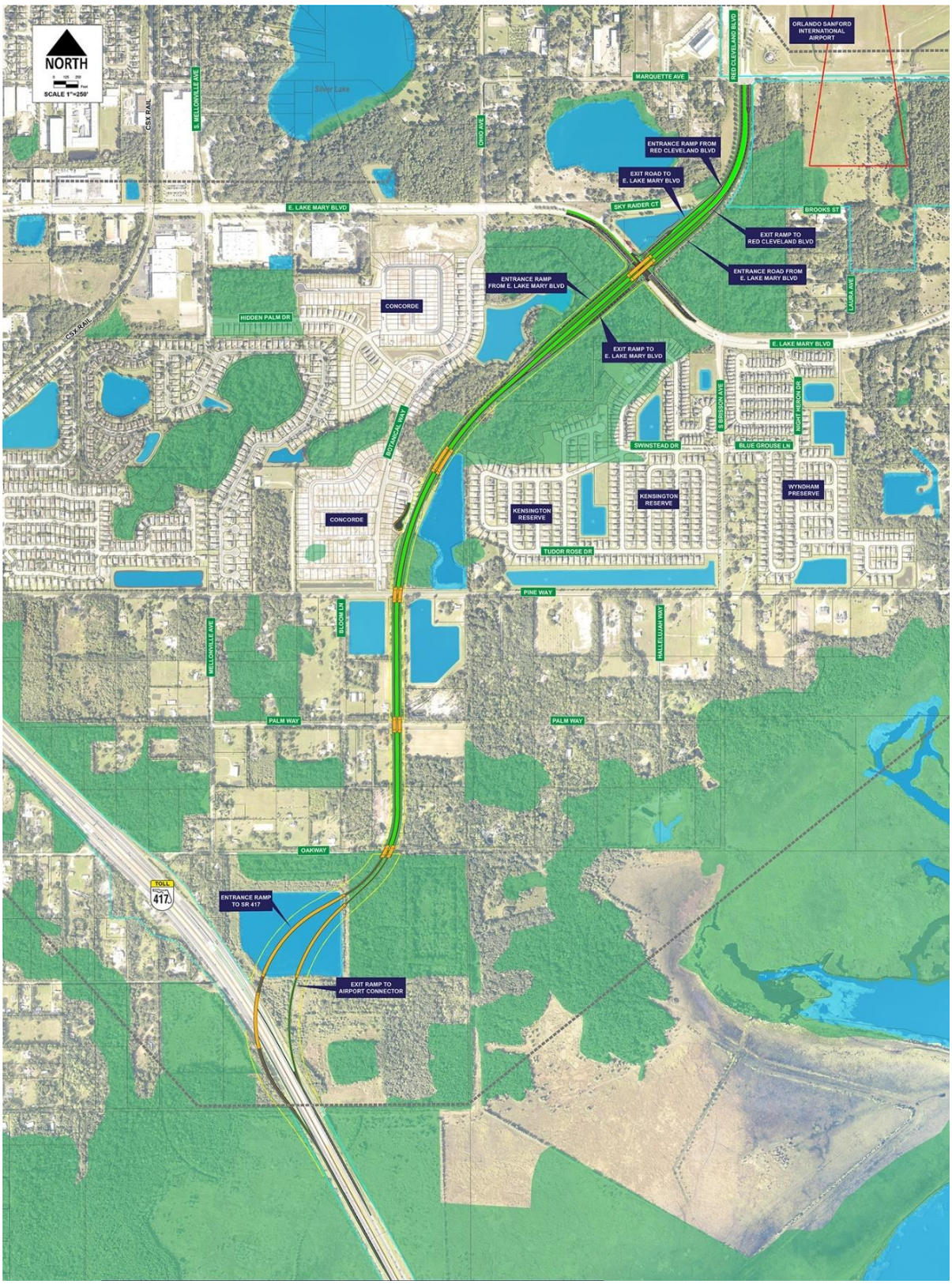


Figure 5-8 Alignment 3D

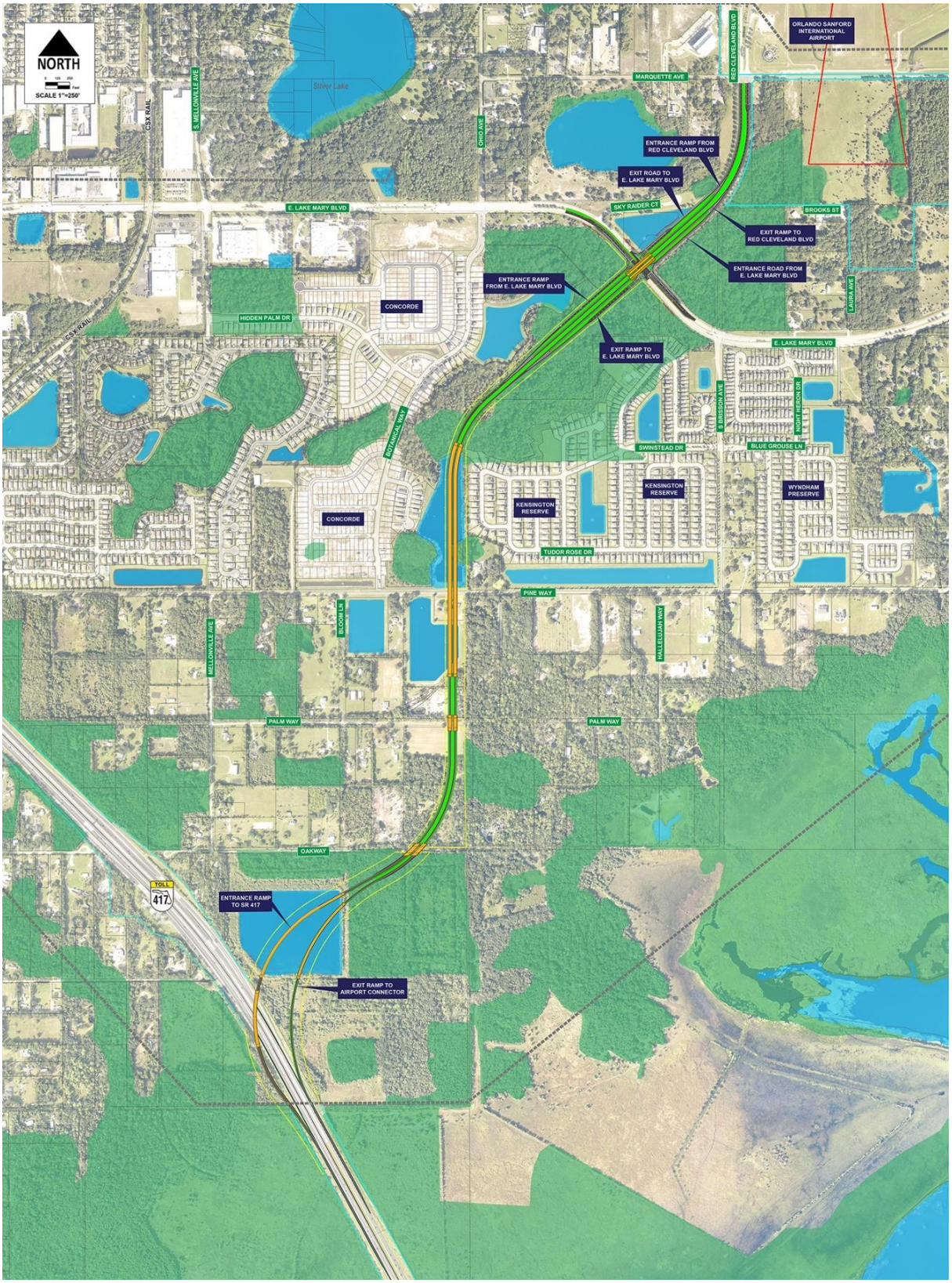
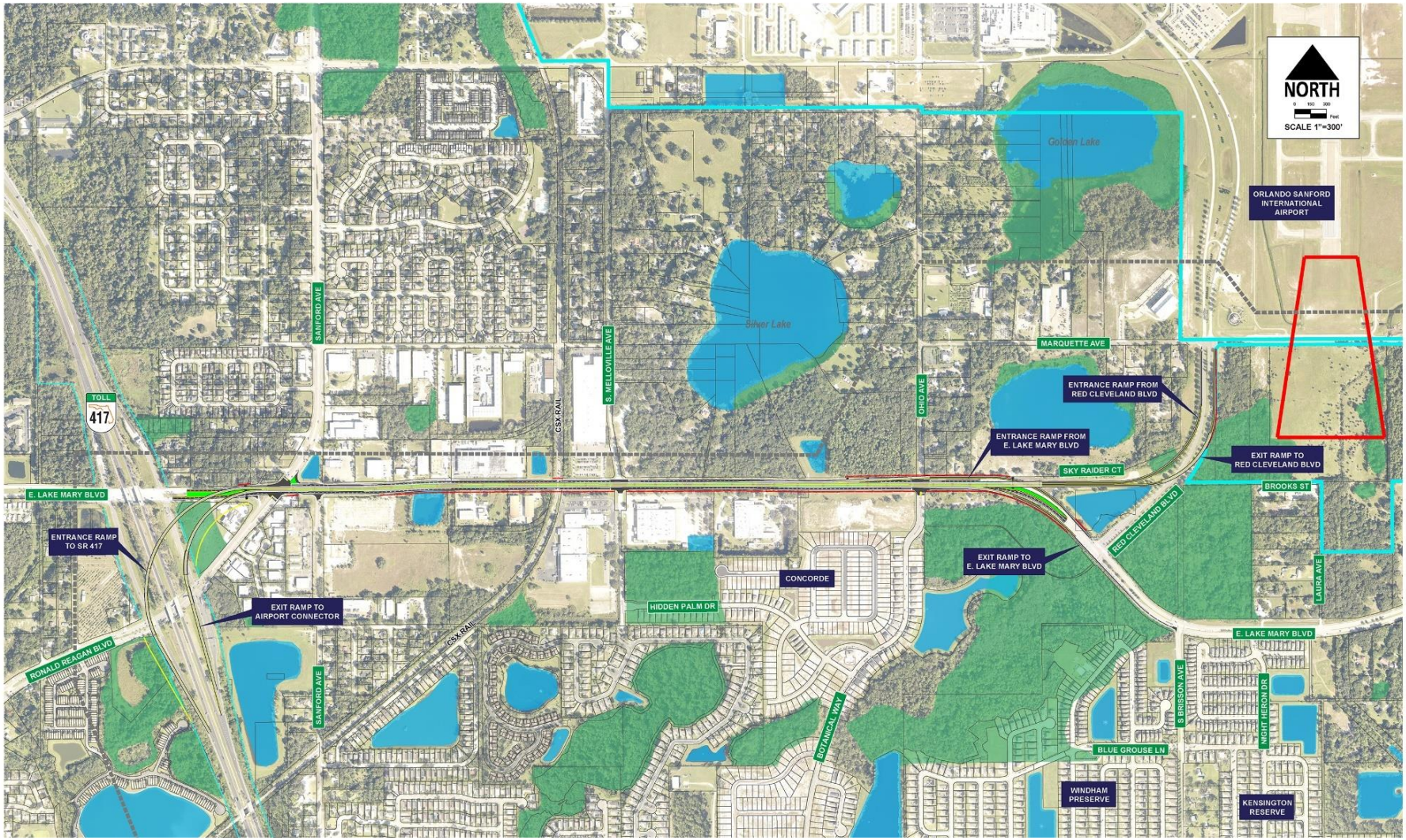


Figure 5-9 Alignment 4



5.4.1.1 Alternative Length

Alternative alignment lengths range from 2 miles for Alignment 4 (Viaduct along East Lake Mary Boulevard) to 3.1 miles for Alignment 1. The lengths of all alternatives are presented in **Table 5-1** below.

Table 5-1 Alternative Alignment Lengths

Alternative Alignment #	Length (Miles)
1	3.1
2	2.4
2A	2.3
3A	2.5
3D	2.5
4	2.0

5.4.1.2 Proposed Right-of-Way Width

All alternatives propose a right-of-way width of 150 feet along the connector mainline with an increased footprint at the East Lake Mark Boulevard and SR 417 interchanges. Alignment 4 (viaduct) has a right-of-way footprint of 130 feet to 140 feet.

5.4.1.3 Proposed Bridges

Alignment 1 has eleven bridges. Alignments 2 and 2A have nine bridges. Alignment 3A has thirteen bridges, and 3D has eleven bridges. Alignment 4 is a viaduct bridge structure located in the median of East Lake Mary Boulevard.

5.4.1.4 Proposed Interchanges

All alternative alignments have a proposed interchange at SR 417 (ramps to and from the south) and a full interchange at East Lake Mary Boulevard, providing access to and off the connector for all movements, including Alignment 4.

5.4.1.5 Proposed At-Grade Intersections

Alignment 1 approaches Red Cleveland Boulevard from the east, terminating as an at-grade intersection just south of the Marquette Avenue and Red Cleveland Boulevard intersection. Alignments 2, 2A, 3A and 3D traverse over Red Cleveland Boulevard and terminate as an at-grade intersection at Marquette Avenue. There are no at-grade intersections associated with Alignment 4.

5.4.1.6 Evaluation Matrix

An evaluation matrix has been prepared to document the various impacts and costs for each build alternative along with the No Build alternative. The evaluation matrix covers traffic projections for the airport connector and East Lake Mary Boulevard, physical impacts, cultural impacts, natural environment impacts, social impacts, estimated costs, roadway construction (includes design and CEI), utility relocation, right-of-way, and mitigation. The Evaluation Matrix is in **Table 5-2.**

Table 5-2 Evaluation Matrix

Evaluation Criteria	Unit of Measure	Alternatives						
		No Build	1	2	2A	3A	3D	4 (Viaduct)
Traffic								
2050 Projected Annual Average Daily Traffic (AADT) on Connector	Vehicles per Day	0	19,800	21,900	21,900	21,900	21,900	8,900
2050 Projected AADT on E. Lake Mar Mary Boulevard West of Red Cleveland Boulevard	Vehicles per Day	36,700	21,100	19,800	19,800	19,800	19,800	29,100
Resulting Reduction in 2050 Projected AADT on E. Lake Mary Boulevard, West of Red Cleveland Boulevard	Vehicles per Day	No Reduction	-15,600 (-43%)	-16,900 (-46%)	-16,900 (-46%)	-16,900 (-46%)	-16,900 (-46%)	-7,600 (-21%)
Design								
Alternative Length	Miles	0	3.1	2.4	2.3	2.5	2.5	2
Right-of-Way Width (Varies per Alternative)	Feet	0	150	150	150	150	150-200	130 - 140
Physical								
Utility Impacts	High/Med/Low/None	None	Med	Low	Low	Low	Low	High
Contamination Sites & Facilities (Medium and High Risk Sites)	No. of Conflicts	0	0	0	0	0	0	6
Railroad Involvement	No. of Conflicts	0	0	0	0	0	0	1
Cultural Environment								
Potential Known Historic Resources	No. of Resources	0	1	0	0	0	0	0
Potential Known Historic Linear Resources (Canals/Highways/Railroads)	No. of Resources	0	1c	0	1c	1c	1c	1r
Potential Known Archaeological Resources	No. of Resources	0	0	0	0	0	0	0

Natural Environment								
Potential Surface Water Impacts	Total Acres	0	0	1	1	1	1	1
Wetlands	Total Acres	0	7	18	17	17	16	4
Forested	*Acres*	*0*	*3*	*15*	*16.5*	*16*	*14*	*1*
Non-forested	*Acres*	*0*	*4*	*3*	*0.5*	*1*	*2*	*3*
Regulatory (SJRWMD) Conservation Easement Impacts	Acres	0	2	12	12	13	10	1
Flood Hazard Area Impacts (100 Year Floodplain)	Acres	0	2	0	0	2	2	1
Listed Species Probability of Occurrence	Degree	0	High	High	High	High	High	Med
Bald Eagle Nest	No. of Conflicts	0	2	3	3	4	4	3
Species Impacts (composite rating)	High/Med/Low/None	None	Med	Med	Med	Med	Med	Low
Social								
Right-of-Way Area Needed (not including proposed ponds)	Total Acres	0	62	34	35	48	58	8
Potential Residential Parcels Affected	Total Parcels	0	23	8	12	22	3	0
Potential Non-Residential Parcels Affected	Total Parcels	0	27	17	20	13	19	28
Community Facilities	No. of Conflicts	0	0	0	0	0	0	0
Parks and Recreational Facilities (public and private)	No. of Conflicts	0	0	0	0	0	0	0
Community Cohesion Effects	High/Med/Low/None	None	Med	Med	Med	Med	Med	Low
Socio-Economic Impacts to Special Populations	High/Med/Low	0	Low	Low	Low	Low	Low	Low
Estimated Costs								
Roadway Construction (includes design and CEI)	Dollars	$0	$174,200,000	$170,900,000	$172,200,000	$185,700,000	$196,300,000	$470,600,000
Utility Relocation	Dollars	$0	$3,800,000	$2,100,000	$3,100,000	$2,100,000	$2,100,000	$22,100,000
Right-of-Way	Dollars	$0	$64,100,000	$16,400,000	$18,300,000	$28,800,000	$16,300,000	$25,500,000
Mitigation, Wetlands, and Wildlife	Dollars	$0	$2,800,000	$7,100,000	$6,800,000	$6,600,000	$6,500,000	$1,500,000
Total Estimated Cost	Dollars	$0	**$244,900,000**	**$196,500,000**	**$200,400,000**	**$223,200,000**	**$221,200,000**	**$519,700,000**

5.5 Preferred Alternative

Alignment 2A was selected as the preferred alternative because it is the shortest and most direct route, has the lowest impact to wetlands, and includes an optimized roadway geometry to improve safety. Alignment 2A also allows for the future addition of ramps to/from the north on SR 417 and received support from stakeholders such as SFB, Seminole County, and Florida's Turnpike Enterprise. The City of Sanford, Seminole County Chamber of Commerce, and the Orlando Economic Partnership have also provided general support for a direct connection between SR 417 and the airport.

5.6 User Benefits

The need for the proposed connector is documented in Section 1.2 of this report. Implementing the proposed improvements associated with the Build Alternative will result in the following benefits:

- Enhance regional connectivity
- Accommodate transportation travel demand
- Provide needed capacity
- Improve safety
- Support modal connectivity
- Serve social and economic growth

5.7 Displacements

The project involves a new roadway corridor that will require additional right-of-way. The Preferred Alternative Alignment 2A will require approximately 35 acres of right-of-way (not including pond sites). The project is anticipated to impact 12 residential parcels and 20 non-residential parcels. Specific information related to displacements is not available at this time. However, should it be determined that displacements are necessary as a result of this project, CFX will carry out the procedures as identified in its Property Acquisition, Disposition, and Permitting Procedures Manual.

5.8 Aesthetics and Landscaping

The proposed typical section accommodates a 10-foot landscaping buffer on both sides of the roadway between the back of curb and face of concrete barriers. The 32-foot median also provides a 17.5-foot area for landscaping.

All bridges along the alignment are assumed to utilize a Level 1 aesthetic treatment such as colored pigments and surface textures of the concrete bridge and retaining wall elements. Some additional enhancements to bridges at sites 2, 3 & 4 which abut residence at Concorde and Kensington Reserve, and highly traveled roadways at E. Lake Mary Blvd. and

SR 417, are recommended to incorporate Level 2 substructure elements like single column hammerhead piers with consideration for enhanced surface reveals and form liners for improved aesthetics.

5.9 Utility Impacts

There is an existing CSX railroad within the study area. SR 417 bridges over the railroad just south of the North Ronald Reagan Boulevard and SR 417 interchange. The CSX railroad crosses at-grade (crossing # 621373) on East Lake Mary Boulevard, located west of Mellonville Avenue. **Table 5-3** lists utility companies and descriptions within the preferred alternative.

Table 5-3 Utility Impacts

Company	Description	Relocation Cost
AT&T Florida-Distribution	• Buried 24 Fiber on north and south side of E Lake Mary Blvd. • Buried 24 Fiber on east side of Red Cleveland Blvd.	$500,000
Charter/Spectrum	• Overhead TV cable on the south side of Oakway and the east side Mellonville Ave, North of SR 417. • Overhead TV cable along the south side of Palm Way. • Buried TV cable along the north side of Pine Way, near Botanical Way. • Buried fiber optic along south side of E Lake Mary Blvd. • Overhead TV cable on the North side of Marquette Ave, crossing Red Cleveland Blvd.	$450,000
City of Sanford Public Works-Lighting	• No Facilities	$0
City of Sanford-Utilities Water/Sewer/Reclaimed	• 8" Water main on the west side of Botanical Way, North of Pine Way. 8" Reclaim Water main on the west side of Botanical Way, North of Pine Way. • 12" Water main along North side of E Lake Mary Blvd. • 12" Reclaim Water main along South side of E Lake Mary Blvd. • 6" Force main along south side of E Lake Mary Blvd. • 12" Water main along the west side of Skyraider Ct and Red Cleveland Blvd. • 20" Force main along the west side of Skyraider Ct and Red Cleveland Blvd. • 12" Water Main on south side of Marquette Ave, from Red Cleveland Blvd to 250' West.	$1,000,000

	• 6″ Force Main on south side of Marquette Ave, from Red Cleveland Blvd to 170′ West. • 12″ Water Main on west side of Red Cleveland Blvd from South of Marquette Ave to 80′ north of Marquette Ave, then crossing Red Cleveland Blvd to 370′ East of Red Cleveland Blvd. • 20″ Force Main on the west side of Red Cleveland Blvd, from South of Marquette Ave to 40′ North of Marquette Ave, then crossing Red Cleveland Blvd to 350′ East of Red Cleveland Blvd. • 12″ Water Main on the west side of Red Cleveland Blvd, from 80′ North of Marquette Ave to 270′ North of Marquette Ave. • 12″ Force Main on the west side of Red Cleveland Blvd, from 40′ North of Marquette Ave to 330′ North of Marquette Ave.	
Florida Power & Light-Distribution	• Overhead Electric line along South side of Michigan St, West of SR 417. • Overhead Electric line along South side of Oakway, from East of Mellonville Ave to West of Mellonville Ave and crossing SR 417 at 300′ West of Mellonville Ave and a Lateral line going South of Oakway, at 210′ West of Mellonville Ave. • Overhead Electric line along East side of Mellonville Ave, from South side of Oakway, crossing Oakway to North of Oakway. • Overhead Electric line along South side of Palm Way, from West of Bloom Ln to East of Bloom Ln. • Overhead Electric line along West side of Bloom Ln, from 200′ South of Palm Way to North of Palm Way. • Overhead Electric line along North side of Pine Way, from West of Botanical Way to East of Botanical Way. • Overhead Electric line crossing from North side of Palm Way to the South, at 200′ East on Botanical Way, due South toward Palm Way, between ponds (possible easements) with additional lateral lines to properties. • Overhead Electric line along North side of Palm Way to the East, up to (possible easement) that is between pond and rear of properties of Swinstead Dr. • Overhead Electric line crossing from the South side of E Lake Mary Blvd to the North side and along the East side of Red Cleveland Blvd. • Overhead Electric line and Underground feeder lines on the South side of E Lake Mary Blvd, from West of E Lake Mary Blvd, crossing Red Cleveland Blvd, to the East of E Lake Mary Blvd.	$1,560,000

Florida Power & Light-Transmission	• No Facilities	$0
Florida Public Utilities Gas	• 4" PE gas main along the South side of E Lake Mary Blvd, from West of E Lake Mary Blvd, crossing Red Cleveland Blvd, to the East of E Lake Mary	$120,000
Florida's Turnpike Enterprise	• **No Response**; Fiber and buried electric along both sides of SR 417	$0
Seminole County Environmental Services	• 8" fire line and 3" water service at the Lake Jessup Toll Plaza.	$85,000
Seminole County-Traffic Eng. (Not a UAO)	• Not a UAO-part of the roadway project, but sent UG fiber info-GIS map. • Underground Fiber along the South side of E Lake Mary Blvd, from West of E Lake Mary Blvd, crossing Red Cleveland Blvd, to the East of E Lake Mary Blvd. • Underground Fiber crossing E Lake Mary Blvd, West of Red Cleveland Blvd, from South side of E Lake Mary Blvd to the North side, then crossing Red Cleveland Blvd form West to the East, then going North along the East side of Red Cleveland Blvd. • Underground Fiber along the East side of Red Cleveland Blvd and crossing Marquette Ave to North of Marquette Ave. • Underground Fiber along the South side of Marquette Ave, from East side of Red Cleveland Blvd, due further East.	$0
Uniti Fiber	• No Facilities	$0
Zayo	• No Facilities	$0

5.10 Safety

The proposed SR 417 Connector is projected to lower traffic on the existing roadway network within the study area. Implementation of the proposed alternative will provide better levels of service, which is generally correlated with a decrease in roadway crashes.

The proposed typical section includes wider 15-foot lanes with 4-foot outside shoulders providing provisions for passing stalled vehicles. The median includes Type E curb and gutter which is mountable by emergency vehicles.

The proposed improvements at the East Lake Mary Boulevard interchange will provide improvements for pedestrians and bicyclists. The proposed connector includes 5-foot sidewalks on both sides of the roadway north of East Lake Mary Boulevard.

5.11 Pedestrian and Bicycle Facilities

The SR 417 connector is a proposed limited access facility; therefore, no bicycle or pedestrian facilities are proposed. A sidewalk is proposed on both sides of the roadway north of the East Lake Mary Boulevard interchange, where regular (non-limited access) right-of-way is proposed. In this section, bicycles are accommodated on the 4-foot bicycle lanes. Existing sidewalks and bicycle lanes along East Lake Mary Boulevard that will be impacted by the proposed single point urban interchange (SPUI) will be replaced.

5.12 Wetlands

Wetlands and other surface waters with potential to be affected by the proposed project were identified within the Preferred Alternative and are shown in **Figure 5-10** and **Figure 5-11**.

It is anticipated that the construction of the Preferred Alternative, including preferred pond sites, will directly impact 20.1 acres of wetlands and 4.1 acres of surface waters, most of which will likely not require mitigation. The proposed direct wetland impacts result in an approximate functional loss of 11.89 UMAM units. The proposed impacts to existing conservation easements will result in a functional loss of approximately 0.52 UMAM units. Mitigation will be addressed pursuant to Chapter 373.4137, FS in order to satisfy all mitigation requirements of Part IV, Chapter 373, FS and 33 U.S.C. 1344.

Currently, this basin has no mitigation banks. Consultation regarding other mitigation options will be discussed during the design phase.

SJWMD conservation areas in the project area were located using GIS data layers from the SJWMD Data and Tools website and by searching the SJWMD Environmental Resource Permit (ERP) database for existing ERPs. Florida Conservation Lands were also analyzed using FNAI data. Of the five SJWMD regulatory conservation easements found within the study area, two would be directly impacted by the Preferred Alternative, with a total of approximately 14.9 acres of direct impacts. **Table 5-4** summarizes the proposed impacts to SJWMD regulatory conservation easement impacts from the Preferred Alternative. However, the roadway is bisecting the impacts to properties under a SJWMD Regulatory Easement, which will require a vote by the SJWMD governing board to release the easements, along with compensatory mitigation, and regulatory action.

Figure 5-10 Wetlands & Other Surface Waters Within the Preferred Alternative (North)

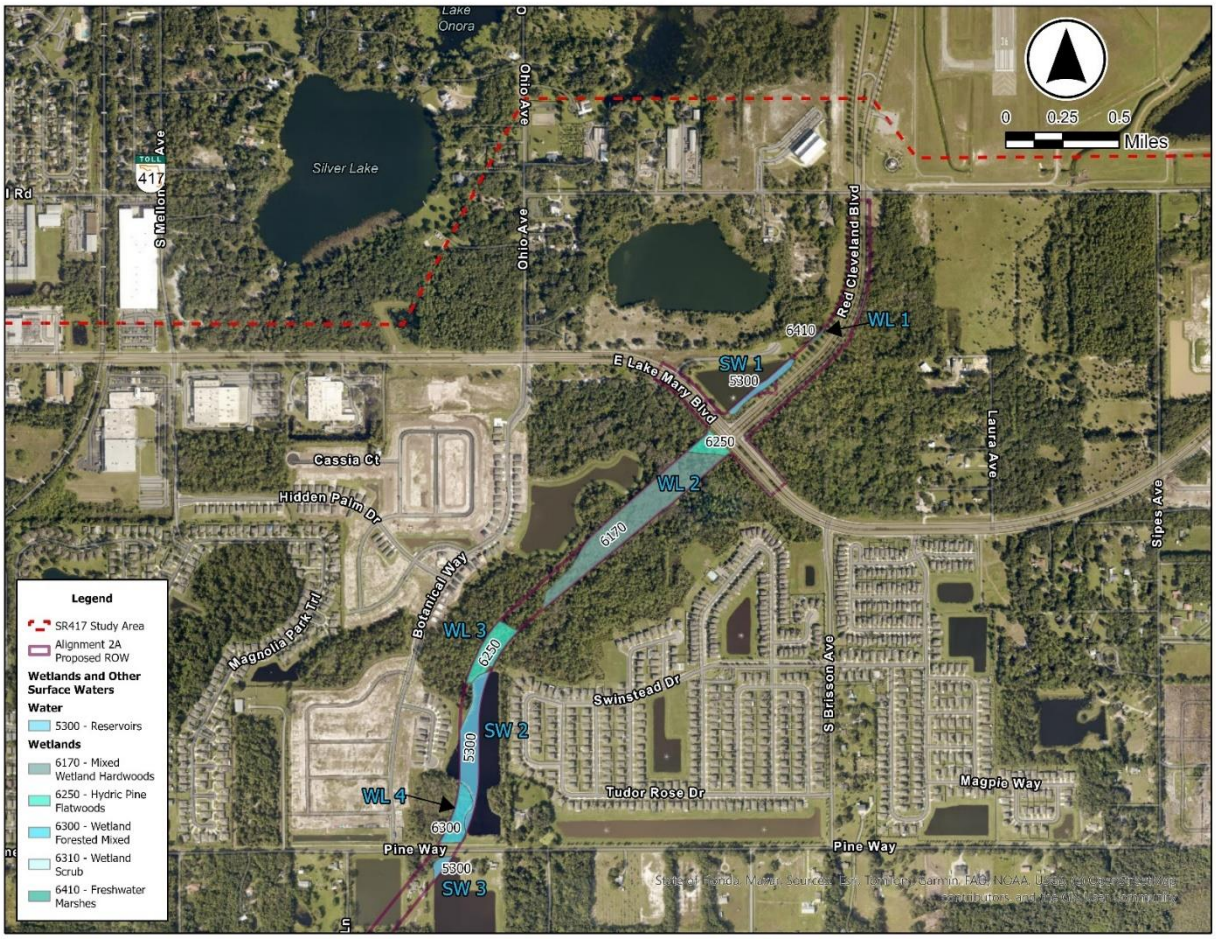


Figure 5-11 Wetlands & Other Surface Waters Within the Preferred Alternative (South)

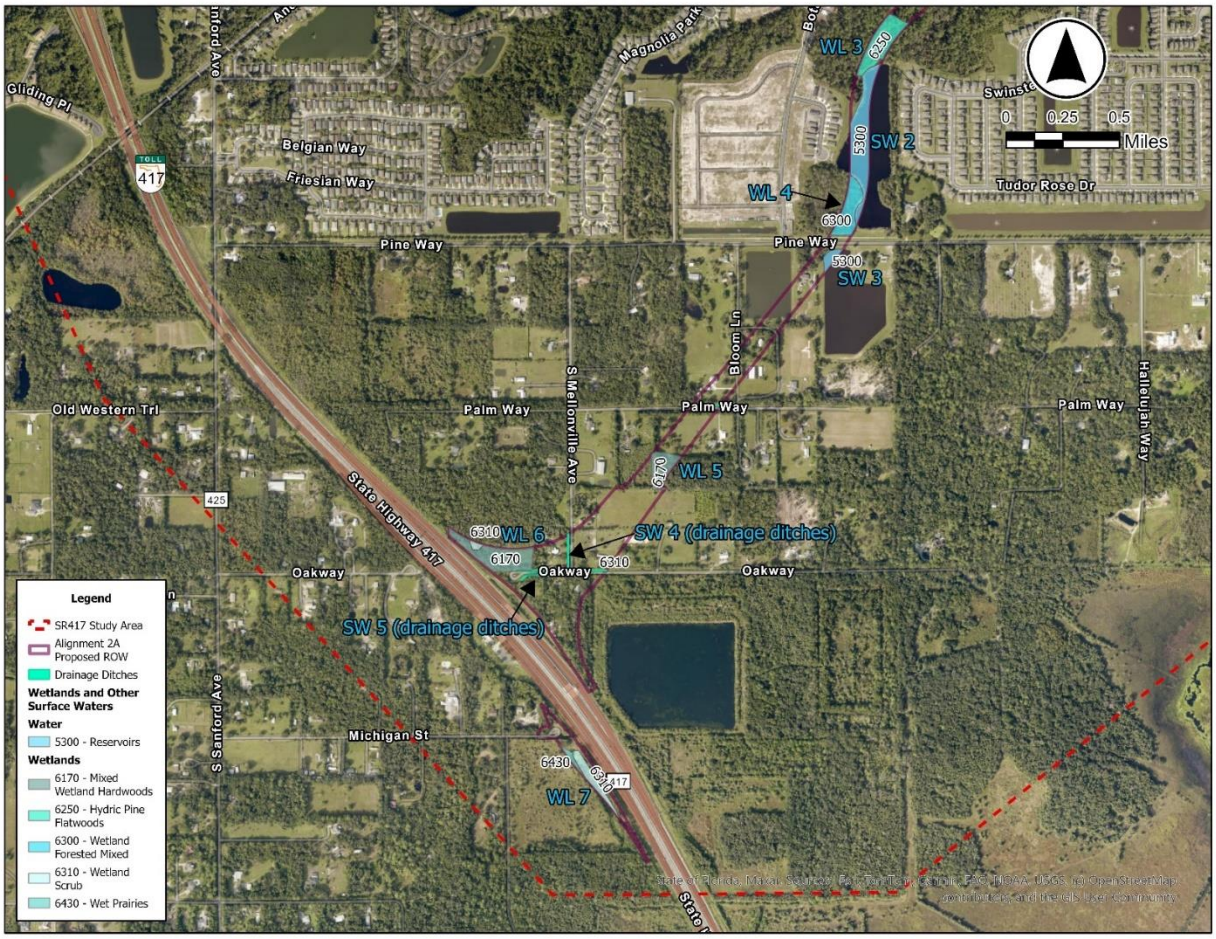


Table 5-4 Proposed Impacts to SJRWMD Easements from the Preferred Alternative

Wetland ID	FLUCFCS Code	Easement Type	Parcel No.'s	Permit No.	Approximate Acres of Impact
WL 2	625,617	SJRWMD Regulatory	0720315VZ0D000000	22290-1	10.9
WL 3	630	SJRWMD Regulatory	0720315VZ0G000000	22290-1	1.0
Preferred Pond Sites					
WL 2 Pond 3A	625	SJRWMD Regulatory Conservation Easement	0720315VZ0D000000	22290-1	3.0
				Total Direct Impacts	**14.9**

5.13 Threatened and Endangered Species and Habitat

5.13.1 Federally Listed Species

Federally listed species with the determination of "***may affect, not likely to adversely affect"*** by the preferred alternative includes the Eastern indigo snake, and wood stork.

The proposed project is anticipated to have "***no effect***" on the following federally listed species:

- Audubon's crested caracara
- Eastern black rail
- Everglades snail kite
- Florida scrub-jay

The monarch butterfly and tricolored bat are proposed for endangered federal listing by USFWS. Consultation with USFWS under section 7 of the ESA is not required for proposed species; however, CFX is dedicated to observing the regulations under the ESA in coordination with USFWS.

5.13.2 State Listed Species

The following state listed species are expected to have a "***no adverse effect is anticipated***" from the proposed project:

- Gopher tortoise
- Burrowing owl
- Florida pine snake
- Sandhill crane
- Southeastern American kestrel
- Wading birds
    - Little blue heron
    - Tricolored heron
    - Roseate spoonbill

Suitable nesting and foraging habitat for the bald eagle was observed within the Preferred Alternative corridor. Several adult bald eagles were observed flying, as well as one pair flying into a pine tree and perching next to a nest (Nest SE078a) during the field review of the study area. According to FWC's Eagle Nest Locator and the Audubon Florida Eagle Watch Nest website (EagleWatch), there are two recorded active eagle nests (SE078a and SE026) and

one destroyed eagle nest (SE078) within the Preferred Alternative corridor. For projects or activities within 660 ft of a bald eagle's nest, a USFWS eagle take permit may be necessary. The Preferred Alternative is within both the 330 feet and 660 feet protection zones of the two active nests.

The most current FWC data for the Florida black bear was reviewed and showed no documents of historical mortality or captures. No impacts to the Florida black bear are anticipated as a result of the lack of bear utilization within the Preferred Alternative.

5.13.3 Protected Plant Species

A "**no adverse effect is anticipated**" determination has been made for the chapman's sedge, sand butterfly pea, Piedmont jointgrass, hartwrightia, star anise, celestial lily, Florida beargrass, and Florida willow. A "**no effect anticipated**" determination has been made for nodding pinweed.

5.13.3 Essential Fish Habitat

In accordance with the MSFCMA, Section 7 of the ESA, and Part 2, Chapter 17, Essential Fish Habitat, of the FDOT's PD&E Manual, the SR 417 study area was evaluated for potential EFH. The study area is located within the central portion of the state of Florida and the impacts associated with this project will not affect marine or estuarine environments. Therefore, no potential impacts to EFH are proposed or expected.

5.13.4 Air Quality

An air quality analysis was performed for the Opening Year (2025) and Design Year (2045) for the proposed improvements. The analysis is documented in the Air Quality Technical Memorandum (June 2025).

The project is in an area that is designated attainment for all 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.

5.13.5 Noise

The traffic noise impact analysis conducted for this project is consistent with Title 23, Code of Federal Regulations (CFR), § 772, Part II, Chapter 18 of the FDOT PD&E Manual, and Chapter 335, Section 335.17, Florida Statutes. This assessment also adheres to current FHWA traffic noise analysis guidelines contained in FHWA-HEP-10-025. The FHWA Traffic Noise Model (TNM) - version 2.5 was used to predict traffic noise levels for this project, following guidelines set forth in the FDOT Traffic Noise Modeling and Analysis Practitioners Handbook.

Noise levels for the 2024 existing condition and the 2050 No-Build and Build Alternatives were predicted for 160 receptor locations representing 207 residential and two nonresidential Special Land Use (SLU) sites. Project noise levels for one residence, Southbound (SB)1-01, are predicted to meet or exceed the FDOT Noise Abatement Criteria (NAC) for the Design Year 2050 Build Alternative. The Build Alternative is also predicted to have a substantial noise increase at residential receptor SB4-06.

Both impacted receptors require consideration of abatement measures to mitigate the impacts. However, the impacted residences are considered "isolated," meaning that no other impacted receptors are near them. FDOT and CFX policy require two impacted receptors to receive a 5 dB(A) noise reduction for a noise barrier to be considered feasible. Consequently, a noise barrier is not considered a feasible abatement measure for an isolated impacted residence.

Based on the noise analyses performed to date, there are no feasible solutions available to mitigate the noise impacts at the two impacted receptors, SB1-01 and SB4-06.

5.13.6 Contamination Sites and Facilities

A desktop Contamination Screening Evaluation Technical Memorandum (June 2025) was performed during this PD&E Study. Within the Preferred Alternative, there are two sites ranked low, three sites ranked medium, and one site ranked high.

Within the proposed pond sites, there are four sites ranked low, three sites ranked medium, and one site ranked high.

The potential contamination sites are listed in **Table 5-5** and, pond site potential contamination risk ratings are shown in **Table 5-6**.

Table 5-5 Potential Contamination Site Summary

Site No.	Facility Name and Address	Facility ID	Concerns	Risk Rating
20	Marquette Shores Borrow Pit C&D Marquette Avenue and Ohio Avenue	27164	This site was a construction demolition debris disposal site, that received a No Further Action status. Debris may remain on-site.	Medium
21	Sanford Airport FUDS Site	FL49799F467500	This site is a former Naval Air Station with the potential for soil and groundwater impacts.	Medium

22	Brisson Road/Avenue Landfill/Dump 2861 East Lake Mary Boulevard	ERIC_8881; ERIC_5591; ERIC_5562; 83721	This site is an abandoned landfill. An April 2015 Supplemental Site Assessment Report found high methane soil exceedances, metal groundwater exceedances and remaining solid waste debris on-site. An October 2015 Addendum recommends a No Further Action for the groundwater due to low levels of exceedances. Landfill debris remains on-site. Additional areas of contamination impacts could exist.	High
25	Historical Citrus Groves and Row Crops	N/A	Typical concerns associated with citrus groves and row crops include pesticide/ herbicide storage and usage, grove heating during cooler winter months (smudge pots and other grove heating equipment), tractor and equipment maintenance and fueling, underground and aboveground fuel storage tanks, irrigation pumps and maintenance, and asbestos irrigation lines.	Medium

Table 5-6 Pond Potential Risk Rating

Pond Name	Location	Concerns	Risk Rating
Pond 417-1A	Northeast corner of the Mellonville Avenue and Oakway intersection	Historically Pond 417-1A consisted of row crop farming prior to 1986, when the site was developed with a horse pasture. In 2023, a pile of brush and tree debris is visible in the southeast corner. The potential for agricultural impacts may remain on site.	Medium

Pond 417-1B	Northeast corner of the Mellonville Avenue and Oakway intersection	Historically Pond 417-1B consisted of row crop farming and a residence. The row crops became fallow by 1986. The potential for agricultural impacts may remain on site.	Medium
Pond 417-2B	Northeast corner of the Palm Way and Bloom Lane intersection	Historically Pond 417-2B consisted of row crop farming until developed with six large horticulture grow houses. The potential for agricultural impacts may remain on site.	Medium
Pond 417-4B	East corner of the East Lake Mary Boulevard and Red Cleveland Boulevard intersection	Historically undeveloped wooded land. This site is located about 500 feet from a closed landfill with known soil contamination impacts and residual landfill debris. (Site No. 22).	High

Level II Impact to Construction Assessments (ICAs) will be recommended for the High Risk pond site (Pond 417-4B) adjacent to Site No. 22, and the Medium Risk pond sites (Ponds 417-1A, 1B, and 2B) with historical agricultural concerns.

6. Public Involvement and Project Coordination

6.1 Agency Coordination

6.1.1 Environmental Advisory Group

The Environmental Advisory Group (EAG) is an important component of the natural environment analysis. The EAG assists in providing input on potential environmental impacts documented in the evaluation of the project alternatives, and informs the project team of local knowledge, issues, and concerns. CFX identifies individuals to join the EAG; these members come from groups comprised of representatives from state, regional and local environmental and governmental agencies, well-known advocacy and community groups, and other key stakeholders.

Three EAG meetings were held as part of this study, with a fourth meeting scheduled for July 8, 2025.

August 20, 2024 EAG meeting: The first EAG meeting was held both virtually and in-person at the CFX Pelican Conference Room. Invitation letters were emailed to 44 EAG members and alternate designees on August 6, 2024. A meeting reminder was emailed on August 15, 2024. There were 10 attendees - 6 EAG members and 4 staff members. Issues EAG members discussed included:

- The East Lake Mary Boulevard raised viaduct option, which would be the least impactful to the local environment.
- The study timeframe.
- The need to avoid conservation areas.

January 9, 2025 EAG meeting: The second EAG meeting was held virtually via Microsoft Teams. Invitation letters were emailed to 44 members of the EAG on December 18, 2024, and a reminder was emailed on December 30, 2024. Eighteen people attended the meeting – 7 EAG members and 11 staff members.

Issues EAG members discussed included:

- The appropriateness of a two-lane expressway, with several participants questioning whether projected traffic demand—much of it not directly related to the airport—warranted a four-lane facility.
- Environmental concerns, particularly regarding conservation easements, wildlife habitats, floodplains, and potential water management issues near Lake Jesup.
- The need for more robust traffic modeling, coordination with regional planning efforts, and cultural resource surveys prior to construction.

March 26, 2025, EAG Meeting: CFX hosted a third EAG meeting via Microsoft Teams. Invitation letters were emailed to 44 members of the EAG on March 10, 2025, and a reminder was emailed on March 24, 2025. Twenty people attended the meeting – 10 EAG members and 10 staff members.

Issues EAG members discussed included:

- Questions about the extent of the impacts to residential parcels that may be affected by the new alignment alternative.
- Concerns about impacts to stormwater with Alternative 2 and 2A to Lake Jesup and wetlands in the area, and the need to provide quality stormwater treatment and design as it is important to ensure that any alternative is protective of the area.
- The need to show where conservation easements and wetland boundaries are located in relation to the alignment alternatives.
- The elimination of Alignment 4 (Viaduct) relates to the purpose and need of the potential expressway.

6.1.2 Project Advisory Group

The Project Advisory Group (PAG) is an important component of the mobility analysis. The PAG assists in providing input in the evaluation of the project alternatives, and informs the project team of local knowledge, issues, and concerns. CFX identifies individuals to join the

PAG; these members come from groups comprised of representatives from state, regional and local environmental and governmental agencies, well-known advocacy and community groups, and other key stakeholders.

Three PAG meetings were held as part of this study, with a fourth meeting scheduled for July 8, 2025.

August 20, 2024, PAG meeting: The first PAG meeting was held both virtually and in-person at the CFX Pelican Conference Room. Invitation letters were emailed to 51 members of the PAG on August 6, 2024, and a reminder was emailed on August 15, 2024. Twenty-two people attended the meeting – 10 PAG members and 12 staff members.

Issues PAG members discussed included:

- Potential impacts to businesses along East Lake Mary Boulevard.
- A potential project coming online of 284 multi-family units at the intersection of East Lake Mary Boulevard and Cameron.
- The need for congestion management measures at the intersection of East Lake Mary Boulevard and Ronald Reagan County Road 427.

January 9, 2025 PAG meeting: CFX hosted the second PAG meeting via Microsoft Teams. Invitation letters were emailed to 52 members of the PAG on December 18, 2024, and a reminder was emailed on December 30, 2024. Twenty-three people attended the meeting - 12 PAG members and 11 staff members.

Issues PAG members discussed included:

- Seminole County will be doing improvements to Sipes Avenue, which runs parallel to Alignment 1.
- The desire to add a row to the cost evaluation matrix to include cost per mile.
- Concern that people may miss the entrance to the airport if they are driving east on East Lake Mary Boulevard due to the overhead bridge structure.

March 26, 2025, PAG Meeting: CFX hosted a third PAG meeting via Microsoft Teams. Invitation letters were emailed to 52 members of the PAG on March 10, 2025 and a reminder was emailed on March 24, 2025. Twenty-six people attended the meeting – 14 PAG members and 12 staff members.

Issues PAG members discussed included:

- A possible discrepancy in traffic data on East Lake Mary Boulevard, and the need to revisit some of those numbers.

- The need for adequate signage on SR 417 so that drivers do not exit early before reaching the airport.

- A desire for the connector to be built as a 4-lane expressway rather than the 2-lane expressway as it is currently being studied.

6.1.3 Community Engagement Group

The Community Engagement Group (CEG) is an important component of the mobility analysis. The CEG

assists in providing input in the evaluation of the project alternatives, and informs the project team of local knowledge, issues, and concerns. CFX identifies individuals to join the CEG; these members come from well-known advocacy and community groups, and other key stakeholders.

Three CEG meetings were held as part of this study, with a fourth meeting scheduled for July 8, 2025.

August 21, 2024 CEG meeting: The CEG held its first meeting both virtually and in-person at the Boombah Sports Complex. Invitation letters were emailed to 15 members of the CEG on August 6, 2024, and a reminder was emailed on August 15, 2024. Fourteen people attended the meeting - 4 CEG members and 10 staff members.

Issues CEG members discussed included:

- Questions about potential impact to properties along East Lake Mary Boulevard.

- Questions about where retention ponds will need to be placed in Alignment 4.

- The need for cooperation with Seminole County and the City of Sanford in limiting growth in the area.

January 8, 2025 CEG meeting: CFX hosted the second CEG meeting in person at The Boombah Sports Complex and virtually via Microsoft Teams. Invitation letters were emailed to 15 members of the CEG on December 18, 2024, and a reminder was emailed on December 30, 2024. Seven people attended the meeting - 3 CEG members and 5 staff members.

Issues CEG members discussed included:

- Galileo School for Gifted Learning is located on Skyway Drive and Kentucky Street to Sipes Avenue. The new expressway and related traffic changes may pose a challenge to people during school drop off and pick up, which will be a lot of cars to process in 45 minutes.
- The difference between the information being presented today, versus what will be presented in the upcoming Alternatives Public Workshop that is being held next week.

March 26, 2025 CEG Meeting: CFX hosted the third CEG meeting via Microsoft Teams. Invitation letters were emailed to 15 members of the CEG on March 10, 2025, and a reminder was emailed on March 24, 2025. Eleven people attended the meeting - 2 CEG members and 9 staff members.

Issues CEG members discussed included:

- Questions about how the potential toll revenue of the expressway factors into the design process.
- Clarification about ramps coming to and from the north side of SR 417 that could be built in the future.

6.1.4 Environmental Stewardship Committee

The Environmental Stewardship Committee (ESC) assists the CFX Board by providing oversight and guidance for the protection of Central Florida's natural environment through conservation and sustainable practices. The committee will evaluate projects and programs so they are designed to support the responsible use and protection of the natural environment through conservation and sustainable practices and make recommendations to the CFX Board.

May 30, 2024 ESC Meeting: Will Hawthorne, Director of Transportation Planning and Policy for CFX, provided background information on the SR 417 Sanford Airport Connector Project Development and Environment (PD&E) Study, a new direct expressway connection from SR 417 north of Lake Jesup to the Orlando Sanford International Airport.

March 6, 2025 ESC Meeting: Will Hawthorne, Director of Transportation Planning and Policy for CFX, noted that the Sanford Airport Connector PD&E Study, which began in May 2024, is nearing completion and is expected to be finalized in summer 2025. David Dangel (Ardurra) presented a detailed update.

May 25, 2025 ESC Meeting: Amanda Ashby (Ardurra) presented updates on the PD&E study. The study evaluates a new expressway connection between SR 417 and Orlando Sanford International Airport. Five alignment alternatives were analyzed. Alignments 1, 3A, 3D, and 4

were eliminated based on environmental and community impact. The refined alternatives—Alignment 2 and Alignment 2A—were presented at a Refined Alternatives Public Workshop on April 2, 2025.

6.1.5 Other Stakeholder Meetings

The Public Engagement Plan involved identifying and communicating with state, regional, and local agencies having a potential interest in this project due to jurisdictional review or expressed interest.

June 24, 2024, Seminole County Coordination Meeting: The project team met in-person with Seminole County on June 24, 2024. Nine people attended the meeting - 5 County staff members and 4 project staff members.

Issues the County discussed included:

- Connecting the project team with the Seminole County Development Engineering group.
- Discussion of potential impacts of Alternatives 2, 3A, and 3D at Red Cleveland Boulevard and E. Lake Mary Boulevard to planned commercial development and land use designations according to a Growth Spotter article. The County was reviewing the permit, but not aware of changes in land use.
- Advent Health emergency room development at the corner of Ronald Reagan Boulevard and E. Lake Mary Boulevard and driveway connections to County roads.
- New commercial development on the north side of E. Lake Mary Boulevard between Mellonville Avenue and Ohio Avenue, and access to County roads for that parcel. Coordination with the site developer regarding additional right-of-way was discussed however the project team indicated that alternatives were still in the early evaluation process.
- The project team would include the County in distribution of the study Kick-off Meeting minutes.

June 26, 2024, City of Sanford Coordination Meeting: The project team met in-person with the City of Sanford on June 26, 2024. Six people attended the meeting - 2 City staff members and 4 project staff members.

Issues the City discussed included:

- Updates on a recent Seminole County coordination meeting regarding growth in the area including:
    - Developments on the south side of E. Lake Mary Boulevard and land use designations according to a Growth Spotter article. The County was reviewing the permit and the City does not support the land use for this location.

    - Advent Health emergency room development at the corner of Ronald Reagan Boulevard and E. Lake Mary Boulevard.
    - New commercial development on the north side of E. Lake Mary Boulevard between Mellonville Avenue and Ohio Avenue.
    - Historic landfill located between SFB Crossings and Seminole Gardens and remediation costs
    - Silver Lake Industrial Park connection disruption to potential connection on Alignments 2, 3A, and 3D at Red Cleveland Boulevard/E. Lake Mary Boulevard.
- General discussion about how the CF&M alignments would bridge over local roads so access is maintained to properties along those roads.

June 27, 2024, Orlando Sanford International Airport Coordination Meeting: The project team met in-person with the Orlando Sanford International Airport on June 27, 2024. Seven people attended the meeting - 2 Airport staff members and 5 project staff members.

Issues the Airport discussed included:

- Revision to the name of the project to communicate that the project is not solely for the Airport – Sanford Connector and Lake Mary Boulevard Connector were proposed by Airport staff.
- Stormwater discussion noted that future facilities should not attract wildlife, desired preferred slopes, and the Airport would like the opportunity to review proposed ponds.
- Future Airport construction and estimated growth numbers from FAA.
- Preferred verbiage regarding airport traffic was discussed with “passengers” being the preferred terminology.
- Local future growth surrounding the airport planned by Seminole County, including a sports complex, commercial/retail development and residential growth.
    - The Airport is aware of the historic landfill located between SFB Crossings and Seminole Gardens and discussion regarding contamination issues followed.

January 21, 2025, Seminole County Tourism Improvement District Coordination Meeting: The project team met in-person with Seminole County Tourism Improvement District (TID) on January 21, 2025. Eleven people attended the meeting - 4 County staff members and 7 project staff members.

Issues the TID discussed included:

- The goals of a new tax are to pay for a proposed indoor sports facility. The tax was to be voted on by the Board of County Commissioners in February, following this meeting. Discussion also included facility usage and whether the county had completed any traffic analysis.
- TID expressed concern about presenting 2-lane alternatives given future development. The project team indicated that all alternatives except the viaduct option are expandable to 4-lanes. The timing of future lane needs was discussed.
- CFX brought up capacity and congestion on East Lake Mary Boulevard. The County does not have any plans to widen the roadway as traffic volumes do not exceed capacity. The County clarified that congestion is found at intersections.
- The growth at the Airport and potential for the airport to add a new legacy carrier to SFB.

February 12, 2025, SJWMD. The project team met in-person with SJWMD on February 12, 2025. Thirteen people attended the meeting - 4 SJWMD staff members and 9 project staff members.

Issues the SJWMD discussed included:

Potential impacts to existing SJWMD Conservation Easements (CE) including coordination with multiple projects for the CE south of Red Cleveland Boulevard between Concorde and Kensington development. SJWMD noted that an exchange of impacts to the CE's would impact the Environmental Resource Permit process and impacts over 2 acres or to sensitive lands would need board approval. Additionally, unmapped CEs would be identified by SJWMD upon provision of plans by the project team.

A question was raised by SJWMD about local eagle nests, and the FWC database is frozen. Audubon Citizens Science Information may be used instead.

A thorough discussion of future SJWMD right-of-way properties concluded that SJWMD is open to reviewing any areas that CFX believes could be considered for mitigation. The project team confirmed that the SJWMD invitees on the Environmental Advisory Group for this project were correct.

April 18, 2025, Florida's Turnpike Enterprise Coordination Meeting: The project team met in-person with the Florida's Turnpike Enterprise (FTE) on April 18, 2025. Thirteen people attended the meeting - 6 FTE staff members and 7 project staff members.

Issues FTE discussed included:

- Discussion of Alignments 2 and 2A – Selection of CFX PD&E Preferred Alternative and public comments received at the recent public meeting.
- SR 417/Connector Interchange ramp speed
- SR 417 future mainline toll gantry location and potential TSTM
- Status of Turnpike SR 417 8-lane widening design project north of SR 434
- Status of the IAR and projected timelines for review/DIRC meetings/etc.
- General discussion about how the CF&M alignments would bridge over local roads so access is maintained to properties along those roads.

April 22, 2025, Seminole County Board of County Commissioners Meeting: Will Hawthorne, Director of Transportation Policy & Planning for CFX, addressed the Board and introduced CFX Executive Director Michelle Maikisch and CFX Senior Director of External Affairs Racquel Asa. Mr. Hawthorne presented the SR 417 Sanford Airport Connector PD&E Study Update. The presentation was followed by Board comments and questions.

6.2 Public Involvement

The Public Engagement Plan (PEP) included conducting a Kickoff Meeting, and two public meetings to present the latest study information and to gather vital feedback from the public. A third meeting was added following the Alternatives Public Workshop. Details of the public meetings can be found below:

Public Kick-Off Meeting

The Public Kick-Off Meeting was held on Thursday, September 12, 2024, from 5:30 to 7:30 p.m. at Millenium Middle School's cafeteria. A simultaneous virtual (online) session was hosted from 6 p.m. to 7:30 p.m. through Microsoft Teams. Participants were able to view a presentation about the study, ask questions and provide comments in writing.

Invitations were mailed on August 16, 2024, to 2,960 property owners and tenants along the corridor. Invitations were also emailed and mailed to 30 elected officials and their aides; 41 interested parties and stakeholders; and 97 government partners. Additionally, an email invitation was sent to 500+ recipients in the project database.

A FAR ad was published in the Vol. 50/176 edition of the Florida Administrative Register on Thursday, September 5, 2024. Meeting information was posted on the project webpage and posted in the CFX lobby. The meeting was also advertised with legal ads in the *Sanford Herald* on September 1, 2024 and the *Orlando Sentinel* on September 7, 2024.

A total of 92 people attended the in-person meeting at Millennium Middle School, and 90 people attended virtually. Government partners from the City of Sanford, Seminole County,

Florida's Turnpike Enterprise and Orlando Sanford International Airport were in attendance either virtually or in-person. Members of the media also covered the public meeting.

CFX received 36 public comments during and after the meeting, reflecting a range of concerns. Several residents questioned the need for the project, citing minimal airport traffic impact. Others raised environmental concerns, particularly regarding bald eagle nests, and opposed certain alternatives affecting recently built homes. Additional feedback focused on anticipated traffic noise and worsening congestion along East Lake Mary Boulevard. All meeting materials were posted to the project webpage for public access.

Alternatives Public Workshop

The Alternatives Public Workshop was held in person at the Sanford Civic Center on Tuesday, January 14, 2025, from 5:30 p.m. to 7:30 p.m. A simultaneous online (virtual) session was hosted from 6 p.m. to 7:30 p.m. through Microsoft Teams. Participants were able to view a presentation about the study, ask questions and provide comments in writing.

Public meeting invitation letters were mailed on December 18, 2024, to 2,960 property owners and tenants along the corridor. Invitations were also emailed and mailed to 30 elected officials and their aides; 41 interested parties and stakeholders; and 97 government partners. Additionally, an email invitation was sent to 500+ recipients in the project database. A FAR ad was published in the Vol. 51/01 edition of the Florida Administrative Register on Thursday, January 2, 2025. Meeting information was posted on the project webpage and posted in the CFX lobby.

The public meeting was advertised with legal ads in the *Sanford Herald* and the *Orlando Sentinel* on January 1, 2025.

A total of 157 people attended the State Road 417 Sanford Airport Connector PD&E Study public meeting—90 in person at the Sanford Civic Center and 67 virtually. Government representatives from the City of Sanford and Seminole County also participated. Ten public comments were received during the meeting and the following 10-day comment period. Key themes included skepticism about the project's link to airport-related traffic, with several attendees attributing congestion to residential growth and regional drivers. Some questioned projected airport growth. Multiple commenters favored Alternative 3A for being cost-effective and practical. Concerns were also raised about existing traffic backups on East Lake Mary Boulevard that should be addressed before introducing new roadway changes.

Refined Alternatives Public Workshop

Following the April 2, 2025 Alternatives Public Workshop for this PD&E Study, CFX eliminated Alignments 1, 3A, 3D and 4 from further consideration. Alignment 2 and a variation of this alignment, designated as Alignment 2A, proceeded with further analysis and evaluation to determine the Preferred Alternative. As a result of this change, CFX scheduled a Refined Alternatives Public Workshop to share details about the new alternative with the public.

Public meeting invitation letters were mailed on February 26, 2025, to 2,960 property owners and tenants along the corridor. Invitations were also emailed and mailed to 30 elected officials and their aides; 41 interested parties and stakeholders; and 97 government partners. Additionally, an email invitation was sent to 500+ recipients in the project database.

The public meeting was advertised with legal ads in the *Sanford Herald* and the *Orlando Sentinel* on March 21, 2025.

A total of 189 people attended the State Road 417 Sanford Airport Connector hybrid public meeting, with 110 attending in person and 79 participating virtually. Forty-three comments were received during or within 10 days of the meeting. Many commenters expressed strong support for Alignment 2, citing concerns that Alignment 2A would split neighborhoods and cause flooding. Additional feedback included suggestions to explore a connection with Airport Boulevard, concerns over stormwater runoff affecting Palm Hammock, and objections from residents of Concorde and Kensington Reserve about potential impacts on property values, noise, and pollution.

Project Webpage

a study webpage on the CFX website was developed to engage the public in study activities (https://www.cfxway.com/agency-information/plans-studies/project-studies/pde-study-sr417-sanfordairportconnector/).

Throughout the study, the page was updated with the latest exhibits, schedules, handouts, presentations, meeting notices, and summaries.

6.3 Public Hearing

To be updated following public hearing.

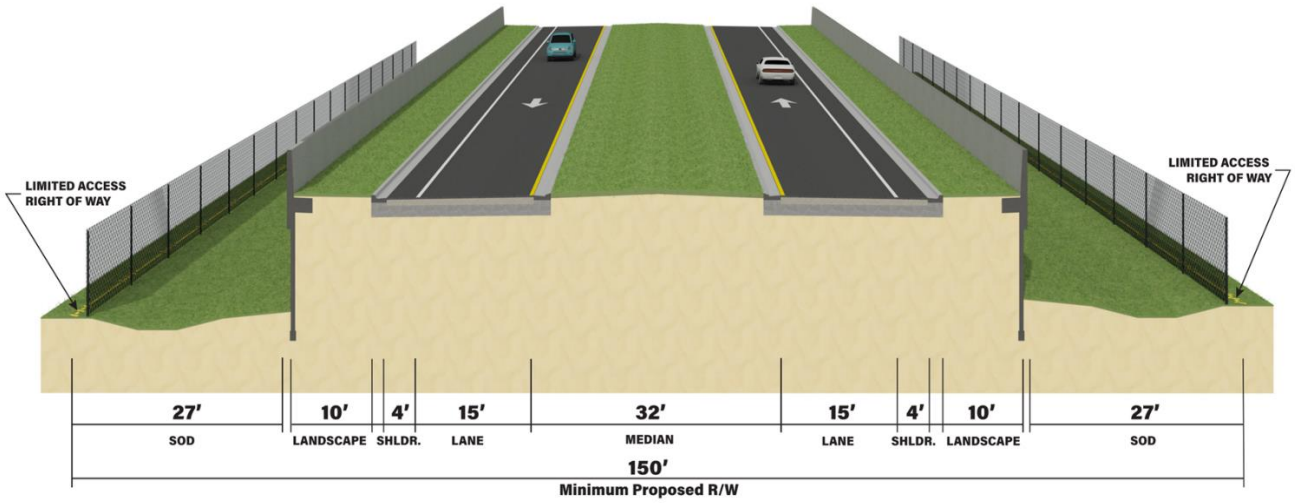
7. Design Features of the Preferred Alternative

7.1 Engineering Details of the Preferred Alternative

7.1.1 Roadway Typical Sections

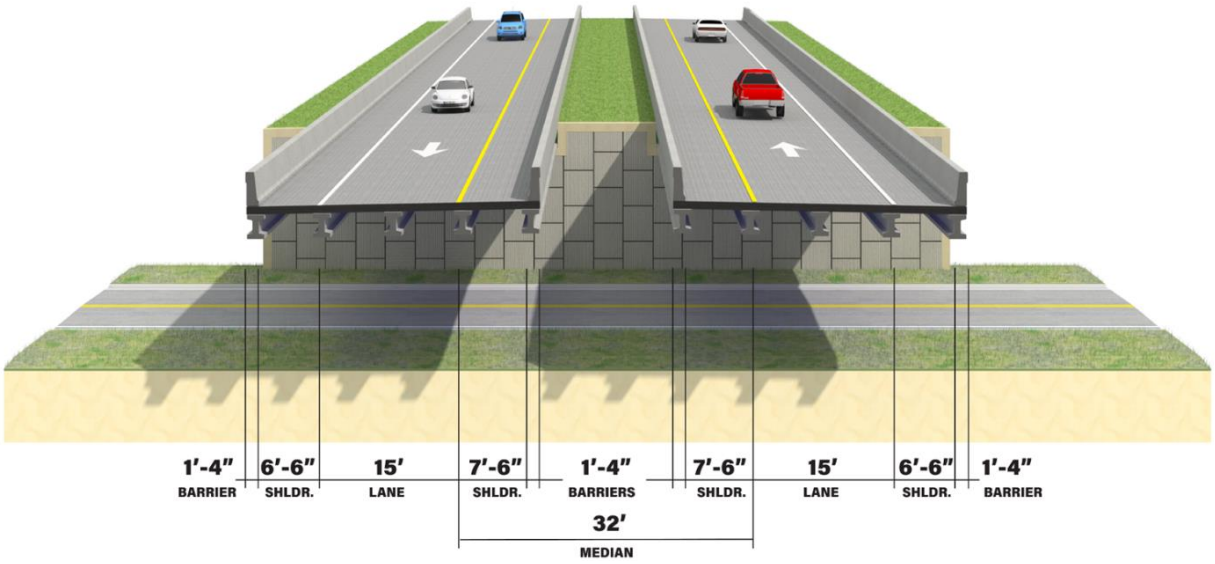
The proposed connector typical section, shown in **Figure 7-1**, consists of a divided roadway with two 15-foot travel lanes, a grassed 32-foot median, 4-foot paved shoulders, and 10-foot landscaping strips on each side of the roadway. Retaining walls run adjacent to the roadway and are separated from a wildlife fence by 27-feet of grass on each side.

Figure 7-1 Two Lane Proposed Connector Typical Section



The proposed bridge typical section, shown in **Figure 7-2**, consists of two separate bridges with one 15-foot travel lane, 6-foot 6-inch outside shoulder, 7-foot 6-inch inside shoulder, and a 1-foot 4-inch barrier on both sides of each bridge.

Figure 7-2 Proposed Connector Bridge Typical Section



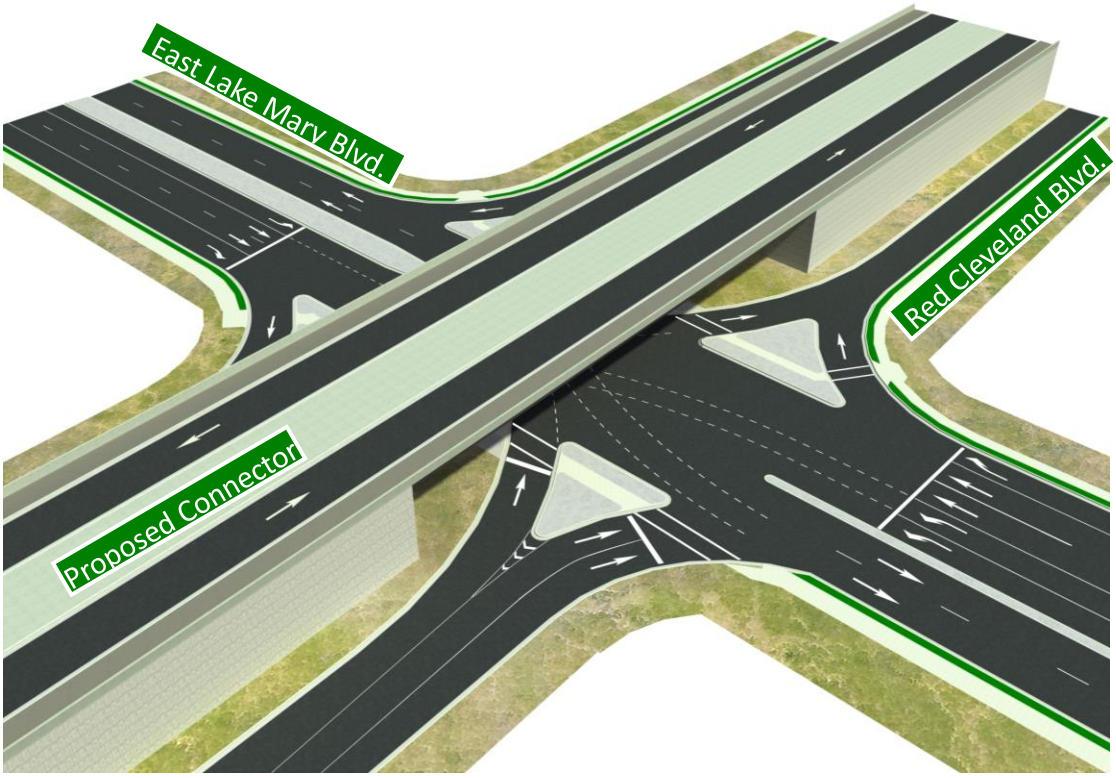
7.2 Interchange Refinements

There are two interchanges within the project limits. The first is at the existing SR 417 where ramps to and from the south are being proposed. The second interchange is a single point urban interchange (SPUI) at East Lake Mary Boulevard. The facility terminates at the at-grade intersection at Marquette Avenue. Concept plans that include interchanges and intersection are included in **Appendix A.**

7.2.1 Proposed Interchange at East Lake Mary Boulevard

Shown in **Figure 7-3** is the proposed interchange with the potential airport connector at East Lake Mary Boulevard for Alignment 2,2A, 3A and 3D. It would allow travelers on the proposed airport connector headed northbound to exit at East Lake Mary Boulevard or continue north to Red Cleveland Boulevard, and it would allow traffic to head south on the proposed Airport Connector from East Lake Mary Boulevard. Existing sidewalks and pedestrian facilities along East Lake Mary Boulevard would be maintained.

Figure 7-3 Proposed Interchange at East Lake Mary Boulevard



7.2.2 Bridges and Structures

Construction of the proposed roadway will require numerous bridges and retaining walls to accommodate crossing of existing surface streets and ponds, and to minimize the amount of right-of-way necessary for embankment side slopes. New single and multi-span bridges are required to span SR 417, Oak Way, Mellonville Avenue, Palm Way, Pine Way and nearby private stormwater ponds. The conceptual bridge layouts utilized the bridge typical sections developed during the CFX Concept, Feasibility, and Mobility (CF&M) Study from 2023 with modifications to shoulder widths on curved ramp bridges to accommodate stopping sight distance requirements. A descriptive summary of the proposed bridges and estimated costs are included below and summarized in **Table 7-1**. Bridge typical sections are provided in **Appendix B.**

Table 7-1 Proposed Bridges

Bridge Site	Roadway Carried	Over	No. Spans	Rdwy. Width (Lanes)	Total Length	Super Type	Bridge Area (SF)	Bridge Cost[(1)]
1	CONN-WB	Palm Way	1	24'(1 Lane)	132'	FIB-54	3,507	$0.60M
	CONN-EB	Palm Way	1	24'(1 Lane)	132'	FIB-54	3,507	$0.60M
2	CONN-WB	Pine Way, Ponds	15	29'(1 Lane)	2357'	FIB-72	75,309	$13.21M
	CONN-EB	Pine Way, Ponds	15	29'(1 Lane)	2373'	FIB-72	75,345	$13.22M
3	CONN-WB	E. Lake Mary Blvd.	3	24'(1 Lane)	270'	FIB-78	7,200	$1.35M
	CONN-EB	E. Lake Mary Blvd.	3	24'(1 Lane)	270'	FIB-78	7,200	$1.35M
4	CONN-WB	SR 417 NB/SB	2	29'(1 Lane)	535'	Curved Steel Girder	17,271	$6.12M
5	CONN-WB	Oakway, Mellonville Ave.	1	29'(1 Lane)	166'	FIB-78	5,548	$0.94M
6	CONN-EB	Oakway	1	29'(1 Lane)	108'	FIB-45	4,295	$0.73M
							Total Bridge Cost:	$38.11M

Note (1): Bridge costs based on deck area alone. See project cost estimate for a more detailed accounting of the cost of bridge approach elements (i.e.: approach slabs and walls).

7.2.2.1 Connector WB/EB over Palm Way

The proposed expressway crosses the existing Palm Way surface street approximately 2300 feet east of SR 417 as a pair of parallel bridges carrying the EB and WB expressway traffic over the existing roadway. The proposed alignment in this area is tangent and crosses the existing 88'-0" roadway right-of-way at approximately a 38.8-degree skew. The Typical Section Package from the Concept, Feasibility, and Mobility (CF&M) Study proposes an elevated roadway on MSE-type retaining walls which are located outside of the existing right-of-way, resulting in a required bridge length of 131'-6" between the face of end bent backwalls. The proposed typical section of each bridge includes a 2'-6" inside shoulder, 15'-0" travel lane, 6'-6" outside shoulder, 36-inch single slope traffic railings (Index 521-027) on each side, an 8½" thick concrete deck slab, all supported by four 54-inch Florida-I Beams (FIB-54, Index 450-054).

7.2.2.2 Connector WB/EB over Pine Way and Stormwater Retention Ponds

The proposed expressway alignment crosses the existing Pine Way surface street, and a trio of adjacent stormwater retention ponds, passing between the existing Concorde and Kensington Reserve housing developments approximately 4000 feet east of SR 417. To avoid impacting the existing ponds and to minimize bridge length and right-of-way needs, the bridge approaches utilize wrap-around MSE retaining walls with the alignment to remain

elevated on bridge as a pair of parallel structures carrying the EB and WB expressway traffic. The proposed alignment in this area goes through a series of reverse 1146-foot radius curves and connecting tangent segments, resulting a 15-span viaduct bridge nearly 2,400 feet long. The proposed typical section of each bridge includes a 6'-0" inside shoulder, 15'-0" travel lane, 8'-0" outside shoulder, 36-inch single slope traffic railings (Index 521-027) on each side, and an 8½" thick concrete deck slab. Span lengths were limited to 160 feet to accommodate the use of chorded prestressed concrete beams. The typical roadway of each bridge is supported by four 72-inch Florida-I Beams (FIB-72, Index 450-072) with variable overhangs on each side ranging between 2'-6" and 5'-6".

7.2.2.3 Connector WB/EB over East Lake Mary Boulevard

Located 8000 feet east of SR 417, the expressway crosses existing East Lake Mary Boulevard at the entry to SFB as a pair of parallel bridges carrying the proposed EB and WB traffic over the existing roadway. This intersection accommodates traffic movements from expressway ramps to the west in addition to access to Red Clevland Avenue and is configured as a Single Point Urban Interchange (SPUI). Proposed bridge piers are set behind the ramp curbs and outside of the clear zone of the East Lake Mary Blvd. roadway resulting in 3-span bridge with a main span of 170'-0" and end spans of 50'-0". The proposed main span typical section of each bridge includes a 2'-6" inside shoulder, 15'-0" travel lane, 6'-6" outside shoulder, 36-inch single slope traffic railings (Index 521-027) on each side, an 8½" thick concrete deck slab, all supported by four 78-inch Florida-I Beams (FIB-78, Index 450-078).

7.2.2.4 Connector WB over SR 417

The westbound expressway ramp to SR 417 southbound crosses the existing SR 417 expressway at a high skew. The ramp flyover alignment is curved with a 1300-foot radius and results in the need for a long span bridge with skewed pier supports within the existing SR 417 median. The end bridge supports and approach retaining walls are located outside of the existing abandoned toll ramps to ensure future maintenance access is maintained. This requires a 2-span bridge with an overall length of 535'-0" and a maximum effective span length of 258'-9". Given the high skew of the crossing, the intermediate pier located within the SR 417 median is configured to utilize twin integral diaphragms sitting upon a pair of staggered single column piers which are aligned with the existing SR 417 median. This proposed configuration minimizes impacts to the existing inside shoulders of SR 417 and helps keep the overall profile of the ramp low. The integral diaphragms could be configured as either steel or post-tensioned concrete, with concrete offering the benefits of internal redundancy and fatigue resistance. The proposed typical section of the bridge includes an 8'-6" inside shoulder, 15'-0" travel lane, 6'-0" outside shoulder, 42-inch single slope traffic railings (Index 521-028) on each side, an 8½" thick concrete deck slab, all supported by four

108-inch web curved steel plate girders. The inside shoulder on the bridge is widened to accommodate stopping sight distance requirements.

Although a steel plate girder superstructure offers the most economical structure type, twin trapezoidal steel box girders may also be considered for improved aesthetics while maintaining the same overall bridge geometry. The use of steel box girders also offers improved structural performance given the combined effects of span length, curvature, and skew.

7.2.2.5 Connector WB over Oakway and Mellonville Avenue

The proposed westbound expressway ramp crosses the existing Oakway and Mellonville Avenue surface streets approximately 700 feet east of SR 417 as a single lane ramp bridge. The ramp alignment is curved with a 1300-foot radius and crosses the surface streets where they intersect. The retaining walls of the proposed approach roadway are set behind the existing right-of-way lines resulting in a required bridge length of 166'-0". Chorded prestressed concrete beams are feasible and preferred over curved steel girders due to the elevated cost of steel and long lead times during construction. The proposed typical section of the bridge includes a 10'-0" inside shoulder, 15'-0" travel lane, 6'-0" outside shoulder, 36-inch single slope traffic railings (Index 521-027) on each side, an 8½" thick concrete deck slab, all supported by four chorded 78-inch Florida-I Beams (FIB-78, Index 450-078) with variable overhangs on each side ranging between 2'-9" and 5'-4". The inside shoulder on the bridge is widened to accommodate stopping sight distance requirements.

7.2.2.6 Connector EB over Oakway

The proposed eastbound expressway ramp crosses the existing Oakway surface streets approximately 700 feet east of SR 417 as a single lane ramp bridge. The ramp alignment is curved with a 955-foot radius and crosses the existing 61'-0" roadway right-of-way at approximately a skew. Given the relatively short span, the bridge supports were arranged orthogonal to the alignment to avoid skew within the structure and retaining walls set behind the existing right-of-way. This results in a required bridge length of only 127'-0". Chorded prestressed concrete beams are again utilized feasible and preferred over curved steel girders due to the elevated cost of steel and long lead times during construction. The proposed typical section of the bridge includes a 6'-0" inside shoulder, 15'-0" travel lane, 16'-0" outside shoulder, 36-inch single slope traffic railings (Index 521-027) on each side, an 8½" thick concrete deck slab, all supported by five chorded 45-inch Florida-I Beams (FIB-45, Index 450-045) with variable overhangs on each side ranging between 2'-10" and 4'-4". The inside shoulder on the bridge is widened to accommodate stopping sight distance requirements.

7.2.3 Right of Way and Parcels

The Preferred Alternative will require 35 acres for the roadway right-of-way. This will impact eight residential and 17 non-residential parcels. These values include parcels that are only considered partially impacted.

The proposed pond sites will require an additional 11 Acres of right-of-way. This will impact four additional parcels, 2 of which are residential and the remaining 2d are non-residential.

7.3 Horizontal and Vertical Alignment

7.3.1 Horizontal Alignment

The proposed horizontal geometry for the Preferred Alternative is shown in **Table 7-2**.

Table 7-2 Proposed Horizontal Geometry

Element	Bearing	Station POT/PI/PC/PRC/PT				Radius (ft.)	Degree of Curve (Degrees, Minutes, Seconds)	Curve Length (ft.)	Super Elevation (e) (ft./ft.)	Design Speed (mph)
Ramp – NB SR 417 to EB SR 417 Connector										
Curve 1		PC	400+00	PT	412+10	955	6°00′	1,120	0.092	50
Ramp – WB SR 417 Connector to SB SR 417										
Curve 1		PC	300+00	PT	306.88	3,094	1°51′06″	689	0.038	50
Tangent 1	N 41°19′ 52″ W									
Curve 2		PC	309+63	PT	327+82	1,300	4°24′27″	1,818	0.078	50
Mainline – SR 417 Connector										
Tangent 1	N 38°49′ 30″ E									
Curve 1		PC	133+64	PT	141+41	1,146	5°00′	776	0.072	45
Tangent 2	N 0°00′ 00″ E									
Curve 2		PC	145+16	PT	154+89	1,146	5°00′	973	0.072	45
Tangent 3	N 48°40′ 21″ E									
Curve 3		PC	186+52	PT	196+28	1,146	5°00′	975	0.072	45

PC = point of curve, PI = point of intersection, PT = point of tangent, Sta. = station

7.3.2 Vertical Alignment

The proposed vertical geometry for the Preferred Alternative is shown in **Table 7-3**.

Table 7-3 Proposed Vertical Geometry

Element	Grade (%)	VPI Station	Sag/Crest	K- Value	Curve Length (ft.)	Design Speed (mph)
Ramp – NB SR 417 to EB SR 417 Connector						
Curve 1	(+)1.05 / (-)3.62	404+20	Crest	136	635	50
Curve 2	(-)3.62 / (-) 0.79	409+36	Sag	96	272	50
Ramp – WB SR 417 Connector to SB SR 417						
Curve 1	(+)0.30 / (+) 5.00	306+22	Sag	96	451	50
Curve 2	(+) 5.00 / (-) 3.50	316+53	Crest	136	1,156	50
Curve 3	(-) 3.50 / (-) 1.05	324+22	Sag	96	235	50
Mainline – SR 417 Connector						
Curve 1	(-) 1.05 / (+) 0.77	107+43	Sag	440	800	45
Curve 2	(+) 0.77 / (-) 0.37	117+57	Crest	701	800	45
Curve 3	(-) 0.37 / (+) 1.66	125+59	Sag	383	800	45
Curve 4	(+) 1.66 / (-) 0.50	134+60	Crest	463	1,000	45
Curve 5	(-) 0.50 / (+) 3.00	164+17	Sag	229	800	45
Curve 6	(+) 3.00 / (-) 4.70	177+50	Crest	136	1,050	45
Curve 7	(-) 4.70 / (+) 0.50	185+50	Sag	106	550	45

7.3.3 Design Deviation

No design variations or design exceptions are proposed.

7.4 Access Management

The SR 417 Connector is a proposed limited access facility. The limited access right-of-way begins at the SR 417 interchange and ends on the south side of the East Lake Mary Boulevard interchange. From north of the interchange to the at-grade intersection at Marquette Avenue, a regular (non-limited access) right-of-way is being proposed.

7.5 Drainage

The proposed SR 417 Sanford Airport Connector is a predominantly new roadway alignment, except at the beginning and end of the project, where the proposed road will tie into existing roadways, and will alter drainage patterns to some extent. The proposed drainage patterns will mimic the existing/historic drainage patterns as closely as possible. Proposed cross drains will convey existing ditches/streams and off-site flows. The Location Hydraulics

Report (LHR) for the project addresses off-site conveyance and is provided under a separate cover.

The proposed typical section footprint includes the option to widen to four lanes in the future. Pond sizing was performed assuming a fully paved median to allow for future conditions. The ultimate condition includes a total impervious area of 45.05 acres. Consequently, new stormwater management facilities (SMFs) are required to adequately treat the additional pavement and meet regulatory criteria. Two pond sites for each basin were identified along the corridor: both sized to provide sufficient treatment capacity. No floodplain impacts are anticipated; therefore, floodplain compensation is not required.

Required pond sizes for each basin were determined by evaluating the increase in runoff volume using the Natural Resources Conservation Service (NRCS) curve number (CN) method and calculating treatment volume requirements. These volumes were summed and combined with landscaping, pond geometry, side slopes, freeboard, and maintenance berm assumptions to produce an estimated total required pond size. Pond size estimates include a 20% increase in area to account for landscaping aesthetics and tie-ins to the existing ground. Since this is a rough analysis for pond sizing capacity, recovery calculations for orifice sizing and permanent pool calculations are not included in the pond sizing considerations. Please note that the recommendations were based on pond sizes determined from preliminary data, reasonable engineering judgment, and assumptions. Pond size requirements may change during the final design as more detailed information on seasonal high groundwater table (SHGWT), wetland hydrologic information, and the final roadway profile become available.

Design considerations for each pond site location included a desktop review of the best available data, which included hydraulic data, hydrology (land use cover, soil types, SHGWT, etc.), contamination sites, wetland extents, wildlife areas, archaeological or historical sites, and conservation areas. No site-specific investigations have been performed or used in this analysis, including field survey, geotechnical testing, wetland delineation, threatened and endangered species observations, archaeological/cultural resources investigations, or contamination screenings. The results are summarized in **Table 7-4**.

Table 7-4 Evaluated Pond Options

Pond Site	Preferred Pond	Wetland Impact (ac)	Conservation Easement	Wildlife Habitat	Contamination Risk	Archaeological Resources Impacts	Cultural Resources Impacts	Access Issues	Number of Parcels/Property Owners	Pond Right-of-way Area (ac)
Pond 417-1A (Option 1)		0	None	Low	None	Low	High	None	3/2	1.75
Pond 417-1B (Option 2)	✓	0	None	Low	None	Low	Low	None	1/1	1.75
Pond 417-1C1, Pond 417-1C2	✓	0.34	None	Low	None	Low	Low	None	N/A (2)	1.60
Pond 417-2A (Option 1)	✓	0.11	None	Low	None	Low	Low	None	1/1	1.45
Pond 417-2B (Option 2)		0	None	Low	None	Low	Low	None	2/1	1.45
Pond 417- 3A (Option 1)		1.66 (1)	Yes	High – Eagle Nest <330ft	Yes	Moderate	Low	None	1/1	3.44
Pond 417-3B (Option 2)	✓	3.44	None	High – Eagle Nest @ 330ft	None	Low	Low	None	1/1	3.44
Pond 417-4A (Option 1)	✓	0	None	High – Eagle Nest @660ft	None	Low	Low	None	1/1	4.70
Pond 417-4B (Option 2)		1.35	None	Low	High	Low	Low	None	1/1	1.35

7.6 Maintenance of Traffic

7.6.1 Transportation Management Plan

The SR 417 Sanford Airport Connector is a new facility on a new alignment. The Transportation Management Plan (TMP) will therefore focus on areas where the proposed connector will interface with existing facilities. This includes the interchange at SR 417, the interchange at Cleveland Blvd/E. Lake Mary Blvd. and the proposed flyovers over local roadways (Oakway, Palm Way and Pine Way). The TMP will include phased construction along Red Cleveland Blvd. given that the proposed roadway is directly over the existing roadway. Access to the Sanford International Airport via Red Cleveland Blvd. will be maintained during all phases of construction. The construction of the proposed bridges over existing roadways will involve temporary detours during beam placement. Coordination with Florida's Turnpike Enterprise and local agencies for detour routes will be required.

7.7 Preliminary Cost Estimates

The cost estimate for the Preferred Alternative is summarized in **Table 7-5**. Additional details are provided in **Appendix C**.

Table 7-5 Preferred Alternative Cost Estimate

Cost Element	Cost
Roadway Construction (including design & CEI)	$172,200,000
Utility Relocation	$3,100,000
Right-of-way	$18,300,000
Mitigation, Wetlands, & Wildlife	$6,800,000
Total Estimated Cost	**$200,400,000**

7.8 Toll Conditions

7.8.1 Future Tolling at the SR 417 Lake Jesup Plaza

While the proposed connector ramps would be located just south of the existing SR 417 Lake Jesup toll plaza, CFX is committed to preserving FTE's toll collection and revenue in its entirety and proposes the following two options in that regard: (1) unified toll collection, and (2) relocation of the SR 417 mainline gantry south of the proposed connector. Depending on the option agreed upon by both CFX and FTE management, and whether the PD&E Study is approved by the CFX Governing Board, and the decision to move forward with design is made, CFX commits to fully evaluating the details involved for the option selected after the

PD&E Study is completed. Additional details are outlined in the letter provided in **Appendix D**.

Appendix A
Concept Plans

STATE OF FLORIDA

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PREFERRED ALIGNMENT CONCEPT PLANS

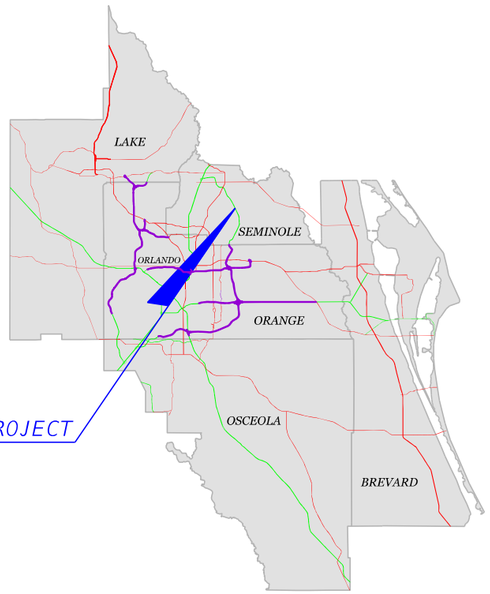
SR 417 (SEMINOLE EXPRESSWAY) TO ORLANDO SANFORD INTERNATIONAL AIRPORT CONNECTOR PD&E STUDY

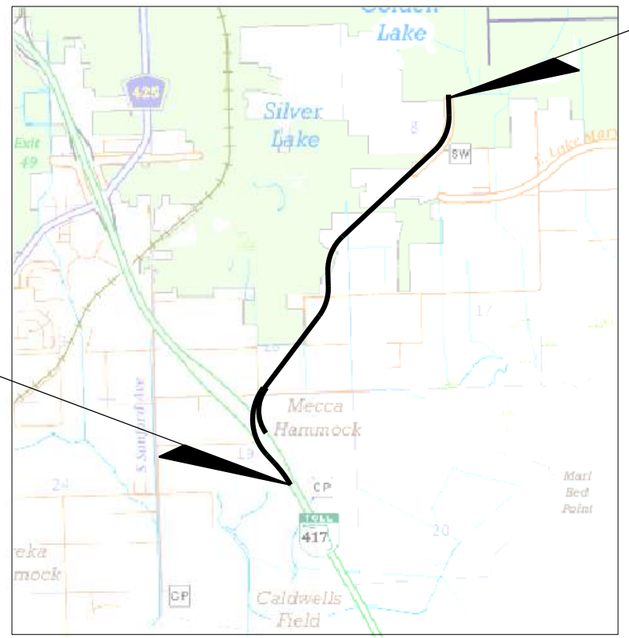
STATE ROAD NO. 417

PROJECT NO. 417-246A

INDEX OF CONCEPT PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2-12	CONCEPT PLANS
13-24	PROFILE SHEETS





DRAFT CONCEPT PLANS
NOT FOR CONSTRUCTION
JUNE 2025

APPROVED BY:

JAYMIN PATEL
LICENSE
No 82267
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

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

ARDURRA GROUP, INC.
3452 LAKE LYNDA DRIVE, SUITE 200
ORLANDO, FL 32817
JAYMIN PATEL, P.E. NO. 82267

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

SHEET NO.
1

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

CURVE DATA (CL-RAMP 1)

PI STA.	= 303+45.74
Δ	= 12° 45' 06" (LT)
D	= 1° 51' 06"
T	= 345.74
L	= 688.62
R	= 3,094.09
PC STA.	= 300+00.00
PT STA.	= 306+88.62
e	= 0.038
DS	= 50 mph

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 2

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
6/26/2025 7:06:30 AM
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

N

0 20 100
Feet

MICHIGAN ST

CL-RAMP 1

CL-RAMP 2

℄ CONST. SR417
ON RAMP

PT STA. 306+88.62

PC STA. 309+63.37

305

310

315

TOLL
417

STA. 302+00.00 SEE SHEET 1

STA. 317+00.00 SEE SHEET 3

℄ CONST. SR417
OFF RAMP

PT STA. 412+10.14

BEGIN RAMP
STA. 412+10.14

CL-RAMP 3

CURVE DATA (CL-RAMP 1)	
PI STA.	= 303+45.74
Δ	= 12° 45' 06" (LT)
D	= 1° 51' 06"
T	= 345.74
L	= 688.62
R	= 3,094.09
PC STA.	= 300+00.00
PT STA.	= 306+88.62
e	= 0.038
DS	= 50 mph

CURVE DATA (CL-RAMP 2)	
PI STA.	= 320+57.23
Δ	= 80° 09' 22" (RT)
D	= 4° 24' 27"
T	= 1,093.85
L	= 1,818.69
R	= 1,300.00
PC STA.	= 309+63.37
PT STA.	= 327+82.06
e	= 0.078
DS	= 50 mph

CURVE DATA (CL-RAMP 3)	
PI STA.	= 407+01.56
Δ	= 72° 36' 12" (LT)
D	= 5° 59' 58"
T	= 701.56
L	= 1,210.14
R	= 955.00
PC STA.	= 400+00.00
PT STA.	= 412+10.14
e	= 0.092
DS	= 50 mph

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 3

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
7:06:49 AM
6/26/2025
gpanaccione

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

N

0 20 100
Feet

CL-RAMP 2

℄ CONST. SR417
ON RAMP

℄ CONST. SR417
AIRPORT
CONNECTOR

MELLONVILLE AVE

TOLL
417

320

325

405

400

410

STA. 317+00.00 SEE SHEET 2

STA. 102+23.48

STA. 105+00.00 SEE SHEET 4

PC STA. 400+00.00

℄ CONST. SR417
OFF RAMP

CL-RAMP 3

END RAMPS
BEGIN CONNECTOR MAINLINE
STA. 327+28.06
STA. 400+52.00
STA. 102+23.48

POND
1B

OAKWAY

CURVE DATA (CL-RAMP 2)		CURVE DATA (CL-RAMP 3)	
PI STA.	= 320+57.23	PI STA.	= 407+01.56
Δ	= 80° 09' 22" (RT)	Δ	= 72° 36' 12" (LT)
D	= 4° 24' 27"	D	= 5° 59' 58"
T	= 1,093.85	T	= 701.56
L	= 1,818.69	L	= 1,210.14
R	= 1,300.00	R	= 955.00
PC STA.	= 309+63.37	PC STA.	= 400+00.00
PT STA.	= 327+82.06	PT STA.	= 412+10.14
e	= 0.078	e	= 0.092
DS	= 50 mph	DS	= 50 mph

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

F:\Projects\CFX-003-01\roadway\PLANROO2A.dgn 6/26/2025 7:07:08 AM gpanaccione

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 4

STA.105+00.00 SEE SHEET 3

STA. 120+00.00 SEE SHEET 5

0 20 100
Feet

PALM WAY

POND
2A

POND
1B

℄ CONST. SR417
AIRPORT CONNECTOR

BLOOM LN

105 110 115 1

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 5

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
6/26/2025 7:07:36 AM
gnanaccione

POND 2A

BLOOM LN

PINE WAY

BOTANICAL WAY

℄ CONST. SR417
AIRPORT CONNECTOR

0 20 100
Feet

STA. 120+00.00 SEE SHEET 4

STA. 135+00.00 SEE SHEET 6

PC STA. 133+64.50

CL-ALT2A1

CURVE DATA (CL-ALT2A1)

PI STA.	= 137+68.35
Δ	= 38° 49' 30" (LT)
D	= 4° 59' 59"
T	= 403.85
L	= 776.56
R	= 1,146.00
PC STA.	= 133+64.50
PT STA.	= 141+41.06
e	= 0.072
DS	= 45 mph

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 6

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
7:07:57 AM
6/26/2025
gpanaccione

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

N

0 20 100
Feet

VIOLET SHELTON CT

℄ CONT. SR 417
AIRPORT CONNECTOR

CL-ALT2A1

CL-ALT2A2

STA. 135+00.00 SEE SHEET 5

STA. 150+00.00 SEE SHEET 7

PT STA. 141+41.06

PC STA. 145+15.89

PINE WAY

SWINSTEAD DR

CURVE DATA (CL-ALT2A1)

PI STA.	= 137+68.35
Δ	= 38° 49' 30" (LT)
D	= 4° 59' 59"
T	= 403.85
L	= 776.56
R	= 1,146.00
PC STA.	= 133+64.50
PT STA.	= 141+41.06
e	= 0.072
DS	= 45 mph

CURVE DATA (CL-ALT2A2)

PI STA.	= 150+34.20
Δ	= 48° 40' 21" (RT)
D	= 4° 59' 59"
T	= 518.31
L	= 973.52
R	= 1,146.00
PC STA.	= 145+15.89
PT STA.	= 154+89.41
e	= 0.072
DS	= 45 mph

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 7

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
6/26/2025 7:08:24 AM
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond

0 20 100
Feet

℄ CONST. SR417
AIRPORT CONNECTOR

155

PT STA. 154+89.41

160

CL-ALT2A2

STA. 150+00.00 SEE SHEET 6

STA. 165+00.00 SEE SHEET 8

POND
3B

CURVE DATA (CL-ALT2A2)

PI STA.	=	150+34.20
Δ	=	48° 40' 21" (RT)
D	=	4° 59' 59"
T	=	518.31
L	=	973.52
R	=	1,146.00
PC STA.	=	145+15.89
PT STA.	=	154+89.41
e	=	0.072
DS	=	45 mph

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

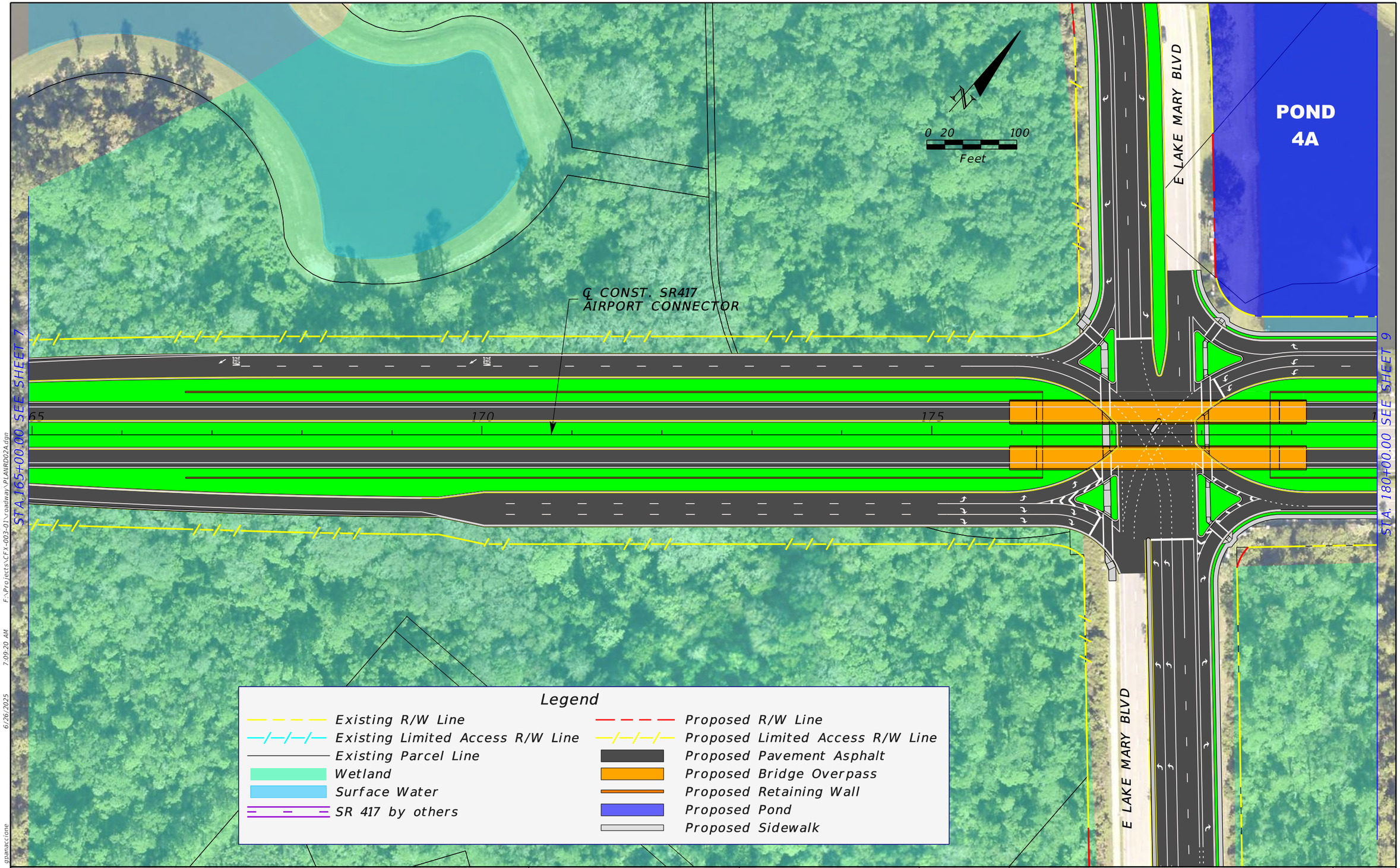
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 8



F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
7:09:20 AM
6/26/2025
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 9

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond
- Proposed Sidewalk

N

0 20 100
Feet

SKYRAIDER CT

POND
4A

STA. 180+00.00 SEE SHEET 8

RED CLEVELAND BLVD

185

℄ CONST. SR417
AIRPORT CONNECTOR

CL-ALT2A3

PC STA. 186+52.41

190

RED CLEVELAND BLVD

STA. 195+00.00 SEE SHEET 10

CURVE DATA (CL-ALT2A3)

PI STA.	=	191+71.94
Δ	=	48° 45' 49" (LT)
D	=	4° 59' 54"
T	=	519.54
L	=	975.58
R	=	1,146.28
PC STA.	=	186+52.41
PT STA.	=	196+27.99
e	=	0.072
DS	=	45 mph

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn
6/26/2025 7:09:41 AM
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

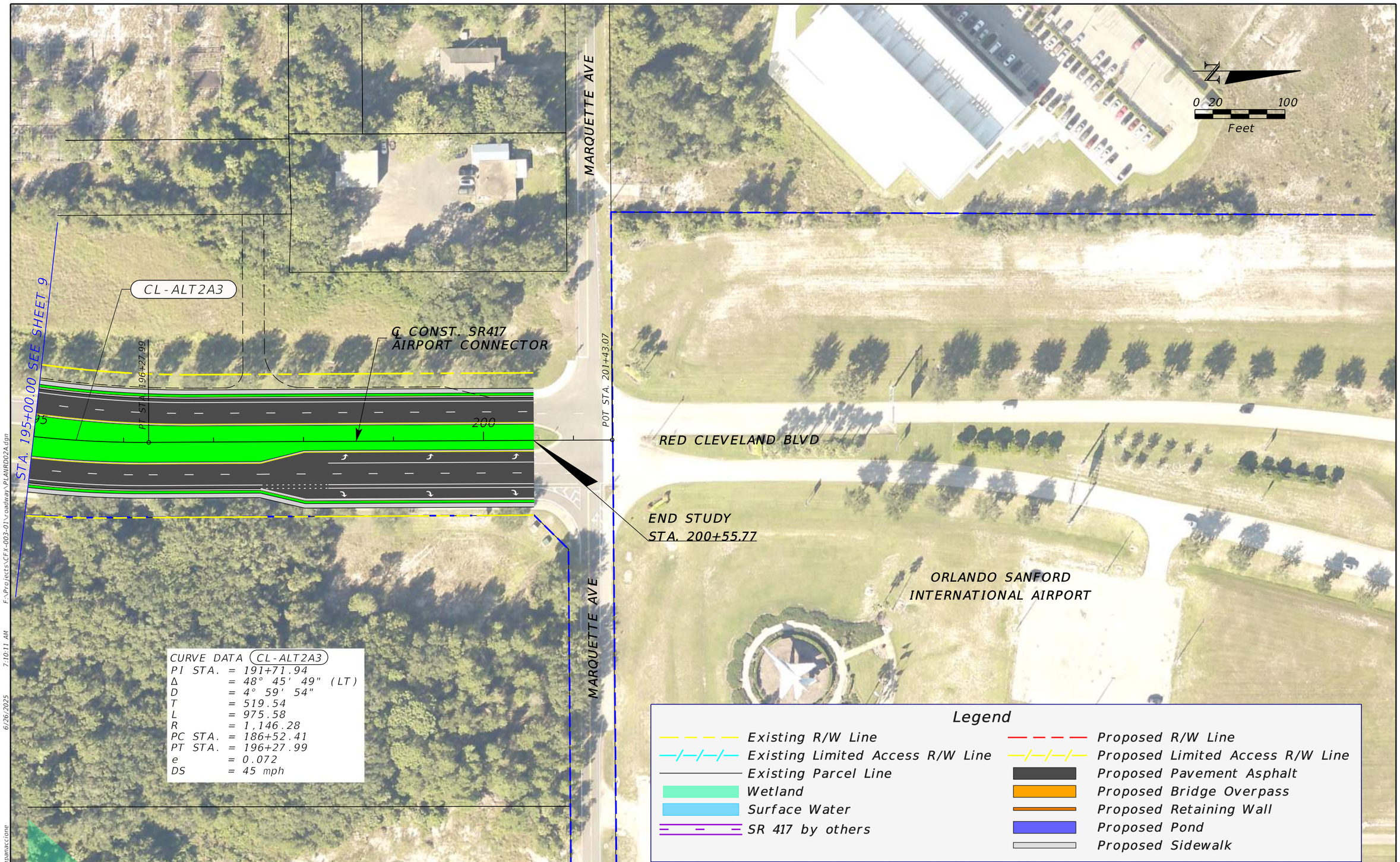
SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 10



CURVE DATA (CL-ALT2A3)

PI STA.	=	191+71.94
Δ	=	48° 45' 49" (LT)
D	=	4° 59' 54"
T	=	519.54
L	=	975.58
R	=	1,146.28
PC STA.	=	186+52.41
PT STA.	=	196+27.99
e	=	0.072
DS	=	45 mph

Legend

- Existing R/W Line
- Existing Limited Access R/W Line
- Existing Parcel Line
- Wetland
- Surface Water
- SR 417 by others
- Proposed R/W Line
- Proposed Limited Access R/W Line
- Proposed Pavement Asphalt
- Proposed Bridge Overpass
- Proposed Retaining Wall
- Proposed Pond
- Proposed Sidewalk

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLAN
ALIGNMENT 2A

SHEET NO. 11

F:\Projects\CFX-003-01\roadway\PLANRD02A.dgn 6/26/2025 7:10:11 AM gtpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

gpanaccione 6/26/2025 7:27:34 AM F:\Projects\CFX-003-01\roadway\PLANRD09LM_200scale.dgn

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

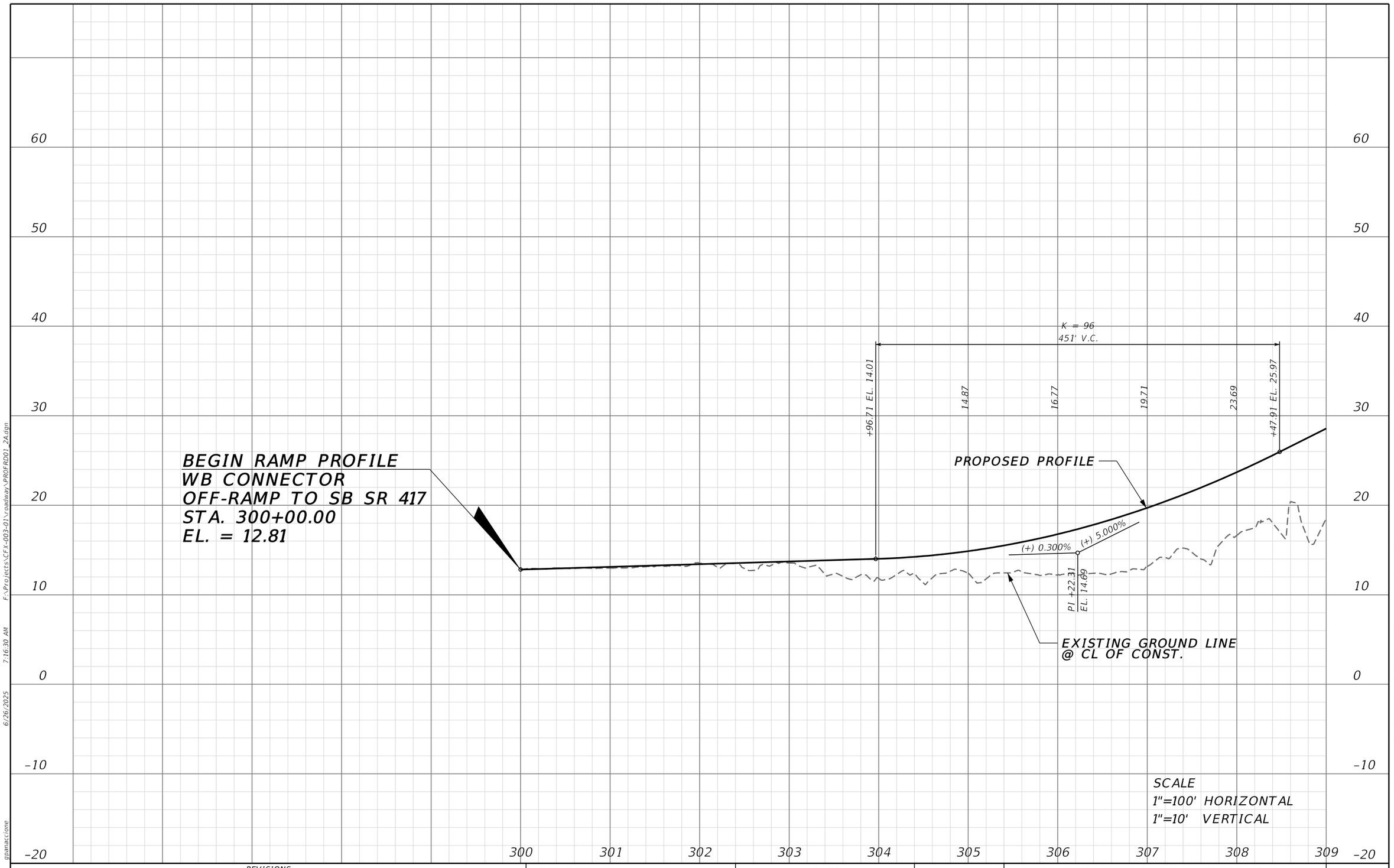
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

PD&E STUDY
CONCEPT PLANS ALIGN. 2A
LAKE MARY BLVD

SHEET NO. 12



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
7:16:30 AM
6/26/2025
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

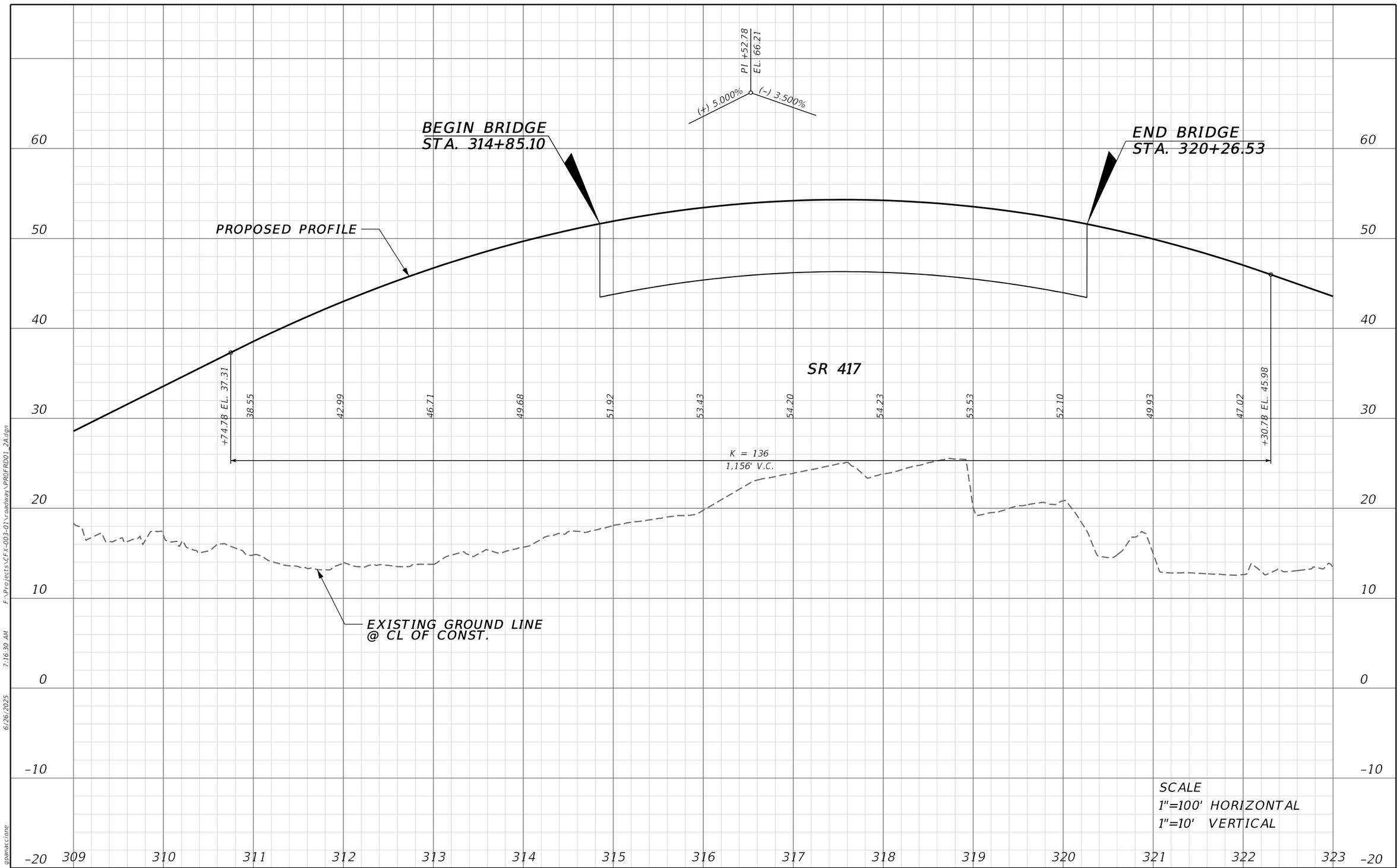
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

WB CONNECTOR OFF RAMP TO SB SR 417 PROFILE SHEET (1)

SHEET NO. 13



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn 7:16:30 AM 6/26/2025 gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

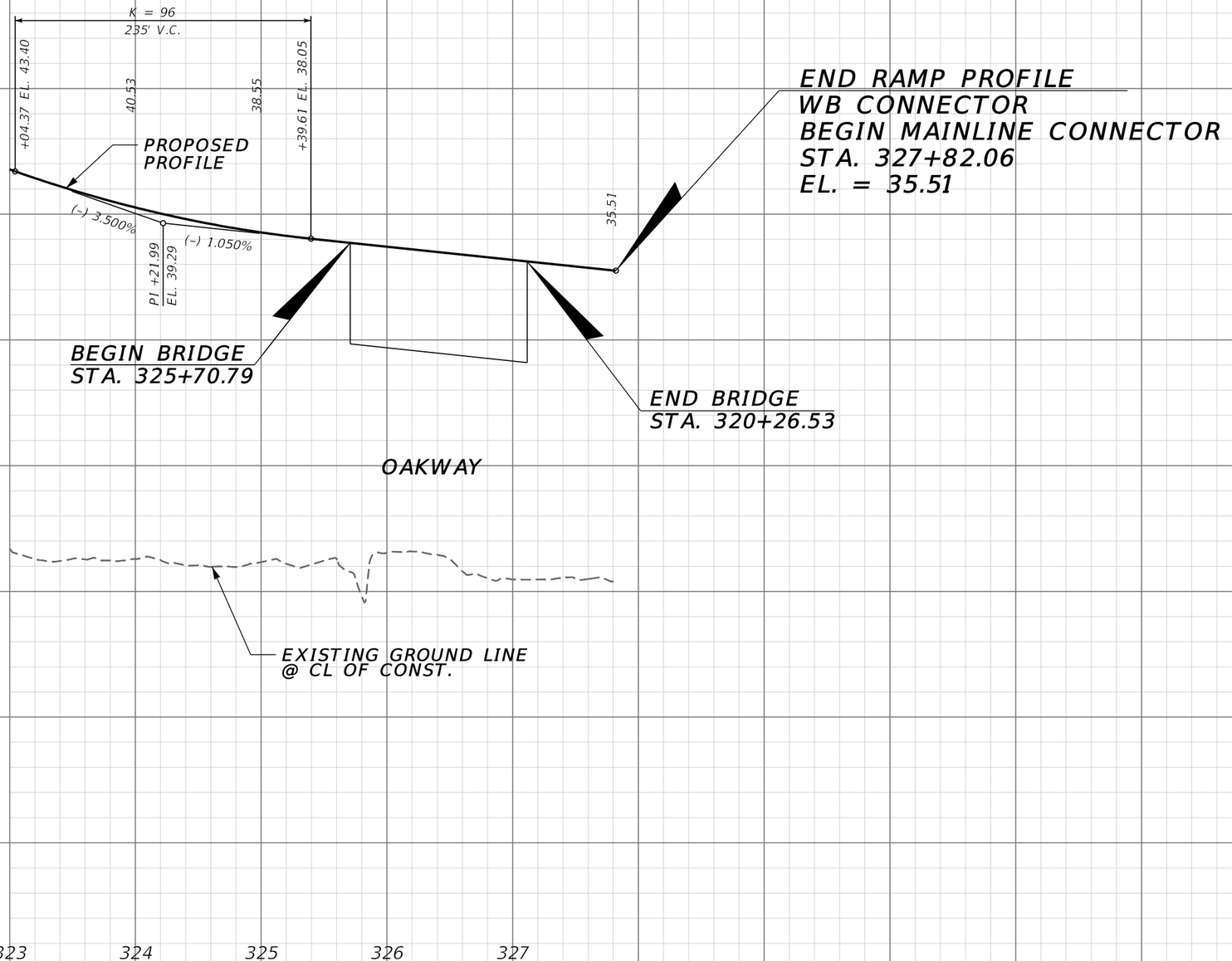
SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

WB CONNECTOR OFF RAMP TO SB SR 417 PROFILE SHEET (2)

SHEET NO. 14



SCALE
1"=100' HORIZONTAL
1"=10' VERTICAL

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

WB CONNECTOR OFF RAMP TO SB SR 417 PROFILE SHEET (3)

SHEET NO. 15

F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
6/26/2025 7:16:31 AM
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

END RAMP PROFILE
BEGIN CONNECTOR MAINLINE
EB CONNECTOR
ON-RAMP FROM NB SR 417
STA. 400+50.00
EL. = 35.51

BEGIN BRIDGE
STA. 402+11.46

PI +19.94
EL. 39.39

PROPOSED PROFILE

BEGIN RAMP PROFILE
EB CONNECTOR
ON-RAMP FROM NB SR 417
STA. 411+84.10
EL. = 18.66

END BRIDGE
STA. 401+22.05

35.51

(–) 1.050%

(+) 1.050%

(–) 3.617%

+02.59 EL. 36.06

36.73

36.70

35.93

34.42

32.18

29.21

+37.30 EL. 27.91

OAKWAY

K = 136
635' V.C.

+00.14 EL. 25.64

22.54

20.49

+71.73 EL. 19.65

K = 96
272' V.C.

18.66

(–) 3.617%

(–) 0.788%

PI +35.93
EL. 20.73

EXISTING GROUND LINE
@ CL OF CONST.

SCALE
1"=100' HORIZONTAL
1"=10' VERTICAL

60 50 40 30 20 10 0 –10 –20

400 401 402 403 404 405 406 407 408 409 410 411 412

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

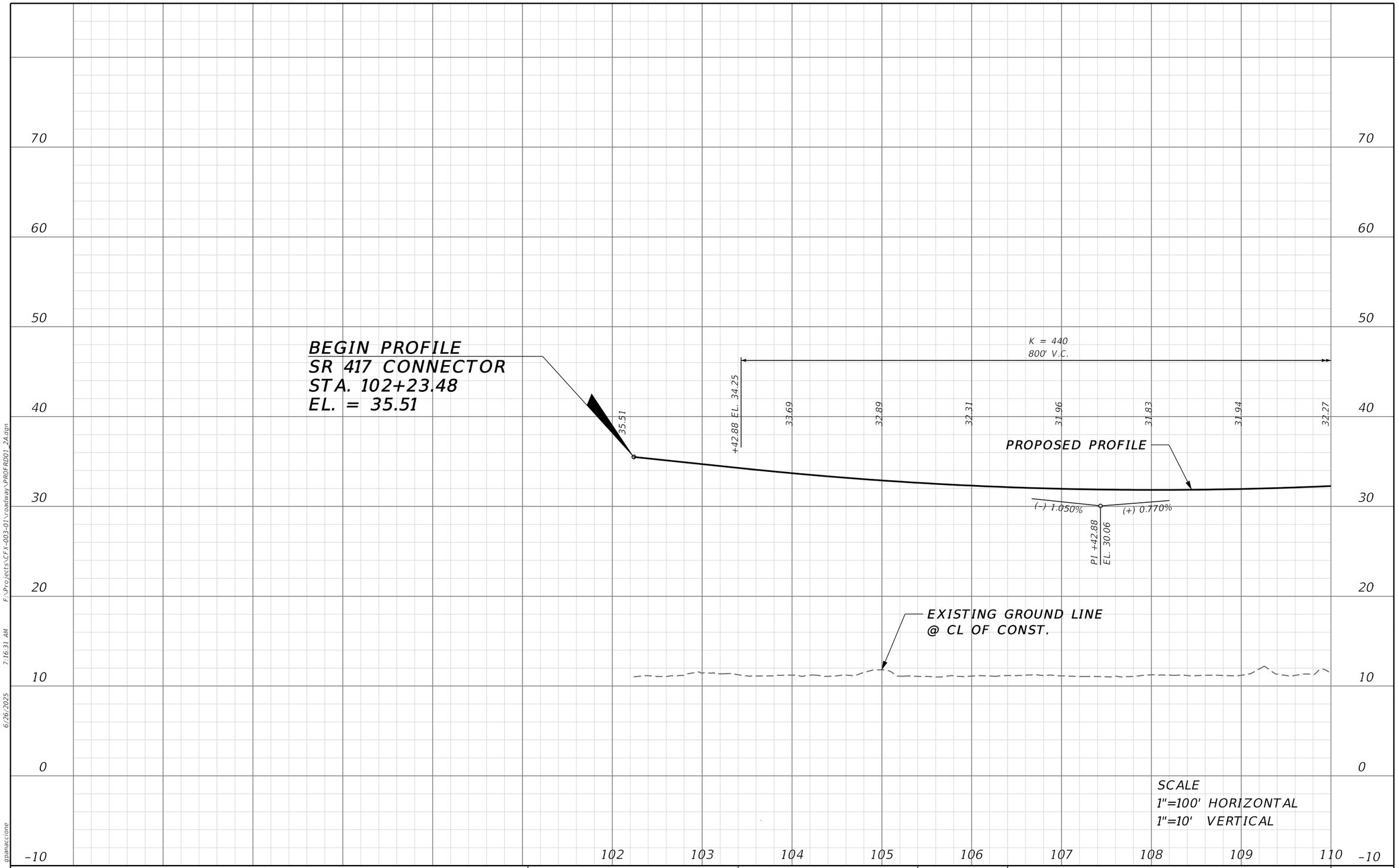
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

EB CONNECTOR ON RAMP TO AIRPORT CONNECTOR PROFILE SHEET (1)

SHEET NO. 16



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

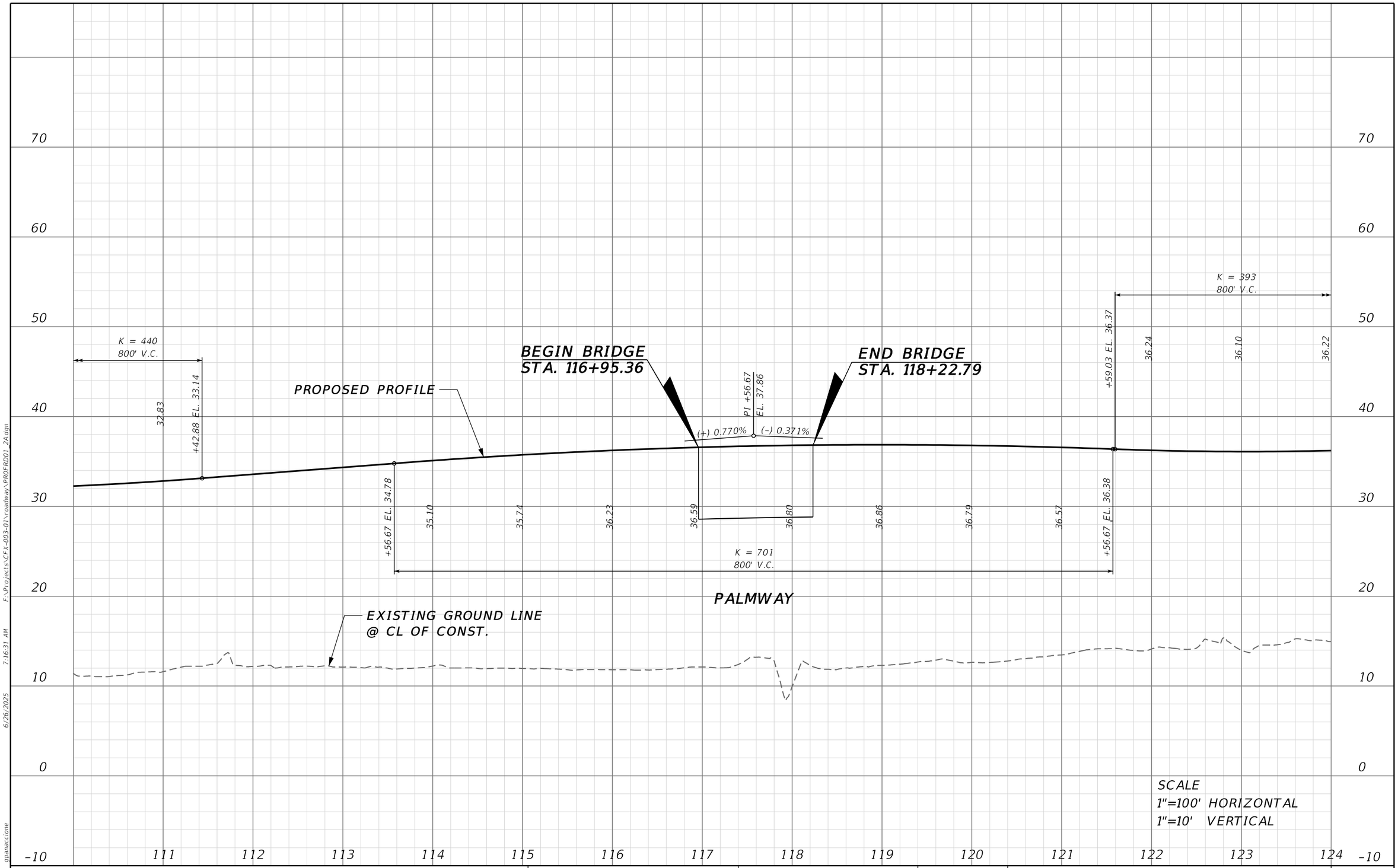
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (1)

SHEET NO. 17

F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
6/26/2025 7:16:31 AM
gtganaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
6/26/2025 7:16:31 AM
gtganaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

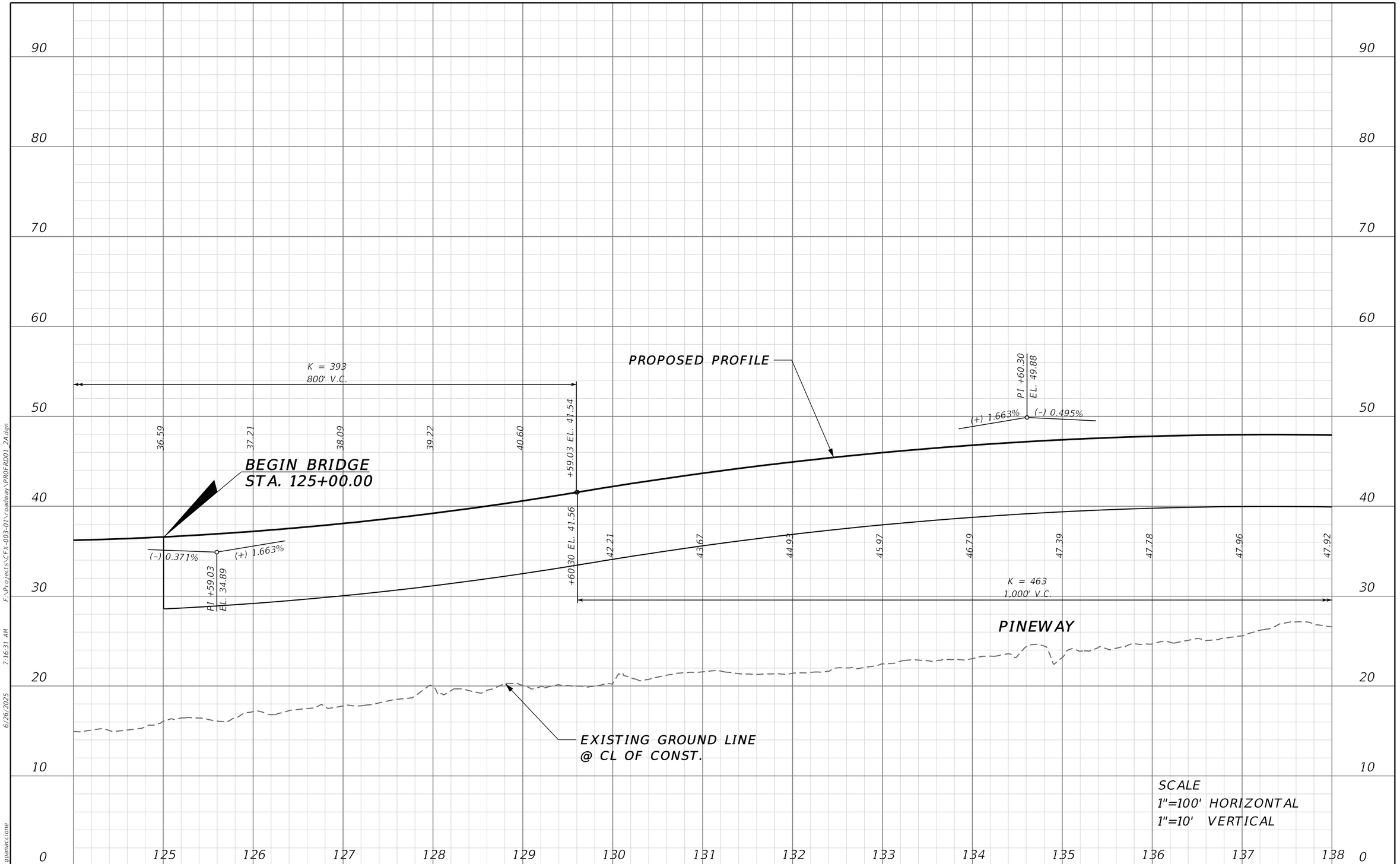
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (2)

SHEET NO. 18



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
7:16:31 AM
6/26/2025
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

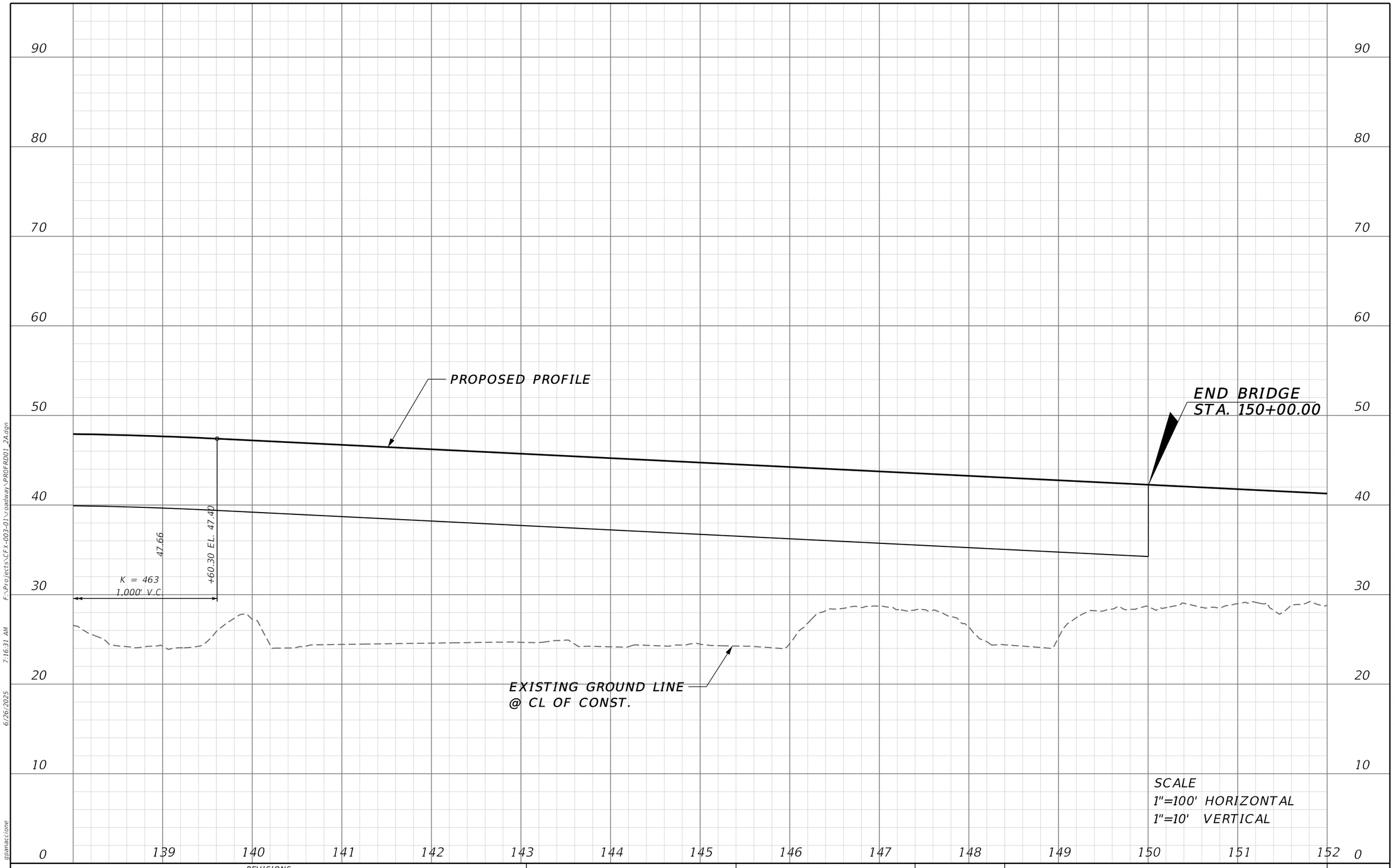
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (3)

SHEET NO. 19



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
6/26/2025 7:16:31 AM
gnanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

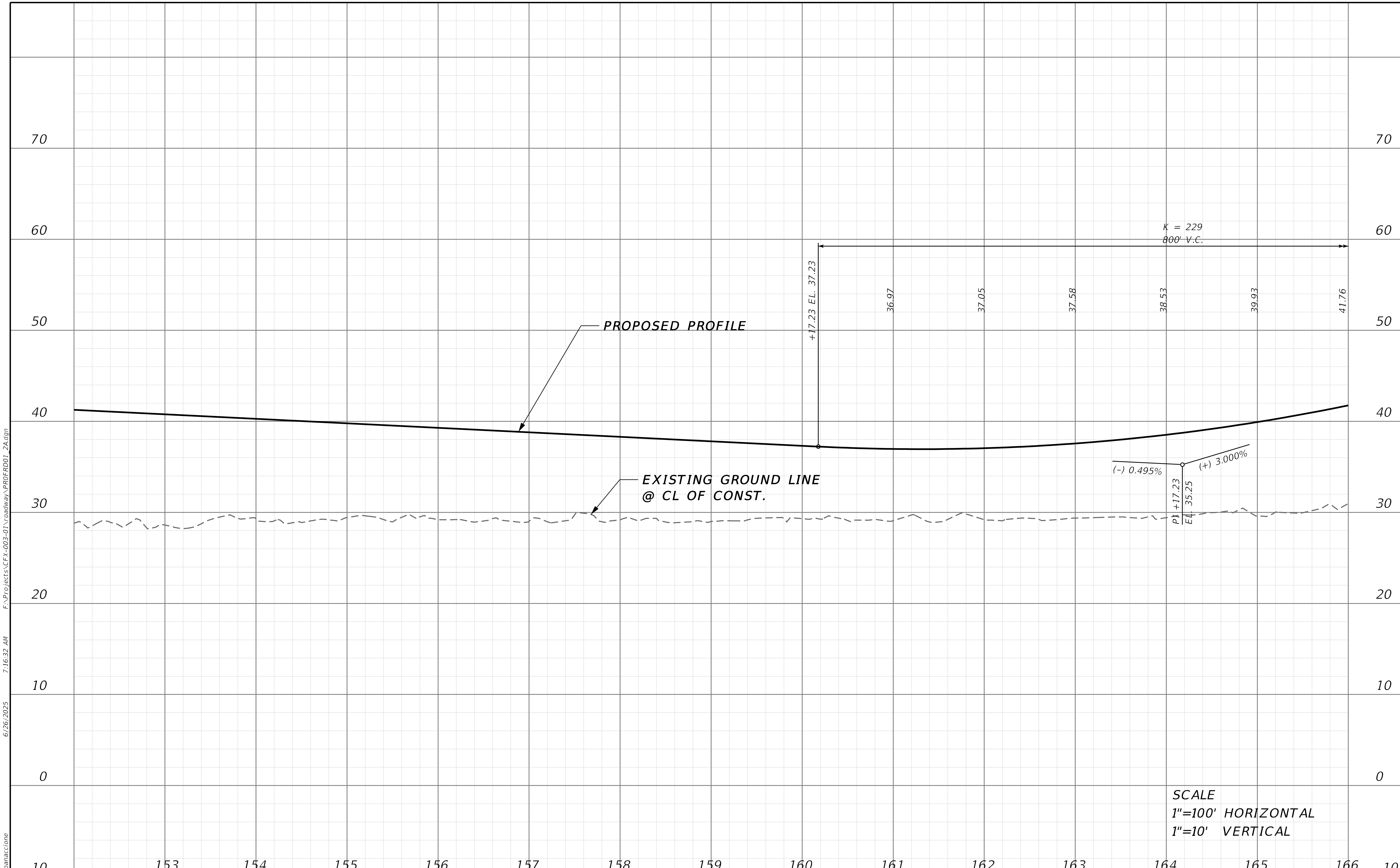
SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (4)

SHEET NO. 20



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

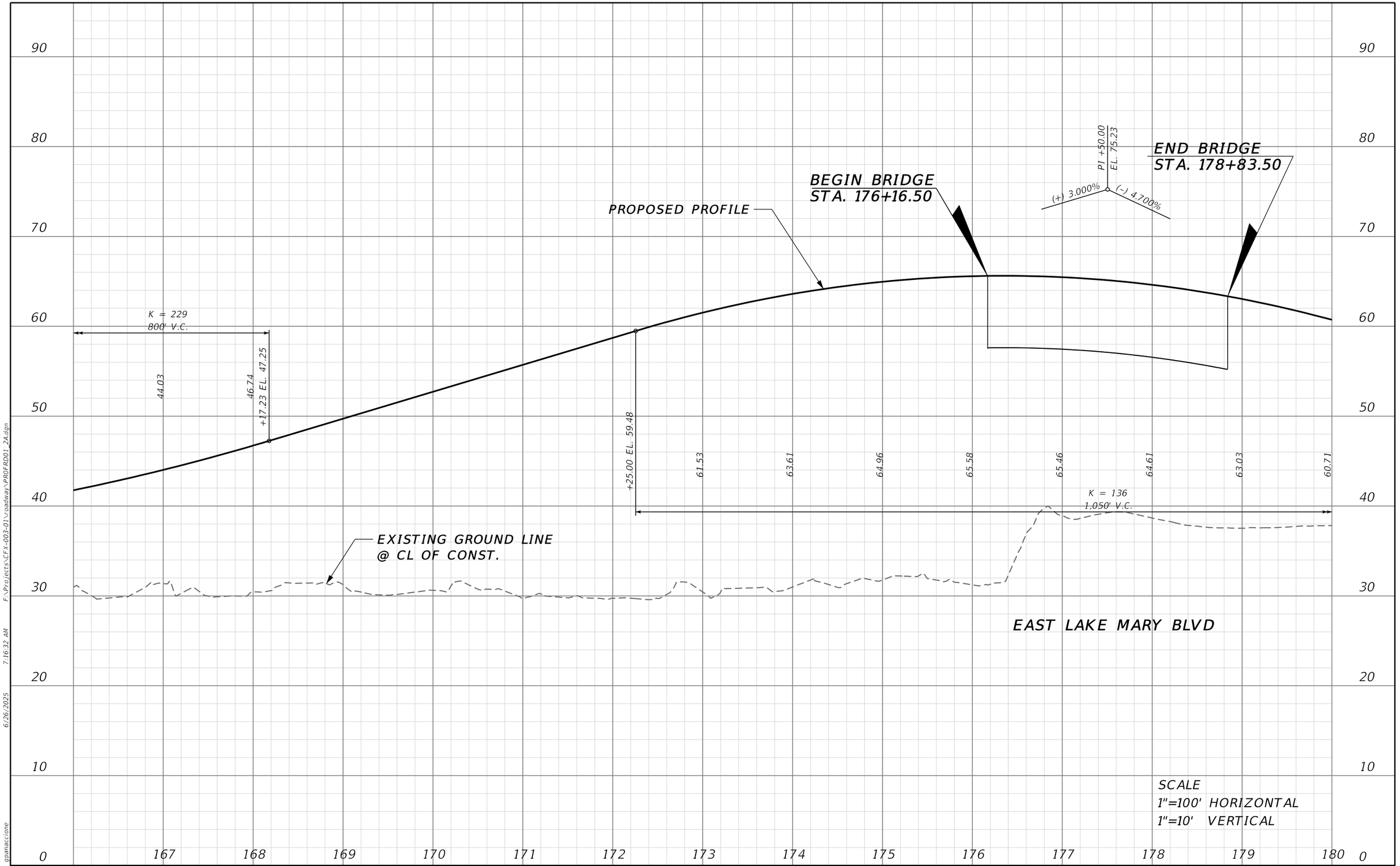
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR
PROFILE SHEET (5)

SHEET NO.
21



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

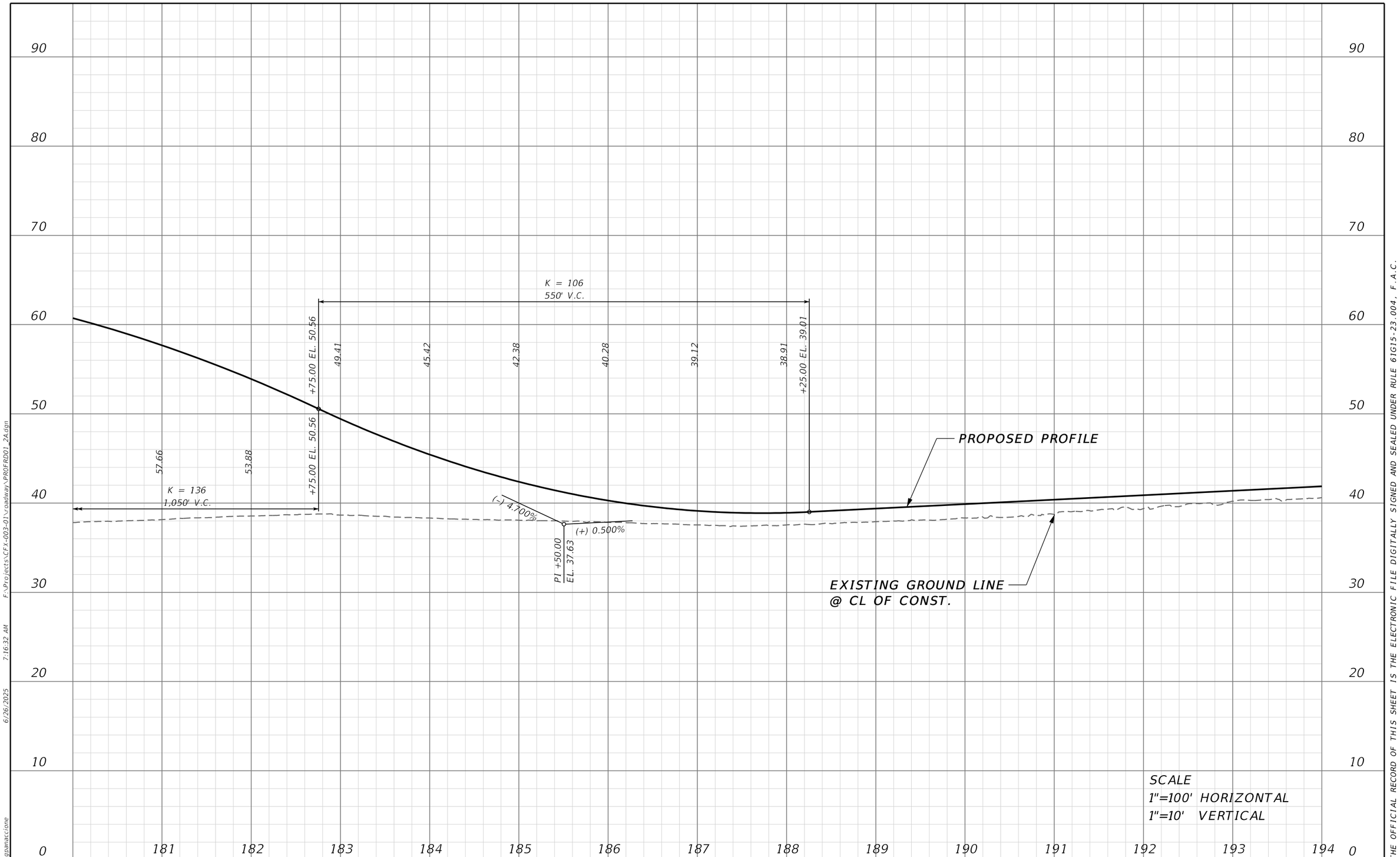
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (6)

SHEET NO. 22



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
7:16:32 AM
6/26/2025
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

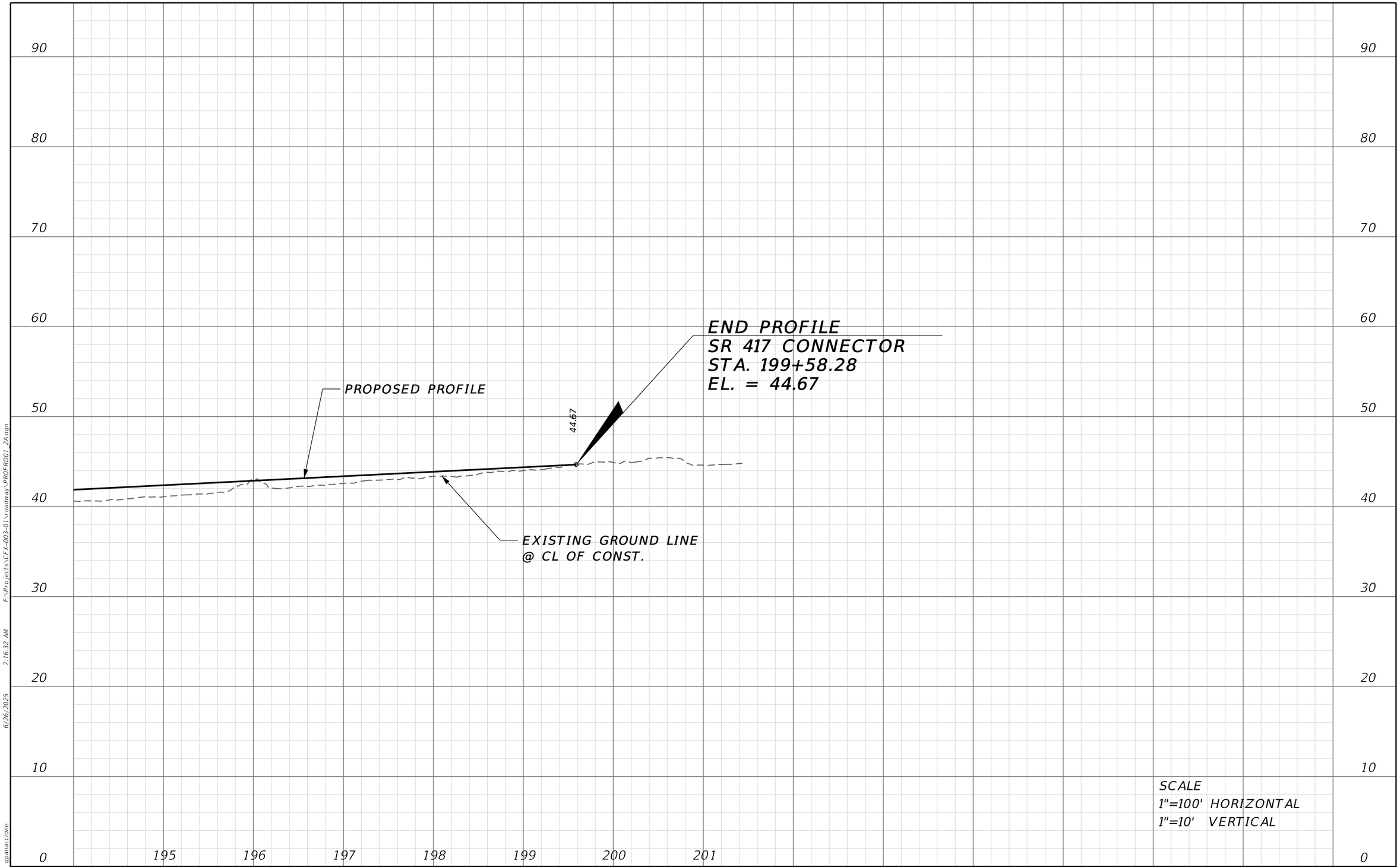
SR 417
SANFORD AIRPORT
CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (7)

SHEET NO. 23



F:\Projects\CFX-003-01\roadway\PROFRD01_2A.dgn
6/26/2025 7:16:32 AM
gpanaccione

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

JAYMIN PATEL, P.E.
P.E. LICENSE NUMBER 82267
ARDURRA GROUP, INC.
3452 LAKE LYNDA DR, SUITE 200
ORLANDO, FLORIDA 32817
CERTIFICATE OF AUTHORIZATION 002067

SR 417
SANFORD AIRPORT CONNECTOR

ROAD NO.	PROJECT NO.
SR 417	417-246A

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

AIRPORT CONNECTOR PROFILE SHEET (8)

SHEET NO. 24

Appendix B
Typical Section Package

STATE OF FLORIDA

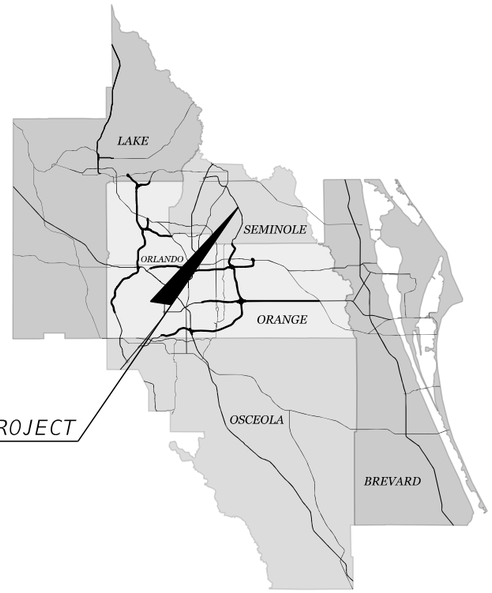
CENTRAL FLORIDA EXPRESSWAY AUTHORITY

TYPICAL SECTION PACKAGE

SR 417 (SEMINOLE EXPRESSWAY) TO ORLANDO SANFORD INTERNATIONAL AIRPORT CONNECTOR PD&E STUDY

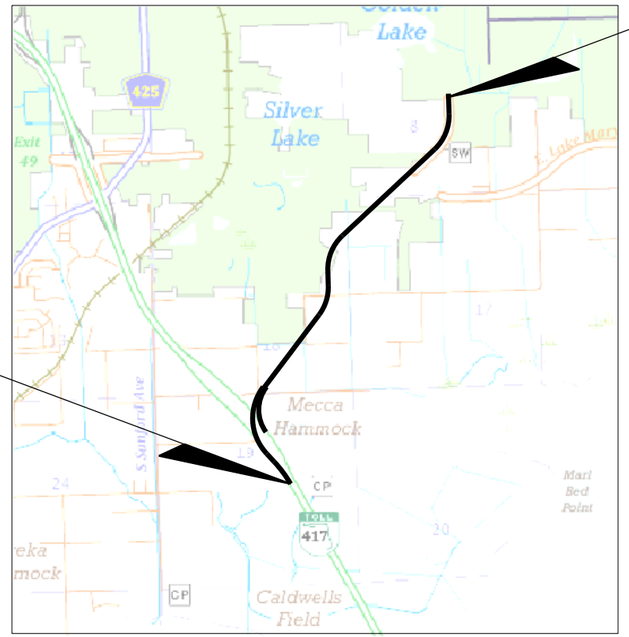
STATE ROAD NO. 417

PROJECT NO. 417-246A



CENTRAL FLORIDA EXPRESSWAY AUTHORITY
GOVERNING BOARD

CHRISTOPHER MAIER	CHAIRMAN, GOVERNOR'S APPOINTEE
BUDDY DYER	VICE CHAIRMAN, MAYOR OF ORLANDO
ANDRIA HERR	TREASURER, SEMINOLE COUNTY REPRESENTATIVE
BRANDON ARRINGTON	OSCEOLA COUNTY REPRESENTATIVE
KATIE DELANEY	BREVARD COUNTY REPRESENTATIVE
JERRY DEMINGS	ORANGE COUNTY MAYOR
RAFAEL E. MARTINEZ	GOVERNOR'S APPOINTEE
CHRISTINE MOORE	ORANGE COUNTY REPRESENTATIVE
SEAN PARKS	LAKE COUNTY REPRESENTATIVE
RICK PULLUM	GOVERNOR'S APPOINTEE



APPROVED BY:

JAYMIN PATEL
LICENSE
No 82267
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

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

ARDURRA GROUP, INC.
3452 LAKE LYNDA DRIVE, SUITE 200
ORLANDO, FL 32817
JAYMIN PATEL, P.E. NO. 82267

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

INDEX OF SHEETS

SHEET NO	SHEET DESCRIPTION
1	COVER SHEET
2	TYPICAL SECTION No. 1
3	TYPICAL SECTION No. 2
4	TYPICAL SECTION No. 3
5	TYPICAL SECTION No. 4
6	TYPICAL SECTION No. 5
7	TYPICAL SECTION No. 6
8	TYPICAL SECTION No. 7
9	TYPICAL SECTION No. 8

SHEET NO.
1

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

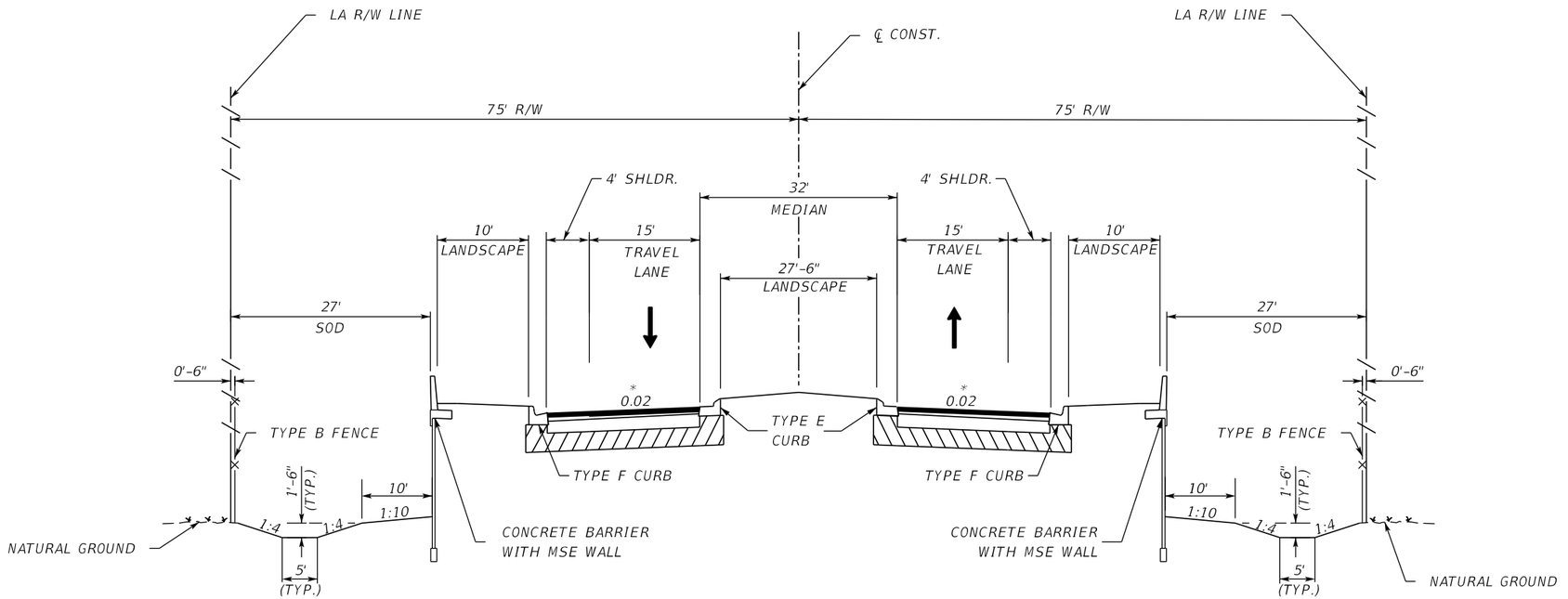
- (X) 1 - FREEWAY
- ( ) 2 - RESTRICTIVE w/Service Roads
- ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
- ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
- ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- ( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 1



AIRPORT CONNECTOR (PROPOSED TWO-LANE TYPICAL SECTION)

DESIGN SPEED 45 MPH

STATION RANGE	* SUPERELEVATION (FT/FT)
STA. 145+15.89 to STA. 154+89.41	0.072
STA. 186+52.41 to STA. 196+27.99	0.072

PROJECT NUMBER	SHEET NO.
417-246A	2

6/23/2025 10:16:46 AM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

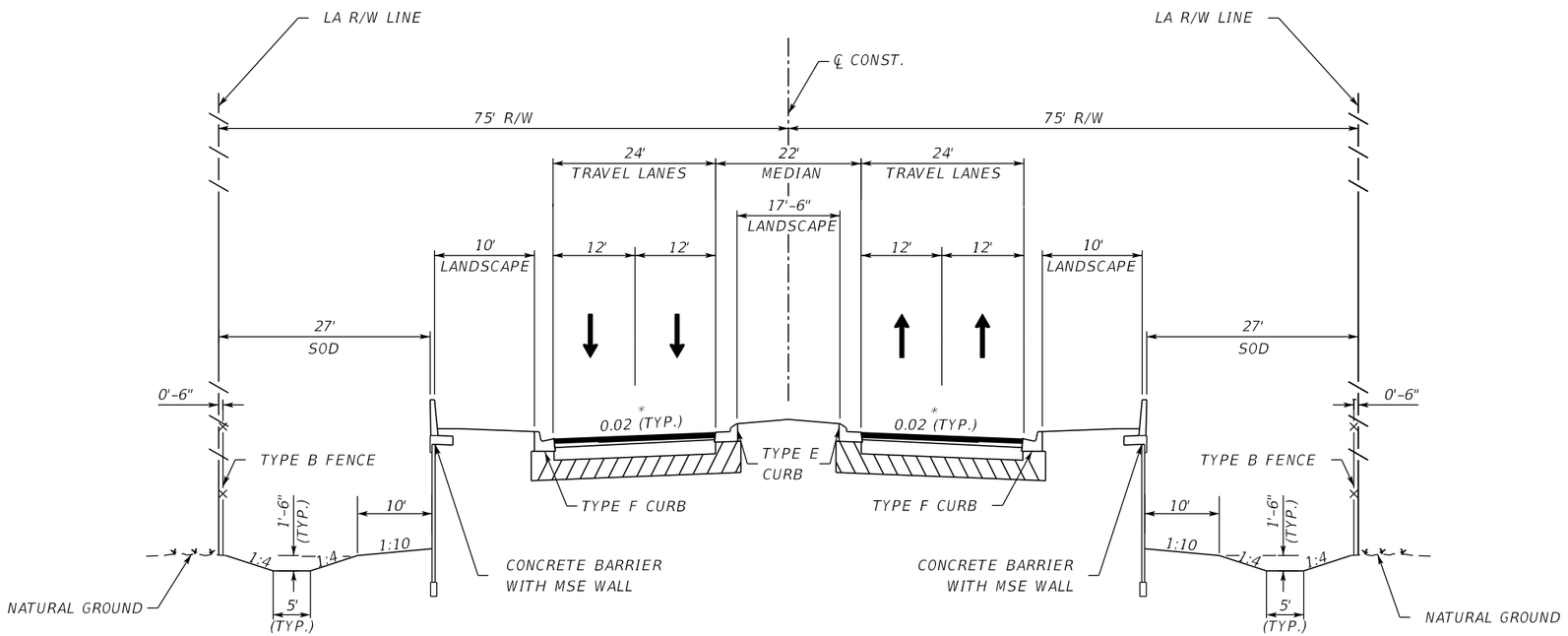
(X) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 2



AIRPORT CONNECTOR (FUTURE FOUR-LANE TYPICAL SECTION)

DESIGN SPEED 45 MPH

STATION RANGE	* SUPERELEVATION (FT/FT)
STA. 145+15.89 to STA. 154+89.41	0.072
STA. 186+52.41 to STA. 196+27.99	0.072

PROJECT NUMBER	SHEET NO.
417-246A	3

6/23/2025 10:16:47 AM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

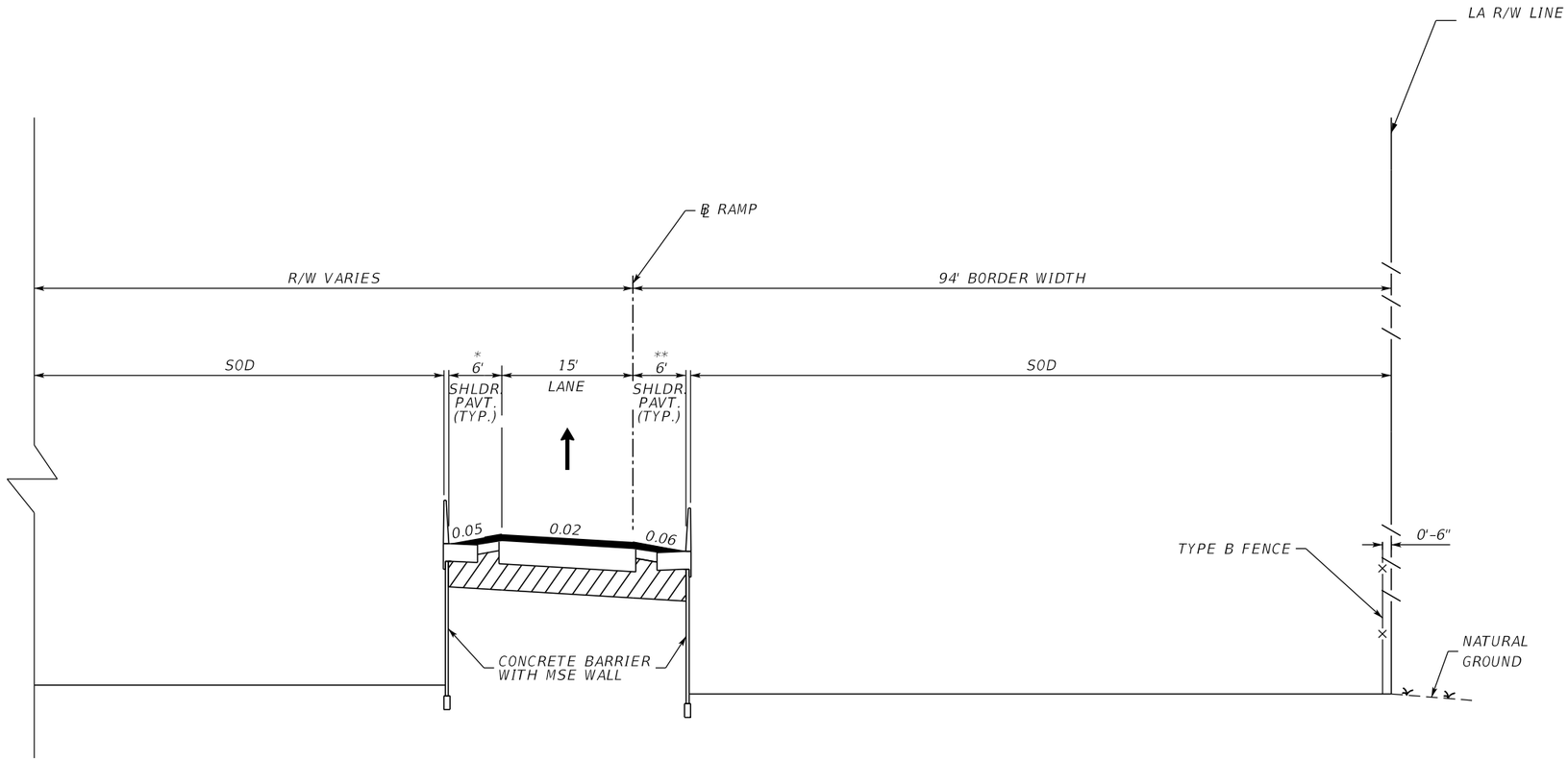
- (X) 1 - FREEWAY
- ( ) 2 - RESTRICTIVE w/Service Roads
- ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
- ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
- ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- ( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 3



SR 417 INTERCHANGE RAMP TYPICAL SECTION

DESIGN SPEED 50 MPH

BRIDGE DESCRIPTION	STATION RANGE	OUTSIDE * SHOULDER WIDTH	INSIDE ** SHOULDER WIDTH	SUPERELEVATION (FT/FT)
WB CONNECTOR TO SB SR 417	STA. 300+00.00 to STA. 309+63.37	6'	6'	0.038
WB CONNECTOR TO SB SR 417	STA. 309+63.37 to STA. 327+82.06	6'	8.5' to 10'	0.078
NB SR 417 TO EB CONNECTOR	STA. 400+00.00 to STA. 412+10.14	6'	16' (WHEN BARRIER PRESENT)	0.092

PROJECT NUMBER	SHEET NO.
417-246A	4

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

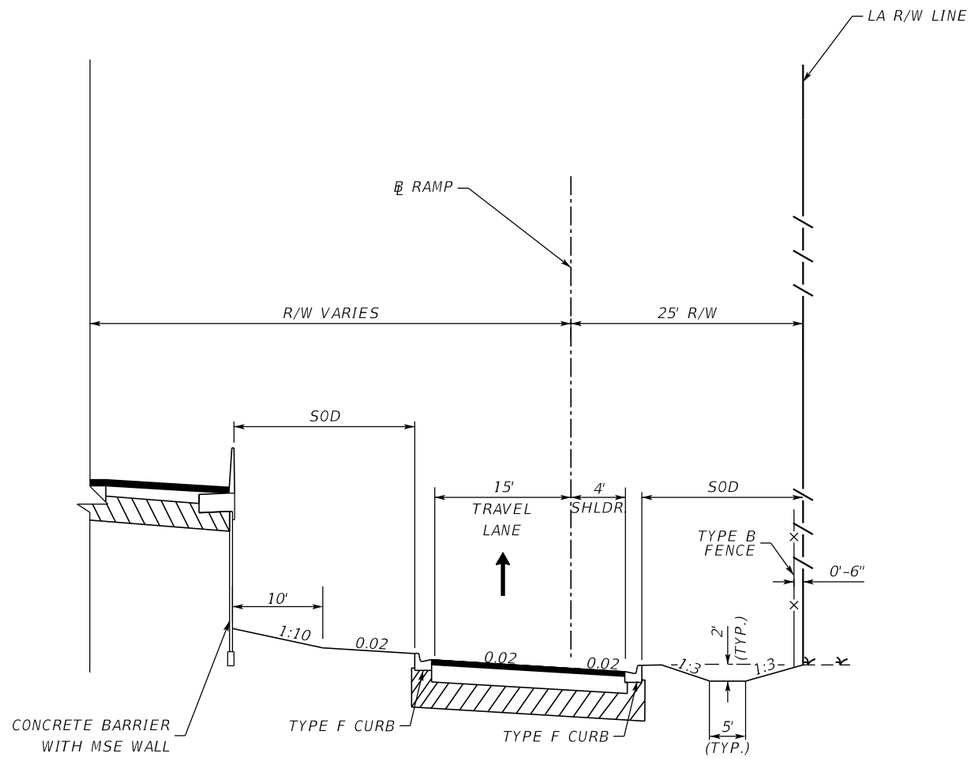
(X) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 4



RED CLEVELAND BLVD. INTERCHANGE RAMP TYPICAL SECTION (SOUTH OF EAST LAKE MARY BLVD.)

DESIGN SPEED 45 MPH

PROJECT NUMBER	SHEET NO.
417-246A	5

6/23/2025 10:16:48 AM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

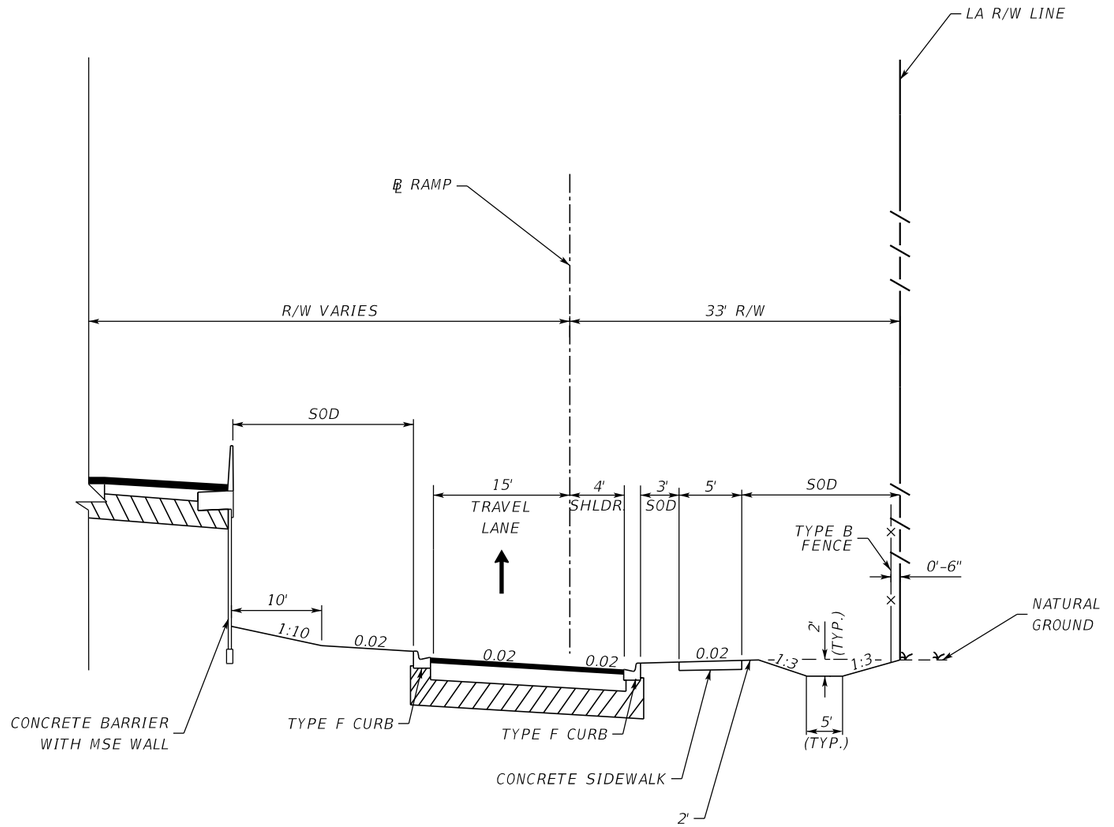
- (X) 1 - FREEWAY
- ( ) 2 - RESTRICTIVE w/Service Roads
- ( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
- ( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
- ( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
- ( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
- ( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 5



RED CLEVELAND BLVD. INTERCHANGE RAMP TYPICAL SECTION (NORTH OF EAST LAKE MARY BLVD.)

DESIGN SPEED 45 MPH

PROJECT NUMBER	SHEET NO.
417-246A	6

6/23/2025 10:16:49 AM

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

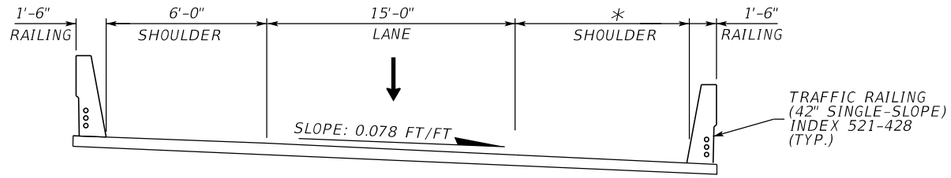
(X) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

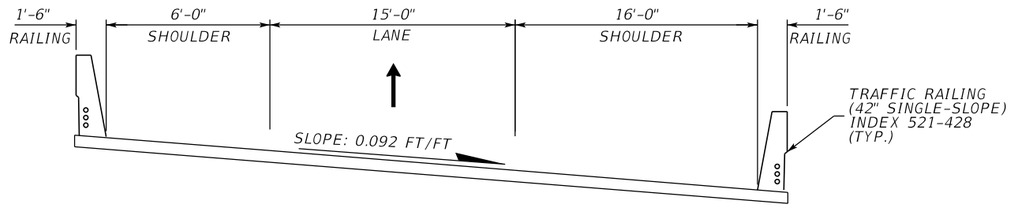
TYPICAL SECTION No. 6



SR 417 INTERCHANGE RAMP BRIDGE TYPICAL SECTION (WB)

DESIGN SPEED 50 MPH

LOCATION	* SHOULDER WIDTH
OVER SR 417	8.5'
OVER OAKWAY	10'



SR 417 INTERCHANGE RAMP BRIDGE TYPICAL SECTION (EB)

DESIGN SPEED 50 MPH

PROJECT NUMBER	SHEET NO.
417-246A	7

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

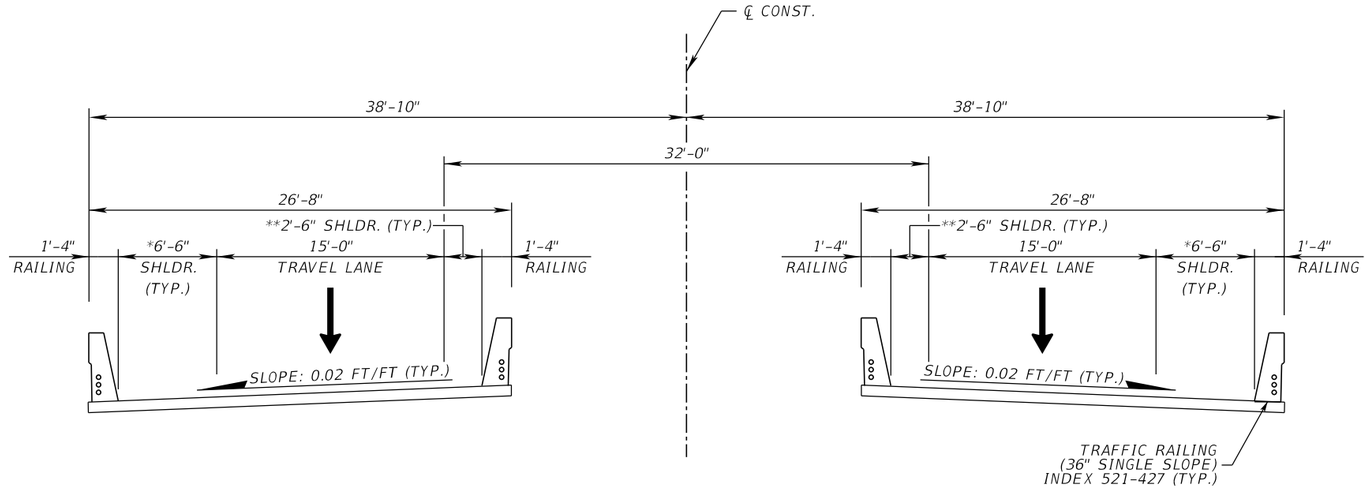
(X) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 7



AIRPORT CONNECTOR (PROPOSED TWO-LANE TYPICAL BRIDGE SECTION)

DESIGN SPEED = 45 MPH

NOTE: MINIMUM SHOULDER WIDTHS FOR BRIDGES 500' OR LONGER
- INSIDE: 6'-0"
- OUTSIDE: 8'-0"

BRIDGE DESCRIPTION	STATION RANGE	OUTSIDE SHOULDER WIDTH *	INSIDE SHOULDER WIDTH **	SUPERELEVATION (FT/FT)
WB CONNECTOR	STA. 133+64.50 to STA. 141+41.06	7'	2.5	0.072
EB CONNECTOR	STA. 133+64.50 to STA. 141+41.06	6.5'	2.5'	0.072
WB CONNECTOR	STA. 145+15.89 to STA. 150+00.00	6.5'	6.5'	0.072
EB CONNECTOR	STA. 145+15.89 to STA. 150+50.00	7'	2.5	0.072

PROJECT NUMBER	SHEET NO.
417-246A	8

PROJECT CONTROLS

CONTEXT CLASSIFICATION

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

FUNCTIONAL CLASSIFICATION

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

HIGHWAY SYSTEM

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

ACCESS CLASSIFICATION

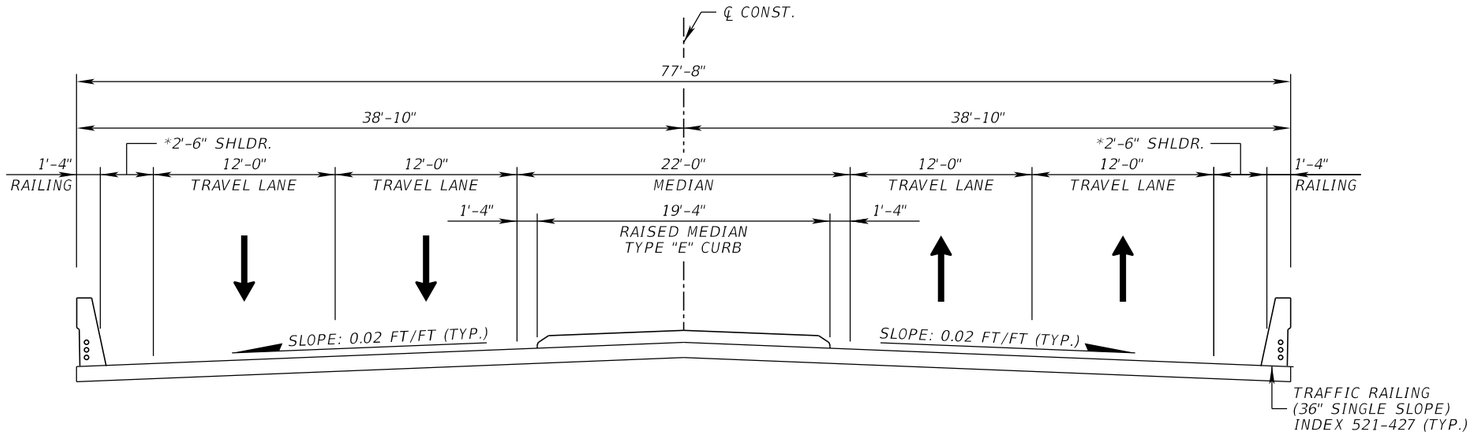
(X) 1 - FREEWAY
( ) 2 - RESTRICTIVE w/Service Roads
( ) 3 - RESTRICTIVE w/660 ft. Connection Spacing
( ) 4 - NON-RESTRICTIVE w/2640 ft. Signal Spacing
( ) 5 - RESTRICTIVE w/440 ft. Connection Spacing
( ) 6 - NON-RESTRICTIVE w/1320 ft. Signal Spacing
( ) 7 - BOTH MEDIAN TYPES

CRITERIA

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

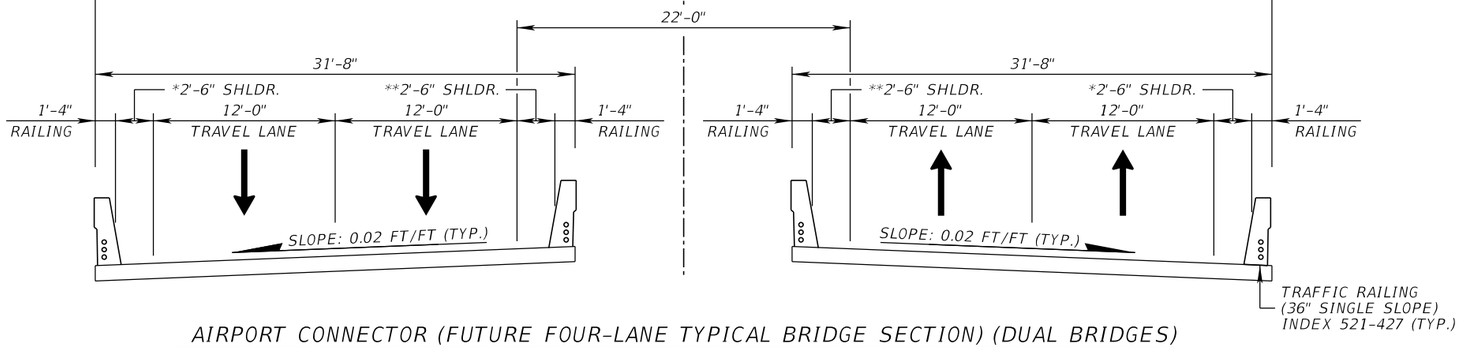
POTENTIAL EXCEPTIONS AND VARIATIONS RELATED TO TYPICAL SECTION:

TYPICAL SECTION No. 8



AIRPORT CONNECTOR (FUTURE FOUR-LANE TYPICAL BRIDGE SECTION) (SINGLE BRIDGE)

DESIGN SPEED = 45 MPH



AIRPORT CONNECTOR (FUTURE FOUR-LANE TYPICAL BRIDGE SECTION) (DUAL BRIDGES)

DESIGN SPEED = 45 MPH

NOTE: MINIMUM SHOULDER WIDTHS FOR BRIDGES 500' OR LONGER
- INSIDE: 6'-0"
- OUTSIDE: 8'-0"

BRIDGE DESCRIPTION	STATION RANGE	OUTSIDE * SHOULDER WIDTH	INSIDE ** SHOULDER WIDTH	SUPERELEVATION (FT/FT)
WB CONNECTOR	STA. 133+64.50 to STA. 141+41.06	7'	2.5	0.072
EB CONNECTOR	STA. 133+64.50 to STA. 141+41.06	6.5'	2.5'	0.072
WB CONNECTOR	STA. 145+15.89 to STA. 150+00.00	6.5'	6.5'	0.072
EB CONNECTOR	STA. 145+15.89 to STA. 150+50.00	7'	2.5	0.072

PROJECT NUMBER	SHEET NO.
417-246A	9

Appendix C
Estimated Project Costs

SUMMARY

ESTIMATED PROBABLE PROJECT COST

417-246A - Alternative 1

PREPARED BY ARDURRA
LAST UPDATED (04/15/2025)

PROJECT CENTERLINE MILES:	3.087
NUMBER OF BRIDGES:	11

417-246A - Alternative 1				$139,996,054
TOTAL (2025 CONSTRUCTION COST)				**$139,996,054**
ENGINEERING / ADMINISTRATION / LEGAL (24%)				$33,599,053
RIGHT - OF - WAY	0.0	ACRES		See Project Matrix
SPECIES HABITAT MITIGATION	0.0	CREDITS @	$ 145,000	
REGULATORY CONSERVATION EASEMENT MITIGATION	0.0	CREDITS @	$ 145,000	See Project Matrix
MITIGATION (WETLAND IMPACT ACERAGE x 0.8 = CREDITS	0.0	CREDITS @	$ 145,000	
TOLL COLLECTION EQUIPMENT	2	LANES @	$ 275,000	$550,000
GRAND TOTAL PROJECT COST				**$174,145,107**

F:\Projects\CFX-003-01\admin\cost estimates\[417-246A_ Alternative 1_Const Cost Estimate_V9.xls 25-Jun-25

ESTIMATED PROBABLE CONSTRUCTION COST

417-246A - Alternative 1

PREPARED BY *ARDURRA*

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
**** EXPRESSWAYS / RAMPS / ROADWAYS****				
MAINLINE ROADWAY TYPICAL (W/FILL SLOPES - 3.5' HEIGHT)	1.417	MI	$10,329,161	$14,631,335
MAINLINE ROADWAY TYPICAL (W/ WALLS - 10' HEIGHT)	0.152	MI	$24,302,241	$3,696,932
MAINLINE ROADWAY TYPICAL (W/ WALLS - 15' HEIGHT)	0.234	MI	$29,781,900	$6,957,232
MAINLINE ROADWAY TYPICAL (W/ WALLS - 20' HEIGHT)	0.342	MI	$35,261,560	$12,059,387
MAINLINE ROADWAY TYPICAL (W/ WALLS - 25' HEIGHT)	0.328	MI	$40,741,245	$13,350,628
MAINLINE ROADWAY TYPICAL (W/ WALLS - 30' HEIGHT)	0.017	MI	$46,220,905	$807,290
ONE LANE RAMPS	0.831	MI	$3,201,367	$2,659,596
TWO-LANE RAMPS	0.247	MI	$4,268,965	$1,055,203
THREE-LANE RAMPS	0.152	MI	$5,574,090	$844,559
(ACCEL/DECEL LANES) EXTRA COST FOR ADDED 12' LANE (WIDENING) (TPK-417)	0.440	MI	$912,338	$401,429
EXTRA FILL FOR ELEVATED RAMPS	26,666	CY	$26.30	$701,316
RETAINED EARTH WALL FOR RAMPS	20,000	SF	$58	$1,160,000
WIDENING ON RED CLEVELAND BLVD.	0.253	MI	$756,672	$191,461
RED CLEVELAND BLVD - MEDIAN CROSS OVER	1.000	EA	$32,947	$32,947
WIDENING ON E. LAKE MARY BLVD.	0.320	MI	$756,672	$242,135
**** BRIDGES ****				
BRIDGE 1 (OVER OAK WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 84' L) (2 Bridges)	5,320	SF	$170	$904,400
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
BRIDGE 2 (OVER HALLELUJAH WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 62' L) (2 Bridges)	3,927	SF	$170	$667,604
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 3 (OVER PINE WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 101' L) (2 Bridges)	6,397	SF	$170	$1,087,445
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 4 (OVER E. LAKE MARY BLVD.) (31'-8" W x 213' L) (2 Bridges)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET	13,490	SF	$230	$3,102,700
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	3,841	SF	$58	$222,778
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	3,841	SF	$58	$222,778
BRIDGE 6 (RAMP - SB 417 ON-RAMP OVER TPK SR 417)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 545' L) (Single Bridge)	16,350	SF	$312	$5,101,200
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 7 (RAMP - SB TPK 417 ON-RAMP - OVER BORROW PIT)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 1082' L) (Single Bridge)	32,460	SF	$190	$6,167,400
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 8 (RAMP - NB TPK 417 OFF-RAMP OVER BORROW PIT)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 997' L) (Single Bridge)	29,910	SF	$190	$5,682,900
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
**** ADDITIONAL ITEMS ****				
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	3.087	MI	$350,000	$1,080,317

RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	9.18	AC	$394,946	$3,623,826
SIGNALIZATION PER INTERCHANGE (RED CLEVELAND BLVD. & E. LAKE MARY BL\	2	EA	$391,561	$783,122
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	$330,000	$330,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	$1,750,000	$1,750,000

SUB-TOTAL	$91,181,761
EROSION CONTROL / TEMPORARY DRAINAGE (1%)	$911,818
SIGNING, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING (10%)	$9,118,176
MAINTENANCE OF TRAFFIC (5%)	$4,559,088
MOBILIZATION (10%)	$9,118,176
SUB-TOTAL ROADWAY	$90,065,973
ROADWAY CONTINGENCY (20%)	$18,013,195
SUB-TOTAL BRIDGES	$24,823,046
BRIDGE CONTINGENCY (10%)	$2,482,305
SUB-TOTAL	$135,384,518
AESTHETICS CONTINGENCY (3%)	$4,061,536
RELOCATE UTILITIES	**$0**
ALLOWANCE FOR DISPUTES REVIEW BOARD	$50,000
WORK ORDER ALLOWANCE	$500,000
TOTAL (2025 CONSTRUCTION COST)	**$139,996,054**

SUMMARY

ESTIMATED PROBABLE PROJECT COST

417-246A - Alternative 2

PREPARED BY ARDURRA
LAST UPDATED (04/15/2025)

PROJECT CENTERLINE MILES:	2.420
NUMBER OF BRIDGES:	9

417-246A - Alternative 2				$137,346,713
TOTAL (2025 CONSTRUCTION COST)				**$137,346,713**
ENGINEERING / ADMINISTRATION / LEGAL (24%)				$32,963,211
RIGHT - OF - WAY	0.0	ACRES		See project matrix
SPECIES HABITAT MITIGATION	0.0	CREDITS @	$ 145,000	
REGULATORY CONSERVATION EASEMENT MITIGATION	0.0	CREDITS @	$ 145,000	See Project Matrix
MITIGATION (WETLAND IMPACT ACERAGE x 0.8 = CREDITS	0.0	CREDITS @	$ 145,000	
TOLL COLLECTION EQUIPMENT	2	LANES @	$ 275,000	$550,000
GRAND TOTAL PROJECT COST				**$170,859,925**

F:\Projects\CFX-003-01\admin\cost estimates\[417-246A_ Alternative 2_Const Cost Estimate_V9.xls 25-Jun-25

ESTIMATED PROBABLE CONSTRUCTION COST

417-246A - Alternative 2

PREPARED BY *ARDURRA*

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
**** EXPRESSWAYS / RAMPS / ROADWAYS****				
MAINLINE ROADWAY TYPICAL (W/FILL SLOPES - 3.5' HEIGHT)	0.477	MI	$10,329,161	$4,927,303
MAINLINE ROADWAY TYPICAL (W/ WALLS - 10' HEIGHT)	0.224	MI	$24,302,241	$5,453,782
MAINLINE ROADWAY TYPICAL (W/ WALLS - 15' HEIGHT)	0.202	MI	$29,781,900	$6,003,986
MAINLINE ROADWAY TYPICAL (W/ WALLS - 20' HEIGHT)	0.122	MI	$35,261,560	$4,314,799
MAINLINE ROADWAY TYPICAL (W/ WALLS - 25' HEIGHT)	0.123	MI	$40,741,245	$5,014,954
MAINLINE ROADWAY TYPICAL (W/ WALLS - 30' HEIGHT)	0.141	MI	$46,220,905	$6,523,888
MAINLINE ROADWAY TYPICAL (W/ WALLS - 35' HEIGHT)	0.040	MI	$51,700,564	$2,075,366
ONE LANE RAMPS	1.692	MI	$3,201,367	$5,418,229
TWO-LANE RAMPS	0.330	MI	$4,268,965	$1,409,163
THREE-LANE RAMPS	0.237	MI	$5,574,090	$1,319,623
EXTRA FILL FOR ELEVATED RAMPS	26,666	CY	$26.30	$701,316
RETAINED EARTH WALL FOR RAMPS	20,000	SF	$58	$1,160,000
WIDENING ON E. LAKE MARY BLVD.	0.492	MI	$756,672	$372,283
**** BRIDGES ****				
BRIDGE 1 (OVER PALM WAY.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 92' L) (2 Bridges)	5,827	SF	$170	$990,638
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
BRIDGE 2 (OVER MELLONVILLE AVE.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 78' L) (2 Bridges)	4,941	SF	$170	$839,888
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
BRIDGE 3 (OVER PINE WAY & POND)				
MAINLINE ROADWAY BRIDGE OVER WATER BODY (31'-8" W x 2500' L) (2 Bridges)	158,350	SF	$175	$27,711,250
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	777	SF	$58	$45,049
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	777	SF	$58	$45,049
BRIDGE 4 (OVER E. LAKE MARY BLVD.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 267' L) (2 Bridges)	16,912	SF	$230	$3,889,709
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
BRIDGE 5 (RAMP - SB 417 ON-RAMP OVER SR 417)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 540' L) (Single Bridge)	16,200	SF	$312	$5,054,400
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
**** ADDITIONAL ITEMS ****				
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	2.420	MI	$350,000	$846,846
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	5.17	AC	$394,946	$2,040,290
SIGNALIZATION PER INTERCHANGE (E. LAKE MARY BLVD.)	1	EA	$763,950	$763,950
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	$330,000	$330,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	$1,750,000	$1,750,000

SUB-TOTAL	$90,488,502
EROSION CONTROL / TEMPORARY DRAINAGE (1%)	$904,885
SIGNING, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING (10%)	$9,048,850
MAINTENANCE OF TRAFFIC (5%)	$4,524,425
MOBILIZATION (10%)	$9,048,850
SUB-TOTAL ROADWAY	$73,952,791
ROADWAY CONTINGENCY (20%)	$14,790,558

SUB-TOTAL BRIDGES	$40,062,722
BRIDGE CONTINGENCY (10%)	$4,006,272
SUB-TOTAL	$132,812,343
AESTHETICS CONTINGENCY (3%)	$3,984,370
RELOCATE UTILITIES	**$0**
ALLOWANCE FOR DISPUTES REVIEW BOARD	$50,000
WORK ORDER ALLOWANCE	$500,000
TOTAL (2025 CONSTRUCTION COST)	**$137,346,713**

SUMMARY

ESTIMATED PROBABLE PROJECT COST

417-246A - Alternative 2A

PREPARED BY ARDURRA
LAST UPDATED (04/15/2025)

PROJECT CENTERLINE MILES:	2.252
NUMBER OF BRIDGES:	9

417-246A - Alternative 2A				$138,387,499
TOTAL (2025 CONSTRUCTION COST)				**$138,387,499**
ENGINEERING / ADMINISTRATION / LEGAL (24%)				$33,213,000
RIGHT - OF - WAY	0.0	ACRES		See Project Matrix
SPECIES HABITAT MITIGATION	0.0	CREDITS @	$ 145,000	
REGULATORY CONSERVATION EASEMENT MITIGATION	0.0	CREDITS @	$ 145,000	See Project Matrix
MITIGATION (WETLAND IMPACT ACERAGE x 0.8 = CREDITS	0.0	CREDITS @	$ 145,000	
TOLL COLLECTION EQUIPMENT	2	LANES @	$ 275,000	$550,000
GRAND TOTAL PROJECT COST				**$172,150,499**

F:\Projects\CFX-003-01\admin\cost estimates\[417-246A_ Alternative 2A_Const Cost Estimate_V9.x 25-Jun-25

ESTIMATED PROBABLE CONSTRUCTION COST

417-246A - Alternative 2A

PREPARED BY *ARDURRA*

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
**** EXPRESSWAYS / RAMPS / ROADWAYS****				
MAINLINE ROADWAY TYPICAL (W/FILL SLOPES - 3.5' HEIGHT)	0.479	MI	$10,329,161	$4,947,316
MAINLINE ROADWAY TYPICAL (W/ WALLS - 10' HEIGHT)	0.109	MI	$24,302,241	$2,643,697
MAINLINE ROADWAY TYPICAL (W/ WALLS - 15' HEIGHT)	0.106	MI	$29,781,900	$3,149,380
MAINLINE ROADWAY TYPICAL (W/ WALLS - 20' HEIGHT)	0.299	MI	$35,261,560	$10,535,860
MAINLINE ROADWAY TYPICAL (W/ WALLS - 25' HEIGHT)	0.239	MI	$40,741,245	$9,733,763
MAINLINE ROADWAY TYPICAL (W/ WALLS - 30' HEIGHT)	0.041	MI	$46,220,905	$1,897,158
MAINLINE ROADWAY TYPICAL (W/ WALLS - 35' HEIGHT)	0.040	MI	$51,700,564	$2,075,366
ONE LANE RAMPS	1.509	MI	$3,201,367	$4,832,179
TWO-LANE RAMPS	0.330	MI	$4,268,965	$1,409,163
THREE-LANE RAMPS	0.237	MI	$5,574,090	$1,319,623
(ACCEL/DECEL LANES) EXTRA COST FOR ADDED 12' LANE (WIDENING) (TPK-417)	0.170	MI	$912,338	$155,512
EXTRA FILL FOR ELEVATED RAMPS	26,666	CY	$26.30	$701,316
RETAINED EARTH WALL FOR RAMPS	20,000	SF	$58	$1,160,000
40' RAD - CUL-DE-SAC (Michigan Street)	1	EA	$65,912	$65,912
WIDENING ON E. LAKE MARY BLVD.	0.492	MI	$756,672	$372,283
**** BRIDGES ****				
BRIDGE 1 (OVER PALM WAY.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 128' L) (2 Bridges)	8,108	SF	$170	$1,378,278
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
BRIDGE 2 (OVER PINE WAY & POND)				
MAINLINE ROADWAY BRIDGE OVER WATER BODY (31'-8" W x 2408' L) (2 Bridges)	152,523	SF	$175	$26,691,476
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	971	SF	$58	$56,311
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	971	SF	$58	$56,311
BRIDGE 3 (OVER E. LAKE MARY BLVD.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 267' L) (2 Bridges)	16,912	SF	$230	$3,889,709
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
BRIDGE 4 (RAMP - SB 417 ON-RAMP OVER SR 417)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 541' L) (Single Bridge)	16,230	SF	$312	$5,063,760
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 5 (RAMP - SB 417 ON-RAMP OVER OAK WAY/MELLONVILLE AVE.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 141' L) (Single Bridge)	4,230	SF	$260	$1,099,800
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 5 (RAMP - NB 417 ON-RAMP OVER OAK WAY/MELLONVILLE AVE.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 90' L) (Single Bridge)	2,700	SF	$260	$702,000
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
**** ADDITIONAL ITEMS ****				
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	2.252	MI	$350,000	$788,262
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	5.35	AC	$394,946	$2,111,973
SIGNALIZATION PER INTERCHANGE (E. LAKE MARY BLVD.)	1	EA	$763,950	$763,950
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	$330,000	$330,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	$1,750,000	$1,750,000

SUB-TOTAL	$91,181,688
EROSION CONTROL / TEMPORARY DRAINAGE (1%)	$911,817
SIGNING, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING (10%)	$9,118,169
MAINTENANCE OF TRAFFIC (5%)	$4,559,084
MOBILIZATION (10%)	$9,118,169
SUB-TOTAL ROADWAY	$74,449,952
ROADWAY CONTINGENCY (20%)	$14,889,990
SUB-TOTAL BRIDGES	$40,438,975
BRIDGE CONTINGENCY (10%)	$4,043,897
SUB-TOTAL	$133,822,814
AESTHETICS CONTINGENCY (3%)	$4,014,684
RELOCATE UTILITIES	**$0**
ALLOWANCE FOR DISPUTES REVIEW BOARD	$50,000
WORK ORDER ALLOWANCE	$500,000
TOTAL (2025 CONSTRUCTION COST)	**$138,387,499**

SUMMARY

ESTIMATED PROBABLE PROJECT COST

417-246A - Alternative 3A

PREPARED BY ARDURRA
LAST UPDATED (04/15/2025)

PROJECT CENTERLINE MILES:	2.458
NUMBER OF BRIDGES:	13

417-246A - Alternative 3A				$149,266,859
TOTAL (2025 CONSTRUCTION COST)				**$149,266,859**
ENGINEERING / ADMINISTRATION / LEGAL (24%)				$35,824,046
RIGHT - OF - WAY	0.0	ACRES		See project matrix
SPECIES HABITAT MITIGATION	0.0	CREDITS @	$ 145,000	
REGULATORY CONSERVATION EASEMENT MITIGATION	0.0	CREDITS @	$ 145,000	See Project Matrix
MITIGATION (WETLAND IMPACT ACERAGE x 0.8 = CREDITS	0.0	CREDITS @	$ 145,000	
TOLL COLLECTION EQUIPMENT	2	LANES @	$ 275,000	$550,000
GRAND TOTAL PROJECT COST				**$185,640,905**

F:\Projects\CFX-003-01\admin\cost estimates\[417-246A_ Alternative 3A_Const Cost Estimate_V9.x 25-Jun-25

ESTIMATED PROBABLE CONSTRUCTION COST

417-246A - Alternative 3A

PREPARED BY *ARDURRA*

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
**** EXPRESSWAYS / RAMPS / ROADWAYS****				
MAINLINE ROADWAY TYPICAL (W/FILL SLOPES - 3.5' HEIGHT)	0.479	MI	$10,329,161	$4,949,859
MAINLINE ROADWAY TYPICAL (W/ WALLS - 10' HEIGHT)	0.065	MI	$24,302,241	$1,575,273
MAINLINE ROADWAY TYPICAL (W/ WALLS - 15' HEIGHT)	0.162	MI	$29,781,900	$4,809,946
MAINLINE ROADWAY TYPICAL (W/ WALLS - 20' HEIGHT)	0.273	MI	$35,261,560	$9,615,720
MAINLINE ROADWAY TYPICAL (W/ WALLS - 25' HEIGHT)	0.576	MI	$40,741,245	$23,463,254
MAINLINE ROADWAY TYPICAL (W/ WALLS - 30' HEIGHT)	0.144	MI	$46,220,905	$6,653,972
MAINLINE ROADWAY TYPICAL (W/ WALLS - 35' HEIGHT)	0.013	MI	$51,700,564	$675,730
ONE LANE RAMPS	1.568	MI	$3,201,367	$5,019,877
TWO-LANE RAMPS	0.330	MI	$4,268,965	$1,409,163
THREE-LANE RAMPS	0.237	MI	$5,574,090	$1,319,623
(ACCEL/DECEL LANES) EXTRA COST FOR ADDED 12' LANE (WIDENING) (TPK-417)	0.502	MI	$912,338	$457,993
EXTRA FILL FOR ELEVATED RAMPS	26,666	CY	$26.30	$701,316
RETAINED EARTH WALL FOR RAMPS	20,000	SF	$58	$1,160,000
RE-ALIGN VIOLET SHELTON CT.	0.047	MI	$5,287,211	$246,336
DEMOLISH EXISTING PAVEMENT	0.088	MI	$192,334	$16,829
40' RAD. - CUL-DE-SAC	1	EA	$65,912	$65,912
WIDENING ON E. LAKE MARY BLVD	0.492	MI	$756,672	$372,604
**** BRIDGES ****				
BRIDGE 1 (OVER OAK WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 72' L) (2 Bridges)	4,560	SF	$170	$775,282
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
BRIDGE 2 (OVER PALM WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 102' L) (2 Bridges)	6,461	SF	$170	$1,098,316
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 3 (OVER PINE WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 96' L) (2 Bridges)	6,081	SF	$170	$1,033,709
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 4 (OVER EXISTING POND)				
MAINLINE ROADWAY BRIDGE OVER POND (31'-8" W x 240' L) (2 Bridges)	15,202	SF	$170	$2,584,272
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 5 (OVER E. LAKE MARY BLVD.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 267' L) (2 Bridges)	16,912	SF	$230	$3,889,709
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
BRIDGE 6 (RAMP - SB TPK 417 ON-RAMP - OVER BORROW PIT)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 1176' L) (1 Bridge)	35,280	SF	$190	$6,703,200
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 7 (RAMP - SB 417 ON-RAMP OVER SR 417)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 529' L) (1 Bridge)	15,870	SF	$312	$4,951,440
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900

BRIDGE 8 (RAMP - NB TPK 417 OFF-RAMP OVER BORROW PIT)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 857' L) (1 Bridge)	25,710	SF	$190	$4,884,900
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
**** ADDITIONAL ITEMS ****				
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	2.458	MI	$350,000	$860,218
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	7.45	AC	$394,946	$2,943,136
SIGNALIZATION PER INTERCHANGE (E. LAKE MARY BLVD)	1	EA	$763,950	$763,950
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	$330,000	$330,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	$1,750,000	$1,750,000

SUB-TOTAL	$97,357,811
EROSION CONTROL / TEMPORARY DRAINAGE (1%)	$973,578
SIGNING, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING (10%)	$9,735,781
MAINTENANCE OF TRAFFIC (5%)	$4,867,891
MOBILIZATION (10%)	$9,735,781
SUB-TOTAL ROADWAY	$94,473,744
ROADWAY CONTINGENCY (20%)	$18,894,749
SUB-TOTAL BRIDGES	$28,197,098
BRIDGE CONTINGENCY (10%)	$2,819,710
SUB-TOTAL	$144,385,300
AESTHETICS CONTINGENCY (3%)	$4,331,559
RELOCATE UTILITIES	**$0**
ALLOWANCE FOR DISPUTES REVIEW BOARD	$50,000
WORK ORDER ALLOWANCE	$500,000
TOTAL (2025 CONSTRUCTION COST)	**$149,266,859**

SUMMARY

ESTIMATED PROBABLE PROJECT COST

417-246A - Alternative 3D

PREPARED BY ARDURRA
LAST UPDATED (04/15/2025)

PROJECT CENTERLINE MILES:	2.492
NUMBER OF BRIDGES:	11

417-246A - Alternative 3D				$157,807,037
TOTAL (2025 CONSTRUCTION COST)				**$157,807,037**
ENGINEERING / ADMINISTRATION / LEGAL (24%)				$37,873,689
RIGHT - OF - WAY	0.0	ACRES		See project matrix
SPECIES HABITAT MITIGATION	0.0	CREDITS @	$ 145,000	
REGULATORY CONSERVATION EASEMENT MITIGATION	0.0	CREDITS @	$ 145,000	See Project Matrix
MITIGATION (WETLAND IMPACT ACERAGE x 0.8 = CREDITS	0.0	CREDITS @	$ 145,000	
TOLL COLLECTION EQUIPMENT	2	LANES @	$ 275,000	$550,000
GRAND TOTAL PROJECT COST				**$196,230,726**

F:\Projects\CFX-003-01\admin\cost estimates\[417-246A_ Alternative 3D_Const Cost Estimate_V9.: 25-Jun-25

ESTIMATED PROBABLE CONSTRUCTION COST

417-246A - Alternative 3D

PREPARED BY *ARDURRA*

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
**** EXPRESSWAYS / RAMPS / ROADWAYS****				
MAINLINE ROADWAY TYPICAL (W/FILL SLOPES - 3.5' HEIGHT)	0.452	MI	$10,329,161	$4,667,685
MAINLINE ROADWAY TYPICAL (W/ WALLS - 10' HEIGHT)	0.190	MI	$24,302,241	$4,609,693
MAINLINE ROADWAY TYPICAL (W/ WALLS - 15' HEIGHT)	0.071	MI	$29,781,900	$2,109,946
MAINLINE ROADWAY TYPICAL (W/ WALLS - 20' HEIGHT)	0.116	MI	$35,261,560	$4,098,355
MAINLINE ROADWAY TYPICAL (W/ WALLS - 25' HEIGHT)	0.253	MI	$40,741,245	$10,321,887
MAINLINE ROADWAY TYPICAL (W/ WALLS - 30' HEIGHT)	0.195	MI	$46,220,905	$9,031,110
MAINLINE ROADWAY TYPICAL (W/ WALLS - 35' HEIGHT)	0.016	MI	$51,700,564	$816,340
ONE LANE RAMPS	1.692	MI	$3,201,367	$5,415,937
TWO-LANE RAMPS	0.330	MI	$4,268,965	$1,409,163
THREE-LANE RAMPS	0.237	MI	$5,574,090	$1,319,623
(ACCEL/DECEL LANES) EXTRA COST FOR ADDED 12' LANE (WIDENING) (TPK-417)	0.502	MI	$912,338	$457,993
EXTRA FILL FOR ELEVATED RAMPS	26,666	CY	$26.30	$701,316
RETAINED EARTH WALL FOR RAMPS	20,000	SF	$58	$1,160,000
WIDENING ON E. LAKE MARY BLVD	0.492	MI	$756,672	$372,604
**** BRIDGES ****				
BRIDGE 1 (OVER OAK WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 89' L) (2 Bridges)	5,637	SF	$170	$958,334
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,197	SF	$58	$127,417
BRIDGE 2 (OVER PALM WAY)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 102' L) (2 Bridges)	6,461	SF	$170	$1,098,316
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 3 (OVER PINE WAY & POND)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 2350' L) (2 Bridges)	148,849	SF	$175	$26,048,575
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,553	SF	$58	$90,097
BRIDGE 4 (OVER E. LAKE MARY BLVD.)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (31'-8" W x 267' L) (2 Bridges)	16,912	SF	$230	$3,889,709
APPROACH SLABS	4	EA	$29,295	$117,179
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	2,716	SF	$58	$157,528
BRIDGE 5 (RAMP - SB 417 ON-RAMP OVER SR 417)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 529' L) (1 Bridge)	15,870	SF	$312	$4,951,440
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 6 (RAMP - SB TPK 417 ON-RAMP - OVER BORROW PIT)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 1202' L) (1 Bridge)	36,060	SF	$190	$6,851,400
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
BRIDGE 7 (RAMP - NB TPK 417 OFF-RAMP OVER BORROW PIT)				
MAINLINE ROADWAY BRIDGE OVER SIDESTREET (30' W x 862' L) (1 Bridge)	25,860	SF	$190	$4,913,400
APPROACH SLABS	2	EA	$27,750	$55,500
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	1,188	SF	$58	$68,900
**** ADDITIONAL ITEMS ****				
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	2.492	MI	$350,000	$872,230
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	8.69	AC	$394,946	$3,431,290

SIGNALIZATION PER INTERCHANGE (E. LAKE MARY BLVD)	1	EA	$763,950	$763,950
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	$330,000	$330,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	$1,750,000	$1,750,000

SUB-TOTAL	$104,329,195
EROSION CONTROL / TEMPORARY DRAINAGE (1%)	$1,043,292
SIGNING, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING (10%)	$10,432,919
MAINTENANCE OF TRAFFIC (5%)	$5,216,460
MOBILIZATION (10%)	$10,432,919
SUB-TOTAL ROADWAY	$80,764,714
ROADWAY CONTINGENCY (20%)	$16,152,943
SUB-TOTAL BRIDGES	$50,690,071
BRIDGE CONTINGENCY (10%)	$5,069,007
SUB-TOTAL	$152,676,735
AESTHETICS CONTINGENCY (3%)	$4,580,302
RELOCATE UTILITIES	**$0**
ALLOWANCE FOR DISPUTES REVIEW BOARD	$50,000
WORK ORDER ALLOWANCE	$500,000
TOTAL (2025 CONSTRUCTION COST)	**$157,807,037**

SUMMARY

ESTIMATED PROBABLE PROJECT COST

417-246A - Alternative 4

PREPARED BY ARDURRA
LAST UPDATED (5/8/2025)

PROJECT CENTERLINE MILES:	2.500
NUMBER OF BRIDGES:	6

417-246A - Alternative 4 (E. Lake Mary Blvd. Viaduct)				$379,005,752
TOTAL (2025 CONSTRUCTION COST)				**$379,005,752**
ENGINEERING / ADMINISTRATION / LEGAL (24%)				$90,961,380
RIGHT - OF - WAY	0.0	ACRES		See project matrix
SPECIES HABITAT MITIGATION	0.0	CREDITS @	$ 145,000	
REGULATORY CONSERVATION EASEMENT MITIGATION	0.0	CREDITS @	$ 145,000	See Project Matrix
MITIGATION (WETLAND IMPACT ACERAGE x 0.8 = CREDITS	0.0	CREDITS @	$ 145,000	
TOLL COLLECTION EQUIPMENT	2	LANES @	$ 275,000	$550,000
GRAND TOTAL PROJECT COST				**$470,517,132**

F:\Projects\CFX-003-01\admin\cost estimates\[417-246A_ Alternative 4 (Viaduct)_Const Cost Estim 25-Jun-25

ESTIMATED PROBABLE CONSTRUCTION COST

417-246A - Alternative 4 (E. Lake Mary Blvd. Viaduct)

PREPARED BY *ARDURRA*

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
****ROADWAYS & RAMPS****				
LOCAL ROADS				
E. LAKE MARY BLVD. - WIDENING	1.534	MI	$5,978,953	$9,172,257
SKYRAIDER CT. - DEMOLISH	0.189	MI	$192,334	$36,427
RED CLEVELAND BLVD. & E. LAKE MARY BLVD. RAMPS				
NB TPK-417 TO EB AIRPORT CONNECTOR				
(ACCEL/DECEL LANES) EXTRA COST FOR ADDED 12' LANE (WIDENING) (TPK-417)	0.095	MI	$912,338	$86,396
ONE LANE RAMPS	0.294	MI	$3,201,367	$939,795
EXTRA FILL FOR ELEVATED RAMPS	20,833	CY	$26.30	$547,917
RETAINED EARTH WALL FOR RAMPS	37,500	SF	$58	$2,175,000
WB AIRPORT CONNECTOR TO SB TPK-417				
(ACCEL/DECEL LANES) EXTRA COST FOR ADDED 12' LANE (WIDENING) (TPK-417)	0.293	MI	$912,338	$266,962
ONE LANE RAMPS	0.336	MI	$3,201,367	$1,076,217
EXTRA FILL FOR ELEVATED RAMPS	19,356	CY	$26.30	$509,051
RETAINED EARTH WALL FOR RAMPS	34,840	SF	$58	$2,020,720
RED CLEVELAND BLVD. TO WB AIRPORT CONNECTOR				
ONE LANE RAMPS	0.444	MI	$3,201,367	$1,421,819
EXTRA FILL FOR ELEVATED RAMPS	34,667	CY	$26.30	$911,733
RETAINED EARTH WALL FOR RAMPS	31,200	SF	$58	$1,809,600
EB AIRPORT CONNECTOR TO RED CLEVELAND BLVD.				
ONE LANE RAMPS	0.367	MI	$3,201,367	$1,176,260
EXTRA FILL FOR ELEVATED RAMPS	39,767	CY	$26.30	$1,045,863
RETAINED EARTH WALL FOR RAMPS	46,305	SF	$58	$2,685,690
E. LAKE MARY BLVD. TO WB AIRPORT CONNECTOR				
ONE LANE RAMPS	0.335	MI	$3,201,367	$1,073,186
EXTRA FILL FOR ELEVATED RAMPS	14,469	CY	$26.30	$380,532
RETAINED EARTH WALL FOR RAMPS	26,044	SF	$58	$1,510,552
EB AIRPORT CONNECTOR TO E. LAKE MARY BLVD.				
ONE LANE RAMPS	0.377	MI	$3,201,367	$1,208,395
EXTRA FILL FOR ELEVATED RAMPS	15,111	CY	$26.30	$397,422
RETAINED EARTH WALL FOR RAMPS	27,200	SF	$58	$1,577,600
****VIADUCT STRUCTURE & BRIDGES ****				
TPK - SR 417 EXISTING MAINLINE				
BRIDGE 1 (TPK 417 - MAINLINE) WIDEN EXIST. BRIDGE OVER CFX RAILROAD				
MAINLINE ROADWAY BRIDGE OVER R/R	1,700	SF	$200	$340,000
APPROACH SLABS	2	EA	$15,725	$31,450
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	540	SF	$58	$31,320
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	540	SF	$58	$31,320
WB AIRPORT CONNECTOR TO SB TPK-417 RAMP BRIDGES				
BRIDGE 2	12,101	SF	$245	$2,964,843
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
BRIDGE 3	8,599	SF	$245	$2,106,829
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
BRIDGE 4	28,019	SF	$245	$6,864,655
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
NB TPK-417 TO EB AIRPORT CONNECTOR RAMP BRIDGES				
BRIDGE 5	5,182	SF	$245	$1,269,590
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800

RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
BRIDGE 6	8,279	SF	$258	$2,135,982
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
BRIDGE 7	17,204	SF	$245	$4,215,029
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
EB AIRPORT CONNECTOR TO RED CLEVELAND BLVD. RAMP BRIDGE				
BRIDGE 8	20,152	SF	$245	$4,937,265
APPROACH SLABS	2	EA	$29,295	$58,590
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
RETAINED EARTH WALL (END BRIDGE - WRAP AROUND WALL)	600	SF	$58	$34,800
E. LAKE MARY BLVD. TO WB AIRPORT CONNECTOR				
BRIDGE 9	18,045	SF	$245	$4,421,050
APPROACH SLABS	1	EA	$29,295	$29,295
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	930	SF	$58	$53,940
EB AIRPORT CONNECTOR TO E. LAKE MARY BLVD.				
BRIDGE 10	7,967	SF	$205	$1,633,276
APPROACH SLABS	1	EA	$29,295	$29,295
RETAINED EARTH WALL (BEGIN BRIDGE - WRAP AROUND WALL)	750	SF	$58	$43,500
AIRPORT CONNECTOR MAINLINE VIADUCT STRUCTURE				
SEGMENTAL EXTRADOSED BOX (TULIP PIERS/C-PIERS/STRADDLE) - VAR. WIDTH	353,511	SF	$330	$116,658,663
SEGMENTAL EXTRADOSED BOX (TULIP PIERS) - VAR. WIDTH	73,842	SF	$320	$23,629,504
SEGMENTAL EXTRADOSED BOX (STRADDLE PIERS) - UNIFORM WIDTH	31,185	SF	$315	$9,823,275
**** ADDITIONAL ITEMS ****				
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	2.500	MI	$350,000	$875,000
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	3.11	AC	$394,946	$1,227,506
SIGNALIZATION PER INTERCHANGE (N. Ronald Reagan, Sanford Ave., Mellonville Ave., Red Cleveland Blvd.)	4	EA	$558,623	$2,234,490
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	2	INT	$330,000	$660,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	$1,750,000	$1,750,000

SUB-TOTAL	$220,854,197
EROSION CONTROL / TEMPORARY DRAINAGE (1%)	$2,208,542
SIGNING, PAVEMENT MARKING, SIGNALIZATION AND LIGHTING (10%)	$22,085,420
MAINTENANCE OF TRAFFIC (15%)	$33,128,130
MOBILIZATION (10%)	$22,085,420
SUB-TOTAL ROADWAY	$118,283,902
ROADWAY CONTINGENCY (20%)	$23,656,780
SUB-TOTAL BRIDGES	$182,077,806
BRIDGE CONTINGENCY (20%)	$36,415,561
SUB-TOTAL	$360,434,049
AESTHETICS CONTINGENCY (5%)	$18,021,702
RELOCATE UTILITIES	**$0**
ALLOWANCE FOR DISPUTES REVIEW BOARD	$50,000
WORK ORDER ALLOWANCE	$500,000
TOTAL (2025 CONSTRUCTION COST)	**$379,005,752**

Appendix D
CFX Tolling Commitment

June 13, 2025

Sent Via Electronic Mail to Alison.Stettner@dot.state.fl.us

Ms. Alison Stettner, AICP
Director of Transportation Development
Florida's Turnpike Enterprise
Milepost 263, Bldg. 5315
Ocoee, FL. 34761

RE: SR 417 Sanford Airport Connector PD&E Study
Future Tolling at SR 417 Lake Jesup Plaza

Dear Ms. Stettner:

On behalf of the Central Florida Expressway Authority (CFX), I would like to thank you and Florida's Turnpike Enterprise (FTE) for the continued coordination in planning for regional mobility within Central Florida, as evidenced with the SR 417 Sanford Airport Connector ("Connector") Project Development and Environment (PD&E) Study. The purpose of this letter is to outline the two options CFX proposes for future tolling at the SR 417 Lake Jesup Plaza, should the proposed Connector PD&E Study be approved by the CFX Governing Board ("Board") later this year. The two tolling options are subject to coordination and agreement between CFX and FTE management. This letter also serves as a commitment by CFX to fully evaluate the option agreed upon by both agencies, after the PD&E Study is approved by the Board and prior to commencing design.

The most recent PD&E Study coordination occurred following the Refined Alternatives Public Meeting held on April 2nd, 2025. CFX held individual meetings with the three primary stakeholders within the study area (Orlando Sanford International Airport, Seminole County and FTE) to obtain concurrence on the selection of the preferred alignment alternative. The Preferred Alternative (Alignment 2A) was selected on April 18th, 2025. Since then, CFX has been working on preparing and finalizing the PD&E Study documents, in preparation for the upcoming Public Hearing scheduled for July 17th, 2025. Following the Public Hearing, the PD&E Study findings will be presented to our Board in the Fall of 2025 and completed by the end of 2025.

As discussed during the April 18, 2025, coordination meeting, and at follow up meetings with FTE staff on April 23rd, 2025, and May 6th, 2025, the Preferred Alternative (2A) for the Connector includes ramps to/from SR 417 south only. The proposed Connector ramps will tie into the SR 417 mainline just south of the existing Lake Jesup Plaza and should not impact the existing toll gantry or building. For the proposed Connector, a toll gantry will be sited between SR 417 and East Lake Mary Boulevard.

CFX is committed to preserving FTE's toll collection and revenue at the Lake Jesup Plaza and proposes the following two options in that regard:

Option 1: Unified Toll Collection – This would be like our collective approach to SR 528 tolling at the Dallas Plaza (toll amount for both FTE and CFX segments of SR 528 are collected at one

location). In this scenario, the toll amount at the Connector gantry would be set to include the toll for FTE's SR 417 mainline, equal to the toll amount at the Lake Jesup Plaza. Should this option be preferred, CFX commits to begin evaluating the tolling details after the PD&E Study is completed and our Board provides direction to move the Connector project forward into design. Further, CFX commits to construction of the new toll gantry on the Connector and collecting / distributing the proportionate toll revenue like our current agreement at the Dallas Plaza.

Option 2: Relocation of the Lake Jesup Plaza south of the Connector on SR 417 – Should this option be preferred, CFX commits to preparing a Toll Sitting Technical Memorandum (TSTM) in accordance with FTE's General Tolling Requirements (GTR). The TSTM will be completed prior to or during the early phase of design for the Connector. As noted in previous discussions, performing a full evaluation of this option was not possible prior to the Preferred Alternative being selected on April 18th, 2025. Conducting a SR 417 toll site evaluation and preparation of a TSTM during the current CFX PD&E Study will significantly impact the study schedule and is premature since the project has not yet been approved by our Board as a viable project.

With this commitment, CFX will finalize and provide the Interchange Justification Report (IJR) to both FTE and FDOT Central Office for review after the Public Hearing, as discussed and agreed upon during recent coordination meetings. After all review comments are addressed, the IJR will be provided for execution and the PD&E Study will be complete. This letter/commitment will be referenced and appended to the following PD&E Study reports: IJR, Preliminary Engineering Report (PER) and Project Environmental Impact Report (PEIR). Please provide your concurrence to this letter by July 11th, 2025, or let me know if you would like to discuss further.

Sincerely,

CENTRAL FLORIDA
EXPRESSWAY AUTHORITY

Will Hawthorne, PE
Director of Transportation Planning and Policy

cc: Michele Maikisch – CFX, Executive Director
Nicola Liquori – FTE, Executive Director and CEO
Glenn Pressimone, PE – CFX, Chief of Infrastructure
David Falk, PE – CFX, Director of Engineering
Carol Scott, CPM – FTE, Planning and Environmental Management Administrator
Erin Sterk, CPM – FTE, Toll Studies & Forecasting Manager, District Interchange Review Coordinator