STATE ENVIRONMENTAL IMPACT REPORT

Florida Department of Transportation

PD&E WIDEN TPK(SR91) FROM S OF SR 408 TO SR 50 (MP 263 - 273)

District: Florida's Turnpike Enterprise

County: Orange County

ETDM Number: 14378

Financial Management Number: 444007-1-22-01

Project Manager: Michael Leo

This project has been developed without regard to race, color, national origin, age, sex, religion, disability, or family status.

The final SEIR reflects consideration of the PD&E Study and the public hearing.

_____ Date:

District Secretary or Designee

For additional information, contact:

Michael Leo, P.E.
Project Manager
Florida Department of Transportation
Florida's Turnpike Enterprise (HNTB)
P.O. Box 613069
Ocoee, FL 34761
407-264-3414
Michael.Leo@dot.state.fl.us

Prime Consulting Firm:
RS&H

Consulting Project Manager:
Nathan Silva, PE, AICP

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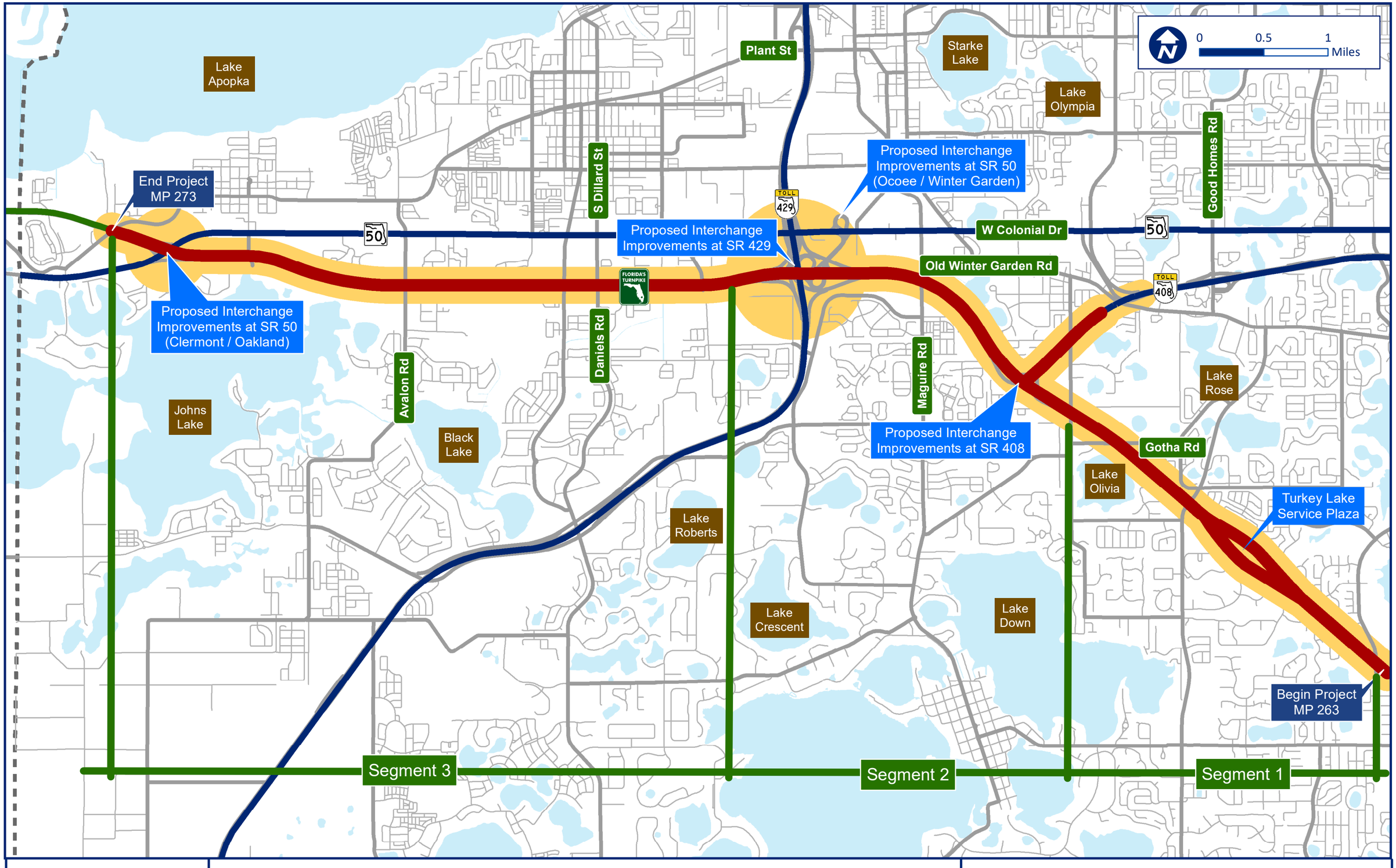

Turnpike (SR 91) Widening PD&E Study from South of SR 408 to SR 50 (MP 263 to 273)
FPID: 444007-1 | ETDM: 14378

Figure 1.1.1: Project Location Map

1. Project Information

1.1 Project Description

The Florida's Turnpike Enterprise (FTE), part of the Florida Department of Transportation (FDOT), is evaluating alternatives to widen Florida's Turnpike (State Road (SR) 91) from south of SR 408 to SR 50 (milepost (MP) 263 to 273), a distance of approximately 10 miles, and along SR 408 from the Florida's Turnpike interchange to east of the Old Winter Garden Road overpass. As part of the study, all existing interchanges within the project limits and the need for a new interchange at Avalon Road were evaluated. The project is located in Orange County, Florida within the municipalities of Oakland, Winter Garden, and Ocoee. The project location map, Figure 1.1.1, shows the study area for the Florida's Turnpike Project Development and Environment (PD&E) Study.

Florida's Turnpike currently has eight to twelve lanes (four travel lanes and up to two auxiliary lanes in each direction) within the study limits. The roadway is functionally classified as an Urban Principal Arterial - Freeway and Expressway and has a posted speed limit of 70 miles per hour (mph). The access management classification is Class 1 and the corridor does not have a context classification.

Early planning efforts conducted by FTE concluded that major operational, safety, and capacity improvements are needed along Florida's Turnpike to improve current and future peak period traffic operations along the mainline at the major interchanges with SR 408, SR 429, and SR 50 to reduce the potential for traffic incidents and accommodate travel at acceptable levels of service. This PD&E Study evaluated the widening of the Florida's Turnpike as well as milling and resurfacing, bridge construction, and interchange improvements. Interchange improvements were evaluated at SR 408, SR 429, SR 50 (Ocoee / Winter Garden), SR 50 (Clermont / Oakland), and a new interchange was evaluated at Avalon Road.

The Preliminary Engineering Report (PER), under a separate cover, describes the Build Alternatives, the No-Build Alternative, and the Preferred Alternative in detail. A summary of the Preferred Alternative is provided below.

The Preferred Alternative for Florida's Turnpike mainline are subdivided into three segments. The first segment of Florida's Turnpike, from Turkey Lake Service Plaza to SR 408, involves adding a total of two lanes in each direction for a total of five travel lanes and one auxiliary lane in each direction. Figure 1.1.2 shows the proposed typical section for Segment 1 of the Florida's Turnpike mainline.

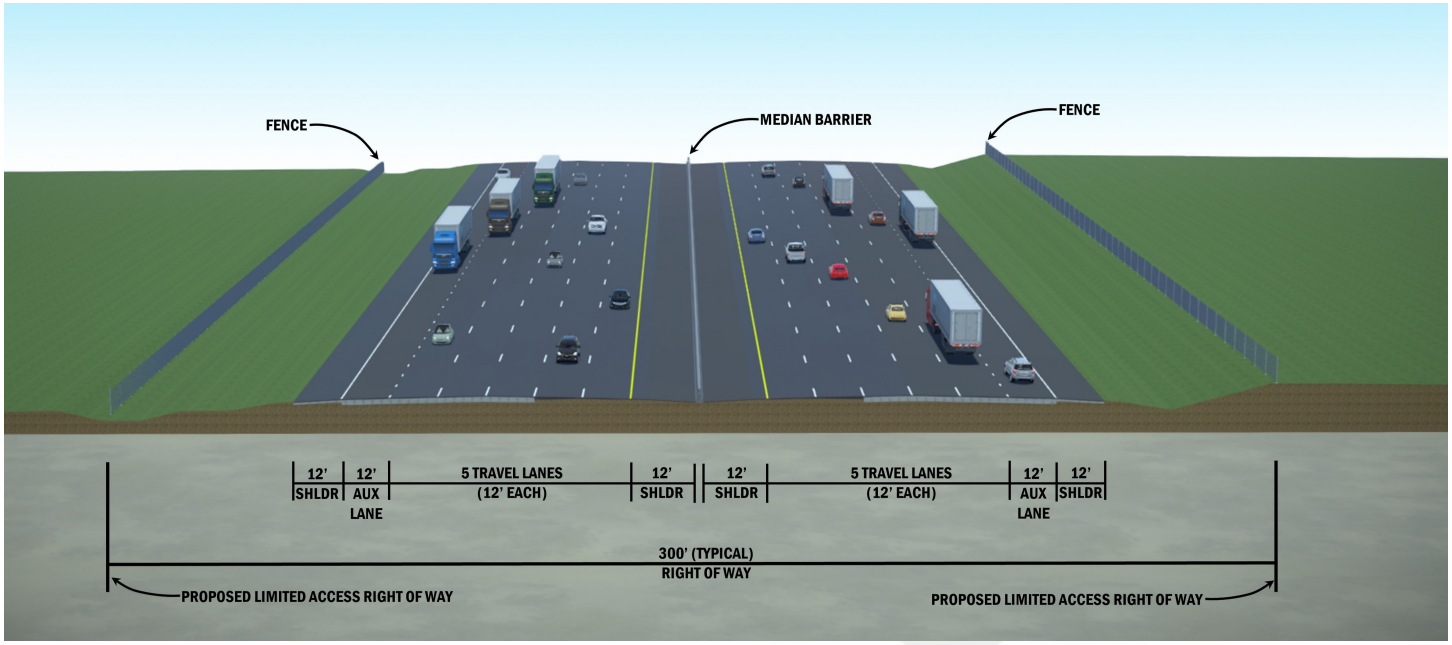

Figure 1.1.2: Proposed Typical Section - Segment 1

The second segment, from SR 408 to SR 429, includes a collector-distributor (C-D) system consisting of a separate roadway facility that will parallel the mainline lanes of Florida's Turnpike. The purpose of the C-D system is to remove the weaving movements associated with the interchanges from the high-speed mainline, thereby improving traffic operations and safety. Traffic traveling to either SR 408 or SR 429 will use the C-D system. The northbound C-D system contains a five and a half-foot inside shoulder, three travel lanes, and a 16-foot-wide outside shoulder. The extra space for the outside shoulder will allow for part-time shoulder use (PTSU) which will be implemented when PM peak hour level of service (LOS) degrades to an unacceptable condition. Traffic forecasts and future year analyses developed for this PD&E study indicate PTSU operations may be warranted by the year 2040. The southbound C-D system will have a five-foot inside shoulder, four travel lanes, and a 10-foot-wide outside shoulder. Both C-D systems will be barrier separated from the mainline travel lanes. In addition, the mainline will be widened to five lanes in each direction to serve the regional traffic passing through this segment. Figure 1.1.3 shows the proposed typical section for the second segment of Florida's Turnpike.

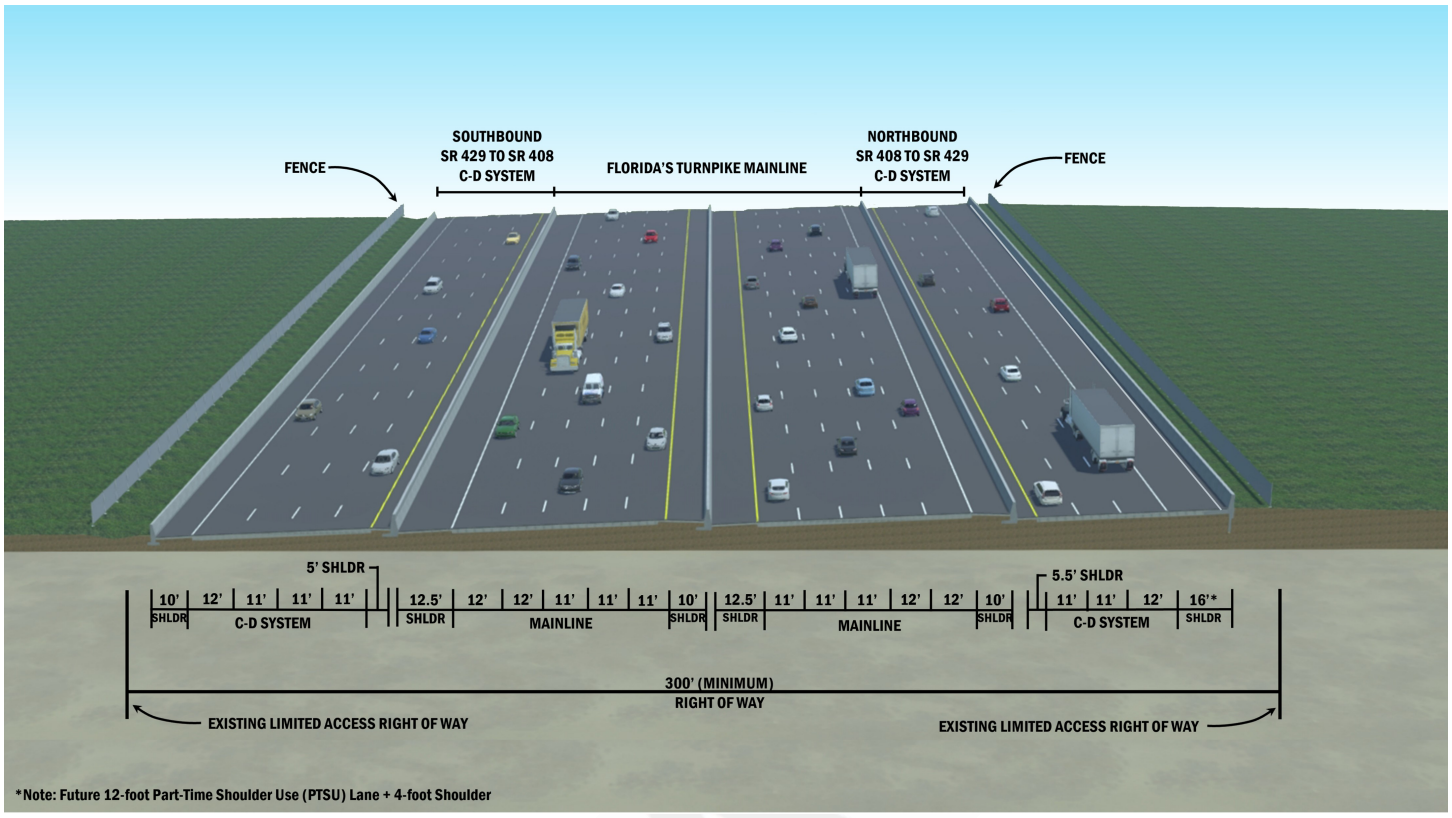

Figure1.1.3_Proposed Typical Section - Segment 2

The final segment of the study, from SR 429 to SR 50, consists of adding one through lane in each direction, for a total of five travel lanes in each direction. Figure 1.1.4 shows the proposed typical section for the third segment of Florida's Turnpike.

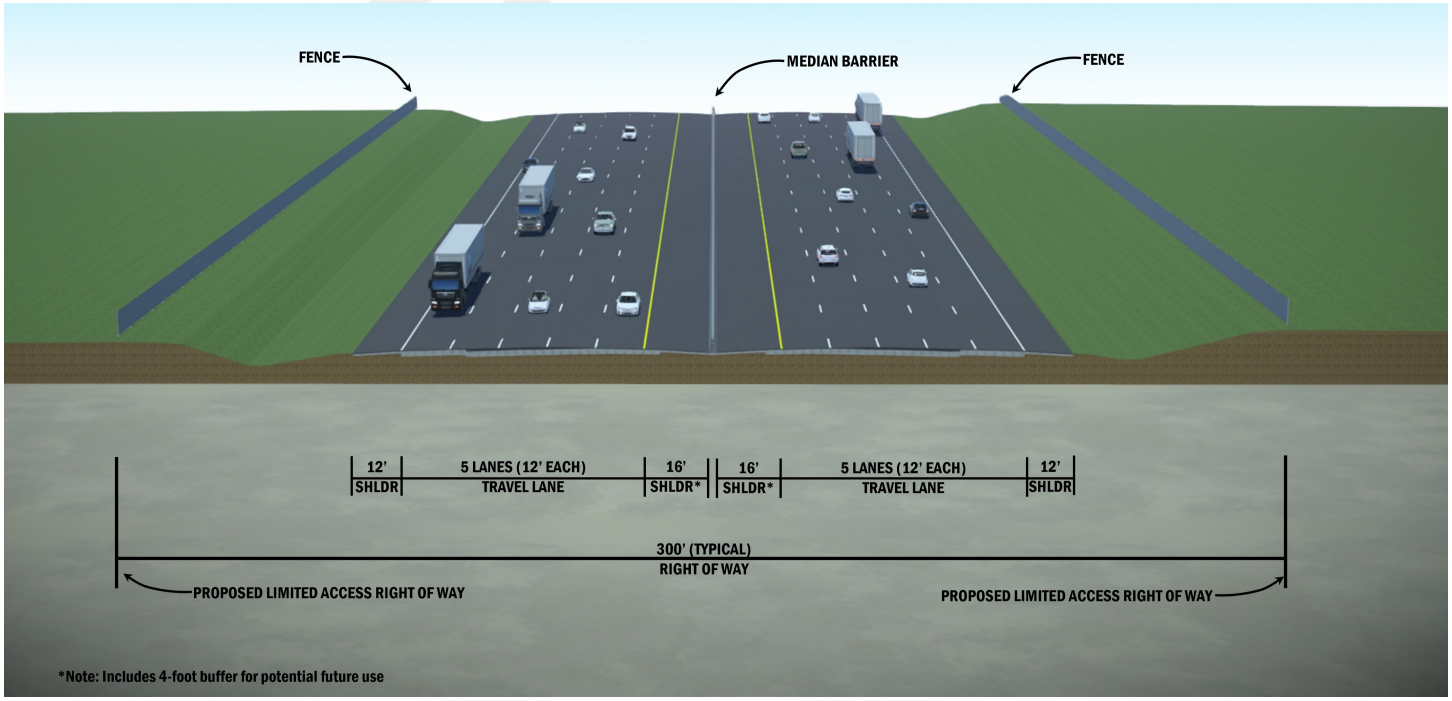

Figure 1.1.4: Proposed Typical Section - Segment 3

The preferred interchange improvements are described below.

The SR 408 interchange will be reconstructed to provide direct connections to both the Florida's Turnpike mainline and the proposed C-D system. The Florida's Turnpike southbound exit ramp to SR 408 will be replaced with a new four-lane ramp designed for 55 mph.

The SR 429 interchange will be modified to accommodate the connections to the new C-D system between SR 408 and SR 429. Other interchange modifications include the northbound Florida's Turnpike to southbound SR 429 ramp which will be replaced with a new two-lane ramp and the southbound SR 429 ramp to Florida's Turnpike which will be replaced with a three-lane ramp. The three-lane ramp will split to a two-lane ramp for Florida's Turnpike northbound and a two-lane ramp for Florida's Turnpike southbound.

At SR 50 (Ocoee / Winter Garden) Connector, the project will widen the existing bridge over SR 50 to and from the Florida's Turnpike to meet current design standards. This option includes a new eastbound right turn lane onto SR 50 that merges with the exit ramp from Florida's Turnpike along SR 50 just before the Marshall Farms Road intersection. Motorists wishing to turn right onto Marshall Farms Road will need to make that decision before the overpass. The merge will be signal controlled.

At SR 50 (Clermont / Oakland), the Florida's Turnpike northbound off-ramp will split to allow eastbound traffic on SR 50 to make a right turn, while the westbound traffic moves under the Florida's Turnpike mainline to bypass the northern junction. This alternative improves safety by allowing for fewer conflict points and improves mobility by bypassing the northern traffic signal on SR 50.

A new interchange was evaluated at Avalon Road, however, after considering public input, the No-Build Alternative was selected as the Preferred Alternative.

1.2 Purpose and Need

The purpose of the project is to reduce congestion and improve mobility on Florida's Turnpike mainline from south of SR 408 to SR 50 to accommodate current and future traffic volumes generated by growth in Orange County and adjacent counties. A goal of the project is to enhance safety and improve emergency evacuation times.

The need for this project is to improve current and future peak period traffic operations and safety issues at the interchanges and throughout the corridor. The SR 408 to SR 429 segment of the project currently has a high volume of weaving and merging movements, with 45 percent of traffic from SR 408 exiting at SR 429 and 32 percent of northbound Florida's Turnpike traffic exiting at SR 429. This hinders the traffic operations and increases the concern for safety. The close proximity (1.3 miles) of these system-to-system interchanges causes merging and weaving conflicts. A total of 1,792 crashes were reported in the study limits between 2013 to 2017. Of those crashes, 60 percent occurred on the Florida's Turnpike mainline, seven percent on the SR 408 mainline, 11 percent on the SR 429 mainline, and 22 percent at the SR 50 (Clermont / Oakland) intersection. The proposed improvements will improve the travel time reliability, enhance safety, and improve emergency response and evacuation times.

Project Status

The project is listed in the FDOT's State Transportation Improvement Program (STIP) with funding for PD&E in the fiscal year 2023 and prior to 2023. Construction, design, and right-of-way acquisition are not currently funded. MetroPlan

Orlando Metropolitan Planning Organization (MPO) 2045 Metropolitan Transportation Plan (MTP) shows funding for the PD&E and Preliminary Engineering for this project in 2026-2030 and Construction in 2031-2035. The project is not included in the April 2023 MetroPlan Orlando Transportation Improvement Program (TIP), but the FTE is working with MetroPlan Orlando through the PD&E phase to include the improvements in the TIP.

System Linkage

Within the study area, Florida's Turnpike is part of the state's Strategic Intermodal System (SIS) and the National Highway System (NHS). The SIS is an intermodal network of transportation facilities that are designed to provide the highest degree of mobility for people and goods traveling throughout Florida. The SIS is an integral piece of Florida's goal to enhance economic competitiveness and quality of life for its citizens and visitors. The NHS is a network of strategic highways within the United States, including the Interstate Highway System and other roads serving major airports, seaports, rail or truck terminals, railway stations, pipeline terminals, and other strategic transport facilities.

Florida's Turnpike provides limited access north-south connectivity from Miami-Dade County to Sumter County and connects to I-75, northwest of Orlando. The corridor is a key component for travel in the Metropolitan Orlando area providing easy access to major state roadways. In the study area, Florida's Turnpike connects to SR 429, which connects to I-4 in Osceola County and to US 441 in Orange County. The major east-west corridors in the study area are SR 408, which connects Florida's Turnpike in Orange County to SR 50 just east of SR 417, and SR 50 which spans the width of Florida from US 1 to US 19.

Capacity

This project is needed to relieve current and projected future traffic congestion along the portion of Florida's Turnpike from south of SR 408 to SR 50. FTE prepared a Preliminary Project Traffic Forecast Memorandum (PTFM), dated October 2019 and available under a separate cover, that shows the current (year 2019) traffic volumes recorded within the study limits range from approximately 105,000 to 155,000 Annual Average Daily Traffic (AADT), with approximately 50,000 AADT utilizing the Florida's Turnpike to travel between SR 408 and SR 429. Traffic forecasts for the design year 2045 are projected to grow to approximately 259,000 AADT between SR 408 and SR 429, a traffic volume which will substantially exceed the travel capacity of the existing Florida's Turnpike system and result in a LOS F for the No-Build condition. Therefore, capacity improvements are needed to meet the adopted LOS target (LOS D or better).

FTE's Traffic Trends Report (July 2018) documents that the SR 429 at Florida's Turnpike interchange experiences congestion southbound in the AM peak hours and northbound in the PM peak hours. The report also lists weaving movements as existing operational deficiencies. Additionally, the SR 50 (Clermont / Oakland) interchange is documented to have operational deficiencies at the northbound off-ramp. An additional lane is required for both the northbound off-ramp and the southbound off-ramp in the year 2045 to meet LOS targets.

Transportation Demand

A need exists to improve local and regional traffic operations along Florida's Turnpike, as the projected future traffic results in an unacceptable LOS for both the mainline and existing interchanges. Therefore, the corridor does not meet the future transportation demands based on projected population, employment growth, and requirements as an evacuation route. Consequently, additional capacity is needed on Florida's Turnpike to meet the future transportation demands as outlined in the MetroPlan Orlando MPO 2045 MTP.

Social Demand and Economic Development

Social and economic demands on Florida's Turnpike will continue to grow as population and employment increase in Orange County and the central Florida region. The East Central Florida Corridor Task Force Report dated December 1,

2014, projects the population will increase 90% in the next 50 years from a population of 2 million to a population of 3.8 million people in Orange, Osceola, and Brevard Counties. Additionally, the University of Florida's Bureau of Economic and Business Research (BEBR) projects that the population of Orange County will grow from 1,145,956 (2020) to 1,969,000 by the year 2045, an increase of 72 percent.

Traffic Safety

The crash analysis shows that a total of 1,792 crashes were reported in the study area between 2013 and 2017. The number of crashes increased each year within the study area, with an 80 percent increase from 2013 (151) to 2017 (271). This increase is likely due to the increase in traffic and population. Crash rates were analyzed for the study area with the freeway mainline and ramps estimated in crashes per Million Vehicle Miles Traveled (MVMT). A critical crash rate, based on the average crash rate for a similar facility adjusted by vehicle exposure and a probability constant, was then used as a ration to come up with a safety ratio. If the safety ratio is greater than one, it may have a safety deficiency. The analysis shows that each mainline roadway, interchange ramp, and intersection within the study area had actual crash rates lower than the critical crash rates during the 2013 to 2017 timeframe. The Florida's Turnpike mainline has a safety ratio of 0.61. Even though the safety ratio is under 1.0, there is a high number of crashes on the mainline, most of which can be attributed to congestion and ramp queues between SR 408 and SR 429.

1.3 Planning Consistency

Planning Consistency is not required for this SEIR.

2. Environmental Analysis Summary

Issues/Resources	Substantial Impacts?* Yes	No	Enhance	NoInv
3. Social and Economic				
1. Social	☐	☒	☐	☐
2. Economic	☐	☒	☐	☐
3. Land Use Changes	☐	☒	☐	☐
4. Mobility	☐	☐	☒	☐
5. Aesthetic Effects	☐	☒	☐	☐
6. Relocation Potential	☐	☒	☐	☐
4. Cultural Resources				
1. Florida Historical Resources Act (FHRA), Chapter 267, Florida Statutes (F.S.)	☐	☒	☐	☐
2. Section 6(f) of the Land and Water Conservation Fund Act of 1965	☐	☐	☐	☒
3. Recreational Areas and Protected Lands	☐	☒	☐	☐
5. Natural Resources				
1. Wetlands and Other Surface Waters	☐	☒	☐	☐
2. Aquatic Preserves and Outstanding Florida Waters	☐	☐	☐	☒
3. Water Resources	☐	☒	☐	☐
4. Wild and Scenic Rivers	☐	☐	☐	☒
5. Floodplains	☐	☒	☐	☐
6. Coastal Barrier Resources	☐	☐	☐	☒
7. Protected Species and Habitat	☐	☒	☐	☐
8. Essential Fish Habitat (EFH)	☐	☐	☐	☒
6. Physical Resources				
1. Highway Traffic Noise	☐	☒	☐	☐
2. Air Quality	☐	☒	☐	☐
3. Contamination	☐	☒	☐	☐
4. Utilities and Railroads	☐	☒	☐	☐
5. Construction	☐	☒	☐	☐
6. Bicycles and Pedestrians	☐	☒	☐	☐
7. Navigation	☐	☐	☐	☒

*** Impact Determination:** Yes = Substantial Impact; No = No Substantial Impact; Enhance = Enhancement; NoInv = Issue absent, no involvement. Basis of decision is documented in the following sections.

3. Social and Economic

3.1 Social

A Sociocultural Effects (SCE) evaluation was conducted for the project and is available in the project file. Field reviews and existing Geographic Information System (GIS) data were used to assess the socioeconomic characteristics and impacts associated with the project.

Community Focal Points

Community focal points located within the study area, which consists of a 1/4-mile radius around the centerline of the project limits are summarized below.

Schools

Twelve schools are located within the 1/4-mile study area and range from daycare to high school. Figure 3.1.1 depicts the schools in the study area. The following is a list of the schools within the 1/4-mile study area:

- SunRidge Elementary School;
- SunRidge Middle School;
- Resurrection Catholic Church Preschool;
- Premier Academy Inc;
- Westbrooke Elementary;
- UCP West Orange Charter School;
- StarChild Academy Winter Garden;
- The Crenshaw School;
- Bright Horizons at Winter Garden;
- West Orange High School;
- Matthew's Hope Firm Foundation Preschool; and
- Primrose School of Ocoee.

No schools will be directly impacted as a result of this project, however, close coordination with these schools before and during the construction phase will be necessary to ensure appropriate access and to minimize operational disruptions. In order to minimize disruptions to school bus and route operations, coordination with Orange County Public Schools and individual private schools will be necessary to ensure that safety and access concerns are addressed during construction. After project completion, access to schools in the study area will be improved by reduced congestion in the area.

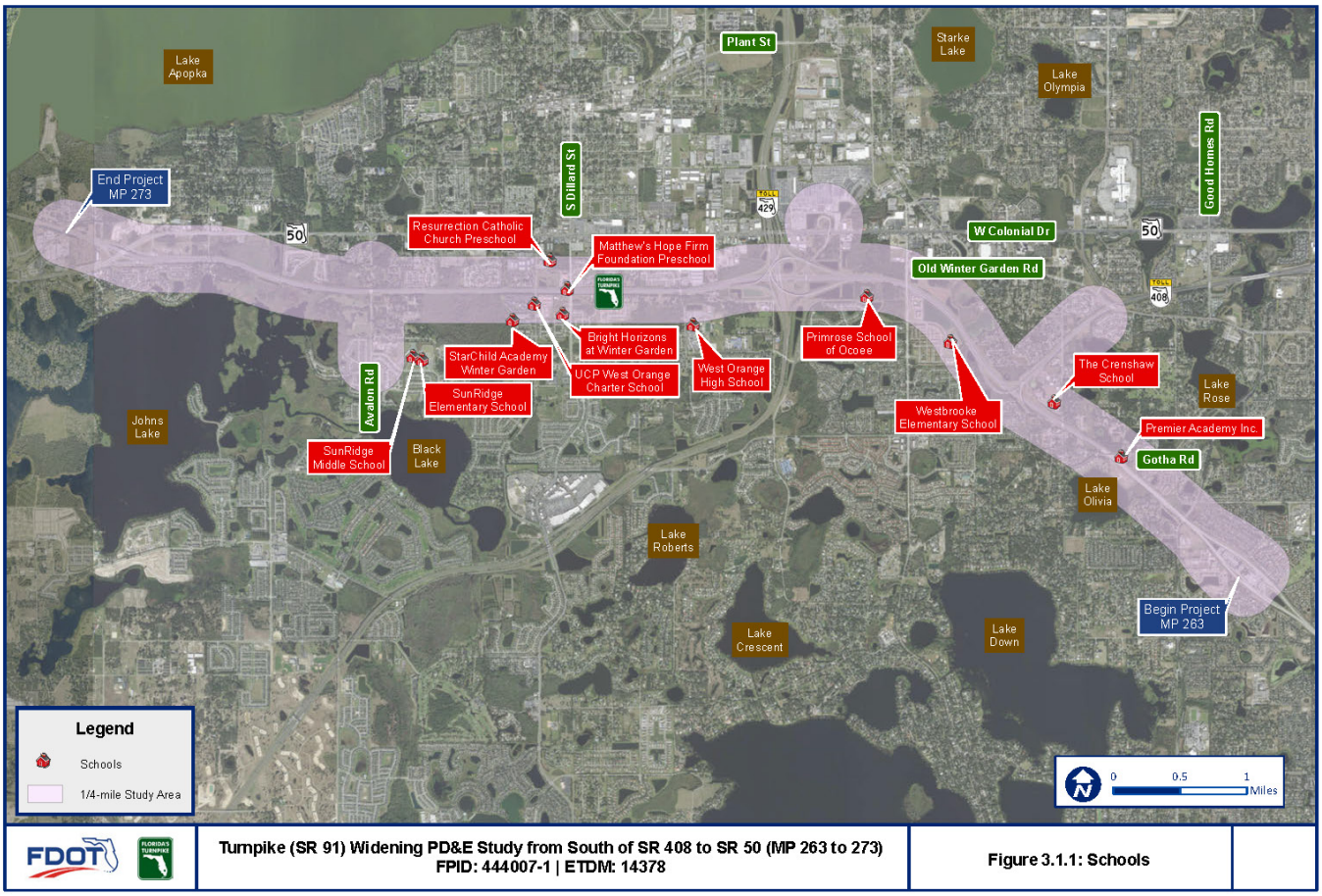

Figure 3.1.1: Schools

Worship Centers

Eleven worship centers are located within the 1/4-mile study area. The Kingdom Hall of Jehovah's Witness is the closest worship center to the project corridor and is located adjacent to the right-of-way at SR 408. No direct impacts to the worship centers are anticipated. Figure 3.1.2 depicts the worship centers in the study area.

The following is a list of the worship centers within the 1/4-mile study area:

- Zion New Life Lutheran Church;
- Kingdom Hall of Jehovah's Witnesses - Winter Garden Congregation;
- New Life Worship Center;
- New Covenant Church of the Brethren;
- Shabach Ministries of Praise;
- Resurrection Catholic Church;
- West Orange Church of Christ;
- Church of God of Prophecy;
- Ministerio Evangelistico El Llamado De Dios;
- Ashram of Central Florida; and
- Oasis Community Church.

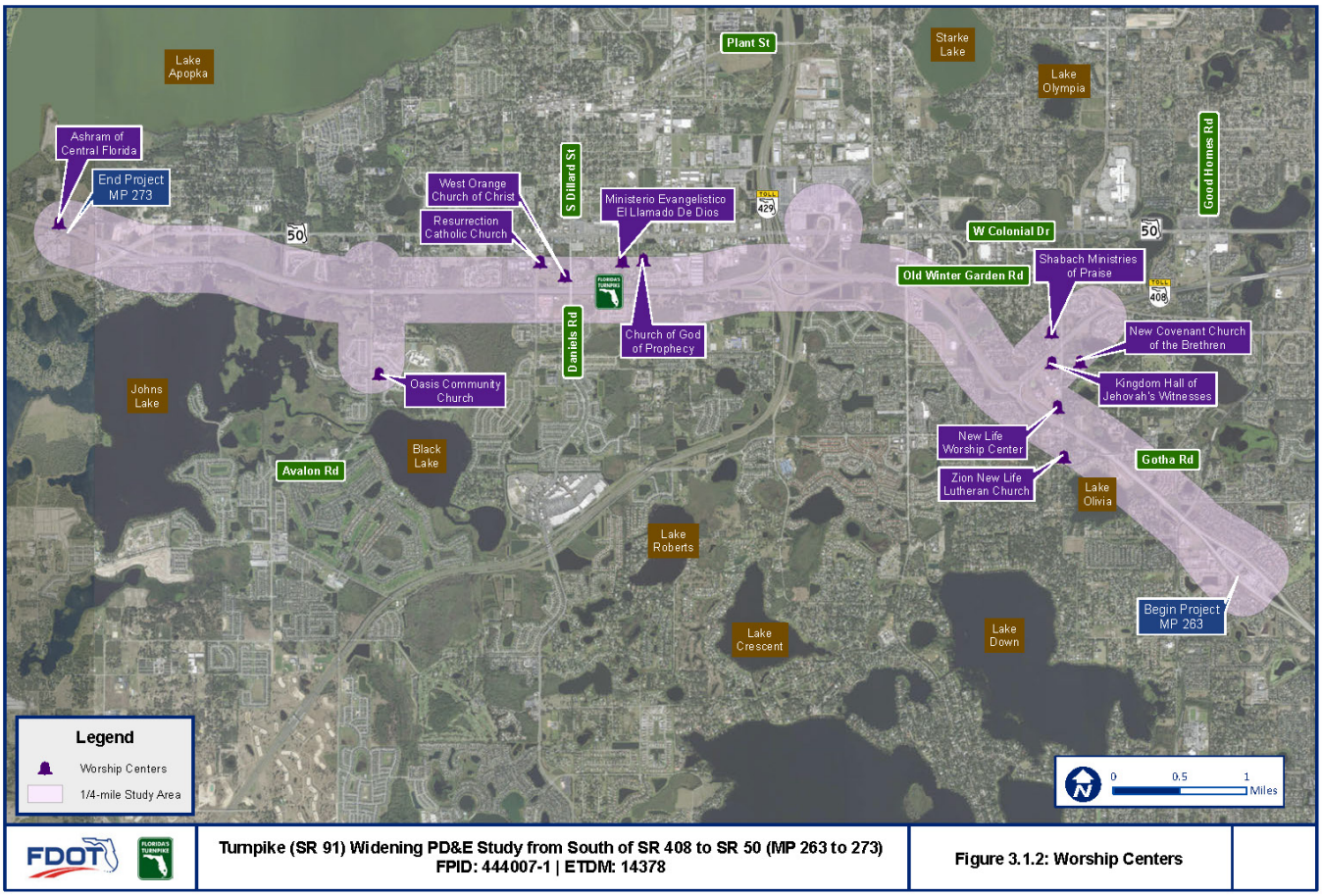

Figure 3.1.2: Worship Centers

Community Centers, Parks, and Cemeteries

Two community centers, six parks, and four cemeteries are located within the 1/4-mile study area and are listed below:

Community Centers:

- YMCA - Roper Family Center; and
- Knights of Columbus 11189 - Resurrection.

Parks:

- Lake Pearl Park;
- Tildenville Park;
- West Orange Park;
- West Orange Dog Park;
- Tucker Ranch Recreation and Nature Complex; and
- Brookestone Homeowners Association Park.

Cemeteries:

- Temple Israel Cemetery;
- Zion Lutheran Church Cemetery;
- Old African American Oakland Cemetery; and
- Oakland Cemetery.

Tucker Ranch Recreation and Nature Complex is the closest feature in this category to the project corridor and is located just south of Florida's Turnpike and just west of Avalon Road. The 209-acre property is open to the public and provides restroom facilities, covered areas, picnic benches, nature trails, a kayak / canoe launch, a playground facility, and group camping areas. The Ranch is undergoing a two-decade renovation that started in 2017. Figure 3.1.3 shows the boundaries of the Tucker Ranch Recreation and Nature Complex. West Orange Park is the next closest park and is located approximately 75 feet from the right-of-way on SR 429. No direct impacts to the parks are anticipated.

Figure 3.1.3: Tucker Ranch Recreation and Nature Complex

Old African American Oakland Cemetery and Zion Lutheran Church Cemetery are the two cemeteries directly adjacent to the right-of-way. The Preferred Alternative does not impact any of the cemeteries or community centers in the 1/4-mile study area.

Figure 3.1.4 depicts the community centers, parks, and cemeteries in the 1/4-mile study area.

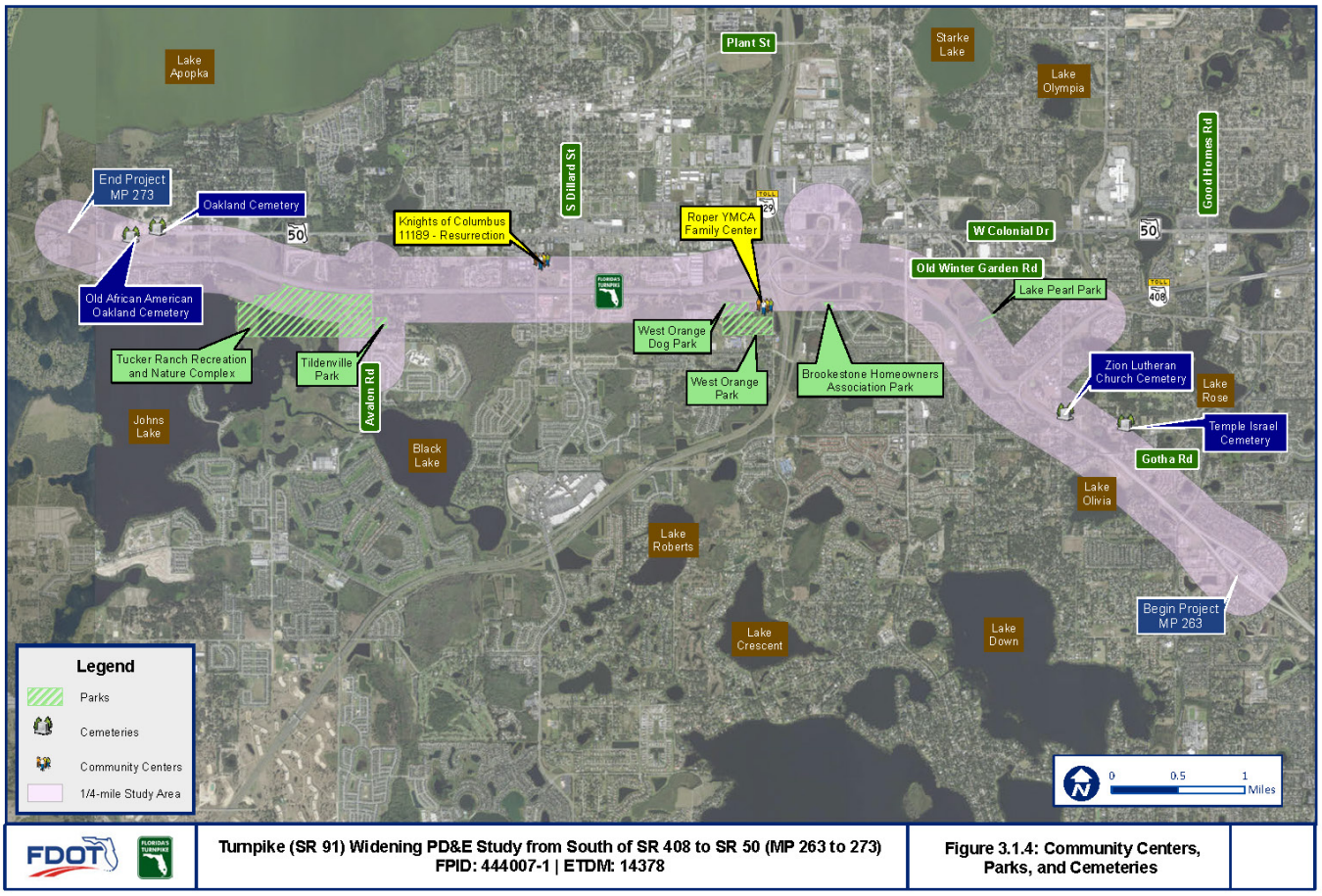

Figure 3.1.4: Community Centers, Parks and Cemeteries

Fire Stations

The Health Central Paramedic Service and Orange County Fire Department Station 33 (Gotha) are the only fire stations located in the 1/4-mile study area. Health Central Paramedic Service is located adjacent to Maguire Road just north of Florida's Turnpike. Orange County Fire Department Station 33 (Gotha) is located just south of Florida's Turnpike and west of South Apopka Vineland Road, approximately 175 feet from the right-of-way. No impacts to the fire stations are anticipated.

Law Enforcement Facilities

The Florida Highway Patrol - Troop K is located at the beginning of the project in the Turkey Lake Service Plaza. No other law enforcement facilities are located within the 1/4-mile study area. No adverse impacts to the law enforcement facility are anticipated.

Government Buildings

The United States Postal Service - Gotha is located south of Florida's Turnpike and west of Hempel Avenue, adjacent to the existing right-of-way on Florida's Turnpike. No impacts to the postal service are anticipated. No other government facilities are located within the 1/4-mile study area.

Figure 3.1.5 depicts the fire stations, law enforcement facilities, and government buildings in the study area.

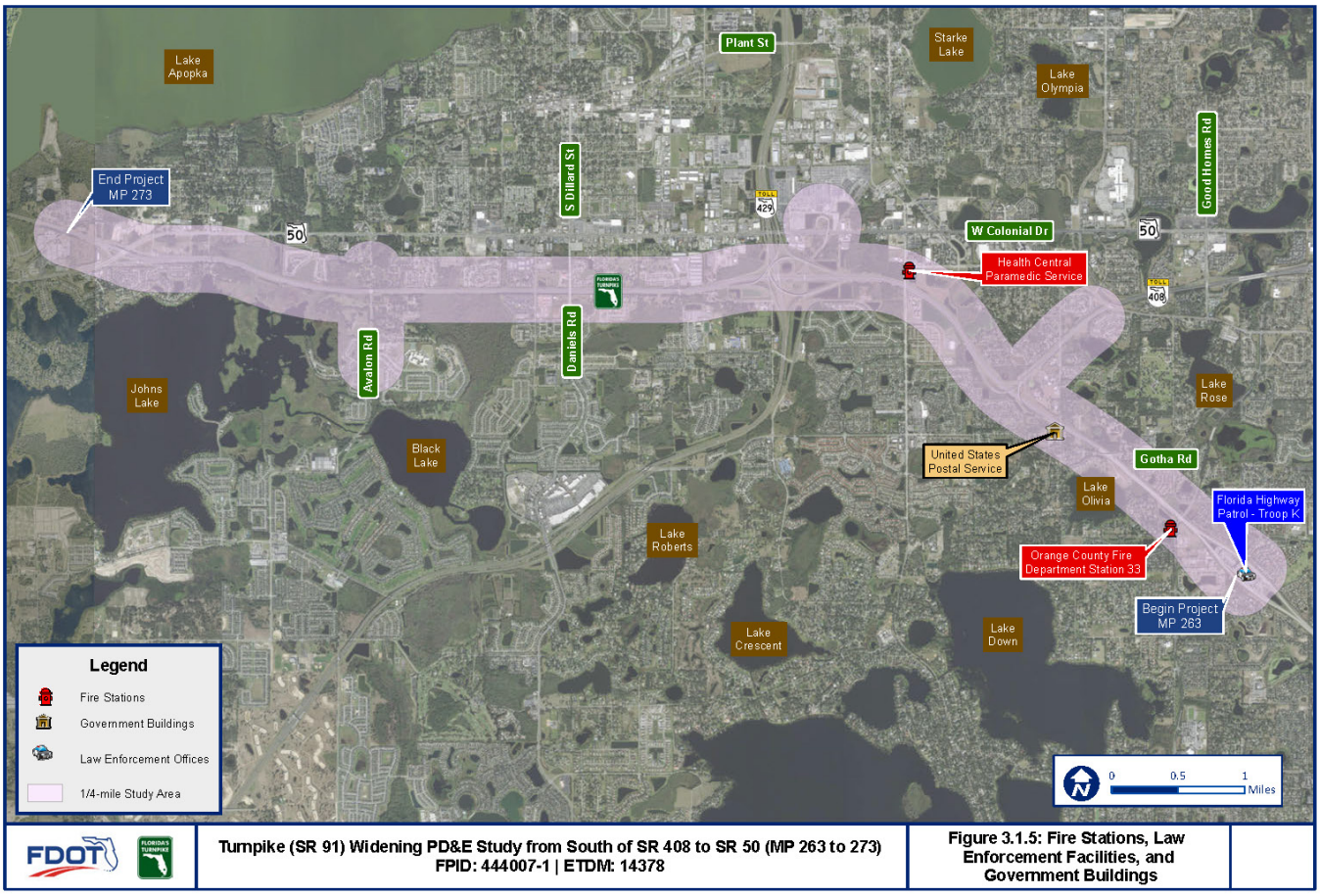

Figure 3.1.5: Fire Stations, Law Enforcement Facilities, and Government Buildings

Healthcare Facilities

Three healthcare facilities are located within the 1/4-mile study area and are listed below:

- DaVita Winter Garden Dialysis;
- Health Central Express Care; and
- Ocoee Health Care Center.

Orlando Heath Central Hospital is located just north of Old Winter Garden Road and west of SR 408, outside of the 1/4-mile study area. The hospital is anticipated to benefit from congestion relief due to the proposed improvements. No direct impacts to the healthcare facilities are anticipated as a result of this project.

Cultural Facilities and Civic Centers

Three cultural facilities are located within the 1/4-mile study area and are listed below.

- West Orange Country Club Arch;
- West Orange Cinema; and
- Nerhling Gardens.

No direct impacts to the cultural facilities or civic centers are anticipated as a result of this project.

Figure 3.1.6 shows the healthcare and cultural facilities in the study area.

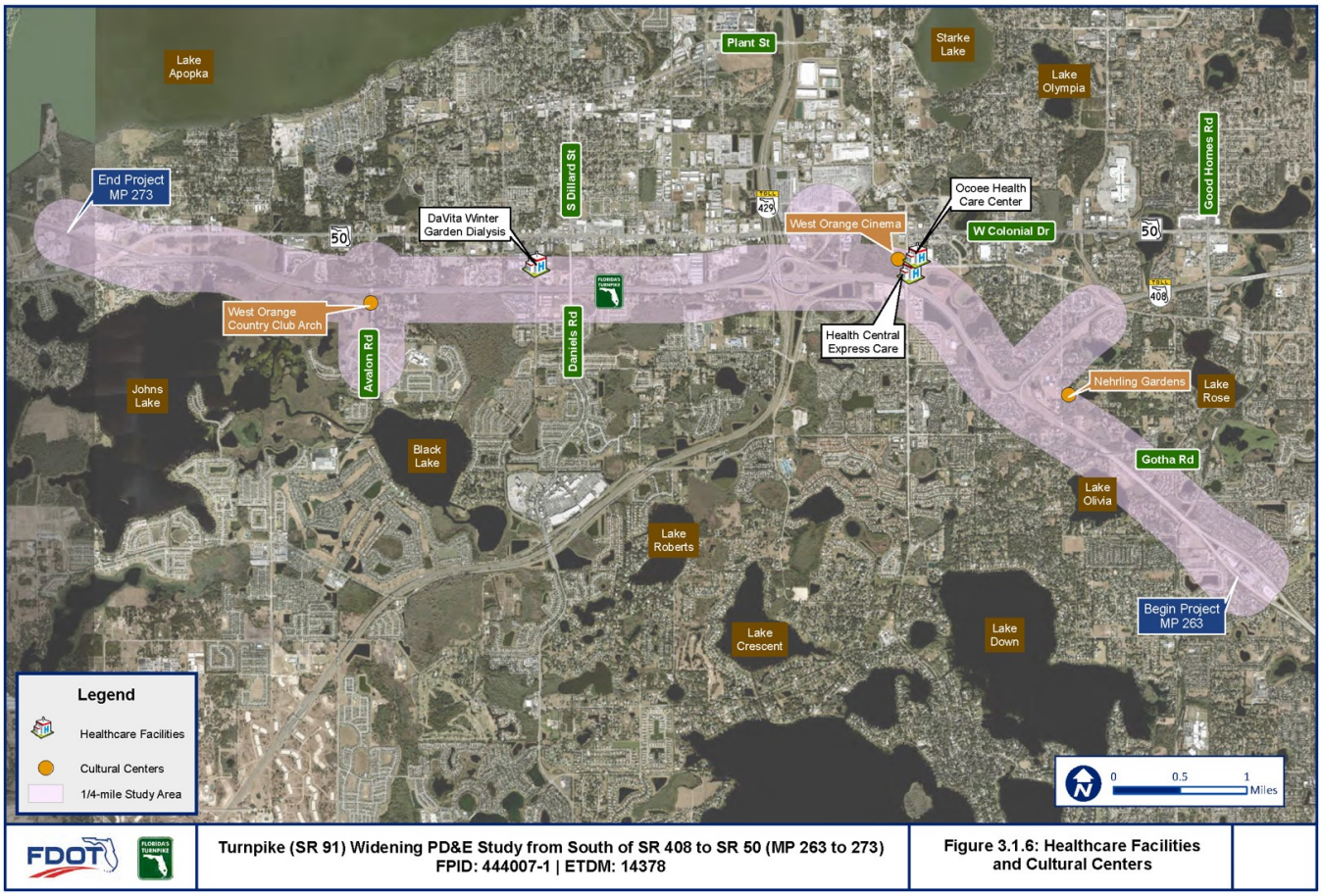

Figure 3.1.6: Healthcare Facilities and Cultural Centers

Demographics

An analysis of the minority and low-income populations was conducted through a review of census data, field reconnaissance, and public meetings. The 2010 Census Block Group data was used to complete the demographic comparison and analysis contained in the Sociocultural Effects Evaluation Report and in this document. The 1/4-mile study area intersects 10 census blocks in Orange County as shown in Figure 3.1.7. After grouping the 10 census blocks intersecting with the 1/4-mile study area, the averages of specific demographic information were compared to the demographic information for all of Orange County and are shown in Tables 3.1.1 to 3.1.6.

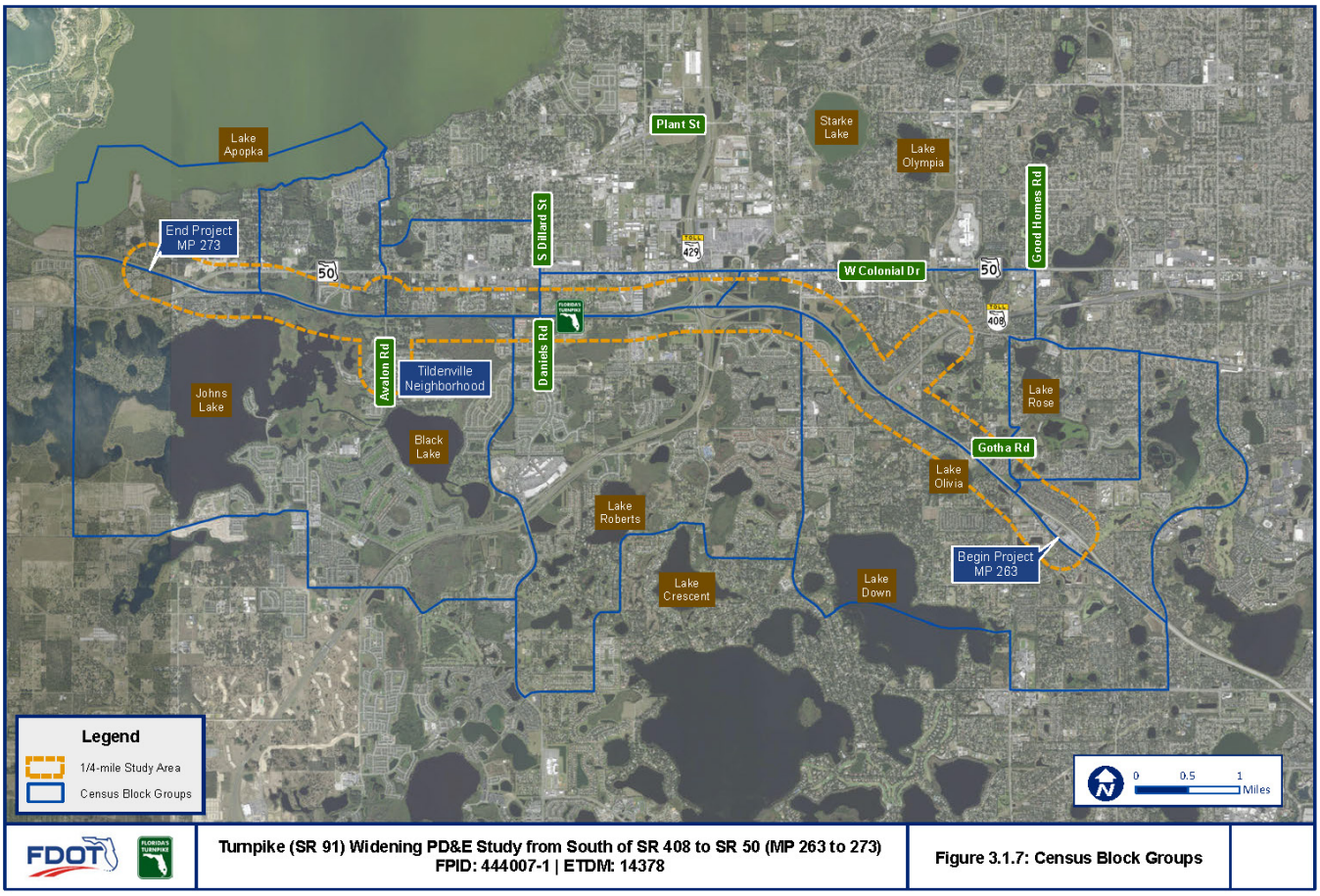

Figure 3.1.7: Census Block Groups

Evaluation Criteria	Orange County	Study Area Block Groups
Total population	1,145,956	59,752
Percent of the population that is White	44.1%	50.8%
Percent of the population that is Black	21.5%	15.9%
Percent of the population that is Hispanic	21.7%	18.8%
Percent of the population that is Asian	3.6%	6.0%
Percent of the population that is Other*	9.1%	8.6%
Percent of the population that is considered 'Minority'	55.9%	49.2%
Median population age	37.1	37.1
Percent of the population that is above 65 years old	12.1%	9.4%
*Other nationalities include American Indian or Alaska native, Native Hawaiian or other Pacific Islander, or two more races.		

Table 3.1.1: Demographic Comparison: Population

Evaluation Criteria	Orange County	Study Area Block Groups
Total acres	642,087	23,517
Population Density (persons per acre)	1.8	2.5
Household Density (houses per acre)	0.8	1.0
Percent of housing units occupied	86.5%	90.4%
Percent of housing units vacant	13.5%	9.6%
Average family size	3.1	3.0
Average household size	2.5	2.9

Table 3.1.2: Demographic Comparison: Density

Evaluation Criteria	Orange County	Study Area Block Groups
Median Household Income ($)	54,735	68,382
Median Family Income ($)	65,235	74,903
Percent of households below the poverty line*	12.2%	4.0%
Percent of the population below the poverty line*	12.8%	4.7%
*The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. If a family's total income is less than the family's threshold, then that family and every individual in it is considered in poverty.		

Table 3.1.3: Demographic Comparison: Income

Evaluation Criteria	Orange County	Study Area Block Groups
Percent of the population that commute to / from work via a car, truck, or van	90.1%	89.2%
Percent of the population that does not commute to / from work	4.2%	6.4%
Percent of the population that bikes, walks, or takes public transportation to / from work	4.1%	2.0%
Percent of population that travels to / from work via a motorcycle	0.3%	0.2%
Percent of the population that travels to / from work via "other" means	1.3%	2.2%
Percent of occupied house units that do not have a vehicle	5.7%	2.17%

Table 3.1.4: Demographic Comparison: Transportation

Evaluation Criteria	Orange County	Study Area Block Groups
Percent of the population that speaks only English	67.4%	75.3%
Percent of the population that speaks a language other than English and also speaks English "very well"	19.8%	16.0%
Percent of the population that is considered to be Limited English Proficient	12.8%	8.7%
Note: People with Limited English Proficiency (LEP) speak English "less than very well" or "not at all". These people have a limited ability to read, write, speak, or understand English.		

Table 3.1.5: Demographic Comparison: Language

Evaluation Criteria	Orange County	Study Area Block Groups
Percent of the population that is over 25 years old and has less than a 9th grade education	5.2%	3.1%
Percent of the population that is over 25 years old and has completed more than 9th grade, but does not have a high school diploma	8.0%	5.4%
Percent of the population that is over 25 years old and has a high school diploma	86.9%	91.6%
Percent of the population that has some college or an associate's degree	29.2%	28.2%
Percent of the population that has a bachelor's, master's, doctorate, or professional degree	30.3%	42.6%

Table 3.1.6: Demographic Comparison: Education

As shown in the tables above, the 1/4-mile study area has a similar demographic profile as the whole of Orange County. The percent of population considered White is approximately 6.7% higher in the study area compared to Orange County, while the percent of population considered Asian is approximately 2.4% higher in the study area. As a result, the percent of population considered "minority" is approximately 6.7% lower in the study area compared to Orange County. Figure 3.1.8 shows the percent considered "minority" in the study area. The median population age is equal in the 1/4-mile study area and Orange County, while the percent of population above the age is 65 years old is approximately 2.7% less in the study area. Figure 3.1.9 depicts the population above the age of 65 years old in the study area.

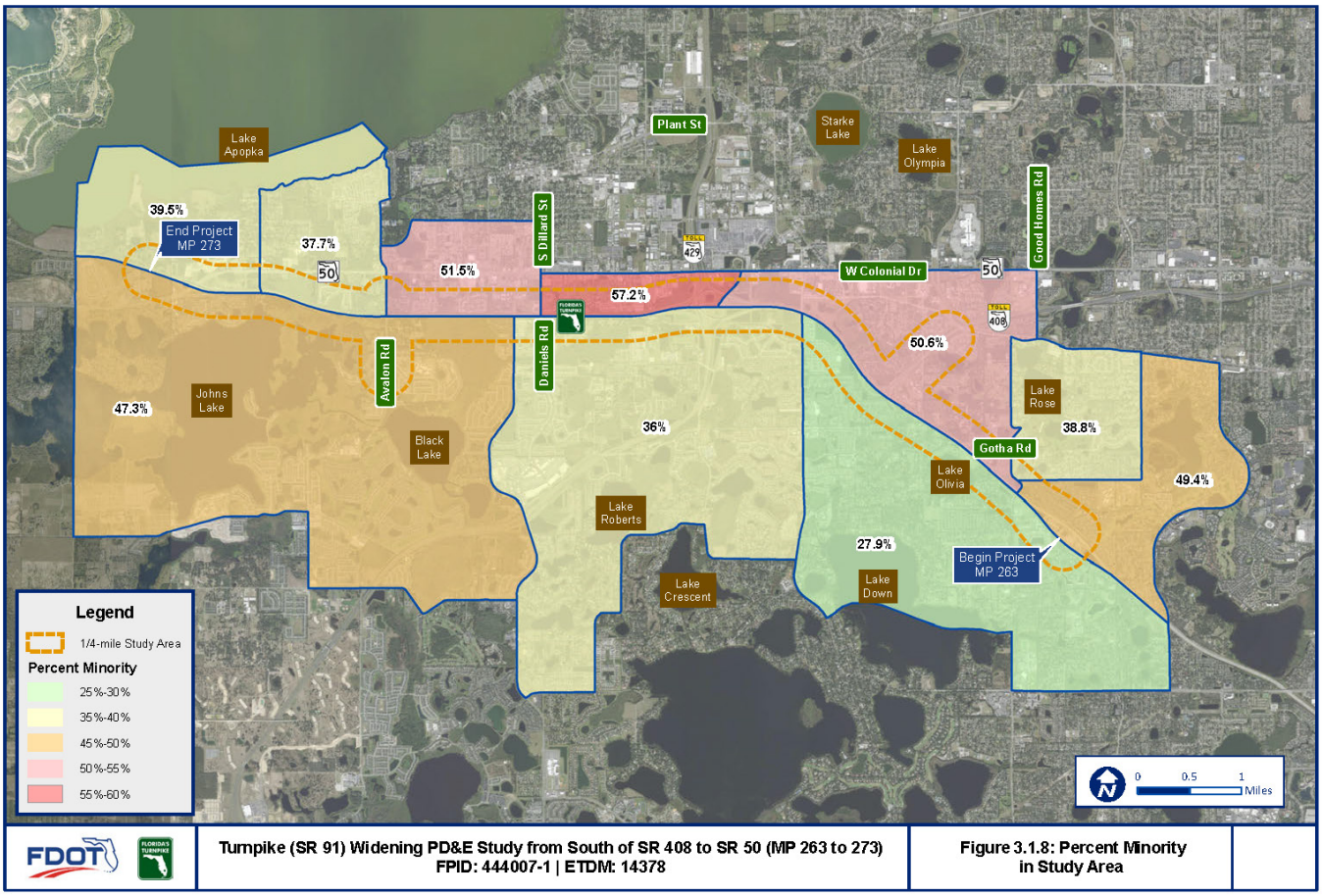

Figure 3.1.8: Percent Minority in the Study Area

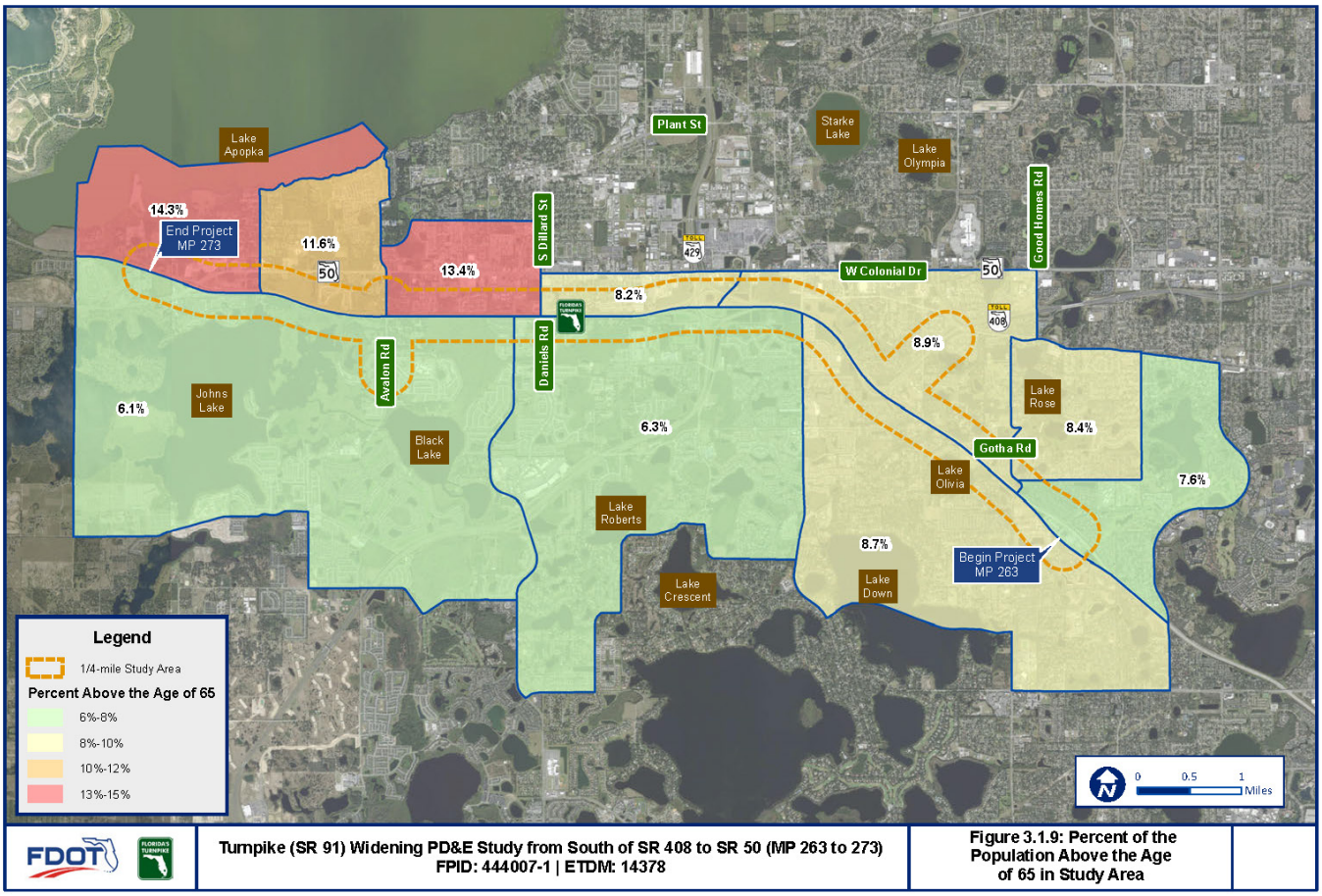

Figure 3.1.9: Percent of the Population Above the Age of 65 in the Study Area

The 1/4-mile study area has a higher population and household density compared to Orange County, 0.8 and 0.2 higher per acre, respectively. The percent of housing units occupied also is approximately 4% higher in the study area. The average family size and household size are very similar for both analyses, with 3.1 family members in Orange County compared to 3.0 in the study area, and 2.5 average people in a household for Orange County while the study area has 2.9.

The income comparison has the largest differences of all the demographic information. The median household income in Orange County is $54,735 while the study area has an income of $68,382. Similarly, the median family income in Orange County is $62,235 compared to $74,903 in the study area. This data is consistent with the percent of households and individuals below the poverty line which is 12.2% and 12.8%, respectively, in Orange County and 4.0% and 4.7%, respectively, in the study area, a difference of approximately 8%. Figure 3.1.10 depicts the percent of households below the poverty line in the study area.

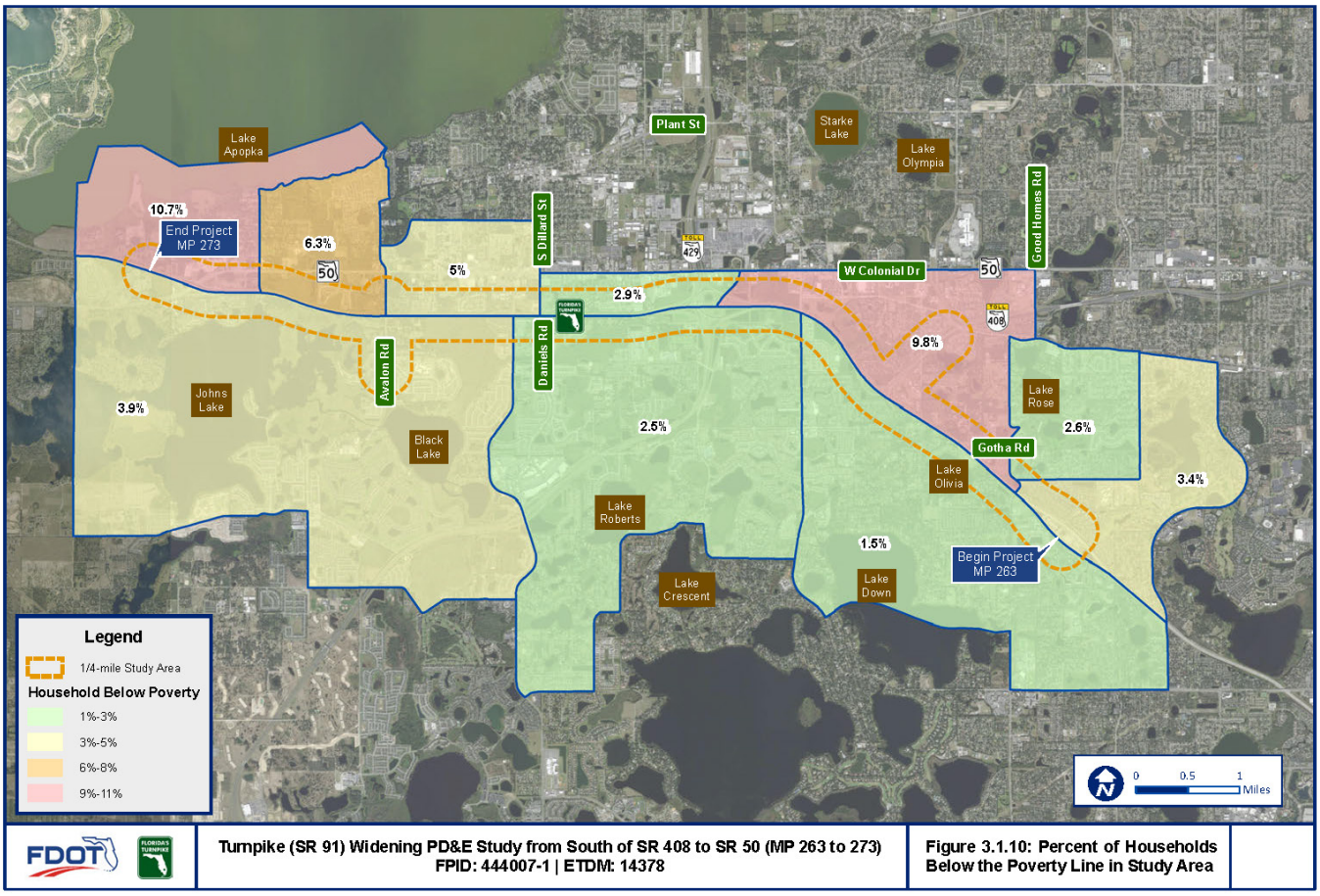

Figure 3.1.10: Percent of the Households Below the Poverty Line in the Study Area

The study area has a comparable percentage of the population that commute to and from work via a personal vehicle to Orange County; however, Orange County has 3.5% more people that do not have a vehicle compared to the study area. Orange County also has a larger percentage of the population that is over 25 years old that have not completed 9th grade compared to the study area. A slightly larger percentage of people in the study area have completed high school compared to Orange County, although the percentage of population that has some college or an associate's degree is comparable.

The percentage of the population that is considered Limited English Proficient (LEP) is lower in the study area compared to Orange County - 8.7% compared to 12.8%. This gap is consistent with study area having a smaller minority percentage compared to Orange County. Presidential Executive Order 13166: Improving Access to Services for Persons with Limited English Proficiency, ensures people with LEP will have meaningful access to programs and activities of agencies receiving federal financial assistance.

Utilizing the four LEP factors identified in Presidential Executive Order 13166, the Kickoff Open House and Public Alternatives Information Meeting flyers and newspaper ads included a Spanish translation as well as bilingual staff in attendance at the meetings. The Public Hearing will have the same accommodations.

No changes to the population or demographic characteristics of the study area are anticipated to result from the project, as it is within an existing highway corridor. Based on the analysis for this PD&E Study, the Preferred Alternative will not cause a disproportionately high or adverse effects on any minority or low-income population in accordance with the

provisions of the President's Executive Order on Environmental Justice (EO 12898). Therefore, no further Environmental Justice analysis is required.

A community is made up of residents, businesses, and institutions within a defined geographic area. The people who comprise a community often share a similar social, cultural, ethnic, economic, political, and / or religious characteristics. They may attend the same schools, churches, or social clubs, and often share similar values. The construction of the Florida's Turnpike in the 1960s divided the Tildenville neighborhood which is adjacent to the Town of Oakland and City of Winter Garden, near the intersection of Avalon Road and Florida's Turnpike. As with many urban interstates constructed in the 1960s, this facility changed the nature of the community where through streets became dead ends and noise walls became visual obstructions. The proposed widening of Florida's Turnpike will improve mobility and safety and reduce congestion on Florida's Turnpike. Bicycle and pedestrian accommodations will also be maintained on the local cross streets. Therefore, the proposed project is not anticipated to negatively impact community cohesion or quality of life.

3.2 Economic

Social and economic demands on Florida's Turnpike will continue to increase as population and employment increase in Orange County, and the Central Florida region. The University of Florida's BEBR projects that the population of Orange County is estimated to grow from 1,145,956 (2020) to 1,969,000 by the year 2045, an increase of 72 percent.

Traffic volumes will continue to rise with increases in population growth. Consequently, a long-term mobility option is needed that will not only serve current traffic volumes but will also accommodate the population and employment growth expected between 2020 and 2045. Without any improvements, residents and businesses in the surrounding areas will face additional congestion, leading to lost productivity, increased fuel consumption, and increased air and noise pollution, all of which contribute to a decreased quality of life for the area's residents.

The project will close an existing unsignalized full median opening on SR 50 located between Oakland Avenue and Remington Road that serves the ABC Bus Sales & Leasing property. This existing median opening provides an opportunity for U-turns. The additional westbound SR 50 lanes proposed in each direction will require this existing median opening to be eliminated as the number of proposed lanes will not allow a vehicle to safely turn left into the ABC Bus Sales property. Right-in and right-out turning traffic is maintained at the entrance to ABC Bus Sales & Leasing. The property has existing rear access to Oakland Avenue.

3.3 Land Use Changes

The existing land use within the project limits is primarily residential (47%), followed by public / semi-public land use (19%). The next most common land use types are: vacant non-residential (7%), agricultural (6%), vacant residential (5%), and retail / office (5%). Other minor land uses found in the corridor include: industrial, acreage not zoned for agriculture, institutional, right-of-way, water, recreation, parcels with no value, and other. The SR 429 and SR 50 interchanges have the least residential development along Florida's Turnpike and include the majority of the commercial / public land use types. Figure 3.3.1 shows the existing land use within the study area.

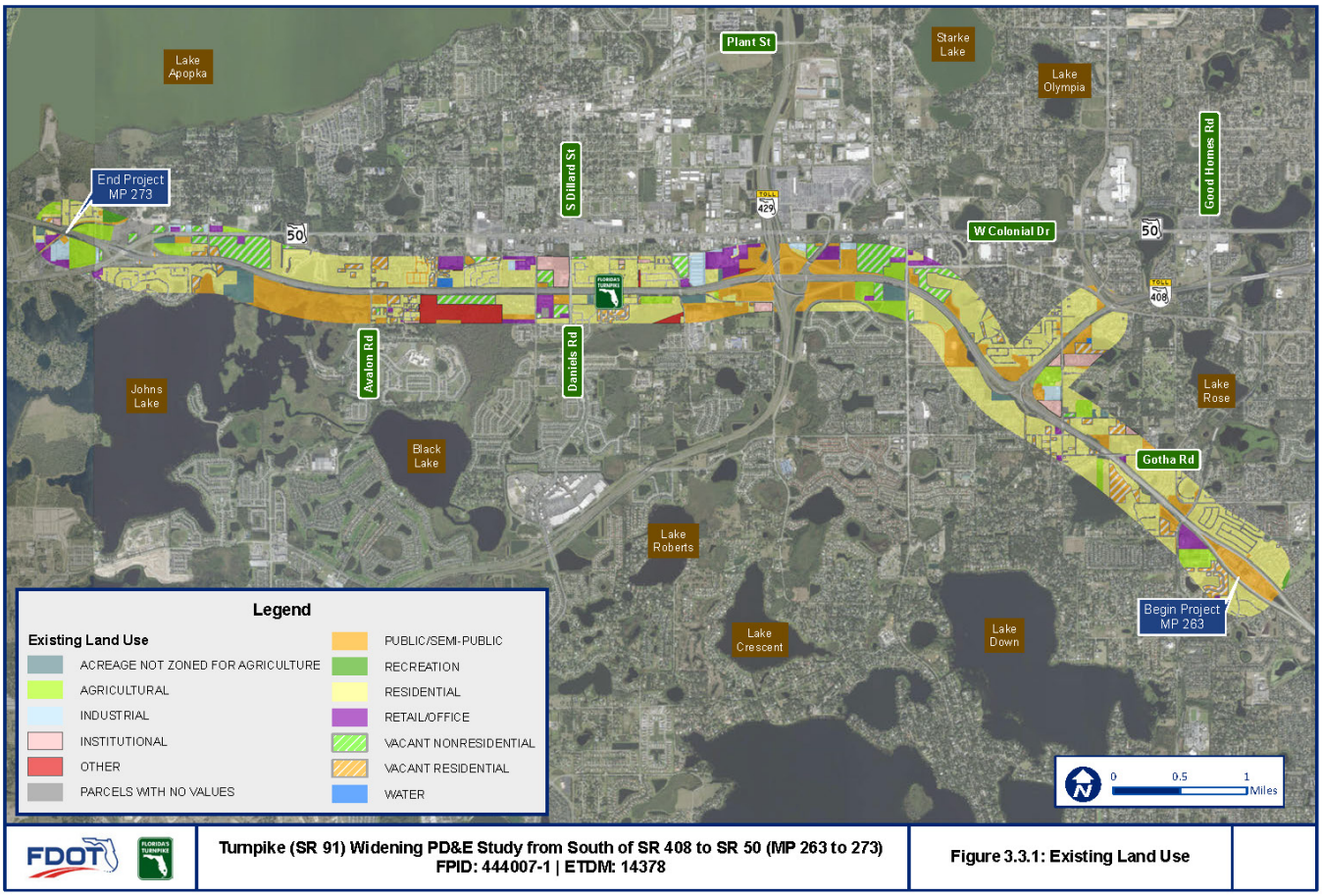

Figure 3.3.1: Existing Land Use

Figure 3.3.2 shows the future land use within the study area. The future land use is primarily residential (44%), followed by transportation / utilities (26%). The next most common land use types are: commercial (10%), agricultural (7%), industrial (5%), water (3%), conservation (2%), and institutional (2%). Office / professional, planned development, and recreation are also listed in the future land use map, and together represent one percent (1%) of land use in the study area. Similar to the existing land use, the SR 429 and SR 50 interchanges have the least residential development along Florida's Turnpike and include the commercial / transportation / industrial land-use types. The most significant difference between the existing and future land use maps is that vacant land uses in the existing condition are converted to commercial and industrial land uses in the future condition.

The proposed project is consistent with the existing and future land use plans and is not anticipated to change the land use in the project area.

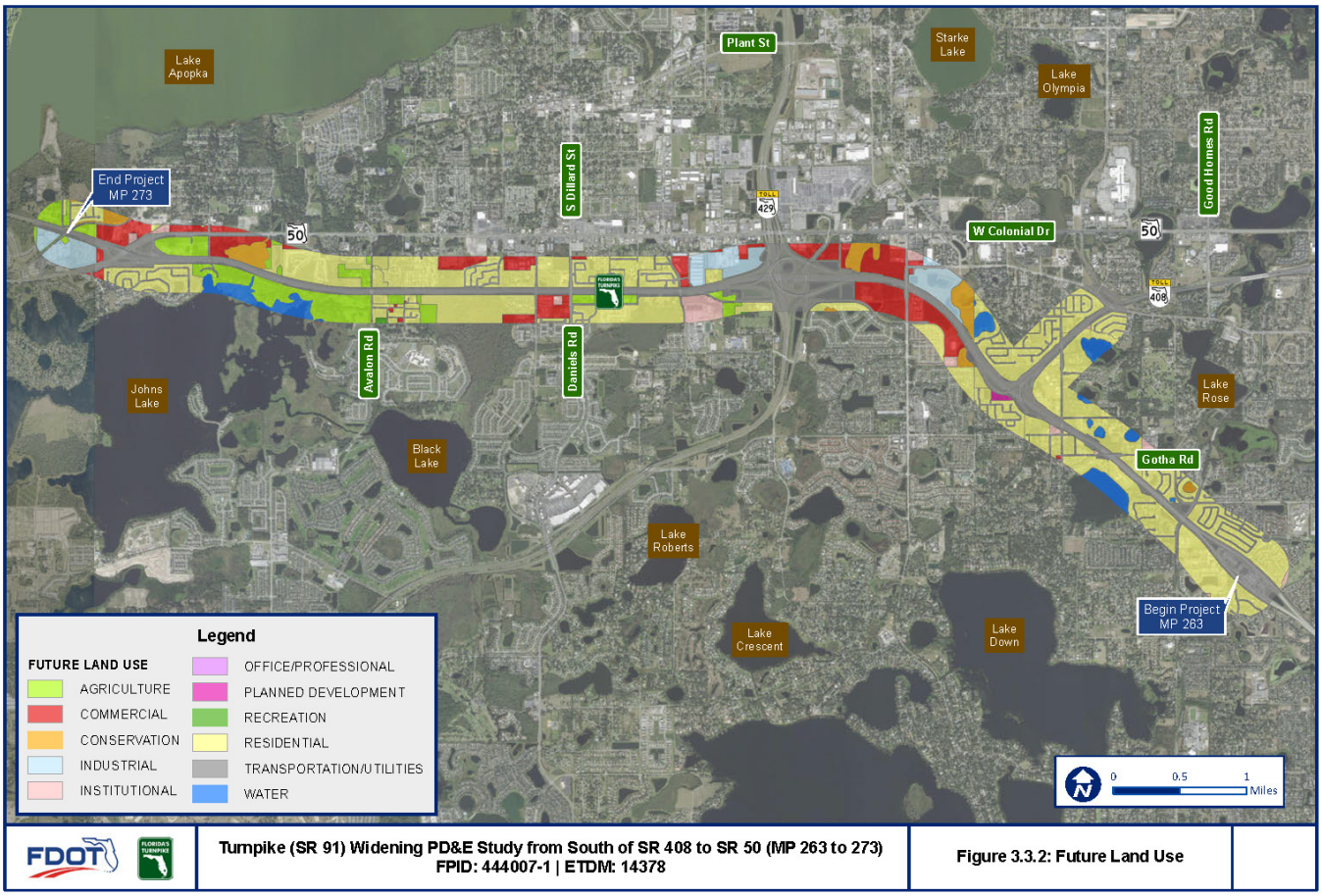

Figure 3.3.2: Future Land Use

3.4 Mobility

This project will result in improved and enhanced intermodal connectivity. Traffic patterns will be improved between SR 408 and SR 429 with the addition of a three-lane C-D system connecting the two interchanges in each direction. One additional travel lane in each direction will also be added to the mainline. SR 50 (Clermont / Oakland) will also be improved by moving the exit ramp from northbound Florida's Turnpike to westbound SR 50 to the south side of Florida's Turnpike, thereby reducing the delay at traffic signals and conflict points. No change in connectivity between residential and non-residential areas is expected as part of this project.

Florida's Turnpike is a limited access facility, which means it is statutorily exempt from providing bicycle or pedestrian facilities along the expressway; however, bicycle and pedestrian facilities on local and arterial roadways impacted by the project, such as SR 50, Maguire Road, and Hempel Avenue, will be maintained, replaced, or enhanced.

3.5 Aesthetic Effects

The study area has limited aesthetic features including lighting along the mainline of Florida's Turnpike and along the ramps. The proposed widening of Florida's Turnpike will retain similar lighting features throughout the project limits. Minimal viewshed impacts are anticipated as a result of the wider roadway footprint. No new overpasses are anticipated

that would impact the existing viewshed. Approximately 1.7 miles of existing noise walls on the northbound side of Florida's Turnpike are located within the study area and approximately 1.4 miles on the southbound side. The project will retain/replace noise walls throughout the study area, as described in the Noise Study Report (NSR), available in the project file. Final noise wall aesthetics will be coordinated with affected stakeholders during the final design phase of the project.

3.6 Relocation Potential

Nineteen parcels totaling 10.5 acres are impacted as a result of this project. One of the parcels impacted is owned by the FTE and accounts for 5.2 acres of the 10.5 acres of impacts. No residential or business relocations are anticipated and therefore, no Conceptual Stage Relocation Plan is required.

In order to minimize the unavoidable effects of Right of Way acquisition and displacement of people, the Florida Department of Transportation will carry out a Right of Way and Relocation Assistance Program in accordance with Florida Statute 421.55, Relocation of displaced persons.

4. Cultural Resources

4.1 Florida Historical Resources Act (FHRA), Chapter 267, Florida Statutes (F.S.).

A Cultural Resource Assessment Survey (CRAS), conducted in accordance with 36 CFR Part 800, was performed for the project, and the resources listed below were identified within the project Area of Potential Effect (APE). FDOT found that some of these resources meet the eligibility criteria for inclusion in the National Register of Historic Places (NRHP), and State Historic Preservation Officer (SHPO) has concurred with this determination. After application of the Criteria of Adverse Effect, and in consultation with SHPO, FDOT has determined that the proposed project will have No Adverse Effect on these resources.

Historic Sites

The historic resources APE considered the nature of the improvements and the current conditions within and surrounding the project corridor. To account for the proposed widening of the existing facility, the historic resources APE consisted of the footprint of all existing and proposed right-of-way, as well as adjacent parcels or properties for up to 200 feet from the existing and proposed right-of-way. The historic resources survey resulted in the identification of 40 historic resources within the historic resources APE. Of the 40 identified historic resources, 19 were previously recorded and 21 are newly recorded. The 19 previously recorded historic resources consist of 13 buildings, three cemeteries, two resource groups, and one bridge. The 21 newly recorded historic resources consist of 19 buildings, one bridge, and one resource group.

One previously recorded historic resource, the West Orange Country Club Arch (8OR6324), has been determined eligible for listing in the NRHP. Five previously recorded historic resources are considered NRHP-eligible as a result of the current study: the Old Killarney Post Office (8OR6337), the Gotha Community Center (8OR6664), the Oakland Cemetery on SR 50 (8OR8120), the Gotha Cemetery (8OR8123), and the Old African American Oakland Cemetery (8OR9567). The remaining previously recorded resources have been determined or are considered ineligible for listing in the NRHP due to their common architecture and design types, lack of known historical associations, or observed alterations or additions.

Of the 21 newly identified historic resources, only the Possum Hollow Historic District is considered NRHP-eligible. Two newly identified historic resources, 8OR11779 and 8OR11780, are considered to be individually NRHP-ineligible, but they are contributing to the proposed Possum Hollow Historic District (8OR11787). The 18 remaining newly identified historic resources exhibit common architecture and design types found throughout Central Florida, lack known associations with significant people or events, or exhibit modifications that affect their historic physical integrity. Therefore, 20 newly recorded historic resources are considered individually ineligible for listing in the NRHP.

Archeological Sites

No archaeological sites or archaeological occurrences were newly identified within the archaeological APE as a result of the current survey effort. The pedestrian survey confirmed that the four archaeological sites previously recorded within the archaeological APE (8OR4888, 8OR4345, 8OR4346, and 8OR9605) are within areas of existing right-of-way that have been previously disturbed by roadway construction. In addition, three of these four sites would be considered archaeological occurrences today due to the scarcity of cultural material, and each of these four sites has been previously determined to be NHRP-ineligible by the SHPO.

While subsurface testing was not feasible within much of the APE due to hardscape, underground utilities, drainage ditches, excavated ponds, and standing water, 26 shovel tests were excavated within the archaeological APE where

feasible. No cultural material was identified as a result of the subsurface testing or pedestrian survey. Therefore, the results of the current survey, as well as past testing conducted within the current APE during the previous related survey efforts, indicated a low potential for encountering intact archaeological deposits or significant archaeological sites within the archaeological APE.

The SHPO concurred with the findings in the CRAS in a letter dated October 13, 2022, attached and included in the project file. For more information about the historic or archaeological survey, please refer to the CRAS, under a separate cover.

4.2 Section 6(f) of the Land and Water Conservation Fund Act of 1965

There are no properties in the project area that are protected pursuant to Section 6(f) of the Land and Water Conservation Fund of 1965.

4.3 Recreational Areas and Protected Lands

As mentioned in Section 3.1, the Tucker Ranch Recreation and Nature Complex is located just south of Florida's Turnpike and just west of Avalon Road. The 209-acre property is open to the public and provides restroom facilities, covered areas, picnic benches, nature trails, a kayak / canoe launch, a playground facility, and group camping areas. The Tucker Ranch Recreation and Nature Complex is located adjacent to the proposed project, as shown in Figure 3.1.3, but no direct or indirect adverse effects are anticipated.

5. Natural Resources

5.1 Wetlands and Other Surface Waters

The following evaluation was conducted pursuant to Presidential Executive Order 11990 of 1977 as amended, Protection of Wetlands and the USDOT Order 5660.1A, Preservation of the Nation's Wetlands.

There are numerous freshwater wetlands within and adjacent to the project right-of-way, some of which are protected by conservation easements, as shown in Figure 5.1.1. Wetlands are classified according to the following Florida Land Use, Cover and Forms Classification System (FLUCFCS) code subcategories:

- 611 - Bay Swamps
- 617 - Mixed Wetland Hardwoods
- 630 - Wetland Forested Mixed
- 641, 644 - Freshwater Marsh
- 646 - Treeless Hydric Savanna

There are several ditches, ponds, and lakes within and adjacent to the project. All surface waters are freshwater, and none are considered Essential Fish Habitat or provide access to any marine or estuarine species. These surface waters can provide habitat to aquatic species such as fish, alligators, and turtles, as well as birds. Wet areas that are inundated by two to 15 inches of water could provide suitable foraging habitat for wood storks and wading birds when surface water is present. Surface waters are classified according to the following FLUCFCS code subcategories:

- 520 - Lakes
- 530 - Reservoirs

Figure 5.1.1 shows the wetlands, other surface waters, and conservation easements in the study area.

Potential direct impacts to wetlands and other surface waters have been assessed for the Preferred Alternative within the project corridor using GIS. The wetlands and other surface waters within the project study area were overlaid with the Preferred Alternative to identify areas of impacts. Table 5.1.1 provides anticipated wetland and other surface water impacts for the Preferred Alternative. The blue labels on Figure 5.1.1 correspond with the wetland / surface water identification number in Table 5.1.1. In cases where the Wetland / Surface Water Identification column has two numbers, both numbers are a part of the same wetland system.

Figure 5.1.1: Wetlands and Other Surface Waters in the Study Area (1 of 4)

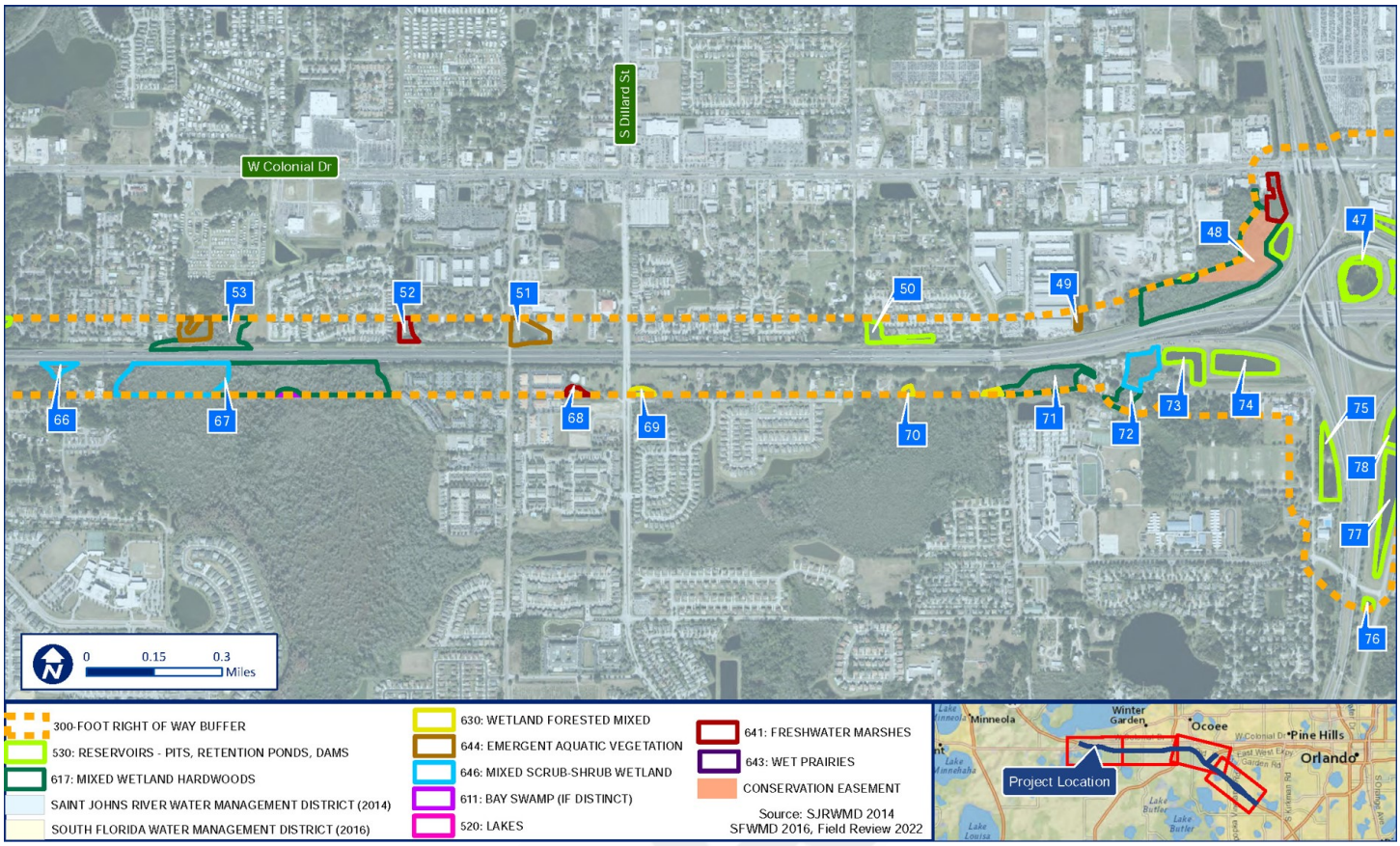

Figure 5.1.1: Wetlands and Other Surface Waters in the Study Area (2 of 4)

Figure 5.1.1: Wetlands and Other Surface Waters in the Study Area (3 of 4)

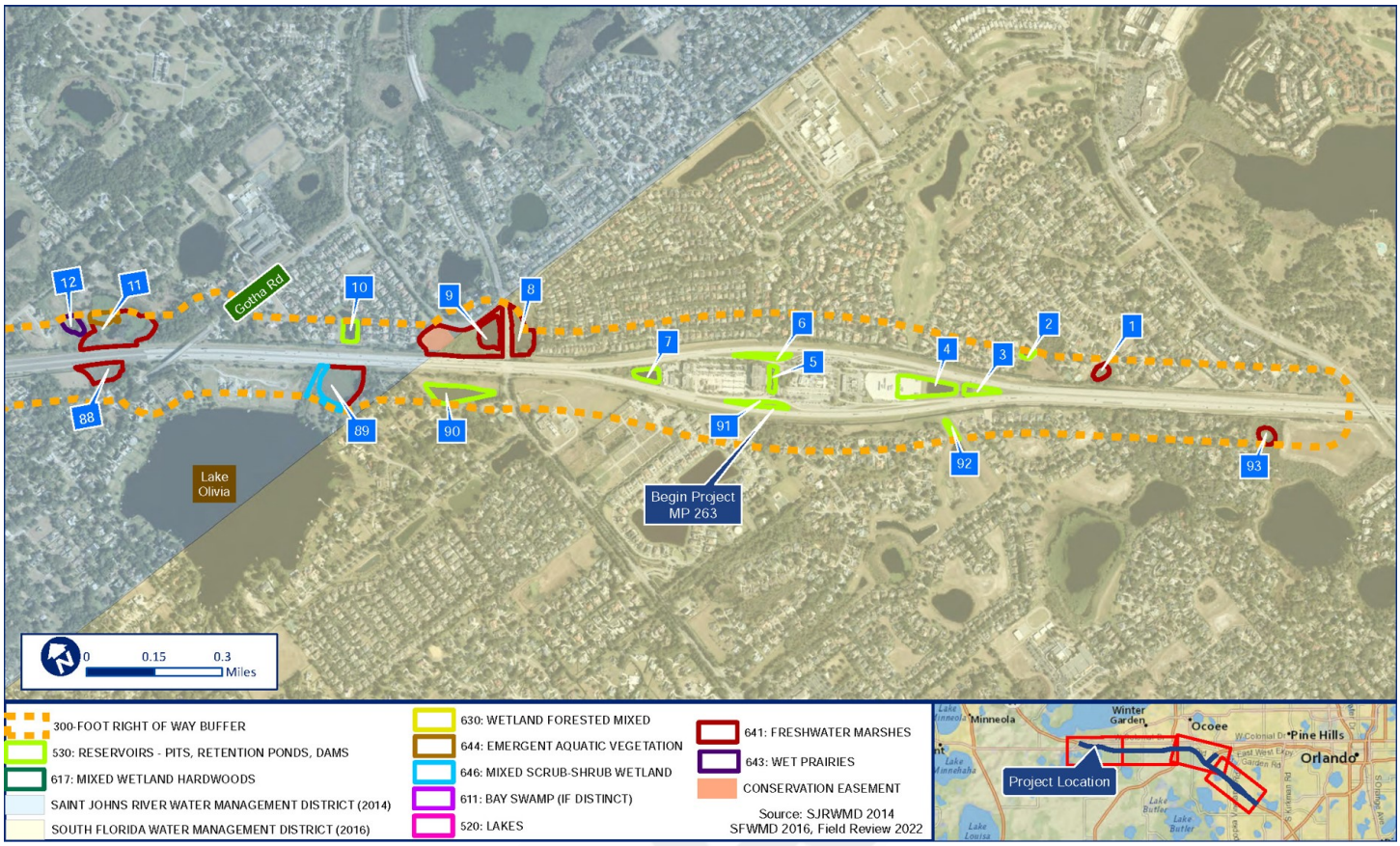

Figure 5.1.1: Wetlands and Other Surface Waters in the Study Area (4 of 4)

Wetland / Surface Water Identification	FLUCFCS	Impact Area (Acres)
Roadway Improvements		
60	617/630	0.22
63/64	641	0.68
58	618	2.10
64	618	0.29
57	618	0.27
55	617/630	1.28
53	617/630	0.57
72	617/630	0.11
48	617/630	0.16
44	617/630	0.43
31	617/630	0.85
27	617/630	1.05
23/25	617/630	2.75
13	520	0.25
88	520	0.49
11	641	0.10
89	641	0.25
9	641	0.17
Roadway Subtotal		**12.02**
Pond Alternative Impacts		
58	641	1.64
36	617/630	2.11
23	617/630	0.31
Pond Alternative Subtotal		**4.05**

Table 5.1.1: Wetland and Other Surface Waters Impact Analysis

The Preferred Alternative roadway widening is anticipated to impact 12.02 acres of wetland and surface waters within the project limits. Impacts associated with the Preferred Alternative stormwater treatment facilities and floodplain compensation alternatives are anticipated to impact 4.05 acres of wetlands and surface waters. The Preferred Alternative impacts one SJRWMD deeded conservation easement just west of lake Pearl and north of the proposed SR 408 exit ramp to northbound Florida's Turnpike, as shown in Figure 5.1.1.

The Uniform Mitigation Assessment Method (UMAM) was established to fulfill the mandate of subsection 373.414(18), F.S., which requires the establishment of a uniform mitigation assessment method to determine the amount of mitigation needed to offset adverse impacts to wetlands and other surface waters and to award and deduct mitigation bank credits. Functional loss was calculated by wetland and natural other surface water habitat type for the Preferred Alternative using the UMAM.

UMAM datasheets for each habitat type impacted are included in the Natural Resources Evaluation (NRE). These scores are subject to agency review and revisions are anticipated during the permitting process. Table 5.1.2 summarizes anticipated wetland impacts and UMAM functional loss for each wetland type impacted by the Preferred Alternative.

Wetland / Surface Water Identification	FLUCFCS	Impact Area (Acres)	Score (sum/30)	UMAM Functional Loss
Roadway Improvements				
60	617/630	0.22	0.50	0.11
63/64	641	0.68	0.37	0.25
58	618	2.10	0.37	0.77
64	618	0.29	0.37	0.11
57	618	0.27	0.37	0.10
55	617/630	1.28	0.43	0.55
53	617/630	0.57	0.43	0.25
72	617/630	0.11	0.43	0.05
48	617/630	0.16	0.43	0.07
44	617/630	0.43	0.43	0.19
31	617/630	0.85	0.43	0.37
27	617/630	1.05	0.43	0.45
23/25	617/630	2.75	0.43	1.19
13	520	0.25	0.57	0.14
88	520	0.49	0.57	0.28
11	641	0.10	0.37	0.04
89	641	0.25	0.37	0.09
9	641	0.17	0.37	0.06
Roadway Subtotal		**12.02**	**5.06**	
Pond Alternative Impacts				
58	641	1.64	0.37	0.60
36	617/630	2.11	0.37	1.05
23	617/630	0.31	0.50	0.15
Pond Alternative Subtotal		**4.05**	**1.81**	

Table 5.1.2: Wetland Impacts and UMAM Score

Avoidance and minimization measures include utilizing existing roadway fill areas for bridge approaches and roadway widening, and siting stormwater treatment facilities outside of wetland areas to the extent feasible. Additionally, impacts were minimized by adjusting slopes where safely possible and stormwater treatment locations will avoid wetlands when practicable. Surficial runoff from additional impervious areas will be treated to prevent increased water quality degradation as a result of the proposed transportation improvements.

Due to the incorporation of stormwater treatment facilities, the proposed project will not result in the degradation of water quality in the wetlands and other surface waters of the project area. Additionally, sedimentation and erosion control measures (i.e., silt fences, turbidity barriers) will be implemented during construction to minimize soil exposure and siltation into the water column, further reducing adverse impacts to wetlands and other surface waters.

There are no practical avoidance alternatives to the construction of the proposed project design within wetland areas. Wetland impacts will be further refined during future project phases and minimization/avoidance measures will be

implemented to the extent practicable as discussed above.

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S. (SJRWMD Senate Bill), to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. 1344. Compensatory mitigation for this project will be provided using mitigation banks and other mitigation options to satisfy state and federal requirements. In accordance with EO 11990.

The project includes area within two mitigation area basins. The western portion of the project is located within the Ocoee Drain Basin, and the eastern portion of the project is located within the Southern Ocklawaha River Basin. Within the Ocoee Drain Basin, there are two mitigation banks which list this basin in their service area: Wekiva River Mitigation Bank and Blackwater Creek Mitigation Bank. Within the Ocklawaha River Basin, the Emeralda Marsh Mitigation Bank is approved to provide mitigation credits.

For more information on wetland impacts and mitigation options, refer to the NRE, available in the project file.

5.2 Aquatic Preserves and Outstanding FL Waters

There are no aquatic preserves or Outstanding Florida Waters (OFW) in the project area.

5.3 Water Resources

A Water Quality Impact Evaluation (WQIE) was conducted for the project to comply with the Clean Water Act and is available in the project file. The project study area does not directly discharge to an Outstanding Florida Water but does discharge into an impaired waterbody (Lake Apopka). The study area is also located within the Lake Okeechobee, Middle St. Johns River, and Upper Ocklawaha River Basin Management Action Plans. Lake Okeechobee and the Upper Ocklawaha River Basin are both impaired for total phosphorous. The Middle St. John's River Basin is impaired for total nitrogen, total phosphorous, and dissolved oxygen.

One Environmental Look Around (ELA) meeting was held on June 30, 2021 with St. Johns River Water Management District (SJRWMD) to explore stormwater needs and the potential for joint use ponds or regional ponds. Refer to the WQIE for more information on the ELA. The results of the WQIE indicate that water quality regulatory requirements apply to this project. Water quality and stormwater issues will be mitigated through compliance with the design requirements of authorized regulatory agencies. The design of the stormwater facilities will comply with the standards set forth by the FTE, South Florida Water Management District (SFWMD), SJRWMD, and FDOT. An Environmental Resource Permit (ERP) will be acquired from SJRWMD and/or SFWMD during the design of this project. Stormwater captured by the stormwater collection system will be conveyed to multiple wet detention facilities. Captured stormwater will receive treatment and attenuation by the wet detention pond before discharging to the adjacent stormwater outfall. The project is currently a non-federal action receiving no federal monies; therefore, concurrence from the United States Environmental Protection Agency (USEPA) is not required according to the Safe Drinking Water Act. Best Management Practices (BMPs) that would control erosion, sediment release, and storm water runoff to minimize adverse impacts on surface water resources will be implemented during design, permitting, and construction.

The Pond Siting Report (PSR) prepared for this project identified 16 major drainage basins and three pond sites were evaluated for each basin. Two types of ponds were evaluated in the PSR: stormwater management facilities, which treat and attenuate the proposed roadway, and floodplain compensation (FPC) ponds, which provide equivalent floodplain storage that is displaced by the proposed roadway. Additionally, the FPC sites will provide attenuation for the 100-year

storm event volume that is not already included in the stormwater management ponds. All stormwater management facilities are assumed to be wet. An evaluation matrix was used to score the pond sites and FPC sites which is located in the PSR. An excerpt of the matrix is summarized in Table 5.3.1, the pond sites in bold indicate a preferred pond site. The ponds are also shown in an attachment at the end of the report. Information used to evaluate the potential sites was based on the guidance provided in the FDOT Drainage Manual and Florida's Turnpike Enterprise PSR Outline.

Pond Site	**Wetland Impacts**	**Wildlife Habitat**	**Potential Contamination**	**Cultural or Archaeological Resource Impacts**	**Easement Area Needed (acres)**	**Pond Right-of-Way Area (acres)**
Basin 5 Alt 1	None	Low	Low	Low	0.32	2.16
Basin 5 Alt 2	None	Low	Low	Low	0.00	3.25
Basin 5 Alt 3	**None**	**Low**	**Low**	**Low**	**0.00**	**0.00**
Basin 6 Alt 1	None	Low	Low	Low	0.00	3.37
Basin 6 Alt 2	**None**	**Low**	**Med**	**Low**	**1.70**	**3.31**
Basin 6 Alt 3	None	Low	Med	Low	0.00	4.86
Basin 7&8 Alt 1	None	Low	Med	Low/Med	0.00	6.87
Basin 7&8 Alt 2	0.01	Low	Med	Low	0.76	9.65
Basin 7&8 Alt 3	**None**	**Low**	**Med**	**Low**	**n/a**	**n/a**
Basin 9 Alt 1	0.01	Low	Med	Low	5.50	6.87
Basin 9 Alt 2	**0.61**	**Low**	**Med**	**Low**	**4.04**	**5.48**
Basin 9 Alt 3	None	Low	Med	Low	0.48	6.67
Basin 10 Alt 1	**None**	**Low**	**Med**	**Low**	**n/a**	**n/a**
Basin 10 Alt 2	1.31	Low	Med	Low	0.00	11.14
Basin 10 Alt 3	0.43	Low	Med	Low	0.90	10.83
Basin 11 Alt 1	1.19	Low	Low	Low	0.00	3.54
Basin 11 Alt 2	0.47	Low	Low	Low	0.00	4.45
Basin 11 Alt 3	**None**	**Low**	**Med**	**Low**	**n/a**	**n/a**
Basin 12 Alt 1	**2.09**	**Low/Med**	**Low**	**Low**	**0.45**	**3.95**
Basin 12 Alt 2	None	Med/High	Low	Low/Med	0.10	4.34
Basin 12 Alt 3	3.65	Med/High	Low	Low	0.39	3.89
Basin A Alt 1	**None**	**Low**	**Low**	**Low**	**0.00**	**3.35**
Basin A Alt 2	None	Low	Low	Low	0.00	2.74
Basin A Alt 3	0.14	Low/Med	Low	Low	0.10	3.83
Basin B Alt 1	**None**	**Low**	**Low**	**Low**	**0.00**	**n/a**
Basin B Alt 2	3.72	Low	Low	Low	0.00	5.43
Basin B Alt 3	0.48	Low	Low	Low	0.99	6.61
Basin C Alt 1	2.13	Low	Low	Low/Med	0.00	5.55
Basin C Alt 2	**None**	**Low**	**Low**	**Low**	**0.00**	**2.30**
Basin C Alt 3	None	Low	Low	Low	0.00	2.49

Pond Site	Wetland Impacts	Wildlife Habitat	Potential Contamination	Cultural or Archaeological Resource Impacts	Easement Area Needed (acres)	Pond Right-of-Way Area (acres)
Basin D Alt 1	None	Low	Med	Low	0.00	6.00
Basin D Alt 2	None	Low	Med	Low	0.00	5.73
Basin D Alt 3	**None**	**Low**	**Low**	**Low**	**n/a**	**n/a**
Basin E Alt 1	0.17	Low	Med	Low	0.00	2.82
Basin E Alt 2	None	Low	Med	Low	0.00	2.61
Basin E Alt 3	None	Low	Med	Low	0.00	3.35
Basin SR 408 Alt 1	None	Low	Med	Low/Med	0.00	6.18
Basin SR 408 Alt 2	**None**	**Low**	**Med**	**Low**	**0.00**	**2.36**
Basin SR 408 Alt 3	None	Low	Low	Low	0.25	2.42
Basin SR 429N Alt 1	**None**	**Low**	**Low**	**Low**	**0.00**	**2.31**
Basin SR 429N Alt 2	1.69	Low	Med	Low	0.00	4.30
Basin SR 429N Alt 3	None	Low	Med	Low	0.00	4.22
Basin SR 429S Alt 1	None	Low	Low	Low	0.00	1.37
Basin SR 429S Alt 2	None	Low	Med	Low	0.00	1.08
Basin SR 429S Alt 3	**0.24**	**Low**	**Med**	**Low**	**0.00**	**0.67**
Basin DSR50N Alt 1	None	Low	Med	Low	0.15	1.39
Basin DSR50N Alt 2	None	Low	Med	Low	0.00	1.06
Basin DSR50N Alt 3**	**None**	**None**	**None**	**None**	**0.00**	**n/a**
**Existing pond						

Table 5.3.1: Pond Site Matrix

5.4 Wild and Scenic Rivers

There are no designated Wild and Scenic Rivers or other protected rivers in the project area.

5.5 Floodplains

Floodplain impacts resulting from the project were evaluated pursuant to Executive Order 11988 of 1977, Floodplain Management.

The proposed widening of the existing Florida's Turnpike and the associated interchange improvements will encroach upon approximately 27 acres of the Federal Emergency Management Agency (FEMA) floodplains. The anticipated 100-year floodplain impacts due to the proposed roadway widening were estimated and the resulting necessary compensation was assessed. Off-site FPC sites were evaluated to provide compensation for the floodplain impacts. Two FPC site alternatives were identified for each floodplain impact location, where feasible.

Twenty-six FPC sites were evaluated. The FPC sites were evaluated based on several factors, including construction cost associated with each alternative, wetland impacts, habitat and environmental impacts, and hydraulic connectivity to the FEMA flood zones. The preferred FPC alternatives were selected based on the sites that best met these parameters.

Floodplain encroachments will be mitigated on a cup-for-cup basis in floodplain compensation sites which have been designed such that there are no adverse impacts to the natural and beneficial floodplain values and no changes in flood risk. There will not be a change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that the encroachment type for this study is classified as "minimal."

Further information about floodplain encroachment or floodplain compensation sites can be found in the Location Hydraulics Report (LHR), available in the project file.

5.6 Coastal Barrier Resources

The Coastal Barrier Resources Act of 1982 (CBRA) and the Coastal Barrier Improvement Act of 1990 (CBIA) are not applicable to this project since there is no federal funding.

5.7 Protected Species and Habitat

The following evaluation was conducted pursuant to Section 7 of the Endangered Species Act of 1973 as amended as well as other applicable federal and state laws protecting wildlife and habitat.

The project was also evaluated for plant species designated as endangered, threatened, or commercially exploited in accordance with the Regulated Plant Index (5B-40.0055, F.A.C.), which is administered by the Florida Department of Agriculture and Consumer Services (FDACS), Division of Plant Industry, pursuant to Chapter 5B-40, F.A.C. Evaluations were conducted in accordance with the FDOT PD&E Manual, while using information from the U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), FDACS, Florida Natural Areas Inventory (FNAI), Natural Resources Conservation Service (NRCS), and other databases.

Figure 5.7.1 depicts field observations within the project study are as well as historic species occurrences from database searches.

Figure 5.7.1: Observed Species in the Study Area (1 of 4)

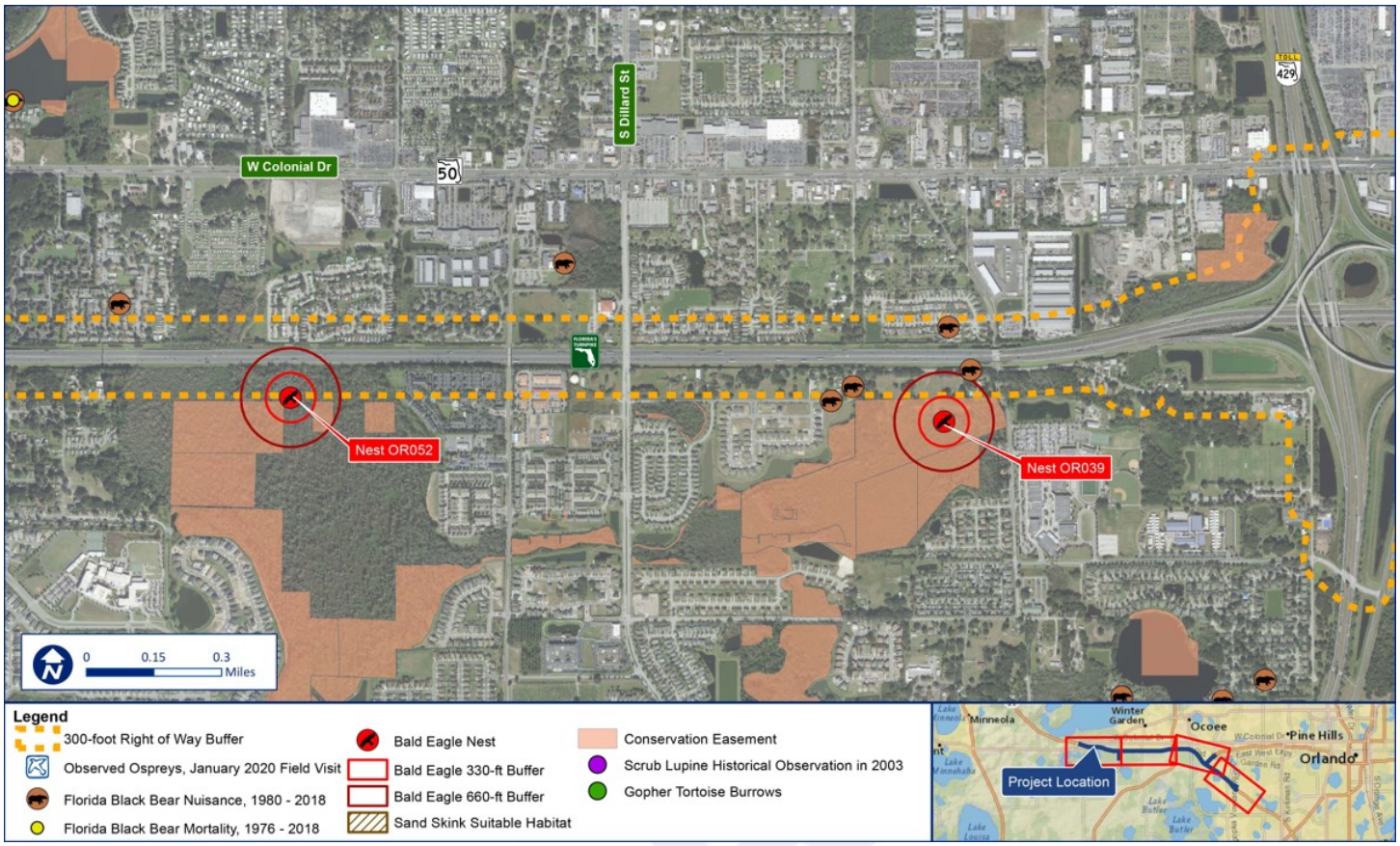

Figure 5.7.1: Observed Species in the Study Area (2 of 4)

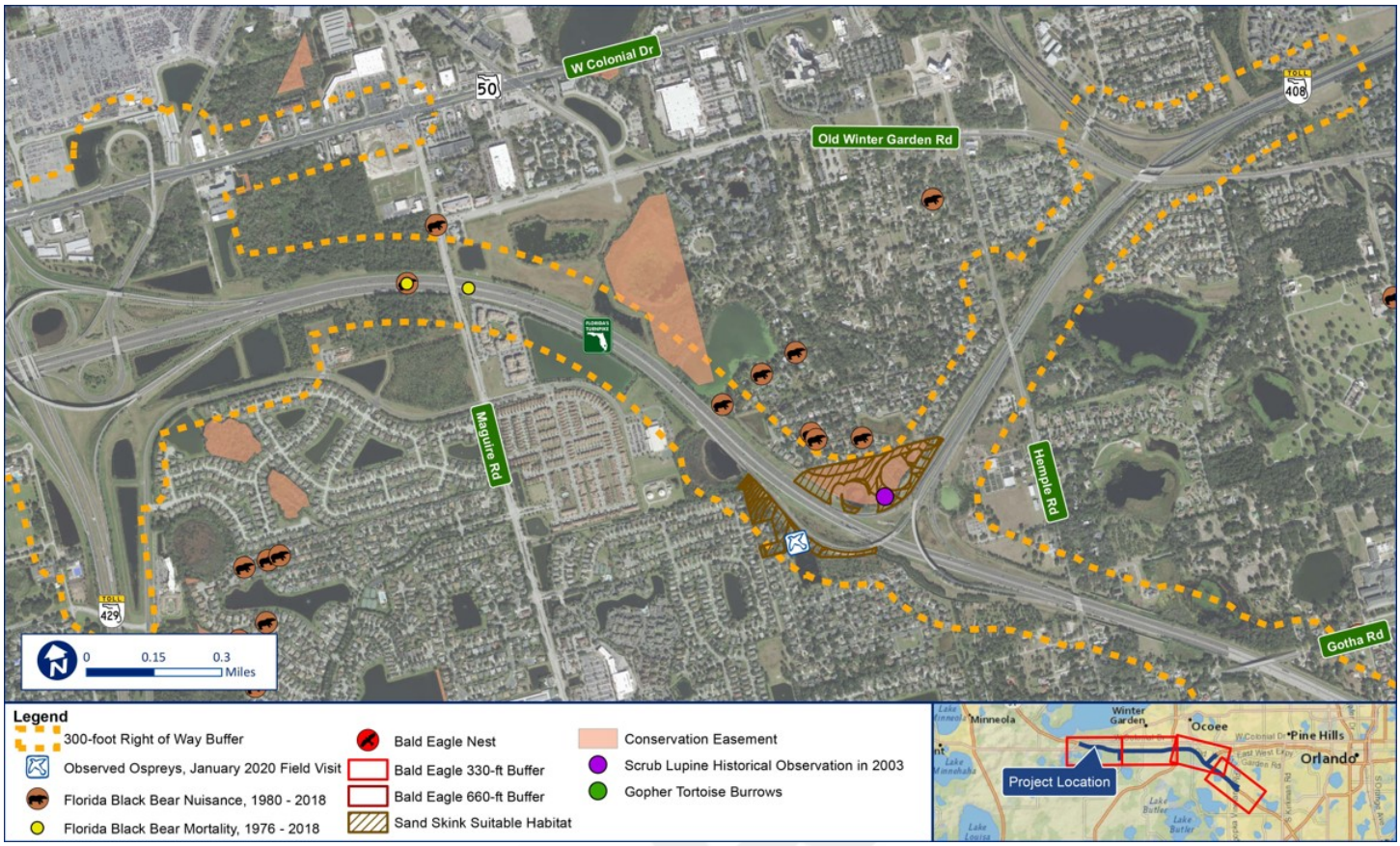

Figure 5.7.1: Observed Species in the Study Area (3 of 4)

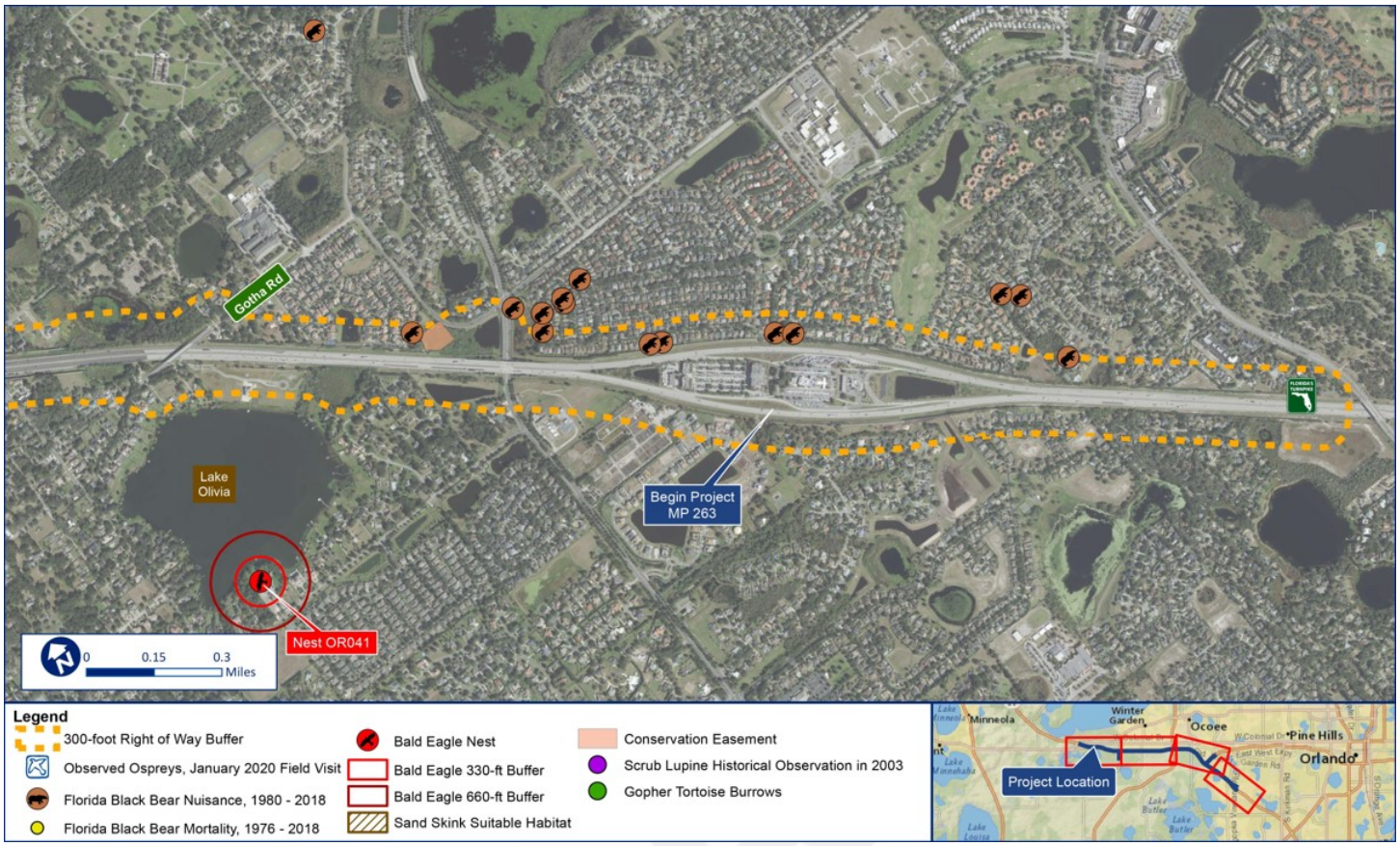

Figure 5.7.1: Observed Species in the Study Area (4 of 4)

Table 5.7.1 lists the federally listed wildlife and plant species known to occur within Orange County that could potentially occur near the project area based on potential availability of suitable habitat and known ranges.

Species	Common Name	FWC Status	Habitat Proximity	Potential for Occurrence	Comments
Birds					
Athene cunicularia floridana	Florida burrowing owl	T	Within R/W	Moderate	No known presence nearby but could occur in open upland areas.
Egretta caerulea	Little Blue Heron	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Egretta tricolor	Tricolored Heron	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Falco sparverius paulus	Southeastern American kestrel	T	Within R/W	Moderate	Several disturbed uplands and open areas present that could provide habitat.
Grus canadensis pratensis	Florida sandhill crane	T	Within R/W	Moderate	Foraging habitat varies among many habitat types; prefers sparse canopy or open land.
Reptiles					
*Gopherus polyphemus**	Gopher tortoise	T	Within R/W	High	Burrows observed within and adjacent to R/W.
Lampropeltis extenuata	Short-tailed snake	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411 and 421.

Pituophis melanoleucus mugitus	Florida pine snake	T	Within R/W	Low	Prefers pine-dominated uplands (such as FLUCFCS codes 411 and 441)
Platalea ajaja	Roseate Spoonbill	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Plants					
Agrimonia incisa	Incised groove-bur	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Arnoglossum diversifolium	Variable-leaved Indian-plantain	T	Within R/W	Low	Potential habitat includes sandhill.
Calamintha ashei	Ashe's savory	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Calopogon multiflorus	Many-flowered grass-pink	E	Within R/W	Moderate	Potential habitat includes wetlands.
Carex chapmanii	Chapman's sedge	T	Within R/W	Moderate	Potential habitat includes wetlands.
Centrosema arenicola	Sand butterfly pea	E	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Coelorachis tuberculosa	Piedmont jointgrass	T	Within R/W	Moderate	Potential habitat includes wetlands.
Hartwrightia floridana	Hartwrightia	T	Within R/W	Moderate	Potential habitat includes wetlands.
Illicium parviflorum	Star anise	E	Within R/W	Moderate	Potential habitat includes wetlands.
Lechea cernua	Nodding pinweed	T	Within R/W	Low	Historical occurrence south of project limits. Potential habitat limited to FLUCFCS codes 411, 421, and xeric disturbed land.
Litsea aestivalis	Pondspice	E	Within R/W	Moderate	Potential habitat includes wetlands.
Matelea flordana	Florida spiny-pod	E	Within R/W	Low	Potential habitat includes uplands.
Nemastylis floridana	Celestial lily	E	Within R/W	Moderate	Potential habitat includes wetlands.
Nolina atopocarpa	Florida beargrass	T	Within R/W	Low	Potential habitat includes uplands.
Panicum abscissum	Cutthroat grass	E	Within R/W	Moderate	Potential habitat includes wetlands.
Pteroglossaspis ecristata	Giant orchid	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Salix floridana	Florida willow	E	Within R/W	Moderate	Potential habitat includes wetlands.
Schizachyrium niveum	Scrub bluestem	E	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.

Ranking: E - endangered, T - threatened

Sources:

(1) USFWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species, 50 CFR 17.11

(2) Federally Listed Species in Orange County, Florida | North Florida ESO Jacksonville (fws.gov)

Note: *In accordance with Florida Administrative Code (FAC) Title 68A-27.0012, Procedures for Listing and Removing Species from Florida's Endangered and Threatened Species List, federally endangered or threatened species under the Endangered Species Act will be listed by the FWC by their federal designation.*

Table 5.7.1: Federally Listed Species with the Potential to Occur

The project may affect, but is not likely to adversely affect the following federally listed species:

- Sand skink;
- Florida scrub-jay;
- Eastern indigo snake;
- Snail kite; and
- Wood stork.

The project will have no effect on the following federally listed species:

- Florida bonamia;
- Pygmy fringe tree;
- Scrub pigeon-wing;
- Short-leaved rosemary;
- Beautiful pawpaw;
- Scrub buckwheat;
- Florida blazing star;
- Scrub lupine;
- Britton's beargrass;
- Paper-like nailwort;
- Lewton's polygala;
- Small's jointweed;
- Scrub plum;
- Clasping warea; and
- Carter's warea.

For federally listed plant species, suitable native habitats have been fragmented over time by land development and what remains are patches too small and altered to reasonably support the species. In addition, the existing right-of-way is generally not conducive to supporting these listed plants given regular maintenance activities including mowing and nuisance / exotic species management. These species have not been observed in the project corridor for approximately 15 years and were not observed during field reviews. Given this information, and that it is unlikely that the fragments of disturbed habitat available within the project corridor could support these species, the project will have no effect on federally listed plant species.

In an effort to mitigate impacts to protected plant species within the project area, the FTE will coordinate with FDACS prior to construction for possible relocation of protected plants. If Florida sandhill crane nests are observed during future surveys conducted prior to construction, then a 400-foot buffer will be implemented if construction occurs during the nesting season (January through July). The FTE will coordinate with the FWC during the project construction phase, if necessary. The project will implement the USFWS-approved Standard Protection Measures for the Eastern Indigo Snake (most updated version) during the proposed roadway improvements. FTE is committed to providing an updated evaluation and consultation with USFWS during the design phase of this project for potential sand skinks in the project study area.

Table 5.7.2 lists the state protected wildlife and plant species known to occur within Orange County that could potentially occur near the project area based on potential availability of suitable habitat and known ranges.

Species	Common Name	FWC Status	Habitat Proximity	Potential for Occurrence	Comments
Birds					
Athene cunicularia floridana	Florida burrowing owl	T	Within R/W	Moderate	No known presence nearby but could occur in open upland areas.
Egretta caerulea	Little Blue Heron	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Egretta tricolor	Tricolored Heron	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Falco sparverius paulus	Southeastern American kestrel	T	Within R/W	Moderate	Several disturbed uplands and open areas present that could provide habitat.
Grus canadensis pratensis	Florida sandhill crane	T	Within R/W	Moderate	Foraging habitat varies among many habitat types; prefers sparse canopy or open land.
Reptiles					
*Gopherus polyphemus**	Gopher tortoise	T	Within R/W	High	Burrows observed within and adjacent to R/W.
Lampropeltis extenuata	Short-tailed snake	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411 and 421.
Pituophis melanoleucus mugitus	Florida pine snake	T	Within R/W	Low	Prefers pine-dominated uplands (such as FLUCFCS codes 411 and 441)
Platalea ajaja	Roseate Spoonbill	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Plants					
Agrimonia incisa	Incised groove-bur	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Arnoglossum diversifolium	Variable-leaved Indian-plantain	T	Within R/W	Low	Potential habitat includes sandhill.
Calamintha ashei	Ashe's savory	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Calopogon multiflorus	Many-flowered grass-pink	E	Within R/W	Moderate	Potential habitat includes wetlands.
Carex chapmanii	Chapman's sedge	T	Within R/W	Moderate	Potential habitat includes wetlands.
Centrosema arenicola	Sand butterfly pea	E	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Coelorachis tuberculosa	Piedmont jointgrass	T	Within R/W	Moderate	Potential habitat includes wetlands.
Hartwrightia floridana	Hartwrightia	T	Within R/W	Moderate	Potential habitat includes wetlands.
Illicium parviflorum	Star anise	E	Within R/W	Moderate	Potential habitat includes wetlands.
Lechea cernua	Nodding pinweed	T	Within R/W	Low	Historical occurrence south of project limits. Potential habitat limited to FLUCFCS codes 411, 421, and xeric disturbed land.
Litsea aestivalis	Pondspice	E	Within R/W	Moderate	Potential habitat includes wetlands.
Matelea flordana	Florida spiny-pod	E	Within R/W	Low	Potential habitat includes uplands.

Nemastylis floridana	Celestial lily	E	Within R/W	Moderate	Potential habitat includes wetlands.
Nolina atopocarpa	Florida beargrass	T	Within R/W	Low	Potential habitat includes uplands.
Panicum abscissum	Cutthroat grass	E	Within R/W	Moderate	Potential habitat includes wetlands.
Pteroglossaspis ecristata	Giant orchid	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Salix floridana	Florida willow	E	Within R/W	Moderate	Potential habitat includes wetlands.
Schizachyrium niveum	Scrub bluestem	E	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.

Ranking: E - endangered, T - threatened,
* = Candidate species for federal listing
Sources:
(1) FWC - Florida Fish and Wildlife Conservation Commission, Florida's Threatened and Endangered Species List, Updated June 2021.
Note: *In accordance with Florida Administrative Code (FAC) Title 68A-27.0012, Procedures for Listing and Removing Species from Florida's Endangered and Threatened Species List, federally endangered or threatened species under the Endangered Species Act will be listed by the FWC by their federal designation.*

Table 5.7.2: State Listed Species with the Potential to Occur

No adverse effects are anticipated for the state listed species.

If burrowing owls or southeastern American kestrel nests are found, technical assistance with the FWC will establish avoidance, minimization, and permitting options. The FWC Gopher Tortoise Permitting Guidelines (Revised July 2020) will be implemented for gopher tortoise burrows found within 25 feet of the limits of construction. The FTE will secure an FWC Gopher Tortoise Relocation Permit to relocate the tortoises and associated commensal species if the gopher tortoise burrows cannot be avoided.

Table 5.7.3 lists the managed and protected species known to occur within Orange County that could potentially occur near the project area based on potential availability of suitable habitat and known ranges.

Species	Common Name	USFWS Status	Habitat Proximity	Potential for Occurrence	Comments
Birds					
Haliaeetus leucocephalus	Bald eagle	N	Within R/W	High	4 nests within 660-feet of existing R/W; new nests could occur in tall trees or structures.
Pandion haliaetus	Osprey	N	Within R/W	High	Nests observed within R/W; new nests could occur in trees or structures.
Mammals					
*Ursus americanus floridanus**	Florida black bear	N	Within R/W	Medium	Known to occur within the project footprint.
Myotis spp.	Bat species	N	Within R/W	Low	No evidence under bridges; limited other structures to provide habitat.

Ranking: N - none
Sources:
(1) USFWS - U.S. Fish and Wildlife Service status, Official lists of Threatened and Endangered species, 50 CFR 17.11
(2) FWC - Florida Fish and Wildlife Conservation Commission, Florida's Threatened and Endangered Species List, Updated June 2021.
FWC Notations:
Has a significant vulnerability to habitat modification, environmental alteration, human disturbance, or human exploitation which, in the foreseeable future may result in becoming a threatened species unless appropriate protective/management techniques are initiated/maintained.
*The Florida black bear is no longer listed as threatened, however is still protected under the FWC Florida Black Bear
Management Plan.

Note: In accordance with Florida Administrative Code (FAC) Title 68A-27.0012, Procedures for Listing and Removing Species
from Florida's Endangered and Threatened Species List, federally endangered or threatened species under the Endangered
Species Act will be listed by the FWC by their federal designation.

Table 5.7.3: Managed and Protected Species with the Potential to Occur

No adverse effects are anticipated for the managed / protected species. Four bald eagle nests were documented to have been observed within 300 feet of the right of way, well within the 660-foot required perimeter. A nest located northwest of the SR 50 (Clermont / Oakland) at Florida's Turnpike was active during the 2021 nesting season as per eagle nest databases. A nest located south of Florida's Turnpike and west of SR 429 was also active during the 2021 nesting season and field verified in April 2020. Two other nests were not active during the 2021 nesting season but were observed during the field survey in April 2020. No additional bald eagle nests were observed during the field surveys. A more detailed analysis of the bald eagle sites can be found in the NRE, available in the project file.

An updated survey will be completed during the final design and permitting phase of the project to evaluate the status of the currently documented nests and to identify potential new nests within 660 feet of the project area. Work within 660 feet of nests will require adherence to criteria outlined by the USFWS, and the FTE will coordinate with USFWS should active nests be identified within 660 feet of proposed work.

Initial agency comments were provided through the Efficient Transportation Decision Making (ETDM) process. The results of the programming screen review of the project (ETDM #14378) were published on June 28, 2019. Reviewing agency comments about potential effects to wildlife and habitat range from "Not Applicable / No Involvement" to "Moderate", with most comments summarized as "Minimal" effect on the wildlife and habitats being considered.

- Not Applicable / No Involvement on Wildlife and Habitat - FDACS
- Minimal Effect on Wildlife and Habitat - National Marine Fisheries Service (NMFS), USFWS, SJRWMD, and SFWMD
- Moderate Effect on Wildlife and Habitat - FWC

A pre-application meeting was held with the FTE staff and representatives as well as the SJRWMD on June 30, 2021, to discuss the proposed drainage designs, SJRWMD special basins, wetlands, conservation easements, and eagle's nests located in the area.

A meeting was held on April 21, 2022, with the FTE, USFWS, and FWC where it was decided that the Florida's Turnpike corridor within the project limits does not warrant a wildlife crossing. This meeting also discussed the state and federal listed species and plants that may be located within the project limits. The meeting minutes for both of these meetings are located in the project file.

5.8 Essential Fish Habitat (EFH)

There is no Essential Fish Habitat (EFH) in the project area.

6. Physical Resources

6.1 Highway Traffic Noise

The following evaluation was conducted pursuant to 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, and Section 335.17, F.S., State highway construction; means of noise abatement.

The purpose of the NSR is to identify noise sensitive sites that would be impacted by the Preferred Alternative, evaluate potential abatement measures at impacted noise sensitive sites, and determine where potential noise abatement (i.e., noise barriers) is recommended for further evaluation during the design phase. Predicted noise levels were produced using the Federal Highway Administration's (FHWA) Traffic Noise Model (TNM), version 2.5.

Noise levels developed for this analysis are expressed in decibels (dB) using an "A"-scale [dB(A)] weighting. This scale most closely approximates the response characteristics of the human ear. All noise levels are reported as hourly equivalent noise levels (LAeq1h). The LAeq1h is defined as the equivalent steady-state sound level that, in a given hourly period, contains the same acoustic energy as the time-varying sound level for the same hourly period. Use of the dB(A) and LAeq1h metrics to evaluate traffic noise is consistent with 23 CFR 772. Noise abatement measures are considered when in conjunction with "impacts", meaning predicted future year traffic noise levels approach, meet, or exceed the FHWA's Noise Abatement Criteria (NAC) or when there is a substantial increase (15 dB(A)) in traffic noise levels over existing conditions. Refer to the NSR for more information about the FHWA's NAC and FDOT policy.

Within the study area there are 21 existing noise barriers that will be retained in the future design. It should be noted that the existing barriers are not adequate by themselves to eliminate all noise impacts associated with this project. Therefore, additional barriers were evaluated to supplement the existing noise barriers.

To determine if noise barriers were feasible and reasonable in areas with existing barriers, the base condition assumed no barriers as part of the Build Alternative. For consistency with other FDOT projects, the criteria for reasonableness and feasibility were applied to a future condition that included both existing and new barriers compared against this "no-barrier" condition.

For the year 2045 Build condition, noise levels were modeled at 5,347 noise sensitive sites. Even with the existing noise barriers that are being retained, noise levels at 2,602 residences and 69 non-residential "special land use" sites, are predicted to approach or exceed the NAC for the year 2045 Build Alternative and therefore are considered "impacted". No noise sensitive sites are expected to experience a substantial increase (15 dB(A)) in traffic noise compared to existing conditions.

Analyses were performed of the impacted locations to determine if noise abatement was potentially feasible and reasonable under FDOT policy, including the no-barrier analysis of existing noise barriers. The noise barrier analysis performed to date and summarized in an attachment at the end of the report indicates that noise barriers could potentially provide reasonable and feasible noise abatement for 2,459 of the 3,606 impacted residences (including existing barrier "no-barrier" analysis impacts), as well as provide a 5 dB(A) noise reduction benefit to 412 non-impacted residences. Noise abatement was not determined feasible and reasonable for any of the 69 impacted special use sites; however, some of the special use locations will receive incidental benefits from noise barriers for the residential areas. The results of the noise barrier evaluations where noise abatement was determined to be potentially feasible and reasonable are

summarized by noise sensitive area in Table 6.1.1 located in the attachments of this report and in Figure 6.1.1, shown below. The NSR provides detailed graphics showing the locations of all walls determined to be potentially feasible and reasonable.

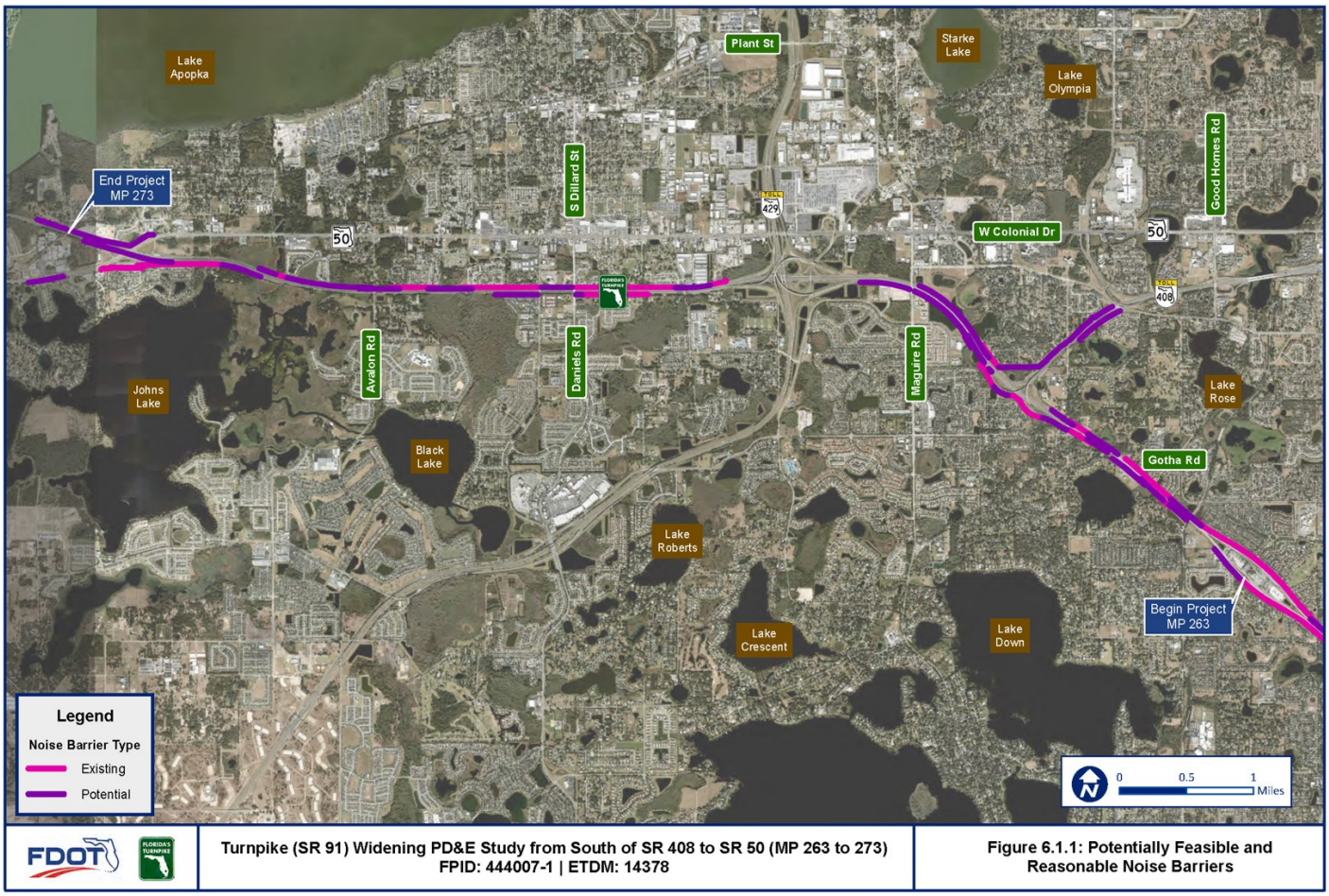

Figure 6.1.1: Potentially Feasible and Reasonable Noise Barriers

The noise analysis indicates that noise barriers are potentially feasible and reasonable at 11 noise sensitive areas. Table 6.1.1 shows the 11 noise sensitive areas where preliminary noise barriers were determined to be potentially feasible and reasonable. The potentially feasible and reasonable noise barriers meet the FDOT's cost per benefit criteria with a preliminary cost of under the $42,000 per benefited receptor criterion. Noise barriers at these 11 locations will be given further consideration during the design phase of this project. The dimensions of noise walls are subject to change during the design phase of the project. Furthermore, it should be noted that as part of the conceptual PD&E assessment process, several noise wall locations appear to have engineering constraints that may render them non-constructible, or which could result in them not being cost-reasonable. While these constraints will be assessed with greater scrutiny in future design projects, an effort was made to identify those walls that may have such potential constraints in the NSR.

Statement of Likelihood

FTE is committed to the construction of feasible and reasonable noise abatement measures. Eleven potentially feasible and reasonable noise barrier systems have been identified for this project contingent upon the following conditions:

- Final recommendations on the construction of abatement measures are determined during the project's final design and through the public involvement process;

- Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;
- Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
- Community input supporting types, heights, and locations of the noise barrier(s) is provided to FTE; and
- Safety and engineering aspects have been reviewed and any conflicts or issues resolved.

A land use review will be performed during the design phase to identify all noise sensitive sites that may have received a building permit subsequent to the noise study but prior to the project's Date of Public Knowledge. The date that the State Environmental Impact Report is approved by FTE will be the Date of Public Knowledge. If the review identifies noise sensitive sites that have been permitted prior to the Date of Public Knowledge, then those sensitive sites will be evaluated for traffic noise impacts and abatement considerations.

6.2 Air Quality

This project is not expected to create adverse impacts on air quality because the project area is in attainment for all National Ambient Air Quality Standards (NAAQS) and because the project is expected to improve the Level of Service (LOS) and reduce delay and congestion on all facilities within the study area.

The proposed project is located in Orange County, an area currently designated as being in attainment for particulate matter (2.5 microns in size and 10 microns in size) and carbon monoxide (CO). As part of this PD&E Study, the project has been reviewed for air quality impacts.

The amount of mobile source air toxics (MSAT) emitted for the Preferred Alternative would be proportional to the vehicle miles traveled (VMT). The VMT estimated for the Preferred Alternative is slightly higher than that for the No-Build Alternative because the additional capacity increases the efficiency of the roadway and may attract additional trips from elsewhere in the transportation network. Refer to Table 6.2.1 AADT and VMT for a summary of this analysis.

Location	No-Build 2045 AADT**	Build 2045 AADT**	Length (miles)*	No-Build VMT	Build VMT	% Change
279 - Minneola to 272 - Winter Garden / Clermont (SR 50)	138,400	142,600	6.2	858,080	884,120	3.0%
272 - Winter Garden / Clermont (SR 50) to 267A - SR 429	184,900	192,600	4.9	906,010	943,740	4.2%
267A - SR 429 to 265 - SR 408	259,300	268,600	2.1	544,530	564,060	3.6%
265 - SR 408 to 263 - Turkey Lake Service Plaza	188,800	196,600	2.2	415,360	432,520	4.1%

Table 6.2.1: AADT and VMT along Florida's Turnpike

This increase in VMT would lead to higher MSAT emissions for the Preferred Alternative along Florida's Turnpike, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to the USEPA MOVES2014 model, emissions of all priority MSAT decrease as speed increases. Also, emissions for the Preferred Alternative will likely be lower than present levels in the design year because of USEPA's national control programs that are projected to reduce annual MSAT emissions by over 90 percent between 2010 and 2050.

Additional information on air quality analysis is contained in the Air Quality Technical Memorandum (AQTM), available in the project file.

6.3 Contamination

A Level I contamination screening was performed for the project. The purpose of this Level I evaluation was to assess the risk of encountering petroleum or hazardous substance, contamination of soil, groundwater, surface water, or sediment that could adversely affect this project. The following activities were performed as part of this evaluation: review of public regulatory files, review of historical data sources, a site reconnaissance, and interviews.

The contamination study area was defined by the following distances from the proposed right of-way:

- All sites within 500 feet;
- Non-landfill solid waste sites within 1,000 feet; and
- Solid waste landfills, superfund sites, and national priority list sites within 1/2 mile.

As a result of this evaluation, contamination risk ratings have been assigned to 70 sites. The 70 site locations are shown and described in the Contamination Screening Evaluation Report (CSER), available in the project file.

Using the FDOT Risk Ratings, 50 Low Risk sites, 20 Medium Risk sites, and 0 High Risk sites were identified. Design plans should be reviewed to evaluate potential project impacts and the need for Level II Impact to Construction Assessments (ICAs). Table 6.3.1 summarizes the medium risk potential contamination sites in the study area. Figure 6.3.1 shows the locations of the sites.

Site No.	Site Name	Site Address	Risk Potential	Parameters of Concern	Media Affected
2	Circle K #2722116	17503 West State Road 50	Medium	Petroleum Products	Soil and Groundwater
3	Killarney Fruit Company	100 West State Road 50	Medium	Petroleum products, Pesticides, Herbicides, Arsenic	Soil and Groundwater
7	Racetrac #2399	17108 Remington Road	Medium	Petroleum Products	Soil and Groundwater
8	7-Eleven Store #34286	17100 West Colonial Drive	Medium	Petroleum Products	Soil and Groundwater
9	FL Dept of Transportation-Turnpk MP 272	Turnpike MM 272 and Highway 91 Toll	Medium	Petroleum Products	Soil and Groundwater
11	US C-Stores Oper-Chevron Colonial	16131 West Colonial Drive	Medium	Petroleum Products	Groundwater
12	Jack H Ross Groves, Inc.	15567 West Colonial Drive	Medium	Pesticides, Herbicides, Arsenic	Groundwater
13	Circle K #7490	14990 Colonial Drive	Medium	Petroleum Products	Groundwater
19	Ranger Construction Industries Inc.	1200 Elboc Way	Medium	Petroleum Products	Soil and Groundwater

23	Dunbar Ave Debris Staging Area; Winter Garden Trash Site	691 Dunbar Avenue	Medium	Hazardous Materials	Soil and Groundwater
49	FL Dept of Transportation-Turnpike MP 267	Turnpike MM 267	Medium	Petroleum Products	Soil and Groundwater
51	Former Statewide Station - Texaco, Former Chevron Statewide Station Dependable Motor Sales, Pepboys #1811	11460 West Colonial Drive	Medium	Petroleum Products	Groundwater
52	Ralph Johnson's 24-Hour Wrecker Service	11409 West Colonial Drive	Medium	Petroleum Products	Groundwater
58	Royal Mulch & Nursery, Inc.	2204 Hempel Avenue	Medium	Pesticides, Herbicides, Arsenic, Petroleum Products	Soil and Groundwater
63	AT&T	1717 South Apopka Vineland Road	Medium	Petroleum Products	Groundwater
64	Landscape Nursery Inc-Old Fuel Site	1955 South Apopka Vineland Road	Medium	Pesticides, Herbicides, Arsenic, Petroleum Products	Groundwater
65	Turkey Lake Plaza, FL Dept Of Transportation-Turnpike; Mobil Oil Corp SS #34d	Turkey Lake Service Plaza Gas Station	Medium	Petroleum Products	Soil and Groundwater
66	Turkey Lake Service Plaza (Vehicle Spill)	Turnpike MM 263	Medium	Petroleum Products	Soil and Groundwater
68	Agriculture/Citrus Groves	Study Area	Medium	Pesticides, Herbicides, Arsenic	Soil and Groundwater
69	Railroads	Study Area	Medium	Herbicides, Arsenic	Soil and Groundwater

Table 6.3.1: Potential Contamination Sites - Medium Risk Sites

A total of 77 stormwater pond and floodplain compensation alternative locations were under consideration to address stormwater management. Of the Preferred Alternative stormwater pond / floodplain compensation sites, there were 10 locations assigned Low Risk, 15 assigned Medium Risk, and 0 sites assigned High Risk. Table 6.3.2 summarizes the medium risk potential sites and Figure 6.3.2 shows where the medium risk preferred pond sites are located.

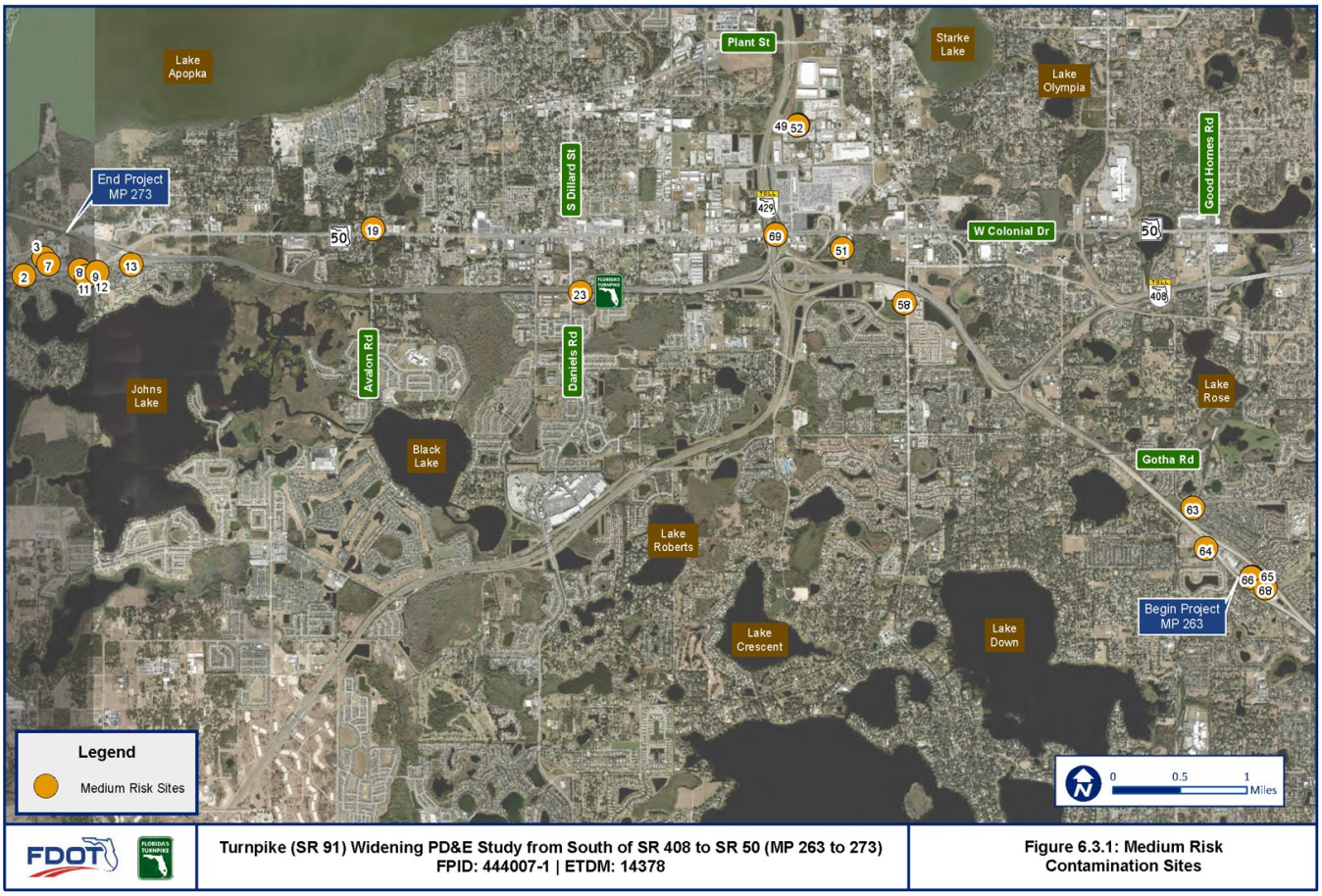

Figure 6.3.1: Preferred Roadway Alternative Medium Risk Sites

Pond Site Number	Alignment	Risk Potential
Basin D Alt 3	SR 50	Medium
Basin 6 Alt 2	Florida's Turnpike	Medium
Basin 7&8 Alt 3	Florida's Turnpike	Medium
Basin 9 Alt 2	Florida's Turnpike	Medium
Basin 10 Alt 1	SR 429	Medium
Basin 11 Alt 3	Florida's Turnpike	Medium
Basin SR 408 Alt 2	SR 408	Medium
Basin SR 429S Alt 3	Windermere Road	Medium
Basin DSR50N Alt 3	SR 50	Medium
FPC 1-2B	Florida's Turnpike	Medium
FPC 3-B	Morton Jones Road	Medium
FPC 4-B	Florida's Turnpike	Medium
FPC 9-10B	Avalon Road	Medium
FPC 11-12A	SR 50	Medium
FPC 13-A-1	SR 408	Medium

Table 6.3.2: Preferred Alternative Ponds - Medium Risk

Figure 6.3.2: Preferred Pond Sites - Medium Risk (1 of 2)

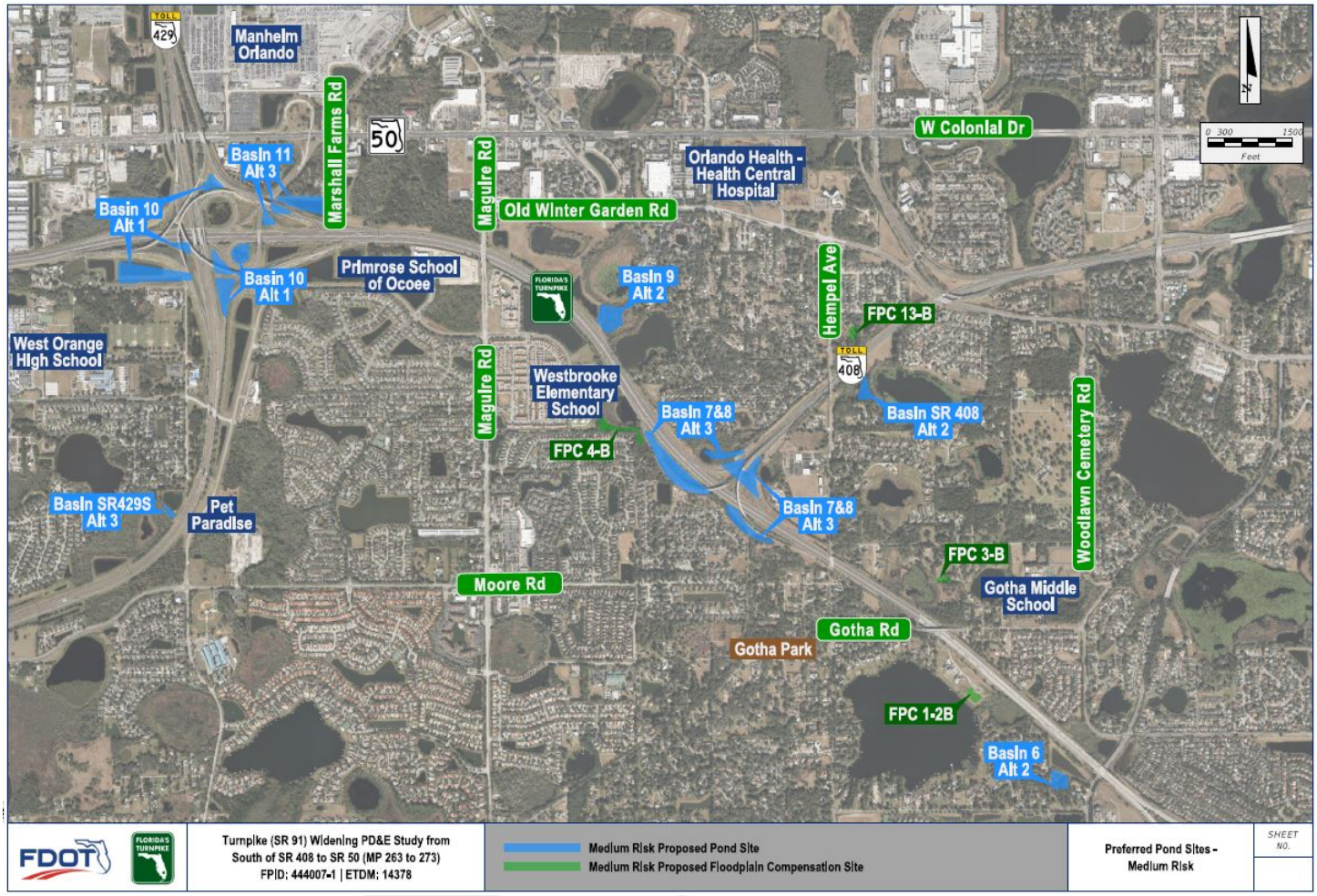

Figure 6.3.2: Preferred Pond Sites - Medium Risk (2 of 2)

The Preferred Alternative was designed to avoid or minimize involvement with known or potential contamination sites, where possible. However, some sites could not be avoided, and minor right-of-way acquisition is required. A Level II contamination assessment is recommended once the project reaches the design phase and may be required for the 20 Medium Risk roadway sites and the 15 Medium Risk Pond sites. Additional information on contamination conditions is contained in the CSER, available in the project file.

6.4 Utilities and Railroads

A Utility Assessment Package Technical Memorandum, July 2020, was prepared to document the existing or planned utilities in accordance with FDOT PD&E Manual. Twenty-five Utility Agencies/Owners (UAOs) were initially identified as potentially having facilities within the project study limits through a Sunshine 811 design ticket. Follow-up information provided by the identified UAOs and confirmed through field reviews determined only 18 UAOs have facilities within the project area. The 18 confirmed UAOs and their facilities are generally summarized in Table 6.4.1.

Utility Agency / Owner	Utility Type	General Location
AT&T Florida	Overhead telephone Buried fiber optic cable	Multiple locations: Turnpike mainline, SR 408, SR 50, Hempel Avenue, Maguire Road, Turkey lake Service Plaza
AT&T Corporation	High-capacity fiber optic cable system	NB Turnpike mainline
Charter Communications (f.k.a. Bright House Networks)	Buried fiber optic and coaxial cable	Multiple locations: S. Apopka-Vineland Road, Hempel Road, Maguire Road, Winter Garden-Vineland Road, Turkey Lake Service Plaza
CenturyLink	Buried fiber optic Buried telephone	Multiple locations: Maguire Road, Winter Garden-Vineland Road, SR 50, Turkey Lake Service Plaza
City of Ocoee, Florida	Water, Wastewater and Reclaimed Water lines	Multiple locations: Maguire Road, Marshall Farms Road, SR 50, SR 429
City of Winter Garden, Florida	Water, Wastewater and Reclaimed Water lines	Multiple locations: Beulah Road, Beard Road, Daniels Road, Winter Garden - Vineland Road, Avalon Road.
Comcast Communications	Buried fiber optic	S. Apopka Vineland Road
Duke Energy (Distribution)	12.47 kV overhead and underground distribution	Multiple locations: S. Apopka-Vineland Road, Gotha Road, SR 408, Hempel Avenue, Maguire Road, Beulah Road
Duke Energy (Transmission)	69 kV overhead transmission	Multiple locations: SR 408 and SR 50
Duke Energy (Fiber)	Overhead fiber optic	Multiple locations: SR 408 and SR 50
Town of Oakland, Florida	Water and Wastewater	SR 50
Level 3 Communications / CenturyLink	Buried fiber optic	Multiple locations: Maguire Road, Beulah Road, Winter Garden-Vineland Road
Lake Apopka Natural Gas District	Natural Gas Distribution	Multiple locations: S. Apopka-Vineland Road, Hempel Avenue, Maguire Road, SR 50, SR 429, Winter Garden-Vineland Road, Avalon Road
Orange County Utilities	Water, Wastewater and Reclaimed Water lines	Multiple locations: S. Apopka-Vineland Road, Gotha Road, Hempel Avenue, Turkey Lake Service Plaza
Summit Broadband	Overhead and underground fiber optic	Multiple locations: Maguire Road, Beulah Road
Smart City Solutions	Overhead and underground fiber optic	Avalon Road
Verizon Business (f.k.a. MCI)	Buried fiber optic	Multiple locations: SR 429, SR 50, Avalon Road
Water Conserv II	Reclaimed Water	Turnpike mainline MP 261.4 - 265.6

Table 6.4.1: Utility Agencies/Owners

As reflected in Table 6.4.1, most of the utilities cross over or under Florida's Turnpike mainline or interchange ramps. Actual utility impacts will be verified during the design phase, when a detailed survey and subsurface utility information is available. The proposed project is expected to have no significant utility impacts.

There is no railroad involvement within the project area.

6.5 Construction

Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction.

Noise and vibration impacts may be generated by heavy equipment and construction activities such as pile driving and vibratory compaction of embankments. Noise control measures will be implemented as set forth in the FDOT's Standard Specifications for Road and Bridge Construction. Adherence to local construction noise and/or construction vibration ordinances by the construction contractor will also be required where applicable.

Visual impacts associated with the storage of construction materials and establishment of temporary construction facilities will occur but are temporary and short term. Long term visual impacts due to proposed structures are deemed not substantial as the structures proposed are in character with the existing freeway facility.

Water quality impacts resulting from erosion and sedimentation will be controlled in accordance with FDOT's Standard Specifications for Road and Bridge Construction and using BMPs. Temporary erosion control features as specified in the FDOT's Standard Specifications for Road and Bridge Construction, Section 104, will be utilized.

Maintenance of traffic and sequence of construction will be planned and scheduled to minimize traffic delays during project construction. Signs will be used as appropriate to provide notice of road closures and other pertinent information to the traveling public. The local news media will be notified in advance of road closings and other construction-related activities which could inconvenience the community so that motorists, residents, and businesspersons can plan travel routes in advance. Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling.

6.6 Bicycles and Pedestrians

Florida's Turnpike is a limited access facility, which means it is statutorily exempt from providing bicycle or pedestrian facilities along the expressway. The existing bicycle and pedestrian facilities located along local and arterial roadways such as SR 50, Maguire Road, and Hempel Avenue, impacted by the Preferred Alternative will be maintained, replaced, or upgraded as summarized below.

Turnpike / SR 50 (Oakland / Clermont) Interchange - The Preferred Alternative improvement at this interchange includes upgrades to the existing bicycle and pedestrian facilities located along SR 50. A new 12-foot-wide shared use path will be constructed along the westbound side of SR 50 providing upgraded access to the West Orange Trail trailhead near the Oakland Avenue intersection. This project will not affect the West Orange Trail overpass of the Florida's Turnpike mainline. Enhanced pedestrian refuge areas and crosswalks will also be provided at the SR 50 / Remington Road and new ramp terminal signalized intersections to further ensure safe pedestrian travel.

Turnpike / SR 50 (Ocoee / Winter Garden) Interchange - The operational improvements proposed at this interchange include the reconstruction of the SR 50 eastbound bicycle and pedestrian facilities. The relocated seven-foot on-street bicycle lane and the adjacent five-foot sidewalk will be reconstructed to accommodate the proposed SR 50 eastbound right-turn-lane and interchange ramp modifications. A new actuated traffic signal will also be installed to further enhance the safety at this interchange.

Maguire Road and Hempel Avenue - Both roadways bridge over the Florida's Turnpike and must be replaced to accommodate the Preferred Alternative. The replacement bridges will at a minimum, provide protected sidewalks designed and constructed to current criteria. The bridges follow a similar typical section as the existing roadways and do not contain bicycle lanes. Additionally, the City of Ocoee has a long-range trail plan that includes the Maguire Road corridor. Coordination will continue with the city through design to ensure the new Maguire Road bridge adequately accommodates the appropriate trail facilities consistent with their plan.

6.7 Navigation

There are no navigable waterways located within the study area, and therefore, the Preferred Alternative will not impact this resource.

7. Permits

The following environmental permits are anticipated for this project:

Federal Permit(s)	Status
USACE Section 10 or Section 404 Permit	To be acquired

State Permit(s)	Status
DEP or WMD Environmental Resource Permit (ERP)	To be acquired
DEP National Pollutant Discharge Elimination System Permit	To be acquired
FWC Gopher Tortoise Relocation Permit	To be acquired
State 404 Permit	To be acquired

8. Engineering Analysis Support

The engineering analysis supporting this environmental document is contained within the Preliminary Engineering Report.

9. Project Commitments

To minimize the impacts of this project to the social, cultural, natural and physical environment, Florida Department of Transportation (FDOT) has identified the following commitments:

1. In an effort to mitigate impacts to protected plant species within the project area, the FTE will coordinate with FDACS prior to construction for possible relocation of protected plants.
2. If Florida sandhill crane nests are observed during future surveys conducted prior to construction, then a 400-foot buffer will be implemented if construction occurs during the nesting season (January through July). The FTE will coordinate with the FWC during the project construction phase, if necessary.
3. The project will implement the USFWS-approved Standard Protection Measures for the Eastern Indigo Snake (most updated version) during the proposed roadway improvements.
4. Work within 660 feet of bald eagle nests will require adherence to criteria outlined by the USFWS, and the FTE will coordinate with USFWS should active nests be identified within 660 feet of proposed work.
5. FTE is committed to providing an updated evaluation and consultation with USFWS during the design phase of this project for potential sand skinks in the project study area.
6. The FWC Gopher Tortoise Permitting Guidelines (Revised July 2020) will be implemented for gopher tortoise burrows found within 25 feet of the limits of construction. The FTE will secure an FWC Gopher Tortoise Relocation Permit to relocate the tortoises and associated commensal species if the gopher tortoise burrows cannot be avoided.
7. During development of final design plans FTE EMO will consider performing Level II impact to construction assessment of the identified medium-ranked risks for potential contamination.
8. Compensatory mitigation will be provided pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and U.S.C. section 1344. In accordance with EO 11990.
9. FTE is committed to the construction of feasible and reasonable noise abatement measures. Eleven potentially feasible and reasonable noise barrier systems have been identified for this project contingent upon the following conditions:
   - Final recommendations on the construction of abatement measures are determined during the project's final design and through the public involvement process.
   - Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement.
   - Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion.
   - Community input supporting types, heights, and locations of the noise barrier(s) is provided to FTE.
   - Safety and engineering aspects have been reviewed and any conflicts or issues resolved.

10. Approved for Public Availability

Date:

Environmental or Project Development Manager

11. Public Involvement

The following is a summary of public involvement activities conducted for this project:

Summary of Activities Other than the Public Hearing
Two public meetings were conducted for this study: a Public Kickoff Open House and an Alternatives Public Workshop. The following sections provide summaries of these meetings. The Comments and Coordination Report, available in the project file, contains a more detailed summary of each meeting and includes the public comments from each meeting.

Public Kickoff Open House
A Public Kickoff Open House was held on Tuesday, March 10, 2020, from 5:30 p.m. to 7:30 p.m. at the Ocoee Lakeshore Center.

Public meeting invitation letters were sent by mail to 40 elected officials, 49 federal, state, and regional representatives, 49 Environmental Technical Advisory Team (ETAT) members, and 10 Native American Tribe representatives. Invitations were also sent out to 2,921 property owners and tenants adjacent to the study area. The public open house was advertised in the *Orange Sentinel, Orange County Section* on Sunday, February 23, 2020, and the *El Sentinel* on Saturday, February 22, 2020. An advertisement was published in The Florida Administrative Register (FAR) on February 24, 2020. FTE distributed a press release to local media, and notices were posted on the project website at www.Turnpike408to50.com and the FDOT Central Office public notices website.

The public was invited to attend the Open House at any time between 5:30 p.m. and 7:30 p.m. Attendees had an opportunity to view a continuous looping presentation that provided a general overview of the project. They also had an opportunity to view several project displays, including maps, information about the study process, and information about current conditions and future traffic projections. Interactive Smart Boards also were used to allow community members to focus on a specific area of the project, ask questions and provide feedback. A PD&E Process video, a Turnpike Traffic Noise video, and an FDOT Right-of-way video were also available for viewing. Members of the project team, including engineers and experts on traffic and noise, were available to discuss the project with attendees and answer questions.

A total of 55 people attended the Open House, and five questions and comments were received.

Alternatives Public Information Meeting
A Hybrid Alternatives Public Information Meeting was held in August 2021 and was composed of a Virtual Meeting and an In-Person Meeting. The virtual component was held on Tuesday, August 10, from 5:30 p.m. until 6:00 p.m., while the in-person component was held on Thursday, August 12, from 5:30 p.m. until 7:30 p.m. at the Ocoee Lakeshore Center.

Public meeting invitation letters were sent by e-mail to 40 elected officials, 53 appointed officials, 54 federal, state, and regional agency representatives, and 49 ETAT members. Letters were mailed to 12 Native American Tribe representatives, 44 interested persons, 16 public interest organizations, and 2,551 property owners and tenants adjacent to the study area. The Alternatives Public Information Meeting was advertised in the *Orange Sentinel* on Sunday, July 25, 2021. An advertisement was published in the FAR on July 28, 2021. FTE distributed a press release on August 3, 2021, to local media, and notices were posted on the project website at www.Turnpike408to50.com and the FDOT Central Office public notices website.

The public was invited to attend the Virtual Public Information Meeting at 5:30 p.m. Attendees had the opportunity to listen to the FTE project manager introduce the project and team members before watching the meeting presentation which described project and proposed alternatives. A "Question" feature was open for the duration of the meeting which allowed the viewers to write questions in to be submitted to the public record. At the conclusion of the meeting, the consultant project manager appeared to answer select questions. Unanswered questions were responded to via e-mail to the e-mail address provided during the registration.

A total of 99 people signed into the virtual meeting (41 FTE and consultant employees), and 29 questions and comments were received.

The public was invited to attend the In-Person Public Information Meeting at any time between 5:30 p.m. and 7:30 p.m. Attendees had an opportunity to view a continuous looping presentation that provided a general overview of the project. Attendees also had an opportunity to view several project displays, including concepts, information about the study process, and information about current conditions and future traffic projections. Interactive Smart Boards also were used to allow community members to focus on a specific area of the project, ask questions and provide feedback. A PD&E Process video, a Turnpike Traffic Noise video and an FDOT Right-of-way video were also available for viewing. Members of the project team, including engineers and experts on traffic and noise, were available to discuss the project with attendees and answer questions.

A total of 50 people attended the In-Person Public Information Meeting, and nine questions and comments were received, mostly regarding noise, drainage, and the impact to quality of life as a result of the project.

Date of Public Hearing: 08/07/2023

Summary of Public Hearing

This section will be completed following the Public Hearing.

12. Technical Materials

The following technical materials have been prepared to support this environmental document.

Cultural Resources Assessment Survey
Water Quality Impact Report (WQIE)
Air Quality Technical Memorandum (AQTM)
Preliminary Engineering Report
Public Involvement Plan

Attachments

Planning Consistency
Planning Consistency

Cultural Resources
SHPO Concurrence Letter

Natural Resources
SJRWMD Meeting Notes
USFWS and FWS Technical Assistance Meeting Notes
Proposed Pond Sites

Physical Resources
Noise Walls

Planning Consistency Appendix

Contents:

Florida Department of

TRANSPORTATION

Federal Aid Management Sean McAuliffe - Manager

STIP Project Detail and Summaries Online Report

**** Repayment Phases are not included in the Totals ****

Selection Criteria	
Current STIP Financial Project: 444007 _ **As Of:** 5/10/2023	**Detail Related Items Shown**

TURNPIKE

Item Number: 444007 1 **Project Description:** PD&E WIDEN TPK(SR91) FROM S OF SR 408 TO SR 50 (MP 263 - 273) *SIS*

District: 05 **County:** ORANGE **Type of Work:** PD&E/EMO STUDY **Project Length:** 14.683MI

		Fiscal Year						
Phase / Responsible Agency		**<2023**	**2023**	**2024**	**2025**	**2026**	**>2026**	**All Years**
P D & E / MANAGED BY FDOT								
Fund Code:	PKYI-TURNPIKE IMPROVEMENT	6,918,188	457,666					**7,375,854**
CONSTRUCTION / MANAGED BY FDOT								
Fund Code:	PKYI-TURNPIKE IMPROVEMENT	16,403						**16,403**
	Item: 444007 1 Totals	**6,934,591**	**457,666**					**7,392,257**
	Project Totals	**6,934,591**	**457,666**					**7,392,257**
	Grand Total	**6,934,591**	**457,666**					**7,392,257**

This site is maintained by the Office of Work Program and Budget, located at 605 Suwannee Street, MS 21, Tallahassee, Florida 32399.

For additional information please e-mail questions or comments to:
Federal Aid Management
Sean McAuliffe: Sean.McAuliffe@dot.state.fl.us Or call 850-414-4564

MTP ID#	County	Facility Name & Limits	Project Description	Length (miles)	Project Phase	Total Project Cost (2020 $'s) Shown in Millions	Existing TIP as of 9/14/2022		Plan Period I: 2026-2030		Plan Period II: 2031-2035		Plan Period III: 2036-2045		Unfunded Needs	
							Phase	YOE $'s	Phase	YOE $'s	Phase	YOE $'s	Phase	YOE $'s	Phase	YOE $'s
1013	Seminole	SR 417 From: Lake Mary Blvd / CR 427 - To: I-4	Widen to 8 Lanes	5.86	PD&E	$ 4.00	PD&E	$ 4.00		$ -		$ -		$ -		$ -
					PE	$ 11.00		$ -	PE	$ 14.52		$ -		$ -		$ -
					ROW			$ -		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 110.00		$ -		$ -	CST	$ 170.50		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1027	Orange	SR 91 / Florida's Turnpike From: S of SR 408 / Gotha Rd - To: SR 50 / Colonial Dr	Widen to 10 Lanes	7.41	PD&E	$ 5.00		$ -	PD&E	$ 6.60		$ -		$ -		$ -
					PE	$ 19.00		$ -	PE	$ 25.08		$ -		$ -		$ -
					ROW			$ -		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 326.00		$ -		$ -	CST	$ 505.30		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1056	Osceola	SR 91 / Turnpike Mainline From: US 192 To: Partin Settlement Rd	Widen to 8 Lanes	1.50	PD&E			$ -		$ -		$ -		$ -		$ -
					PE	$ 3.00	PE	$ 3.00		$ -		$ -		$ -		$ -
					ROW			$ -		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 76.00		$ -	CST	$ 100.32		$ -		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1057	Osceola	SR 91 / Turnpike Mainline From: Partin Settlement Road To: Osceola Pkwy	Widen to 8 Lanes	5.51	PD&E			$ -		$ -		$ -		$ -		$ -
					PE	$ 16.00	PE	$ 16.00		$ -		$ -		$ -		$ -
					ROW	$ 8.00	ROW	$ 8.00		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 212.00	CST	$ 212.00		$ -		$ -		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1058	Osceola	SR 91 / Turnpike Mainline From: at Nolte Road To:	New Interchange	1.00	PD&E			$ -		$ -		$ -		$ -		$ -
					PE	$ 4.00	PE	$ 4.00		$ -		$ -		$ -		$ -
					ROW			$ -		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 58.00	CST	$ 58.00		$ -		$ -		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1059	Osceola	SR 91 / Turnpike Mainline From: at US 192 To:	Interchange Modification	1.00	PD&E			$ -		$ -		$ -		$ -		$ -
					PE	$ 1.00	PE	$ 1.00		$ -		$ -		$ -		$ -
					ROW			$ -		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 10.00		$ -	CST	$ 13.20		$ -		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1060	Osceola	SR 91 / Turnpike Mainline From: at Osceola Pkwy To:	Interchange Modification	1.00	PD&E			$ -		$ -		$ -		$ -		$ -
					PE	$ 1.50	PE	$ 1.50		$ -		$ -		$ -		$ -
					ROW			$ -		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 13.00	CST	$ 13.00		$ -		$ -		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -
1061	Orange	SR 91 / Turnpike Mainline From: at Sand Lake Road To:	New Interchange	1.00	PD&E			$ -		$ -		$ -		$ -		$ -
					PE			$ -		$ -		$ -		$ -		$ -
					ROW	$ 2.00	ROW	$ 2.00		$ -		$ -		$ -		$ -
					ENV			$ -		$ -		$ -		$ -		$ -
					CST	$ 77.00	CST	$ 77.00		$ -		$ -		$ -		$ -
					CEI			$ -		$ -		$ -		$ -		$ -

Cultural Resources Appendix

Contents:

SHPO Concurrence Letter

Florida Department of Transportation

RON DESANTIS
GOVERNOR

FLORIDA'S TURNPIKE ENTERPRISE
P.O. Box 613069, Ocoee, FL 34761

JARED W. PERDUE, P.E.
SECRETARY

September 27, 2022

Ms. Alissa S. Lotane
Director, Division of Historical Resources
& State Historic Preservation Officer
Office of Cultural and Historical Programs
Division of Historical Resources
500 South Bronough Street
Tallahassee, FL 32399-0250

Attn: Transportation Compliance Review Program

RE: **Cultural Resource Assessment Survey Report**
Turnpike (SR 91) Widening PD&E Study
From South of SR 408 to SR 50 (MP 263 to 273)
Orange County, Florida
FPID No: 444007-1-22-01

Dear Ms. Lotane:

At the request of the Florida Turnpike Enterprise (FTE), and in association with RS&H, Janus Research conducted a cultural resource assessment survey (CRAS) for the Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from south of SR 408 to SR 50 (Milepost [MP] 263 to 273) in Orange County, Florida (Financial Project ID (FPID) No. 444007-1-22-01). The purpose of this survey was to locate, identify, and bound any previously recorded or unrecorded cultural resources within the project area of potential effect (APE) and to assess these resources in terms of their eligibility for listing in the *National Register of Historic Places* (National Register) according to the criteria set forth in 36 CFR Section 60.4.

This assessment complies with the revised Chapter 267, *Florida Statutes (F.S.)*; and the standards embodied in the Florida Division of Historical Resources (FDHR's) *Cultural Resource Management Standards and Operational Manual* (February 2003), and Chapter 1A-46 (*Archaeological and Historical Report Standards and Guidelines*), *Florida Administrative Code*. In addition, this report was prepared in conformity with standards set forth in Part 2, Chapter 8 (*Archaeological and Historical Resources*) of the Florida Department of Transportation (FDOT) *PD&E Manual* (effective July 1, 2020). All work also conforms to professional guidelines set forth in the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716, as amended and annotated). Principal Investigators also meet the *Secretary of the Interior's Professional Qualification Standards* (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture.

The archaeological APE consisted of the footprint of the existing and proposed ROW that contains proposed improvements, as well as the footprint of improvements in the few areas where they are proposed outside of existing or proposed ROW. The historic resources APE consisted of the footprint of all existing and

proposed ROW, as well as adjacent parcels or properties for up to 200 feet from the existing and proposed ROW. In areas where ramps are proposed, areas where additional newly elevated improvements are proposed, and areas where existing elevated facilities will be widened, the historic resources APE expanded out 250 feet from the edge of the footprint of these improvement types.

Large portions of the project APE established for the current CRAS located along the Florida's Turnpike, Western Beltway (SR 429), and SR 50 fall within areas previously surveyed for cultural resources during the following previous survey efforts:

- Cultural Resource Assessment Survey of Florida's Turnpike Mainline PD&E Study From US 192 to SR 50 (Clermont), Orange and Osceola Counties (Florida Master Site File [FMSF] Manuscript No. 9230; Janus Research 2003a) (FPID No. 411488-1-22-01)
- Cultural Resource Assessment Survey, Western Beltway - Part A, Project Development and Environment Study from SR 50/Florida's Turnpike to US 441 (SR 500) (FMSF Manuscript No. 4762; Janus Research 1995)
- Final Report Cultural Resource Assessment Survey State Road 50 PD&E Study Lake and Orange Counties, Florida (FMSF Manuscript No. 7056; Archaeological Consultants, Inc. [ACI] 2001) (FPID Nos. 238429-1-22-01, 238429-2-22-01, and 239535-1-22-01)

Due to the level of previous survey work that occurred during the three aforementioned survey efforts, as well as the previous coordination of those survey efforts with the FDHR/State Historic Preservation Officer (SHPO), archaeological fieldwork for the current survey focused primarily on areas of the archaeological APE that had not been previously subjected to archaeological survey. Historic resources survey efforts focused on the entire project APE due to the potential for resources to have become newly historic since the previous survey work occurred.

No archaeological sites or archaeological occurrences were newly identified within the archaeological APE as a result of the current survey effort. The pedestrian survey confirmed that the four archaeological sites previously recorded within the archaeological APE (8OR4888, 8OR4345, 8OR4346, and 8OR9605) are within areas of existing right-of-way (ROW) that have been previously disturbed by construction associated with the Florida's Turnpike and the Western Beltway (SR 429). In addition, three of these four sites would be considered archaeological occurrences today due to the scarcity of cultural material, and each of these four sites has been previously determined to be National Register–ineligible by the SHPO. Underground utilities prevented subsurface testing within the portion of the archaeological APE located to the north of nearby site 8OR10659 during the current survey and the initial 2003 Janus Research CRAS of the Florida's Turnpike. The pedestrian surveys conducted in 2003 and 2021 identified no cultural material within the ROW at this location.

Background research, the pedestrian survey, and extensive subsurface testing conducted during the current and previous surveys determined that large portions of the archaeological APE have been subjected to previous episodes of land modification associated with the construction of the Florida's Turnpike, SR 50, the Western Beltway (SR 429), the East-West Expressway (SR 408), numerous smaller roads, and various related interchanges. The project corridor has also been disturbed by the installation of underground utilities, numerous retention ponds, and former agricultural uses.

While subsurface testing was not feasible within much of the APE due to hardscape, underground utilities, drainage ditches, excavated ponds, and standing water, 26 shovel tests were excavated within the archaeological APE where feasible. No cultural material was identified as a result of the subsurface testing or pedestrian survey. Therefore, the results of the current survey, as well as past testing conducted

within the current APE during the previous related survey efforts, indicated a low potential for encountering intact archaeological deposits or significant archaeological sites within the archaeological APE.

The historic resources survey resulted in the identification of 40 historic resources within the historic resources APE. Of the 40 identified historic resources, 19 are previously recorded and 21 are newly recorded. The 19 previously recorded historic resources consist of 13 buildings (8OR4314, 8OR4317-8OR4319, 8OR5930, 8OR6325-8OR6326, 8OR6337-8OR6338, 8OR6412, 8OR6436, 8OR6664, and 8OR11000), three cemeteries (8OR8120, 8OR9567, and 8OR8123), two resource groups (8OR6324 and 8OR10740), and one bridge (8OR11006). The 21 newly recorded historic resources consist of 19 buildings (8OR11767-8OR11785), one bridge (8OR11786), and one resource group (8OR11787). Additionally, the field survey revealed that 22 previously recorded historic resources have been demolished within the historic resources APE:

- 321 Windermere Road (8OR4285)
- 102 Marshall Farms Road (8OR4294)
- 2051 East SR 50 (8OR4295)
- 1429 Marshall Farms Road (8OR4296)
- 1389 Marshall Farms Road (8OR4297)
- 1231 Marshall Farms Road (8OR4299)
- 12423 Marshall Farms Road (8OR4315)
- Box Culvert #1 (8OR4316)
- Box Culvert #2 (8OR4321)
- Box Culvert #3 (8OR4322)
- 1720 McGuire Road (1720 Maguire Road) (8OR4323)
- Dann Family Cemetery (8OR4347)
- 15460 W Colonial Drive (8OR5998)
- 550 SR 545 (8OR6323)
- 1530 Buelah Road (8OR6408)
- 12228 Marshall Farms Road (8OR6409)
- 301 Avalon Road (8OR6458)
- 1668 Marshall Farms Road (8OR6576)
- 11700 Jernigan Court (8OR9563)
- 11770 Jernigan Court (8OR9564)
- SCL Railroad (8OR10661)
- FDOT Bridge No. 750047 (8OR10997)

One previously recorded historic resource, the West Orange Country Club Arch (8OR6324), has been determined eligible for listing in the National Register. Five previously recorded historic resources are considered National Register-eligible as a result of the current study: the Old Killarney Post Office (8OR6337), the Gotha Community Center (8OR6664), the Oakland Cemetery on SR 50 (8OR8120), the Gotha Cemetery (8OR8123), and the Old African American Oakland Cemetery (8OR9567). The 13 remaining previously recorded resources have been determined or are considered ineligible for listing in the National Register due to their common architecture and design types, lack of known historical associations, or observed alterations or additions. While two of these resources (8OR6325 and 8OR6326) are considered individually ineligible for listing in the National Register, they are considered contributing resources to the newly identified Possum Hollow Historic District (8OR11787).

Of the 21 newly identified historic resource, only the proposed Possum Hollow Historic District (8OR11787) is considered National Register-eligible. Two newly identified historic resources, 8OR11779 and 8OR11780, are considered to be individually National Register-ineligible, but they are contributing to the proposed Possum Hollow Historic District (8OR11787). The 18 remaining newly identified historic resources exhibit common architecture and design types found throughout Central Florida, lack known associations with significant people or events, or exhibit modifications that affect their historic physical integrity. Therefore, these 20 newly recorded historic resources are considered individually ineligible for listing in the National Register.

Four additional parcels that may contain unrecorded historic resources were either set back from the ROW or obscured by vegetation and inaccessible to the survey crew. While Orange County Property Appraiser GIS data identified the parcels as containing a historic building within the historic resources APE, the buildings were not visible and therefore could not be documented or evaluated for National Register eligibility at this time. These parcels are located at 15668 W Colonial Drive, 12405 Stagg Road, 1751 Hempel Avenue, and 9975 8th Street.

The CRAS Report is provided for your review and comment. If you have any questions or need assistance, please contact me at 407.264.3301 or via email at Philip.Stein@dot.state.fl.us. Thank you for your continued assistance on FTE projects.

Philip Stein
Environmental Administrator
Florida's Turnpike Enterprise

CC: Nathan Silva, RS&H
Kathleen S. Hoffman, Janus Research

The Florida State Historic Preservation Officer (SHPO) finds the attached Cultural Resources Assessment Survey Report complete and sufficient and ✓ concurs/ _____ does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 2022-1992-C. Or, the SHPO finds the attached document contains _____ insufficient information.

SHPO Comments:

_____
_____
_____
_____
_____

Kelly L. Chase, DSHPO

Digitally signed by Kelly L. Chase, DSHPO
DN: cn=Kelly L. Chase, DSHPO, o, ou, email=kelly.chase@dos.myflorida.com, c=US
Date: 2022.10.13 12:34:43 -04'00'

Alissa S. Lotane, Director
Division of Historical Resources
& State Historic Preservation Officer

10.13.2022
Date

Natural Resources Appendix

Contents:

SJRWMD Meeting Notes

USFWS and FWS Technical Assistance Meeting Notes

Proposed Pond Sites

Florida Department of Transportation

RON DESANTIS
GOVERNOR

Florida's Turnpike Enterprise
P.O. Box 613069, Ocoee, FL 34761
407-532-3999

KEVIN J. THIBAULT, P.E.
SECRETARY

FDOT, Florida's Turnpike Enterprise/SJRWMD Pre-Application Meeting Notes
FPID No. 444007-1-22-01- Turnpike Widening from South of SR 408 to SR 50 PD&E
Orange County
SJRWMD Compliance Item # 1424958

Date: Wednesday, June 30, 2021 via WebEx
Attendees:

Tracy Miller, SJRWMD
Lee Kissick, SJRWMD
Sandy Joiner, SJRWMD
Annemarie Hammond, FTE
Erin Yao, FTE
Rax Jung, FTE
Henry Pinzon, FTE
Tiffany Crosby, Atkins/FTE
Adriana Kirwan, HNTB/FTE
Chris Daily, RS&H
James Fike, RS&H
Nathan Silva, RS&H
Jeff Glenn, RS&H
Lauren Rhodes, RS&H
Jen Rehrl, PGA
Tim Polk, PGA

Introduction

Florida's Turnpike Enterprise (FTE) has contracted with RS&H to develop a project development and engineering (PD&E) study for the widening of the Turnpike from south of SR 408 to SR 50 in Orange County, Florida. The St. Johns River Water Management District (SJRWMD) pre-application meeting is necessary per FTE Scope requirements for confirming the stormwater management design approach and determining the permitting requirements specific to the project.

These meeting minutes reflect pertinent discussions that took place during the meeting and will serve as a guide for developing design decisions.

Overview & Schedule

FTE briefly introduced the project. RS&H proceeded to describe the project's roadway improvements, drainage limits and project schedule.

- It is anticipated that a preferred alternative will be presented to the public in early 2022 with the PD&E study wrapping up in the spring of that same year. Although this project is not currently funded for design or construction, FTE considers it a priority project.

- FTE is proposing to widen the Turnpike for approximately 10 miles from the Turkey Lake Service Plaza to just west of the SR 50 interchange. In the existing condition, the Turnpike is 4 lanes in each direction east of SR 408 and west of SR 429 while the area between SR 408 and SR 429 currently has 6-lanes in each direction. In the proposed condition, it is anticipated that the area east of SR 408 will be widened so there are 6-lanes in each direction, while the area west of the SR 429 interchange will be widened such that there are 5-lanes in each

direction. In addition to these improvements, it is anticipated that a barrier separated collector distributor system will be installed between the SR 408 and SR 429 interchanges which will include a total of 9-lanes in each direction.

- The project traverses both the SJRWMD and the South Florida Water Management District (SFWMD). The boundary between these two water management districts is in the vicinity of Lake Olivia, with SJRWMD located to the west of Lake Olivia and SFWMD located to the east of Lake Olivia. Since most of the project is located within the SJRWMD, FTE would like to permit the entire project through the SJRWMD. It was noted that an interagency agreement would be required between SJRWMD and SFWMD to permit the entire project through one water management district. The portion of the project located within the SFWMD would also need to follow the more stringent of the SFWMD and SJRWMD criteria. SJRWMD indicated that it was likely that the entire project could be permitted through the SJRWMD, however, more design details were needed to confirm this.

Proposed Drainage Design

- RS&H indicated that most of the project will traverse closed basins with the only open basin located at the western extents of the project which will drain to Lake Apopka. RS&H noted that there was some ambiguity in the information found regarding the Johns Lake Basin as some of the literature seemed to indicate that it is an open basin while other information researched indicated that the Johns Lake Basin is a closed basin. SJRWMD noted that since Johns Lake discharges for the 10-year storm they consider it an open basin.

- The SJRWMD Special Basins were discussed. RS&H noted the following special basins within the project limits: Lake Apopka Hydrologic Basin, Ocklawaha River Hydrologic Basin, Wekiva River Hydrologic Basin, and the Wekiva Recharge Protection Basin. SJRWMD noted that this list was inclusive of all the special basins within the project corridor.

- RS&H noted that there were no WBID'S on the verified list impaired for nutrients. There are, however, basin management action plans (BMAP's) established within the corridor for the Implementation of Total Maximum Daily Loads for Total Phosphorus and Total Nitrogen by the Florida Department of Environmental Protection.

- The floodplains that traverse the project were discussed. It is anticipated that volumetric compensation will be provided for all floodplain impacts.

- RS&H noted that the approach for providing water quality will be consistent with the methodologies followed on previous FTE projects. Treatment will be provided for all additional impervious area and any previously permitted areas that are impacted as a result of project improvements. Where applicable, special basin criteria will also be met.

- Attenuation criteria was discussed. In areas where the project traverses closed basins the more stringent criteria required for closed basins will be met. All other locations will meet the criteria associated with open basins in the absence of any special basin criteria.

Environmental

- RS&H staff noted that a Natural Resources Evaluation will be produced during the PD&E.

- RS&H staff noted that there are multiple private wetland mitigation banks located within the basins to accommodate wetland impacts.

- SJRWMD staff noted that there are three Conservation Easements adjacent to the project area- in the area of Lake Pearl, in the northeast quadrant of the SR 408 Interchange and northwest corner of 429 interchange. SJRWMD staff also noted that it is possible to apply for a release from these easements during the permitting phase. Generally, additional mitigation would be required.

- SJRWMD staff noted two eagle nests located adjacent to the Turnpike. Following the meeting, RS&H staff identified three documented nests adjacent to the Turnpike (OR018, OR039 and OR052).

- FTE staff asked if SJRWMD staff saw any fatal flaws with the environmental permitting. SJRWMD staff noted no fatal flaws.

Environmental Look Around

- Potential joint use ponds and regional ponds were discussed. SJRWMD was not aware of any joint use ponds or regional ponds within the vicinity of the project.

Meeting Notes
FDOT, Florida's Turnpike Enterprise – USFWS and FFWCC Technical Assistance
FPID 444007-1-22-01, Turnpike (SR 91) Widening from S of SR 408 to SR 50 (MP 263 to 273)
Orange County

Meeting Date: April 21, 2022
Time: 1:00 PM
Meeting Location: Teams

1) Introduction of Attendees:

- Turnpike Project Manager – Jazlyn Heywood, P.E. (Jazlyn.Heywood@dot.state.fl.us)
- Turnpike Permit Coordinator – Annemarie Hammond (Annemarie.Hammond@dot.state.fl.us)
- Turnpike Permit Coordinator (Atkins) – Tiffany Crosby (Tiffany.Crosby@dot.state.fl.us)
- USFWS Staff – Zakia Williams (Zakia_Williams@fws.gov)
- FWC Staff – Sean Greene (Sean.Greene@MyFWC.com)
- RS&H Senior Environmental Scientist – Chris Dailey (Chris.Dailey@rsandh.com)
- Scalar Senior Environmental Scientist – Kristin Caruso (KCaruso@scalarinc.net)

- In addition to the meeting notes provided here, meeting attendees viewed a PowerPoint presentation. The presentation slides are included at the end of these meeting notes.

2) Project Description

- Following Introductions, Mr. Dailey provided a summary of the project overview.
  - Project is approximately 10 miles, surrounding area consists of urban, agricultural, extractive, and rural land cover. Existing R/W mostly devoid of natural habitat. Adjacent natural lands consist of pine flatwoods, xeric oak, upland forest, and forested, shrub, and marsh wetlands.
  - Florida's Turnpike currently has 8 to 12 lanes (4 travel lanes and up to 2 auxiliary lanes in each direction) within the study limits. This PD&E Study is evaluating widening to 10, 12 or more lanes while also considering milling and resurfacing, bridge construction, and interchange improvements. Interchanges with proposed improvements or modifications on Florida's Turnpike include SR 408, SR 429, SR 50 (Ocoee / Winter Garden), and SR 50 (Clermont / Oakland).
  - ETDM #14378 – Advanced Notification Package published on March 15, 2019

3) Listed Species Discussion:

a) Eastern Indigo Snake (EIS)

- No observations within the project area and no documented occurrences within 1 mile
- Estimated less than 25 acres of xeric habitat will be impacted.
- Determination based on key "A>B>C>D>E **MANLAA**"
- USFWS ETDM comment indicated low probability of EIS in corridor
- Mr. Greene noted that the nearest documented occurrence of the Eastern indigo snake is approximately 1 mile outside of the project area.

b) Sand Skink

- No observations within the project area and no documented occurrences within 5 miles
- Mr. Dailey noted that there are four locations of potential habitat along corridor (outside existing R/W) shown in brown hatching on the attached exhibits.
- It was noted that surveys for skinks following the survey protocol would be conducted during the Design phase if these parcels are proposed for impact, with USFWS technical assistance
- **MANLAA** currently anticipated based on desk-top data
- USFWS ETDM comment indicated low probability of skinks in corridor
- Potential mitigation could be provided by Conservation Bank credit purchase
- Ms. Williams provided informal concurrence with the approach to conduct sand skink surveys during the design phase.

c) Florida scrub-jay

- Ms. Caruso noted that there were observations within the project area and no documented occurrences within 7 miles.
- Ms. Caruso noted that three locations of suboptimal habitat along corridor (outside existing R/W) were informally surveyed during field reviews. No scrub-jays were observed.
- **MANLAA** anticipated with no design-phase species-specific surveys proposed
- USFWS ETDM comment indicated no suitable habitat in corridor
- Ms. Williams provided informal concurrence that this project is not likely to adversely affect the Florida scrub-jay, and it is unlikely that surveys will be required during the design phase.

d) Wood stork

- Project includes up to 36 acres of suitable foraging habitat within the project area
- One (1) observation within the project area
- Located within the 15-mile core foraging area (CFA) of three (3) nesting colonies
  - Lake Lawne
  - Gatorland
  - Eagle Nest Park
- Foraging analysis to determine biomass loss and mitigation reservation to occur via ERP during Design
- Determination based on key "A>B>C>D>E **MANLAA**"
- Ms. Williams noted that she informally concurred with the MANLAA recommendation for the wood stork.

e) Snail Kite

- Project includes minimal suitable habitat within the project area
- No observations within the project area and no documented occurrences within 17 miles
- **MANLAA** anticipated with no design-phase species-specific surveys proposed

f) Listed Plants

- Ms. Caruso noted that there are 15 listed plant species with potential to occur based on historic records and remnant habitats
- Surveys were conducted during flowering season where possible to maximize identification
- Florida bonamia- last recorded in area 1987
- **No effect** anticipated
- Ms. Crosby noted that the Turnpike to coordinate with Florida Department of Agriculture and Consumer Services (FDCAS) or NGO's regarding the potential relocation of any listed plants during the design phase.

g) Bald Eagle Coordination

- A map showing 4 nests observed within 660 feet of proposed alignments was provided:
  - OR110- last known active 2021
  - OR018- last known active 2020
  - OR052- last known active 2020
  - OR039- last known active 2021
- The project will include updated surveys during the Design phase and USFWS coordination at that time for any impacts that cannot be addressed with avoidance and minimization measures
- Ms. Williams recommended coordinating with Ulgonda Kirkpatrick (USFWS) (Ulgonda_Kirkpatrick@fws.gov, 321-972-9089) during the design phase regarding bald eagle nests.

h) State listed species- all no adverse effect anticipated

- Gopher tortoise- identified, suboptimal habitat, surveys and permitting during Design
- Short-tailed snake- none found, suboptimal habitat
- Florida pine snake- none found, suitable habitat adjacent to corridor
- Florida burrowing owl- none found during field reviews, no optimal habitat
- Southeastern American kestrel- none found during field reviews, no optimal habitat
- Florida sandhill crane- no nests found, potential nesting and foraging adjacent to corridor
- Wading birds- wetland mitigation expected to offset habitat impacts
- Several potential state-listed plants with nodding pinweed most likely to occur based on historic records and remnant habitats- last recorded in area 2007. None found.

4) Anticipated Permits

- Section 404 Dredge and Fill Permit (FDEP Assumed Waters)
- Environmental Resource Permit (ERP – SJRWMD)
- National Pollutant Discharge Elimination System (NPDES – FDEP)
- Gopher Tortoise Relocation Permit (as necessary) (FFWCC)
- Incidental Take Permit (as necessary – FFWCC)
- Incidental Take Permit (as necessary – USFWS)

5) Wildlife Crossings

- None proposed; corridor not identified as warranting a crossing

6) Roundtable/Questions/Comments

- Mr. Greene noted that, as a condition of the 404 permit, the following will be required:
  - Gopher tortoise surveys
  - Sandhill crane nest survey
  - Wood stork foraging habitat mitigation

Meeting concluded at 1:40 pm

Attachment: Presentation Slides

Florida Department of TRANSPORTATION

Turnpike (SR 91) Widening

Project Development and Environment (PD&E) Study

from South of SR 408 to SR 50 (MP 263 to 273)
Orange County
Project Number: 444007-1

Thursday, April 21, 2022

Technical Assistance Meeting Agenda

1. Introductions
2. Project Overview
3. Listed Species
4. Discussion

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)

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Study Limits

- Florida's Turnpike (SR 91) from south of SR 408 to SR 50 (Clermont/Oakland)
  - Mile Post 263 to 273 (Approximately 10 miles)
- SR 408 from SR 91 to Old Winter Garden Road
  - Approximately 1 mile

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
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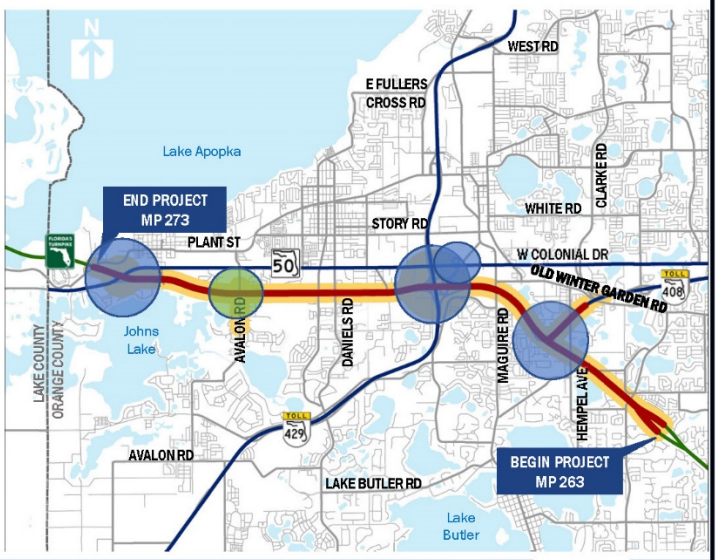
Study Scope

Includes the evaluation of:

- Existing and future (2045) traffic conditions
- Modifications to existing interchanges
  - SR 408
  - SR 50 (Ocoee/Winter Garden)
  - SR 429
  - SR 50 (Clermont/Oakland)
- Potential new local access interchange evaluated but later eliminated – Avalon Road



FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT 3

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Protected Species and Habitat

- Federally Listed Species

Species	Common Name	USFWS Status	Habitat Proximity	Potential for Occurrence	Comments
			Birds		
Aphelocoma coerulescens	Florida scrub-jay	T	Near R/W	Low	Potential habitat limited. Historical occurrence south of project limits.
Rostrhamus sociabilis	Snail kite	E	Near R/W	Low	Habitat preferences are edges of large lakes; low likelihood within corridor.
Mycteria americana	Wood stork	T	Within R/W	High	Suitable foraging habitat consists of shallow inundated areas.
			Reptiles		
Neoseps reynoldsi	Sand skink	T	Within R/W	Low	Potential habitat limited to four areas with appropriate soils/elevation.
Drymarchon couperi	Eastern indigo snake	T	Within R/W	Low	Could occur in most undeveloped areas; correlation with gopher tortoise burrows.

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
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Protected Species and Habitat

- Federally Listed Species (continued)

Plants					
Bonamia grandiflora	Florida bonamia	E	Within R/W	Low	Historical occurrence in general region of FTE service plaza. Limited, sub-optimal habitat.
Chionanthus pygmaeus	Pygmy fringe tree	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Clitoria fragrans	Scrub pigeon-wing	T	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Conradina brevifolia	Short-leaved rosemary	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Deeringothamnus pulchellus	Beautiful pawpaw	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Eriogonum longifolium var. *gnaphalifolium*	Scrub buckwheat	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Liatris ohlingerae	Florida blazing star	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Lupinus aridorum	Scrub lupine	E	Within R/W	Low	Historical occurrence at SR 408 interchange (**Appendix D**) and general region of FTE service plaza. Limited, sub-optimal habitat.
Nolina brittoniana	Britton's beargrass	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Paronychia chartacea ssp. *chartacea*	Paper-like nailwort	T	Within R/W	Low	Historical occurrence south of project limits. Limited, sub-optimal habitat.
Polygala lewtonii	Lewton's polygala	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Polygonella myriophylla	Small's jointweed	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Prunus geniculata	Scrub plum	E	Within R/W	Low	Historical occurrence south of project limits. Limited, sub-optimal habitat.
Warea amplexifolia	Clasping warea	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.
Warea carteri	Carter's warea	E	Within R/W	Low	None observed. Limited, sub-optimal habitat.

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Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
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Protected Species and Habitat – Species Keys

- Eastern indigo snake
  - FTE will implement the Standard Protection Measures for the Eastern Indigo Snake during construction
  - Determination of Effect Key: (A>B>C>D>E) "MANLAA"
- Wood stork
  - SFH analysis will be prepared during design and permitting
  - Wetland mitigation, as credit purchase from a USFWS-approved mitigation bank, will offset impacts within the CFA of one or more of the affected colonies.
  - Determination of Effect Key: (A>B>C>D>E) "MANLAA"

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Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
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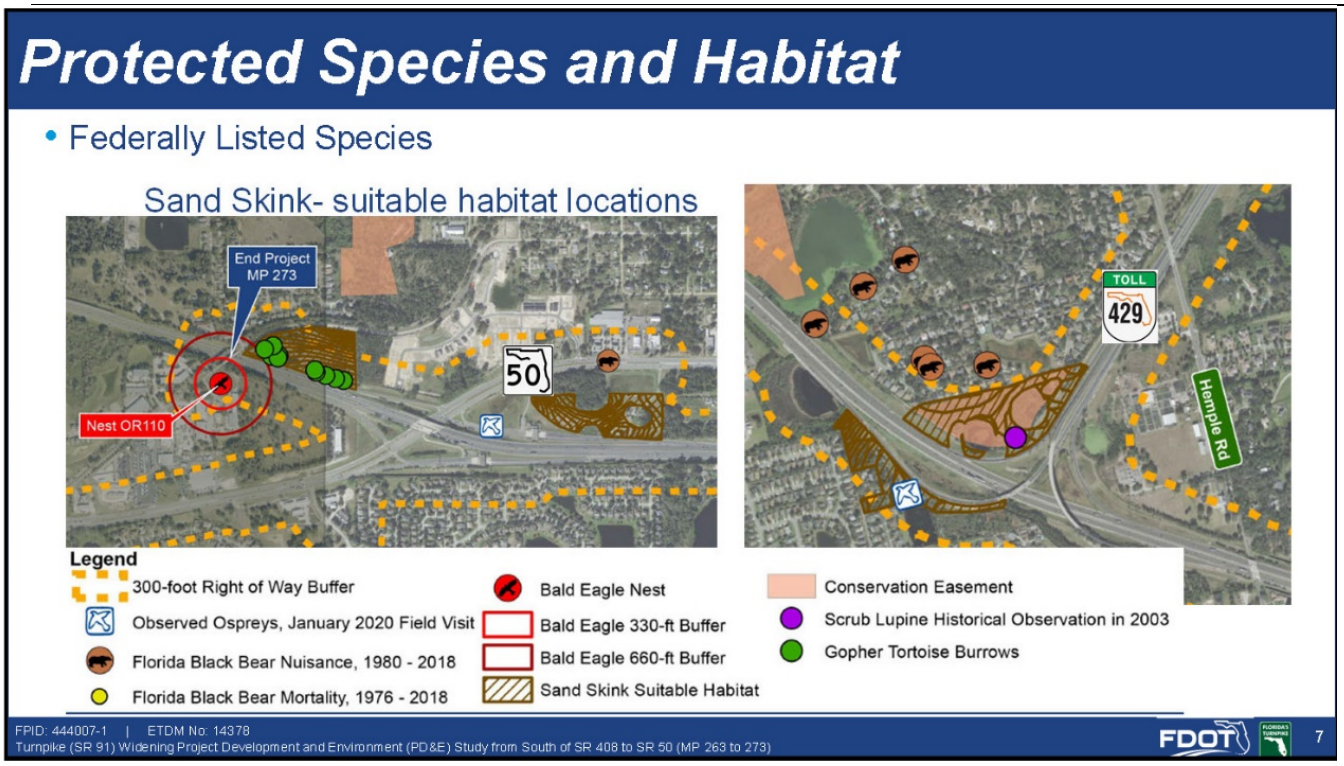
Protected Species and Habitat
• Federally Listed Species
Sand Skink- suitable habitat locations
End Project MP 273
Nest OR110
50
TOLL
429
Hemple Rd
Legend
300-foot Right of Way Buffer
Observed Ospreys, January 2020 Field Visit
Florida Black Bear Nuisance, 1980 - 2018
Florida Black Bear Mortality, 1976 - 2018
Bald Eagle Nest
Bald Eagle 330-ft Buffer
Bald Eagle 660-ft Buffer
Sand Skink Suitable Habitat
Conservation Easement
Scrub Lupine Historical Observation in 2003
Gopher Tortoise Burrows
FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
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Protected Species and Habitat
• Bald Eagle Nests
Killarney
50
OR110
OR018
OR052
OR039
Avalon Rd
Daniels Rd
Beard Rd
Beulah Rd
439
408
Old Winter Garden Rd
Johns Lake
Black Lake
Roberson Rd
Gotha
Gotha Rd
Steer Lake Rd
Maguire Rd
Florida's Tpke
Harlem Heights
Williams Rd
Lake Avalon
Windermere
Country Club
Lake Crescent
24 ft
160 ft
190 ft
FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT
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Protected Species and Habitat- Summary

- Proposed Determinations for Federally Listed Species
- The project "may affect, but is not likely to adversely affect" the following federally listed species:
  - Sand skink
  - Florida scrub-jay
  - Eastern indigo snake
  - Snail kite
  - Wood stork
- The project will have "no effect" on:
  - Federally listed plants

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
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Protected Species and Habitat

- State-Listed Species

Species	Common Name	FWC Status	Habitat Proximity	Potential for Occurrence	Comments
Birds					
Athene cunicularia floridana	Florida burrowing owl	T	Within R/W	Moderate	No known presence nearby but could occur in open upland areas.
Egretta caerulea	Little Blue Heron	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Egretta tricolor	Tricolored Heron	T	Within R/W	Moderate	Prefers wetlands/surface waters.
Falco sparverius paulus	Southeastern American kestrel	T	Within R/W	Moderate	Several disturbed uplands and open areas present that could provide habitat.
Grus canadensis pratensis	Florida sandhill crane	T	Within R/W	Moderate	Foraging habitat varies among many habitat types; prefers sparse canopy or open land.
Reptiles					
*Gopherus polyphemus**	Gopher tortoise	T	Within R/W	High	Burrows observed within and adjacent to R/W.
Lampropeltis extenuata	Short-tailed snake	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411 and 421.
Pituophis melanoleucus mugitus	Florida pine snake	T	Within R/W	Low	Prefers pine-dominated uplands (such as FLUCFCS codes 411 and 441)
Platalea ajaja	Roseate Spoonbill	T	Within R/W	Moderate	Prefers wetlands/surface waters.

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT 10

10

Protected Species and Habitat

- State-Listed Species (plants)

Plants					
Agrimonia incisa	Incised groove-bur	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Arnoglossum diversifolium	Variable-leaved Indian-plantain	T	Within R/W	Low	Potential habitat includes sandhill.
Calamintha ashei	Ashe's savory	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Calopogon multiflorus	Many-flowered grass-pink	E	Within R/W	Moderate	Potential habitat includes wetlands.
Carex chapmanii	Chapman's sedge	T	Within R/W	Moderate	Potential habitat includes wetlands.
Centrosema arenicola	Sand butterfly pea	E	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Coelorachis tuberculosa	Piedmont jointgrass	T	Within R/W	Moderate	Potential habitat includes wetlands.
Hartwrightia floridana	Hartwrightia	T	Within R/W	Moderate	Potential habitat includes wetlands.
Illicium parviflorum	Star anise	E	Within R/W	Moderate	Potential habitat includes wetlands.
Lechea cernua	Nodding pinweed	T	Within R/W	Low	Historical occurrence south of project limits. Potential habitat limited to FLUCFCS codes 411, 421, and xeric disturbed land.
Litsea aestivalis	Pondspice	E	Within R/W	Moderate	Potential habitat includes wetlands.
Matelea flordana	Florida spiny-pod	E	Within R/W	Low	Potential habitat includes uplands.
Nemastylis floridana	Celestial lily	E	Within R/W	Moderate	Potential habitat includes wetlands.
Nolina atopocarpa	Florida beargrass	T	Within R/W	Low	Potential habitat includes uplands.
Panicum abscissum	Cutthroat grass	E	Within R/W	Moderate	Potential habitat includes wetlands.
Pteroglossaspis ecristata	Giant orchid	T	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.
Salix floridana	Florida willow	E	Within R/W	Moderate	Potential habitat includes wetlands.
Schizachyrium niveum	Scrub bluestem	E	Within R/W	Low	Potential habitat limited to FLUCFCS codes 411, 421, & xeric disturbed land.

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT 11

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Protected Species and Habitat

- Proposed Determinations for State Listed Species
- The project will have "no adverse effect anticipated" on the following state listed species:
  - Florida burrowing owl;
  - Southeastern American kestrel;
  - Gopher tortoise;
  - Wading birds including little blue heron, tricolored heron, and roseate spoonbill;
  - Florida sandhill crane;
  - Short-tailed snake;
  - Florida pine snake;
  - Many-flowered grass-pink;
  - Chapman's sedge;
  - Piedmont jointgrass;
  - Hartwrightia;
  - Star anise;
  - Pondspice;
  - Celestial lily;
  - Cutthroat grass; and
  - Florida willow.

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Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT 12

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Schedule

Project Milestones	2019		2020				2021				2022		
	July - September	October - December	January - March	April - June	July - September	October - December	January - March	April - June	July - September	October - December	January - March	April - June	July - September
Begin Study	◆												
Data Collection	▬	▬	▬	▬									
Public Input			▬	▬	▬	▬	▬	▬	▬	▬	▬	▬	▬
Public Kickoff Open House			◆										
Alternatives Analysis			▬	▬	▬	▬	▬	▬	▬	▬			
Alternatives Public Information Meeting										◆			
Alternatives Refinement and Documentation										▬	▬		
Public Hearing													◆
Finalize Documents												▬	▬
State Environmental Impact Report (SEIR) Approved – Study Completed													◆

Tentative – Subject to Change

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT 13

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Project Contacts

Contact Information

Jazlyn Heywood, P.E.
Project Manager
Florida's Turnpike Enterprise (Atkins)

P.O. Box 613069
Ocoee, Florida 34761-3069
Phone: 407-264-3298
Email: Jazlyn.Heywood@dot.state.fl.us

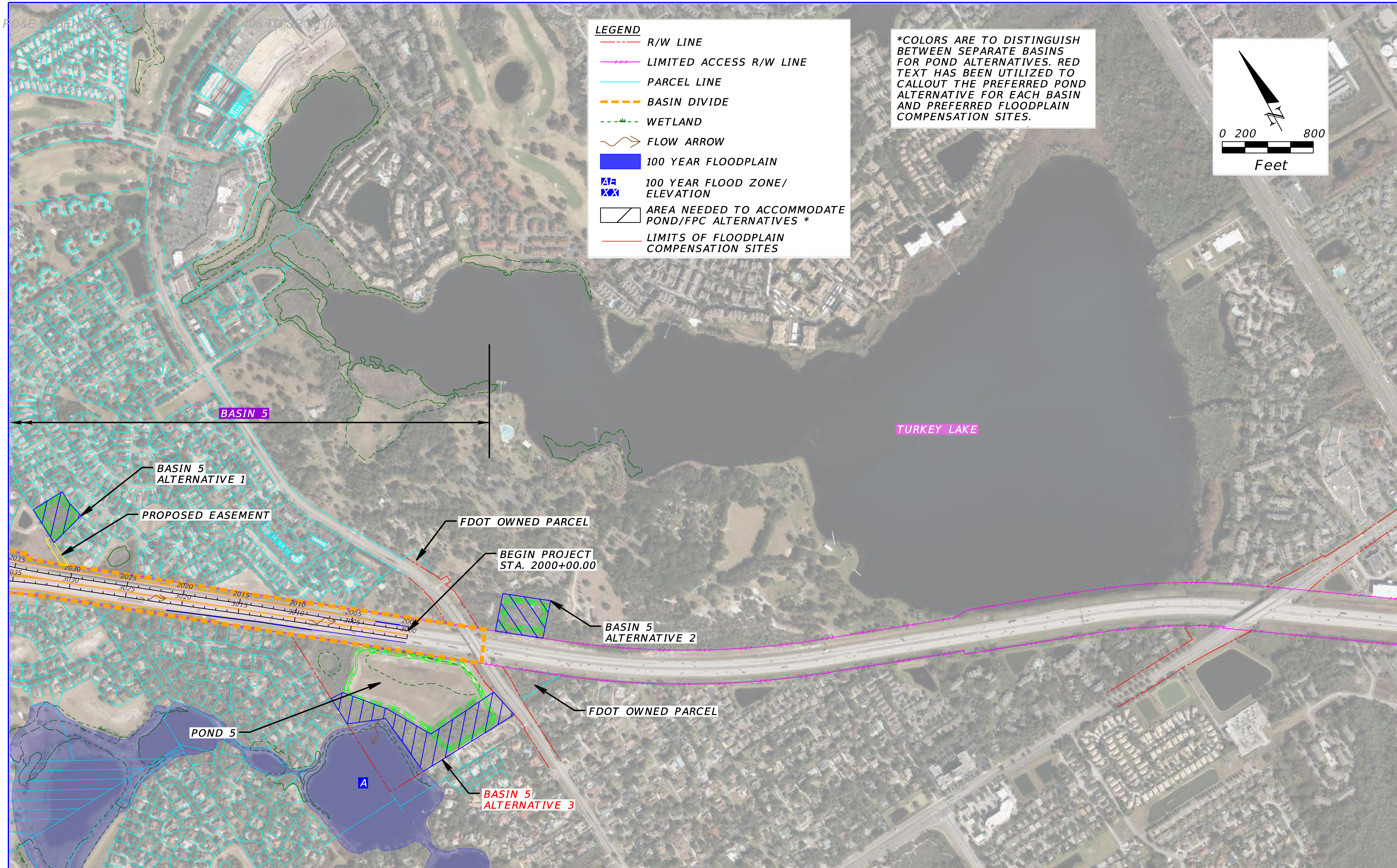
Rax Jung, P.E., Ph.D.
Project Development Engineer
Florida's Turnpike Enterprise

P.O. Box 613069
Ocoee, Florida 34761-3069
Phone: 407-264-3870
Email: Rax.Jung@dot.state.fl.us

Project Website: www.Turnpike408to50.com

FPID: 444007-1 | ETDM No: 14378
Turnpike (SR 91) Widening Project Development and Environment (PD&E) Study from South of SR 408 to SR 50 (MP 263 to 273)
FDOT 14

14



LEGEND
R/W LINE
LIMITED ACCESS R/W LINE
PARCEL LINE
BASIN DIVIDE
WETLAND
FLOW ARROW
100 YEAR FLOODPLAIN
100 YEAR FLOOD ZONE/ ELEVATION
AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES *
LIMITS OF FLOODPLAIN COMPENSATION SITES
*COLORS ARE TO DISTINGUISH BETWEEN SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVE FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITES.
N
0 200 800
Feet
BASIN 5
TURKEY LAKE
BASIN 5 ALTERNATIVE 1
PROPOSED EASEMENT
FDOT OWNED PARCEL
BEGIN PROJECT STA. 2000+00.00
BASIN 5 ALTERNATIVE 2
FDOT OWNED PARCEL
POND 5
A
BASIN 5 ALTERNATIVE 3

FLORIDA'S TURNPIKE	TURNPIKE (SR 91) WIDENING FROM SOUTH OF SR 408 TO SR 50	RS&H	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	SHEET NO.
			ROAD NO.: SR 91 — COUNTY: ORANGE — FINANCIAL PROJECT ID: 444007-1-22-01	PROPOSED BASIN MAP (1) — 1 OF 7

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*COLORS ARE TO DISTINGUISH BETWEEN SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVES FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITE.

LEGEND
- R/W LINE
- LIMITED ACCESS R/W LINE
- PARCEL LINE
- BASIN DIVIDE
- WETLAND
- FLOW ARROW
- 100 YEAR FLOODPLAIN
- AE XX — 100 YEAR FLOOD ZONE/ ELEVATION
- AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES*
- LIMITS OF FLOODPLAIN COMPENSATION SITES

N
0 200 800
Feet

LAKE STEER
APOPKA VINELAND RD.
LAKE NALLY
MORTON JONES RD.
GOTHA POND
GOTHA RD.
℄ SR 91 NB
MP 265 LAKE
MP 265
MP 264
BASIN 7&8 ALTERNATIVE 2
BASIN 6 ALTERNATIVE 1
FPC 3-A
FPC 3-B
NON-FTE R/W FOR CONVEYANCE
FPC 1-2B
LAKE OLIVIA
AE EL. 96.8
PROPOSED EASEMENT
NON-FTE R/W FOR CONVEYANCE
BASIN 6 ALTERNATIVE 2
BASIN 6 ALTERNATIVE 3
BASIN 5
BASINS 7 & 8
BASIN 6

FLORIDA'S TURNPIKE

TURNPIKE (SR 91) WIDENING FROM SOUTH OF SR 408 TO SR 50

RS&H

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 91	ORANGE	444007-1-22-01

PROPOSED BASIN MAP (2)

SHEET NO. 2 OF 7

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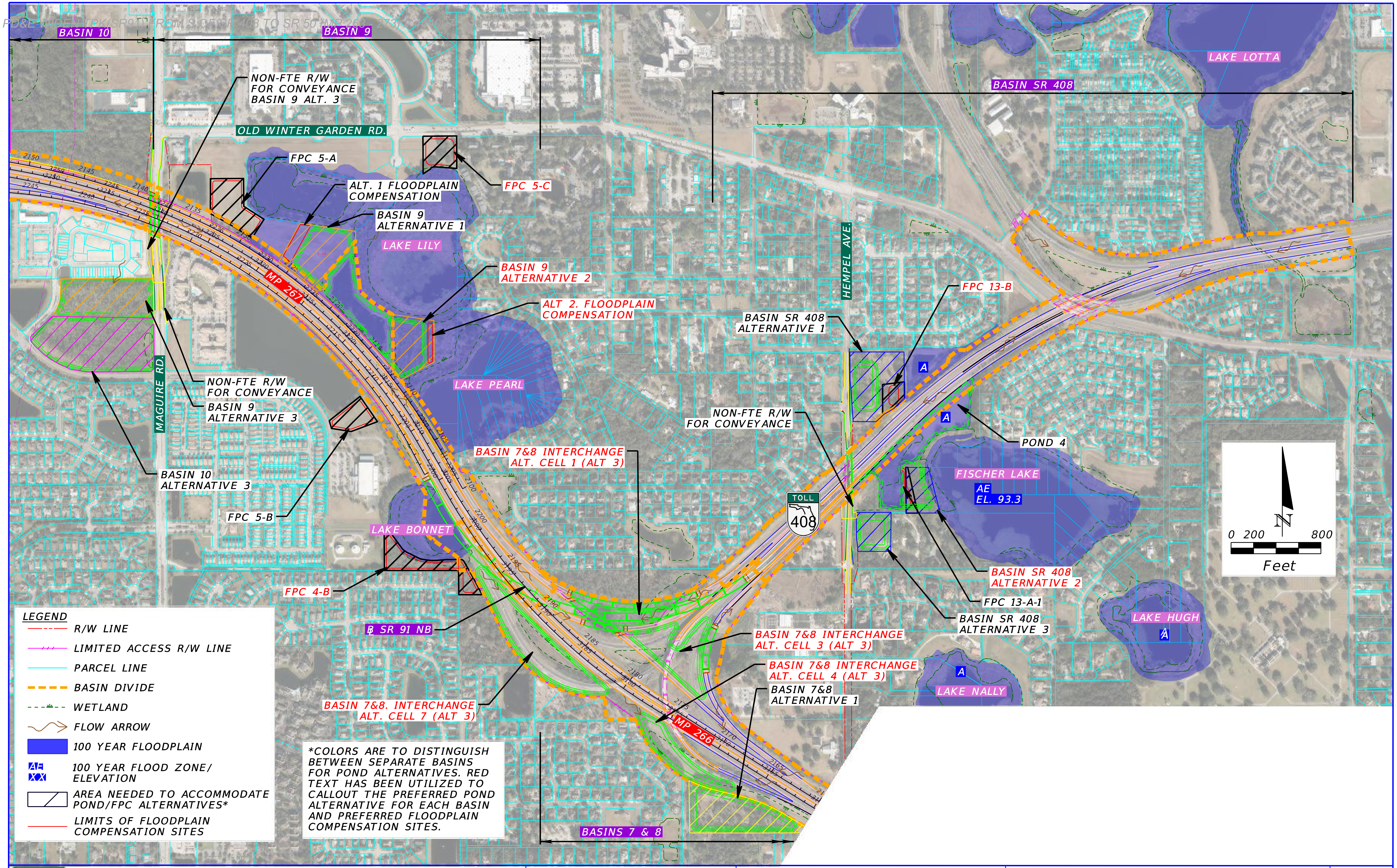
BASIN 10
BASIN 9
BASIN SR 408
LAKE LOTTA
NON-FTE R/W
FOR CONVEYANCE
BASIN 9 ALT. 3
OLD WINTER GARDEN RD.
FPC 5-A
FPC 5-C
ALT. 1 FLOODPLAIN
COMPENSATION
BASIN 9
ALTERNATIVE 1
LAKE LILY
BASIN 9
ALTERNATIVE 2
ALT 2. FLOODPLAIN
COMPENSATION
MP 267
HEMPEL AVE.
FPC 13-B
BASIN SR 408
ALTERNATIVE 1
LAKE PEARL
NON-FTE R/W
FOR CONVEYANCE
BASIN 9
ALTERNATIVE 3
MAGUIRE RD.
NON-FTE R/W
FOR CONVEYANCE
POND 4
BASIN 7&8 INTERCHANGE
ALT. CELL 1 (ALT 3)
FISCHER LAKE
AE
EL. 93.3
BASIN 10
ALTERNATIVE 3
TOLL
408
FPC 5-B
LAKE BONNET
0 200 800
Feet
N
BASIN SR 408
ALTERNATIVE 2
FPC 4-B
FPC 13-A-1
BASIN SR 408
ALTERNATIVE 3
SR 91 NB
LAKE HUGH
BASIN 7&8 INTERCHANGE
ALT. CELL 3 (ALT 3)
BASIN 7&8 INTERCHANGE
ALT. CELL 4 (ALT 3)
BASIN 7&8
ALTERNATIVE 1
LAKE NALLY
BASIN 7&8. INTERCHANGE
ALT. CELL 7 (ALT 3)
MP 266
LEGEND
R/W LINE
LIMITED ACCESS R/W LINE
PARCEL LINE
BASIN DIVIDE
WETLAND
FLOW ARROW
100 YEAR FLOODPLAIN
AE XX 100 YEAR FLOOD ZONE/ ELEVATION
AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES*
LIMITS OF FLOODPLAIN COMPENSATION SITES
*COLORS ARE TO DISTINGUISH BETWEEN SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVE FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITES.
BASINS 7 & 8

FLORIDA'S TURNPIKE

TURNPIKE (SR 91) WIDENING
FROM SOUTH OF SR 408 TO SR 50

RS&H

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 91	ORANGE	444007-1-22-01

PROPOSED BASIN MAP (3)

SHEET NO.
3 OF 7

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LEGEND
- R/W LINE
- LIMITED ACCESS R/W LINE
- PARCEL LINE
- BASIN DIVIDE
- WETLAND
- FLOW ARROW
- 100 YEAR FLOODPLAIN
- AE / XX — 100 YEAR FLOOD ZONE/ ELEVATION
- AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES **
- LIMITS OF FLOODPLAIN COMPENSATION SITES

*FOR CLARITY THE DIVIDE FOR BASIN 11 HAS BEEN SHOWN IN PURPLE.

**COLORS ARE TO DISTINGUISH SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVE FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITES.

MATCHLINE PROPOSED BASIN MAPS (7)

BASIN SR429N

POND TP-8

BASIN 12

BASIN 10

BASIN B

BASIN A

BASIN SR 429N ALTERNATIVE 1

POND TP-7

BASIN 11 ALT. CELL TP-4 EXPANSION (ALT 3)

FDOT OWNED PARCEL

BASIN 11 ALTERNATIVE 1

FDOT OWNED PARCEL

FDOT OWNED PARCEL

FPC 6-A

BASIN 10 INTERCHANGE ALT. CELL TP-8 (ALT 1)

BASIN 11 ALTERNATIVE 2

FPC-7-A

FPC 7-B

SR 50

BASIN A ALTERNATIVE 1

FPC 8-C

℄ SR 91 NB

FPC 6-B

BASIN A ALTERNATIVE 2

NON-FTE R/W FOR CONVEYANCE

BASIN A ALTERNATIVE 3

ALT. 3 FLOODPLAIN COMPENSATION

NON-FTE R/W FOR CONVEYANCE

BASIN 12 ALTERNATIVE 2

BASIN 10 INTERCHANGE ALT. CELL TP-9 (ALT 1)

MP 268

BASIN 10 ALTERNATIVE 2

FPC 6-C

MP 269

PROPOSED EASEMENT

ALT. 1 FLOODPLAIN COMPENSATION

BASIN 12 ALTERNATIVE 1

ALT. 3 FLOODPLAIN COMPENSATION

BASIN 12 ALTERNATIVE 3

NON-FTE R/W FOR CONVEYANCE

FPC-8B2

FPC-8B1

FPC-8A

BASIN 10 INTERCHANGE ALT. CELL TP-9.2 (ALT 1)

BASIN 10 INTERCHANGE ALT. CELL-8 (ALT 1)

BASIN 10 INTERCHANGE ALT. CELL 600-2 (ALT 1)

BASIN 11 INTERCHANGE ALT. CELL TP-3.1 (ALT 3)

BASIN 11 INTERCHANGE ALT. CELL TP-3.3 (ALT 3)

BASIN 10 INTERCHANGE ALT. CELL TP-7 (ALT 1)

BASIN 11*

DANIELS RD.

BEULAH RD.

TOLL 429

N

0 200 800

Feet

MATCHLINE PROPOSED BASIN MAPS (7)

FLORIDA'S TURNPIKE

TURNPIKE (SR 91) WIDENING FROM SOUTH OF SR 408 TO SR 50

RS&H

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 91	ORANGE	444007-1-22-01

PROPOSED BASIN MAP (4)

SHEET NO. 4 OF 7

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BASIN C

BASIN B

SR 50

BASIN B ALTERNATIVE 3

FPC 9-10A

N

0 200 800

Feet

A

A

SR 91 NB

BASIN C ALTERNATIVE 1

NON-FTE R/W FOR CONVEYANCE

MP 272

MP 271

MP 270

WINTER GARDEN VINELAND RD.

ALT. 1 FLOODPLAIN COMPENSATION

AE EL. 99.7

FPC LOCATED OUTSIDE OF SOUTHERN LIMIT

AVALON RD.

FPC 9-10B

BASIN B ALTERNATIVE 2

FDOT OWNED PARCEL

ALT. 2 FLOODPLAIN COMPENSATION

BASIN B ALTERNATIVE 1

AVALON RD.

JOHNS LAKE

AE EL. 99.7

AE EL. 99.7

*COLORS ARE TO DISTINGUISH BETWEEN SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVE FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITES.

LEGEND

- R/W LINE
- LIMITED ACCESS R/W LINE
- PARCEL LINE
- BASIN DIVIDE
- WETLAND
- FLOW ARROW
- 100 YEAR FLOODPLAIN
- AE XX — 100 YEAR FLOOD ZONE/ ELEVATION
- AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES*
- LIMITS OF FLOODPLAIN COMPENSATION SITES

FLORIDA'S TURNPIKE

TURNPIKE (SR 91) WIDENING FROM SOUTH OF SR 408 TO SR 50

RS&H

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 91	ORANGE	444007-1-22-01

PROPOSED BASIN MAP (5)

SHEET NO. 50 OF 100

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LAKE APOPKA

BASIN E

END PROJECT
STA. 2579+27.57

℄ SR 91 NB

MP 274

BASIN D INTERCHAGE
ALT. CELL 1 (ALT 3)

BASIN D INTERCHANGE
ALT. CELL D-20 (ALT 3)

BASIN D
ALTERNATIVE 2

FPC 11-12B-1

FPC 11-12A

AE
EL. 99.7

MP 273

SEE DETAIL 1

BASIN DSR50N
ALTERNATIVE 1

BASIN DSR50N
ALTERNATIVE 3
EXIST. POND CITGO B

BASIN D
ALTERNATIVE 1

BASIN DSR50N
ALTERNATIVE 2

EXIST. POND
CITGO A

SR 50

REMMINGTON RD

BASIN D INTERCHANGE
ALT. CELL D-30 (ALT 3)

BASIN C ALTERNATIVE 2

BASIN C ALTERNATIVE 3

NON-FTE R/W
FOR CONVEYANCE

EXIST. POND H

BASIN DSR50N

BASIN D

BASIN C

AE
EL. 99.7

DETAIL 1

BASIN DSR50N
ALTERNATIVE 3
EXIST. POND G

SR 50

JOHNS LAKE

AE
EL. 99.7

AE
EL. 99.7

0 200 800
Feet

*COLORS ARE TO DISTINGUISH BETWEEN SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVE FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITES.

LEGEND
- R/W LINE
- LIMITED ACCESS R/W LINE
- PARCEL LINE
- BASIN DIVIDE
- WETLAND
- FLOW ARROW
- 100 YEAR FLOODPLAIN
- AE XX — 100 YEAR FLOOD ZONE/ ELEVATION
- AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES *
- LIMITS OF FLOODPLAIN COMPENSATION SITES

FLORIDA'S TURNPIKE

TURNPIKE (SR 91) WIDENING
FROM SOUTH OF SR 408 TO SR 50

RS&H

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 91	ORANGE	444007-1-22-01

PROPOSED BASIN MAP (6)

SHEET NO.
6 OF 7

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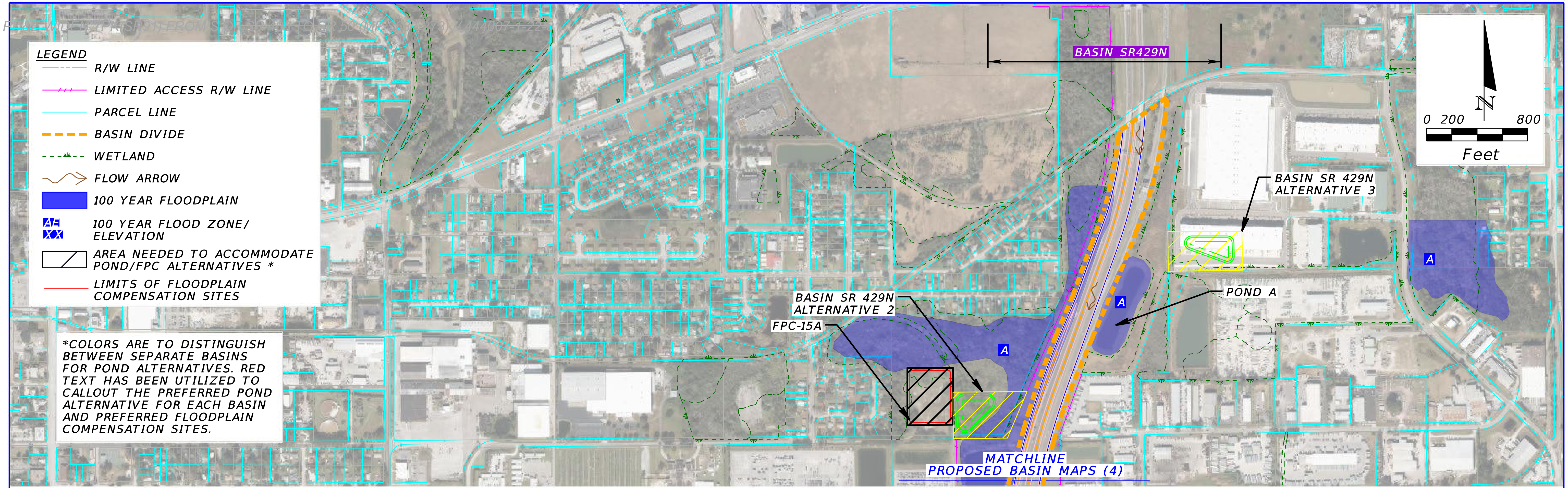
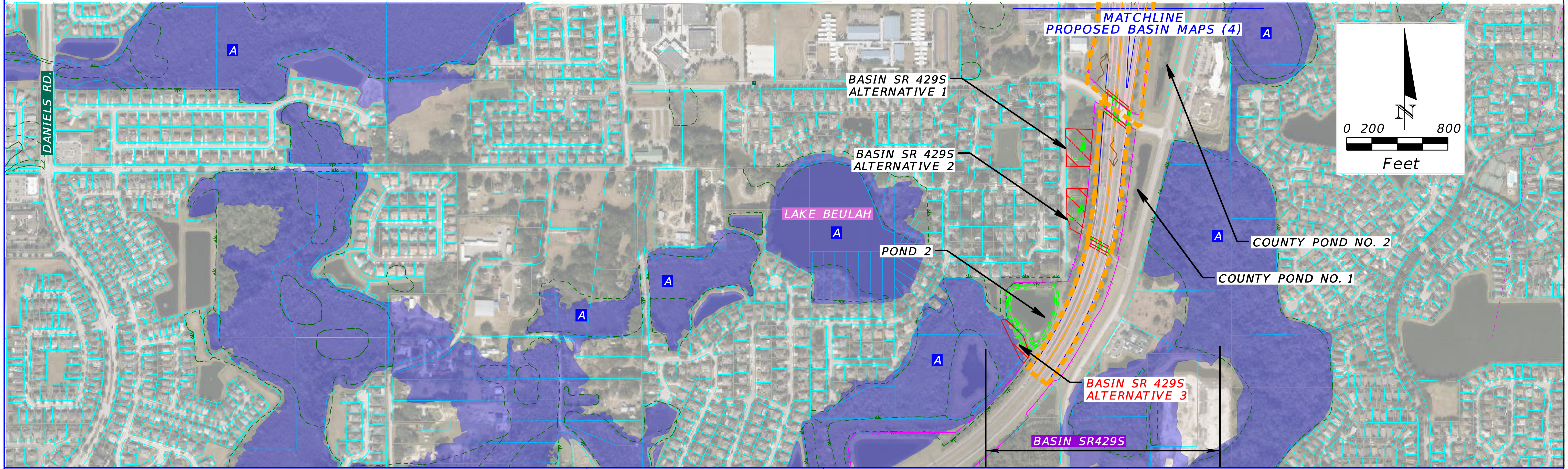

LEGEND
R/W LINE
LIMITED ACCESS R/W LINE
PARCEL LINE
BASIN DIVIDE
WETLAND
FLOW ARROW
100 YEAR FLOODPLAIN
100 YEAR FLOOD ZONE/ ELEVATION
AREA NEEDED TO ACCOMMODATE POND/FPC ALTERNATIVES *
LIMITS OF FLOODPLAIN COMPENSATION SITES
*COLORS ARE TO DISTINGUISH BETWEEN SEPARATE BASINS FOR POND ALTERNATIVES. RED TEXT HAS BEEN UTILIZED TO CALLOUT THE PREFERRED POND ALTERNATIVE FOR EACH BASIN AND PREFERRED FLOODPLAIN COMPENSATION SITES.
BASIN SR429N
BASIN SR 429N ALTERNATIVE 3
BASIN SR 429N ALTERNATIVE 2
FPC-15A
POND A
A
MATCHLINE PROPOSED BASIN MAPS (4)
0 200 800
Feet



FLORIDA'S TURNPIKE

TURNPIKE (SR 91) WIDENING
FROM SOUTH OF SR 408 TO SR 50

RS&H

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 91	ORANGE	444007-1-22-01

PROPOSED BASIN MAP (7)

SHEET NO. 7 OF 7

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Physical Resources Appendix

Contents:

Noise Walls

Table 6.1.1: Potentially Feasible and Reasonable Noise Barrier Evaluation Summary

Noise Barrier System (CNEs included in barrier system	Number of Impacted Residences[1]	Noise Barrier Approx. Begin Station	Noise Barrier Approx. End Station	Preliminary Noise Barrier Height (ft.)	Preliminary Noise Barrier Length (ft.)[7]	Preliminary Noise Barrier Location (SH=Shoulder ROW=Edge of Right-of-way)	Total Noise Barrier System Cost (includes costs of existing barriers)[2]	New Construction Noise Barrier Cost[3]	Number of Residences Potentially Benefited by a Noise Barrier[4]		Total Noise Barrier System Cost per Benefited Residence[5]
									Impacted	Total	
Noise Barriers Northbound Side of Turnpike (*italics in red indicate existing barriers*)											
#1 (NB01-NB08)	511	*2000+00*	*2022+00*	*22*	*2200*	*ROW*	$10,124,200	$2,133,600	484	490	$20,666
		2020+00	2032+00	14	1200	SH					
		2031+00	*2092+80*	*22*	*6400*	*ROW*					
		2091+00	2095+00	14	400	SH					
		2095+00	2097+00	8	200	SH					
		2097+00	2106+80	14	980	SH					
		2105+20	*2130+80*	*22*	*2560*	*ROW*					
		2134+00	2148+30	14	1430	SH					
		2147+50	*2157+00*	*22*	*950*	*ROW*					
		2155+10	2156+60	14	150	SH					
		2156+60	2158+10	8	150	SH					
		2158+10	2165+30	14	720	SH					
#2 (NB14)	46	544+10	563+10	22	1900	ROW	$1,254,000	$1,254,000	30	30	$41,800
#3 (NB15-NB18)	595	92+40	114+00	22	2160	ROW	$5,180,400	$4,467,600	272	316	$16,394
		115+20	147+60	22	3060	ROW					
		2193+00	*2204+00*	*22*	*1080*[6]	*ROW*					
		2198+00	2240+00	8	4260	SH					
#4 (NB23-NB33)	868	*2314+00*	*2321+40*	*14*	*780*	*ROW*	$9,593,400	$4,168,800	598	770	$12,459
		2320+80	2334+60	8	1380	SH					
		2332+00	*2357+00*	*20*	*2540*	*ROW*					
		2357+00	*2373+50*	*20*	*1680*	*ROW*					
		2375+30	2387+50	22	1220	ROW					
		2389+00	*2418+50*	*18*	*3000*	*ROW*					
		2414+50	2431+90	8	1740	SH					
		2429+00	*2446+50*	*18*	*1750*	*ROW*					
		2443+50	2459+50	8	1600	SH					
		2454+20	2499+70	22	3380	ROW					

Noise Barrier System (CNEs included in barrier system	Number of Impacted Residences[1]	Noise Barrier Approx. Begin Station	Noise Barrier Approx. End Station	Preliminary Noise Barrier Height (ft.)	Preliminary Noise Barrier Length (ft.)[7]	Preliminary Noise Barrier Location (SH=Shoulder ROW=Edge of Right-of-way)	Total Noise Barrier System Cost (includes costs of existing barriers)[2]	New Construction Noise Barrier Cost[3]	Number of Residences Potentially Benefited by a Noise Barrier[4]		Total Noise Barrier System Cost per Benefited Residence[5]
									Impacted	Total	
#5 (NB36-NB39)	396	2543+00	2574+70	22	3400	ROW	$2,613,600	$2,613,600	385	397	$6,583
		2577+50	2589+50	22	560	ROW					
Noise Barriers Southbound Side of Turnpike (*italics in red indicate existing barriers*)											
#6 (SB01-SB04)	271	*3000+00*	*3065+80*	*22*	*6600*	*ROW*	$5,346,000	$990,000	197	222	$24,081
		3065+80	3080+60	22	1500	ROW					
#7 (SB05-SB15)	507	3096+50	3105+80	14	900	SH	$10,158,000	$7,449,600	290	332	$30,596
		3104+60	*3110+60*	*14*	*600*	*ROW*					
		3108+40	3121+40	8	1290	SH					
		3118+50	3134+80	22	1630	ROW					
		3137+60	3147+40	14	960	SH					
		3145+00	*3155+00*	*22*	*1020*	*ROW*					
		3156+30	3166+80	22	1060	ROW					
		3166+80	*3182+80*	*20*	*1740*	*ROW*					
		3182+80	3188+50	22	630	ROW					
		3188+50	*3198+00*	*22*	*1120*	*ROW*					
		3193+20	3210+50	14	1720	SH					
		3205+60	3238+80	22	3240	ROW					
		3240+70	3261+00	22	1980	ROW					
#8 (SB25)	48	*3344+80*	*3353+80*	*14*	*920*	*ROW*	$1,402,800	$554,400	63	82	$17,107
		3353+80	3359+80	22	600	ROW					
		3359+80	*3370+80*	*14*	*1100*	*ROW*					
		3370+80	3373+20	22	240	ROW					
#9 (SB27)	152	3388+20	3405+20	22	1700	ROW	$1,122,000	$1,122,000	107	157	$7,146
#10 (SB31-SB32)	180	3498+00	3514+00	22	1600	ROW	$3,940,800	$1,800,000	124	124	$31,781
		3514+00	*3517+00*	*16*	*310*	*ROW*					
		3518+00	*3535+00*	*16*	*1770*	*ROW*					
		3533+60	*3547+00*	*8*	*1400*	*SH*					
		3545+00	*3559+00*	*16*	*1680*	*ROW*					
		3533+60	3570+00	8	3100	SH					

Noise Barrier System (CNEs included in barrier system	Number of Impacted Residences[1]	Noise Barrier Approx. Begin Station	Noise Barrier Approx. End Station	Preliminary Noise Barrier Height (ft.)	Preliminary Noise Barrier Length (ft.)[7]	Preliminary Noise Barrier Location (SH=Shoulder ROW=Edge of Right-of-way)	Total Noise Barrier System Cost (includes costs of existing barriers)[2]	New Construction Noise Barrier Cost[3]	Number of Residences Potentially Benefited by a Noise Barrier[4]		Total Noise Barrier System Cost per Benefited Residence[5]
									Impacted	Total	
#11 (SB33)	14	622+00	636+00	14	1400	SH	$588,000	$588,000	14	33	$12,511

1 Impacts counts [residences approaching or exceeding the FHWA NAC of 67 dB(A)] are based on setting all existing barriers to a height of zero as a part of the existing barrier methodology being used for this project.
2 Unit cost of $30/ft² for all noise barriers; cost includes both existing barriers and newly constructed noise barriers as part of the existing noise barrier methodology.
3 Cost for only new construction portion of noise barrier systems.
4 Total includes impacted/benefited residences and residences with a predicted noise level that does not approach or exceed the residential NAC of 67 dB(A), but are incidentally benefited. All benefits are calculated with the barrier system in consideration being compared to a "no-barrier" condition where any existing barriers set to a height of zero as a part of the existing barrier methodology being used for this project.
5 Cost per benefited residence of noise barrier systems that include existing barrier segments uses the full preliminary noise barrier cost that includes the cost of the existing noise barriers as a part of the existing noise barrier analysis methodology being used on this project. This establishes that the full square footage of wall under the build condition is cost-reasonable under FDOT policy.
6 Existing barrier shortened from existing length of 1,880 feet to 1,080 feet to accommodate future roadway widening.
7 Full height is for length indicated. The length for any required taper in height at a shoulder noise barrier termination would be in addition to the length indicated.