

PRELIMINARY ENGINEERING REPORT

Florida Department of Transportation

District Five

Truck and Freight Alternative Site Analysis

Limits of Project: I-4 from Polk/Osceola County Line to I-95

Osceola, Orange, Seminole, and Volusia Counties, Florida

Financial Management Number: 447724-1-22-01

ETDM Number: N/A

Date: July 2, 2024

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

PROFESSIONAL ENGINEER CERTIFICATION

PRELIMINARY ENGINEERING REPORT

Project: Truck and Freight Alternative Site Analysis

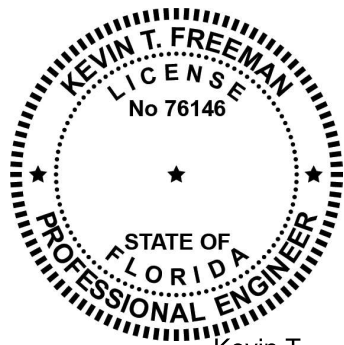
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This preliminary engineering report contains engineering information that fulfills the purpose and need for the Truck and Freight Alternative Site Analysis Project Development & Environment Study for I-4 from Polk/Osceola County Line to I-95 in Osceola, Orange, Seminole, and Volusia Counties, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Vanasse Hangen Brustlin, Inc., and that I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice for this project.



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LIST OF ACRONYMS

AADT	Annual Average Daily Traffic	EV	Electric Vehicle
AASHTO	American Association of State Highway and Transportation Officials	F.A.C.	Florida Administrative Code
ac-ft	Acre-foot	FDACS	Florida Department of Agriculture and Consumer Services
ADA	Americans with Disabilities Act	FDEP	Florida Department of Environmental Protection
AMC	Antecedent Moisture Condition	FDM	FDOT Design Manual
API	Application Programming Interface	FDOT	Florida Department of Transportation
AQTM	Air Quality Technical Memorandum	FEIS	Final Environmental Impact Statement
ATA	American Trucking Associations	FEMA	Federal Emergency Management Agency
AWSWE	Average Wet Seasonal Water Elevation	FHWA	Federal Highway Administration
BEBR	Bureau of Economic and Business Research	FIRM	Flood Insurance Rate Map
BFE	Base Flood Elevation	FLUCFCS	Florida Land Use, Cover and Forms Classification System
BMAP	Basin Management Action Plan	FNPS	Florida Native Plant Society
CAC	Community Advisory Committee	FPCA	Floodplain Compensation Area
CARS	Crash Analysis Reporting System	FPID	Financial Project Identification Number
CATV	Cable Television	FTE	Florida's Turnpike Enterprise
CCTV	Closed-Circuit Television	FTO	Florida Traffic Online
		FWC	Florida Fish and Wildlife Conservation Commission
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	FY	Fiscal Year
CFX	Central Florida Expressway Authority	GIS	Geographical Information Systems
CR	County Road	HCM	Highway Capacity Manual
CRAS	Cultural Resources Assessment Survey	HCS	Highway Capacity Software
CSER	Contamination Screening Evaluation Report	HHS	United States Department of Health and Human Services
CSRP	Conceptual Stage Relocation Plan	HOS	Highway Operations System
DDI	Diverging Diamond Interchange	HOV	High Occupancy Vehicle
DMS	Dynamic Message Sign	HSG	Hydrologic Soil Group
DOJ	Department of Justice	HSM	Highway Safety Manual
EB	Eastbound	I-4	Interstate 4
EBL	Eastbound Left	I-4 BtU	I-4 Beyond the Ultimate
EBR	Eastbound Right	I-75	Interstate 75
EFH	Essential Fish Habitat	I-95	Interstate 95
EPA	United States Environmental Protection Agency	ICA	Impact to Construction Assessment
ERP	Environmental Resource Permit	INFRA	Infrastructure for Rebuilding America
ESA	Endangered Species Act	INSF	Insufficient Information
		ISATe	Enhanced Interchange Safety Analysis Tool



ITS	Intelligent Transportation Systems	SB	Southbound
kW	Kilowatt	SBL	Southbound Left
LEP	Limited English Proficiency	SBR	Southbound Right
LHR	Location Hydraulic Report	SCE	Sociocultural Effects Evaluation
LOS	Level of Service	SDR	Sociocultural Data Report
L RTP	Long Range Transportation Plan	SFH	Suitable Foraging Habitat
MAC	Municipal Advisory Committee	SFWMD	South Florida Water Management District
MP	Milepost	SHS	State Highway System
mph	Miles Per Hour	SJRWMD	St Johns River Water Management District
MPO	Metropolitan Planning Organization	SPUI	Single Point Urban Interchange
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act	SR	State Road
MUTCD	Manual on Uniform Traffic Control Devices	SSA	Sole Source Aquifer
NB	Northbound	SSURGO	Soil Survey Geographic Database
NBL	Northbound Left	STIP	Statewide Transportation Improvement Program
NBR	Northbound Right	SW	Surface Water
NEVI	National Electric Vehicle Infrastructure	TAC	Technical Advisory Committee
NMFS	National Marine Fisheries Service	TCC	Technical Coordinating Committee
NPDES	National Pollutant Discharge Elimination System	TIITF	State of Florida Board of Trustees of the Internal Improvement Trust Fund
NRCS	Natural Resources Conservation Service	TIP	Transportation Improvement Program
NRE	Natural Resources Evaluation Technical Memorandum	TMDL	Total Maximum Daily Load
NRHP	National Register of Historic Places	TPAS	Truck Parking Availability System
NSTM	Noise Study Technical Memorandum	TPO	Transportation Planning Organization
NWI	National Wetlands Inventory	TSM&O	Transportation Systems Management and Operations
OFW	Outstanding Florida Water	UAO	Utility Agency/Owner
P3	Public Private Partnership	UAP	Utility Assessment Package
PD&E	Project Development & Environment	U.S.C.	United States Code
PER	Preliminary Engineering Report	USDA	United States Department of Agriculture
PIP	Public Involvement Plan	USFWS	United States Fish and Wildlife Service
PPE	Poinciana Parkway Extension	USGS	United States Geological Survey
PSR	Pond Siting Report	VE	Value Engineering
PTAR	Project Traffic Analysis Report	WBID	Waterbody Identification
PVC	Polyvinyl Chloride	WB	Westbound
R2C TPO	River to Sea Transportation Planning Organization	WBL	Westbound Left
ROD	Record of Decision	WBR	Westbound Right
ROW	Right-of-Way	WL	Wetland
RV	Recreational Vehicle	WQIE	Water Quality Impact Evaluation

1

1. Project Summary

This Preliminary Engineering Report (PER) documents the site identification methodology and process, the alternatives analyses, the preferred site selection, and environmental and engineering studies prepared to evaluate the five preferred sites for the *Truck and Freight Alternative Site Analysis Project Development and Environment (PD&E) Study*.

1.1 Project Description

The Florida Department of Transportation (FDOT) is conducting the *Truck and Freight Alternative Site Analysis PD&E Study* to identify, evaluate, and recommend truck and freight parking sites along or near the Interstate 4 (I-4) corridor within Osceola, Orange, Seminole, and Volusia Counties that are viable for private and public operator use for rest stops. In 2018, FDOT conducted a statewide truck parking study to assess existing truck parking and future demand. The study found the I-4 corridor is the most critical corridor for truck parking needs in the state, specifically between the Osceola/Polk County Line and I-95. Based on the 2018 study, the existing average demand for the I-4 corridor within FDOT District 5 was 481 designated truck parking spaces (combined public and private) for rest stops. However, there are currently 36 truck-only parking spaces (combined public and private) for rest stops along the I-4 corridor within the study area.

The study limits extend from Osceola County north to Volusia County encompassing a 75-mile-long project study area and spanning approximately one mile from I-4 within the four counties. In heavily industrialized areas, the initial study area was expanded to approximately three to five miles from the I-4 corridor. An initial screening of the study area was conducted to identify alternatives that met the purpose and need for the project. The initial alternatives were further screened to identify viable alternatives that minimize environmental and community impacts.

As a result of the initial alternatives analysis conducted during the PD&E Study, seven viable truck parking sites within the four-county area were identified. The goal of the study was to identify at least one truck parking facility within each county to serve regional freight demand in Central Florida and balance the parking available throughout the I-4 corridor. The seven viable sites provide a total of approximately 1,094 truck parking spaces to accommodate existing and future needs. One viable site was identified in Osceola County (234 spaces) and Seminole County (132 spaces), two viable sites within Volusia County (total of 528 spaces), and three viable sites within Orange County (total of 200 spaces). All the sites are located within unincorporated areas except for the Volusia County sites with one located within the City of Port Orange and one located within the City of Daytona Beach.

As a result of the engineering and environmental analyses completed during this study and the comprehensive public engagement plan, five of the seven sites are being advanced for project development and are programmed for the final Design phase. These five preferred sites provide a total of approximately 987 truck parking spaces to accommodate existing and future needs. The Preferred

Alternative for the *Truck and Freight Alternative Site Analysis PD&E Study* includes the following five sites: Osceola County Site 1, Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A (Eastbound), and Volusia County Site 1B (Westbound). A map of the study limits and the preferred sites is provided in **Figure 1-1**.

Preliminary concepts for each of the seven viable truck parking sites and the five preferred sites were developed to establish site boundaries and are provided in this PER. The study area for each site included the proposed Right-of-Way (ROW), adjacent land uses and the access roadways surrounding the site. All five preferred sites are located adjacent to existing roadways. The preliminary site concepts include parking layouts, site access, proposed sidewalks, stormwater management, restroom buildings, and landscaping/greenspace areas.

1.2 Purpose & Need

1.2.1 Purpose

The purpose of this PD&E Study is to identify, evaluate, and recommend viable candidate truck parking sites along or near the I-4 corridor in Osceola, Orange, Seminole, and Volusia Counties for public and/or private development. The purpose of this project is to provide needed truck parking facilities to serve regional freight parking demand within or near the I-4 corridor.

1.2.2 Need

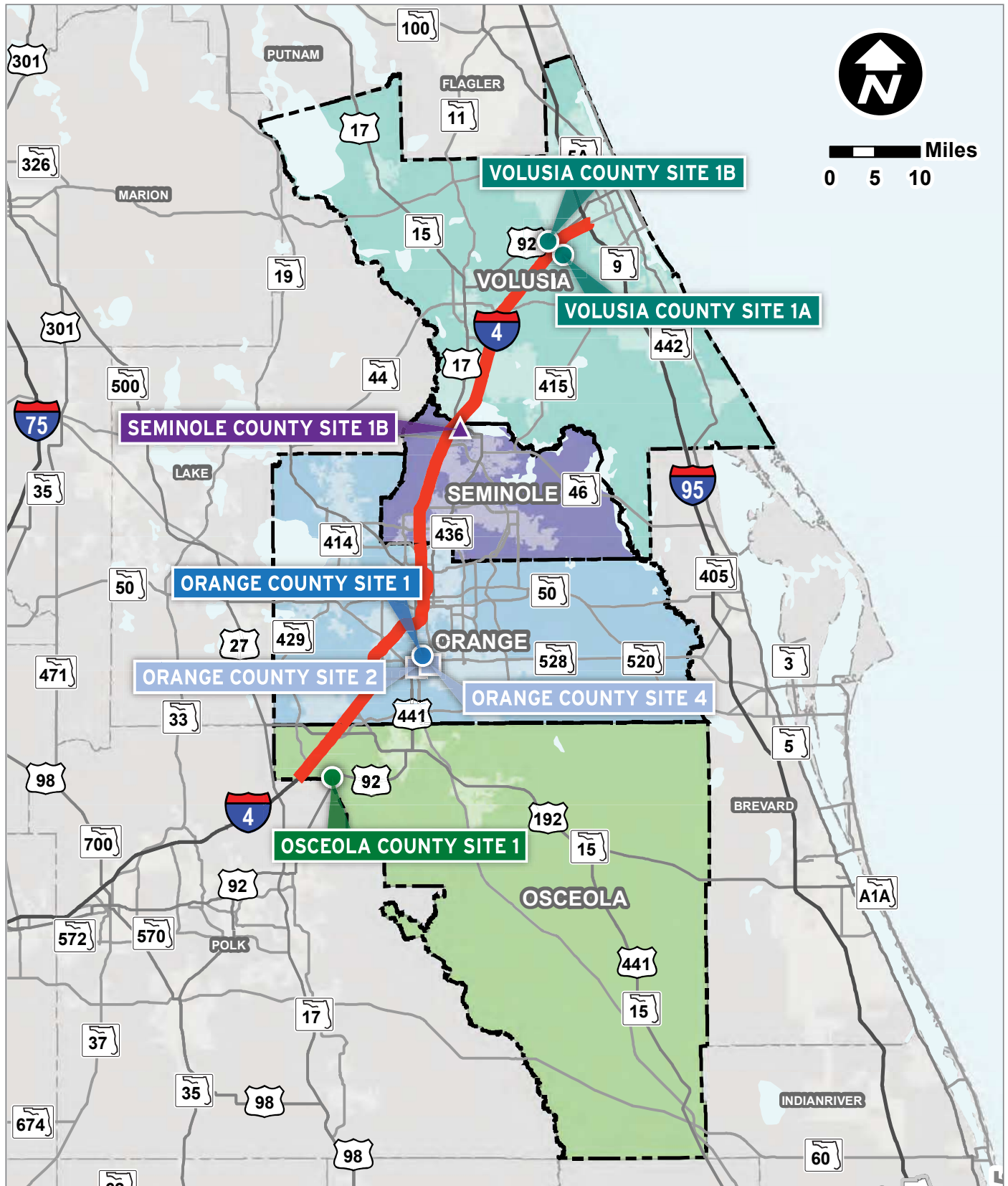
The need for the project is to address existing truck parking deficiencies and accommodate future truck parking demand to better serve freight mobility, improve safety, and address capacity needs. The primary goal of the PD&E Study is to develop and evaluate viable truck parking sites to meet the future 2040 (average) parking demand of 883 designed parking spaces.

Freight Mobility

The trucking industry is indispensable to the American economy and the quality of life for our communities and consumers that depend on delivered goods. Apart from many other roles and responsibilities, truck drivers are responsible for delivering raw materials to manufacturing facilities and finished products to retail and commercial sites. Businesses both big and small depend on truck drivers to safely transport their items across the nation, while maintaining efficient delivery times. According to Trucker Path survey (2018), 48% of truck drivers spend over an hour searching for a place to park. This equates to a \$5.1B loss in revenue annually, including wasted fuel, wages lost, maintenance, and associated crashes.

Safety

Truck parking is a national safety concern. In September 2022, FHWA hosted the National Coalition on Truck Parking to provide an update on studies and initiatives to advance safe truck parking. The FHWA 2022 Truck Parking Development Handbook lists the primary safety concerns arising from a lack of available designated truck parking spaces include tired truck drivers continuing to drive because of difficulty finding a place to park for rest and truck drivers choosing to park at unsafe locations, such as on the shoulder of the road, exit ramps, or vacant lots. The FHWA 2022 Truck Development Handbook states both of these scenarios endanger the truck driver and create hazards for drivers on the highway.



- Project Limits
- County Boundary
- Seminole site (as part of the I-4 BtU)
- Preferred Sites
- Viable Sites



Figure 1-1
Preferred Freight Parking Sites
 Preliminary Engineering Report

Capacity

The nationwide shortage of truck parking capacity continues to be a critical transportation industry focus. According to data published by the American Trucking Association (ATA) in 2022, there are about 3.5 million truck drivers nationwide and approximately 313,000 truck parking spaces; for every 11 drivers, there is one truck parking space. Truck parking needs have been ranked as a top critical issue in the trucking industry. In the most recent (2019) Jason's Law Truck Parking Survey and Comparative Assessment, the Federal Highway Administration (FHWA) noted that truck parking concerns are nationwide but most critical along key freight corridors and in metropolitan areas. Additionally, nationwide survey results showed that shortages exist at all times of day, week, and year, but mostly overnight and weekdays.

In 2018, FDOT conducted a statewide truck parking study to assess existing truck parking capacity and future needs. The study found the I-4 corridor is the most critical corridor for truck parking needs in the state, specifically between the Osceola/Polk County Line and I-95, which is the focus of this PD&E Study. The University of Florida Bureau of Economic and Business Research (BEBR) reports a 35.1% population growth in Florida from 2000-2020 and continued growth is expected.

Parking Demand

The parking demand is a function of both freight mobility and federal regulations governing hours of service for commercial vehicle operators. These regulations involve mandated maximum hours of service, maximum consecutive hours and days, and required regular minimum 30-minute breaks after eight cumulative hours. Without the appropriate freight parking facilities, drivers may be forced to spend unnecessary time searching for available parking, or they may be required to park in unsafe and/or improper locations.

The FDOT District Five Truck Parking Study (2019) determined the average freight parking demand (2016 existing condition) along I-4 within the PD&E study area in Osceola, Orange, Seminole, and Volusia Counties was 481 designated truck parking spaces (combined public and private rest stops). In 2023, a review was conducted to identify available public and private truck parking facilities within the PD&E study area, including a five-mile radius from the I-4 corridor and excluding Florida's Turnpike service plazas that serve Turnpike freight demand. There are currently only 36 designated truck-only parking spaces (combined public and private) directly along the I-4 corridor within the PD&E study area inclusive of the Longwood Truck Parking facility on I-4 Eastbound in Seminole County, the I-4 Westbound Rest Area in Seminole County, and a private retail location with truck parking capacity. Additional private truck parking facilities that provide fee-based or subscription-based parking located within a six-mile buffer of I-4 were considered during the research for the PD&E study. However, these facilities serve truck parking needs along other highways (Florida's Turnpike, SR 408, SR 528). There is a need for 445 additional truck parking spaces to serve existing demand within the PD&E study area.

As the number of people and the amount of goods continue to increase in Florida, freight traffic continues to be an essential part of our state's growth and economy. Based on the 2019 study, the average demand for truck parking spaces is anticipated to grow to 750 spaces by 2025 and 883 parking spaces by 2040 for the I-4 corridor within Osceola, Orange, Seminole and Volusia Counties. The projected demand is anticipated to intensify as the development of more distribution facilities like the Amazon Fulfillment Center in Volusia County, the Northport Industrial Park in Seminole County, the Infinity Park in Orange County, and JELD-WEN in Osceola County continue to be developed to better serve the region's population. The parking spaces provided by the five preferred truck parking sites are needed to serve both the existing and projected truck parking demand in Osceola County and regionally within the I-4 study corridor.

Osceola County Site Need

There are no truck or freight parking facilities maintained exclusively for public parking and non-retail public use in Osceola County along the I-4 corridor.

Orange County Site Need

There are no truck or freight parking facilities maintained exclusively for public parking and non-retail public use in Orange County which can serve the truck parking demand of I-4 through the county.

Seminole County Site Need

There are two exclusive public, non-retail truck parking facilities (the Longwood Truck Parking facility on I-4 Eastbound and the I-4 Westbound Rest Area), and one private retail location with truck parking capacity in Seminole County, providing the only 36 truck parking spaces for the I-4 corridor.

Volusia County Site Need

There are no truck or freight parking facilities maintained exclusively for public parking and non-retail public use in Volusia County along the I-4 corridor.

Project Status

The Design phase is underway for three of the five Preferred Alternative sites (Seminole County Site 1B, Volusia County Site 1A, and Volusia County Site 1B). Seminole County Site 1B is fully funded through the Construction phase. Volusia County Site 1A is funded through the Construction phase and Volusia County Site 1B is funded through the ROW phase. The Construction phase for Volusia County Site 1B is currently planned for FY 2031 however, the project was awarded a federal Infrastructure for Rebuilding America (INFRA) grant to facilitate expedited project development and the Work Program will be updated.

FDOT is identifying funding opportunities for future project development phases (Design, ROW, and Construction phases, as applicable) for four of the five Preferred Alternative sites (Osceola County Site 1, Orange County Site 1, Volusia County Site 1A, and Volusia County Site 1B). FDOT intends to program each site independently for design as funding is identified.

Public Private Partnerships (P3) opportunities are also being explored to potentially transfer some of the design and construction cost to a private developer while being able to expand some of the amenities that are provided at these sites. This will also potentially help reduce the operations and maintenance cost of the truck parking facilities.

Planning Consistency

Osceola County Site 1

Funding for Osceola County Site 1 is included in the FDOT Five Year Work Program (2024-2029 Tentative) for the Design phase (\$3.3 million in Fiscal Year (FY) 2025) and ROW phase (\$7 million in FY 2024, \$1.75 million in FY 2028, and \$1.75 million in FY 2029). As of June 2024, no funding has been programmed for the Construction phase in the tentative FDOT Five Year Work Program. The Work Program is being updated to reflect the programmed Construction phase which is funded through an INFRA grant for FY 2027.

As of June 2024, the STIP includes the \$7 million funded for the ROW phase in FY 2024 but does not include the FY 2028 and FY 2029 ROW funding or the Design phase. The STIP is still being updated to reflect FDOT Work Program updates. Based on FDOT coordination, the new STIP will be adopted by FDOT by July 15,

2024, to reflect the tentative FDOT Work Program updates. The STIP will be approved by FHWA by October 1, 2024, on the annual cycle.

No future funding is shown in the current Metroplan Orlando Transportation Improvement Program (TIP) 2024-2028, however it is included in the draft TIP (2025-2029). The draft TIP includes funding for the Design phase (\$3.31 million in FY 2025) and ROW phase (\$7 million in FY 2025, \$1.75 million in FY 2028, and \$1.75 million in FY 2029). The new TIP is due to be adopted on July 10, 2024.

[Orange County Site 1](#)

As of June 2024, no future phases for Orange County Site 1 are programmed in the FDOT Five Year Work Program (2024-2029 Tentative). FDOT is identifying funding opportunities for future project development phases for Orange County Site 1.

[Seminole County Site 1B](#)

A portion of Seminole County Site 1B was previously identified for stormwater management as part of the *I-4 Beyond the Ultimate (BtU) Segment 3* project (FPID: 242592-4). Therefore, Seminole County Site 1B is programmed for ROW as part of the *I-4 BtU Segment 3* project. As of June 2024, Seminole County Site 1B is in the Design phase. Funding for Seminole County Site 1B is included under FPID: 446445-1 in the FDOT Five Year Work Program (2024-2029 Tentative) for the Design phase (\$104 thousand in FY 2024) and Construction phase (\$22.8 million in FY 2026). As of June 2024, the STIP includes \$22.8 million funded for the Construction phase in FY 2026. The current Metroplan Orlando TIP (2024-2028) includes \$15.96 million in funding for the Construction phase in FY 2025, and the draft TIP (2025-2029) includes the full \$22.8 million in funding for the Construction phase in FY 2025. The STIP and TIP are still being updated to reflect FDOT Work Program updates.

[Volusia County Site 1A](#)

Funding for Volusia County Site 1A is included in the FDOT Five Year Work Program (2024-2029 Tentative) for the Design phase (\$3.92 million in FY 2024), the ROW phase (\$8.05 million in FY 2027 and \$4.30 million in FY 2028), and the Construction phase (\$25.35 million in FY 2029). As of June 2024, the STIP includes \$3.93 million in funding for the Design phase in FY 2024 and \$4.26 million of the ROW funding beyond FY 2027, however it does not include the remaining \$8.09 million in ROW funding or any of the Construction phase. The River to Sea (R2C) TPO TIP includes \$2.17 million of the Design funding in FY 2024 and \$20 million for ROW funding in FY 2028, however it does not include the remaining \$1.75 million in Design funding or any of the Construction phase. The STIP and TIP are still being updated to reflect the FDOT Work Program updates and the federal INFRA grant awarded to the project.

[Volusia County Site 1B](#)

Funding for Volusia County Site 1B is included in the FDOT Five Year Work Program (2024-2029 Tentative) for the Design phase (\$3.83 million in FY 2024) and the ROW phase (\$15 million in FY 2028). As of June 2024, no funding has been programmed for the Construction phase in the tentative FDOT Five Year Work Program. As of June 2024, the STIP includes \$4.36 million in funding for the Design phase in FY 2024 but does not include any of the ROW phase. The R2C TPO TIP includes \$2.91 million of the Design funding in FY 2024, but does not include the remaining \$0.92 million in Design funding or any of the ROW phase. The STIP and TIP are still being updated to reflect the FDOT Work Program updates and the federal INFRA grant awarded to the project.

1.3 Commitments

During stakeholder engagement and study evaluations, there were several project commitments and implementation measures related to design features, design activities and environmental commitments made as part of the study. The implementation measures are based on FDOT input on concept development and future project development whereas the commitments are based on external agency coordination. The Implementation measures and commitments are listed by site as each site will be programmed for future project development independently. For more details on the conceptual design for the Preferred Alternative, refer to Section 8.

[Implementation Measures](#)

- All Sites
 - FDOT will continue coordination with local agencies during the Design phase for each site to obtain feedback on site design. This coordination will include landscaping and aesthetics.
 - FDOT will include restroom facilities on all proposed sites. The building design will include space for vending areas and security offices. The size and layout of buildings will be determined during the Design phase; however, a centralized restroom building is recommended for Osceola County Site 1, Volusia County Site 1A and Volusia County Site 1B as a result of the Value Engineering (VE) Study commitments.
 - FDOT will include fencing around the perimeter of the truck parking area for all sites during the Design phase.
 - FDOT will include necessary conduit infrastructure in the site design to facilitate a combination of shore power (electrical outlets for truck parking to eliminate the need to idle on site) and Electric Vehicle (EV) charging stations for a minimum of 15% of the total truck parking spaces at each site (as feasible). Of this total, a minimum of 10% of the total spaces (as feasible) will provide conduit infrastructure for future EV charging stations. P3 will be explored during the Design phase to identify companies to provide these services where possible.
 - FDOT will coordinate Truck Parking Availability System (TPAS) implementation and informational monitors during Design phase.
 - FDOT will include Closed-circuit Television (CCTV) for monitoring parking lots and security for each site during future phases of project development.
 - FDOT will include several other design features, such as site lighting, dumpster storage enclosures, pet walk areas, windshield wash stations, air compressor areas, and oversize truck parking and these will be further evaluated during the Design phase for each site as feasible.
- Osceola County Site 1
 - FDOT commits to handling the dumped materials within the sites appropriately prior to development of the site. This may include special handling of the materials.
 - FDOT plans to conduct additional groundwater and soil sampling for petroleum and pesticide use along the CSX Rail ROW corridor along the southeastern boundary, particularly near proposed stormwater facilities bordering the corridor.
 - Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the Design phase and permits to relocate tortoises and commensals as appropriate will be obtained from Florida Fish and Wildlife Conservation Commission (FWC).
 - Surveys for the Florida burrowing owl will be conducted in accordance with 68A-27.003(a), 68A-27.001(4), F.A.C. and the current FWC Florida Burrowing Owl Species Conservation and Permitting Guidelines during the Design phase. Coordination with FWC will take place as necessary to determine appropriate avoidance and minimization measures to apply during construction.

- Surveys for the southeastern American kestrel will be conducted during the nesting season (May through August) in the Design phase. If determined nest areas are found and could be impacted by the project, FDOT will coordinate with FWC to determine appropriate avoidance and minimization measures to apply during construction.
- Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137 F.S., to satisfy all mitigation requirements of Part IV, Chapter 373 F.S. and 33 U.S.C. 1344.
- Orange County Site 1
 - Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the Design phase and permits to relocate tortoises and commensals as appropriate will be obtained from FWC.
 - Surveys for the southeastern American kestrel will be conducted during the nesting season (May through August) in the Design phase. If determined nest areas are found and could be impacted by the project, FDOT will coordinate with FWC to determine appropriate avoidance and minimization measures to apply during construction.
 - FDOT will provide compensatory mitigation for wetland impacts resulting from the project design and construction per 373.4137, F.S. and 33 U.S.C. § 1344.
 - FDOT will develop a hydraulic floodplain model during the Design phase, to show that any uncompensated volume will not result in a significant rise in the Base Flood Elevation (BFE).
- Seminole County Site 1B
 - Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the Design phase and permits to relocate tortoises and commensals as appropriate will be obtained from FWC.
 - FDOT will provide compensatory mitigation for wetland impacts resulting from the project design and construction per 373.4137, F.S. and 33 U.S.C. § 1344.
- Volusia County Site 1A
 - Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the Design phase and permits to relocate tortoises and commensals as appropriate will be obtained from FWC.
 - FDOT will provide compensatory mitigation for wetland impacts resulting from the project design and construction per 373.4137, F.S. and 33 U.S.C. § 1344.
- Volusia County Site 1B
 - Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the Design phase and permits to relocate tortoises and commensals as appropriate will be obtained from FWC.
 - FDOT will provide compensatory mitigation for wetland impacts resulting from the project design and construction per 373.4137, F.S. and 33 U.S.C. § 1344.

Commitments

- All Sites
 - The most recent version of the *United States Fish and Wildlife Service (USFWS) Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
- Osceola County Site 1
 - FDOT will provide mitigation for impacts to wood stork suitable foraging habitat (SFH) within the Service Area of the Service-approved wetland mitigation bank or wood stork conservation bank.
 - The USFWS is proposing to list the tricolored bat as an endangered species. To prevent disturbance of potential arboreal roost habitat no tree clearing will occur when day-time high temperatures are below 45 degrees, nor during maternity season (May 1st through July 15th).

- FDOT will coordinate with Central Florida Expressway Authority (CFX) and Osceola County during the Design phase. As of March 2024, CFX is in the Design phase for the Poinciana Parkway Extension (PPE) which is on the west side of this site. Osceola County plans to build a pond on this site as part of the County Road (CR) 532 (Osceola Polk Line Road) widening. Joint use stormwater management with Osceola County will be coordinated in Design.
- Based on local agency coordination, FDOT will include proposed pond and landscape buffer on the east side of site, as shown in the concept plans, to provide a buffer to properties to the east.
- Orange County Site 1
 - Based on local agency coordination, FDOT will include landscaping and pond buffers from adjacent properties and roadways to enhance aesthetics for all sites feasible.
 - FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of the Service-approved wetland mitigation bank or wood stork conservation bank.
 - If the listing status for the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.
 - FDOT will coordinate with FTE for the Florida's Turnpike at Sand Lake Road Interchange as the FTE-proposed pond will need to be modified to accommodate the preferred truck parking site.
- Seminole County Site 1B
 - Based on coordination with Seminole County, FDOT will provide a landscaped berm along Orange Boulevard to provide a visual buffer from the truck parking site.
 - Based on coordination with Seminole County, FDOT will provide a tighter radius return and raised traffic separator on School Street to prevent trucks from exiting and traveling west as shown in the design plans.
 - Based on coordination with Seminole County, FDOT will provide signage for trucks exiting the site to travel east on School Street to US 17/92. Also, FDOT will also provide signage for trucks to turn right at the eastbound approach to US 17/92 at School Street intersection so trucks can utilize the SR 46 interchange for access to I-4 until I-4 BtU is completed.
- Volusia County Site 1A
 - Lighting provided for the truck parking areas will be directed inward with shields to minimize light pollution into adjacent natural areas.
 - ROW acquisition will include a wildlife conservation area, as shown in the concept plans as the remaining area outside of the limits of construction but within the proposed ROW, to provide an enhanced natural buffer. This area will be placed under a conservation easement. The dimensions of the conservation area located outside the fenced truck parking will be coordinated further with regulatory agencies during the Design and ROW phases.
 - FDOT will require contractors to remove garbage daily from the construction site or use bear proof containers for securing of food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear (*Ursus americanus floridanus*). Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
 - FDOT will relocate the existing wildlife jump-out within the limits of the proposed truck parking site approximately 2,500 feet northeast, along the existing FDOT ROW, from the tie in from the proposed eastbound on-ramp. Additionally, the exclusionary fencing will be extended to accommodate the new jump-out location.

- A survey for listed plant species, Rugel's pawpaw, and leafless beaked orchid will be performed during the Design phase and coordination with Florida Department of Agriculture and Consumer Services (FDACS) and USFWS will occur if impacts to the species are anticipated.
- If the listing status of the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.
- FDOT will include landscaping and pond buffers to enhance aesthetics and provide a natural buffer from adjacent properties and roadways as feasible.
- Volusia County Site 1B
 - FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.
 - Lighting provided for the truck parking areas will be directed inward with shields to minimize light pollution into adjacent natural areas.
 - ROW acquisition will include a wildlife corridor and a wildlife conservation area, as shown in the concept plans, that will maintain wildlife movement via the existing wildlife crossing on I-4 adjacent to the truck parking facility. Natural buffers around truck parking areas will be maintained to reduce potential light, vibration, and noise impacts to adjacent natural areas. This area will be placed under a conservation easement. The dimensions of the wildlife corridor and conservation area located outside the fenced truck parking will be coordinated further with regulatory agencies during the Design and ROW phases.
 - FDOT will require contractors to remove garbage daily from the construction site or use bear proof containers for securing of food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear (*Ursus americanus floridanus*). Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
 - A survey for the State listed plant species, Hooded pitcher plant (*Sarracenia minor*) will be performed during the Design phase and coordination with FDACS will occur if impacts to the species are anticipated.
 - If the listing status of the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.
 - FDOT will include landscaping and pond buffers to enhance aesthetics and provide a natural buffer from adjacent properties and roadways as feasible.

1.4 Alternatives Analysis Summary

As part of the PD&E Study, more than 77,000 parcels were examined for their potential viability as a freight parking site for trucks traveling along I-4 within Osceola, Orange, Seminole, and Volusia Counties. The methodology for identifying, analyzing, and refining potential sites is described in detail in Section 2.

Based on the methodology described in Section 2, 12 initial sites were identified for further review, analysis, and refinement. Out of those initial sites, seven were determined to be viable freight parking sites to meet the truck parking demand. Five of the seven viable sites are programmed for further project development providing at least one site within each county, including: Osceola County Site 1, Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A (Eastbound), and Volusia County Site 1B (Westbound). Two of the seven viable sites, both located in Orange County (Orange County Site 2 and

Orange County Site 4), are unfunded at this time and not included in the Preferred Alternative. More detail on the viable Orange County Sites is documented in this report. Further analysis and environmental documentation is anticipated for Orange County Site 2 and Site 4 if future project development is programmed. This report documents all seven viable sites and provides detailed analysis of the Preferred Alternative (five sites).

No-Build Alternative

The No-Build Alternative, carried as a viable option throughout the PD&E Study process, assumes no construction of a new truck parking site and no additional truck parking capacity along I-4 within the study area. No public truck parking facilities are programmed; therefore, none are included in the No-Build Alternative. The No-Build Alternative includes any programmed intersection improvements or roadway widening within the vicinity of the five proposed truck parking sites included in the Preferred Alternative. The results of the No-Build Alternative analysis are documented in this PER. The advantages of the No-Build Alternative include no additional ROW acquisition, no impacts to the environment from construction, no disruption of traffic during construction, and no project cost. The disadvantages of the No-Build Alternative involve not satisfying the purpose and need for the project: existing and future truck parking demand is not accommodated, safety for truck drivers is not improved, and freight mobility is not increased to support better movement of goods for the local communities.

1.5 Related Projects

There are several projects near the preferred truck parking sites that interface with the alternatives as discussed throughout the report. These related projects are illustrated in **Figure 1-2** and described in the following subsections.

1.5.1 Poinciana Parkway Extension

The PPE is a new four-lane expressway that extends Poinciana Parkway from its existing southern terminus at Ronald Reagan Parkway to I-4. The PPE is being developed in two separate projects; CFX is responsible for the *State Road (SR) 538 (Poinciana Parkway) Extension to County Road (CR) 532* project from Ronald Reagan Parkway to CR 532, and FTE is responsible for the PPE from *CR 532 to north of the I-4/SR 429 interchange*.

[CFX SR 538 \(Poinciana Parkway\) Extension to CR 532](#)

As of June 2024, the PPE from Ronald Reagan Parkway to CR 532 is in the Design phase (which is nearing completion). The segment includes planned interchanges at US 17/92 and at CR 532. A Diverging Diamond Interchange (DDI) will be constructed at US 17/92 and a diamond interchange will be constructed at CR 532. The preferred Osceola County freight parking site is located along CR 532 adjacent and east of the PPE. The CFX portion of the PPE is funded through construction, which is programmed in FY 2025 through FY 2027.

As part of the PPE segment, there are three proposed ponds located immediately east of the new expressway facility. One pond is located approximately 800 feet southeast of the proposed US 17/92 interchange and one pond is located in the northeast quadrant of the proposed US 17/92 interchange. The third retention pond along the PPE is located approximately 700 feet southeast of the CR 532 interchange and immediately west of the Osceola County Site 1.

The proposed PPE is a four-lane facility with two 12-foot lanes in each direction, 12-foot paved shoulders on each side of the pavement, and a 50-foot median. The northbound off-ramp at CR 532 is a two-lane facility that expands to two left turn lanes and one right turn lane as it approaches CR 532. The proposed

Osceola County Site 1 entrance is immediately east of this off-ramp. The southbound on-ramp from CR 532 is a two-lane facility with 12-foot lanes.

[Poinciana Parkway Extension \(FPID No. 446581-1\)](#)

FTE is completing a PD&E Study to evaluate the PPE from CR 532 to north of the I-4/SR 429 interchange. The PD&E Study is considering a six-lane facility expandable to eight lanes, with improvements to the CR 532 interchange and a new interchange with I-4. The CR 532 interchange alternative includes a northbound on-ramp and southbound off-ramp. The Public Hearing was held in April 2023 and the PD&E Study was completed in December 2023. The Design and ROW phases are programmed for FY 2025 in the adopted with amended FDOT Five Year Work Program (2024-2028).

1.5.2 [CR 532/Osceola Polk Line Road Capacity Improvements](#)

In partnership with Osceola County, CFX conducted a study to evaluate proposed capacity improvements for CR 532 (Osceola Polk Line Road) from Lake Wilson Road to US 17/92 in conjunction with the planned PPE from its northern end at Ronald Reagan Parkway to CR 532. The study resulted in a recommendation for a three-mile capacity improvements project to improve roadway connections between the PPE and I-4 via CR 532. The project also includes pedestrian, bicycle, drainage, and curb and gutter improvements. The Design phase was completed in June 2023 and Construction is programmed for FY 2025 to FY 2026. The preferred Osceola County Site 1 is located along CR 532 adjacent to this project.

1.5.3 [Florida's Turnpike at Sand Lake Road Interchange \(FPID No. 433663-1\)](#)

The FTE will construct a new interchange at Sand Lake Road and Florida's Turnpike. The interchange will provide a southbound off-ramp exiting onto Sand Lake Road. The southbound off-ramp will travel within the eastern boundary of the FTE-owned property between Florida's Turnpike, Sand Lake Road, and John Young Parkway and provide a signalized intersection with Sand Lake Road at the entrance to the Southpark Development approximately 800 feet west of the Florida's Turnpike. The remaining legs of the intersection will run directly adjacent to the Florida's Turnpike corridor and meet Sand Lake Road in a Single Point Urban Interchange (SPUI). The preferred Orange County Site 1 is adjacent to the off-ramp, accommodating freight vehicles from Florida's Turnpike and I-4 access to the site. There are two ponds proposed at this interchange, both are located within the Orange County Site 1 parcel. One pond is located between the Turnpike and southbound off-ramp. The other pond is located west of the southbound off-ramp. The Design phase has been completed, and construction is programmed from FY 2024 to FY 2027; the project was let on March 19, 2024.

1.5.4 [I-4 Beyond the Ultimate Segment 3 \(FPID No. 242592-4\)](#)

[I-4 Beyond the Ultimate Background](#)

The *I-4 PD&E Study – Section 2* from west of SR 528 to east of SR 472 was conducted by FDOT previously. A Final Environmental Impact Statement (FEIS) (August 2002) and Record of Decision (ROD) (December 2002) was approved to widen I-4 to provide six general use lanes and two High Occupancy Vehicle (HOV) lanes, for a total of eight lanes, from SR 435 (Kirkman Road) to SR 414 (Maitland Boulevard). An additional ROD was approved in 2005 which added the limits from SR 414 (Maitland Boulevard) to SR 434. Seminole County Site 1B is within the limits of the 2005 ROD.

Subsequently, FDOT conducted a re-evaluation of the *I-4 PD&E Study* (I-4 BtU), to update and reevaluate the original *I-4 PD&E Study*. The I-4 BtU design changes include providing six general use lanes and four express lanes operating under a variable price toll plan for a total of ten lanes. Other design changes

include stormwater management, access modifications, and interchange improvements. The I-4 BtU project is divided into five segments, with Segment 3 defined as I-4 from one mile east of SR 434 to east of US 17/92 at the Seminole-Volusia County line. This segment is within, and adjacent to, the preferred Seminole County Site 1B. The ROD for the I-4 BtU from SR 528 to east of SR 472 (Segments 2-4) was obtained in August 2017.

A Pond Siting Report (PSR) Addendum (July 2017) for *I-4 BtU Segment 3* was completed to amend the pond sites that are no longer viable options. The PSR Addendum proposed modifications to three stormwater facilities, a floodplain compensation site and added one stormwater pond, resulting in a 9.69-acre reduction in required ROW for stormwater management. The added pond, Pond 317D, is proposed on the southwest corner of the US 17/92 (Monroe Road) and Orange Boulevard intersection. This proposed pond site is located within the preferred Seminole County Site 1B.

The Seminole County Site 1B project includes nine parcels adjacent to I-4 BtU at the US 17/92 interchange and will impact the formerly proposed Pond 317D (not yet constructed). Seminole County Site 1B will be designed to accommodate stormwater management facilities for both I-4 BtU and the truck parking site. The potential environmental impacts associated with the entire truck parking site are documented in this report.

I-4 Beyond the Ultimate Segment 3 Proposed Improvements

I-4 BtU Segment 3 within the study area proposes a variety of improvements, such as construction of new tolled express lanes, interchange modifications, new auxiliary lanes, bridge replacements, and shifting roadway alignments. As part of the *I-4 BtU Segment 3* improvements, US 17/92 will be realigned and moved to the south, with a new bridge over I-4. Additionally, the I-4 bridges over Orange Boulevard and the SunRail tracks will be widened to accommodate two express lanes per direction. Orange Boulevard will be re-routed by crossing under US 17/92 and looping back into the east side of US 17/92 to School Street and will include a pond along the inside radius as shown in **Appendix C**. The intersection of US 17/92 and School Street/Orange Boulevard will be signalized. The I-4 BtU will have a pond in the location of the Circle K gas station at the corner of US 17/92 and Orange Boulevard.

The US 17/92 bridge over I-4 will begin approximately 600 feet north of the School Street intersection and be four lanes, divided by a 24-foot concrete traffic separator. The bridge overpasses I-4 and connects to the eastbound and westbound I-4 on- and off-ramps with traffic signals. The proposed Seminole County freight parking site is located on School Street, adjacent to the existing I-4 corridor and south of the interchange at US 17/92.

As of June 2024, Segment 3 is in the Design and ROW acquisition phases. Construction is not currently programmed.

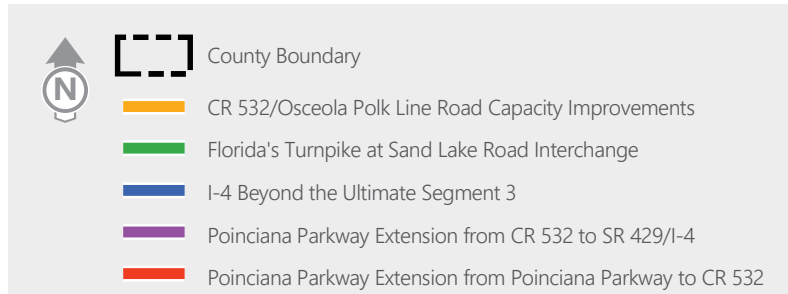
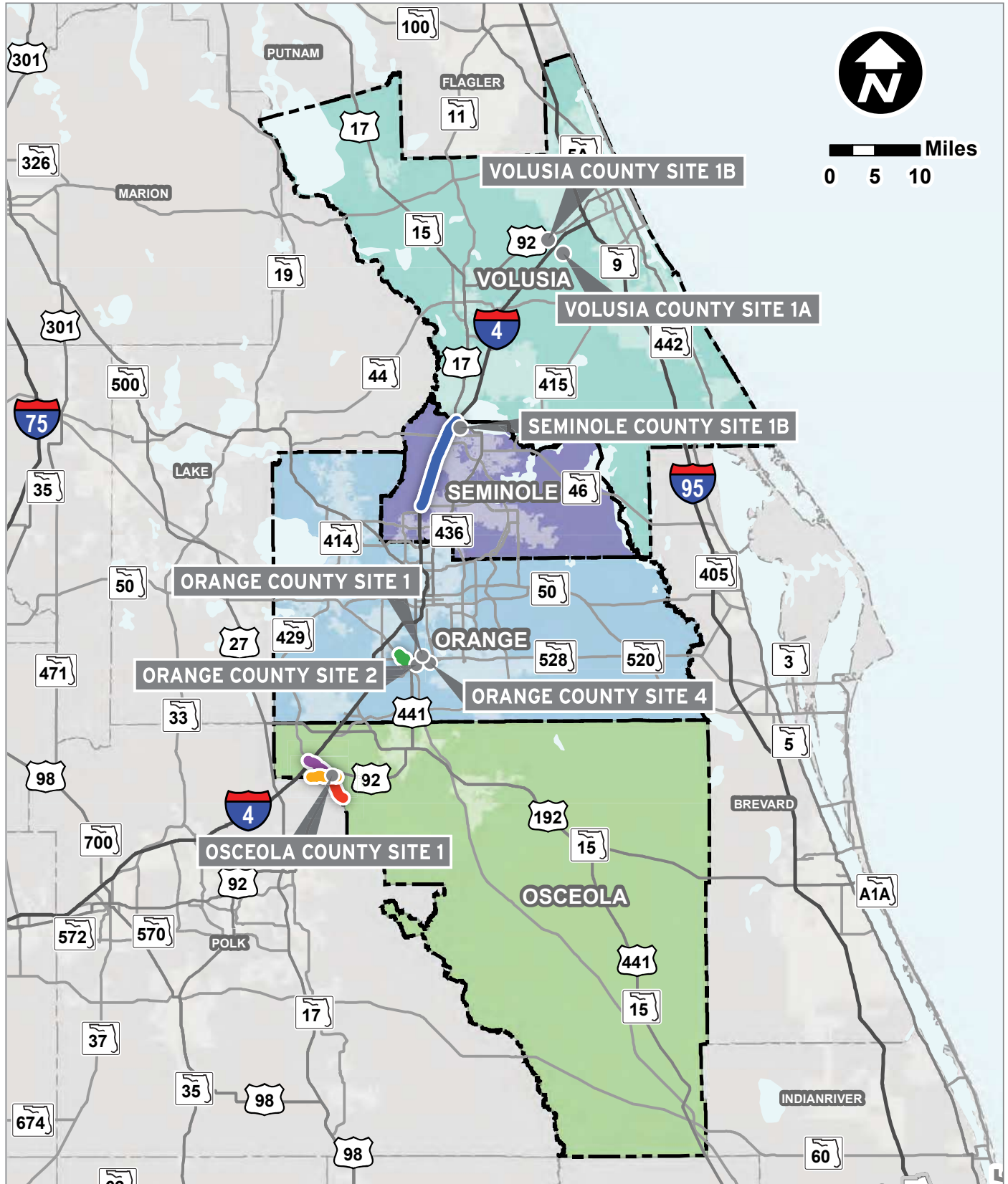


Figure 1-2

Related Projects Map
Preliminary Engineering Report

1.6 Description of Preferred Alternative

The following sections summarize the seven viable sites, including the five preferred sites described in Section 1.1 and two viable sites recommended for future project development (Orange County Site 2 and Orange County Site 4). Details for the sites are provided in Section 8 of the report. **Figure 1-1** illustrates the site locations within the Central Florida region, and **Figure 1-3** through **Figure 1-9** illustrate the site locations and their surrounding area. The site concept plans for the Preferred Alternative are included in **Appendix A**.

1.6.1 Viable Sites Identified for Future Projects

Two viable sites located in Orange County were identified for future project development. Further analysis and environmental documentation is recommended for the two sites if future project development is programmed. The following is a description of the two viable sites.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

Orange County Site 2 (**Figure 1-3**) is located along West Landstreet Road approximately 5.5 miles east of I-4. The site is proposed in a heavy industrial area along West Landstreet Road in the northwest corner and adjacent to the SR 528 interchange. I-4 can be accessed via Florida’s Turnpike, approximately 0.25 miles from the site. Alternatively, I-4 can be accessed via West Landstreet Road, US 441, and Sand Lake Road. The Orange County Site 2 will supply 59 truck parking spaces and a restroom building. An eight-foot sidewalk surrounding the truck parking site will be included to allow pedestrians to safely walk from their individual truck parking spot to the restroom building and to provide connection from the site to the sidewalk along West Landstreet Road.

The viable site is anticipated to require approximately 6.8 acres of ROW, impacting one parcel. No relocations are anticipated for the viable site. Access to the site will be provided with a new stop-controlled driveway on West Landstreet Road. Modifications to the existing directional opening on West Landstreet Road in the vicinity of the viable truck parking site will be required to provide an eastbound left turn for site access.

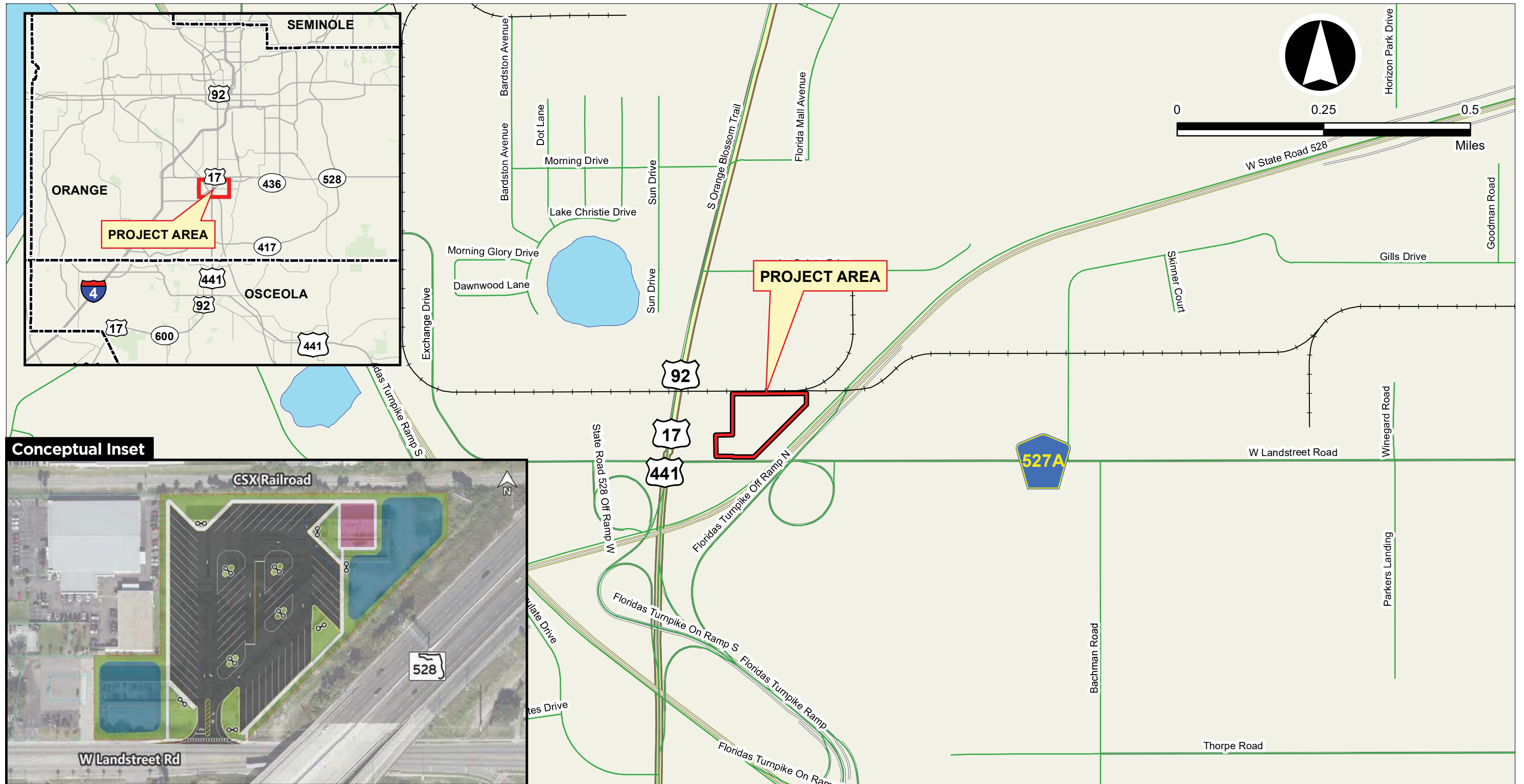
The viable Orange County Site 2 will include two wet detention stormwater ponds, with a combined pond area of 1.44 acres.

Orange County Site 4 – West Landstreet Road, East of SR 528

Orange County Site 4 (**Figure 1-4**) is located along West Landstreet Road approximately 6.8 miles east of I-4. The site is proposed in a heavy industrial area along the north side of West Landstreet Road, approximately 1.2 miles east of SR 528 and west of Trussway Boulevard. I-4 can be accessed via Florida’s Turnpike. Alternatively, I-4 can be accessed via West Landstreet Road, US 441, and Sand Lake Road. The Orange County Site 4 will supply 48 truck parking spaces. Due to the small size of the truck parking facility, no restroom facilities are assumed at this site. An eight-foot sidewalk surrounding the truck parking site will be included to allow pedestrians to safely walk from their individual truck parking spot to the existing five-foot sidewalk along West Landstreet Road.

The viable site is anticipated to require approximately 4.9 acres of ROW, impacting one parcel. One business relocation is anticipated for the viable site. Access to the site will be provided with a new stop-controlled driveway on West Landstreet Road, approximately 0.09 mile (450 feet) west of the Trussway Boulevard intersection. No access or median modifications on West Landstreet Road are proposed for the viable truck parking site.

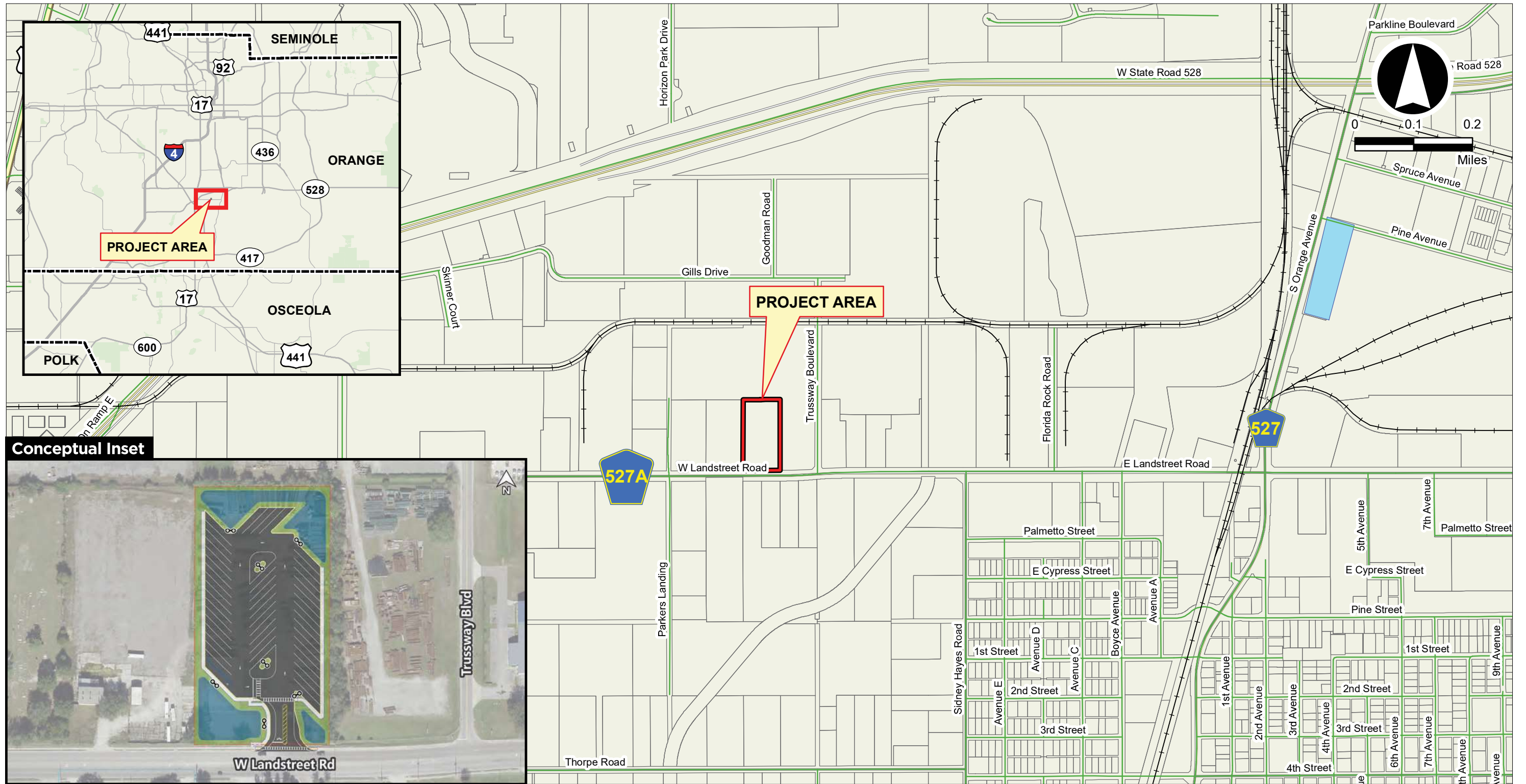
The viable Orange County Site 4 will include three wet detention stormwater ponds, with a combined pond area of 0.91 acres.



- LEGEND**
- Site Boundary
 - Parcels
 - Streets
 - Public Lands
 - Railroads
 - Waterbodies

- CONCEPTUAL INSET LEGEND**
- Pond
 - Restroom Facility
 - Sidewalk
 - Proposed Right-of-Way
 - Property Lines
 - Lighting

FDOT **Figure 1-3**
Orange County Site 2
Project Location
 Preliminary Engineering Report



- LEGEND**
- Site Boundary
 - Streets
 - Railroads
 - Parcels
 - Public Lands
 - Waterbodies

- CONCEPTUAL INSET LEGEND**
- Pond
 - Sidewalk
 - Proposed Right-of-Way
 - Property Lines
 - Lighting

FDOT **Figure 1-4**
Project Location Map
Orange County Site 4
 Preliminary Engineering Report

1.6.2 Preferred Sites

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

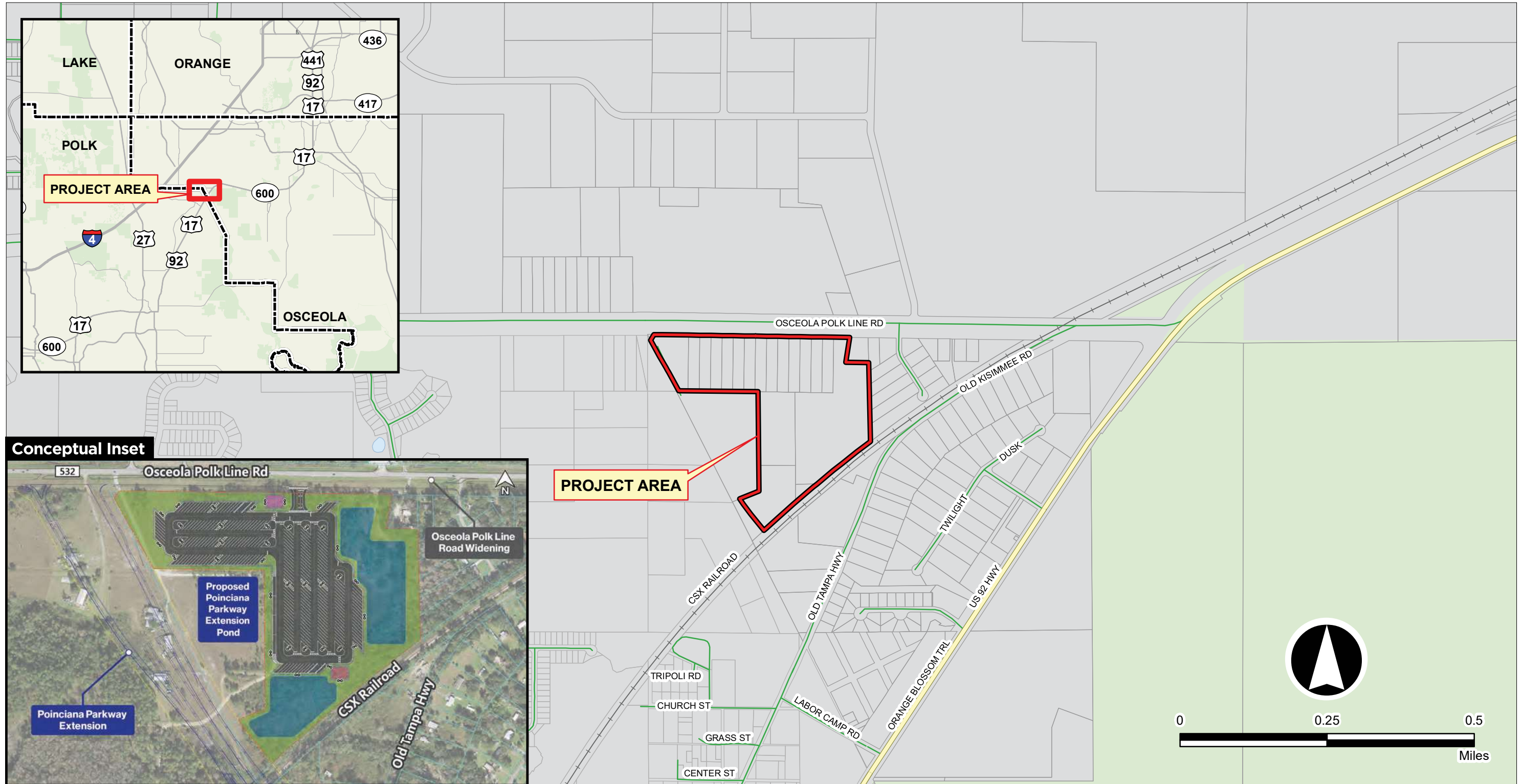
Osceola County Site 1 (**Figure 1-5**) is located approximately 3.87 miles east of the I-4 interchange with CR 532 along the south side of CR 532. The preferred site is immediately east of the planned PPE, which is in the Design phase as of June 2024, and located south of the planned CR 532 widening project, which completed the Design phase as of June 2023. The site is planned to be developed around a proposed pond for the PPE. This site would be bordered by the PPE, CR 532, and CSX Railroad, providing access to I-4 as well as other high freight corridors including the PPE, CR 532, and US 17/92.

Osceola County Site 1 will supply 234 truck parking spaces (four of which will be oversized); a centralized restroom building which will accommodate restroom facilities, vending machines, and an office for security staff. Eight-foot sidewalks will be provided around the preferred site to allow pedestrians to safely walk from their individual truck parking spot to the restroom building and to provide connection from the site to the sidewalks along CR 532, to be installed during the widening project. Proposed landscaping and green spaces adjacent to the restroom building will include picnic areas/shelters. Fencing and landscaping is proposed around the perimeter of the truck parking area. CCTV monitoring will be provided throughout the site, and a TPAS will be installed to inform truck drivers on I-4 of the availability of parking spaces at the truck parking site. The site will also include other design features such as dumpster storage enclosures, pet walk areas, windshield wash stations and oversize truck parking spaces as feasible, based on further evaluation during the Design phase. During the Design phase, FDOT plans to include necessary conduit infrastructure in the site design to facilitate a combination of shore power (electrical outlets for truck parking to eliminate the need to idle on site) and EV charging stations for a minimum of 15% of the total truck parking spaces at each site.

The preferred site is anticipated to require approximately 40.1 acres of ROW, impacting a total of 18 parcels. No relocations are anticipated for the preferred site. Access to the site will be located along CR 532, approximately 0.66 miles west of the intersection with US 17/92. A new signalized entrance on CR 532 is proposed for the site access, which will require a new median opening once the CR 532 widening is constructed. There is a gas easement located on the western side of the site. This easement will be maintained.

The preferred Osceola County Site 1 will include two wet detention stormwater ponds, with a combined pond area of 11.38 acres. The CR 532 widening project adjacent to the site includes construction of a new wet detention stormwater pond on the preferred site. Since this pond will need to be removed to accommodate the preferred site, compensation has been provided for the lost pond volume.

A VE Study was conducted in July 2023, which led to site recommendations, including a modified site layout for Osceola County Site 1. During the Design phase, FDOT will modify the site layout to centralize the restroom for Osceola County Site 1. Per the VE Study, this will minimize walking distance to the restroom building, reduce the utility and maintenance costs, and centralize the security area.



LEGEND

- Site Boundary
- Streets
- Railroads
- Parcels
- Public Lands
- Waterbodies

CONCEPTUAL INSET LEGEND

- Pond
- Restroom Facility
- Sidewalk
- Lighting
- Property Lines
- Proposed Right-of-Way
- Poinciana Parkway Extension Proposed Right-of-Way



Figure 1-5
Project Location Map
Osceola County Site 1
 Preliminary Engineering Report

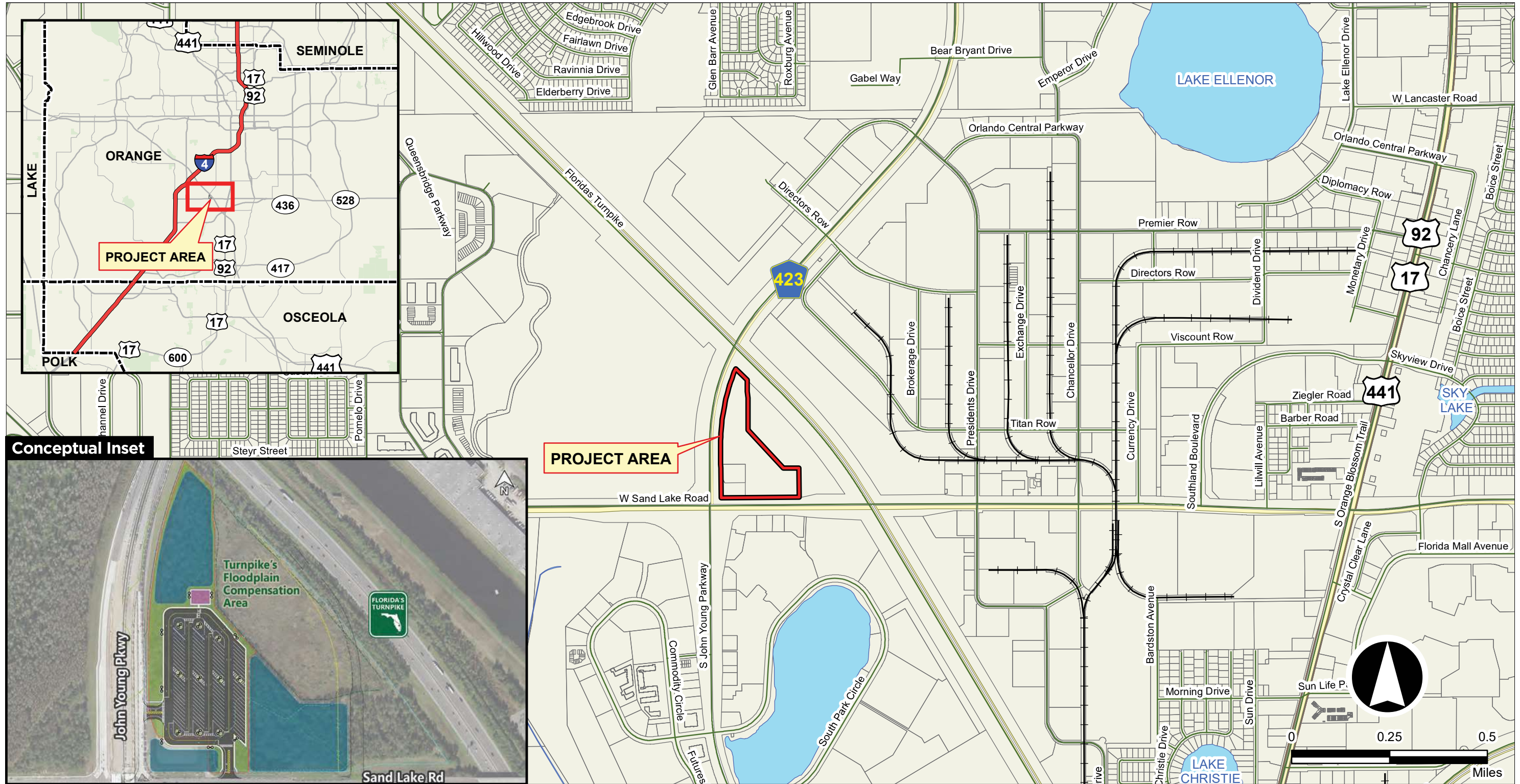
Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 (**Figure 1-6**) is located along Sand Lake Road approximately 2.90 miles east of I-4. The site is proposed on the northeast corner of Sand Lake Road and John Young Parkway immediately west, and adjacent to, Florida's Turnpike. As part of a separate project, Florida's Turnpike is adding a new interchange with Sand Lake Road, which will increase access to this truck parking site. Orange County Site 1 will supply 93 truck parking spaces and a building which will house restroom facilities, vending machines, and an office for security staff. Eight-foot sidewalks will be provided around the preferred site to allow pedestrians to safely walk from their individual truck parking spot to the restroom building and to provide connection from the site to the sidewalk along Sand Lake Road, to be installed during the Florida's Turnpike interchange project. Proposed landscaping and green spaces adjacent to the restroom building will include picnic areas/shelters. Fencing and landscaping is proposed around the perimeter of the truck parking area. CCTV monitoring will be provided throughout the site, and a TPAS will be installed to inform truck drivers on I-4 of the availability of parking spaces at the truck parking site. The site will also include other design features such as dumpster storage enclosures, pet walk areas, windshield wash stations and oversize truck parking spaces as feasible, based on further evaluation during the Design phase. During the Design phase, FDOT plans to include necessary conduit infrastructure in the site design to facilitate a combination of shore power (electrical outlets for truck parking to eliminate the need to idle on site) and EV charging stations for a minimum of 15% of the total truck parking spaces at each site.

The preferred site area is approximately 16.3 acres and is anticipated to require approximately 14.6 acres of ROW, impacting a total of two parcels. A portion of the site is an existing pond jointly owned by FDOT and Orange County. No relocations are anticipated for the preferred site. Access to the site will be provided with two unsignalized driveways (right-in/right-out) on John Young Parkway and on Sand Lake Road. The new driveway on Sand Lake Road is located approximately 480 feet west of the proposed Turnpike off-ramp to Sand Lake Road. The second driveway connects to the John Young Parkway northbound off-ramp (frontage road) and is located approximately 440 feet north of the John Young Parkway and Sand Lake Road intersection. No access or median modifications are proposed on either Sand Lake Road or John Young Parkway to accommodate the preferred truck parking site.

The preferred Orange County Site 1 will include two wet detention stormwater ponds, with a combined pond area of 5.01 acres. An existing wet detention pond in the southwest corner of the site currently serves as the stormwater management system for portions of John Young Parkway and Sand Lake Road. The existing pond will be removed with the construction of the preferred site; therefore, treatment and attenuation volumes must be replaced in kind, and the proposed stormwater ponds will serve as a joint-use stormwater management facility between the preferred site and John Young Parkway and Sand Lake Road.

The site is adjacent to the new proposed off-ramp from Florida's Turnpike to Sand Lake Road (FPID: 433633-1), which was let in March 2024, and includes construction of stormwater treatment ponds which overlap the preferred Orange County Site 1. The 5.62-acre pond proposed for the Turnpike project was configured as part of the Preferred Alternative for Orange County Site 1 to optimize the number of truck parking spaces. As construction of the Turnpike pond is anticipated to begin in Spring 2024, the future pond modification will be verified in the Design phase for Orange County Site 1.



- LEGEND**
- Site Boundary
 - Streets
 - Railroads
 - Parcels
 - Public Lands
 - Waterbodies
 - Restroom Facility
 - Proposed Right-of-Way
 - Turnpike Proposed Right-of-Way
 - Sidewalk
 - Lighting
 - Wetlands

- CONCEPTUAL INSET LEGEND**
- Pond
 - Property Lines

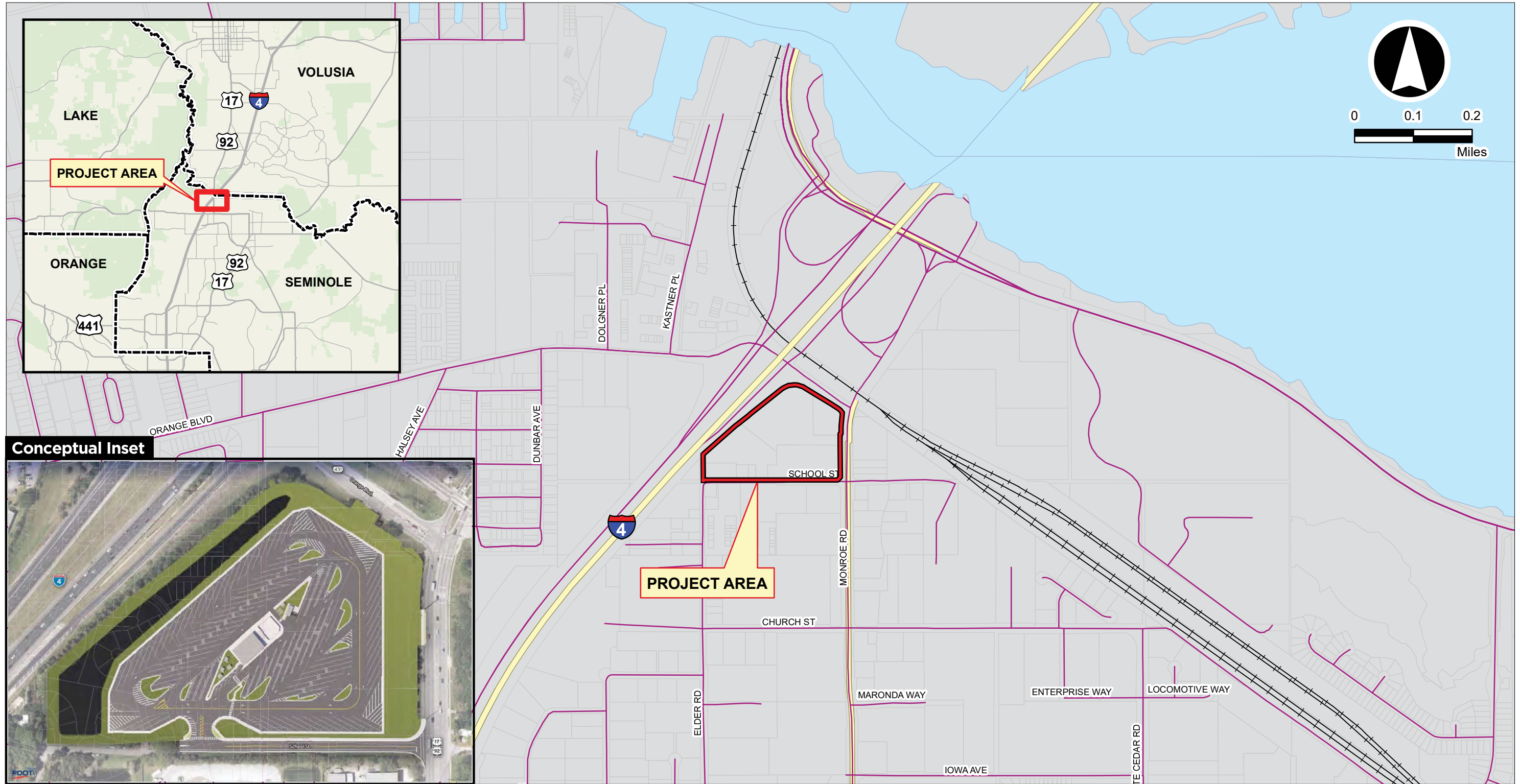
FDOT **Figure 1-6**
Project Location Map
Orange County Site 1
 Preliminary Engineering Report

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B (**Figure 1-7**) is located adjacent to eastbound I-4 and southeast of the I-4 and US 17/92 interchange in unincorporated Seminole County, immediately outside the Sanford city limits. In the existing condition, the site can access I-4 via US 17/92 (0.45 miles) and via SR 46 (1.85 miles). Additionally, there are planned I-4 BtU improvements at the I-4 and US 17/92 interchange, which will modify access to I-4 through a reconfigured ramp adjacent to the site. Following the I-4 BtU construction, the distance to I-4 via US 17/92 will be shortened to 0.25 miles. The preferred site will supply 132 truck parking spaces, a centralized restroom building which will accommodate restroom facilities, vending machines, and a security office. The site will include other features such as dumpster storage enclosures, pet areas, a windshield wash, and an air compressor. Lighting and CCTV monitoring will be provided throughout the site, and a TPAS will be installed to inform truck drivers on I-4 of the availability of parking spaces at the truck parking site. Necessary conduit infrastructure will also be included in the site design to facilitate a combination of shore power (electrical outlets for truck parking to eliminate the need to idle on site) and EV charging stations for a minimum of 15% of the total truck parking spaces at each site. Fencing and landscaping will be provided around the perimeter of the truck parking site as well as greenspace areas surrounding the restroom building and within parking islands.

The preferred site is anticipated to require approximately 17.4 acres of ROW, impacting a total of seven parcels, and requiring up to three relocations. A large, raised berm at the northeast corner of the site along Orange Boulevard is proposed to decrease the visibility of the site to nearby properties. Access to the site will be provided with a stop-controlled entrance on School Street. A raised traffic separator on School Street just west of the site entrance is proposed to prevent trucks leaving the site from heading westbound on School Street and ultimately traveling on the narrower Elder Road. The median modification will still allow passenger vehicles to travel on School Street from US 17/92 to Elder Road.

The preferred Seminole County Site 1B will include two stormwater ponds (one wet detention and one dry retention), with a combined area of 3.73 acres. As of June 2024, Seminole County Site 1B is under Design as part of the Truck Parking Central Corridor – Seminole County Site (FPID 446445-1).



- LEGEND**
- Site Boundary
 - Streets
 - Railroads
 - Parcels
 - Public Lands
 - Waterbodies

- CONCEPTUAL INSET LEGEND**
- Pond
 - Restroom Facility
 - Sidewalk
 - Property Lines
 - Proposed Right-of-Way
 - Raised Berm
 - Lighting

FDOT **Figure 1-7**
Project Location Map
Seminole County Site 1B
 Preliminary Engineering Report

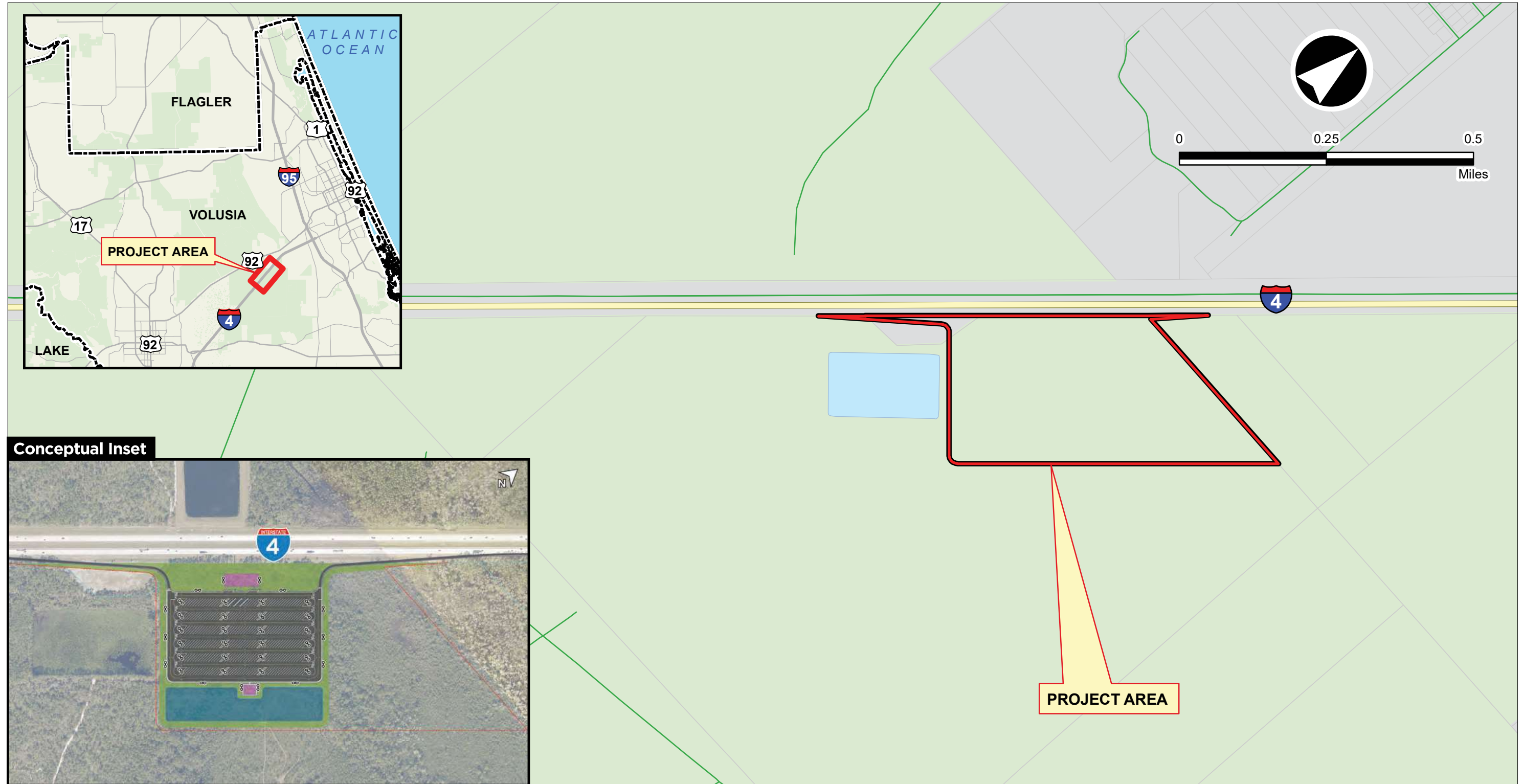
Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A (**Figure 1-8**) is located along I-4 Eastbound approximately 4.5 miles west of the I-95 interchange (approximate Milepost (MP) 23.112). The preferred site, located near the site of a former Volusia County rest area, will supply 275 truck parking spaces and a building which will house restroom facilities, vending machines, and an office for security staff. Eight-foot sidewalks will be provided around the preferred site to allow pedestrians to safely walk from their individual truck parking spot to the restroom building. Proposed landscaping and green spaces adjacent to the restroom building will include picnic areas/shelters. Fencing and landscaping is proposed around the perimeter of the truck parking area. CCTV monitoring will be provided throughout the site, and a TPAS will be installed to inform truck drivers on I-4 of the availability of parking spaces at the truck parking site. The site will also include other design features such as dumpster storage enclosures, pet walk areas, windshield wash stations and oversize truck parking spaces as feasible, based on further evaluation during the Design phase. During the Design phase, FDOT plans to include necessary conduit infrastructure in the site design to facilitate a combination of shore power (electrical outlets for truck parking to eliminate the need to idle on site) and EV charging stations for a minimum of 15% of the total truck parking spaces at each site.

The preferred site is anticipated to require 73.3 acres of ROW, impacting two parcels both publicly owned by the City of Port Orange. Wildlife fencing and wildlife sensitive lighting will be provided around the preferred site due to the proximity of the existing wildlife crossing at MP 22.583. An on- and off-ramp will be provided on I-4 Eastbound for direct access to and from Volusia County Site 1A. No local road access will be provided to the sites.

The preferred Volusia County Site 1A will include one wet detention stormwater pond (approximately 7.15 acres) located along the southeast parcel line. The proposed site includes a proposed conservation area adjacent to the fenced truck parking area, as the remaining area outside the limits of construction but within the proposed ROW. The conservation area will provide an enhanced natural buffer between the proposed truck parking area and the relocated wildlife jump-out location, thereby reducing the likelihood of truck-wildlife interactions. The conservation area (31 acres) is east of the truck parking area and will remain as existing (undeveloped) with no site clearing. A conservation easement over the conservation area will be coordinated in the design and ROW phases for the project.

A VE Study was conducted in July 2023, which led to site recommendations, including a modified site layout for Volusia County Site 1A. During the Design phase (ongoing as of June 2024), FDOT will modify the site layout to centralize the restroom for Volusia County Site 1A. Per the VE Study, this will minimize walking distance to the restroom building, reduce the utility and maintenance costs, and centralize the security area.



LEGEND

- Site Boundary
- Parcels
- Streets
- Public Lands
- Waterbodies

CONCEPTUAL INSET LEGEND

- Pond
- Restroom Facility
- Sidewalk
- Proposed Right-of-Way
- Property Lines
- Lighting



Figure 1-8
Project Location Map
Volusia County Site 1A
 Preliminary Engineering Report

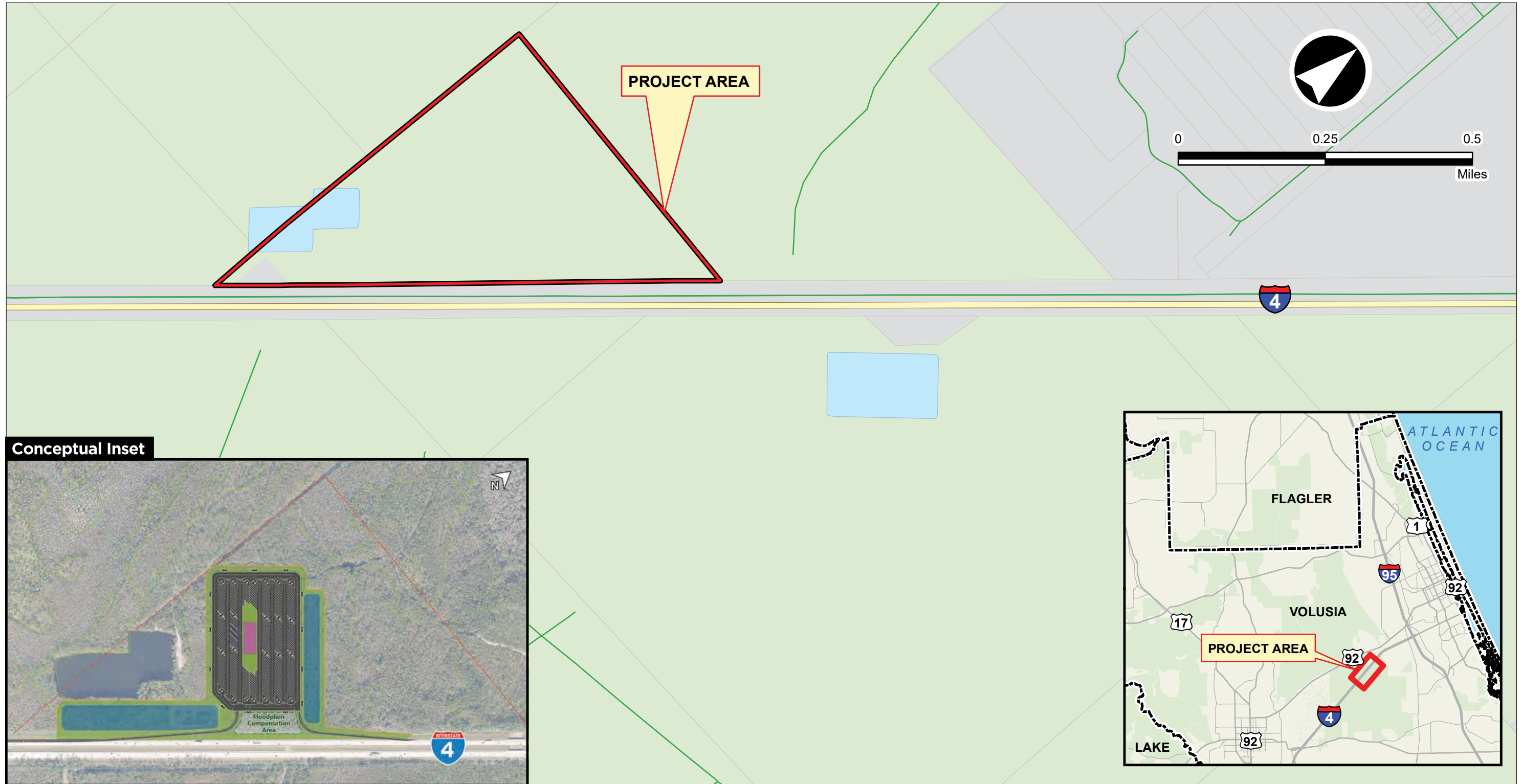
Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B (**Figure 1-9**) is located along I-4 Westbound approximately 4.5 miles west of the I-95 interchange (approximate MP 22.161). The preferred site will supply 253 truck parking spaces and a building which will house restroom facilities, vending machines, and an office for security staff. Eight-foot sidewalks will be provided around the preferred site to allow pedestrians to safely walk from their individual truck parking spot to the restroom building. Proposed landscaping and green spaces adjacent to the restroom building will include picnic areas/shelters. Fencing and landscaping is proposed around the perimeter of the truck parking area. CCTV monitoring will be provided throughout the site, and a TPAS will be installed to inform truck drivers on I-4 of the availability of parking spaces at the truck parking site. The site will also include other design features such as dumpster storage enclosures, pet walk areas, windshield wash stations and oversize truck parking spaces as feasible, based on further evaluation during the Design phase. During the Design phase, FDOT plans to include necessary conduit infrastructure in the site design to facilitate a combination of shore power (electrical outlets for truck parking to eliminate the need to idle on site) and EV charging stations for a minimum of 15% of the total truck parking spaces at each site.

The preferred site is anticipated to require 116.8 acres of ROW, impacting one parcel publicly owned by the City of Daytona Beach. Wildlife fencing and wildlife sensitive lighting will be provided around the preferred site due to the proximity of the existing wildlife crossing at MP 21.523. An on-ramp and off-ramp will be provided on I-4 Westbound for direct access to and from Volusia County Site 1B. No local road access will be provided to the sites.

The preferred Volusia County Site 1B will include two wet detention stormwater ponds for a combined area of 10.78 acres. Pond 1 is located adjacent to, and east of, the truck parking site and is 2.39 acres. The second pond will involve modification of existing Pond I, which was originally constructed with the I-4 widening project (FPID: 408464-2). Pond I will be expanded from its existing size (approximately 1.93 acres) to 8.39 acres, an increase of 6.46 acres. The site also includes one Floodplain Compensation Area (FPCA), a scraped down area that is hydraulically connected to the floodplain, located adjacent to and south of the truck parking site. The FPCA will provide 2.75 acre-feet of compensation.

The preferred site includes a proposed wildlife conservation area and contiguous wildlife corridor surrounding the fenced truck parking area, as the remaining area outside the limits of construction but within the proposed ROW. The conservation area will provide an enhanced natural buffer between the proposed truck parking and the proposed wildlife corridor. The proposed wildlife corridor (36.5 acres) is east of Pond 1 and extends from the existing I-4 wildlife crossing to the western boundary of the site. The proposed conservation area adjacent to the wildlife corridor and surrounding the truck parking site is approximately 43.2 acres. The proposed conservation and wildlife corridor totals approximately 79.7 acres of the 116.8 acre site and will remain as existing (undeveloped) with no site clearing. A conservation easement over the conservation area and wildlife corridor will be coordinated in the Design and ROW phases for the project. The Design phase for Volusia County Site 1B is ongoing as of June 2024.



LEGEND

- Site Boundary
- Parcels
- Streets
- Public Lands
- Waterbodies

CONCEPTUAL INSET LEGEND

- Pond
- Restroom Facility
- Sidewalk
- Property Lines
- Proposed Right-of-Way
- Wetlands
- Lighting



Figure 1-9

Project Location Map
Volusia County Site 1B
 Preliminary Engineering Report

1.7 List of Technical Documents

This report documents the existing conditions for the viable sites, summarizes the purpose and need for the project, provides an overview of the alternatives considered during the study, and details the Preferred Alternative and engineering aspects. The analysis of the preliminary engineering and environmental issues are documented in separate reports that have been prepared for this project and include the following:

Engineering Reports:

- Project Traffic Analysis Report (PTAR) - September 2022
- Conceptual Drainage Report - January 2024
- VE Study Report - October 2023

Osceola County Site 1

- Utilities Assessment Package (UAP) - October 2023

Orange County Site 1

- UAP - October 2023
- Location Hydraulics Technical Memorandum (LHR) - January 2024

Seminole County Site 1B

- UAP - October 2023

Volusia County Site 1A

- UAP - October 2023
- LHR - January 2024

Volusia County Site 1B

- UAP - October 2023
- LHR - January 2024

Environmental Reports:

- Air Quality Technical Memorandum (AQTM) - January 2024
- Noise Study Technical Memorandum (NSTM) - January 2024

Osceola County Site 1

- Contamination Screening Evaluation Report (CSER) - December 2023
- Cultural Resources Assessment Survey (CRAS) - April 2024
- Natural Resources Evaluation Technical Memorandum (NRE) - December 2023
- Type 2 Categorical Exclusion (Type 2 CE) - June 2024
- Sole Source Aquifer (SSA) Checklist - October 2023
- Water Quality Impact Evaluation (WQIE) Checklist - April 2024

Orange County Site 1

- CSER - December 2023
- CRAS - February 2024
- NRE - December 2023
- Type 2 CE - April 2024
- SSA Checklist - October 2023
- WQIE Checklist - April 2024

Seminole County Site 1B

- CSER Addendum - December 2023
- CRAS Addendum - April 2024
- NRE - September 2023
- Conceptual Stage Relocation Plan (CSRP) - January 2024
- Sociocultural Effects Evaluation (SCE) - January 2024
- Type 2 CE Reevaluation - June 2024

Volusia County Site 1A

- CSER - December 2023
- CRAS - February 2024
- NRE - December 2023
- Type 2 CE - June 2024
- SSA Checklist - October 2023
- WQIE Checklist - April 2024

Volusia County Site 1B

- CSER - December 2023
- CRAS - February 2024
- NRE - January 2024
- Type 2 CE - June 2024
- SSA Checklist - October 2023
- WQIE Checklist - April 2024

Public Involvement Reports

- Public Involvement Plan (PIP) - June 2022
- Comments and Coordination Report - July 2024

All of the reports listed here have been included in the project files for the individual truck parking sites as follows:

- Osceola County Site 1 (FPID: 446445-5-32-01)
- Orange County Site 1 (FPID: 446445-3-32-01)
- Seminole County Site 1B (FPID: 432100-1-22-01)
- Volusia County Site 1A (FPID: 446445-2-32-01)
- Volusia County Site 1B (FPID: 446445-4-32-01)

2

2. Methodology

This section summarizes the methodology utilized to determine viable freight parking sites along the I-4 corridor. The methodology was used to identify the potential sites evaluated during this PD&E Study (documented in Chapter 6). The methodology was developed after review of prior related planning studies and based on the previous District Five Truck Parking studies, as well as best practices and lessons learned derived from industry research and other freight parking sites within Florida.

2.1 Developing the Methodology

A methodology for identifying and evaluating potential sites was developed during this PD&E Study using existing research and documentation completed within the state. The following subsection summarizes each resource and the key content that contributed to the methodology development.

2.1.1 Previous District Five Freight Parking Studies

District Five Truck Parking Study – Phase 1 Final Report (2019)

The *District Five Truck Parking Study Phase 1 Report*, published in March 2019, involved significant stakeholder engagement with industry and planning partners to discuss truck parking demands and potential solutions. The national planning efforts, Florida planning efforts and existing truck parking inventory provided in the *Phase 1 Report* are briefly summarized below.

National Planning Efforts

The two national level efforts reviewed were the *Jason’s Law Truck Parking Survey* (2015) and the *American Transportation Research Institute (ATRI) Annual Survey*. Statewide freight parking efforts were reviewed for the following states: Virginia (2015), Minnesota (2010), Utah (2012), Wisconsin (2009), Colorado (2016), Kansas (2016), Michigan (2016), Pennsylvania (2007), New Jersey (2008), and British Columbia, Canada (2016). While the studies reviewed varied in their focus, all the studies recognized a need for truck parking. As such, there were four common methods explored for providing greater truck parking capacity and helping truck drivers locate available truck parking. First, most states evaluated ways of providing real-time information about parking availability to drivers. Second, variable message signs along the highway were the most frequently preferred means of providing this information, often in concert with other tools. Third, multiple states also looked at increasing truck parking capacity by using existing facilities, such as weigh stations and Park & Ride lots. Lastly, several states looked at providing financial incentives, like tax benefits or low-interest loans, to encourage the private sector to increase truck parking capacity.

Florida Planning Efforts

The *District Five Truck Parking Study Phase 1 Report* included a regional review of plans and policies. Within the document, eight completed planning efforts were studied, compared, and summarized to

provide local insights into truck parking needs and how other Florida metropolitan areas are addressing truck parking demand. The eight planning efforts reviewed are:

- Development of Truck Parking Facilities in Miami-Dade (Miami-Dade MPO, 2012)
- Statewide Commercial Motor Vehicle Parking Trends at Rest Areas (Florida International University, 2012)
- Central Florida Regional Freight and Goods Movement Study (MetroPlan Orlando, 2013)
- Districtwide Freight Truck Parking Inventory for District One (FDOT, 2017)
- District Four Truck Parking Supply and Demand Study (FDOT, 2017)
- Study for Turnpike Service Plazas and Tandem Truck Staging Lots
- Site Selection for I-4 Corridor Truck Service Plazas
- South Florida Truck Stop Analysis

The description of the studies, as documented in the Phase I report are as follows:

Three studies aimed to estimate the truck parking demand in their respective area. These studies included: *Development of Truck Parking Facilities in Miami-Dade*; *Statewide Commercial Motor Vehicle Parking Trends at Rest Areas*; and the *Study for Turnpike Service Plazas and Tandem Truck Staging Lots*. The studies observed the capacity of parking locations and reported truck counts and utilization. The FDOT rest area and weigh station study went on to develop Geographical Information Systems (GIS) and other software tools to complement the wireless vehicle detection system.

One study, *Development of Truck Parking Facilities in Miami-Dade*, focused on implementing truck parking throughout Miami-Dade County. Differing from the previous studies which focused on parking demand, this report analyzed, and estimated proposed parking sites and costs. In addition, the study included an action plan for developing truck parking in these locations.

Two studies, *Site Selection for I-4 Corridor Truck Service Plazas* and *South Florida Truck Stop Analysis*, focused on identifying truck parking locations that may support P3. The South Florida study incorporated interviews with truckers and operators, whereas the I-4 study did not; and was intended as a preliminary screening and review of vacant lands.

The *Central Florida Regional Freight and Goods Movement Study* focused on a comprehensive freight transportation inventory. The study did not account for Flagler or Marion Counties, nor did it address freight parking demand or associated needs.

The *Districtwide Freight Truck Parking Inventory for District One* investigated improved efficiency and safe freight movement in the region. Additionally, this study researched and identified current and planned freight parking facilities in District One. These efforts resulted in recommending utilization of the 1,320 available spaces within existing locations, collaborating with local agencies for potential expansion, and working with FDOT to explore utilization of unused state-owned sites.

The *District Four Truck Parking Supply and Demand Study* focused on truck parking supply and unmet demand. The study aimed to identify truck parking needs and how to address these needs to ensure the trucking industry has the necessary infrastructure to serve global hubs and domestic markets while complying with the driver hours of service regulations and the quality of life of communities.

For more information about truck parking and freight related studies conducted in Florida, as well as local noise ordinances and other details, see *Technical Report 1: Plans and Policies Review* that was completed as part of the *District Five Truck Parking Study Phase 1 Report*.

Existing Truck Parking Inventory

An inventory of existing truck parking was conducted for the *Phase 1 Report*, and sample truck parking demand observations were carried out at multiple locations. Once factors contributing to truck parking demand were identified and examined, the *District Five Truck Parking Study* developed a forecast of future truck parking demands. The study concluded with a discussion of truck parking needs, opportunities, and next steps. Several topics discussed in the *Phase 1 Report* were utilized in developing the methodology for the *Truck and Freight Alternative Site Analysis PD&E Study*. In particular, the Demand Estimation section, which discussed factors contributing to increased freight parking demand and included a review of freight intensive and truck trip generating land uses, was useful in identifying high-demand areas for freight parking.

As noted in Section 1.2, the *District Five Truck Parking Study's* examination of freight parking supply and demand along I-4, I-75, and I-95 illustrated the need for additional freight parking sites along I-4 to meet increasing demand through this vital Central Florida corridor.

District Five Truck Parking Study – Phase 2 Final Report (2021)

The *District Five Truck Parking Study Phase 2 Report*, published September 2021, developed a geospatial-based multi-criteria analysis to determine the most suitable areas for freight parking along I-4. The study included two tiers of analysis. The Tier 1 analysis was based on several key elements of land suitability, including:

- Proximity to I-4 interchanges,
- Freight destinations/clusters,
- Overutilized truck parking sites,
- Parcels suitable for truck parking,
- Adjacent land suitability,
- Potential for nearby crime, and
- Unauthorized truck parking hotspots.

The high-suitability candidate areas from Tier 1 were further evaluated in Tier 2 to assess how individual parcels or groups of parcels could be procured for development as a truck parking site.

2.1.2 Site Selection Guidance Technical Memorandum

The Site Selection Guidance Technical Memorandum was developed to inform the initial evaluation of parcels within the *Truck and Freight Alternative Site Analysis PD&E Study*. Based on a review of the 18 private freight parking locations that had been built and opened within the previous five years (2016 to 2021) in Florida, the technical memo identified key elements of the most recent freight parking sites. The review used environmental resource permitting documents from the relevant Water Management District to ascertain the following data:

- Permitting year,
- Land use designation,
- Zoning,
- Site acreage,
- Number of parking spaces,
- Land acquisition cost,
- Proximity to the nearest interstate exit, and
- Direct visibility to the nearest interstate/highway.

The prescribed site selection criteria included land use, zoning, site acreage, and proximity to I-4. The initial site selection criteria are described in more detail in Section 2.2.1.

The technical memo also included a review of zoning designations along I-4 that would allow for travel stops and similar uses. The list of accommodating zoning designations is provided in **Table 2-1**.

Table 2-1: Zoning Designations Along I-4 Which Allow Travel Stops

Municipality	Zoning Designation
Osceola County	CG – Commercial General CT – Commercial Tourist EC – Employment Commercial IR – Industrial Restricted
Orange County	I-1/I-5 – Industrial (low intensity industrial development) I-2/I-3 – Industrial (industrial development requiring locations near compatible neighbors, good transportation facilities and utilities) I-4 – Industrial (higher impact industrial development) C-3 – Wholesale Commercial
Lake Buena Vista (Reedy Creek Improvement District)	None
Orlando	AC-3 – Metropolitan Activity Center (conditional) IG – General Industrial
Eatonville	C-1 – Planned Commercial District (special exception use)
Seminole County	M-1A – Very Light Industrial M-1 – Industrial District M-2 – Impact-General Industrial
Altamonte Springs	I-L – Very Light Industrial
Longwood	None
Lake Mary	M-2A – Industrial District (conditional)
Sanford	No permitted zoning district officially listed. Similar land use, Major Equipment Rental is permitted in: RI-1 – Restricted Industrial MI-2 – Medium Industrial
Volusia County	B-5 – Heavy Commercial (special exception) B-6 – Highway Interchange Commercial (special exception) I-1 – Light Industrial I-2 – Heavy Industrial I-4 – Industrial Park
DeBary	I-1 – Light Industrial
Deltona	C-3 – Heavy Commercial (conditional) I – Industrial District
Orange City	I-1 – Light Industrial I-2 – Heavy Industrial
Lake Helen	None
DeLand	C-2 – General Commercial (special exception) M-1 – Industrial
Daytona Beach	BA – Business Automotive M-1 – Local Industry PD-G – Planned Development, General (subject to a PD Plan/Agreement) PD-RD – Planned Development, Redevelopment (subject to a PD Plan/Agreement)

2.2 Site Selection Methodology

This section describes the methodology for determining viable freight parking candidate sites. The analysis primarily consisted of two phases:

- Phase 1 – Primary Site Selection Criteria
- Phase 2 – Secondary Site Selection Criteria

The methodology and results of each phase are described in greater detail in the following subsections. The datasets used during the GIS analysis are detailed in **Appendix B**.

The freight parking candidate sites derived from this methodology are discussed in greater detail in Section 3.

2.2.1 Phase 1: Primary Site Selection Criteria

The methodology for identifying potential site candidates within the primary site selection criteria was developed using two tiers of analysis.

Tier 1 Analysis – Identify Candidate Parcels

Tier 1 utilized the primary site selection criteria established by the *Site Selection Guidance Technical Memorandum* to identify an initial set of qualifying parcels. **Table 2-2** identifies the primary site selection criteria derived from the *Site Selection Guidance Technical Memorandum*.

Table 2-2: Primary Site Selection Criteria – Tier 1

Criteria	Ideal Site
Land Use	Commercial, Industrial, Governmental (vacant or developed)
Zoning	Commercial or Industrial in accordance with Table 3-4
Site Area	8 – 20 acres
Proximity to I-4	Within 1 mile of an I-4 interchange
Access	Prime frontage, access, and visibility to intersecting arterial roadway

There were more than 77,000 parcels identified within one mile of an I-4 interchange. After filtering out all parcels that did not have a land use designation associated with either commercial, industrial, or governmental use, there were 586 parcels remaining. Individual parcels were not removed from consideration if they did not meet the minimum requirement of eight acres. This was intended to accommodate a cluster of smaller parcels that could be combined into a sufficiently large enough candidate parking site.

Additional consideration was given to public owned properties, industrial clusters, and access to connected major highways. In support of the primary selection criteria, local agency input was also used to help identify additional sites.

Tier 2 Analysis – Refinement of Candidate Parcels

Upon identifying potential candidate parcels that met the land use and distance requirements in Tier 1, an Esri ArcGIS Webmap was created for the study area that included a variety of environmental layers to be used in the Tier 2 analysis, including conservation lands, wetlands, threatened and endangered species habitats, and adjacent land uses. The 586 parcels that met the land use and distance requirements were exported as their own *Potential Parcels* shapefile and included in the webmap. The webmap allowed non-GIS reviewers to examine the parcel and environmental layers without needing to have technical

knowledge of GIS. Reviewers were given “write” access to the Potential Parcels layer within the webmap, allowing them to identify if parcels were truly candidate parcels. If a parcel or group of parcels had obvious fatal flaws, the reviewer could indicate the parcel was not a candidate. Additionally, if there was a question as to a parcel’s candidacy, the reviewer could mark that parcel for further review by others.

Some of the more common fatal flaws in that qualitative analysis included:

- Proximity to residential uses,
- Proximity to noise sensitive areas,
- Cost-prohibitive wetland impacts,
- Failure to meet the eight-acre minimum threshold for a cluster of parcels, and
- Significant conservation impacts that could not be offset.

Potential impacts to culturally relevant sites (e.g., cemeteries and historic sites) and public service facilities (e.g., fire, police, medical, post office) were also considered fatal flaws. Additionally, threatened and endangered species data was also reviewed, but typically the parcels’ proximity to the built environment limited the impact on habitats.

Based on the analysis described above, each parcel was ranked either “Remove” or “Further Review”. The study team then reviewed each parcel labelled as “Further Review” individually with FDOT Management and determined whether the sites should be kept or removed. Following the discussions with FDOT Management, only one site was kept; the Seminole County site.

Phase 1 Results

Based on the Tier 1 and Tier 2 analyses, one potential site in Seminole County was identified across the entire I-4 study area.

The potential sites did not include a location in Osceola County, Volusia County and the Primary Selection Criteria in Orange County did not allow the opportunity to address some of the County’s greatest areas of truck parking need. Consequently, the selection of viable freight parking sites based on the Primary Site Selection Criteria did not meet the Purpose and Need of this PD&E Study. For this reason, the land use component was expanded to include agricultural land uses adjacent to commercial or industrial future land use. Still, the sites resulting from the expanded criteria were deemed unfeasible upon further review.

The lack of sufficient alternative sites for further evaluation necessitated the expanded coverage conducted in Phase 2.

2.2.2 Phase 2: Secondary Site Selection Criteria

The *Secondary Site Selection Criteria Assessment* included additional consideration to public owned properties, industrial clusters, and access to connected major highways. In support of the primary selection criteria, local agency input was also used to help identify additional sites for review. The results of the *Secondary Site Selection Criteria Assessment* in Osceola, Orange, and Volusia County are summarized below.

Osceola County

In Osceola County, the *Proximity to I-4* criterion was expanded from one mile to three miles. This expanded coverage area produced a variety of additional candidate site options within Osceola County. However, many of these options were near residential/tourism land uses or within planned developments and had to be dismissed as viable candidates. Through coordination with local agency stakeholders, two potential candidate sites were identified for further evaluation along CR 532, near the Polk County border.

The sites are adjacent to the planned PPE, which would provide an additional connection to I-4 when constructed.

Orange County

In Orange County, the *Proximity to I-4* criterion was also expanded from one mile to three miles. However, due to compatibility issues, such as proximity to residential/tourism land uses or future planned development, the coverage area for potential freight parking sites in Orange County was also expanded to include other areas of major truck parking need within the County.

The major area of need is the industrial sector just west of the Orlando International Airport as part of the Phase 3 analysis. The industrial sector is generally bounded by John Young Parkway/Orange Blossom Trail (west), Sand Lake Road (north), Boggy Creek Road (east), and Central Florida Parkway (south).

While outside the three-mile distance to I-4, the industrial sector is adjacent to SR 528 and the Turnpike Mainline, two key freight corridors that provide connectivity between nearby I-4 and freight clusters to the east (SR 528) and to the north and south (Turnpike Mainline). The industrial sector is also a major freight destination. With appropriate wayfinding provided on I-4 approaching this area, drivers should be able to comfortably navigate to a freight parking site within the industrial sector.

Incorporating the industrial sector into the coverage area produced several potential candidate sites, seven of which were deemed viable through discussion with County and City staff. These are discussed in Section 3.

Volusia County

In Volusia County, the expanded coverage included government parcels along the I-4 corridor and not just near the interchanges. Two vacant parcels were found on either side of I-4 approximately 4.5 miles west of I-95. The parcel on the northwest (westbound) side of I-4 is owned by the City of Daytona Beach and the parcel on the southeast (eastbound) side of I-4 is owned by the City of Port Orange. The City of Daytona Beach has previously passed a resolution that does not allow truck parking locations within the city, however this site was considered far enough away from the city to be acceptable based on discussion with them. The City of Port Orange also agreed that the use of their parcel for truck parking would be acceptable. When combined, these two parcels were determined to constitute the only viable truck parking location in Volusia County.

2.2.3 Agency Input

Input regarding the project and potential site locations identified in Phases 1 and 2 was sought from the following stakeholder agencies along the study corridor.

- Seminole County (December 16, 2021)
- City of Sanford (December 16, 2021)
- City of Port Orange (January 5, 2022)
- Osceola County (January 14, 2022)
- City of Orlando (February 1, 2022)
- Orange County (February 4, 2022)
- The Florida's Turnpike (March 17, 2022)
- Central Florida Expressway Authority (March 18, 2022)
- Volusia County, City of Daytona Beach, and City of Port Orange (March 25, 2022)

2.3 Potential Sites Identified

Based on the methodology described above, twelve initial candidate sites were identified for further analysis in the *Truck and Freight Alternative Site Analysis PD&E Study*. These freight parking candidate sites are described in further detail in Section 6.3.2.

Osceola County:

- Osceola County Site 1 – CR 532 and PPE
- Osceola County Site 2 – CR 532 – Northside

Orange County:

- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Orange County Site 2 – West Landstreet Road, Adjacent to SR 528
- Orange County Site 3 – West Landstreet Road, East of SR 528 - Southside
- Orange County Site 4 – West Landstreet Road, East of SR 528 - Northside
- Orange County Site 5 – Tradeport Drive, West of Central Port Drive - Southside
- Orange County Site 6 – Tradeport Drive, East of Central Port Drive - Southside
- Orange County Site 7 – Tradeport Drive, East of Ringhaver Drive - Northside

Seminole County:

- Seminole County Site 1 – I-4 at US 17/92

Volusia County:

- Volusia County Site 1A (Eastbound) – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B (Westbound) – I-4 Westbound Direct Access, 4.5 miles west of I-95

After presenting the 12 initial sites to the public and obtaining feedback at a Public Information Meeting, additional desktop screening analysis was completed on the sites. As a result of the screening analysis and public/agency input, seven of the 12 initial sites were selected as viable sites. The key reasons for the selection of the viable sites, and the reasons for eliminating the non-viable sites from further consideration, are described below. Detailed descriptions of the seven viable sites, and evaluation matrices showing the reasons for their selection can be found in Section 6.3.3.

Osceola County

Osceola County Site 2 was eliminated from further consideration as the site configuration did not provide adequate truck parking capacity compared to Osceola Site 1. Osceola County Site 2 has a 50-foot Duke Energy Florida easement that has several large transmission poles in the middle of the site. To avoid impacting these transmission poles, the number of potential truck parking spots becomes greatly reduced. While both sites are approximately four miles away from I-4, Osceola County Site 1 is immediately east of the proposed PPE and will provide improved freight connectivity.

Orange County

Based on the screening analysis, Orange County Sites 3, 5, 6, and 7 were not selected as viable truck parking sites. Orange County Site 3 only allows for 26 total parking spots and is a substantial distance (6.77 miles) from I-4. Orange County Sites 5, 6, and 7 provide adequate parking capacity. However, the total estimated project cost of these sites is higher than other comparable sized truck parking sites. Additionally, these sites are between 11 and 12 miles away from I-4, which is significantly beyond the initial goal of selecting a site within one mile of I-4.

Orange County Sites 1, 2, and 4 were all identified as viable; all three provide adequate parking capacity for the estimated project cost of the sites and have low expected community and environmental impacts. Of these three sites, Sites 2 and 4 were not included in the Preferred Alternative due to lower cost benefit compared to Orange County Site 1. However, these sites are still viable for truck parking, and it is recommended that they be revisited in the future as parking demand increases or when funding becomes available.

Seminole County

After further evaluation, Seminole County Site 1 was split into two different configurations with the original Seminole County Site 1 becoming Seminole County Site 1A and a smaller configuration being Seminole County Site 1B. Seminole County Site 1A is a larger site and therefore, provides additional parking capacity. Seminole County Site 1B was selected as a viable site due to reduced project costs, residential impacts, and potential environmental impacts.

Volusia County

Two concepts for the Volusia County site were identified and analyzed. The sites are comprised of two parcels located approximately 4.5 miles west of I-95, Volusia County Site 1A is located on the south side of I-4 and can be accessed by eastbound traffic, and Volusia County Site 1B is located on the north side of I-4 and can be accessed by westbound traffic. Providing sites on both sides of I-4 at this location ensures that parking can be accessed by traffic in both directions without the need to construct a new bridge over I-4. The sites are recommended as viable due to direct I-4 access, regional freight connectivity, and they provide significant parking capacity (528 total spaces). The parcel with access to I-4 Eastbound provides 253 parking spaces, while the parcel with access to I-4 Westbound provides 275 parking spaces. The eastbound and westbound parcels would operate independently of one another, each with their own unique entrance and exit.

2.3.1 Preferred Sites

The viable sites were further analyzed and refined based on purpose and need, engineering feasibility, environmental effects, and economic feasibility. This detailed analysis (documented in Section 6.3.3) resulted in five preferred site locations for truck parking within Osceola, Orange, Seminole, and Volusia Counties.

The five preferred site locations are:

- Osceola County Site 1 – CR 532 and PPE
- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Seminole County Site 1B – I-4 at US 17/92
- Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Detailed descriptions of the five preferred sites can be found in Section 8.

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3. Existing Conditions

Detailed existing conditions were evaluated for the viable freight parking sites identified using the project methodology (Section 2) and alternatives analysis (Section 6). **This section summarizes the existing physical features for the seven viable truck parking sites evaluated as Build Alternatives.** Some of the existing features evaluated include site conditions, land use, access, traffic operations, drainage, soils, and existing environmental features.

3.1 Previous Planning Studies

Previous planning studies are summarized in Section 2 of this report related to site selection and initial alternatives screening. Additionally, related projects are summarized in Section 1.5 of this report.

3.2 Facilities

3.2.1 Viable Site Locations

The seven viable sites for which existing conditions data was collected are:

- Osceola County Site 1 – CR 532 and PPE
- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Orange County Site 2 – West Landstreet Road, Adjacent to SR 528
- Orange County Site 4 – West Landstreet Road, East of SR 528
- Seminole County Site 1B – I-4 at US 17/92
- Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

A full description of each site is included in Section 1.6.

3.2.2 Transportation Corridors

Interstate 4

I-4 is an interstate principal arterial extending from I-75 in Tampa to I-95 in Daytona Beach, for an overall length of approximately 132 miles. For most of its length, I-4 has a six-lane typical section, widening up to an eight- to ten-lane section through major metropolitan areas. The posted speed limit on I-4 varies from a maximum of 70 miles per hour (mph) in rural areas and less dense metropolitan areas to a minimum of 50 mph in dense metropolitan areas.

From just west of SR 435 (Kirkman Road) in southwest Orange County to SR 434 in south Seminole County, FDOT has recently constructed the *I-4 Ultimate Improvement Project* – a complete reconstruction of I-4

which included the new addition of four tolled express lanes (two in each direction) along the center of I-4 with four general use travel lanes in each direction.

Within District Five, I-4 has 39 interchanges: five in Osceola County, 20 in Orange County, seven in Seminole County, and seven in Volusia County. There is one truck-only rest area directly along I-4 in District Five just outside of the City of Longwood in Seminole County.

Florida's Turnpike

Florida's Turnpike is a tolled principal arterial expressway extending from Miami to I-75 in Wildwood. The Florida's Turnpike passes through the southwest quadrant of Orange County, intersecting with I-4 just north of the major tourist attractions and theme parks. Through the majority of Orange County, the Florida's Turnpike has an eight-lane typical section, occasionally decreasing to seven lanes, or increasing to up to 12 lanes. The posted speed limit on the Florida's Turnpike is 70 mph.

SR 528

SR 528 is a tolled principal arterial expressway extending from I-4 in southwest Orange County to US 1/SR 5 in the City of Cocoa. East of US 1/SR 5, SR 528 continues as a toll-free facility collocated with SR 524 from SR 520 to SR A1A/SR 401. SR 528 intersects with Florida's Turnpike in the industrial district in south Orange County. At its western end, in southwest Orange County, SR 528 primarily has an eight-lane typical section, occasionally decreasing to six lanes, or increasing to up to 10 lanes. The posted speed limit on SR 528 through southwest Orange County is 55 mph.

3.2.3 Truck Parking Facilities

Truck parking facility data within and adjacent to the study area was gathered in December 2023 from D5TransPort (<https://fdot-d5-transport.hdrgateway.com/default.html>) and the MetroPlan Orlando's 'Online Data Viewer' website (<https://metroplanorlando.org/maps-tools/dataviewer/>), where applicable. For the review of existing facilities, an approximate six-mile buffer was applied to the I-4 corridor within the study area to identify any nearby major truck parking facilities. Existing public truck parking locations near the I-4 corridor are provided in **Table 3-1**.

Along the I-4 corridor, there is only one gas station with public parking for retail customers and it is located in Seminole County adjacent to the I-4 and US 17/92 interchange with parking capacity for up to three commercial vehicles. As of June 2024, the combined public and private facilities with public parking along the I-4 corridor provide a maximum of 36 truck parking spaces.

Additionally, there are private truck parking facilities within the six-mile buffer outside the I-4 corridor that provide fee-based or subscription-based parking. These private facilities are located near other major roadways in Central Florida, such as Florida's Turnpike, SR 528, and SR 408. These private facilities support truck parking demand on these other major roadways, and as such, should not count as existing truck parking facilities that meet the required I-4 demand. Existing private truck parking locations outside the I-4 corridor and within the six-mile buffer are provided in **Table 3-2**.

Table 3-1: Public Truck Parking Facilities

Location Name	Turkey Lake Service Plaza	I-4 Eastbound Rest Area/Truck Parking Only Facility	I-4 Westbound Rest Area
County	Orange	Seminole	Seminole
Route	Florida’s Turnpike (SR 91)	I-4	I-4
Location (Approximate)	4 miles north of I-4/Florida’s Turnpike Interchange	2.5 miles north of the I-4/SR 434 Interchange	1 mile north of the I-4/SR 434 Interchange
Hours of Operation	24 hours per day	24 hours per day	24 hours per day
Includes Gas Station? (Y/N)	Yes	No	No
Overnight Parking? (Y/N)	Yes	Yes	Yes
Nighttime Security? (Y/N)	Yes	Yes	Yes
Designated Truck Parking Spaces	24	17	16
Utilization (%)	>100	76-100	>100
Other Amenities	Restrooms, Americans with Disabilities Act (ADA) accommodations, Convenience Store, Restaurants, Fuel Pumps, Pet Walk Area, Picnic Tables, Vending Machines, and Windshield Washing Station, EV Charging Station, electric charging (Duke Energy Park and Plug) and limited tire services.	ADA-compliant facilities, restrooms, picnic tables, drinking water, vending machines, pet exercise areas, facility lighting, traveler information displays (static), and telephones (either pay telephones or emergency-use telephones).	ADA-compliant facilities, restrooms, picnic tables, drinking water, vending machines, pet exercise areas, facility lighting, traveler information displays (static), and telephones (either pay telephones or emergency-use telephones).

Table 3-2: Private Truck Parking Facilities

Location Name	Acme Truck Stop #1	Acme Truck Stop #2	RaceTrac	Circle K Gas Station
County	Orange	Orange	Orange	Seminole
Route	US 441	SR 527	SR 527	Monroe Road
Location (Approximate)	1 mile south of the SR 528/Florida's Turnpike Interchange	2 miles east of the SR 528/Florida's Turnpike Interchange	2 miles east of the Florida's Turnpike/SR 528 Interchange	At the I-4/US 17/92 Interchange
Mileage to Nearest I-4 Interchange	4.8	7.1	6.7	0.5
Hours of Operation	6am-11pm	5am-10pm	24 hours per day	24 hours per day
Fee-Based/Subscription-Based Payment	Fee-Based (Daily)	Fee-Based (Daily)	No – Retail public use	No – Retail public use
Includes Gas Station? (Y/N)	Yes	Yes	Yes	Yes
Overnight Parking? (Y/N)	Yes	Yes	Yes	Yes
Nighttime Security? (Y/N)	Yes	No	Yes	No
Parking Spaces	120	10	30-40	3*
Utilization (%)	51-75	51-75	N/A	>100
Amenities	Restrooms, CAT/Certified/Weigh Scales, Convenience/Travel/Trucker Store, Laundry, Lighting, Paved Parking, Lounge Area, Fuel Pumps, Showers, Restaurants, Nighttime Security, Overnight Parking	Restrooms, Convenience Store, Laundry, Paved Parking, Fuel Pumps, Restaurants, Overnight Parking	Seating Area, Free Wi-Fi, Reserved Truck Parking, Restaurants, Fuel Pumps	Restrooms, Convenience Store, Paved Parking, Fuel Pumps

*Note: * The 2018 FDOT District Five Truck Parking Study Inventory of Existing Facilities reported three truck parking spaces at this location. These are not designated for public parking, but commercial vehicles routinely use this location for parking based on field reviews.*

Table 3-2: Private Truck Parking Facilities (Continued)

Location Name	Vantage Truck Parking	Discount Truck Parking	Taft Truck Parking and Storage	Orlando Truck Parking	JR's Orange City Truck Parking
County	Orange	Orange	Orange	Orange	Volusia
Route	Zell Drive	Saturn Boulevard	Sidney Hayes Road	Kirkman Road	Leveitt Avenue
Location (Approximate)	2 miles southeast of the Florida's Turnpike/SR 528 Interchange	2 miles south of the Florida's Turnpike/SR 528 Interchange	2 miles east of the Florida's Turnpike/SR 528 Interchange	At the SR 408/Kirkman Road Interchange	3 miles southwest of the I-4/SR472 Interchange
Mileage to Nearest I-4 Interchange	6.1	5.5	6.7	5.0	MP 114
Hours of Operation	24 hours per day	24 hours per day	8am-5pm	24 hours per day	24 hours per day
Fee-Based/Subscription-Based Payment	Fee-Based (Daily) and Subscription-Based (Monthly)	Subscription based	Subscription based	Fee-based	Subscription based/lease required
Includes Gas Station? (Y/N)	No	No	No	No	No
Overnight Parking? (Y/N)	Yes	Yes	Yes	Yes	Yes
Nighttime Security? (Y/N)	Yes	Yes	N/A	Yes	Unknown
Designated Truck Parking Spaces	421	>100	20	>100	80
Utilization (%)	N/A	N/A	N/A	N/A	N/A
Amenities	N/A	24/7 Lot Attendance, Air-Conditioned Offices, Restrooms	N/A	24-hour Access, Digital Video Surveillance, Drive-up Access, Dedicated Spots	N/A

3.2.4 Site Access

The existing roadways to access each of the proposed truck parking sites from I-4 are described below; there are no bridge facilities within any of the viable sites.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

This site is located south of existing CR 532, east of the proposed PPE, and north of the existing CSX Railroad. The PPE is proposed to connect the existing Poinciana Parkway from the south with CR 532 to the north. The PPE is planned to be a four-lane limited access facility with interchanges at US 17/92 and CR 532. A future phase of the PPE is being evaluated to connect the PPE at CR 532 north to I-4. At that time, the northbound off-ramp and southbound on-ramps will be removed and northbound on-ramp and southbound off-ramps will be provided.

CR 532 is an urban minor arterial with a two-lane rural, undivided typical section and a posted speed limit of 55 mph. As part of the *CR 532/Osceola Polk Line Road Capacity Improvements* project, the facility will be widened to four lanes, and the posted speed reduced to 40 mph. In the existing condition, there are no driveways or intersections to CR 532 at the site location.

Orange County Site 1 – Sand Lake Road at John Young Parkway

This site is east of John Young Parkway, north of Sand Lake Road, and southwest of the Florida's Turnpike. Both John Young Parkway and Sand Lake Road are six-lane urban divided arterials, while Florida's Turnpike is an eight-lane limited access facility. In the existing condition, there is one maintenance access driveway on Sand Lake Road to the existing pond from the site location and no access to John Young Parkway.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

This site is west of SR 528 and north of West Landstreet Road. Major corridors near the site are SR 528, Florida's Turnpike, and US 441. US 441 is an urban principal arterial with a six-lane urban, divided typical section and a posted speed limit of 45 mph. West Landstreet Road is a major urban collector with a five-lane urban typical section with a bi-directional left turn lane. The site is approximately 0.25 miles from Florida's Turnpike. In the existing condition, there is a driveway from Sand Lake Road just west of the site location.

Orange County Site 4 – West Landstreet Road, East of SR 528

This site is east of SR 528, north of West Landstreet Road, and just west of Trussway Boulevard. Major corridors near the site are SR 528, Florida's Turnpike, and US 441. The Florida's Turnpike is approximately 1.5 miles west of the site. In the existing condition, there is an existing driveway from West Landstreet Road at the site location.

Seminole County Site 1B – I-4 at US 17/92

The site is located east of, and adjacent to, I-4 just south of the I-4 and US 17/92 interchange. It is bounded by US 17/92 to the east, Orange Boulevard to the north, and School Street to the south. In the existing condition, there is an existing driveway on School Street, a driveway on US 17/92 (to Circle K), and a driveway on Orange Boulevard (to Circle K) at the site location.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

This site is located directly alongside I-4 Eastbound, approximately 4.5 miles west of I-95. The posted speed limit on I-4 in this area is 70 mph. There is no access ramp to the site from I-4.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

This is located directly alongside I-4 Westbound, approximately 4.5 miles west of I-95. The posted speed limit on I-4 in this area is 70 mph. There is no access ramp to the site from I-4. Maintenance access to this site location from I-4 is located adjacent to the drainage pond on the site. There is a gate provided for maintenance of the pond.

3.3 Functional & Context Classifications

FDOT assigns functional classifications to roadways based on their surrounding environments, ranging from Local to Principal Arterial - Interstate. FDOT defines functional classification as the assignment of roadways into systems according to the character of service they provide in relation to the total roadway network. Please see **Table 3-3** below for the functional classification for each site.

Table 3-3: Existing Functional Class Summary

County	Site	Access Road	Functional Classification
Osceola	1	CR 532	Minor Arterial Urban
Orange	1	Sand Lake Road	Minor Arterial Urban
	2	Landstreet Road	Major Collector Urban
	4	Landstreet Road	Major Collector Urban
Seminole	1B	US 17/92	Major Collector Urban
		School Street	Local Urban*
Volusia	1A	I-4 Eastbound	Principal Arterial – Interstate Rural
	1B	I-4 Westbound	Principal Arterial – Interstate Rural

*FDOT does not define a functional classification for these roads, therefore a functional classification was determined based on a desktop review of the surrounding area.

FDOT assigns context classifications to roadways based on their surrounding environments, ranging from Natural (C1) to Urban Core (C6). Since the area surrounding a corridor determines the context class assigned to the roadway, the context classification of the access roadways to each viable site can be used as an approximate descriptor for the area surrounding each site, please see **Table 3-4** below.

Table 3-4: Existing Context Class Summary

County	Site	Access Road	Context Classification	Context Classification Description
Osceola	1	CR 532	C3R*	Mostly residential uses within large blocks and a disconnected or sparse roadway network.
Orange	1	Sand Lake Road	C3C	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.
	2	Landstreet Road	C3C*	
	4	Landstreet Road	C3C*	
Seminole	1B	US 17/92	C3C	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.
		School Street	C3C*	
Volusia	1A	I-4	C2*	Sparsely settled lands, may include agricultural land, grassland, woodland, and wetlands.
	1B	I-4	C2*	

*FDOT does not define a context classification for these roads, therefore a context classification was determined based on a desktop review of the surrounding area.

3.4 Access Management Classification

The FDOT classifies access on state roadways using a seven-tier access management system established in *Chapter 14-97, Administrative Rule of the Department of Transportation, State Highway System Access Management Classification System and Standards (Rule 14-97)*. The classification system ranges from Access Class 1, reserved for limited access freeways, to Access Class 7, assigned to lower priority state highways in areas that are already highly urbanized. This classification system assigns standards for driveway connections, spacing, median opening spacing, and signal spacing.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County has adopted FDOT Access Management standards for county and local roadways. The Access Class for the future widened CR 532 will be Access Class 5.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Sand Lake Road and John Young Parkway are Access Class 3 within the study area.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

West Landstreet Road does not meet requirements for FDOT Access Management Classification within the study area.

Orange County has adopted FDOT Access Management standards for county and local roadways similar to the FDOT Access Management standards. Landstreet road is an Access Class 6 within the study area.

Orange County Site 4 – West Landstreet Road, East of SR 528

West Landstreet Road does not meet requirements for FDOT Access Management Classification within the study area.

Orange County has adopted FDOT Access Management standards for county and local roadways, similar to the FDOT Access Management standards. Landstreet road is an Access Class 6 within the study area.

Seminole County Site 1B – I-4 at US 17/92

The US 17/92 designation was shifted to travel along Monroe Road rather than Seminole Boulevard. As of June 2024, the access class for US 17/92 (Monroe Road) has not been determined. School Street does not meet requirements for FDOT Access Management Classification within the study area.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

I-4 is Access Class 1 within the study area.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

I-4 is Access Class 1 within the study area.

3.5 Right-of-Way

The available ROW for the access roads in the direct vicinity of each site was estimated based on the Property Appraiser’s parcel data for each county. The estimated existing ROW is summarized in **Table 3-5**.

Table 3-5: Existing ROW Summary

County	Site	Access Road	Available ROW (ft)
Osceola	1	CR 532	200
Orange	1	Sand Lake Road	Varies (240 – 440)
		John Young Parkway	350
	2	Landstreet Road	Varies (87 – 92)
	4	Landstreet Road	95
Seminole	1B	US 17/92	Varies (104 – 114)
		School Street	Varies (30 – 53)
Volusia	1A	I-4 Eastbound	Varies (312 – 322)
	1B	I-4 Westbound	Varies (312 – 322)

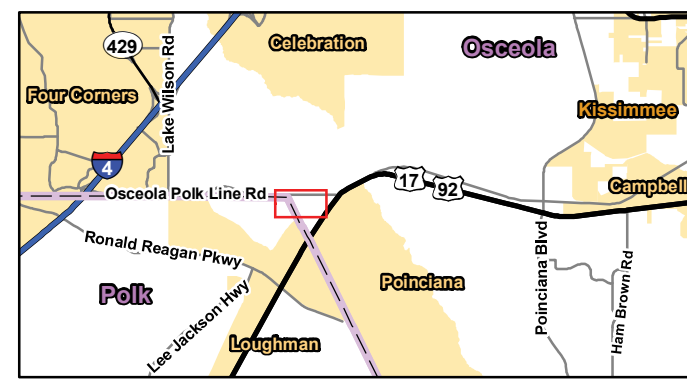
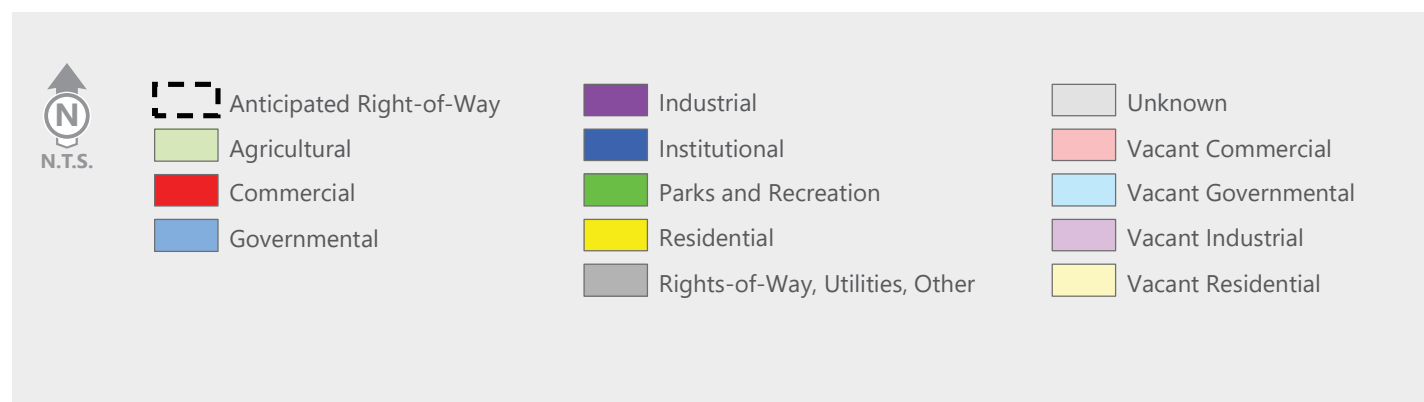
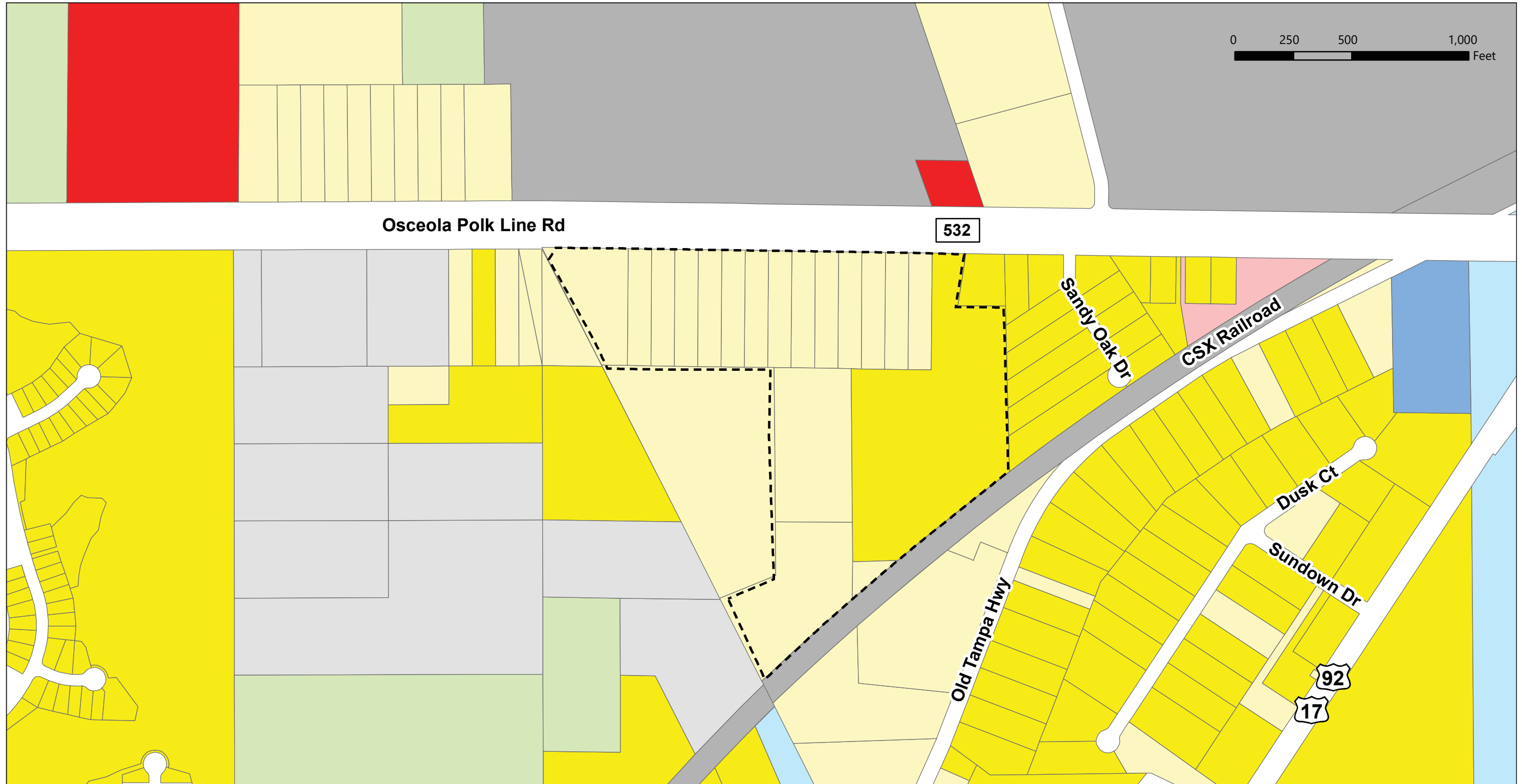
3.6 Adjacent Land Use

The existing land use data was gathered from the *Orange County Property Appraiser (2021)*, *Osceola County Property Appraiser (2021)*, *Seminole County Property Appraiser (2021)*, and *Volusia County Property Appraiser (2021)*, accessed in June 2022. **Table 3-6** describes the existing land uses found within the proposed ROW of the viable sites.

Figure 3-1 through **Figure 3-6** display the land use surrounding the viable sites.

Table 3-6: Existing Land Use Within ROW

County	Site	Land Use	Parcels	Total Acres	Percent of Total
Osceola	1	Residential	1	13.1	31.82%
		Vacant Residential	17	28.2	68.18%
		Total	18	41.3	100.00%
Orange	1	Vacant Governmental	2	14.6	100.00%
		Total	2	14.6	100.00%
	2	Vacant Commercial	2	6.8	100.00%
		Total	2	6.8	100.00%
	4	Industrial	1	4.9	100.00%
		Total	1	4.9	100.00%
Seminole	1B	Commercial	2	8.2	44.51%
		Industrial	1	0.03	0.16%
		Residential	2	0.7	3.99%
		Vacant Commercial	3	9.2	50.14%
		Vacant Residential	1	0.2	1.20%
		Total	9	18.3	100.00%
Volusia	1A	Vacant Governmental	3	73.6	100.00%
		Total	3	73.6	100.00%
	1B	Vacant Governmental	1	116.7	100.00%
		Total	1	116.7	100.00%



FDOT **Figure 3-1**
Osceola County Site 1
Existing Land Use
 Preliminary Engineering Report

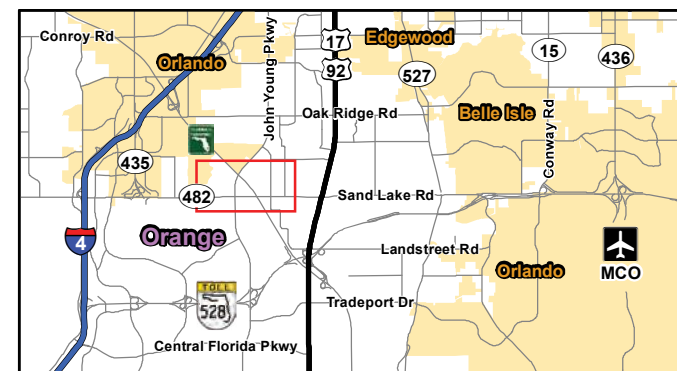
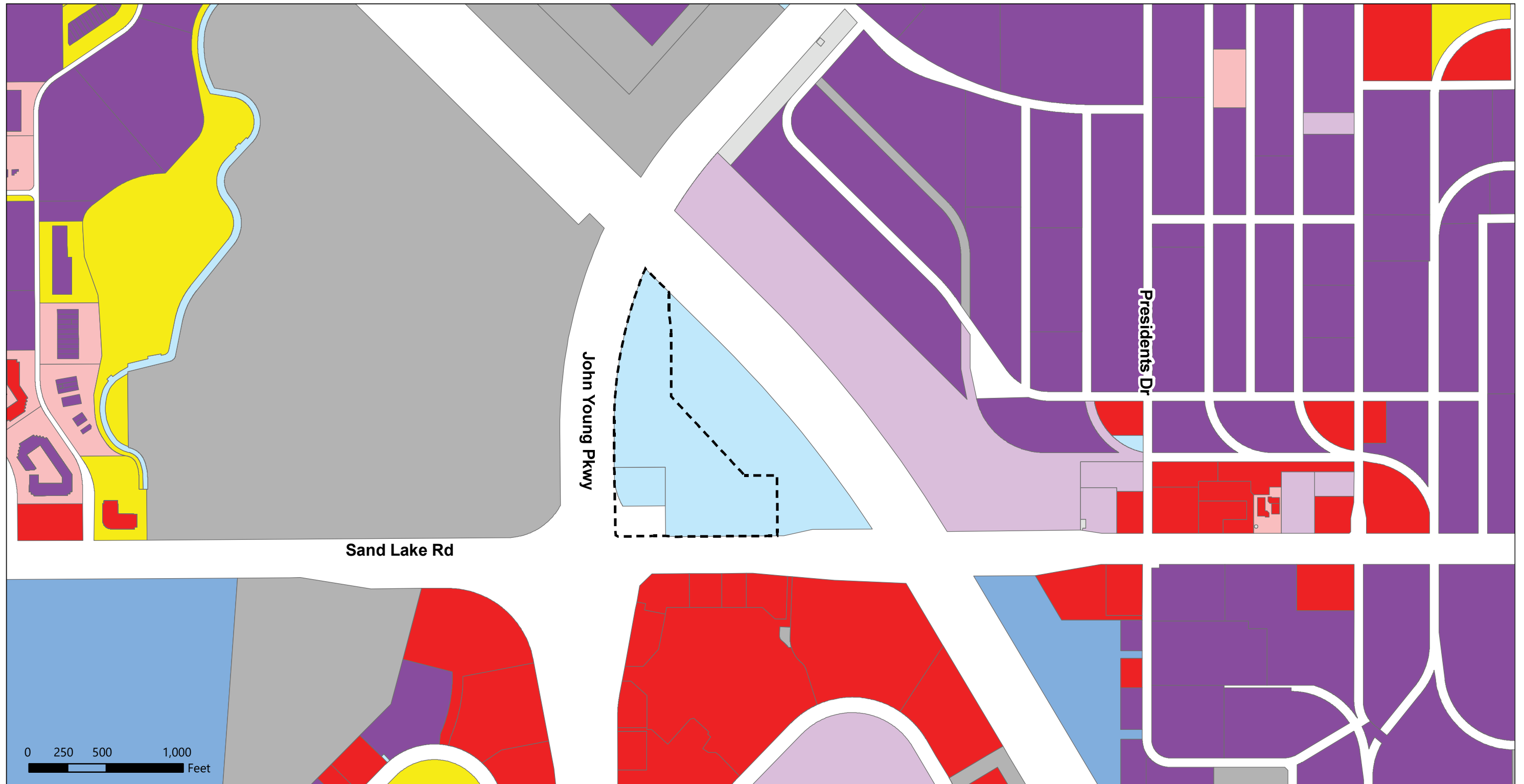


Figure 3-2
Orange County Site 1
Existing Land Use
 Preliminary Engineering Report

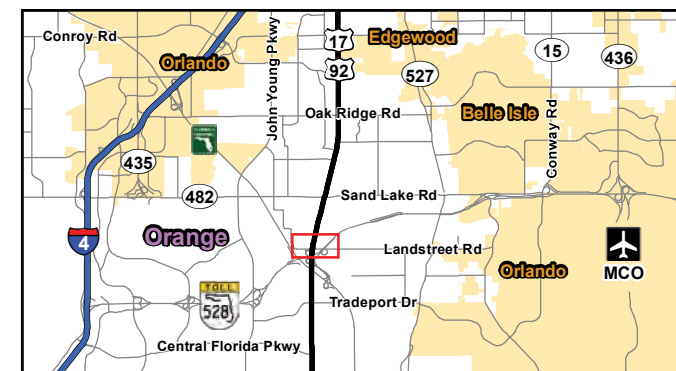
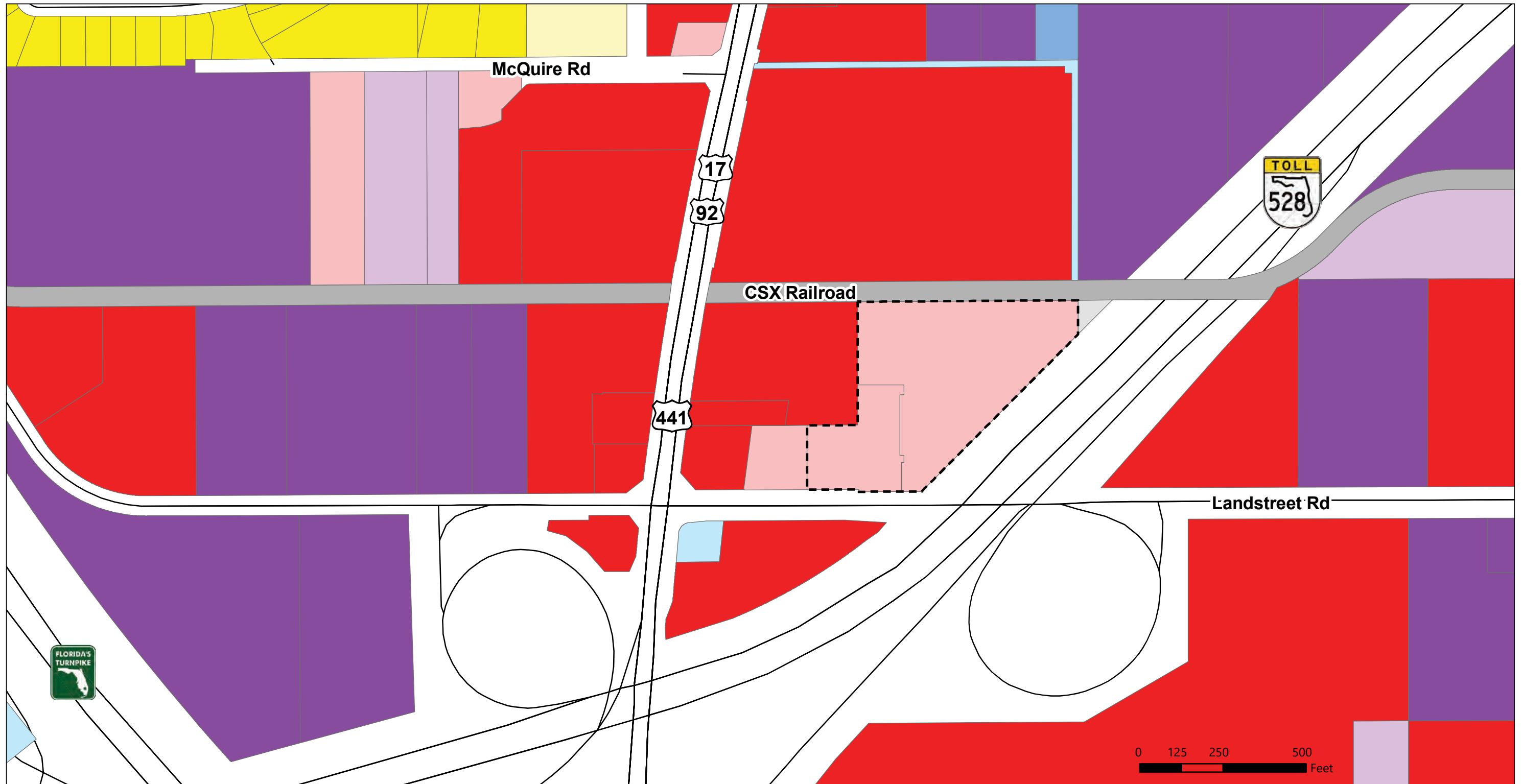


Figure 3-3
Orange County Site 2
Existing Land Use
 Preliminary Engineering Report

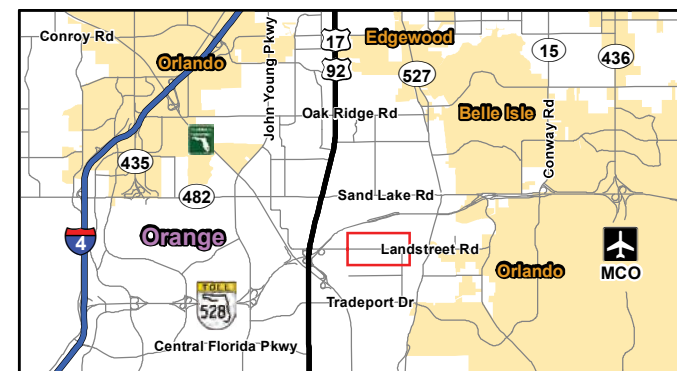
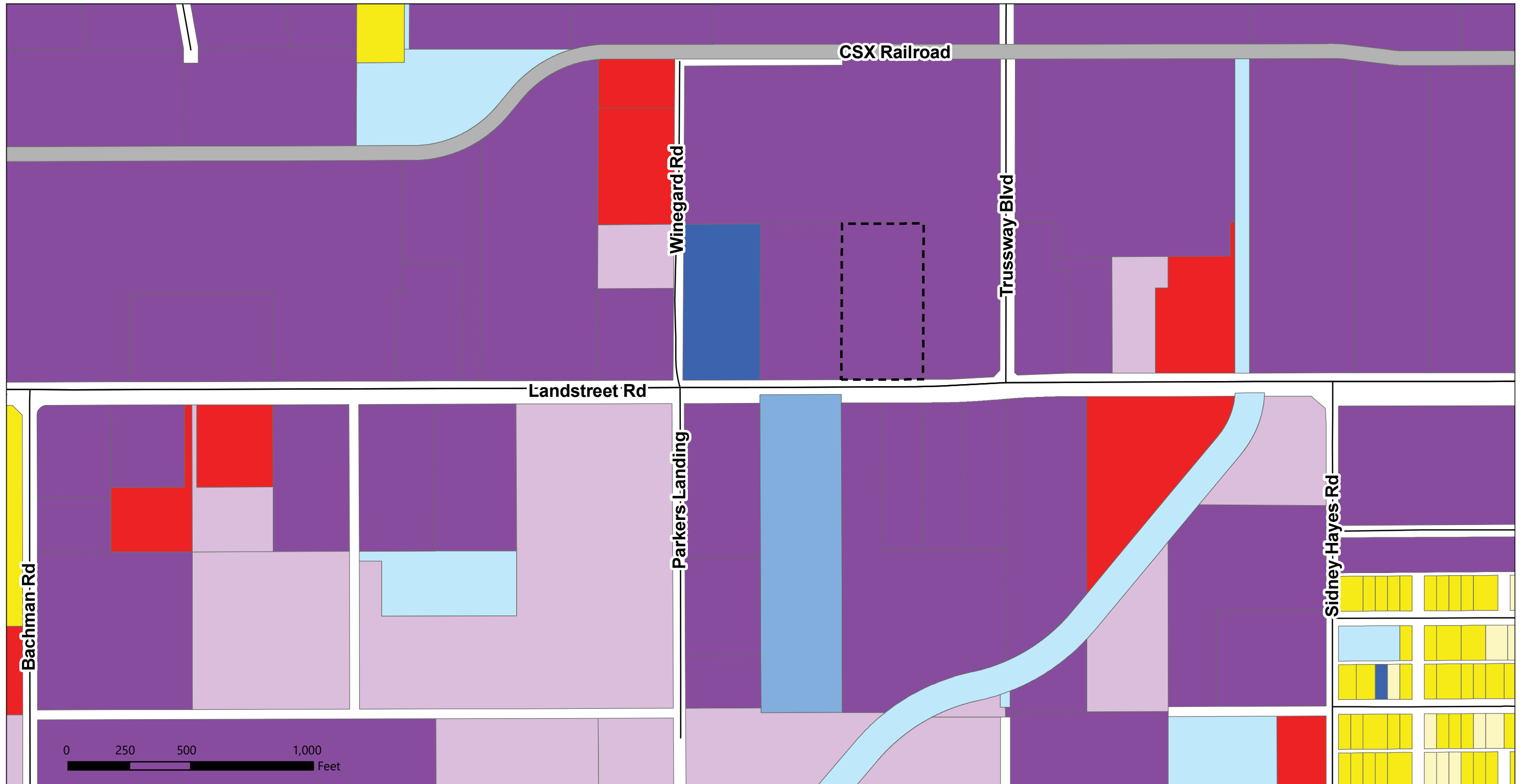


Figure 3-4
Orange County Site 4
Existing Land Use
 Preliminary Engineering Report

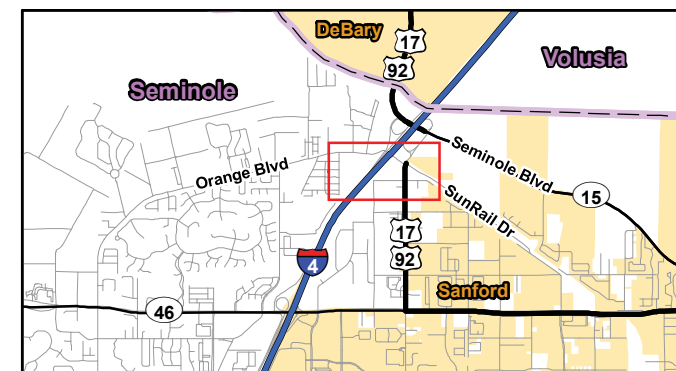
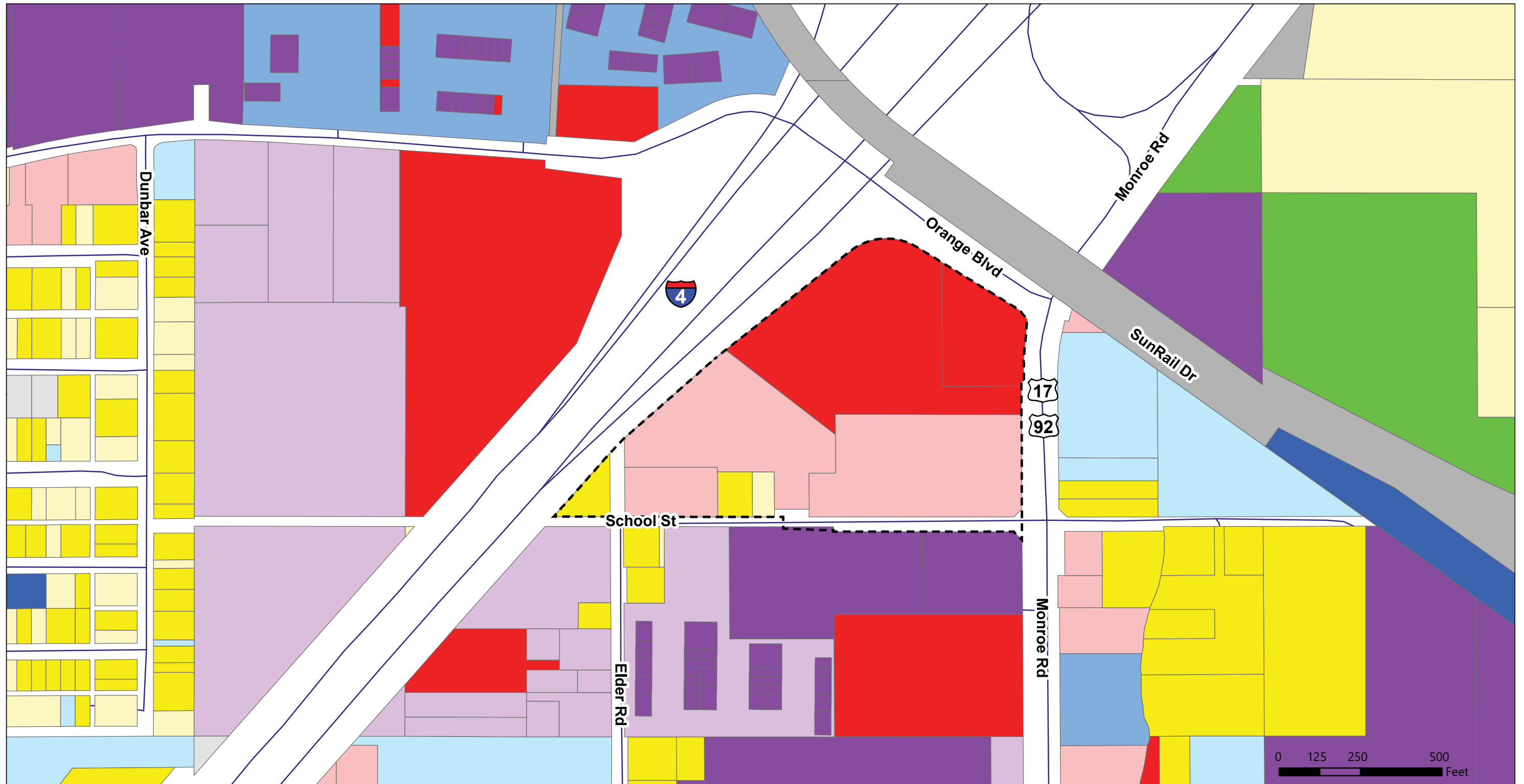


Figure 3-5

Seminole County Site 1B
Existing Land Use
 Preliminary Engineering Report

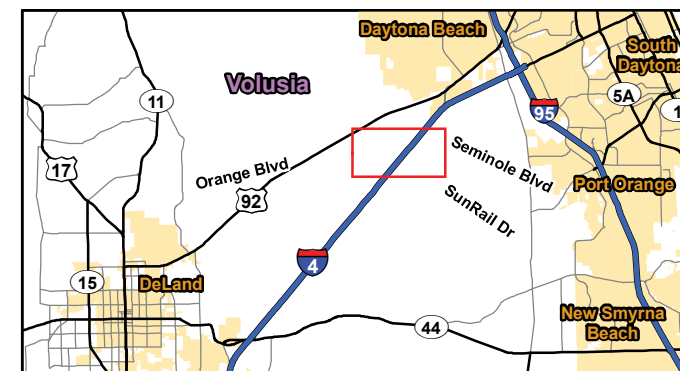
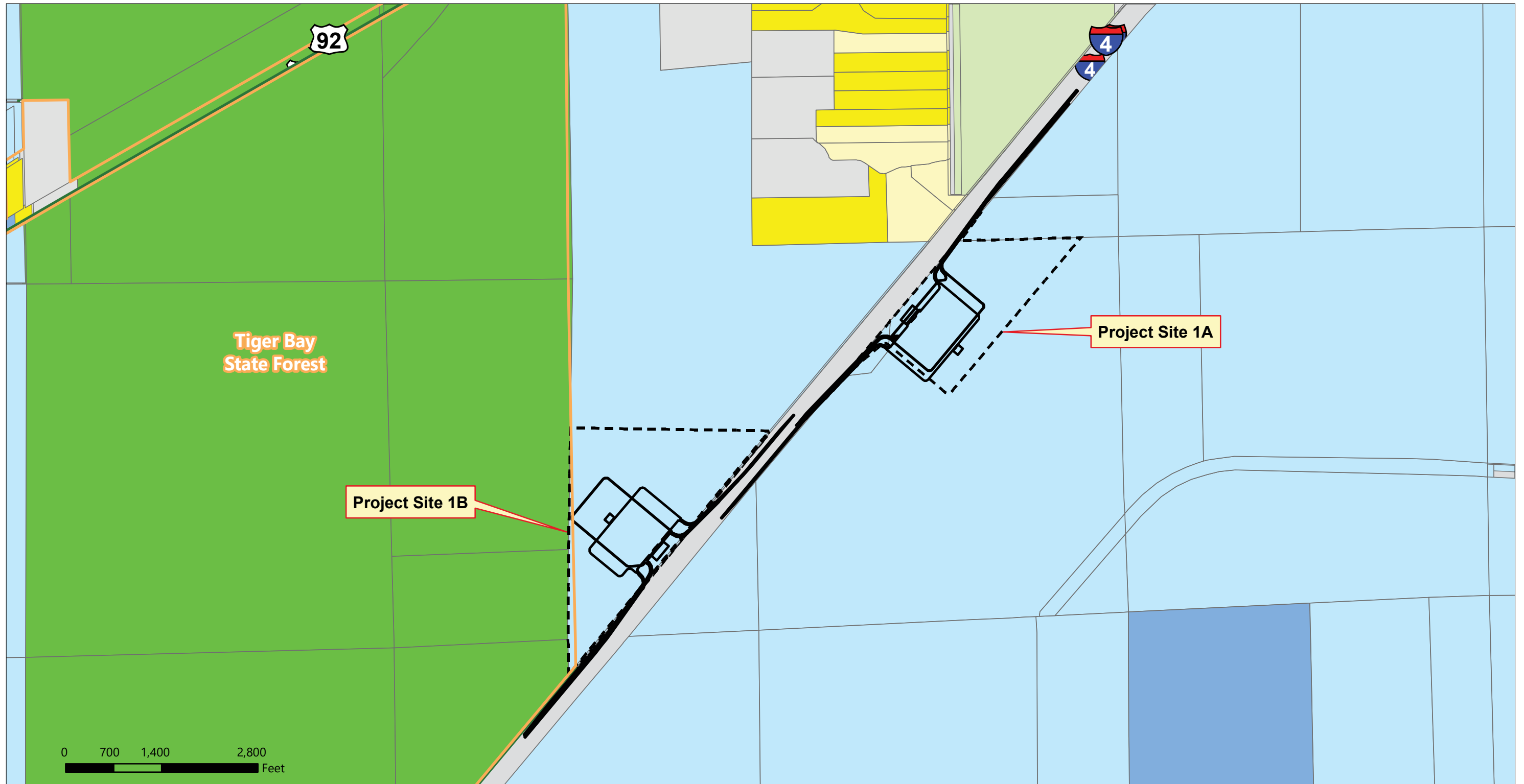


Figure 3-6
Volusia County Site 1A & Site 1B
 Existing Land Use
 Preliminary Engineering Report

3.7 Existing Posted Speeds

The posted speed limits for roadways with access to the viable sites are shown in **Table 3-7**.

Table 3-7: Posted Speed Limits

County	Site	Access Road	Posted Speed (mph)
Osceola	1	CR 532	55*
Orange	1	Sand Lake Road	45
		John Young Parkway	45
	2	Landstreet Road	45
	4	Landstreet Road	45
Seminole	1B	US 17/92	35
		School Street	25
Volusia	1A	I-4 Eastbound	70
	1B	I-4 Westbound	70

**As part of the CR 532/Osceola Polk Line Road Capacity Improvements, the posted speed will be reduced to 40 mph.*

3.8 Multimodal Facilities

Multimodal data from Seminole, Orange, and Osceola Counties were accessed in May 2022 from the *MetroPlan Orlando’s ‘Online Data Viewer’ website* (<https://metroplanorlando.org/maps-tools/dataviewer/>) and aerial desktop review. The only viable sites not viewed with the Online Data Viewer are located on I-4, which is a limited access facility with no pedestrian or bicycle access.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is proposed to be accessed from CR 532. CR 532 is identified as a Freight Distribution Route within the Regional Freight Network. A freight railroad owned by CSX Transportation is approximately 100 feet south of the site.

CR 532 within the study area has no pedestrian, bicycle, or transit facilities.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is proposed to be accessed via Sand Lake Road and John Young Parkway northbound on-ramp. Both John Young Parkway and Sand Lake Road are identified as Regional Freight Mobility Corridors within the Regional Freight Network. There is a freight railroad owned by CSX Transportation within one mile of the site.

LYNX provides transit service along Sand Lake Road every 30 minutes; the nearest bus stop is less than 0.5 miles west from the site. LYNX provides transit service along John Young Parkway greater than every 30 minutes; the nearest bus stop is less than one mile south from the site.

There are no sidewalks along Sand Lake Road except at the intersection of the John Young Parkway northbound on-ramp. Sand Lake Road within the study area has bicycle lanes and paved shoulders. The John Young Parkway northbound on-ramp has sidewalks and paved shoulders within the study area. Shingle Creek Trail crosses Sand Lake Road under the bridge crossing over Shingle Creek, approximately 0.5 miles west of Orange County Site 1. The Shingle Creek Trail includes a short spur located immediately north of Sand Lake Road, providing access to multimodal travelers on Sand Lake Road. The Sand Lake

Trailhead is located immediately south of the underpass. Upon its completion, the planned 9.3-mile Shingle Creek Trail will extend north from Osceola County to Oak Ridge Road, primarily located along John Young Parkway, Florida's Turnpike, and Shingle Creek.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

Orange County Site 2 is proposed to be accessed via Landstreet Road. US 441, approximately 0.1 miles west of the site, is identified as a Regional Freight Mobility Corridor within the Regional Freight Network and is classified as a Principal Arterial. Landstreet Road is identified as a Freight Distribution Route within the Regional Freight Network. There is a freight railroad owned by CSX Transportation at the northern limit of the site.

The LYNX Florida Mall Superstop is approximately 0.7 miles north of the site on US 441. LYNX provides transit service along US 441 every 30 minutes and 60 minutes for four separate routes; the nearest bus stop is at the Superstop. LYNX does not provide transit service along Landstreet Road.

Landstreet Road within the study area has a five-foot sidewalk along the north side of the corridor and no bicycle facilities.

Orange County Site 4 – West Landstreet Road, East of SR 528

Orange County Site 4 is proposed to be accessed via Landstreet Road. Landstreet Road is identified as a Freight Distribution Route within the Regional Freight Network. There is a freight railroad owned by CSX Transportation north of the site.

LYNX does not provide transit service along Landstreet Road. Landstreet Road within the study area has a five-foot sidewalk along the north side of the corridor and no bicycle facilities.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B is proposed to be accessed via School Street and US 17/92. US 17/92 is identified as a Freight Distribution Route within the Regional Freight Network.

The study area includes the FDOT/SunRail railroad tracks within a quarter mile from the site on the north and an active CSX Train Yard about 1,800 feet east from the US 17/92 and School Street intersection.

There are no transit routes along School Road or US 17/92 within the study area. The railroad tracks north of the site is used by SunRail and freight when SunRail is not operating. The nearest SunRail station is approximately 2.75 miles southeast.

School Street within the study area is a paved road with no pavement markings and no pedestrian or bicycle facilities. US 17/92 within the study area has bicycle lanes and a multiuse trail (Cross Seminole/Rinehart Trail).

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A is proposed to be accessed via I-4. I-4 is identified as a Primary Highway Freight System within the National Highway Freight Network.

There are no rail facilities in the study area. I-4 within the study area is a limited access corridor with no pedestrian, bicycle, or transit access.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is proposed to be accessed via I-4. I-4 is identified as a Primary Highway Freight System within the National Highway Freight Network.

There are no rail facilities in the study area. I-4 within the study area is a limited access corridor with no pedestrian, bicycle, or transit access.

3.9 Intersections

The existing intersection layout and traffic control is described for each viable site location in the sections below. Intersection geometry for adjacent intersections is described in the PTAR in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

There are no driveways or intersections to CR 532 at the site location. The PPE project is proposing an interchange at the intersection with CR 532 to the west of the site location. The CR 532 widening project will result in a divided median in the vicinity of the site. Both projects are programmed and assumed to be included in the No-Build Alternative and existing by the time this truck parking site is constructed.

Orange County Site 1 – Sand Lake Road at John Young Parkway

There is a grade-separated signalized SPUI with Sand Lake Road and John Young Parkway. At this interchange, Sand Lake Road has three through lanes, two left turn lanes, and one right turn lane for both eastbound and westbound traffic, while John Young Parkway has three through lanes for both northbound and southbound traffic. Two on-ramps and two off-ramps connect Sand Lake Road to John Young Parkway.

While no connection between Florida’s Turnpike and Sand Lake Road exists, a project is underway (FPID 433663-1) to add an interchange between these two roads. The future interchange will provide a southbound off-ramp and a signalized intersection with Sand Lake Road. Construction is programmed in FY 2024 and these improvements are included in the No-Build Alternative for this project.

There is one driveway to the site that exists along Sand Lake Road that is a right-in/right-out access. This access is used for maintenance of the existing pond directly adjacent to the John Young Parkway and Sand Lake Road intersection.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

There is a signalized intersection with West Landstreet Road and US 441 approximately 0.1 miles west of the site. At this intersection, US 441 is a six-lane undivided urban arterial with an additional left turn lane in each direction.

The existing site location is accessed from a stop-controlled driveway west of the viable truck parking site.

Orange County Site 4 – West Landstreet Road, East of SR 528

Orange County Site 4 is bordered by West Landstreet Road on the south, a property owned by Hubbard Construction Company to the north and east, and a property owned by Mainline Auto LLC to the west. The driveway from West Landstreet Road at the site location is stop-controlled.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B is bordered by School Street on the south, US 17/92 to the east, Orange Boulevard to the northeast, and I-4 to the northwest. There is a full access intersection with School Street and US 17/92, with stop-control. Additionally, a signalized intersection exists at the intersection of US 17/92 and Orange Boulevard. At this intersection, US 17/92 is a four-lane undivided urban collector with a left turn lane, and a traffic separator between northbound and southbound traffic. Orange Boulevard is a two-lane divided collector.

The Donnie Myers Luxury Coach and the Circle K gas station have two driveways (both are right-in/right-out). The Bostons Fish Processing Facility properties on School Street both have access driveways.

The *I-4 BtU Segment 3* (FPID 242592-4) will reconfigure the interchange of I-4 and US 17/92. The signalized intersection with US 17/92 and Orange Boulevard will be removed and Orange Boulevard will be routed under US 17/92 and loop back and connect into US 17/92 at School Street at a future signalized intersection. The signal will be implemented as part of the I-4 BtU construction, but construction is not programmed at this time.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The eastbound Volusia County Site 1A is bordered by I-4 on the northwest, and properties owned by the City of Port Orange on the remaining sides. There is no existing access to I-4 from this site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The westbound Volusia County Site 1B is bordered by I-4 on the southeast, parcels owned by the State of Florida Board of Trustees of the Internal Improvement Trust Fund (TIITF) on the west, and City of Daytona Beach Property to the north. There is no access ramp to this site.

3.10 Traffic Data and Operational Conditions

For specific data and methodology see the PTAR, in the project file. All sites were analyzed using *Synchro 11* exclusive of the Volusia Sites which were analyzed using Highway Capacity Software 7 (HCS7).

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The year 2022 AM and PM peak hour turning movement volumes (**Figure 3-7**) along with existing intersection geometry and signal timings provided by Osceola County were used in the intersection Level of Service (LOS) analysis. As shown in **Table 3-8**, the study intersection, CR 532 at US 17/92, was observed to operate at LOS C for both AM and PM peak hours.

Table 3-8: Existing Intersections LOS Analysis - Osceola County Site 1

Study Intersection	2022 Conditions			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-CR 532 at US 17/92	23.0	C	28.6	C



Study Intersection



Traffic Movement

AM (PM)

Peak Hour Traffic Volumes



Figure 3-7

**Existing Turning Movement Counts
Osceola County Site 1**

Preliminary Engineering Report

Orange County Site 1 – Sand Lake Road at John Young Parkway

The year 2022 AM and PM peak hour turning movement volumes (**Figure 3-8**) along with existing intersection geometry and signal timings provided by Orange County were used in the intersection LOS analysis. As shown in **Table 3-9**, the study intersection, Sand Lake Road at John Young Parkway, was observed to operate at LOS C in both AM and PM peak hours. Whereas, the study intersection, Sand Lake Road at Presidents Drive, was observed to operate at LOS D and LOS E under AM and PM peak hours, respectively.

Table 3-9: Existing Intersections LOS Analysis - Orange County Site 1

Study Intersection	2022 Conditions			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Sand Lake Road at John Young Parkway	33.0	C	34.6	C
3-Sand Lake Road at Presidents Drive	35.2	D	55.8	E

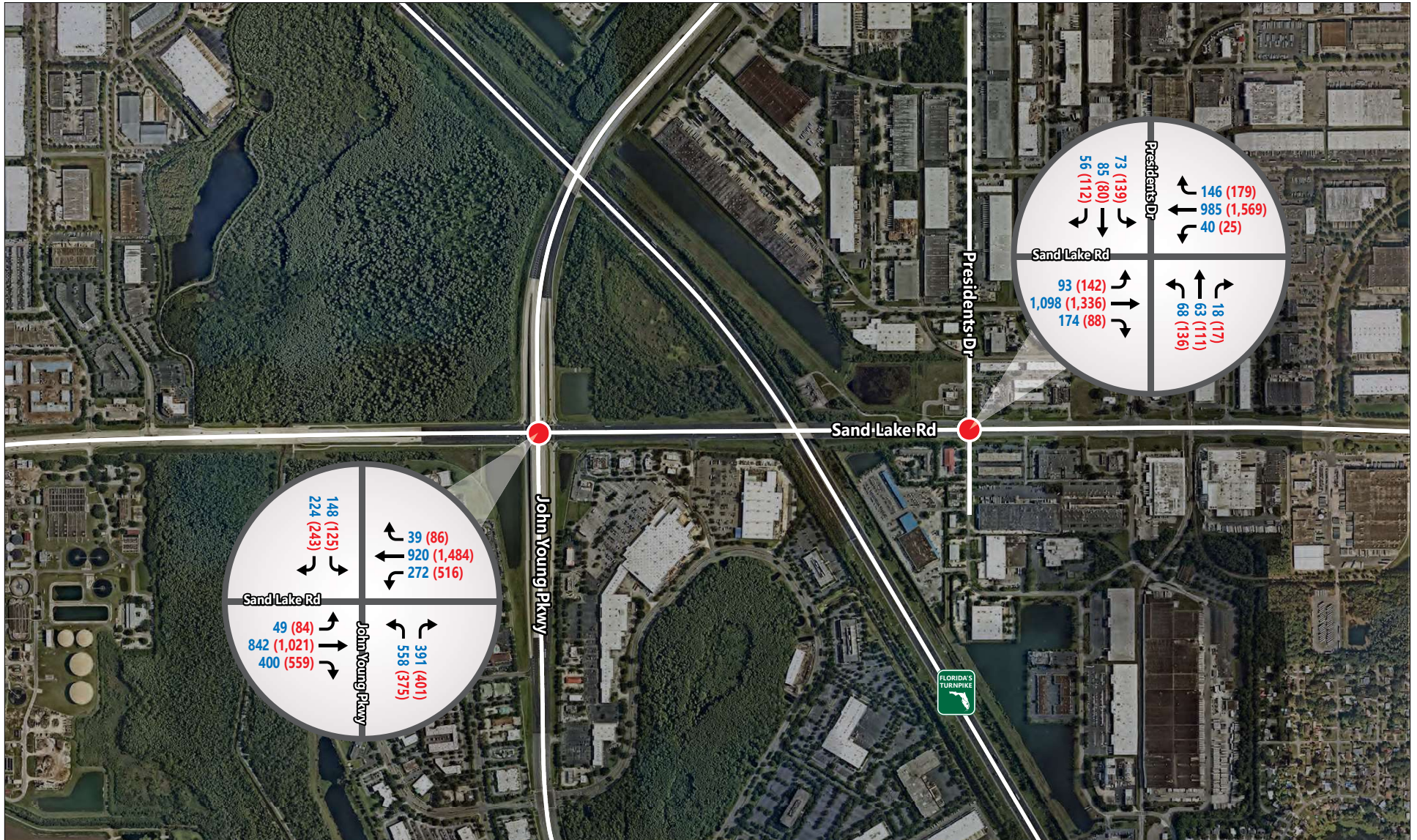
Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

The year 2022 AM and PM peak hour turning movement volumes (**Figure 3-9**) along with existing intersection geometry and signal timings provided by Orange County were used in the intersection LOS analysis. As shown in **Table 3-10**, the signalized intersection, Landstreet Road at US 441, was observed to operate at LOS D and LOS E in the AM and PM peak hours, respectively. Whereas the unsignalized intersection, Landstreet Road at SR 528 Westbound (WB) off-ramp, was observed to operate at LOS B under both AM and PM peak hours. Since there is no traffic control at the intersection of Landstreet Road at SR 528 Eastbound (EB) on-ramp intersection and the westbound left movement is operated under yield conditions – no results are reported in Synchro.

Table 3-10: Existing Intersections LOS Analysis - Orange County Site 2

Study Intersection	2022 Conditions			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Landstreet Road at SR 528 WB off-ramp*	13.7/0.0	B/A	13.6/0.0	B/A
2-Landstreet Road at US 441	40.5	D	55.9	E

Note: 1) * Minor/major street worst delays are reported for the stop-control; 2) Analysis results are not available for Landstreet Road and SR 528 EB on-ramp because there is no stop control on the side street



● Study Intersection

→ Traffic Movement

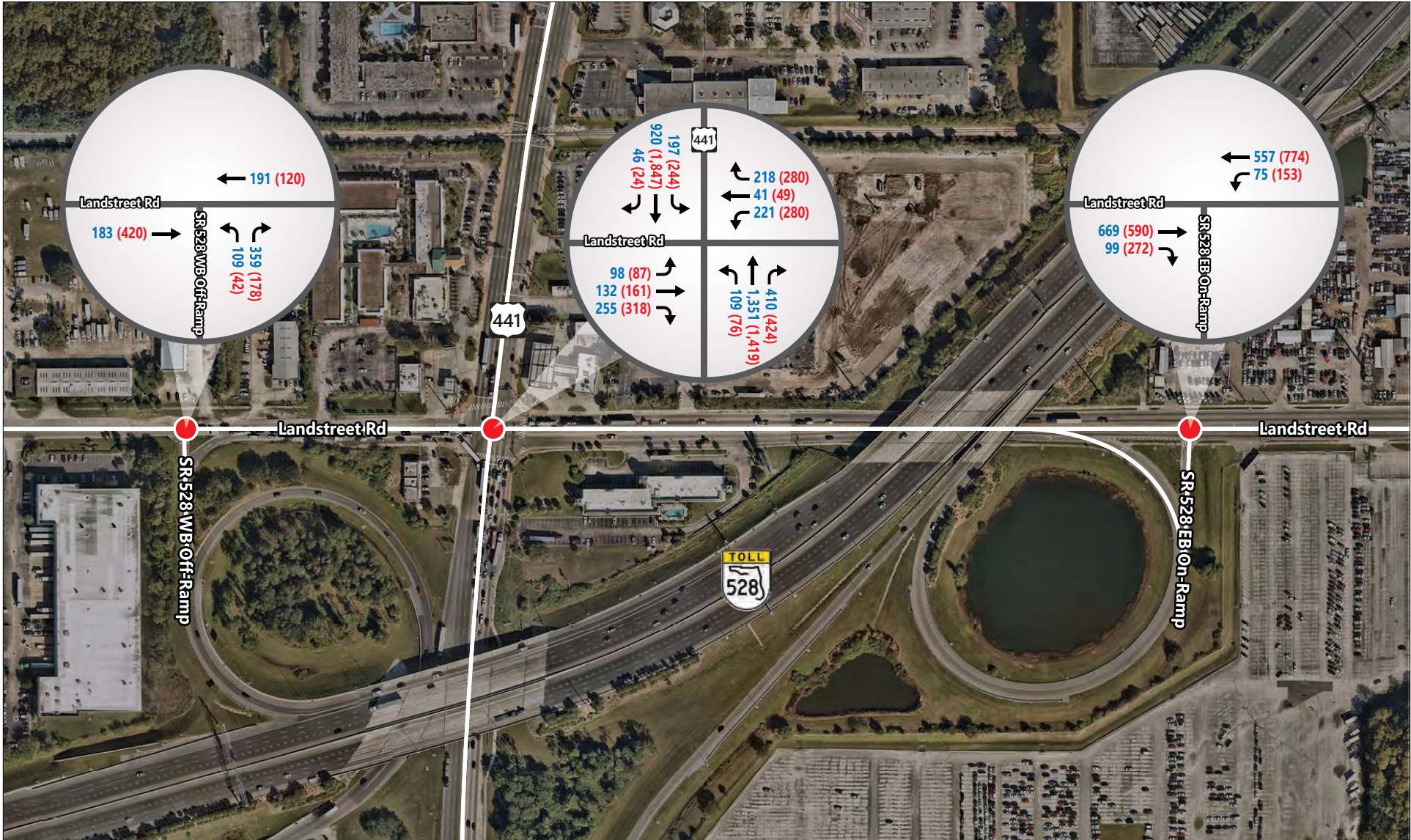
AM (PM) Peak Hour Traffic Volumes



Figure 3-8

**Existing Turning Movement Counts
Orange County Site 1**

Preliminary Engineering Report



● Study Intersection

→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 3-9

Existing Turning Movement Counts
Orange County Site 2
 Preliminary Engineering Report

Orange County Site 4 – West Landstreet Road, East of SR 528

The year 2022 AM and PM peak hour turning movement volumes (**Figure 3-10**) along with existing intersection geometry and signal timings provided by Orange County were used in the intersection LOS analysis. As shown in **Table 3-11**, both the study intersections were observed to operate at LOS B or better for both AM and PM conditions.

Table 3-11: Existing Intersections LOS Analysis - Orange County Site 4

Study Intersection	2022 Conditions			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Landstreet Road at Parkers Landing*	16.3/8.9	C/A	19.5/12.4	C/B
3-Landstreet Road at Sidney Hayes Road	15.6	B	16.3	B

Note: * Minor/major street worst delays are reported for the stop-control

Seminole County Site 1B – I-4 at US 17/92

The year 2022 AM and PM peak hour turning movement volumes (**Figure 3-11**) along with existing intersection geometry and signal timings provided by Seminole County were used in the intersection LOS analysis. All the study intersections were observed to operate at LOS D or better for both AM and PM conditions as shown in **Table 3-12**.

Table 3-12: Existing Intersections LOS Analysis - Seminole County Site 1B

Study Intersection	2022 Conditions			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/92 / Monroe Road at Orange Boulevard	22.0	C	30.2	C
3-US 17/92 / Monroe Road at I-4 EB On-Ramp*	9.2/32.1	A/D	13.4/27.8	B/D
4-US 17/92 / Monroe Road at I-4 EB Off-Ramp	16.9	B	28.0	C

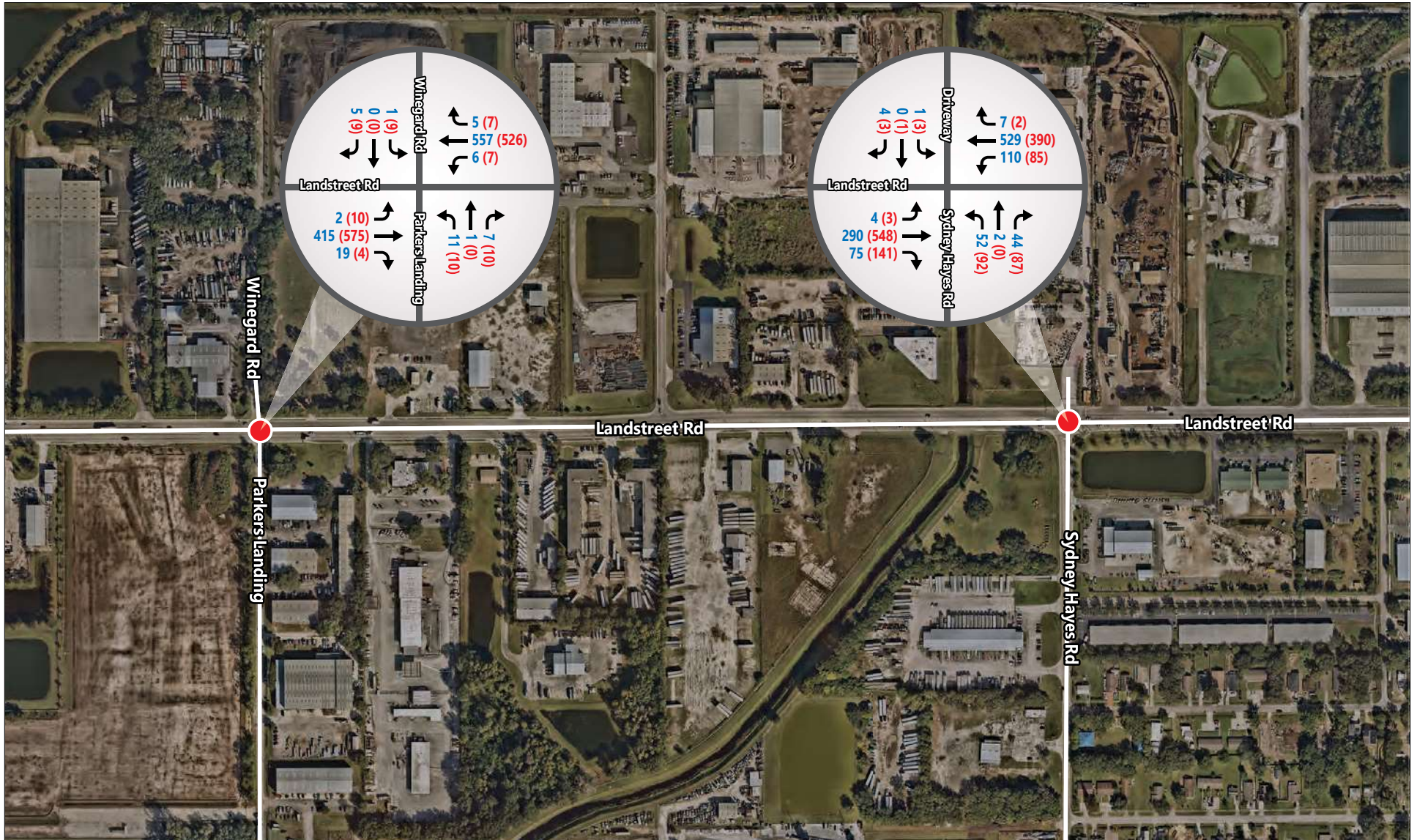
Note: * Minor/major street worst delays are reported for the stop-control

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The peak directional volumes (**Figure 3-12**) were derived using the existing Annual Average Daily Traffic (AADT) (65,500) and a Standard K of 9% and D factor of 58% based on information from the Florida Traffic Online (FTO) for I-4 north of SR 472. Density and estimated LOS based on Highway Capacity Manual (HCM) metrics are provided for the freeway segment analysis. As shown in **Table 3-13**, The analysis indicates that all freeway segments operate at LOS C or better.

Table 3-13: Existing Freeway LOS Analysis - Volusia County Site 1A

I-4 Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Eastbound	18.8	C	13.5	B



● Study Intersection

→ Traffic Movement

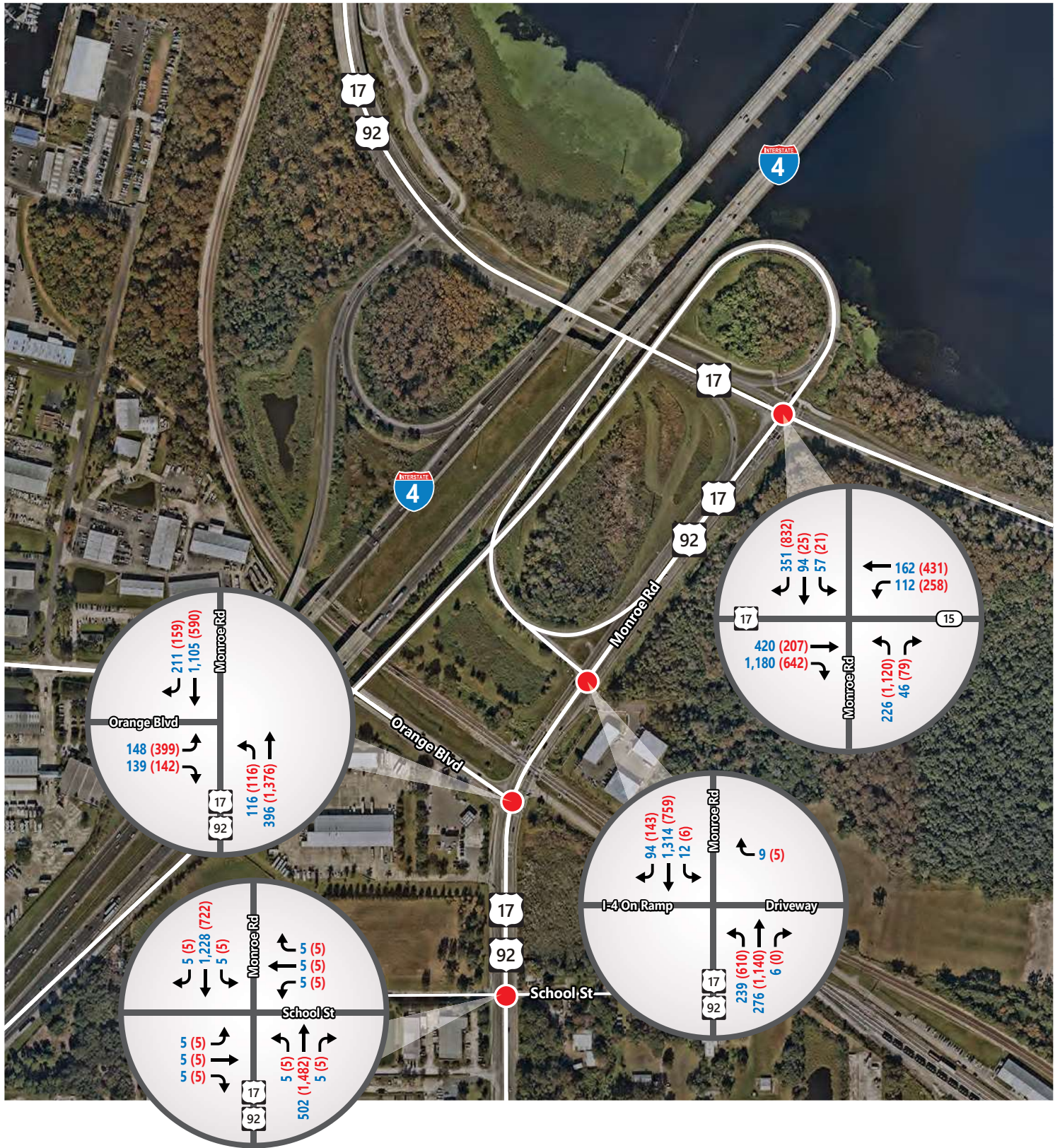
AM (PM) Peak Hour Traffic Volumes



Figure 3-10

**Existing Turning Movement Counts
Orange County Site 4**

Preliminary Engineering Report

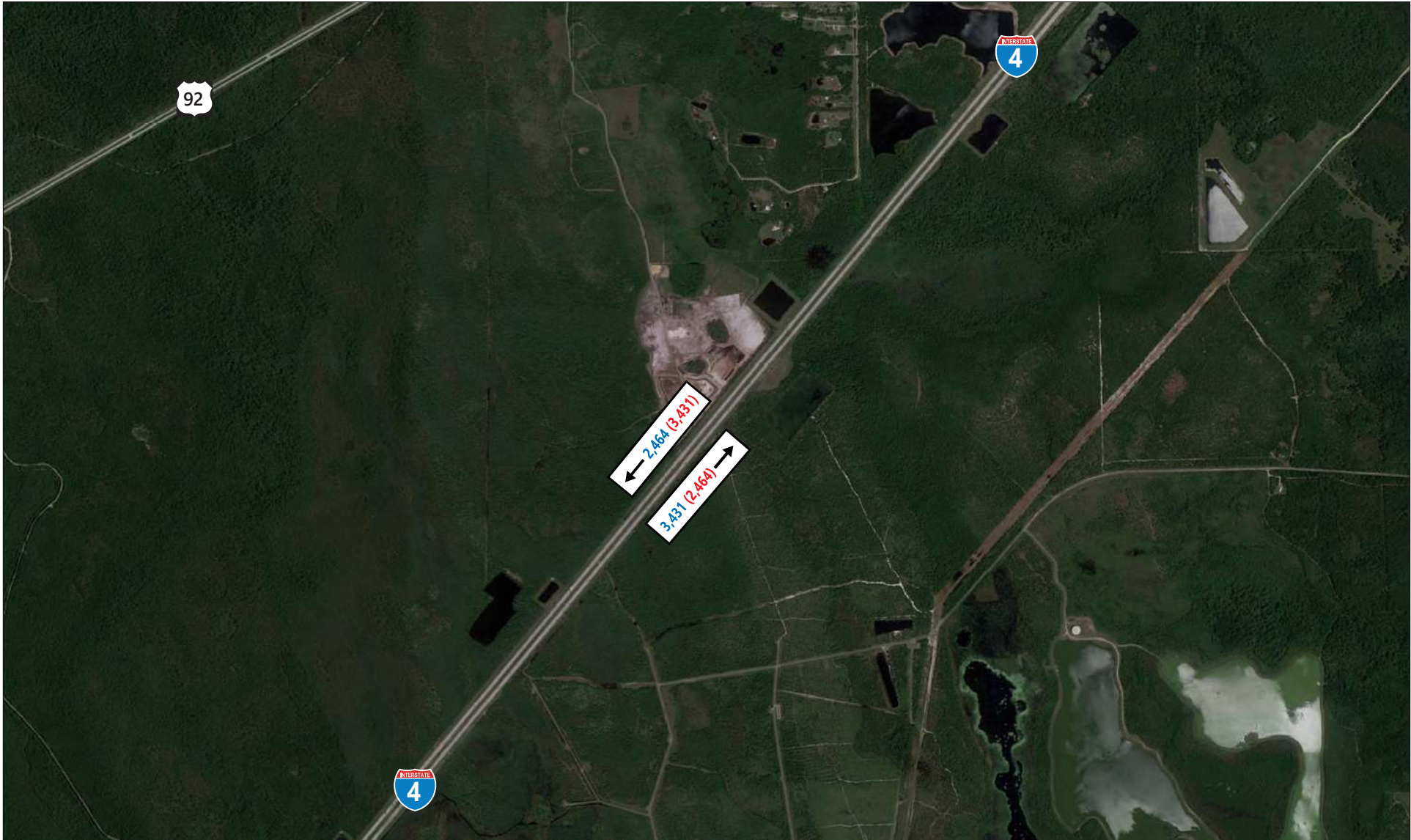


- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes



Figure 3-11

**Existing Turning Movement Counts
Seminole County Site 1B
Preliminary Engineering Report**



→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 3-12

**Existing I-4 Peak Hour Volumes
Volusia County Site 1A & 1B
Preliminary Engineering Report**

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The peak directional volumes were derived using the existing AADT (65,500) and a Standard K of 9% and D factor of 58% based on information from the FTO for I-4 north of SR 472. Density and estimated LOS based on HCM metrics are provided for the freeway segment analysis. As shown in **Table 3-14**, The analysis indicates that all freeway segments operate at LOS C or better.

Table 3-14: Existing Freeway LOS Analysis - Volusia County Site 1B

I-4 Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Westbound	13.5	B	18.8	C

3.11 Crash Data and Safety Analysis

Crash data was collected at each site for the roadway segments immediately adjacent to the site, and which would be impacted by the entering/exiting truck traffic, as well as for any intersections near the site which would be directly impacted by the increased truck volumes. Additionally, crash rates at the intersections near each of the sites were calculated and compared to the statewide averages. For detailed crash data and safety analysis calculations, see the PTAR in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Five years of crash data (January 1, 2015, to December 31, 2019) for the study intersection, CR 532 at US 17/92, and for the segment of CR 532 from Sandy Ridge Road to US 17/92, was extracted from Signal Four Analytics. Based on the crash data obtained, a total of 64 crashes occurred at the study intersection and 72 crashes occurred in the segment within the five-year period. The crashes are summarized below.

Intersection Crashes

Rear End crashes accounted for the majority of crashes (42.2% of total) followed by Left Turn crashes (25.0% of total), Sideswipe crashes (10.9% of total), and Off-road crashes (10.9% of total). Out of the 64 crashes, 34 involved injury, zero involved fatalities, and 30 involved property damage only. There were no Pedestrian and Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for 21 crashes or 32.8% of crashes. Similarly, wet pavement conditions accounted for 7 crashes or 10.9% of crashes.

The crash rate at the intersection of CR 532 and US 17/92 is 1.09, which is above the statewide intersection crash rate of 0.394 for a three-leg urban intersection with a four to five lane, two-way divided with raised median intersecting roadway.

Segment Crashes

Rear End crashes accounted for the majority of crashes (62.5% of total) followed by Sideswipe, Left Turn, and Off-road crashes (5.6% of total each). Out of the 72 crashes, 25 involved injuries, one involved a fatality, and 46 involved property damage only. There was one Bike crash reported for this segment.

Dark-not lighted condition crashes accounted for 14 crashes or 19.4% of crashes. Similarly, wet pavement conditions accounted for 18 crashes or 25.0% of crashes.

The crash rate along the segment of CR 532 between Sand Ridge Road and US 17/92 is 1.57, which is below the statewide segment crash rate of 3.413 for an urban four to five lane, two-way divided with a raised median roadway.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Five years of crash data (January 1, 2015, to December 31, 2019) for the study intersections, Sand Lake Road at John Young Parkway and Sand Lake Road at Presidents Drive, and study segment Sand Lake Road from John Young Parkway to Presidents Drive, was extracted from Signal Four Analytics. Based on the crash data obtained, a total of 695 crashes occurred at the study intersection of Sand Lake Road at John Young Parkway; 156 occurred at the study intersection of Sand Lake Road at Presidents Drive; and 67 crashes occurred on the study segment of Sand Lake Road from John Young Parkway to Presidents Drive within the five-year period. The crashes are summarized below.

Intersection Crashes

Sand Lake Road at John Young Parkway: Rear End crashes accounted for the majority of crashes (39.1% of total) followed by Left Turn crashes (24.5% of total), Sideswipe crashes (17.7% of total) and Angle crashes (8.1% of total). Out of the 695 crashes, 241 involved injuries, one involved a fatality, and 453 involved property damage only. There were five Pedestrian and Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for 182 crashes or 26.2% of crashes. Wet pavement conditions accounted for 54 crashes or 7.8% of crashes.

The crash rate at the intersection of Sand Lake Road and John Young Parkway is 2.64, which is above the statewide intersection crash rate of 0.718 for a four-leg intersection with a six lane suburban, two-way divided by a raised median intersecting roadway.

Sand Lake Road at Presidents Drive: Rear End crashes accounted for the majority of crashes (53.2% of total) followed by Left Turn crashes (15.4% of total), and Sideswipe crashes (10.3% of total). Out of the 156 crashes, 44 involved injury, zero involved fatalities, and 112 involved property damage only. There were two Pedestrian and Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for 33 crashes or 21.2% of crashes. Wet pavement conditions accounted for 20 crashes or 12.8% of crashes.

The crash rate at the intersection of Sand Lake Road and Presidents Drive is 1.77, which is above the statewide crash rate of 0.718 for a four-leg intersection with a six lane suburban, two-way divided by a raised median intersecting roadway.

Segment Crashes

Sand Lake Road from John Young Parkway to Presidents Drive: Rear End crashes accounted for the majority of crashes (59.7% of total) followed by Sideswipe crashes (14.9% of total) and Left Turn crashes (6.0% of total). Out of the 67 crashes, 14 involved injury, zero involved fatalities, and 53 involved property damage only. There were no Pedestrian or Bike crashes reported for this segment.

Dark-lighted condition crashes accounted for 14 crashes or 20.9% of crashes. Similarly, wet pavement conditions accounted for 10 crashes or 14.9% of crashes.

The crash rate along the segment of Sand Lake Road between John Young Parkway and Presidents Drive is 1.33, which is below the statewide segment crash rate of 2.586 for a six lane suburban, two-way divided by a raised median roadway.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

Five years of crash data (January 1, 2015, to December 31, 2019) for the study intersections, Landstreet Road at SR 528 WB Off-Ramp, US 441, and SR 528 EB On-Ramp, and study segment of Landstreet Road from SR 528 WB Off-Ramp to SR 528 EB On-Ramp, was extracted from Signal Four Analytics. Based on the crash data obtained, a total of 30 crashes occurred at the intersection of Landstreet Road at SR 528 WB Off-Ramp; a total of 391 crashes occurred at the intersection of Landstreet Road at US 441; a total of 12 crashes occurred at the intersection of Landstreet Road from SR 528 EB-On Ramp; and a total of 39 crashes occurred along the segment along Landstreet Road from SR 528 WB-Off Ramp to SR 528 EB On-Ramp within the five-year period. The crashes are summarized below.

Intersection Crashes

Landstreet Road at SR 528 WB Off-Ramp: Rear End crashes accounted for the majority of crashes (33.3% of total) followed by Left Turn crashes (23.3% of total), and Sideswipe crashes (13.3% of total). Out of the 30 crashes, five involved injury, zero involved fatalities, and 25 involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for six crashes or 20.0% of crashes. Wet pavement conditions accounted for three crashes or 10.0% of crashes.

The crash rate at the intersection of Landstreet Road and SR 528 WB Off-Ramp is 1.25, which is above the statewide intersection crash rate of 0.540 for a three-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Landstreet Road at US 441: Rear End crashes accounted for the majority of crashes (43.7% of total) followed by Sideswipe crashes (25.6% of total), and Left Turn crashes (7.7% of total). Out of the 391 crashes, 77 crashes involved injury, zero involved fatalities, and 314 involved property damage only. There were six Pedestrian and Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for 65 crashes or 16.6% of crashes. Wet pavement conditions accounted for 25 crashes or 6.4% of crashes.

The crash rate at the intersection of Landstreet Road and US 441 is 3.02, which is above the statewide intersection crash rate of 0.738 for a four-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Landstreet Road at SR 528 EB On-Ramp: Sideswipe crashes accounted for the majority of crashes (66.7% of total) followed by Rear End crashes (16.7% of total). Out of the 12 crashes, three involved injury, zero involved fatalities, and nine involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for two crashes or 16.7% of crashes. Wet pavement conditions accounted for zero crashes.

The crash rate at the intersection of Landstreet Road and SR 528 EB On-Ramp is 0.24, which is below the statewide intersection crash rate of 0.540 for a three-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Segment Crashes

Landstreet Road from SR 528 WB Off-Ramp to SR 528 EB On-Ramp: Rear End crashes accounted for the majority of crashes (35.9% of total) followed by Sideswipe crashes (23.1% of total) and Left Turn crashes (23.1% of total). Out of the 39 crashes, eight involved injury, zero involved fatalities, and 31 involved property damage only. There were no Pedestrian or Bike crashes reported for this segment.

Dark-lighted condition crashes accounted for three crashes or 7.7% of crashes. Similarly, wet pavement conditions accounted for one crash or 2.6% of crashes.

The crash rate along the segment of Landstreet Road between SR 528 WB Off-ramp and SR 528 EB On-ramp is 2.03, which is below the statewide segment crash rate of 6.320 for a four to five lane urban, two-way undivided roadway.

Orange County Site 4 – West Landstreet Road, East of SR 528

Five years of crash data (January 1, 2015, to December 31, 2019) for the study intersections, Landstreet Road at Parkers Landing and at Sidney Hayes Road, and study segment, Landstreet Road from Parkers Landing to Sidney Hayes Road, was extracted from Signal Four Analytics. Based on the crash data obtained, a total of nine crashes occurred at the intersection of Landstreet at Parkers Landing; 18 crashes occurred at the intersection of Landstreet Road at Sidney Hayes Road; and 24 crashes occurred along the study segment along Landstreet from Parkers Landing to Sidney Hayes Road within the five-year period. The crashes are summarized below.

Intersection Crashes

Landstreet Road at Parkers Landing: Rear End crashes accounted for the majority of crashes (55.6% of total) followed by Left Turn, Head On, Sideswipe, and Off-Road crashes (11.1% of total each). Out of the nine crashes, four involved injury, zero involved fatalities, and five involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for one crash or 11.1% of crashes. Wet pavement conditions accounted for zero crashes.

The crash rate at the intersection of Landstreet Road and Parkers Landing is 0.18, which is below the statewide intersection crash rate of 0.738 for a four-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Landstreet Road at Sidney Hayes Road: Left Turn crashes accounted for the majority of crashes (33.3% of total) followed by Rear End crashes (27.8% of total). Out of the 18 crashes, six involved injury, zero involved fatalities, and 12 involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for four crashes or 22.2% of crashes. Wet pavement conditions accounted for zero crashes.

The crash rate at the intersection of Landstreet Road and Sidney Hayes Road is 0.34, which is below the statewide intersection crash rate of 0.738 for a four-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Segment Crashes

Landstreet Road from Parkers Landing to Sidney Hayes Road: Left Turn crashes accounted for the majority of crashes (37.5% of total) followed by Sideswipe and Off-Road crashes (20.8% of total each). Out of the 24 crashes, eight involved injury, zero involved fatalities, and 16 involved property damage only. There was one Bike crash reported for this segment.

Dark-lighted condition crashes accounted for six crashes or 25.0% of crashes. Wet pavement conditions accounted for two crashes or 8.3% of crashes.

The crash rate along the segment of Landstreet Road between Parkers Landing and Sidney Hayes Road is 0.97, which is below the statewide segment crash rate of 6.320 for a four to five lane urban, two-way undivided roadway.

Seminole County Site 1B – I-4 at US 17/92

Five years of crash data from (January 1, 2015, to December 31, 2019) for the study intersections and study segments was extracted from Signal Four Analytics. Based on the crash data obtained, a total of 35 crashes occurred at the intersection of Monroe Road at Orange Boulevard; 18 occurred at the intersection of Monroe Road at I-4 EB On-Ramp; 87 crashes occurred at the intersection of Monroe Road at I-4 EB Off-Ramp/Seminole Boulevard; 12 crashes occurred in the segment of Monroe Road from School Street to Orange Boulevard; and three crashes occurred in the segment of Monroe Road from I-4 EB On-Ramp to I-4 EB Off-Ramp/Seminole Boulevard within the five year period.

Intersection Crashes

Monroe Street at Orange Boulevard: Rear End crashes accounted for the majority of crashes (45.7% of total) followed by Sideswipe crashes (28.6% of total) and Angle crashes (17.1% of total). Out of the 35 crashes, eight involved injury, zero involved fatalities, and 27 involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for one crash or 2.9% of crashes. Wet pavement conditions accounted for four crashes or 11.4% of crashes.

The crash rate at the intersection of Monroe Street and Orange Boulevard is 0.62, which is above the statewide intersection crash rate of 0.540 for a three-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Monroe Street at I-4 EB on-ramp: Rear End crashes accounted for the majority of crashes (55.6% of total) followed by Angle crashes (22.2% of total) and Left Turn crashes (11.1% of total). Out of the 18 crashes, eight of the reported crashes involved injury, zero involved fatalities, and 10 involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for four crashes or 22.2% of crashes. Wet pavement conditions accounted for three crashes or 16.7% of crashes.

The crash rate at the intersection of Monroe Street and I-4 EB On-Ramp is 0.33, which is below the statewide intersection crash rate of 0.738 for a four-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Monroe Street at I-4/EB off-ramp/Seminole Boulevard: Rear End crashes accounted for the majority of crashes (54.0% of total) followed by Angle crashes (17.2% of total) and Sideswipe crashes (10.3% of total). Out of the 87 crashes, 22 involved injury, zero involved fatalities, and 65 involved property damage only. There were no Pedestrian or Bike crashes reported for this intersection.

Dark-lighted condition crashes accounted for 20 crashes or 23.0% of crashes. Wet pavement conditions accounted for 11 crashes or 12.6% of crashes.

The crash rate at the intersection of Monroe Street and I-4 EB Off-Ramp is 1.19, which is above the statewide intersection crash rate of 0.738 for a four-leg urban intersection with a four to five lane, two-way undivided intersecting roadway.

Segment Crashes

Monroe Street from School Street to Orange Boulevard: Rear End crashes accounted for the majority of crashes (50.0% of total) followed by Angle crashes (33.3% of total) and Sideswipe crashes (16.7% of total). Out of the 12 crashes, three involved injury, zero involved fatalities, and nine involved property damage only. There were no Pedestrian or Bike crashes reported for this segment.

Dark-lighted condition crashes accounted for two crashes or 16.7% of crashes. Wet pavement conditions accounted for three crashes or 25.0% of crashes.

The crash rate along the segment of Monroe Street between School Street and Orange Boulevard is 2.15, which is below the statewide segment crash rate of 6.320 for a four to five lane urban, two-way undivided roadway.

Monroe Street from I-4 EB on-ramp to I-4/EB off-ramp/Seminole Boulevard: Rear End crashes accounted for the majority of crashes (66.7% of total) followed by Off Road crashes (33.7% of total). Out of the three crashes, one involved injury, zero involved fatalities, and two involved property damage only. There were no Pedestrian or Bike crashes reported for this segment.

Dark-lighted condition crashes accounted for one crash or 33.3% of crashes. Wet pavement conditions accounted for zero crashes.

The crash rate along the segment of Monroe Street between I-4 EB on-ramp and I-4 EB off-ramp is 0.33, which is below the statewide segment crash rate of 6.320 for a four to five lane urban, two-way undivided roadway.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Five years of crash data (January 1, 2015, to December 31, 2019) for the study segment (Roadway ID 79110000 milepost (MP) 22 to MP 24) was extracted from the FDOT Crash Analysis Reporting System (CARS) database. Based on the crash data obtained, a total of 166 crashes occurred within the five-year period.

Rear End crashes accounted for the majority of crashes (35.5% of total) followed by Off Road crashes (27.1% of total). Out of the 166 crashes, 61 involved injury, one crash involved a fatality, and 104 crashes involved property damage only. There were no Pedestrian or Bike crashes reported for this segment.

Dark-lighted condition crashes accounted for 41 crashes or 24.7% of crashes. Wet pavement conditions accounted for 56 crashes or 33.7% of crashes.

The crash rate along the segment of I-4 (combined eastbound and westbound) between MP 22 and MP 24 is 0.76, which is above the statewide segment crash rate of 0.439 for a rural interstate.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Five years of crash data (January 1, 2015, to December 31, 2019) for the study segment (Roadway ID 79110000 milepost (MP) 22 to MP 24) was extracted from the FDOT CARS database. Based on the crash data obtained, a total of 166 crashes occurred within the five-year period.

Rear End crashes accounted for the majority of crashes (35.5% of total) followed by Off Road crashes (27.1% of total). Out of the 166 crashes, 61 involved injury, one crash involved a fatality, and 104 crashes involved property damage only. There were no Pedestrian or Bike crashes reported for this segment.

Dark-lighted condition crashes accounted for 41 crashes or 24.7% of crashes. Wet pavement conditions accounted for 56 crashes or 33.7% of crashes.

The crash rate along the segment of I-4 (combined eastbound and westbound) between MP 22 and MP 24 is 0.76, which is above the statewide segment crash rate of 0.439 for a rural interstate.

3.12 Railroad Crossings

There are no active railroad crossings within the limits of the proposed ROW or directly adjacent to any of the proposed sites. Therefore, none of the existing railroads noted below will experience a significant increase in traffic as a result of the proposed project. A summary of the railroad crossings located within one mile of each of the potential sites is provided in **Table 3-15**.

Table 3-15: Railroad Crossing Summary

County	Site	Railroad Crossings
Osceola	1	Approximately 2,400 feet east of the site on CR 532
Orange	1	Approximately 4,250 feet east of the site on Sand Lake Road
	2	Railroad tracks run along the north side of the property, and cross over US 441 approximately 640 feet north of the intersection with Landstreet Road
	4	One crossing is located approximately 4,300 feet east of the site on Landstreet Road. Another crossing is located on Trussway Boulevard approximately 1,800 feet from the site entrance, however this crossing is unlikely to affect the site at all.
Seminole	1B	Approximately 200 feet north of the site on US 17/92
Volusia	1A	No railroad crossings are located within one mile of this site
	1B	No railroad crossings are located within one mile of this site

3.13 Drainage

Existing drainage data was gathered for each viable site and is documented in the Conceptual Drainage Report in the project file. A summary of the existing drainage and floodplain conditions for each viable site is included below. Relevant drainage maps, including United States Geological Survey (USGS) Quadrangle Maps and Waterbody ID (WBID) Maps, are available in **Appendix E**. Additionally, these maps and drainage permitting documentation are included in the Conceptual Drainage Report, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The topography throughout the site is sloped downhill from the northwest corner toward the southeast corner. The site is not within an Outstanding Florida Water (OFW). It is within WBID 3170C – Reedy Creek Above Lake Russell, which is not impaired for nutrients but is within the Basin Management Action Plan (BMAP) area for Lake Okeechobee.

The existing site consists mainly of undeveloped mixed forest and wetland, with a small residential area. CR 532, currently under design for widening, borders the site to the north and includes a proposed wet detention pond (Pond 5, approximately 3.11 acres) within the site. To the west, the site is bordered by a gravel road, but a permit application was filed in 2023 for the PPE that is proposed through this area. The permit for the PPE was reviewed and found construction of the Osceola County Site 1 will not impact this permit. The PPE will also include the construction of a new wet detention pond adjacent to the truck parking site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The topography throughout the site varies with a gradual downhill slope from the southern end of the site to the north. The site is not within an OFW. It is within WBID 3169A – Shingle Creek, which is not impaired for nutrients but is within the BMAP area for Lake Okeechobee.

The site is bordered on all sides by ROW for Florida’s Turnpike to the east, John Young Parkway to the west, and Sand Lake Road to the south. The site is largely comprised of forested wetland areas. An existing ditch runs through the center of the site, carrying runoff west toward cross drains beneath John Young Parkway, where it flows along its historic path to wetlands associated with Shingle Creek. A floodplain compensation site constructed as part of a Florida’s Turnpike project lies east of Orange County Site 1, directly between the site and Florida’s Turnpike ROW. Additionally, two stormwater treatment ponds to be constructed as part of a Florida’s Turnpike project lie east of Orange County Site 1. Pond 1B (4.76 acres) will be located between the proposed Turnpike off-ramp and Orange County Site 1, while Pond 1A (5.62 acres) will be located between the proposed Turnpike off-ramp and Florida’s Turnpike.

Additionally, there is a permitted stormwater treatment pond, named “John Young Pond 4”, servicing portions of John Young Parkway and Sand Lake Road located within the limits of the site that is jointly owned by FDOT and Orange County. John Young Pond 4 provides 1.95 ac-ft of treatment volume, and has as an estimated attenuation volume of 2.12 ac-ft. The treatment and attenuation volume, as well as floodplain compensation volume provided by this pond, will need to be replaced in kind in the proposed condition.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

The topography throughout the site is relatively flat. The site is not within an OFW. It is within WBID 3169A – Shingle Creek, which is not impaired for nutrients but is within the BMAP area for Lake Okeechobee.

The existing site sits on a recently demolished motel adjacent to SR 528. The former motel was constructed in 1973 simultaneously with the construction of SR 528, including six separate motel buildings and an additional separate reception building. Construction included a series of storm pipes and inlets directly connected to the SR 528 stormwater system near the northeast corner of the project site. This section of SR 528 is untreated and discharges to the Lake Christie Outfall Canal. No on-site water quality treatment or flood attenuation was provided. The permit for widening of SR 528 was obtained and found the construction of the Orange County Site 2 is anticipated to affect this permit, as the SR 528 storm sewer system serves as the current outfall system for the existing motel site, and the proposed ponds are anticipated to outfall in the same manner.

The permit application for the construction of Orange Blossom Storage Center, a three-story storage facility, associated parking lot, and stormwater management system was reviewed and found the construction of Orange County Site 2 is anticipated to impact this permit application as both projects overlap each other, occupying the same parcel.

Orange County Site 4 – West Landstreet Road, East of SR 528

The topography throughout the project is relatively flat. The site is not within an OFW. It is within WBID 3168B – Boggy Creek, which is not impaired for nutrients but is within the BMAP area for Lake Okeechobee.

As of October 2023, the site is covered with crushed asphalt and concrete and is used for truck storage. Review of aerials has confirmed that the site has historically been used for vehicle parking for the previous 20 years. Additionally, there are two small commercial buildings and one small asphalt car parking lot on the existing site. Stormwater runoff sheet flows across the site and into a small dry swale, which discharges through an 18-inch pipe into a ditch along Landstreet Road before being collected in the

Landstreet Road storm sewer system. The permit for one of the small commercial buildings on the existing vehicle storage site was reviewed and found the Orange County Site 4 is anticipated to impact the existing permit, as the commercial building will need to be demolished during the site construction.

Seminole County Site 1B – I-4 at US 17/92

The topography throughout the site is relatively flat. The site is not within an OFW. It is within WBID 2893C – St. Johns River above Wekiva River, which is not impaired for nutrients but is within the BMAP and Total Maximum Daily Load (TMDL) areas for the Middle St. Johns River.

The existing site consists mainly of commercial development (Donnie Myers RV and Circle K) with permitted detention ponds and open space that is permitted for future commercial expansion. School Street borders the site to the south and US 17/92 to the east. Two permits were obtained related to Donnie Myers RV (also known as Southern Pride Business Center) and found the construction of Seminole County Site 1B is anticipated to impact both permits, as both projects overlap each other, occupying the same parcel.

I-4 borders the site to the northwest and is permitted for widening under the *I-4 BtU Segment 3* project, as of June 2024. The permit for the widening of I-4 from east of SR 434 to east of US 17/92, otherwise known as the *I-4 BtU Segment 3*, includes construction of a new wet detention pond within Seminole County Site 1B. Pond 317D (0.95 acres) has not yet been constructed and is anticipated to be impacted by the Seminole County Site 1B as it lies completely within the proposed limits of the site. The treatment and attenuation volume provided by this pond will need to be replaced in kind in the proposed condition.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The topography throughout the site varies, sloping downhill from the southwest side to the northeast side. The site discharges to the Tiger Bay OFW. It is within WBID 2634 – Tomoka River, which is not impaired for nutrients.

The majority of the existing site consists of undeveloped mixed forests and wetlands. It is bordered to the northwest by I-4 and by the Port Orange City Forest on all other sides. I-4 was recently widened throughout this area. A portion of the site area, specifically the proposed eastbound I-4 off-ramp, is located on a former Volusia County rest area. The permit for the widening of I-4 from SR 44 to I-95 was reviewed. It is anticipated that the construction of the site will not impact this permit.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The topography throughout the site is relatively flat. The site discharges to the Tiger Bay OFW. It is within WBID 2654 – Drainage Canals, which is not impaired for nutrients.

The existing site consists of undeveloped mixed forests and wetlands. It is bordered to the southeast by I-4 and by the Tiger Bay State Forest on the west. I-4 was recently widened throughout this area, and a new wet detention stormwater pond (Pond I) was constructed partially within the proposed freight parking site. The permit for the widening of I-4 from SR 44 to I-95 includes a wet detention stormwater pond within the Volusia County Site 1B, called Pond I (1.93 acres). It is anticipated that the construction of the site will impact this permit as a portion of the site overlaps the existing pond.

3.13.1 Floodplains

The following subsection describes floodplains near viable sites based on Federal Emergency Management Agency (FEMA) Floodplain Maps. Nearby floodplains for each site are illustrated in **Figure 3-13** through **Figure 3-18**.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

According to FEMA, the relevant Flood Insurance Rate Map (FIRM) panel number is 12097C0045G, dated 6/18/2013. According to the FEMA FIRMs, the site lies entirely within Zone X of the 100-year floodplain. These are areas of minimal flood hazard, which are the areas outside the 100-year floodplain and higher than the elevation of the 0.2-percent-annual-chance flood. There are no federally regulated floodways within the site limits.

Orange County Site 1 – Sand Lake Road at John Young Parkway

According to FEMA, the relevant FIRM panel number is 12095C0410F, dated 09/25/2009. According to the FEMA FIRMs, portions of the project intersect Zone AE of the 100-year floodplain. These areas have a 1% probability of flooding every year with predicted flood water elevations that have been established. The BFE of the site has been determined to be elevation 87 feet, per the FEMA FIRMs. There are no federally regulated floodways within the site limits, although the Zone AE floodplains that intersect the site location about the floodway associated with Shingle Creek.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

According to FEMA, the relevant FIRM panel numbers are 12095C0410F and 12095C0420F, dated 9/25/2009. According to the FEMA FIRMs, the site lies entirely within Zone X of the 100-year floodplain. These are areas of minimal flood hazard, which are the areas outside the 100-year floodplain and higher than the elevation of the 0.2-percent-annual-chance flood. There are no federally regulated floodways within the site limits.

Orange County Site 4 – West Landstreet Road, East of SR 528

According to FEMA, the relevant FIRM panel numbers are 12095C0410F and 12095C0420F, dated 09/25/2009. According to the FEMA FIRMs, portions of the project intersect Zone AE of the 100-year floodplain. These areas have a 1% probability of flooding every year with predicted flood water elevations that have been established. The BFE of the site has been determined to be elevation 96 feet, per the FEMA FIRMs. There are no federally regulated floodways within the site limits.

Seminole County Site 1B – I-4 at US 17/92

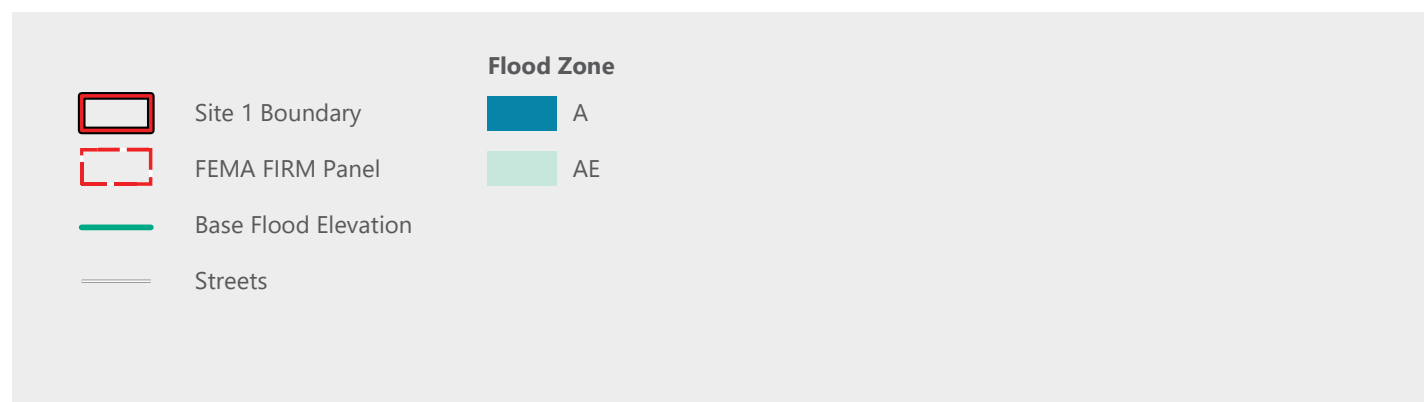
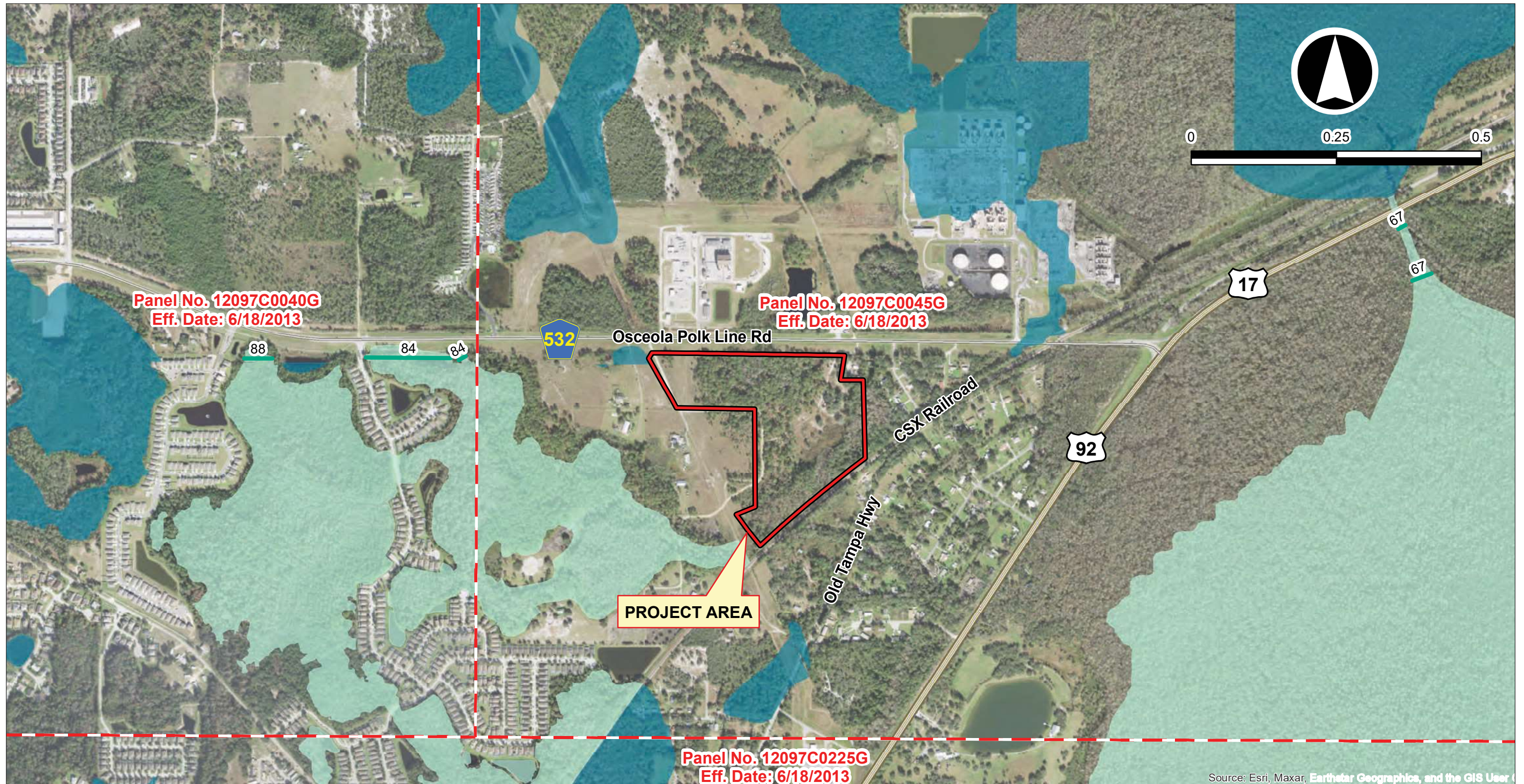
According to FEMA, the relevant FIRM panel number is 12117C0055F, dated 9/28/2007. According to the FEMA FIRMs, the site lies entirely within Zone X of the 100-year floodplain. These are areas of minimal flood hazard, which are the areas outside the 100-year floodplain and higher than the elevation of the 0.2-percent-annual-chance flood. There are no federally regulated floodways within the site limits.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

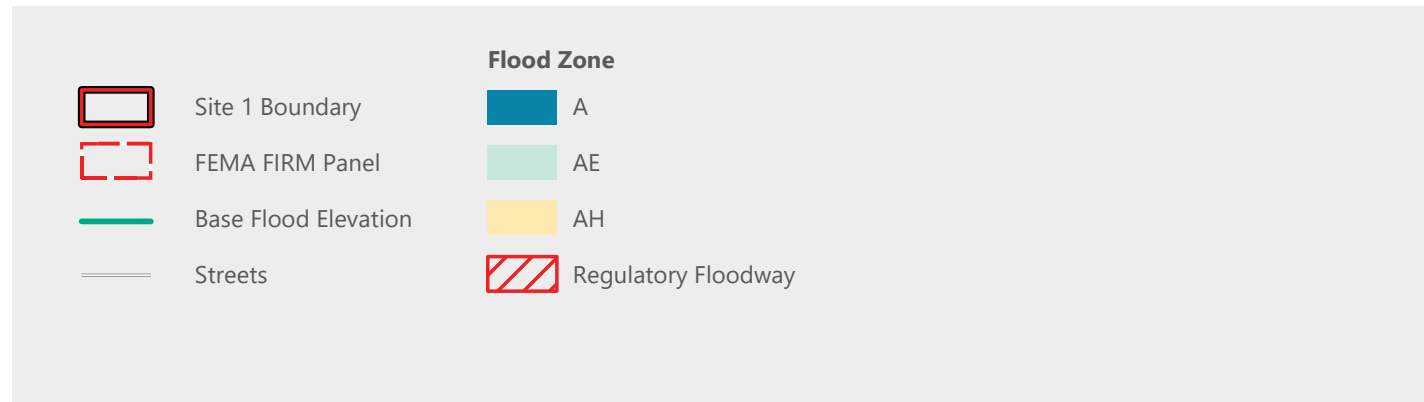
According to FEMA, the relevant FIRM panel number is 12127C0500H, dated 2/19/2014. According to the FEMA FIRMs, the site lies entirely within Zone A of the 100-year floodplain. These areas have a 1% probability of flooding every year with predicted flood water elevations that have not been established. There are no federally regulated floodways within the site limits.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

According to FEMA, the relevant FIRM panel number is 12127C0500H, dated 2/19/2014. According to the FEMA FIRMs, the site lies entirely within Zone A of the 100-year floodplain. These areas have a 1% probability of flooding every year with predicted flood water elevations that have not been established. There are no federally regulated floodways within the site limits.



FDOT **Figure 3-13**
Osceola County Site 1
Floodplains
 Preliminary Engineering Report



FDOT **Figure 3-14**
Orange County Site 1
Floodplains
 Preliminary Engineering Report

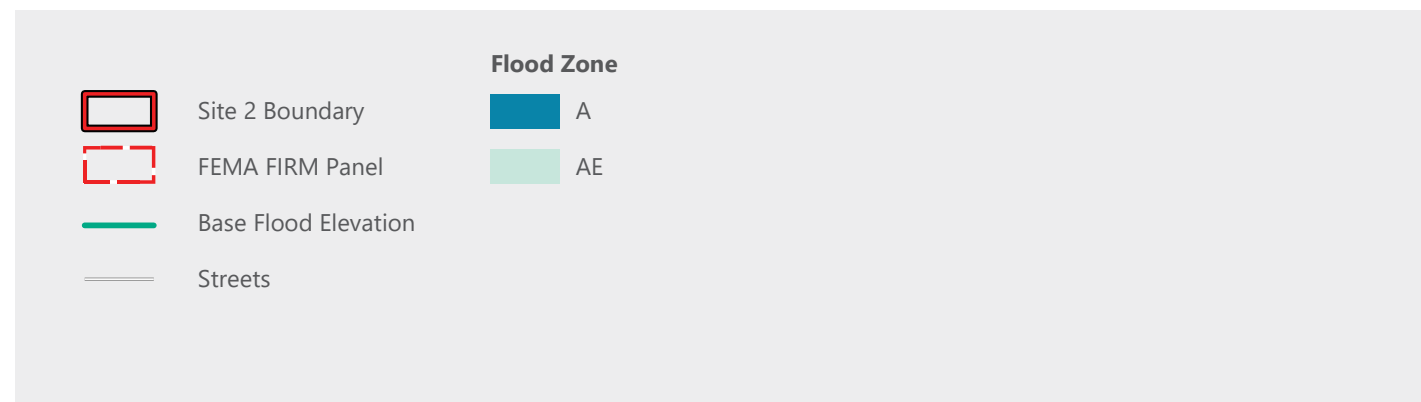
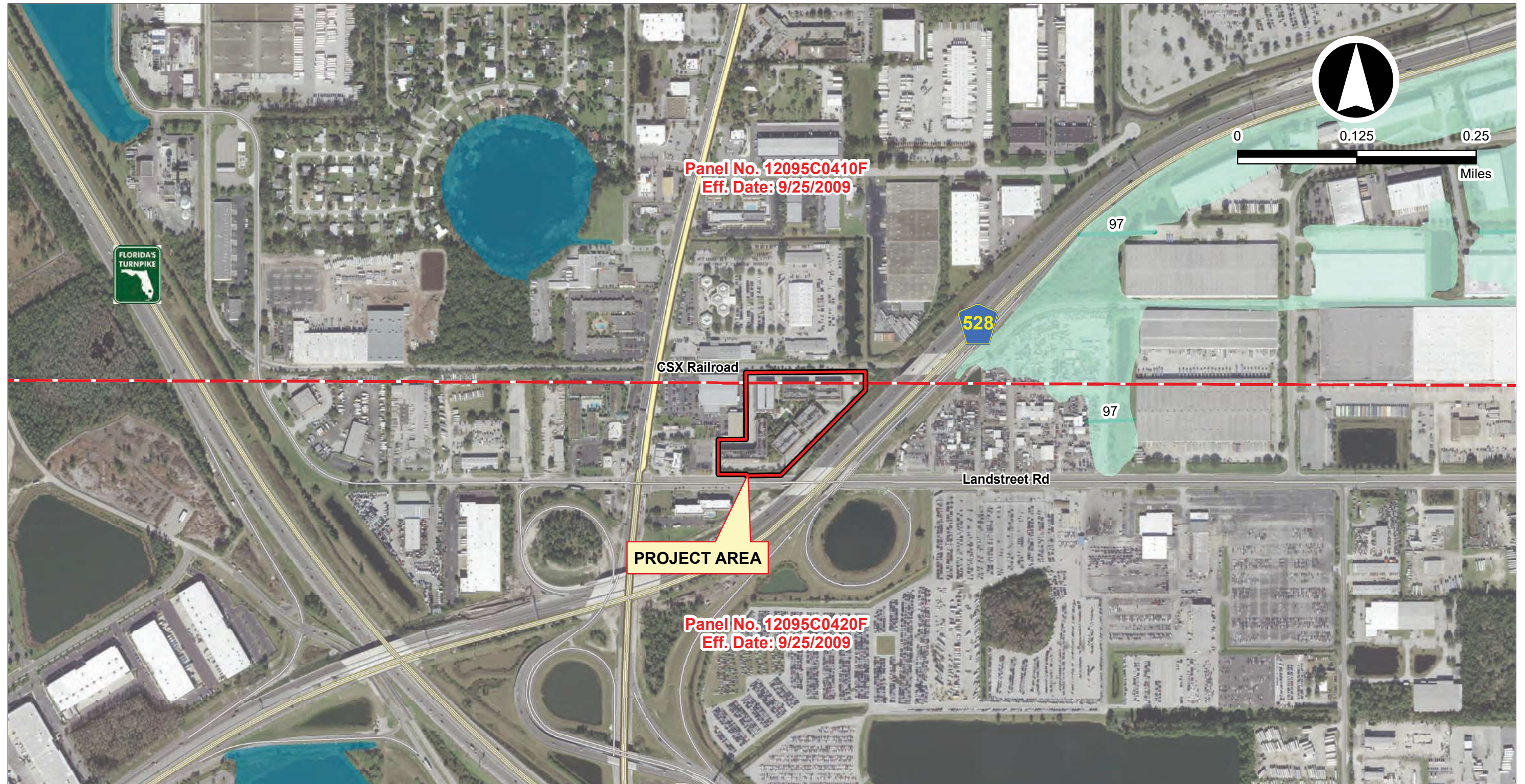


Figure 3-15
Orange County Site 2
Floodplains
 Preliminary Engineering Report

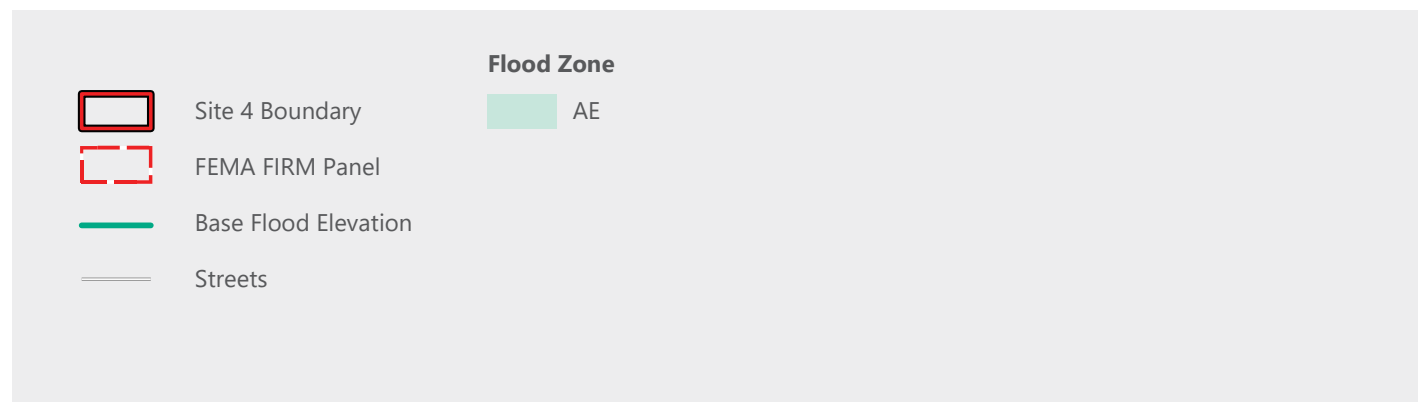
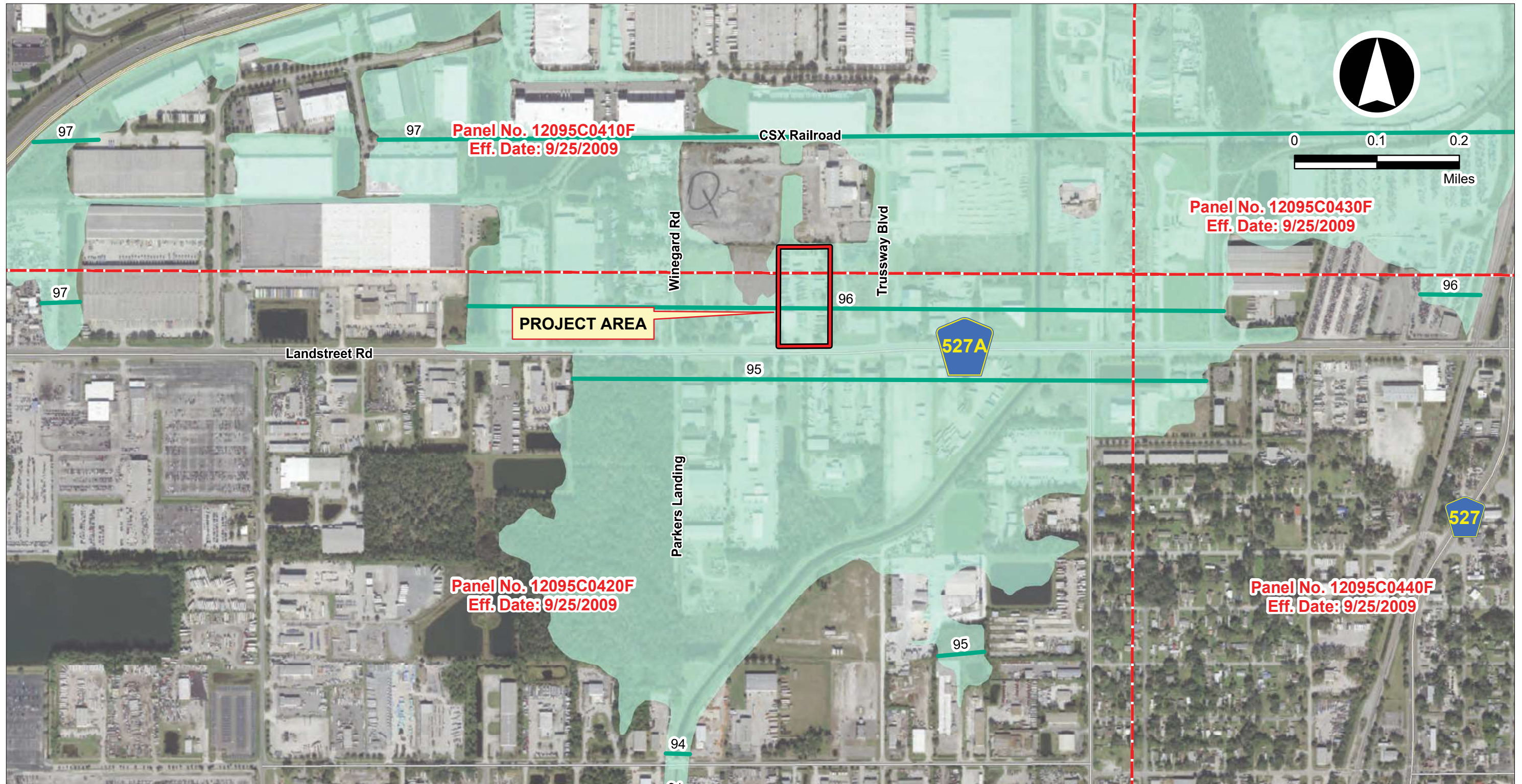
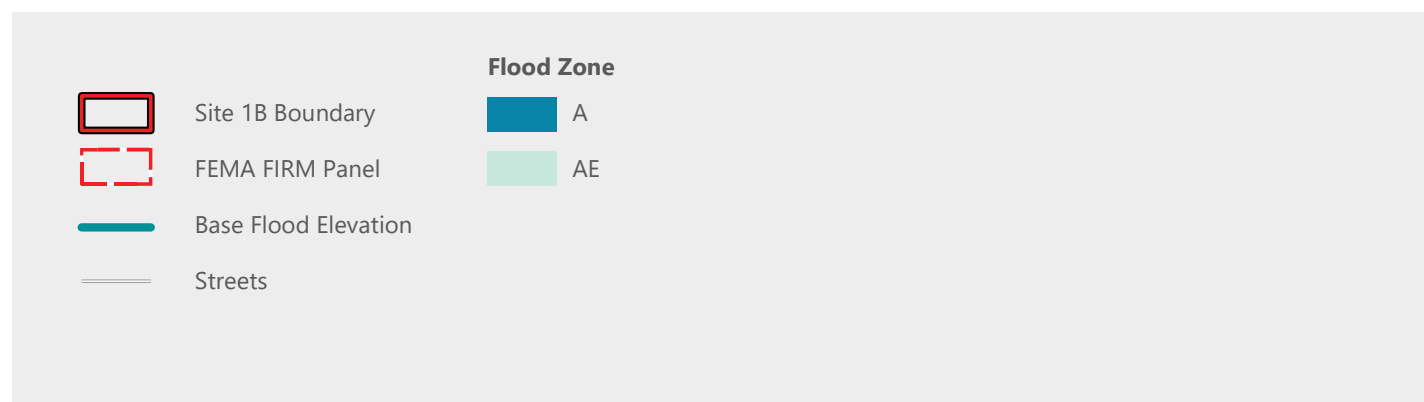


Figure 3-16

**Orange County Site 4
Floodplains**
Preliminary Engineering Report



FDOT **Figure 3-17**
Seminole County Site 1B
Floodplains
 Preliminary Engineering Report

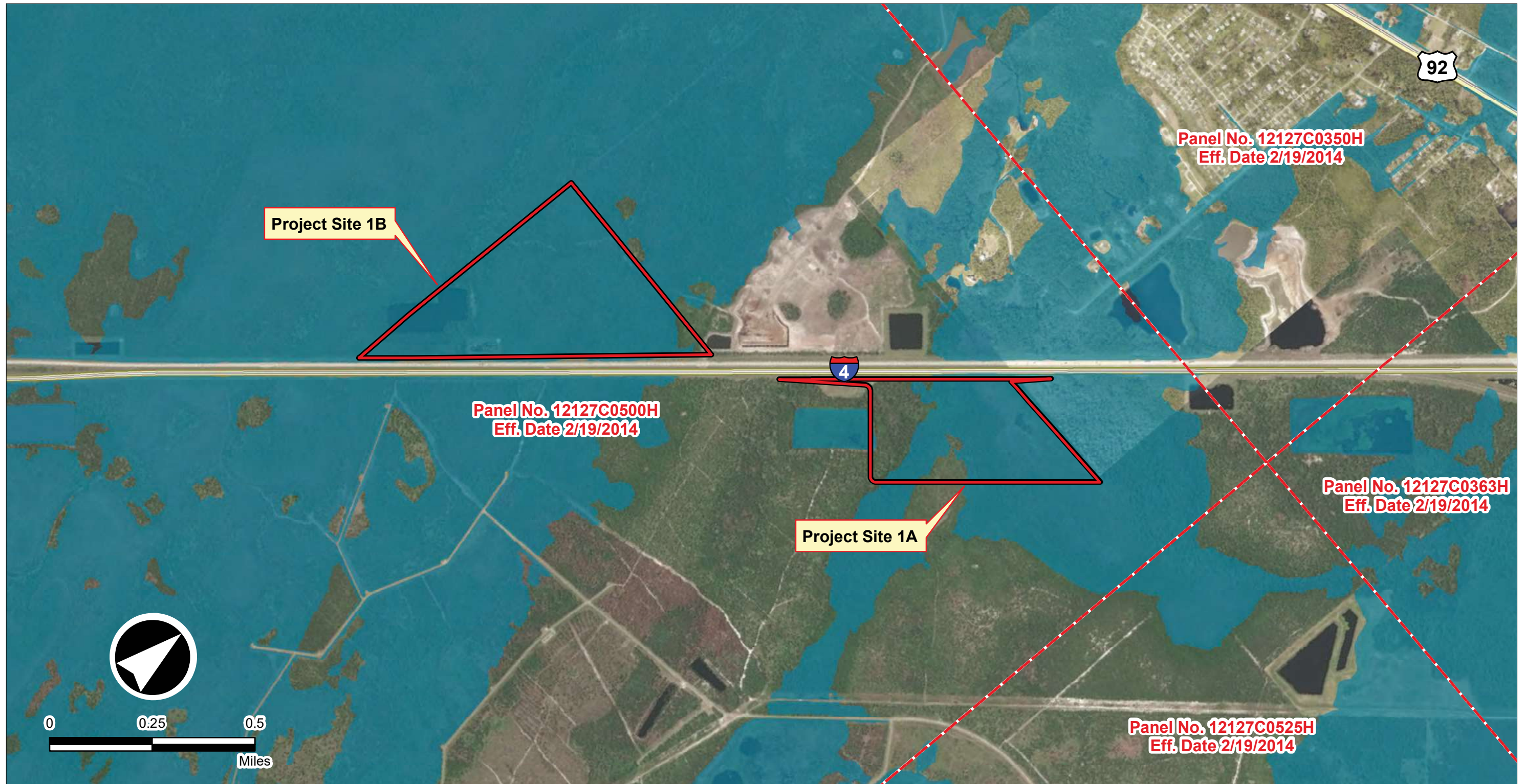


Figure 3-18

**Volusia County Site 1A and Site 1B
Floodplains**
Preliminary Engineering Report

3.14 Lighting

Lighting along the existing corridor(s) adjacent to the viable sites was inventoried.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

No existing lighting is located along CR 532 near the vicinity of Osceola County Site 1. However, as part of the CR 532 widening project, eight cobra head lights are proposed adjacent to Osceola County Site 1 along eastbound CR 532. Additionally, 13 cobra head lights are proposed adjacent to Osceola County Site 1 along the proposed PPE.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Nine cobra head lights are located along northbound John Young Parkway adjacent to Orange County Site 1. Additionally, 15 cobra head lights are located along southbound Florida’s Turnpike adjacent to Orange County Site 1. No existing lighting is located adjacent to westbound Sand Lake Road.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

One cobra head light is located along the north side of Landstreet Road adjacent to Orange County Site 2. Additionally, one cobra head light is located along the southeast property line of the site.

Orange County Site 4 – West Landstreet Road, East of SR 528

No existing lighting is located along Landstreet Road near the vicinity of Orange County Site 4.

Seminole County Site 1B – I-4 at US 17/92

Two high mast light poles are located along the I-4 Eastbound off-ramp to US 17/92. No existing lighting exists along US 17/92, School Street, or Orange Boulevard near the vicinity of Seminole County Site 1B. However, 17 cobra head lights are located within the Circle K property, with an additional 10 cobra head lights within the Donnie Myer Luxury Coach property.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

There is a row of existing cobra head lights located near the I-4 Eastbound off-ramp at the US 92 interchange. Volusia County Site 1A’s ramp accessing I-4 Eastbound is located adjacent to several of these lights.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

No existing lighting is located along I-4 near the vicinity of Volusia County Site 1B.

3.15 Utilities

Existing utilities for each of the viable sites were evaluated separately. A Sunshine 811 Ticket was pulled, Florida Transmission Electric GIS was reviewed, and the *National Pipeline Mapping System* was reviewed for each site. Additionally, for each viable site, available Utility Agency/Owner (UAO) specific GIS or existing utility information was reviewed and considered, including Orange County Utilities and Seminole County Environmental Services. All of the utility information found is detailed in **Table 3-16** through **Table 3-22**. Further utility information for the five preferred sites is provided in each preferred site’s UAP, located in the project file.

Table 3-16: Osceola County Site 1 Existing Utilities Summary

Company	Contact	Description
CenturyLink/ Lumen Local	Marlon Brown – marlon.n.brown@lumen.com relocations@lumen.com	<ul style="list-style-type: none"> Underground facilities on the north side of CR 532 Underground services into the properties off of CR 532 at Sandy Oak Drive
CenturyLink/ Lumen National	Ron Prario – ron.prario@centurylink.com relocations@lumen.com	<ul style="list-style-type: none"> Aerial facilities on the north side of CR 532
Comcast Communications	No name provided – Cenflr-nfl_construction@comcast.com	<ul style="list-style-type: none"> Overhead FOC on the south side of CR 532
Duke Energy Distribution	Robb Brown – robb.brown@duke- energy.com defdistributiongov@duke-energy.com	<ul style="list-style-type: none"> 12.47 kV 3 phase 4 wire overhead distribution power line on the south side of CR 532 – portions to be adjusted on CFX 538-235 project which is currently in the Design phase 12.47 kV 3 phase 3 wire overhead distribution at Ace Auto Repair to be adjusted 0.24 kV or less overhead electric to be removed on CFX 538-235 project
Duke Energy Fiber	Julian Jordan – julian.jordan@duke- energy.com Mark Hurst – mark.hurst@duke- energy.com	<ul style="list-style-type: none"> Fiber connected to the overhead transmission lines on the north side of the road. No impact.
Duke Energy Transmission	Aric Rogers – arogers@pike.com deftransmissiongov@duke-energy.com	<ul style="list-style-type: none"> 2 – 69 kV overhead transmission lines on the north side of CR 532 2 – 230kV overhead transmission lines on the west side of the project area to be removed for the PPE project
Florida Southeast Connection LLC	según Ojetayo - segun.ojetayo@nexteraenergy.com	<ul style="list-style-type: none"> 36” natural gas main running north to south in a 50’ easement within the truck parking project area
Gulfstream Natural Gas/Williams	Shawn Deutscher - shawn.deutscher@williams.com	<ul style="list-style-type: none"> 24” natural gas transmission pipeline LL450 on the north side of CR 532 in a private pipeline easement
Kinder Morgan/Central Florida Pipeline	Jose Pedraza – pipelineinquiries@kindermorgan.com Jose_pedraza2@kindermorgan.com	<ul style="list-style-type: none"> 16” Tampa to Orlando Line along the proposed PPE 10” Tampa to Orlando Line on the northwest side of Old Tampa Highway and CSX Railroad
Polk County Utilities	Ryan Bengsch – ryanbensch@polkcounty.net	<ul style="list-style-type: none"> No facilities
Sabal Trail Transmission – Enbridge	Peter Kerrigan – peter.kerrigan@enbridge.com Erica Jacobson – Erica.jacobson@enbridge.com	<ul style="list-style-type: none"> No facilities
Summit Broadband	Michelle Daniel – permit@summit- broadband.com mdaniel@summit-broadband.com	<ul style="list-style-type: none"> No facilities
TECO Peoples Gas	Shawn Winsor – swinsor@tecoenergy.com	<ul style="list-style-type: none"> Existing 8” coated steel gas main on the south side of CR 532

Table 3-16: Osceola County Site 1 Existing Utilities Summary (contd.)

Company	Contact	Description
Toho Water Authority	Robert Pelham – rpelham@tohowater.com laboyruizje@bv.com	<ul style="list-style-type: none"> • 36" PCCP Reclaimed Transmission main on the south side of CR 532 • 30" water main on the north side of CR 532
Transtate Industrial Pipeline Systems	Tom Ulmer – tulmerjr@transtate.us	<ul style="list-style-type: none"> • KUA natural gas pipeline in the north ROW of CR 532 which does not appear to be impacted
Verizon Business / MCI	Tim Cole – asg.investigationsteam@asginc.us investigations@verizon.com timothy.cole@verizon.com	<ul style="list-style-type: none"> • No facilities

Table 3-17: Orange County Site 1 Existing Utilities Summary

Company	Contact	Description
AT&T Corp	Greg Jacobson – gtjacobson@att.com Steve Eriksson – seriksson@pea-inc.net	<ul style="list-style-type: none"> • No facilities
AT&T Florida	Alan Reynolds – ar2916@att.com	<ul style="list-style-type: none"> • No facilities in the project area • Duct bank on the southside of Sand Lake Road
Bright House Networks / Charter	John Smith – John.smith5@charter.com	<ul style="list-style-type: none"> • OTV on the south side of Sand Lake Road • BFO on the north side of Sand Lake Road • BFO that crosses Sand Lake Road west of the proposed truck parking driveway and east of John Young Parkway
CenturyLink/ Lumen Local	Marlon Brown – marlon.n.brown@lumen.com relocations@lumen.com	<ul style="list-style-type: none"> • No facilities
CenturyLink/Lumen National	Ron Prario – ron.prario@centurylink.com relocations@lumen.com	<ul style="list-style-type: none"> • Metro Underground Lateral and Metro Underground on the north side of Sand Lake Road • Metro Lateral Aerial on the south side of Sand Lake Road • Metro Underground on the south side of Sand Lake Road • Metro Lateral Underground along John Young Parkway
Crown Castle	Danny Haskett – southfloridaplansreview@crowncastle.com dannyhaskett@crowncastle.com	<ul style="list-style-type: none"> • Aerial FOC on joint users pole strand on the south side of Sand Lake Road

Table 3-17: Orange County Site 1 Existing Utilities Summary (contd.)

Company	Contact	Description
Duke Energy Distribution	Robb Brown – robb.brown@duke-energy.com defdistributiongove@duke-energy.com	<ul style="list-style-type: none"> Overhead 12.47/7.2 kV electric on the north and south side of Sand Lake Road which converts to underground to cross John Young Parkway Underground 12.47/7.2kV crosses Sand Lake Road at the Turnpike SB Off Ramp Underground 12.46/7.2kV on the east side of John Young Parkway which crosses to the west at the north side of the proposed truck parking driveway
Duke Energy Fiber	Julian Jordan – julian.jordan@duke-energy.com Mark Hurst – mark.hurst@duke-energy.com	No facilities
Duke Energy Transmission	Aric Rogers – arogers@pike.com deftransmissiongov@duke-energy.com	<ul style="list-style-type: none"> 69 kV transmission electric line on the northeast side of the Turnpike outside of the project limits 230 kV transmission electric line on the northeast side of the Turnpike outside of the project limits
Florida Gas Transmission	Joseph Sanchez – joseph.e.sanchez@energytransfer.com	<ul style="list-style-type: none"> 24” and 26” natural gas transmission pipelines on the northeast side of the Turnpike outside of the project limits
Orange County Utilities	Jose Hernandez – jose.hernandez2@ocfl.net Christina Crosby – christina.crosby@ocfl.net	<ul style="list-style-type: none"> 12” CIP FM and 14” DIP FM on the south side of Sand Lake Road 42” DIP FM on the north side of Sand Lake Road
Orange County Public Works	Roger Smith – roger.smith@ocfl.net	<ul style="list-style-type: none"> No Response
Orlando Utilities Commission Water	Robert Scheuerle – developmentsservices@ouc.com rscheuerle@ouc.com	<ul style="list-style-type: none"> 20” DIP WM on the south side of Sand Lake Road
Smart City Telecom	David Cawley – Dcawley@smartcity.com	<ul style="list-style-type: none"> Aerial fiber cable on Duke Energy pole line on the north side of Sand Lake Road which converts to a directional bore fiber cable in 2” HDPE under John Young Parkway at 4 ft. BFG
Summit Broadband	Michelle Daniel – permit@summit-broadband.com mdaniel@summit-broadband.com	<ul style="list-style-type: none"> Underground 144 ct FOC on the south side of Sand Lake Road which crosses to the north side of Sand Lake Road between the proposed truck parking driveway and John Young Parkway
TECO Peoples Gas	Shawn Winsor – swinsor@tecoenergy.com	<ul style="list-style-type: none"> Existing 4” coated steel gas main down the middle of West Sand Lake Road which moved to the north side of West Sand Lake Road within the project limits Existing 8” coated steel gas main on the south side of West Sand Lake Road between South John Young Parkway and Florida’s Turnpike

Table 3-17: Orange County Site 1 Existing Utilities Summary (contd.)

Company	Contact	Description
Traffic Engineering and Maintenance	Ron Meade – ron.meade@dot.state.fl.us	No conflicts
Verizon Business/MCI	Tim Cole – asg.investigationsteam@asginc.us investigations@verizon.com timothy.cole@verizon.com	<ul style="list-style-type: none"> Verizon Aerial FOC on the south side of Sand Lake Road which crosses Sand Lake Road between the proposed truck parking driveway and John Young Parkway to cross John Young Parkway Underground 2-2" HDPE/FOC on the north side of Sand Lake Road to cross under John Young Parkway
Windstream Communications	Gary Cary – gary.cary@windstream.com	Buried fiber on the south side of Sand Lake Road
Zayo Group, LLC	Bruce Herrington – bruce.herrington@cobbhendley.com	<ul style="list-style-type: none"> (3) 1-1/4" HDPE ducts with 432 CT FOC on the south side of Sand Lake Road outside of the project area

Table 3-18: Orange County Site 2 Existing Utilities Summary

Company	Contact	Description
American Traffic Solutions	Victoria Grasser victoria.grasser@verramobility.com	<ul style="list-style-type: none"> Red light cameras and fiber located within West Landstreet Road ROW
AT&T Distribution	Kirby Spencer – ks2488@att.com	<ul style="list-style-type: none"> Telephone located within West Landstreet Road ROW
Charter Communications	John Smith – John.smith5@charter.com	<ul style="list-style-type: none"> CATV and fiber located within West Landstreet Road ROW
Duke Energy – Transmission	Aric Rogers – arogers@pike.com deftransmissiongov@duke-energy.com	<ul style="list-style-type: none"> 69 kV transmission electric line on the north side of West Landstreet Road
Duke Energy – Distribution	Robb Brown – robb.brown@duke-energy.com defdistributiongove@duke-energy.com	<ul style="list-style-type: none"> Distribution electric lines on the north side of West Landstreet Road ROW
MCI	Tim Cole – asg.investigationsteam@asginc.us investigations@verizon.com timothy.cole@verizon.com	<ul style="list-style-type: none"> Communication Lines and fiber located within West Landstreet Road ROW
Orange County Utilities	Jose Hernandez – jose.hernandez2@ocfl.net Christina Crosby – christina.crosby@ocfl.net	<ul style="list-style-type: none"> 12" PVC" and 6" PVC force main in the north travel lanes (westbound lanes) of West Landstreet Road
Orange County Public Works	Roger Smith – roger.smith@ocfl.net	<ul style="list-style-type: none"> Fiber and traffic signals located within West Landstreet Road ROW
Orlando Utilities Commission	Robert Scheuerle – developmentservices@ouc.com rscheuerle@ouc.com	<ul style="list-style-type: none"> Water located within West Landstreet Road ROW
Summit Broadband	Michelle Daniel – permit@summit-broadband.com mdaniel@summit-broadband.com	<ul style="list-style-type: none"> Fiber and telephone located within West Landstreet Road ROW

Table 3-18: Orange County Site 2 Existing Utilities Summary (contd.)

Company	Contact	Description
TECO Peoples Gas	Shawn Winsor – swinsor@tecoenergy.com	<ul style="list-style-type: none"> Distribution gas located within West Landstreet Road ROW
Traffic Engineering and Maintenance – FTE	Kevin McCaffrey – kevin.mccaffrey@dot.state.fl.us	<ul style="list-style-type: none"> Electric and fiber located within West Landstreet Road ROW
Uniti Fiber	James Mosley – james.mosley@uniti.com	<ul style="list-style-type: none"> Fiber located within West Landstreet Road ROW Telephone located within West Landstreet Road ROW
Zayo Group	Bruce Herrington – bruce.herrington@cobbhendley.com	<ul style="list-style-type: none"> Fiber located within West Landstreet Road ROW

Table 3-19: Orange County Site 4 Existing Utilities Summary

Company	Contact	Description
AT&T Distribution	Kirby Spencer - ks2488@att.com	<ul style="list-style-type: none"> Telephone located within W. Landstreet Road ROW
CenturyLink	Ron Prario – ron.prario@centurylink.com	<ul style="list-style-type: none"> Fiber located within West Landstreet Road ROW
Charter Communications	John Smith – John.smith5@charter.com	<ul style="list-style-type: none"> CATV, fiber, and telephone located within West Landstreet Road ROW
Comcast Cable	No name provided – Cenflr-nfl_construction@comcast.net	<ul style="list-style-type: none"> CATV located within West Landstreet Road ROW
Duke Energy – Transmission	Aric Rogers – arogers@pike.com deftransmissiongov@duke-energy.com	<ul style="list-style-type: none"> There is no transmission electric in the project area
Duke Energy – Distribution	Robb Brown – robb.brown@duke-energy.com defdistributiongove@duke-energy.com	<ul style="list-style-type: none"> Distribution electric on the north side of West Landstreet Road ROW
Orange County Utilities	Jose Hernandez – jose.hernandez2@ocfl.net Christina Crosby – christina.crosby@ocfl.net	<ul style="list-style-type: none"> 12" PVC force main on the south side of W. Landstreet Road
Orange County Public Works	Roger Smith – roger.smith@ocfl.net	<ul style="list-style-type: none"> Fiber and traffic signals located within W. Landstreet Road ROW
Orlando Utilities Commission	Robert Scheuerle – developmentservices@ouc.com rscheuerle@ouc.com	<ul style="list-style-type: none"> Water facilities located within W. Landstreet Road ROW
TECO Peoples Gas	Shawn Winsor – swinsor@tecoenergy.com	<ul style="list-style-type: none"> Distribution gas located within W. Landstreet Road ROW
Zayo Group	Bruce Herrington – bruce.herrington@cobbhendley.com	<ul style="list-style-type: none"> Fiber located within West Landstreet Road ROW

Table 3-20: Seminole County Site 1B Existing Utilities Summary

Company	Contact	Description
AT&T Corp	Greg Jacobson – gtjacobson@att.com Steve Eriksson – seriksson@pea-inc.net	<ul style="list-style-type: none"> No facilities
AT&T Florida	Kirby Spencer - ks2488@att.com	<ul style="list-style-type: none"> No facilities
Bright House Networks / Charter	John Smith – John.smith5@charter.com	<ul style="list-style-type: none"> BTV and BFO on the west side of US 17 BTV on the north side of School Street just south of the proposed Pond 1 site OTV on the south side of the entrance to the existing driveway (existing service to be removed)
City of Sanford Public Works	Jeff Davis – jeff.davis@sanfordfl.gov	<ul style="list-style-type: none"> Not a service provider for this location
City of Sanford Utilities Department	Richard Blake – Richard.blake@sanfordfl.gov Deborah Cole – Deborah.cole@sanfordfl.gov	<ul style="list-style-type: none"> No facilities
Comcast Communications	Scott Osebold – scott_osebold@comcast.com	<ul style="list-style-type: none"> Underground 2” pipe and FOC on the north corner of Orange Boulevard and US 17 outside of the project limits
Embarq Communications	Dave Kennedy – dave.c.kennedy@lumen.com	<ul style="list-style-type: none"> No facilities
Florida Power and Light Distribution	Chris Buonanni – Christopher.buonanni@fpl.com	<ul style="list-style-type: none"> Overhead facilities on the west side of Monroe Road Overhead facilities on the south side of School Street Overhead facilities on the south side of the entrance to the existing driveway Overhead facilities cross the existing driveway into the existing grassy area and underground to the light (existing service to be removed) Overhead facilities on the north side of Orange Boulevard Overhead facilities cross Orange Boulevard into the parking lot
Florida Power and Light Transmission	Thomas Colucci – Thomas.colucci@fpl.com	<ul style="list-style-type: none"> 115 kV transmission line on the west side of US 17
Seminole County Traffic Engineering	Charles Wetzel – cwetzel@seminolecountyfl.gov	<ul style="list-style-type: none"> Facilities on the west side of US 17 and east side of I-4

Table 3-20: Seminole County Site 1B Existing Utilities Summary (contd.)

Company	Contact	Description
Seminole County Environmental Services	Paul Zimmerman – pzimmerman@seminolecountyfl.gov	<ul style="list-style-type: none"> Numerous private sanitary and potable lines within the site There are out-of-service 12” potable and 10” sanitary lines along the west and northwest of the project area, adjacent to the I-4 ROW, on private parcels within utility easements 12” out-of-service potable water main on the northeast side of the project area 12” potable water main and 8” sanitary force main on the northeast side of the project area 10” potable water main and 8” sanitary force main on the east side of the project area 4” out-of-service sanitary force main, 8” sanitary force main, and 12” potable water main on the south side of the project area
Verizon Business/MCI	Tim Cole – asg.investigationsteam@asginc.us investigations@verizon.com timothy.cole@verizon.com	<ul style="list-style-type: none"> No facilities
Uniti Fiber	James Mosley – james.mosley@uniti.com	<ul style="list-style-type: none"> No facilities
Zayo Group LLC	Bruce Herrington – zayoflreolcations@zayo.com bruce.herrington@cobb fendley.com Kate Peters – kate.peters@cobb fendley.com	<ul style="list-style-type: none"> No facilities

Table 3-21: Volusia County Site 1A Existing Utilities Summary

Company	Contact	Description
AT&T Florida	Kirby Spencer - ks2488@att.com	<ul style="list-style-type: none"> No facilities
City of Daytona Beach	James Pekela – pekajames@codb.us Jim Nelson – nelsonjames@codb.us Darren Greer – greerd@codb.us	<ul style="list-style-type: none"> No facilities
City of Port Orange Florida	Junos Reed – jureed@port-orange.org	<ul style="list-style-type: none"> No facilities Truck Parking property is adjacent to the potable water wellfield
Florida Power and Light Distribution	Chris Buonanni – Christopher.buonanni@fpl.com	<ul style="list-style-type: none"> No facilities
Florida Power and Light Transmission	Thomas Colucci – Thomas.colucci@fpl.com	<ul style="list-style-type: none"> No facilities

Table 3-22: Volusia County Site 1B Existing Utilities Summary

Company	Contact	Description
AT&T Florida	Kirby Spencer - ks2488@att.com	• No facilities
City of Daytona Beach	James Pekela – pekalajames@codb.us Jim Nelson – nelsonjames@codb.us Darren Greer – greerd@codb.us	• No facilities
City of Port Orange Florida	Junos Reed – jureed@port-orange.org	• No facilities
Florida Power and Light Distribution	Chris Buonanni – Christopher.buonanni@fpl.com	• No facilities
Florida Power and Light Transmission	Thomas Colucci – Thomas.colucci@fpl.com	• No facilities

3.16 Soils and Geotechnical Data

The soil surveys of Osceola County, Florida (dated 2022), Orange County, Florida (dated 2021), Seminole County, Florida (dated 2022), and Volusia County, Florida (dated 2022), published by the *United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS)* have been reviewed within the project vicinity. *USDA Soil Survey Geographic database (SSURGO)* data was also obtained from NRCS to create soils maps for the project limits using GIS ArcMap, illustrated in **Figure 3-19** through **Figure 3-24**.

A geotechnical investigation was not performed for this study and a detailed geotechnical investigation should be performed during the Design phase. For soils in the following sections with a dual Hydrologic Soil Group (HSG), the first letter is for drained areas, and the second is for un-drained areas. Soils are only assigned a dual class if they are group D in their natural condition.

Osceola County Site 1

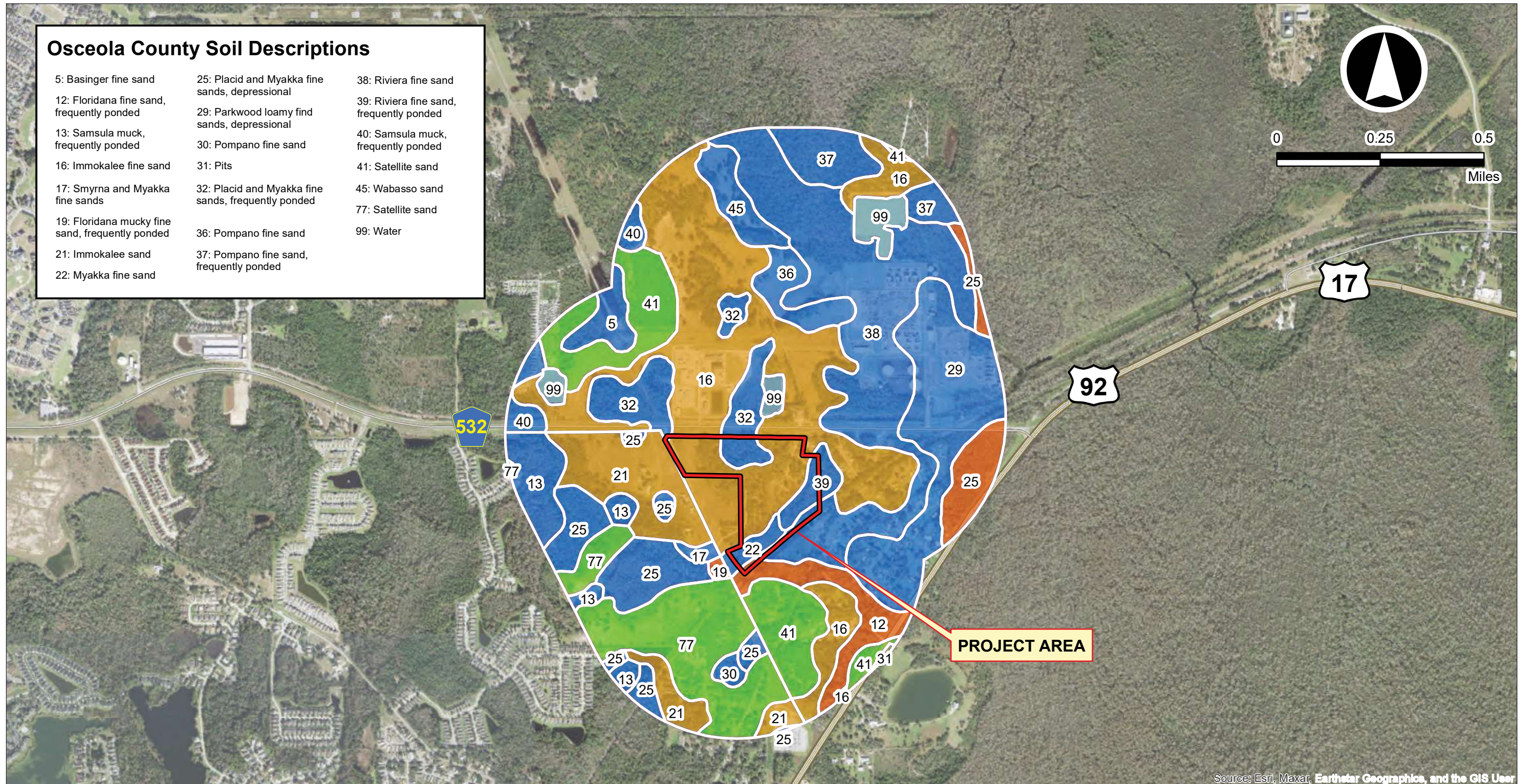
As shown in **Table 3-23**, the soils encountered within the project site are HSG A/D, B/D, and C/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The ground water depth varies from 0.0 feet to 1.5 feet within the project site per the NRCS Soil Survey information.

Table 3-23: USDA NRCS Soil Survey Information for Osceola County

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO**
12	Floridana fine sand, frequently ponded, 0 to 1 percent slopes	0	4	C/D	0-19	SP-SM, SM	A-2-4, A-3
					19-25	SP-SM, SM	A-2-4, A-3
					25-80	SC-SM, CL, SC	A-2-4, A-4, A-7-6
16	Immokalee fine sand, 0 to 2 percent slopes	0.5-1.5	6	B/D	0-6	SP-SM, SM	A-2-4, A-3
					6-35	SP-SM, SM	A-2-4, A-3
					35-54	SP-SM, SM	A-2-4, A-3
					54-80	SP-SM, SM	A-2-4, A-3
22	Myakka fine sand, 0 to 2 percent slopes	0.5-1.5	6	A/D	0-6	SP-SM, SM	A-2-4, A-3
					6-20	SP-SM, SM	A-2-4, A-3
					20-36	SP-SM, SM	A-2-4, A-3
					36-80	SP-SM, SM	A-2-4, A-3
32	Placid fine sand, frequently ponded, 0 to 1 percent slopes	0	4	A/D	0-24	SP-SM, SM	A-2-4, A-3
					24-80	SP-SM, SM	A-2-4, A-3
39	Riviera fine sand, frequently ponded, 0 to 1 percent slopes	0	4	A/D	0-4	SP-SM, SM	A-2-4, A-3
					4-36	SP-SM, SM	A-2-4, A-3
					36-42	SC-SM, CL, SM	A-2-4, A-4, A-6
					42-56	SP-SM, SM	A-2-4, A-3
					56-80	SP-SM, SM	A-2-4, A-3

*Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as "+".

**American Association of State Highway and Transportation Officials



Source: Esri, Maxar, Earthstar Geographics, and the GIS User

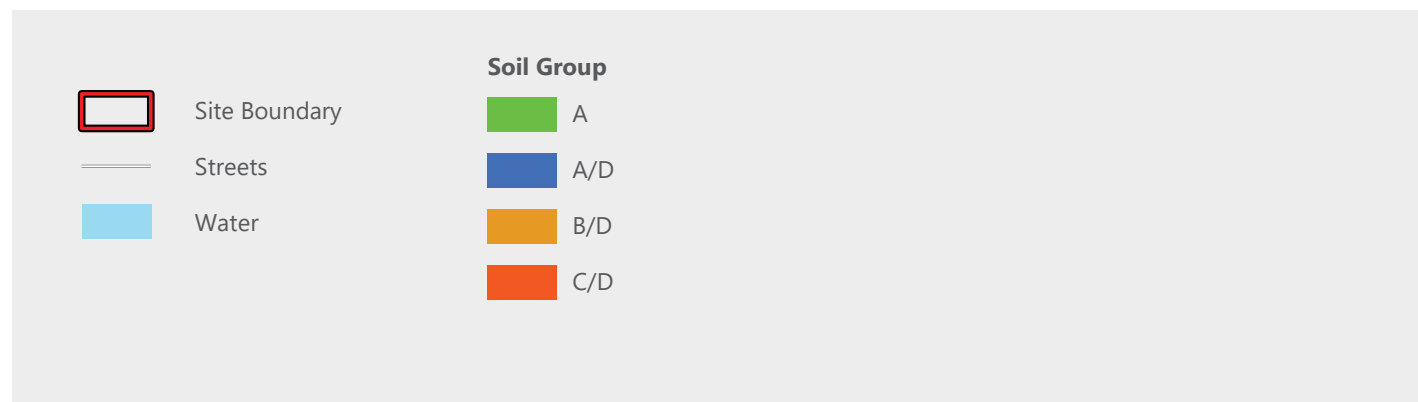


Figure 3-19
NRCS Soils
Osceola County Site 1
 Preliminary Engineering Report

Orange County Site 1 – Sand Lake Road at John Young Parkway

As shown in **Table 3-24**, the soils encountered within the project site are HSG A/D, B/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The ground water depth varies from 0.0 feet to 1 foot within the project site per the NRCS Soil Survey information.

Table 3-24: USDA NRCS Soil Survey Information for Orange County (Site 1)

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
37	St. Johns Fine Sand	0.0 – 1.0	3-4	B/D	0-12	SP-SM, SP	A-3
					12-24	SP-SM, SP	A-3
					24-44	SP-SM, SM	A-2-4, A-3
					44-80	SP-SM, SP	A-3
44	Smyrna-Smyrna, Wet, Fine Sand	0.0 – 0.5	4-6	A/D	0-4	SP-SM, SM, SP	A-2-4
					4-17	SP-SM, SP	A-2-4, A-3
					17-27	SP-SM, SM	A-2-4
					27-80	SP-SM, SP	A-2-4, A-3

*Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as "+".

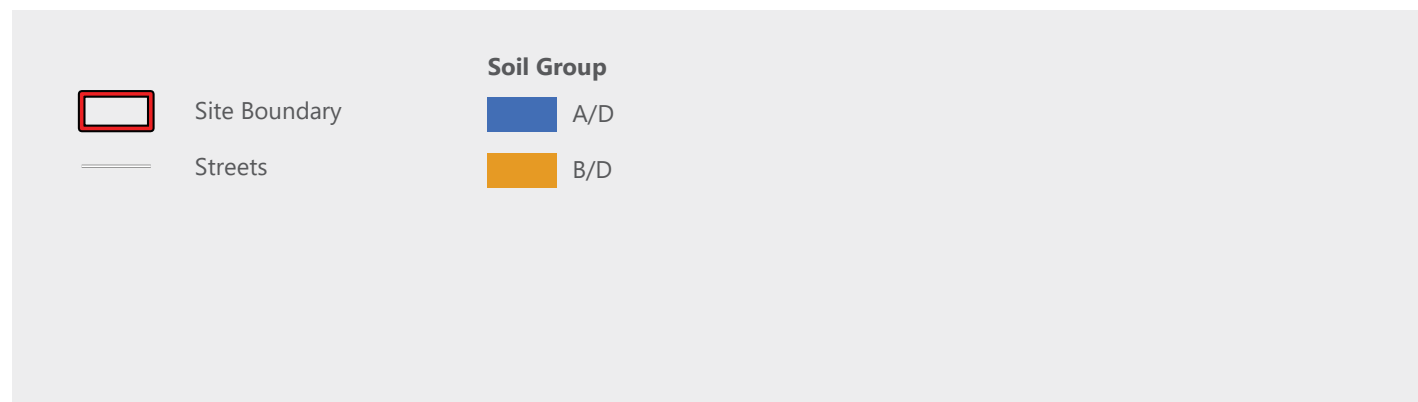
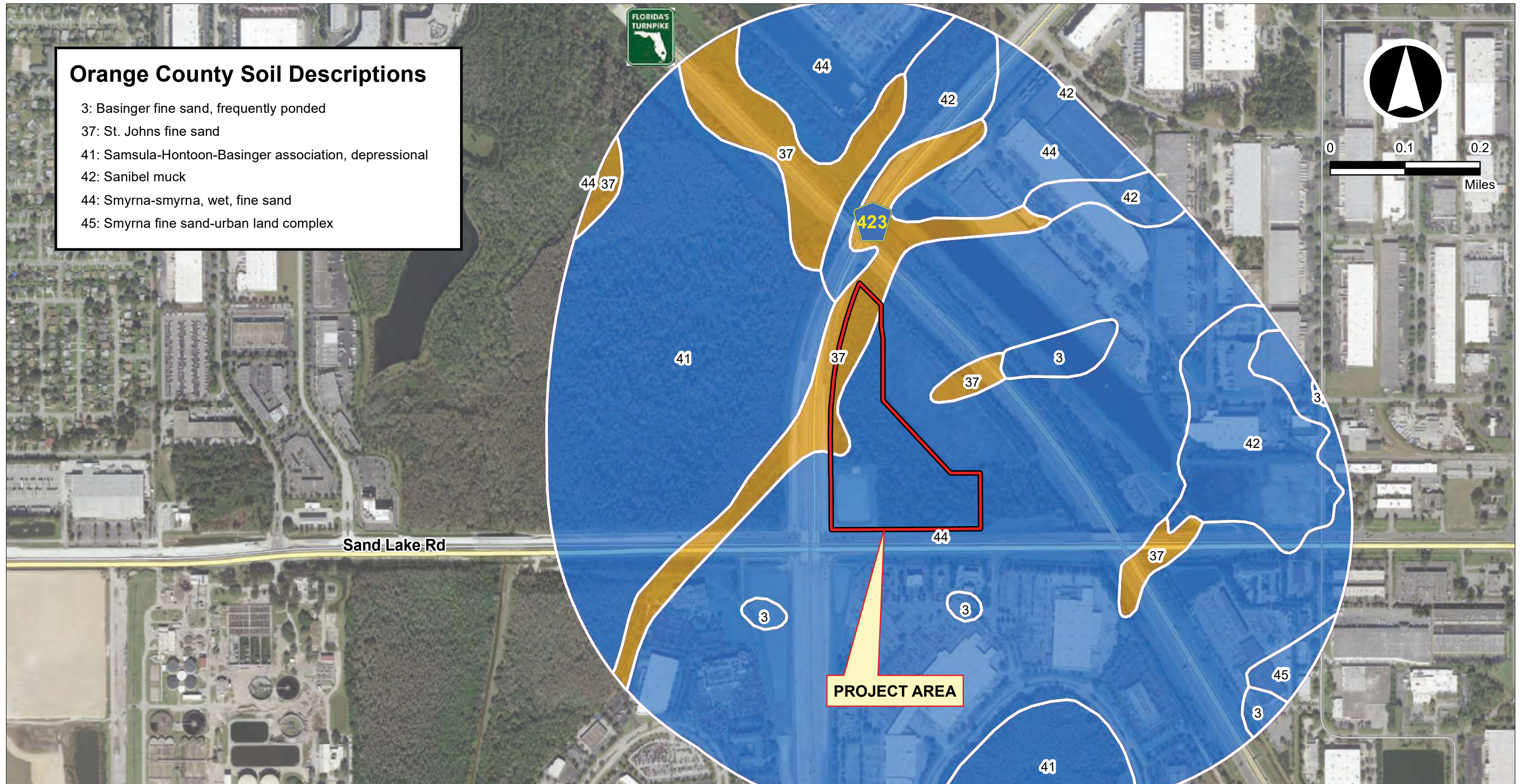
Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

As shown in **Table 3-25**, the soils encountered within the project site are HSG A/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The ground water depth varies from 0.5 feet to 1.5 feet within the site during the wet season per the NRCS Soil Survey information.

Table 3-25: USDA NRCS Soil Survey Information for Orange County (Site 2)

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
45	Smyrna Fine Sand – Urban Land Complex	0.5-1.5	6-8	A/D	0-4	SP-SM, SM	A-2-4, A-3
					4-13	SP-SM, SM	A-2-4, A-3
					13-18	SP-SM, SM	A-2-4, A-3
					18-49	SP-SM, SM	A-2-4, A-3
					49-80	SP-SM, SM	A-2-4, A-3

*Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as "+".



FDOT **Figure 3-20**
NRCS Soils
Orange County Site 1
 Preliminary Engineering Report

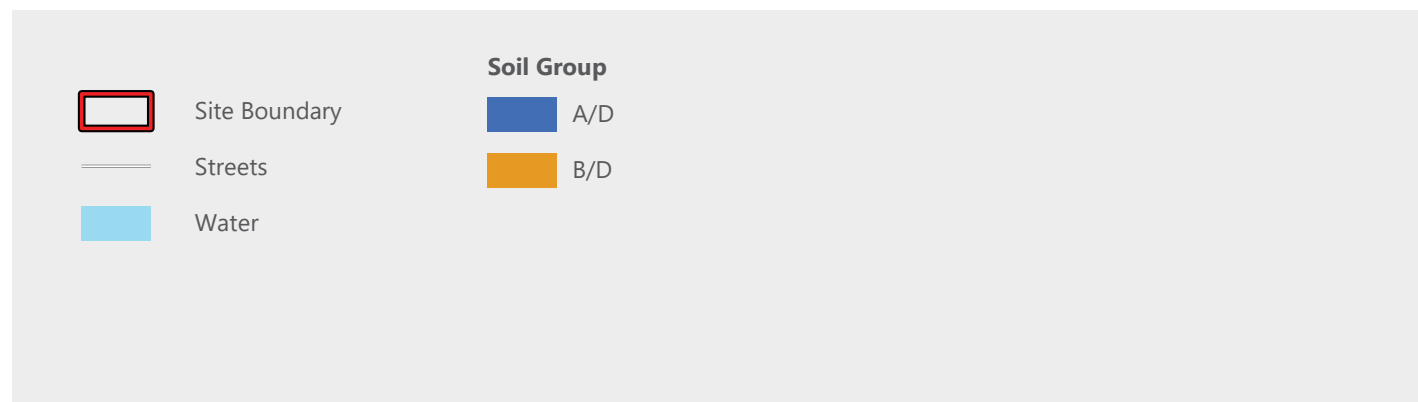
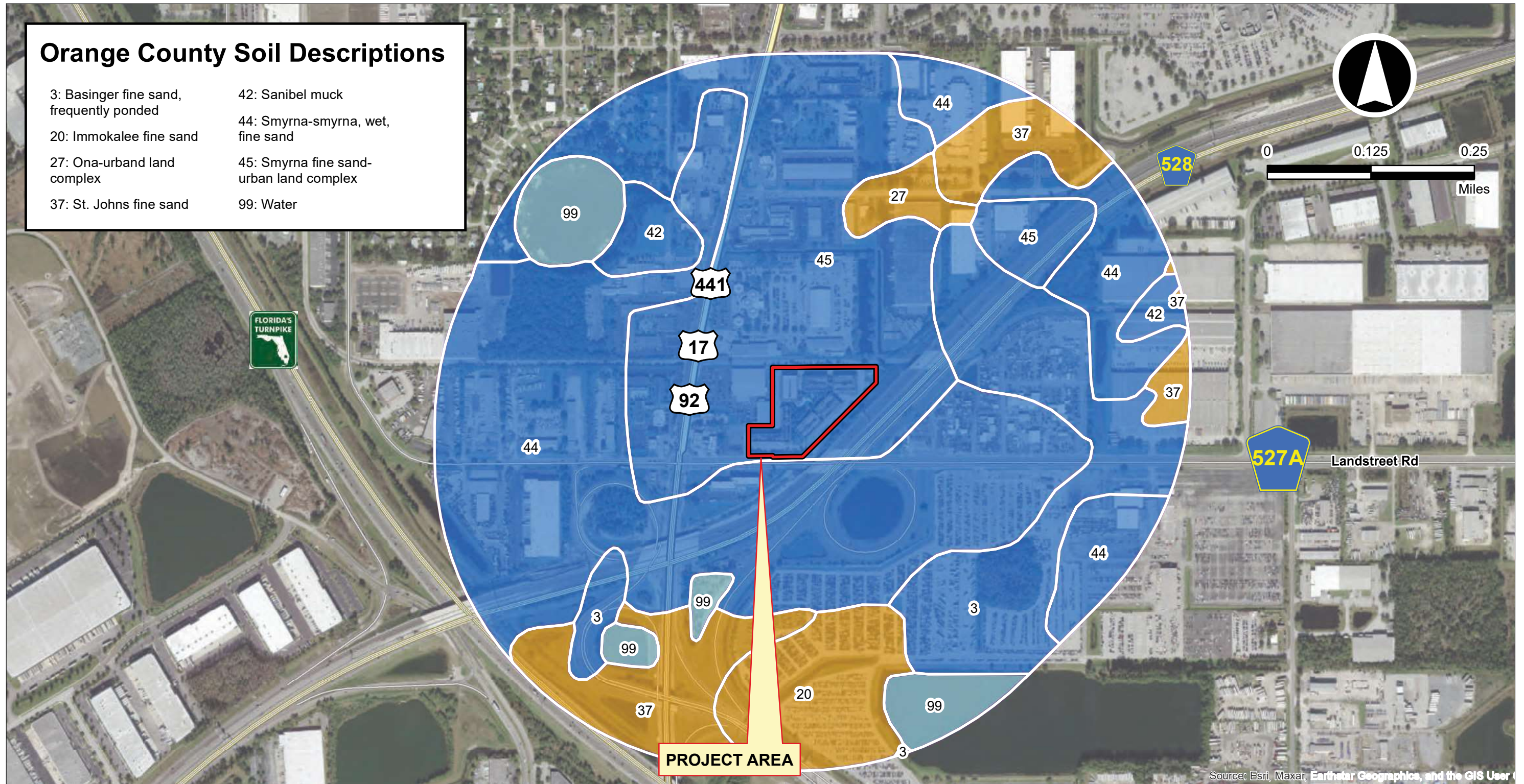


Figure 3-21
NRCS Soils
Orange County Site 2
 Preliminary Engineering Report

Orange County Site 4 – West Landstreet Road, East of SR 528

As shown in **Table 3-26**, the soils encountered within the project site are HSG A/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The ground water depth varies from 0.0 feet to 0.5 feet within the site during the wet season per the NRCS Soil Survey information.

Table 3-26: USDA NRCS Soil Survey Information for Orange County (Site 4)

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
44	Smyrna-Smyrna, Wet, Fine Sand	0.0 – 0.5	4-6	A/D	0-4	SP-SM, SM, SP	A-2-4
					4-17	SP-SM, SP	A-2-4, A-3
					17-27	SP-SM, SM	A-2-4
					27-80	SP-SM, SP	A-2-4, A-3

**Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as “+”.*

Seminole County Site 1B – I-4 at US 17/92

As shown in **Table 3-27**, the soils encountered within the project site are HSG A/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The ground water depth varies from 0.0 feet to 3 feet within the site per the NRCS Soil Survey information.

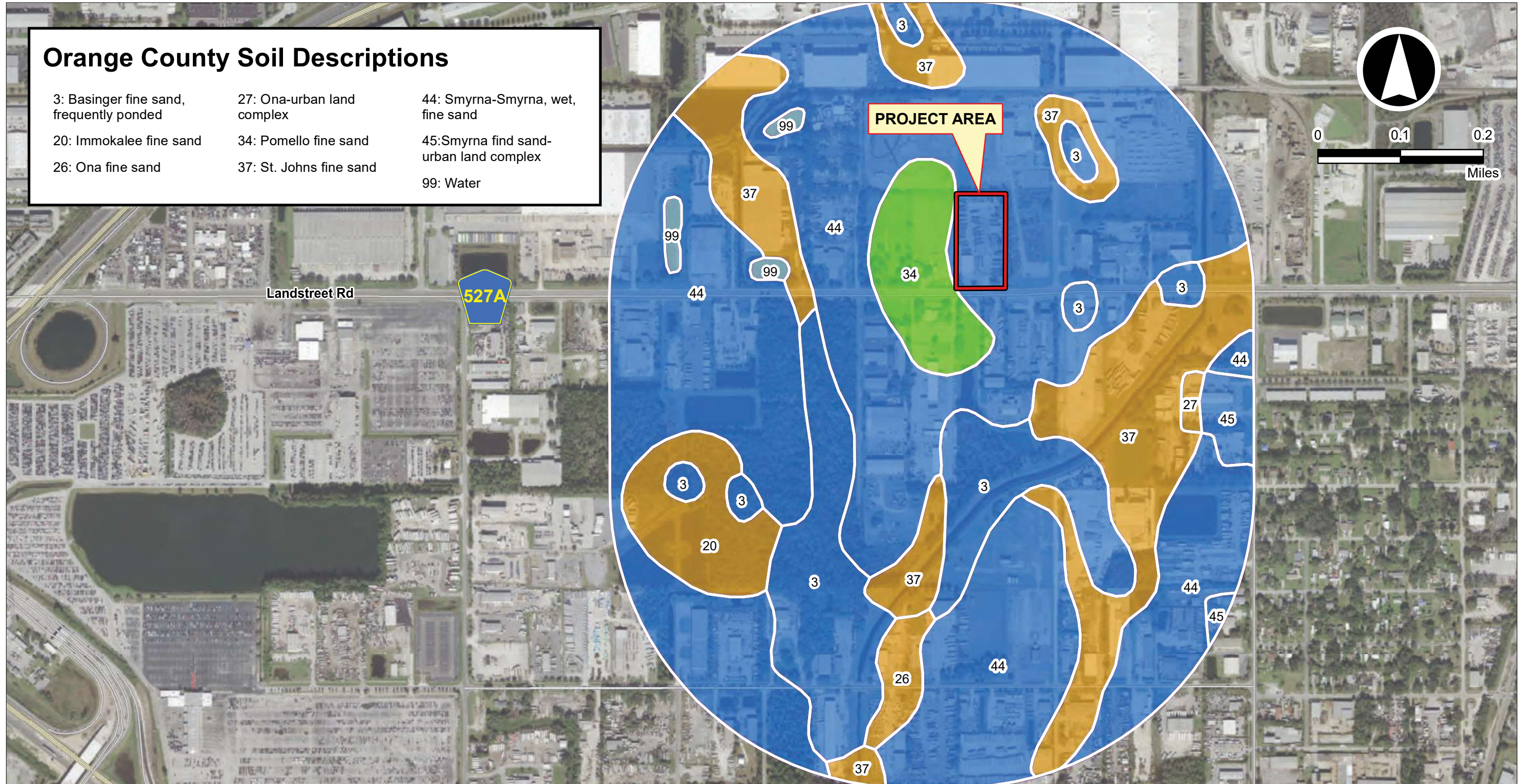
Table 3-27: USDA NRCS Soil Survey Information for Seminole County

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
3	Arents, 0 to 5 percent slopes	1.5-3.0	6	A/D	0-10	SP-SM, SP	A-2-4, A-3
					10-32	SP-SM, SP	A-2-4, A-3
					32-80	SP-SM, SP	A-2-4, A-3
13	EauGallie and Immokalee fine sands	0.5-1.5	4	A/D	0-6	SP-SM, SP	A-3
					6-18	SP-SM, SP	A-3
					18-30	SP-SM, SM	A-2-4, A-3
					30-45	SP-SM, SP	A-2-4, A-3
					45-64	SM-SC, SC, SM	A-2-4, A-2-6
					64-80	SP-SM, SM	A-2-4, A-3
15	Felda and Manatee mucky fine sands, depressional	0	7	A/D	0-4	SP-SM, SP	A-3
					4-28	SP-SM, SP	A-3
					28-36	SM-SC, SC, SM	A-2-4, A-2-6
					36-46	SP-SM, SP	A-2-4, A-3
					46-80	SP-SM, SP	A-3
25	Pineda-Pineda, wet, fine sand, 0 to 2 percent slopes	0.5-1.5	12	A/D	0-1	SP-SM, SM	A-2-4, A-3
					1-5	SP-SM, SM	A-2-4, A-3
					5-36	SP-SM, SM	A-2-4, A-3
					36-54	SC-SM, CL, SC	A-2-4, A-2-6
					54-80	SP-SM, SM	A-2-4, A-3

**Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as “+”.*

Orange County Soil Descriptions

- | | | |
|--|----------------------------|---|
| 3: Basinger fine sand, frequently ponded | 27: Ona-urban land complex | 44: Smyrna-Smyrna, wet, fine sand |
| 20: Immokalee fine sand | 34: Pomello fine sand | 45: Smyrna find sand-urban land complex |
| 26: Ona fine sand | 37: St. Johns fine sand | 99: Water |

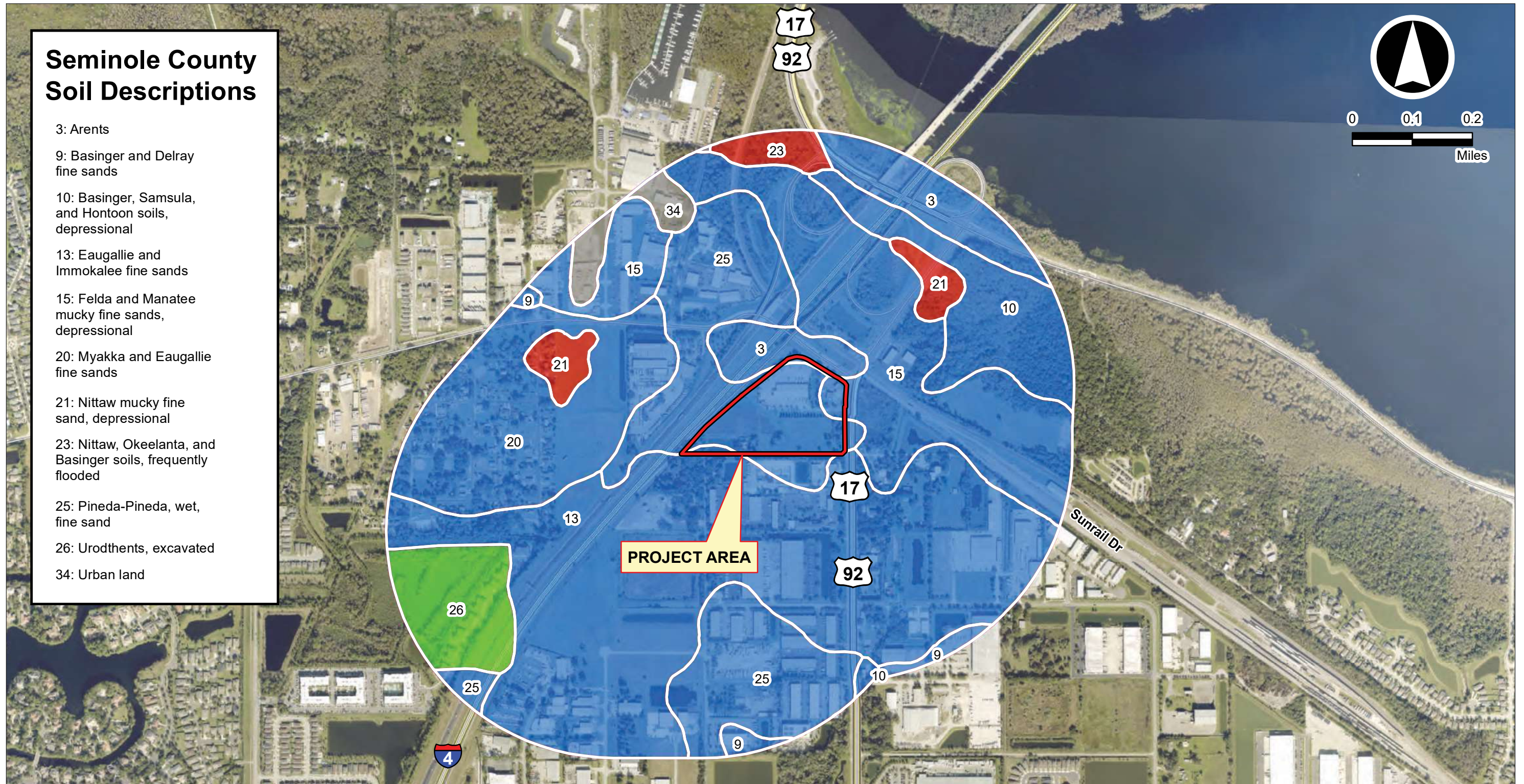


- Site Boundary
- Streets
- Water

- Soil Group**
- A
 - A/D
 - B/D



Figure 3-22
NRCS Soils
Orange County Site 4
 Preliminary Engineering Report




Seminole County Soil Descriptions


- 3: Arents
- 9: Basinger and Delray fine sands
- 10: Basinger, Samsula, and Hontoon soils, depressional
- 13: Eaugallie and Immokalee fine sands
- 15: Felda and Manatee mucky fine sands, depressional
- 20: Myakka and Eaugallie fine sands
- 21: Nittaw mucky fine sand, depressional
- 23: Nittaw, Okeelanta, and Basinger soils, frequently flooded
- 25: Pineda-Pineda, wet, fine sand
- 26: Urodthents, excavated
- 34: Urban land


 Site Boundary

 Streets

Soil Group

 A

 A/D

 C/D


 Urban Land



Figure 3-23

NRCS Soils
Seminole County Site 1B
 Preliminary Engineering Report

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

As shown in **Table 3-28**, the soils encountered within the project site are HSG A/D, B/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The groundwater depth varies from 0.0 feet to 1.5 feet within the site per the NRCS Soil Survey information.

Table 3-28: USDA NRCS Soil Survey Information for Volusia County Site 1A (Eastbound)

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
29	Immokalee sand	0-0.5	3	B/D	0-10	SP-SM, SP	A-3
					10-34	SP-SM, SP	A-3
					34-43	SP-SM, SM	A-2-4, A-3
					43-85	SP-SM, SP	A-3
32	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	0.5-1.5	6	A/D	0-6	SP-SM, SM	A-3, A-2-4
					6-20	SP-SM, SM	A-3, A-2-4
					20-36	SP-SM, SM	A-3, A-2-4
					36-80	SP-SM, SM	A-3, A-2-4
56	Samsula muck, frequently ponded, 0 to 1 percent slopes	0	8	A/D	0-24	PT	A-8
					24-32	PT	A-8
					32-35	SP-SM, SM	A-3, A-2-4
					35-44	SP-SM, SM	A-3, A-2-4
					44-80	SP-SM, SM	A-3, A-2-4

*Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as "+".

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As shown in **Table 3-29**, the soils encountered within the project site are HSG A/D. For more information on the soils and their properties see the Conceptual Drainage Report in the project file. The groundwater depth varies from 0.0 feet to 1.5 feet within the site per the NRCS Soil Survey information.

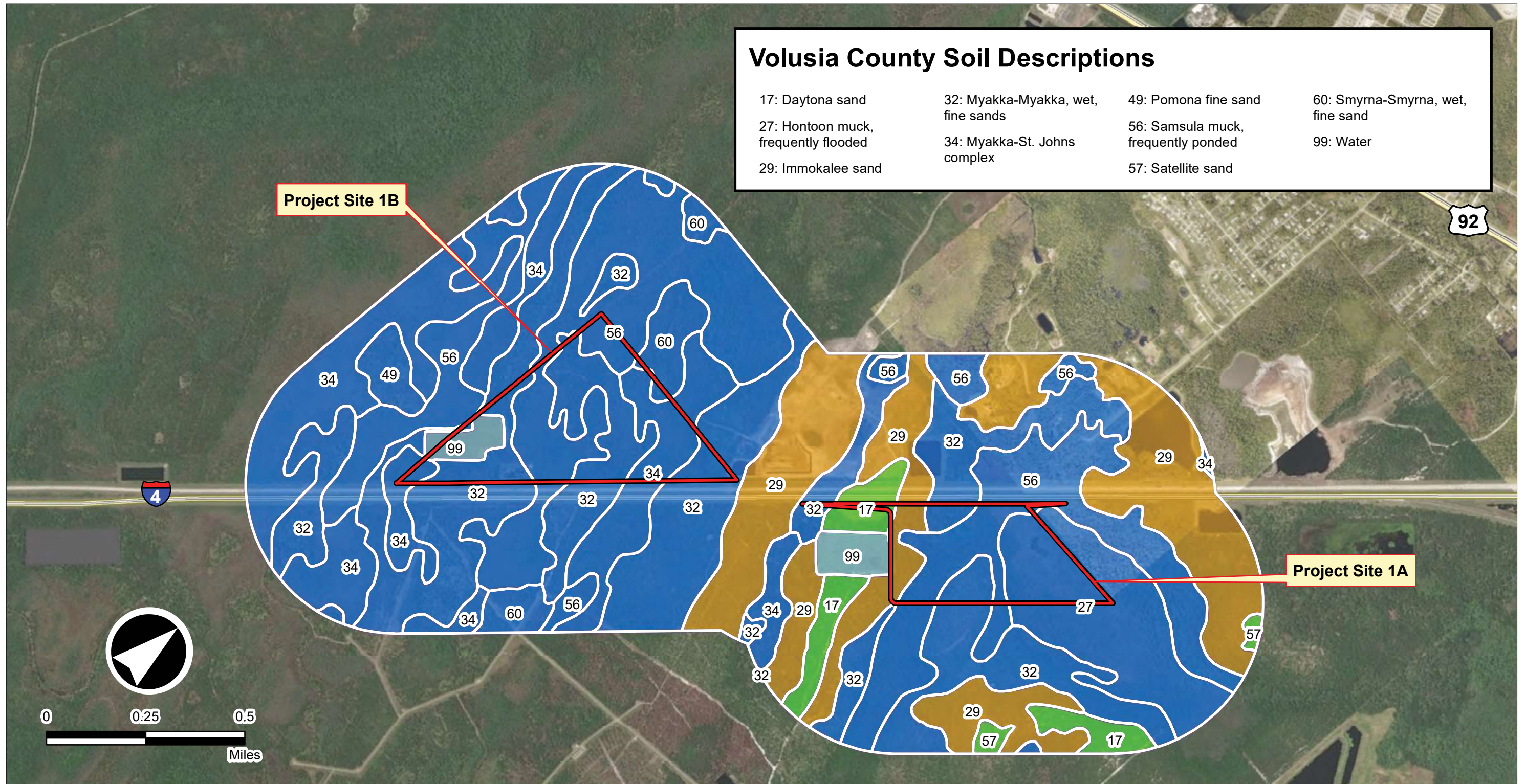
Table 3-29: USDA NRCS Soil Survey Information for Volusia County Site 1B (Westbound)

Soil No.	USDA Soil Name	Seasonal High Ground Water		HSG	Soil Classification		
		Depth* (feet)	Duration (months)		Depth (inches)	Unified	AASHTO
32	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	0.5-1.5	6	A/D	0-6	SP-SM, SM	A-3, A-2-4
					6-20	SP-SM, SM	A-3, A-2-4
					20-36	SP-SM, SM	A-3, A-2-4
					36-80	SP-SM, SM	A-3, A-2-4
34	Myakka-St. Johns complex	0	12	A/D	0-5	SP-SM, SP	A-3
					5-27	SP-SM, SP	A-3
					27-43	SP-SM, SM	A-2-4, A-3
					43-78	SP-SM, SP	A-3
56	Samsula muck, frequently ponded, 0 to 1 percent slopes	0	8	A/D	0-24	PT	A-8
					24-32	PT	A-8
					32-35	SP-SM, SM	A-3, A-2-4
					35-44	SP-SM, SM	A-3, A-2-4
					44-80	SP-SM, SM	A-3, A-2-4

*Seasonal High Ground Water Table: Depth is referenced below existing grade, except where indicated as "+".

Volusia County Soil Descriptions

- | | | | |
|--------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|
| 17: Daytona sand | 32: Myakka-Myakka, wet, fine sands | 49: Pomona fine sand | 60: Smyrna-Smyrna, wet, fine sand |
| 27: Hontoon muck, frequently flooded | 34: Myakka-St. Johns complex | 56: Samsula muck, frequently ponded | 99: Water |
| 29: Immokalee sand | | 57: Satellite sand | |



- Site Boundary
- Streets
- Water

- Soil Group**
- A
 - A/D
 - B/D



Figure 3-24

NRCS Soils
Volusia County Site 1A and Site 1B
Preliminary Engineering Report

Farmlands

Osceola County Site 1 contains 5.02 acres of soil designated as farmland of unique importance based on the NRCS. The site is located adjacent to, but not within, an urbanized area. Based on the Osceola County Comprehensive Plan, the site is not designated for existing or future agricultural use and is within the 2040 Urban Infill Area.

There are no prime or unique farmlands within the site footprints of Orange County Site 1, Orange County Site 2, Orange County Site 4, Seminole County Site 1B, Volusia County Site 1A, or Volusia County Site 1B. Orange County Site 1, Orange County Site 2, Orange County Site 4, and Seminole County Site 1B are all located entirely within an urbanized area. Volusia County Site 1A and Volusia County Site 1B are not located within an urbanized area.

3.17 Aesthetic Features

All the viable truck parking sites are located within areas surrounded by commercial/industrial development, except for the Volusia County sites at I-4. None of the potential sites have any scenic views or vistas, nor are there any aesthetic features of note within sight of any of the potential sites.

3.18 Existing Environmental Features

3.18.1 Sociocultural Features

An assessment of potential social and economic impacts, including potential issues associated with Environmental Justice, Civil Rights, and other nondiscrimination laws was conducted for all seven viable sites. Census data for each site was obtained from the U.S. Census Bureau from the *2020 Census in Florida* and supplemented with data from the *2017-2021 American Community Survey*. Unless otherwise noted, a Sociocultural Data Report (SDR) was developed for the project sites which documents 2017-2021 socioeconomic data. Socioeconomic data was based on a ½ mile study area buffer from each viable site and the intersecting block groups, which provide the most granular data available for the surrounding population.

Osceola County Site 1

The ½ mile buffer from Osceola County Site 1 intersects six block groups.

Table 3-30 shows the demographic comparison of the block groups within the ½ mile study area in Osceola County. As shown in the table, the study area percentages are somewhat different than the surrounding county area. The average percentage of minority populations in the study area is lower for each minority; Black (8.90%), Asian (1.03%), and Other (21.00%) races when compared to Osceola County's average.

Table 3-30: Osceola County Site 1 Demographic Comparison

		Osceola County	Osceola County Site 1 Study Area
Population		380,331	1,067
Race	White	57.68%	69.07%
	Black or African American	10.87%	8.90%
	Asian	2.74%	1.03%
	Other	28.71%	21.00%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	55.45%	55.58%
	Not Hispanic or Latino	44.55%	44.42%
	Total	100.0%	100.0%

In Osceola County, the average population below the poverty level (13.51%), as defined by the U.S. Department of Health and Human Services (HHS), is slightly higher than the Florida average (12.7%). The proportion of the population within the study area below the poverty level is 12.09%, which is lower than both the Osceola County and Florida statewide average poverty rates. There are 469 housing units within the five census block groups comprising the study area. Of these, approximately 210 (44.8%) are owner occupied, 80 (17.1%) are renter occupied and 179 (38.1%) are vacant units.

The median age within the study area is 36, which is almost equivalent to the overall Osceola County median age of 36.3. Within the study area, 13.96% of the population are age 65 and over, and 23.90% are under age 18. The proportion of the population aged 20 to 64 years with a disability is 14.13% within the study area, which is slightly higher than the proportion for Osceola County as a whole (11.58%).

According to the Census data, 23 residents (2.3%) in the study area stated they “Speak English Not At All”. The block groups that intersect the study area buffer include a total of 208 (20.78%) residents that stated they speak English “Less than Very Well” and were considered Limited English Proficient (LEP) persons. The LEP populations meet the Department of Justice’s (DOJ’s) Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

The analysis considered the effect of the project on community facilities and neighborhoods within the site and surrounding ½ mile area. There is one religious facility within the study area, Antioch Missionary Baptist Church, located at 215 Church Road, Loughman, FL 33858. There are two residential communities within ½ mile of the viable site, Sandy Ridge and Palms RV Resort (mobile home community), both located west of the site with access on CR 532. These residential communities will be separated from the viable site by the PPE once constructed. A low-density residential area is located east of, and adjacent to, the viable truck parking site south of CR 532. No other community facilities or neighborhoods are present within the ½ mile study area.

Orange County Site 1

The ½ mile buffer from Orange County Site 1 intersects a total of four block groups. **Table 3-31** shows the demographic comparison of the block groups within the ½ mile study area in Orange County. As shown in the table, the study area percentages are different than the surrounding county area. The average percentage of minority populations in the study area is lower for each minority; Black (15.31%), Asian (4.08%), and Other (12.24%) races when compared to Orange County’s average.

Table 3-31: Orange County Site 1 Demographic Comparison

		Orange County	Orange County Site 1 Study Area
Population		1,409,949	98
Race	White	55.46%	68.37%
	Black or African American	20.74%	15.31%
	Asian	5.21%	4.08%
	Other	18.59%	12.24%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	32.59%	29.59%
	Not Hispanic or Latino	67.41%	70.41%
	Total	100.0%	100.0%

In Orange County, the average population below the poverty level (13.90%), as defined by HHS, is slightly lower than the Florida average (12.7%). As seen in **Table 3-32**, none of the census block groups that intersect the ½ mile study area have a higher average of residents living in poverty when compared to Orange County. There are 71 housing units within the study area. Of these, approximately three (4.2%) are owner occupied, 37 (52.1%) are renter occupied and 30 (42.2%) are vacant units.

Table 3-32: Orange County Site 1 Socio-Economic Comparison

	Orange County	Block Groups, Tract			
		3, 170.01	3, 169.02	1, 170.01	1, 169.02
% Population with income in the past 12 months below poverty level	13.4	1.73	8.25	9.33	2.12

The median age within the study area is 29, which is lower than the overall Orange County median age of 35.7. Within the study area, 5.10% of the population are aged 65 and over, and 6.12% are under age 18.

According to the Census data, 1 resident (1.04%) in the study area stated they “Speak English Not at All”. The block groups that intersect the study area buffer include a total of 12 (12.50%) residents that stated they speak English “Less than Very Well” and were considered LEP persons. The LEP populations meet the DOJ's Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

The analysis considered the effect of the project on community facilities and neighborhoods within the site and surrounding ½ mile area. The site is adjacent to John Young Parkway and Sand Lake Road and is surrounded by industrial and commercial land use. There is one religious facility within the study area, New Missions In Haiti, located at 8054 Presidents Drive, Orlando, FL 32809. There are no other community facilities or neighborhoods within the ½ mile study area.

Orange County Site 2

The ½ mile buffer from Orange County Site 2 intersects a total of four block groups. Block groups provide the most granular data available for the surrounding population. However, the block groups represent a larger area than the viable site and ½ mile study area.

Table 3-33 shows the demographic comparison of the block groups within the ½ mile study area in Orange County. As shown in the table, the block group percentages are different than the surrounding county area. The average percentage of minority populations in the study area is different for each minority;

Black or African American is lower (11.97%), and Asian (6.15%), and Other (21.55%) races are higher when compared to Orange County's average.

Table 3-33: Orange County Site 2 Demographic Comparison

		Orange County	Orange County Site 2 Block Groups
Population		1,373,784	9,867
Race	White	59.90%	65.30%
	Black or African American	21.00%	11.97%
	Asian	5.30%	6.15%
	Other	13.80%	16.58%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	35.48%	43.68%
	Not Hispanic or Latino	64.52%	56.32%
	Total	100.0%	100.0%

In Orange County, the average population below the poverty level (14.2%), as defined by HHS, is slightly higher than the Florida average (12.7%). As seen in **Table 3-34**, one census block group that intersects the ½ mile study area has a higher average of residents living in poverty when compared to Orange County. There are 5,218 housing units within the four census block groups. Of these, approximately 3,201 (61.35%) are owner occupied, 1,569 (43.5%) are renter occupied and 1,294 (35.9%) are vacant units.

Table 3-34: Orange County Site 2 Socio-Economic Comparison

	Orange County	Block Groups, Tract			
		3, 170.01	3, 169.02	1, 170.01	1, 169.02
% Population with income in the past 12 months below poverty level	14.2	1.73	8.25	9.33	2.12

The median age within the study area is 33.8, which is lower than the overall Orange County median age of 35.3. Within the study area, 10.06% of the population are aged 65 and over and 19.20% are under age 18.

According to the Census data, no residents in the study area stated they “Speak English Not At All”. The block groups that intersect the study area buffer include a total of 327 (14.13%) residents that stated they speak English “Less than Very Well” and were considered LEP persons. The LEP population meets the DOJ’s Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

The analysis considered the effect of the project on community facilities and neighborhoods within the study area. There are no residential communities or community facilities within ½ mile of the viable site. The viable site is bordered by SR 528 to the north, east, and south, US 17-92 to the west. The area surrounding the viable site is heavily industrial and commercial.

Orange County Site 4

The ½ mile buffer from Orange County Site 4 intersects a total of two block groups. **Table 3-35** shows the demographic comparison of the block groups within the ½ mile study area in Orange County. As shown in the table, the block group percentages are different than the surrounding county area. The average percentage of minority populations in the block groups are different for each minority; Black or African American (15.31%) and Other (13.40%) races are lower, and Asian race is higher (11.75%) when compared to Orange County's average.

Table 3-35: Orange County Site 4 Demographic Comparison

		Orange County	Orange County Site 4 Block Groups
Population		1,373,784	2,247
Race	White	59.90%	59.55%
	Black or African American	21.00%	15.31%
	Asian	5.30%	11.75%
	Other	13.80%	13.40%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	35.48%	48.24%
	Not Hispanic or Latino	64.52%	51.76%
	Total	100.0%	100.0%

In Orange County, the average population below the poverty level (14.2%), as defined by HHS, is slightly higher than the Florida average (12.7%). As seen in **Table 3-36**, none of the census block groups that intersect the ½ mile study area have a higher average of residents living in poverty when compared to Orange County. There are 1,211 housing units within the two census block groups. Of these, approximately 686 (56.6%) are owner occupied, 106 (8.8%) are renter occupied and 419 (34.6%) are vacant units.

Table 3-36: Orange County Site 4 Socio-Economic Comparison

	Orange County	Block Groups, Tract	
		3, 142.02	1, 168.03
% Population with income in the past 12 months below poverty level	14.2	0	4.75

The median age within the study area is 44.3, which is higher than the overall Orange County median age of 35.3. Within the study area, 4.01% of the population are age 65 and over and 4.93% are under age 18.

According to the Census data, no residents in the study area stated they “Speak English Not At All”. The block groups that intersect the study area buffer include a total of 77 (9.72%) residents that stated they speak English “Less than Very Well” and were considered LEP persons. The LEP population meets DOJ’s Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

The analysis considered the effect of the project on community facilities and neighborhoods within the study area. Taft Memorial Cemetery is located just east of the viable site at 226 W Landstreet Road, Orlando, FL 32824. The viable site is bordered by CSX Railroad to the north and Landstreet Road to the south which is a shared access road. The area surrounding the viable site is heavily industrial and commercial. There are no other community facilities or residential neighborhoods surrounding the viable site.

Seminole County Site 1B

The ½ mile buffer from Seminole County Site 1B intersects a total of six block groups. **Table 3-37** shows the demographic comparison of the block groups within the ½ mile study area in Seminole County. As shown in the table, the block group percentages are different than the surrounding county area. The average percentage of minority populations in the study area is higher for each minority; Black or African American (13.38%), Asian (5.93%), and Other (12.87%) races when compared to Seminole County’s average.

Table 3-37: Seminole County Site 1B Demographic Comparison

		Seminole County	Seminole County Site 1B Block Groups
Population		466,695	23,120
Race	White	72.70%	67.82%
	Black or African American	12.00%	13.38%
	Asian	4.70%	5.93%
	Other	10.60%	12.87%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	17.90%	45.14%
	Not Hispanic or Latino	82.10%	54.86%
	Total	100.0%	100.0%

In Seminole County, the average population below the poverty level (9.9%), as defined by HHS, is lower than the Florida average (12.7%). As seen in **Table 3-38**, three of the census block groups that intersect the ½ mile study area have a higher average of residents living in poverty when compared to Seminole. There are 5,953 housing units within the six census block groups. Of these, approximately 3,953 (70.1%) are owner occupied, 1,685 (29.9%) are renter occupied, and 315 (5.3%) are vacant units.

Table 3-38: Seminole County Site 1B Socio-Economic Comparison

	Seminole County	Block Groups, Tract					
		1, 207.07	3, 206.01	3, 207.06	2, 206,01	1, 909.06	1, 910.29
% Population with income in the past 12 months below poverty level	9.9	1.44	15.07	10.11	45.54	9.11	9.43

The median age within the study area is 43.8, which is higher than the overall Seminole County median age of 39.3. Within the study area block groups, 15.5% of the population are age 65 and over and 19.23% are under age 18.

According to the Census data, no residents in the study area stated they “Speak English Not At All”. The block groups that intersect the study area buffer include a total of 122 (1.54%) residents that stated they speak English “Less than Very Well” and were considered LEP persons. The LEP population does not meet DOJ’s Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

There are two religious facilities within the study area, First Baptist Church of Lake Monroe, located at 691 Monroe Road, Sanford, FL 32771, and Providence Missionary Baptist Church, located at 4561 Douglas Street, Lake Monroe, FL 32747. There is one residential community within a ½ mile of the viable site, Bookertown. This community is located to the west and separated from the site by the existing I-4 corridor. A community park, Bookertown Park, is also located to the west separated by I-4. Other land use surrounding the site includes commercial and vacant industrial parcels. There is another area of residential land use in the southeast quadrant of Monroe Road and School Street, separated from the site by industrial, commercial, and governmental land uses. North of the site are railroad tracks used by SunRail and freight when SunRail is not operating. The nearest SunRail station is approximately 2.75 miles southeast. Development of a junior high school (St. Thomas More Priory and Academy) is being considered on 4009 School Street, located 500 feet east of the viable site and separated by the existing US 17/92 corridor.

A full analysis of sociocultural effects for Seminole County Site 1B is provided in the SCE, in the project file.

Volusia County Site 1A

The ½ mile buffer from Volusia County Site 1A intersects one block group. **Table 3-39** shows the demographic comparison of the block groups within the ½ mile study area in Volusia County. As shown in the table, the study area percentages are significantly different than the surrounding county area, given there are no minority populations in the study area.

Table 3-39: Volusia County Site 1A Demographic Comparison

		Volusia County	Volusia County Site 1A Study Area
Population		548,783	29
Race	White	76.83%	100.00%
	Black or African American	10.90%	0.00%
	Asian	1.82%	0.00%
	Other	10.45%	0.00%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	15.09%	0.00%
	Not Hispanic or Latino	84.91%	100.00%
	Total	100.0%	100.0%

In Volusia County, the average population below the poverty level (12.9%), as defined by HHS, is slightly higher than the Florida average (12.7%). The study area has a higher average of population below the poverty level (17.2%) when compared to Volusia County. There are 14 housing units within the study area. Of these, approximately nine (64.3%) are owner occupied and four (28.6.3%) are renter occupied. There are no vacant units.

The median age within the study area is 49, which is higher than the overall Volusia County median age of 46.4. Within the study area, 20.69% of the population are aged 65 and over, and 3.45% are under age 18. The proportion of the population aged 20 to 64 years with a disability is 10.53% within the study area, which is slightly lower than the proportion for Volusia County as a whole (14.4%).

According to the Census data, no residents in the study area stated they “Speak English Not at All” or “Less than Very Well” or were considered LEP persons. The LEP population does not meet DOJ's Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

The analysis considered the effect of the project on community facilities and neighborhoods within the site and surrounding ½ mile area. The site is located adjacent to the existing 1-4 limited access facility and surrounded by vacant governmental properties. The site will include direct access to I-4, with no access to adjacent properties or local roadways. There are no community facilities within the surrounding ½ mile area. There is one low-density residential area north of the proposed truck parking site. The residential area is separated from Volusia County Site 1A by I-4 and forested area. The nearest residence is approximately 1,600 feet away from the proposed site.

Volusia County Site 1B

The ½ mile buffer from Volusia County Site 1B intersects one block group. **Table 3-40** shows the demographic comparison of the block group within the ½ mile study area in Volusia County. As shown in the table, the study area percentages are significantly different than the surrounding county area. The

average percentage of minority populations in the study area is lower for Black (0.0%), Asian (0.0%), and Other (0.0%) races when compared to Volusia County.

Table 3-40: Volusia County Site 1B Demographic Comparison

		Volusia County	Volusia County Site 1B Study Area
Population		548,783	60
Race	White	76.83%	100.00%
	Black or African American	10.90%	0.00%
	Asian	1.82%	0.00%
	Other	10.45%	0.00%
	Total	100.0%	100.0%
Ethnicity	Hispanic or Latino	15.09%	0.00%
	Not Hispanic or Latino	84.91%	100.00%
	Total	100.0%	100.0%

In Volusia County, the average population below the poverty level (12.9%), as defined by HHS, is slightly higher than the Florida average (12.7%). The study area has a higher average of residents living below the poverty level (16.7%) when compared to Volusia County. There are 29 housing units within the interesting block group. Of these, approximately 19 (65.5%) are owner occupied and 10 (34.5%) are renter occupied. There are no vacant units.

The median age within the study area is 49, which is slightly higher than the overall Volusia County median age of 46.4. Within the study area, 23.3% of the population are age 65 and over, and 5.00% are under age 18. The proportion of the population ages 20 to 64 years with a disability is 14.6% within the study area, which is slightly higher than the proportion for Volusia County as a whole (14.4%).

According to the Census data, no residents in the study area stated they “Speak English Not at All” or “Less than Very Well” or were considered LEP persons. The LEP populations does not meet DOJ’s Safe Harbor Provision threshold for written translations (minimum LEP Population of 1,000 persons or 5% of the area population).

The analysis considered the effect of the project on community facilities and neighborhoods within the site and surrounding ½ mile area. Surrounding the site is mostly public land with small areas of agricultural and residential land use. There are no residential communities or community facilities within the ½ mile area. Outside the ½ mile area, there is one low-density residential area northeast of the proposed truck parking site. The nearest residential structure is located approximately .75 mile from the Volusia County Site 1B and separated from the proposed site by forested area and wetlands.

3.18.2 Cultural Resources

A Phase I CRAS was conducted for Osceola County Site 1, Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A, and Volusia County Site 1B. Preliminary desktop screening was conducted for Orange County Site 2 and Orange County Site 4. This section summarizes the likelihood of cultural resources being present at each site. The full analysis is included in the Phase I CRAS reports and Cultural Resources Desktop Analysis Technical Memorandum, in the project file.

Osceola County

The Osceola County site was evaluated for archaeological and historical potential. The surrounding area contained 12 archaeological sites (8OS1722, 8OS1861, 8OS02567, 8OS2765, 8OS02773, 8OS2940, 8OS03111, 8OS03284, 8PO3968, 8PO7756, 8PO09958, and 8OS02540/8PO07219) within 0.62 miles of the

site footprint. Site 8OS02540/8PO07219 is considered eligible for listing on the National Register of Historic Places (NRHP). Site 8OS2567 was recommended as having insufficient information (INSF) and therefore has unknown eligibility for listing on the NRHP. The other sites have all been determined ineligible for listing on the NRHP.

Orange County

The three potential sites in Orange County were evaluated for archaeological and historical potential. The surrounding area did not contain any recorded archaeological sites within 0.62 miles of the site footprints. Orange County Site 2 was found to have historic structures with potential to be greater than 50 years old in the vicinity. The remaining areas have low potential for archaeological or historical sites.

Seminole County

Seminole County Site 1B was evaluated for archaeological and historical potential. The surrounding area contained a single historic site (8SE1720) within 0.62 miles of the site footprint. In addition, five potential historic resources (8SE03184, 8SE03185, 8SE03186, 8SE03187, and 8SE03188) greater than 50 years in age are within the planned site footprint.

Historic resource 8SE03186 is a residential structure in a folk Victorian architectural style. Historic resources 8SE03184, 8SE03185, 8SE03187, and 8SE03188 are residential structures in a frame vernacular architectural style. All sites are recommended ineligible for the NRHP due to a lack of significant historical associations and architectural distinction.

Volusia County

Volusia County Site 1A and 1B were evaluated for archaeological and historical potential. No archaeological sites were identified during the field survey. No historic resources have been previously recorded within the vicinity of the sites and no new historic resources were identified during the historic resource survey. Borrow pits are located within the site footprints indicating some level of industrial impact.

3.18.3 Natural Environment

Five NREs, one for each of the Preferred Alternative sites, and two Natural Resources Technical Memorandums, one for Orange County Site 2 and one for Orange County Site 4, were completed to determine the existing environmental conditions at each site, and are located in the project file. A summary of the existing environmental conditions is provided in the following sections.

Threatened and Endangered Species

Ecologists conducted a desktop analysis and a field review to determine whether protected species occur or have the potential to occur within each of the potential site study areas. The term protected species refers to those species that are protected by law, regulation, or rule. Specifically, the term protected species refers to those species listed under the Endangered Species Act (ESA) of 1973, as amended; those species listed under Florida's Endangered and Threatened Species List, Chapter 68A-27, Florida Administrative Code (F.A.C.); or those species listed under the Preservation of Native Flora of Florida, Chapter 5B-40, F.A.C. Those threatened and endangered species with a Moderate, High, or Observed potential to occur are summarized in **Table 3-41** through **Table 3-45**.

No table is included for Orange County Site 2 or Orange County Site 4 as no threatened or endangered species have any potential of occurrence at these two sites. The full lists of threatened and endangered species (including those with Low or No potential to occur) are included in each NRE, in the project file.

Table 3-41: Osceola County Site 1 Threatened and Endangered Species Summary

Scientific Name	Common Name	USFWS	FWC	FDACS	Potential Occurrence
Birds					
<i>Athene cunicularia floridana</i>	Burrowing owl		T		Moderate
<i>Egretta caerulea</i>	Little blue heron		T		Moderate
<i>Egretta tricolor</i>	Tricolored heron		T		Moderate
<i>Falco sparverius Paulus</i>	Southeastern American kestrel		T		Moderate
<i>Grus canadensis pratensis</i>	Florida sandhill crane		T		Moderate
<i>Mycteria americana</i>	Wood stork	T	T		Moderate
<i>Platalea ajaja</i>	Roseate spoonbill		T		Moderate
Mammals					
<i>Perimyotis subflavus</i>	Tricolored Bat	C			High
<i>Puma concolor coryi</i>	Florida Panther	E	E		Observed
<i>Sciurus niger niger</i>	Southern fox squirrel		M		Moderate
Reptiles					
<i>Drymarchon couperi</i>	Eastern indigo snake	T	T		Moderate
<i>Gopherus polyphemus</i>	Gopher tortoise		T		Observed
<i>Pituophis melanoleucus mugitis</i>	Florida pine snake		T		Moderate
Plants					
None					

Notes:

T = Threatened C = Candidate M = Managed
 FDACS = Florida Department of Agriculture and Consumer Services
 FWC = Florida Fish and Wildlife Conservation Commission
 USFWS = United States Fish and Wildlife Service

Table 3-42: Orange County Site 1 Threatened and Endangered Species Summary

Scientific Name	Common Name	USFWS	FWC	FDACS	Potential Occurrence
Birds					
<i>Egretta caerulea</i>	Little blue heron		T		Moderate
<i>Egretta tricolor</i>	Tricolored heron		T		Moderate
<i>Mycteria americana</i>	Wood stork	T	T		Moderate
Mammals					
<i>Perimyotis subflavus</i>	Tricolored Bat	C			Moderate
Reptiles					
None					
Plants					
None					

Notes:

T = Threatened T/S = Threatened due to Similarity of Appearance
 FDACS = Florida Department of Agriculture and Consumer Services
 FWC = Florida Fish and Wildlife Conservation Commission
 USFWS = United States Fish and Wildlife Service

Table 3-43: Seminole County Site 1B Threatened and Endangered Species Summary

Scientific Name	Common Name	USFWS	FWC	FDACS	Potential Occurrence
Birds					
<i>Egretta caerulea</i>	Little blue heron		T		Moderate
<i>Egretta tricolor</i>	Tricolored heron		T		Moderate
<i>Grus canadensis pratensis</i>	Florida sandhill crane		T		Moderate
<i>Mycteria americana</i>	Wood stork	E	E		Moderate
Mammals					
None					
Reptiles					
<i>Gopherus polyphemus</i>	Gopher tortoise		T		Moderate
Plants					
None					

Notes:

E = Endangered T = Threatened C = Candidate
 FDACS = Florida Department of Agriculture and Consumer Services
 FWC = Florida Fish and Wildlife Conservation Commission
 USFWS = United States Fish and Wildlife Service

Table 3-44: Volusia County Site 1A Threatened and Endangered Species Summary

Scientific Name	Common Name	USFWS	FWC	FDACS	Potential Occurrence
Birds					
<i>Falco sparverius Paulus</i>	Southeastern American kestrel		T		Moderate
<i>Haliaeetus leucocephalus</i>	Bald Eagle	BGEPA/MBTA	M		Moderate
Mammals					
<i>Perimyotis subflavus</i>	Tricolored Bat	C			High
<i>Ursus Americanus Floridanus</i>	Florida Black Bear		M		High
Reptiles					
<i>Drymarchon couperi</i>	Eastern indigo snake	T	T		Moderate
<i>Gopherus polyphemus</i>	Gopher tortoise		T		Observed
<i>Pituophis melanoleucus mugitis</i>	Florida pine snake		T		Moderate
Plants					
<i>Deeringothamnus rugelii</i>	Rugel's pawpaw	E		E	Observed
<i>Sacoila lanceolata var. lanceolata</i>	Leafless beaked orchid			T	Observed

Notes:

E = Endangered T = Threatened C = Candidate M = Managed BGEPA = Bald and Golden Eagle Protection Act
 FDACS = Florida Department of Agriculture and Consumer Services MBTA = Migratory Bird Treaty Act
 FWC = Florida Fish and Wildlife Conservation Commission
 USFWS = United States Fish and Wildlife Service

Table 3-45: Volusia County Site 1B Threatened and Endangered Species Summary

Scientific Name	Common Name	USFWS	FWC	FDACS	Potential Occurrence
Birds					
<i>Egretta caerulea</i>	Little blue heron		T		Moderate
<i>Falco sparverius Paulus</i>	Southeastern American kestrel		T		Moderate
<i>Haliaeetus leucocephalus</i>	Bald Eagle	BGEPA/MBTA	M		Moderate
Mammals					
<i>Perimyotis subflavus</i>	Tricolored Bat	C			High
<i>Sciurus niger</i>	Southern fox squirrel		M		Moderate
<i>Ursus Americanus Floridanus</i>	Florida Black Bear		M		High
Reptiles					
<i>Drymarchon couperi</i>	Eastern indigo snake	T	T		Moderate
<i>Gopherus polyphemus</i>	Gopher tortoise		T		Moderate
<i>Pituophis melanoleucus mugitis</i>	Florida pine snake		T		Moderate
Plants					
<i>Deeringothamnus rugelii</i>	Rugel’s pawpaw	E		E	High
<i>Sarracenia minor</i>	Hooded pitcher plant			T	Observed

Notes:

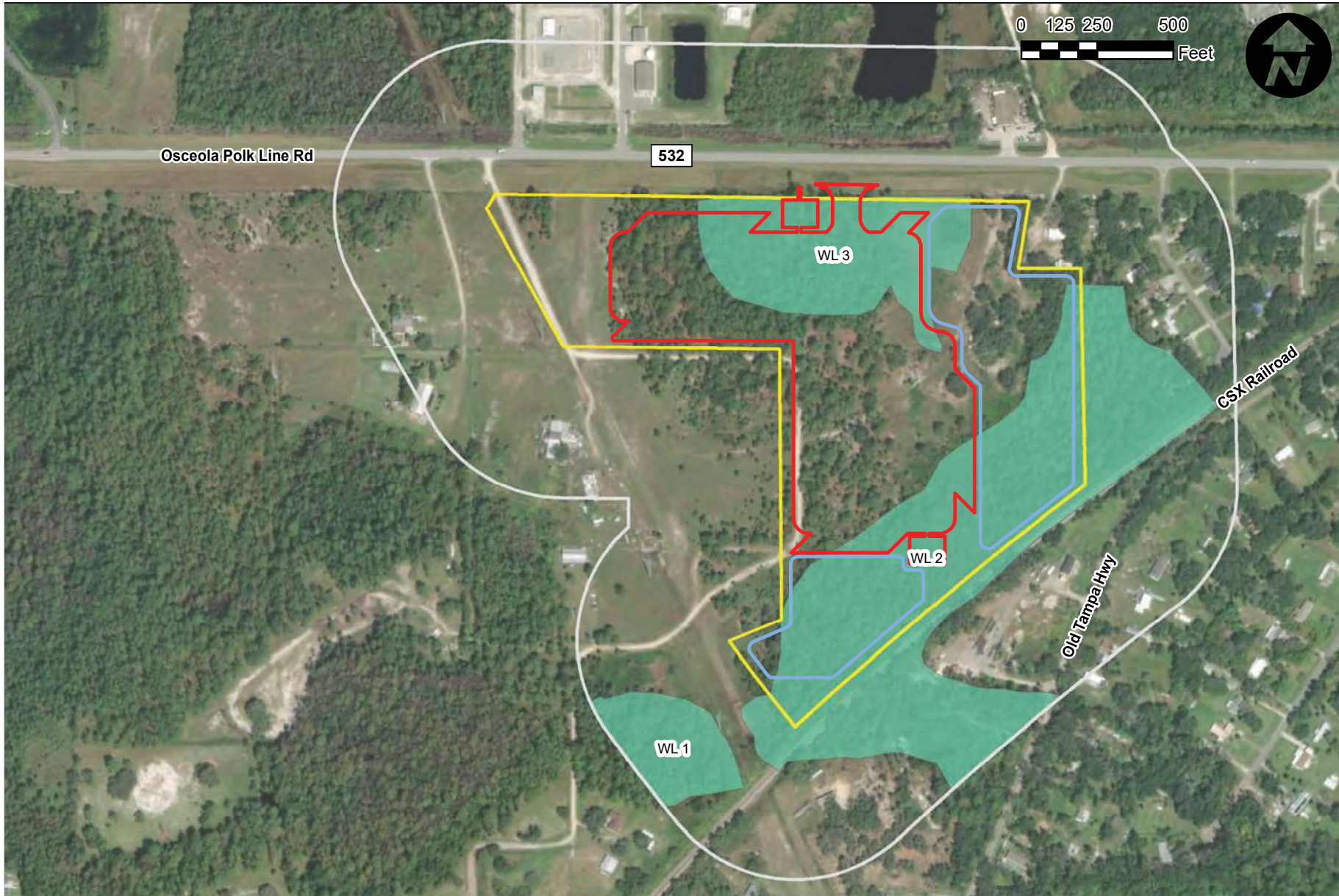
E = Endangered *T* = Threatened *C* = Candidate *M* = Managed BGEPA = Bald and Golden Eagle Protection Act
 FDACS = Florida Department of Agriculture and Consumer Services MBTA = Migratory Bird Treaty Act
 FWC = Florida Fish and Wildlife Conservation Commission
 USFWS = United States Fish and Wildlife Service

Wetlands and Surface Waters

Table 3-46 provides details for each wetland identified within the study area for each potential site. The table includes the wetland number, Florida Land Use, Cover and Forms Classification System (FLUCFCS) classification, and USFWS National Wetlands Inventory (NWI) classification. FLUCFCS classifications are based on the results of the data analysis and field reviews of the study area. NWI classifications were not altered and are based on the listed classification of the nearest NWI wetland system as applicable. **Figure 3-25** through **Figure 3-29** illustrate wetlands and surface waters near each potential site, there are no wetlands or surface waters at Orange County Sites 2 and 4.

Table 3-46: Wetlands and Surface Waters in Each Study Area

Site	Wetland Number	FLUCFCS Classification	USFWS NWI Classification	Description
Osceola 1	WL 1	617	PFO1C	Mixed Wetland Hardwoods
	WL 2	617/621/630	PEM1C/PFO1C	Mixed Wetland Hardwoods/Cypress/ Wetland Forested Mixed
	WL 3	625/643	PFO7C/PEM1C	Hydric Pine Flatwoods/Wet Prairies
Orange 1	WL 1	621	PSS1C	Cypress
	WL 2	630	PFO1Cd	Wetland Forested Mixed
	SW 1	530	-	Reservoirs
	SW 2	510	PFO4C	Streams and Waterways
Orange 2	None			
Orange 4	None			
Seminole 1B	WL 1	643	PFO1Cd	Wet Prairies
	WL 2	617	PFO1Cd	Mixed Wetland Hardwoods
	SW 1	530	N/A	Reservoirs
	SW 2	530	PUBHx	Reservoirs
	SW 3	530	PUBHx	Reservoirs
Volusia 1A	WL 1	611/617/630/631/641	PFO1/3Cd/PSS1Fd	Bay Swamps/Mixed Wetland Hardwoods/Wetland Forested Mixed/ Wetland Scrub/Freshwater Marshes
	SW 1	510	N/A	Streams and Waterways (Roadside Ditch)
Volusia 1B	WL 1	617/621/625/ 630/646	PFO1C	Mixed Wetland Hardwoods/Cypress/Hydric Pine Flatwoods/Wetland Forested Mixed/ Treeless Hydric Savanna
	SW 1	530	-	Reservoirs
	SW 2	510	-	Surface Water








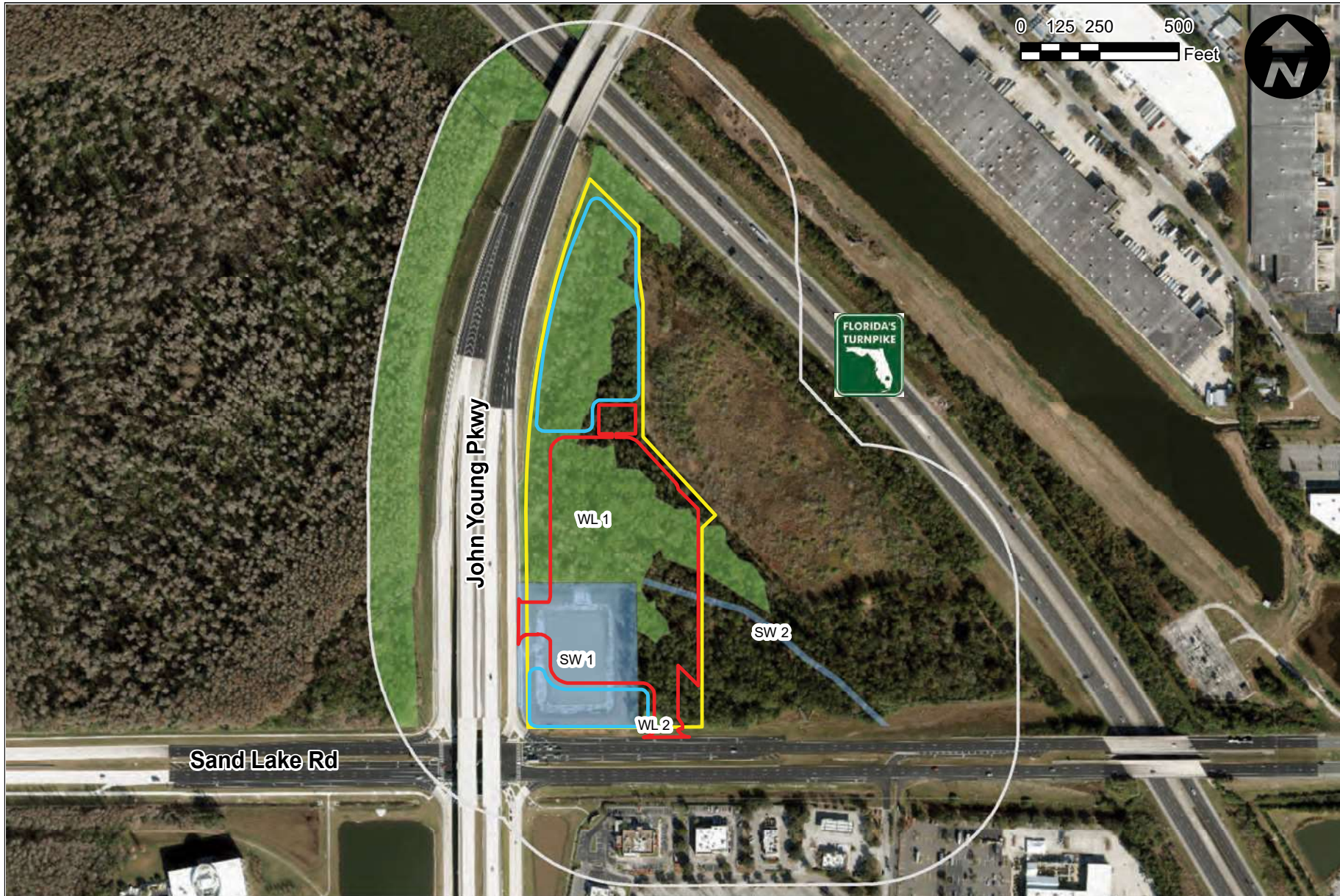
-  Osceola County Truck Parking Area
-  Proposed Ponds
-  Proposed Right-of-Way
-  500ft Project Area Buffer
-  Wetlands



Figure 3-25

**Wetlands and Surface Waters
Osceola County Site 1**
Preliminary Engineering Report

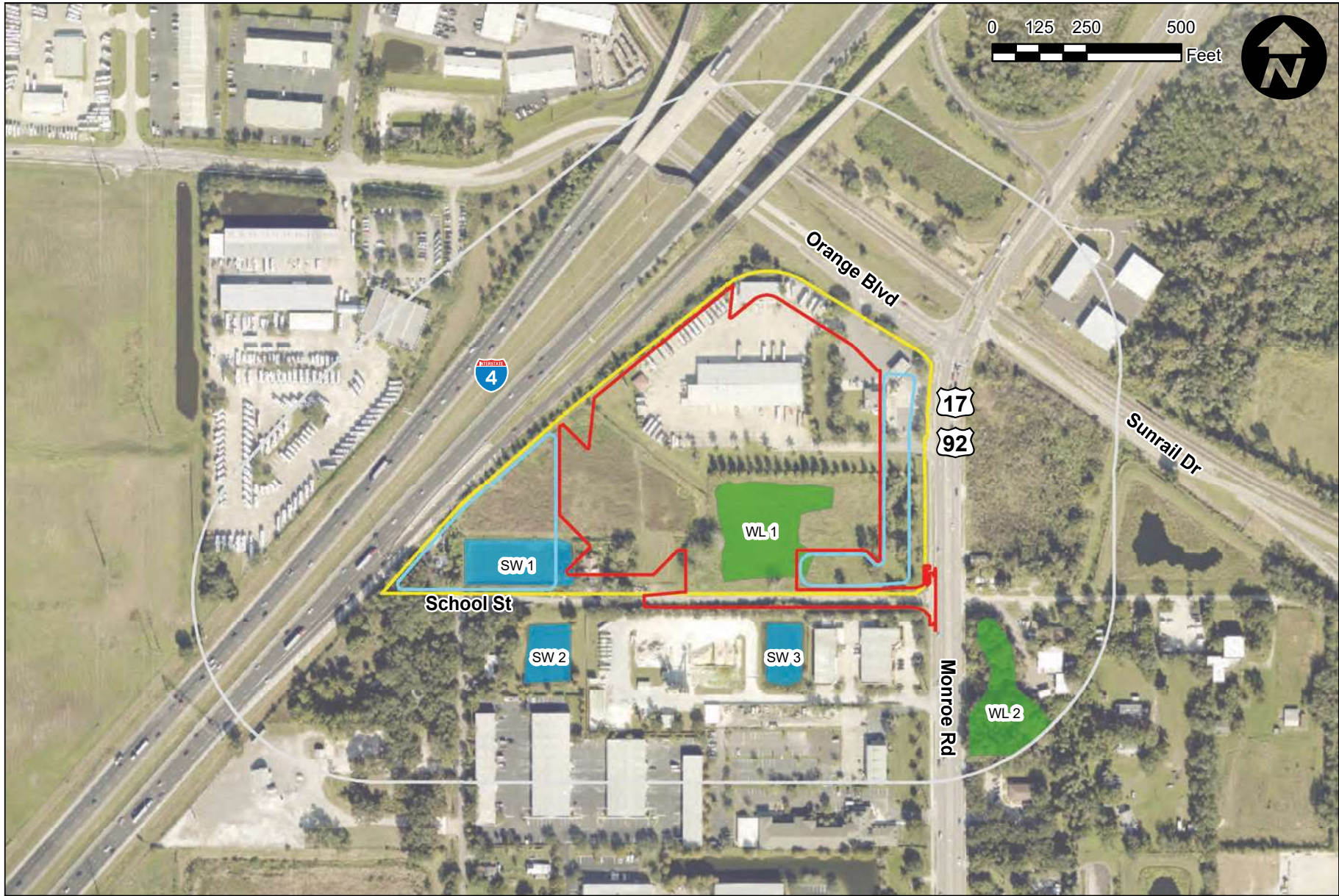


-  Orange County Truck Parking Area
-  Proposed Ponds
-  Proposed Right-of-Way
-  500ft Project Area Buffer
-  Wetlands
-  Surface Waters



Figure 3-26

**Wetlands and Surface Waters
Orange County Site 1
Preliminary Engineering Report**

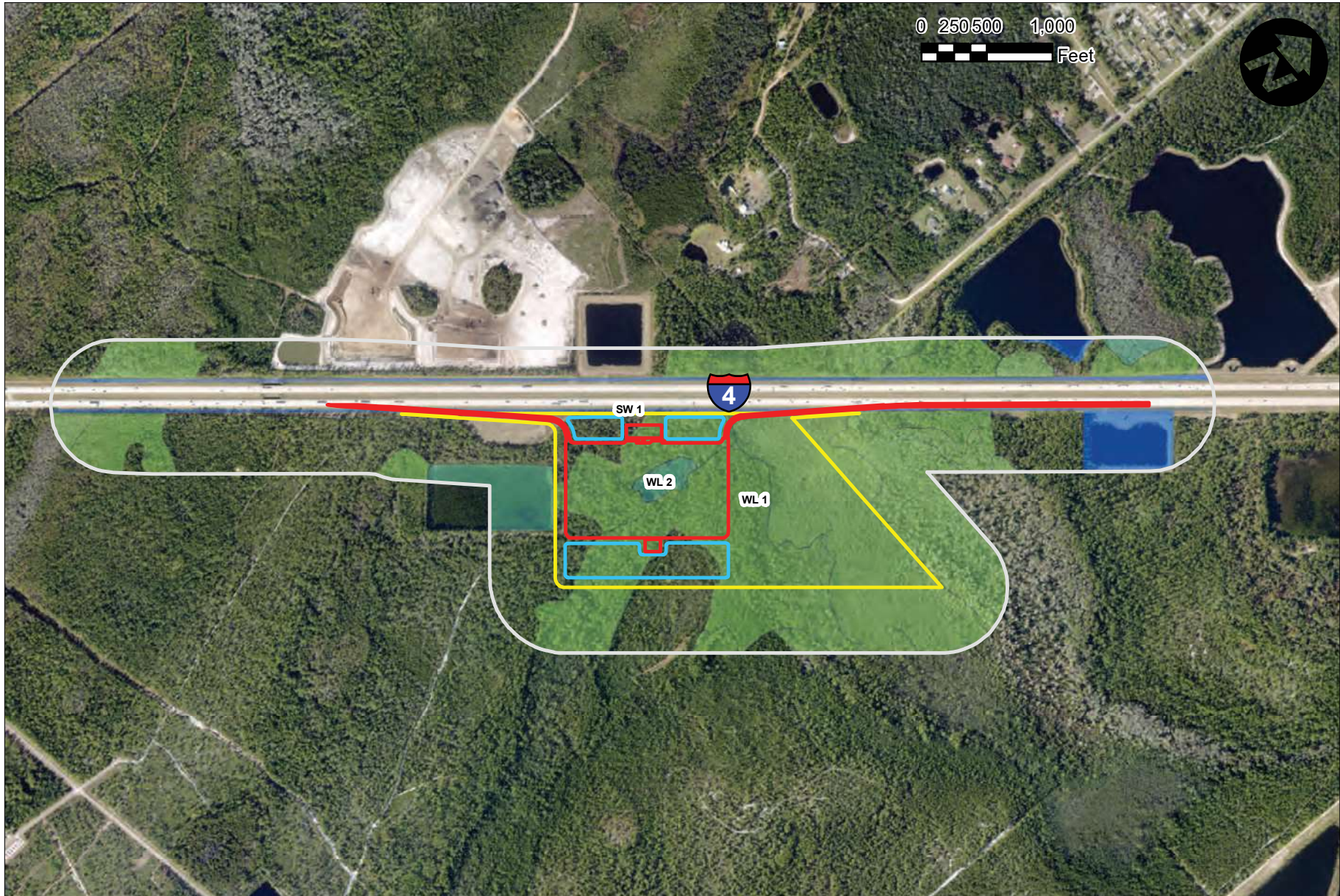


- ▭ Seminole County Truck Parking Area
- ▭ Proposed Ponds
- ▭ Proposed Right-of-Way
- 500ft Project Area Buffer
- ▭ Wetlands
- ▭ Surface Waters



Figure 3-27

**Wetlands and Surface Waters
Seminole County Site 1B**
Preliminary Engineering Report

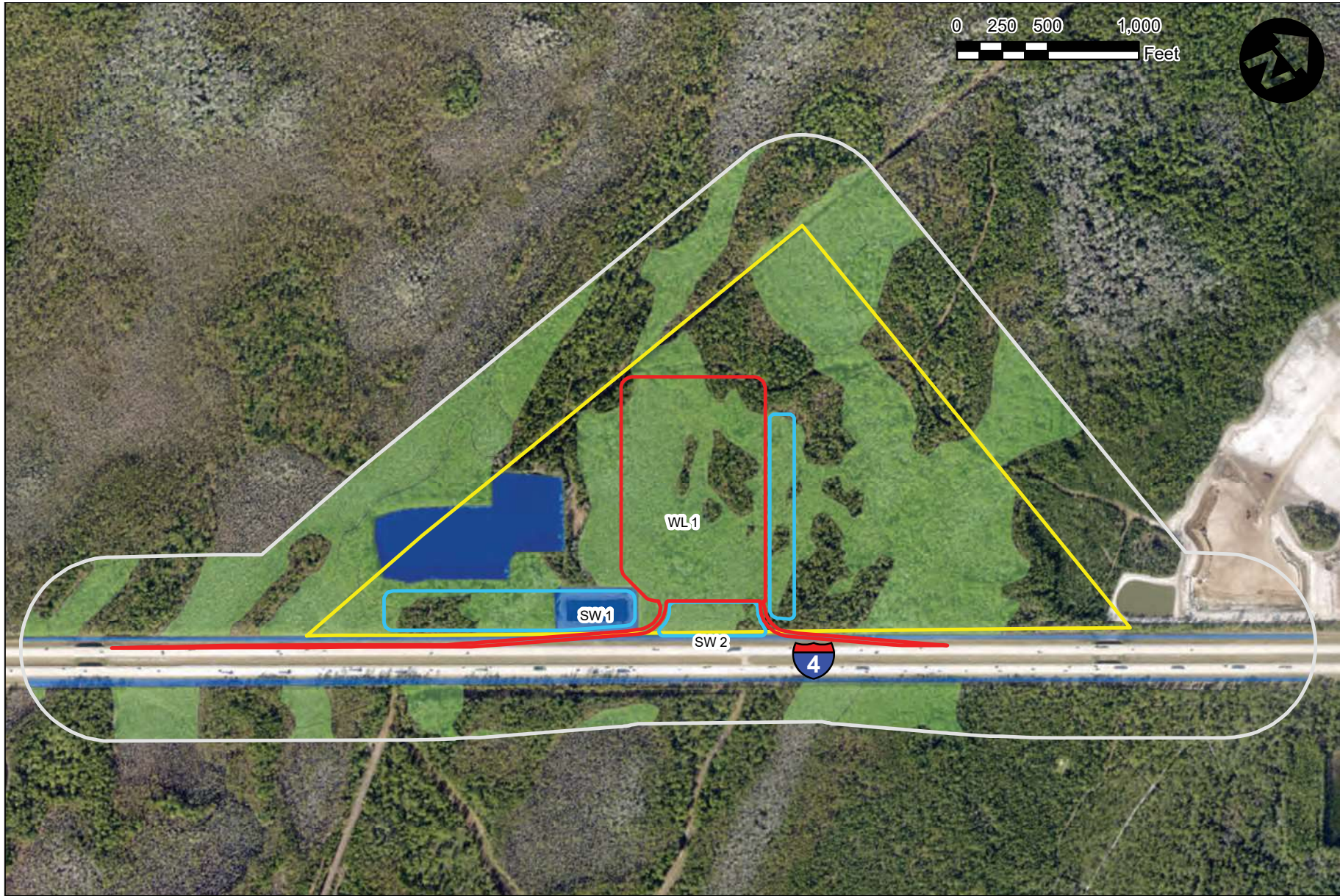


- Volusia County Truck Parking Area
- Proposed Ponds
- Proposed Right-of-Way
- 500ft Project Area Buffer
- Surface Waters
- Forested Wetlands
- Herbaceous Wetlands



Figure 3-28

**Wetlands and Surface Waters
Volusia County Site 1A**
Preliminary Engineering Report









-  Volusia County Truck Parking Area
-  Proposed Ponds
-  Proposed Right-of-Way
-  500ft Project Area Buffer
-  Wetlands
-  Surface Waters



Figure 3-29

**Wetlands and Surface Waters
Volusia County Site 1B**
Preliminary Engineering Report

Essential Fish Habitat

The National Marine Fisheries Service (NMFS) is the regulatory agency responsible for the nation’s living marine resources and their habitats, including essential fish habitat (EFH). This authority is designated by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended. The MSFCMA defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” [16 United States Code [U.S.C.] § 1802(10)].

In accordance with the MSFCMA, Section 7 of the ESA, and the FDOT’s PD&E Manual, each viable site was evaluated for potential EFH. No EFH is located within or adjacent to any of the seven viable site project areas. Therefore, no EFH assessments are required.

3.18.4 Physical Environment

A preliminary contamination screening, in the project file, was prepared to determine and document any potentially contaminated sites within or adjacent to the seven viable sites. Later, individual CSERs were prepared for the preferred sites. For all preferred sites, state and federal records were queried by Lightbox and included the following review areas:

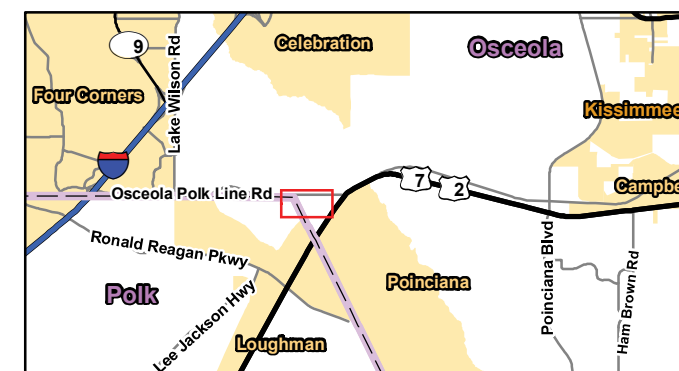
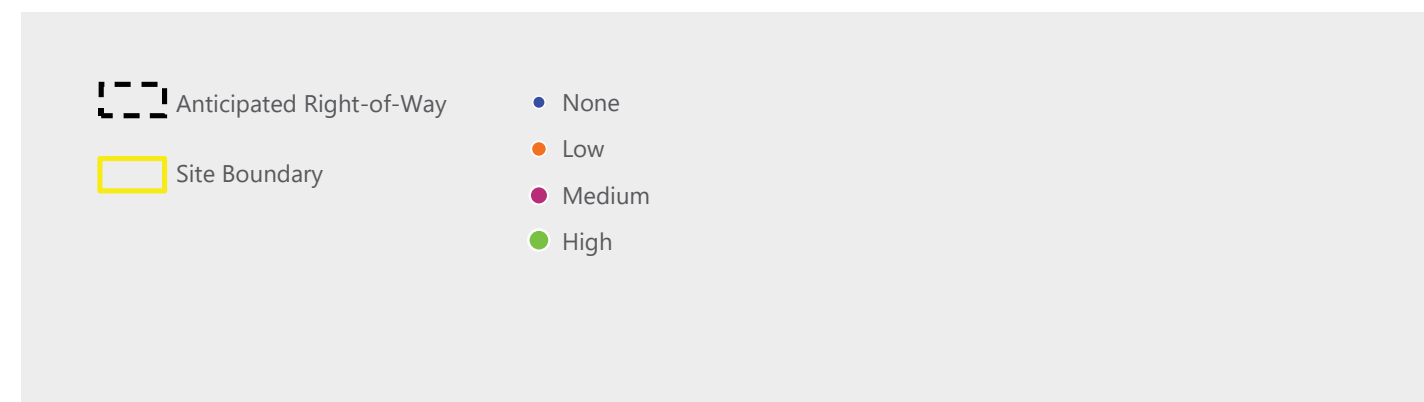
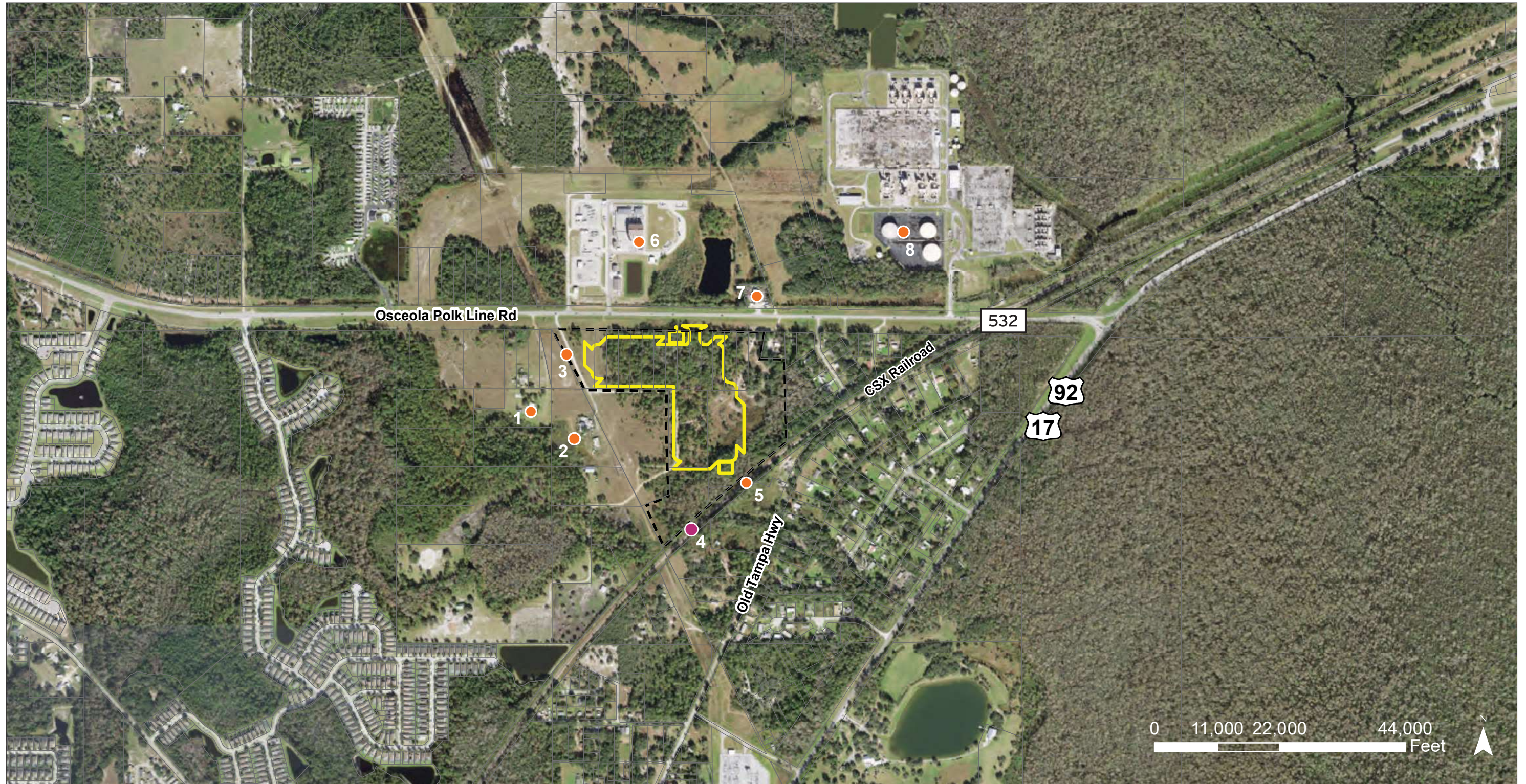
- Half a mile for the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- 1,000 feet for non-landfill solid waste sites (such as recycling facilities, transfer stations and debris management areas)
- 500 feet for petroleum sites, drycleaners and other contaminated sites (not included above)

For the remaining two viable sites; Orange County Site 2 and Orange County Site 4, the U.S. Environmental Protection Agency (EPA) Envirofacts federal environmental database tool was queried approximately 0.25 miles from each of the sites, while Florida Department of Environmental Protection (FDEP) records were queried approximately 1,000 feet beyond each of the site limits. FDEP records were accessed with the Map Direct tool and applicable databases included Petroleum Contamination Monitoring Discharges, Registered Tanks, Storage Tanks Contamination Monitoring, FDEP Cleanup Sites, ERIC Waste Cleanups, Site Investigations, Brownfield Sites, Drycleaning Solvent Program Cleanup Sites, and Florida Institutional Controls Registry.

For all sites, a cursory review of available online documentation was conducted for sites listed in the databases. **Table 3-47** provides a summary of the results of the contamination screening of the existing sites. **Figure 3-30** through **Figure 3-35** illustrate contamination sources near each site. A detailed discussion of the contamination risk at each site is included in the CSER, in the project file.

Table 3-47: Contamination Screening Risk Evaluation Summary

Site	No Risk Property Records	Low Risk Property Records	Medium Risk Property Records	High Risk Property Records	Overall Site Risk
Osceola 1	0	7	1	0	Low
Orange 1	1	1	1	0	Low
Orange 2		20	6	1	Medium
Orange 4		33	2	0	Medium
Seminole 1B	0	7	3	1	High
Volusia 1A	1	1	0	0	Low
Volusia 1B	1	0	0	0	Low



FDOT **Figure 3-30**
Contamination Map
Osceola County Site 1
 Preliminary Engineering Report

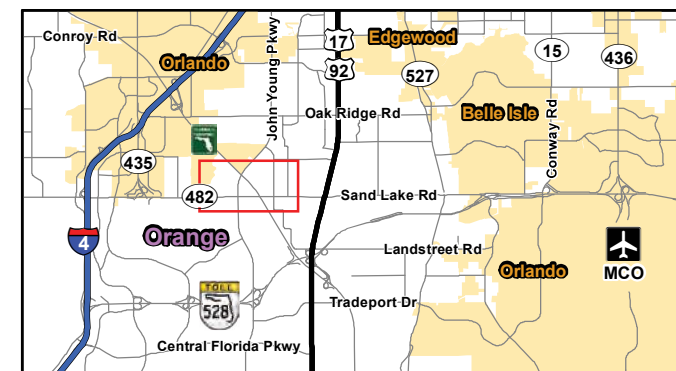
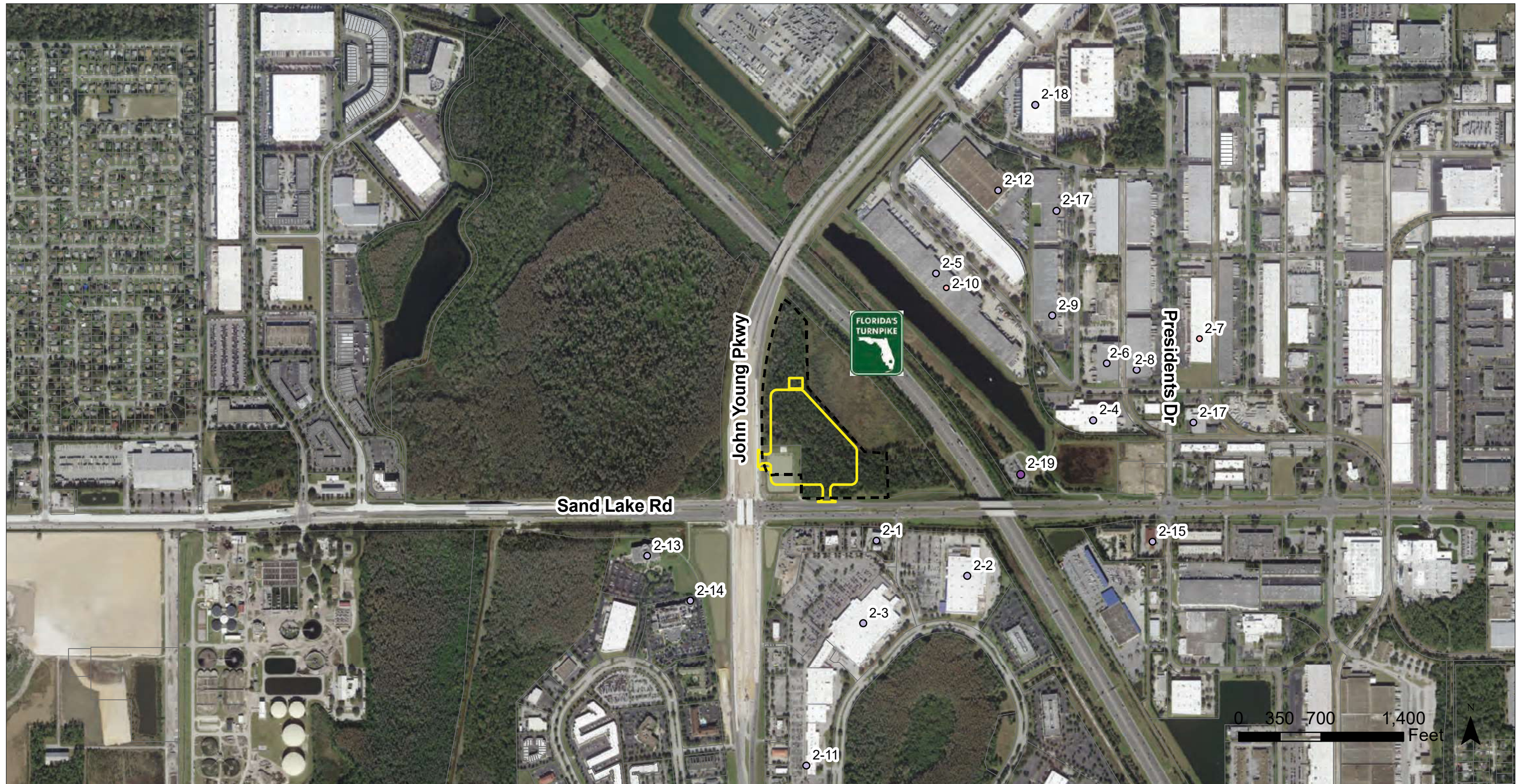
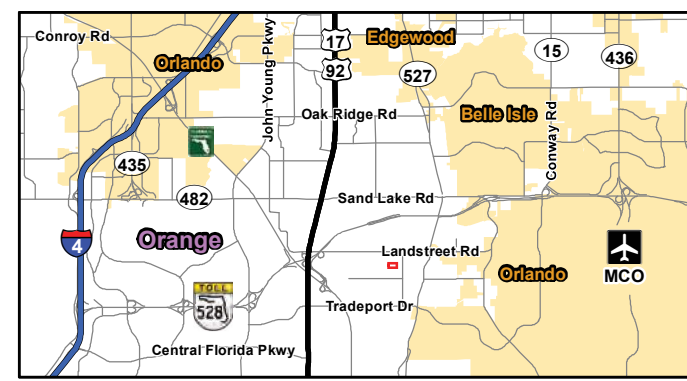
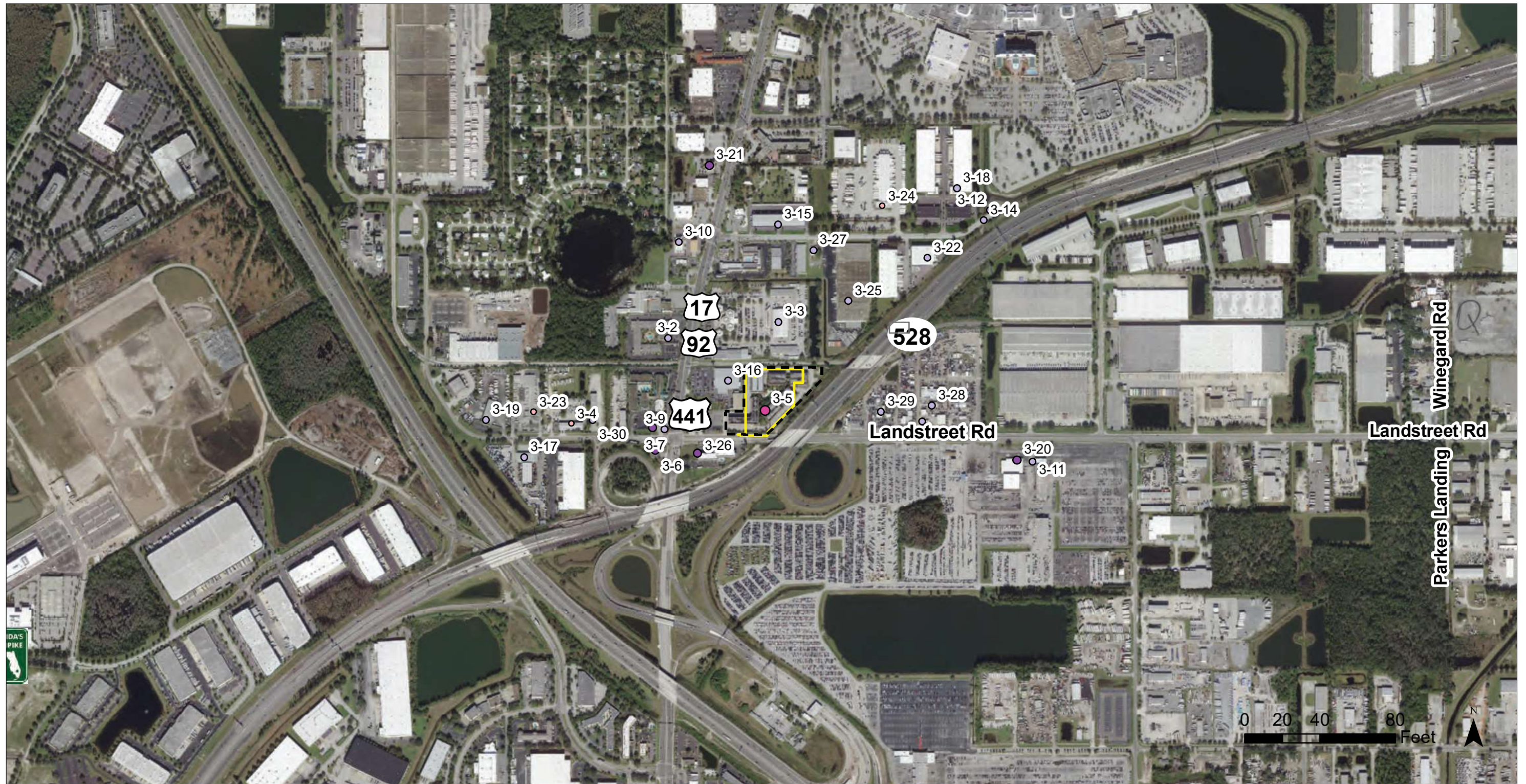
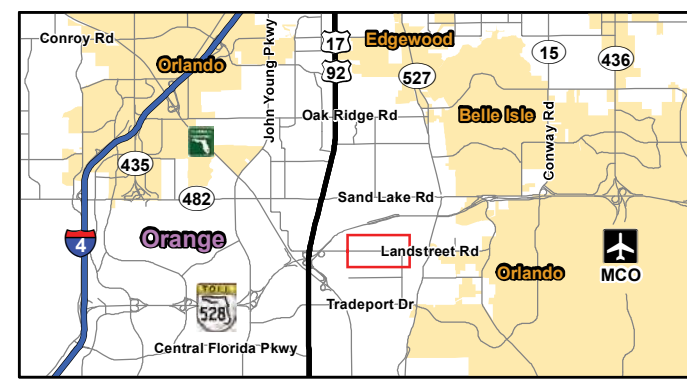


Figure 3-31
Contamination Map
Orange County Site 1
 Preliminary Engineering Report



FDOT **Figure 3-32**
Contamination Map
Orange County Site 2
 Preliminary Engineering Report



FDOT **Figure 3-33**
Contamination Map
Orange County Site 4
 Preliminary Engineering Report

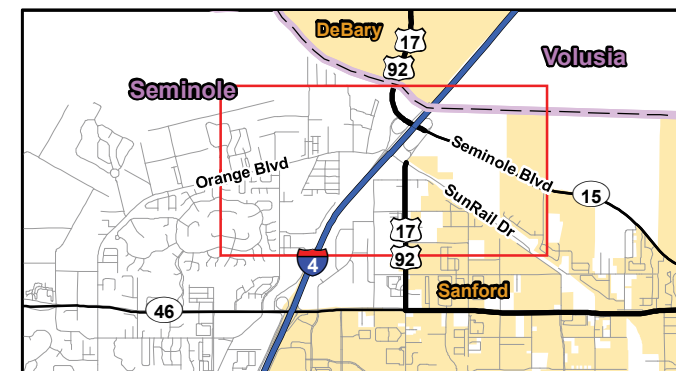


Figure 3-34
Contamination Map
Seminole County Site 1B
Preliminary Engineering Report



Anticipated Right-of-Way

Site Boundary

None

Low

Medium

High

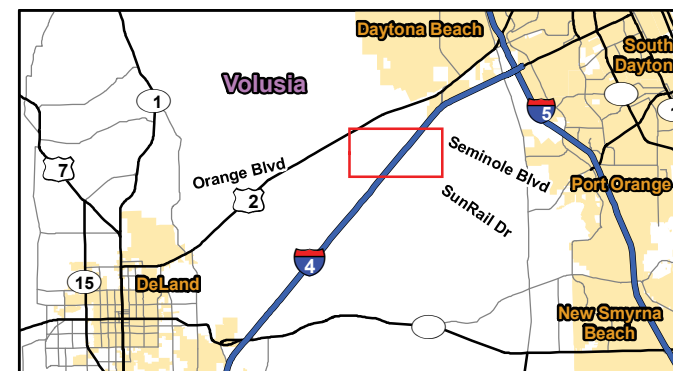
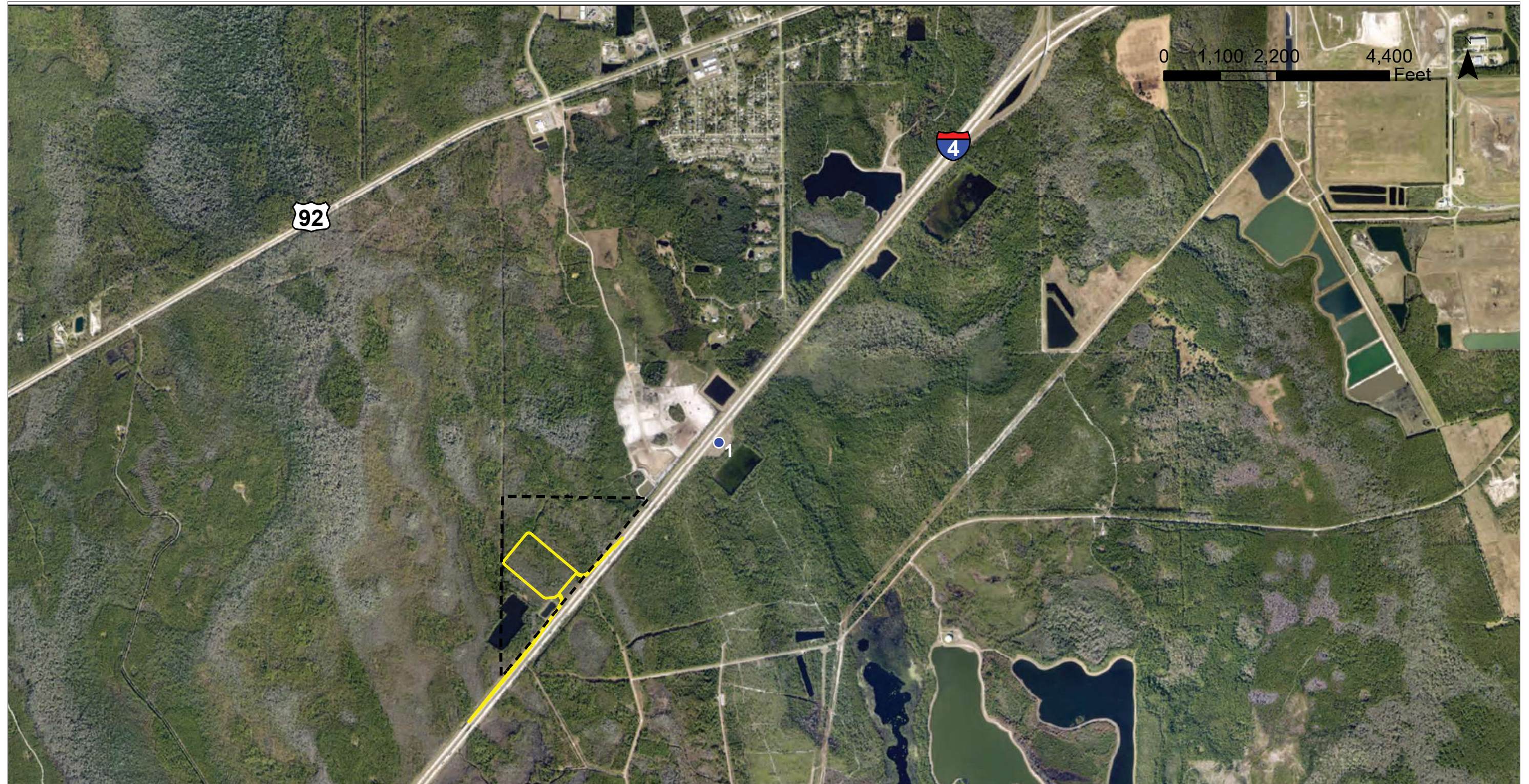






Figure 3-35A

**Contamination Map
Volusia County Site 1A**

Preliminary Engineering Report



-  Anticipated Right-of-Way
-  Site Boundary
-  None
-  Low
-  Medium
-  High

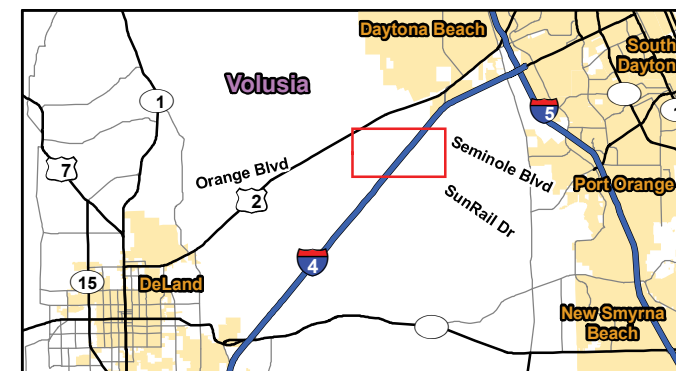


Figure 3-35B
Contamination Map
Volusia County Site 1B
Preliminary Engineering Report

4

4. Future Conditions

The future conditions including land use, parking demand, parking capacity and future traffic volumes for each of the seven viable truck parking locations are documented in this chapter.

4.1 Future Land Use

The future land use data was gathered from the *Osceola County Comprehensive Plan 2040 (2019)*, *University of Florida GeoPlan Center (2021)*, *Orange County Comprehensive Plan (Amended 2021)*, *City of Orlando Future Land Use (Amended 2021)*, *Seminole County Future Land Use Pattern (2021)*, *City of Sanford Future Land Use (2021)*, and *Volusia County Future Land Use Map (2014)*, accessed in June 2022.

Table 4-1 describes the future land use found within the proposed ROW of the viable sites. **Figure 4-1** through **Figure 4-6** display the land use surrounding the viable sites.

Table 4-1: Future Land Use Within ROW of Viable Sites

County	Site	Land Use	Total Acres	Percent of Total
Osceola	1	Low Density Residential	40.1	100.00%
		<i>Total</i>	40.1	100%
Orange	1	Industrial	14.6	100.00%
		<i>Total</i>	14.6	100%
	2	Industrial	6.8	100.00%
		<i>Total</i>	6.8	100%
	4	Industrial	4.9	100.00%
		<i>Total</i>	4.9	100%
Seminole	1B	Higher Intensity Planned Development (Transitional, Target Industry, or Airport)	18.5	100.00%
		<i>Total</i>	18.5	100.00%
Volusia	1A	Conservation	71.4	97.41%
		Federal Highway System	1.9	2.59%
		<i>Total</i>	73.3	100%
	1B	Conservation	116.8	100.00%
		<i>Total</i>	116.8	100%

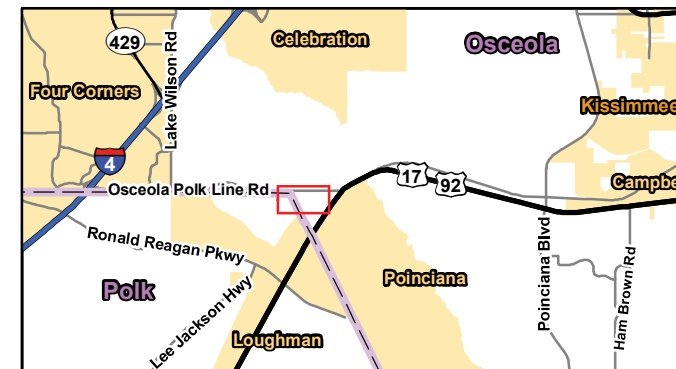
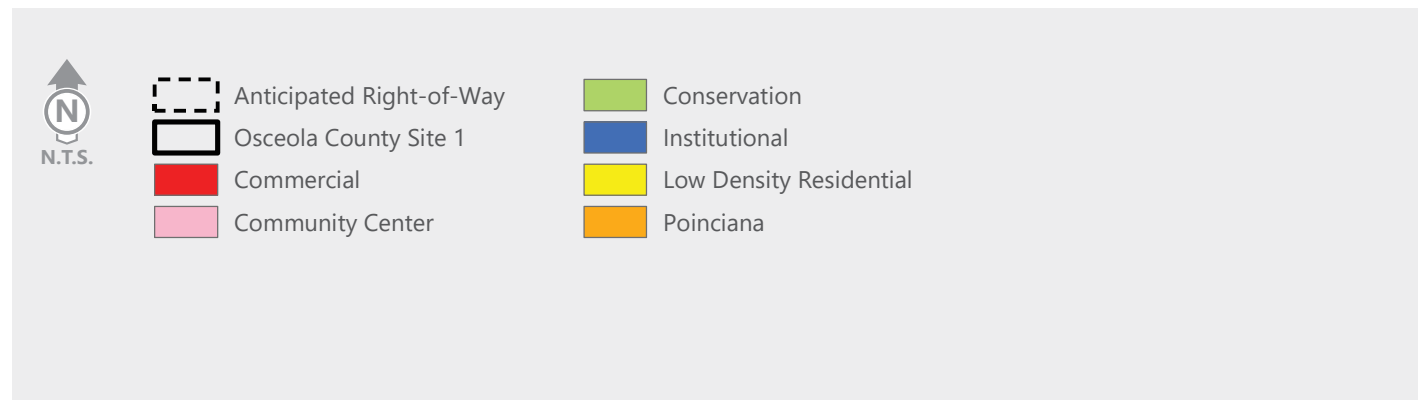
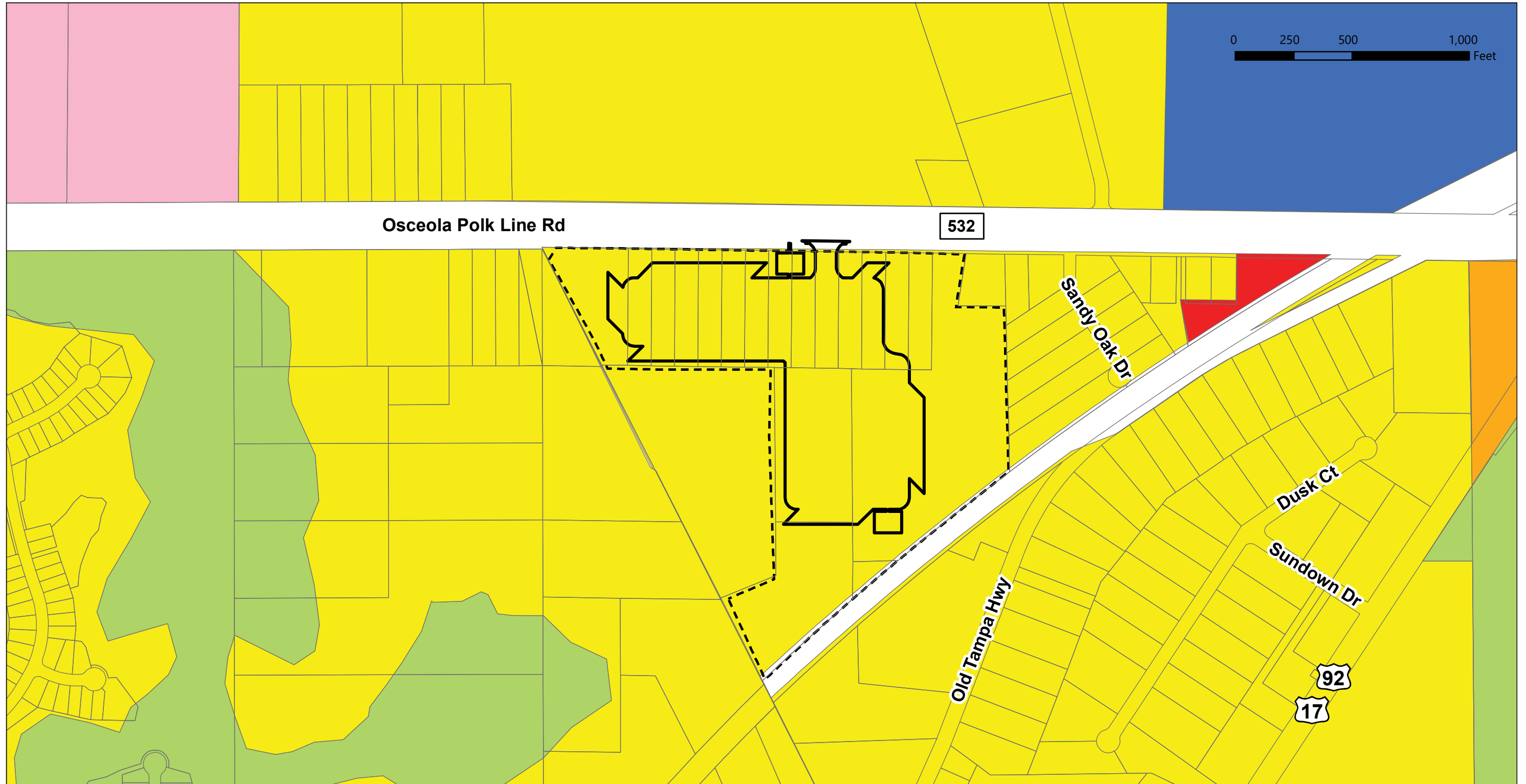


Figure 4-1
Future Land Use
Osceola County Site 1
 Preliminary Engineering Report

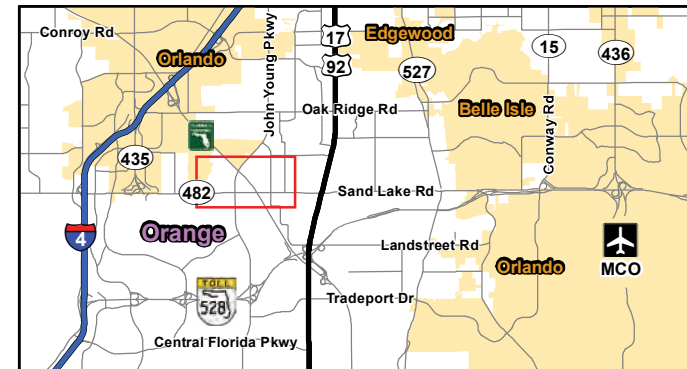
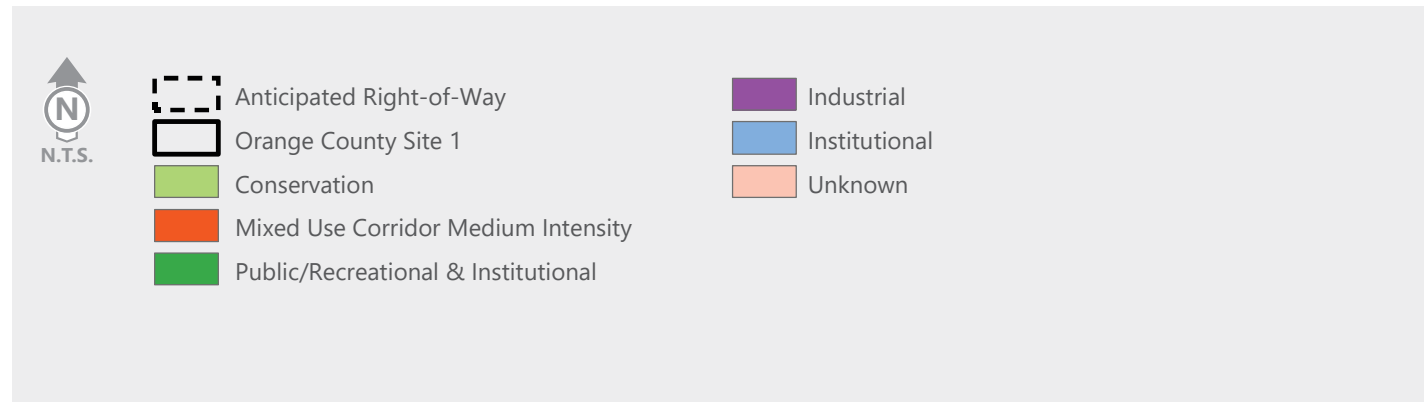
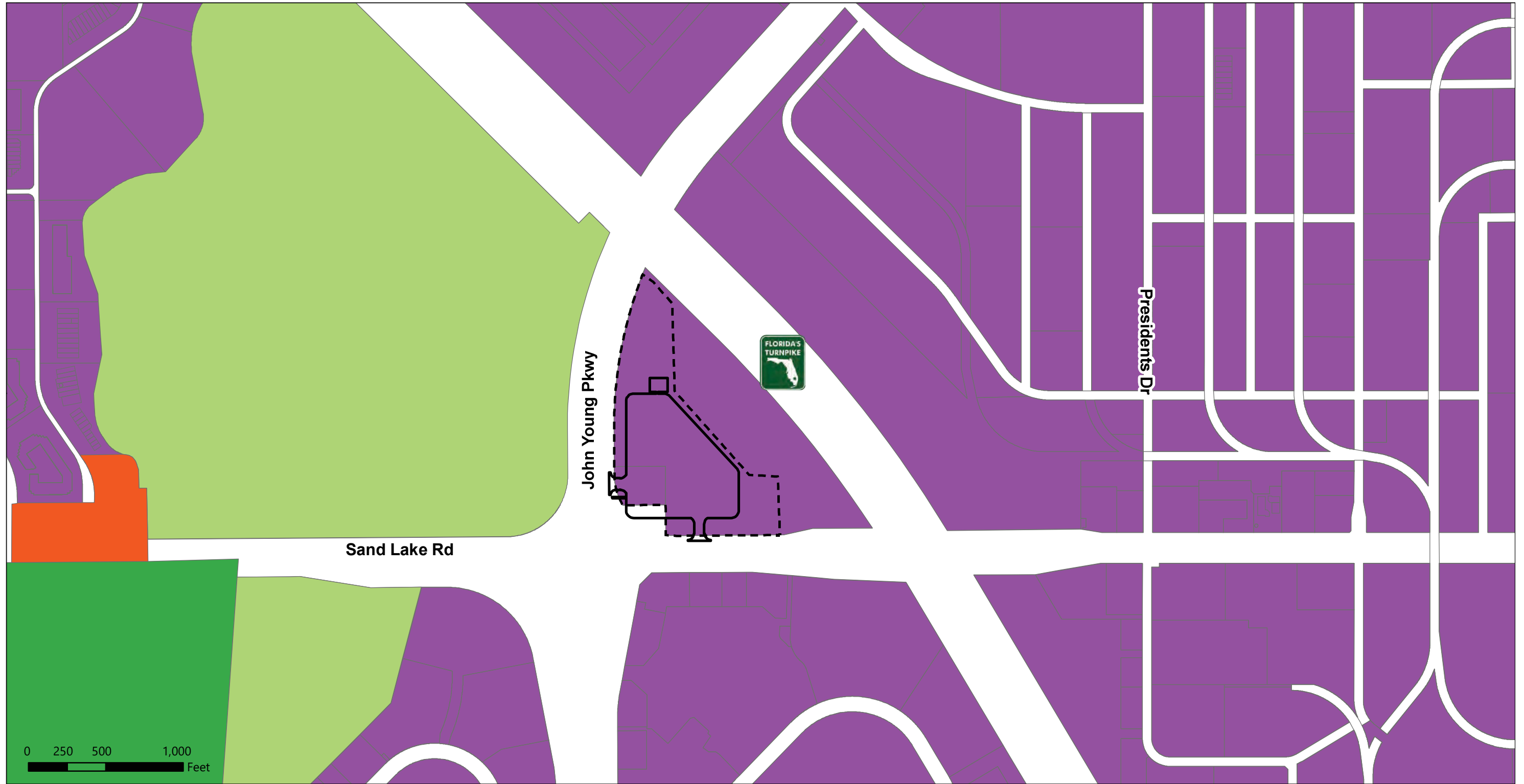


Figure 4-2
Future Land Use
Orange County Site 1
 Preliminary Engineering Report

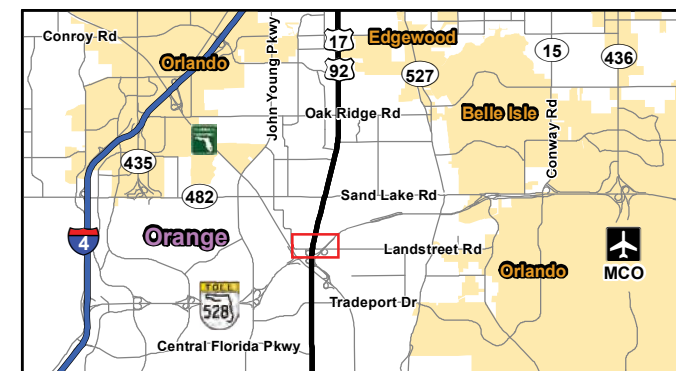
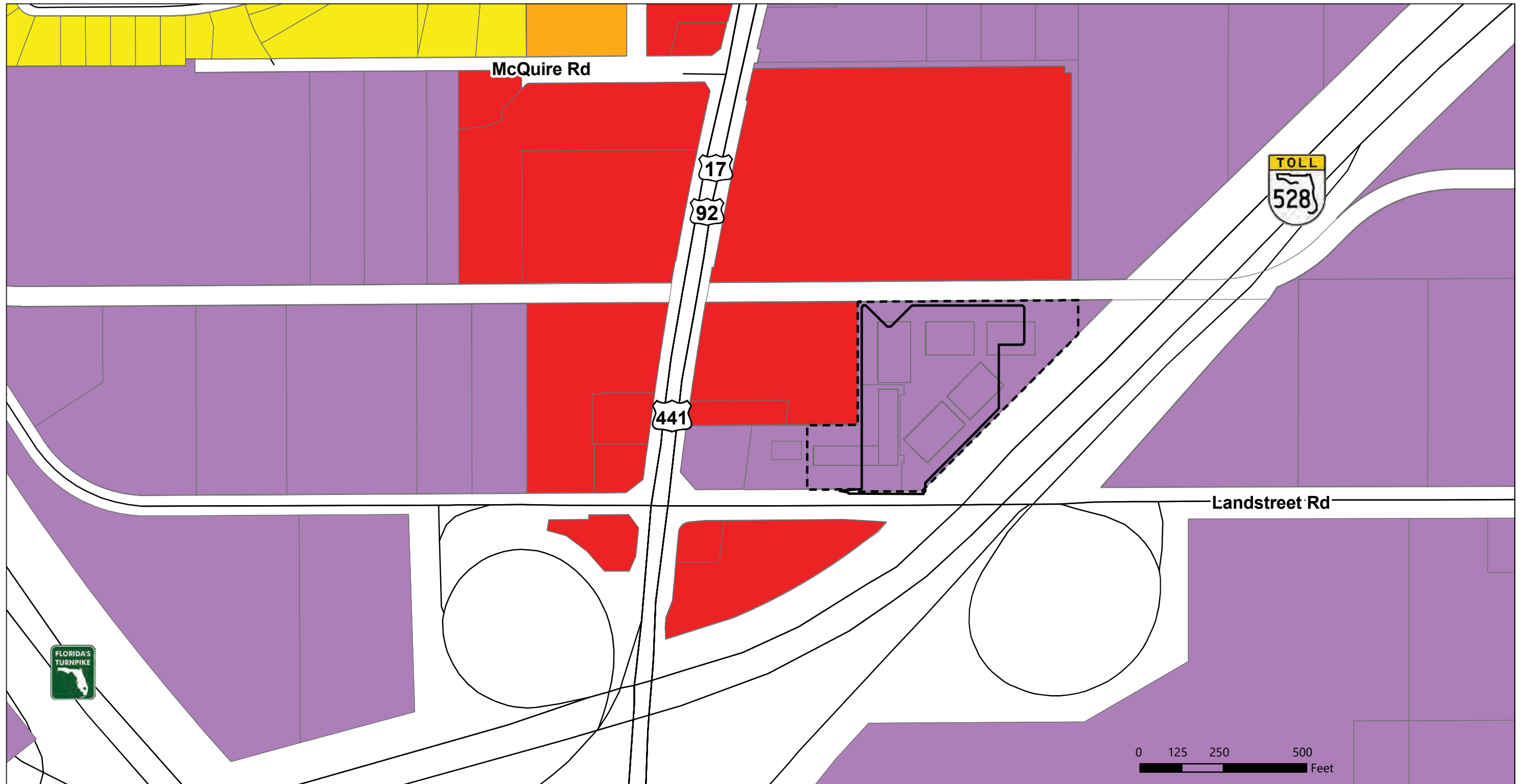


Figure 4-3
Future Land Use
Orange County Site 2
 Preliminary Engineering Report

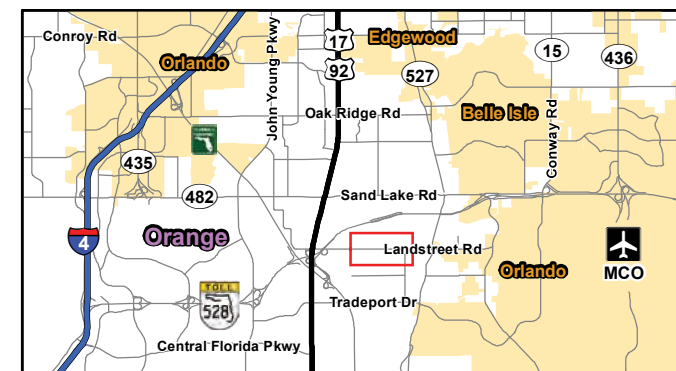
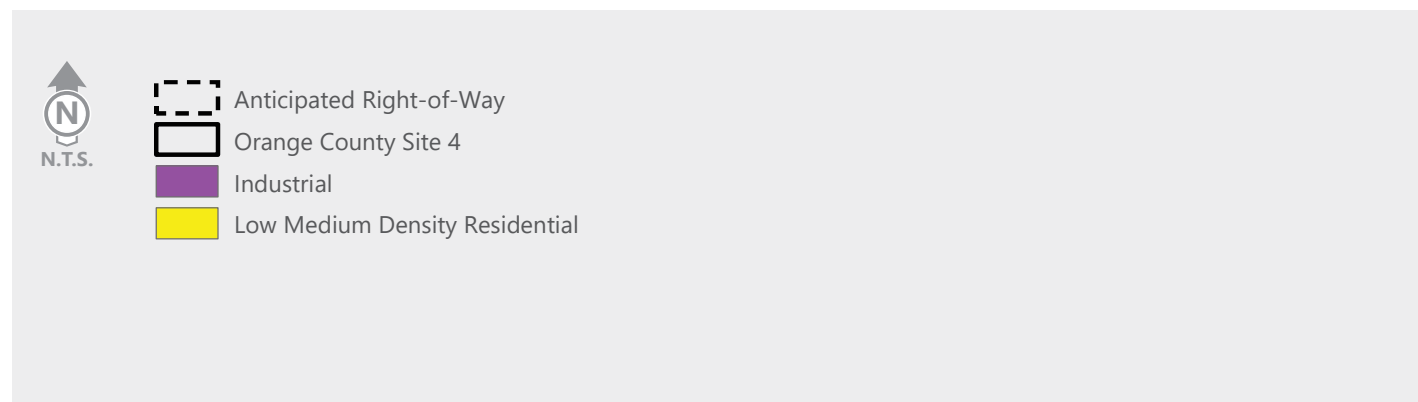
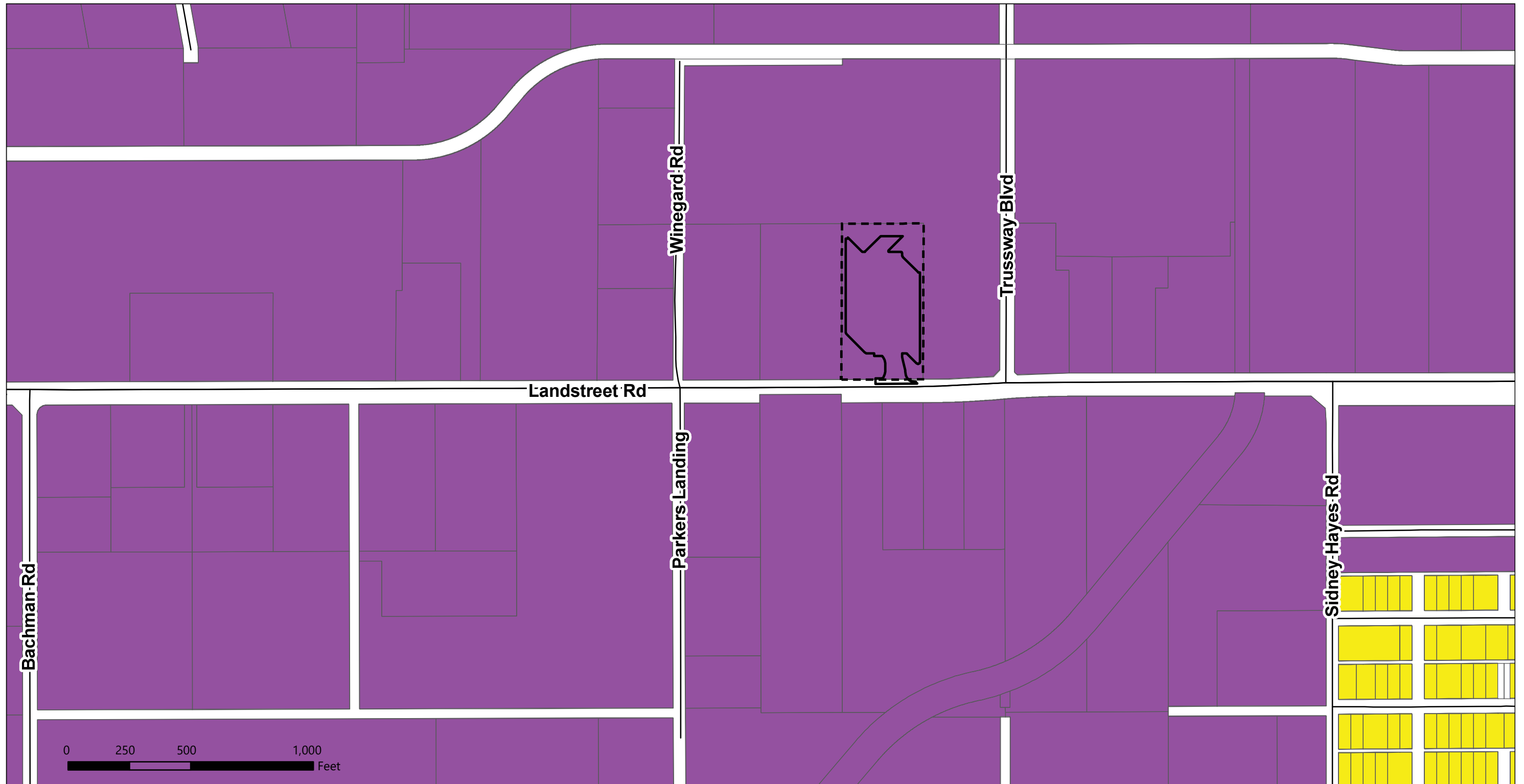
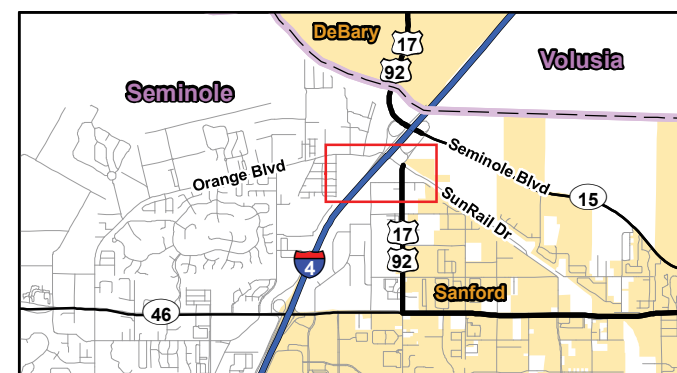
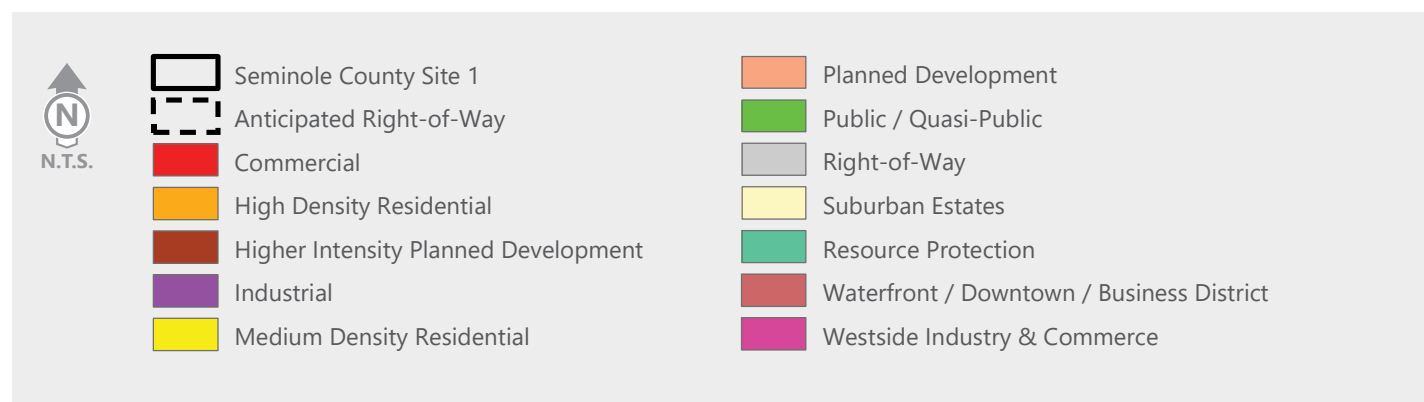
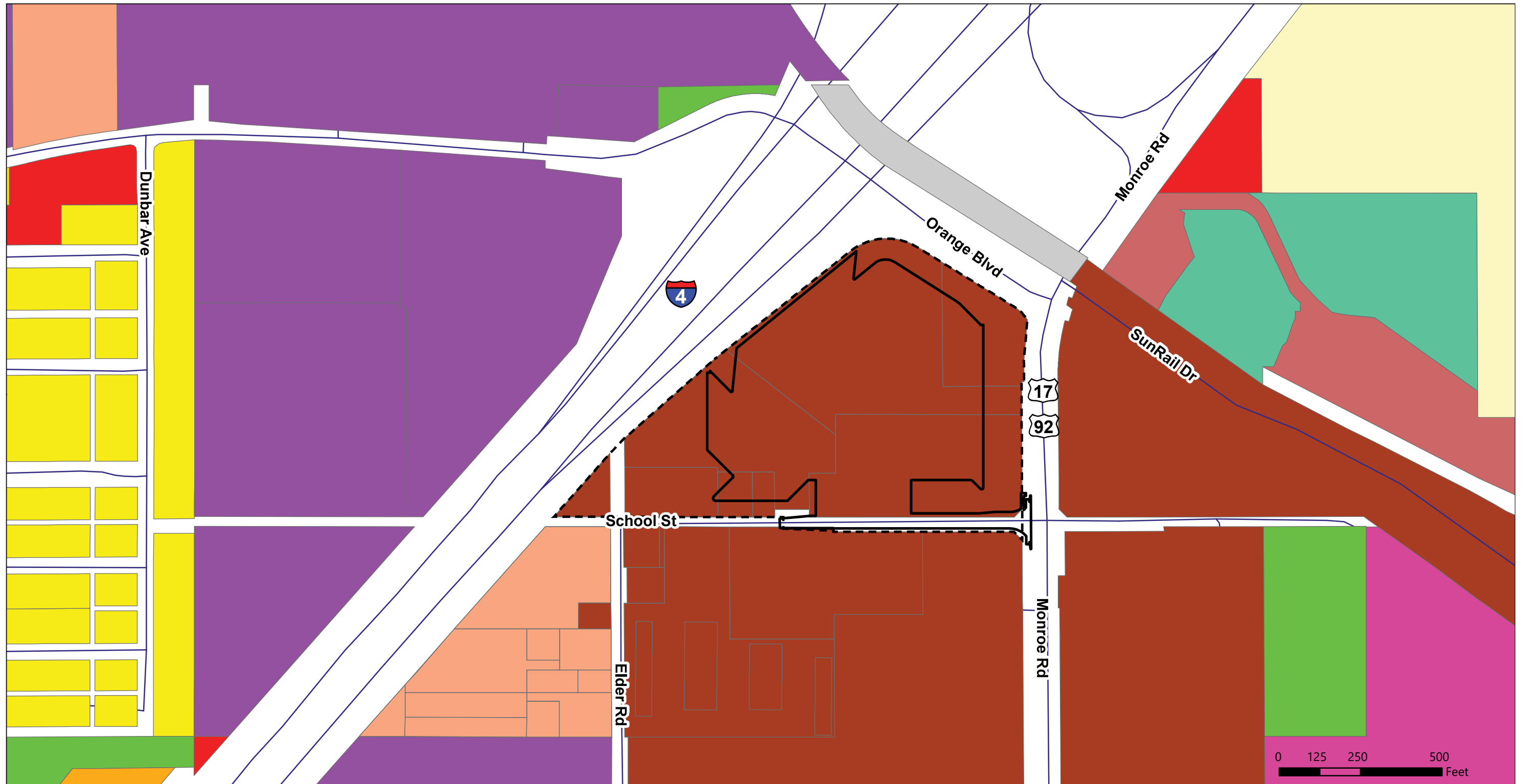


Figure 4-4
Future Land Use
Orange County Site 4
 Preliminary Engineering Report



FDOT **Figure 4-5**
Future Land Use
Seminole County Site 1B
 Preliminary Engineering Report

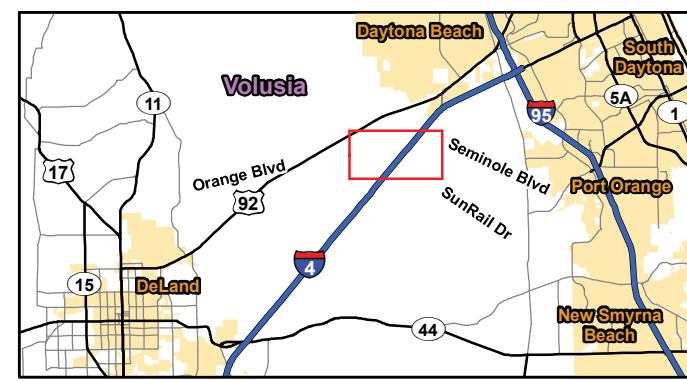
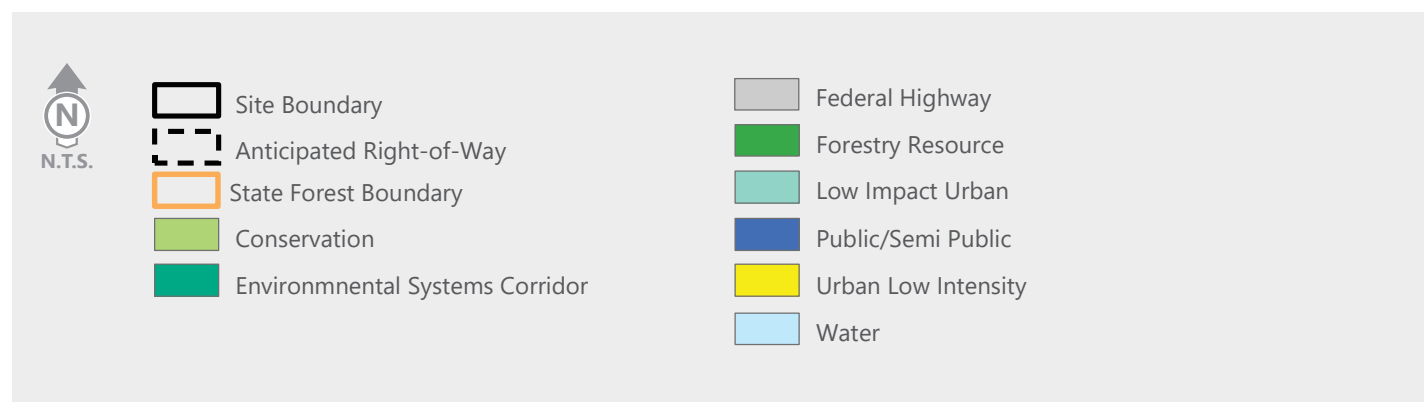


Figure 4-6
Future Land Use
Volusia County Site 1A & Site 1B
 Preliminary Engineering Report

4.2 Future Parking Demand

In 2019, FDOT District Five completed a *Truck Parking Study* to determine existing and future demand for truck parking in Central Florida. As part of the study, future truck parking demand was estimated using the *FHWA Model Development for National Assessment of Commercial Vehicle Parking* methodology. The selected model methodology requires four main attributes in order to estimate truck parking demand: length of highway segment, AADT, percent of daily traffic consisting of commercial trucks, and speed limit of the highway or average truck speed. With this methodology, 27 planning scenarios were developed to provide probabilistic outputs and represent the variation in parking demands within FDOT District Five. Of the 27 results, the highest and lowest five results were discarded to remove any extreme estimations.

Along the I-4 corridor from the Osceola-Polk County line to I-95, the maximum estimated truck parking demand is 1506 spaces in 2025 and 1775 spaces in 2040. The average estimated truck parking demand is 750 spaces in 2025 and 883 spaces in 2040. The average estimated truck parking demand was utilized to estimate future parking capacity needs.

4.3 Future Parking Capacity

The existing truck parking capacity along the I-4 corridor is 36 parking spaces. Three of those existing spaces are proposed to be eliminated due to the I-4 BtU project stormwater management areas and are not included in the No-Build Alternative. Therefore, the potential sites for future parking were selected with the intent to provide the remaining 850 spaces which are projected to be needed along the I-4 corridor by 2040. The viable truck parking sites were estimated to accommodate the following parking capacity:

- Osceola County Site 1 - 257 truck parking spaces
- Orange County Site 1 - 109 truck parking spaces
- Orange County Site 2 - 59 truck parking spaces
- Orange County Site 4 - 48 truck parking spaces
- Seminole County Site 1B - 157 truck parking spaces
- Volusia County Site 1A - 275 truck parking spaces
- Volusia County Site 1B - 253 truck parking spaces

Altogether, the viable sites were estimated to provide up to 1,158 parking spaces, which when combined with the truck parking along the I-4 corridor in the No-Build Alternative (33 spaces) totals 1,191 parking spaces to meet the future 2040 parking demand. The viable sites and parking capacity were further refined during project development as documented in Section 6 and Section 8 of this report.

4.4 Future Traffic Operations (No-Build Alternative)

Future traffic operations related to the Build Alternatives are provided in Section 6.4. This section describes future traffic operations for the No-Build Alternative at the seven locations analyzed for comparison to the Build Alternatives. The future traffic volumes presented in this section are for design year 2045. Future traffic volumes for the interim year 2025 are provided in the PTAR, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The AM and PM peak hour projected future volumes in the year 2045 for the Osceola County Site 1 No-Build conditions is shown in **Figure 4-7**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

No-Build Intersection LOS Analysis

Table 4-2 shows the projected operations for the year 2045 for the Osceola County Site 1 No-Build condition. Both study intersections were projected to operate at LOS C or better through the design year 2045 No-Build conditions.

Table 4-2: No-Build Intersection LOS Analysis - Osceola County Site 1

Study Intersection	2045 No-Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-CR 532 at US 17/92	28.0	C	24.5	C
3-CR 532 at PPE off-ramp	26.8	C	31.4	C

Orange County Site 1 – Sand Lake Road at John Young Parkway

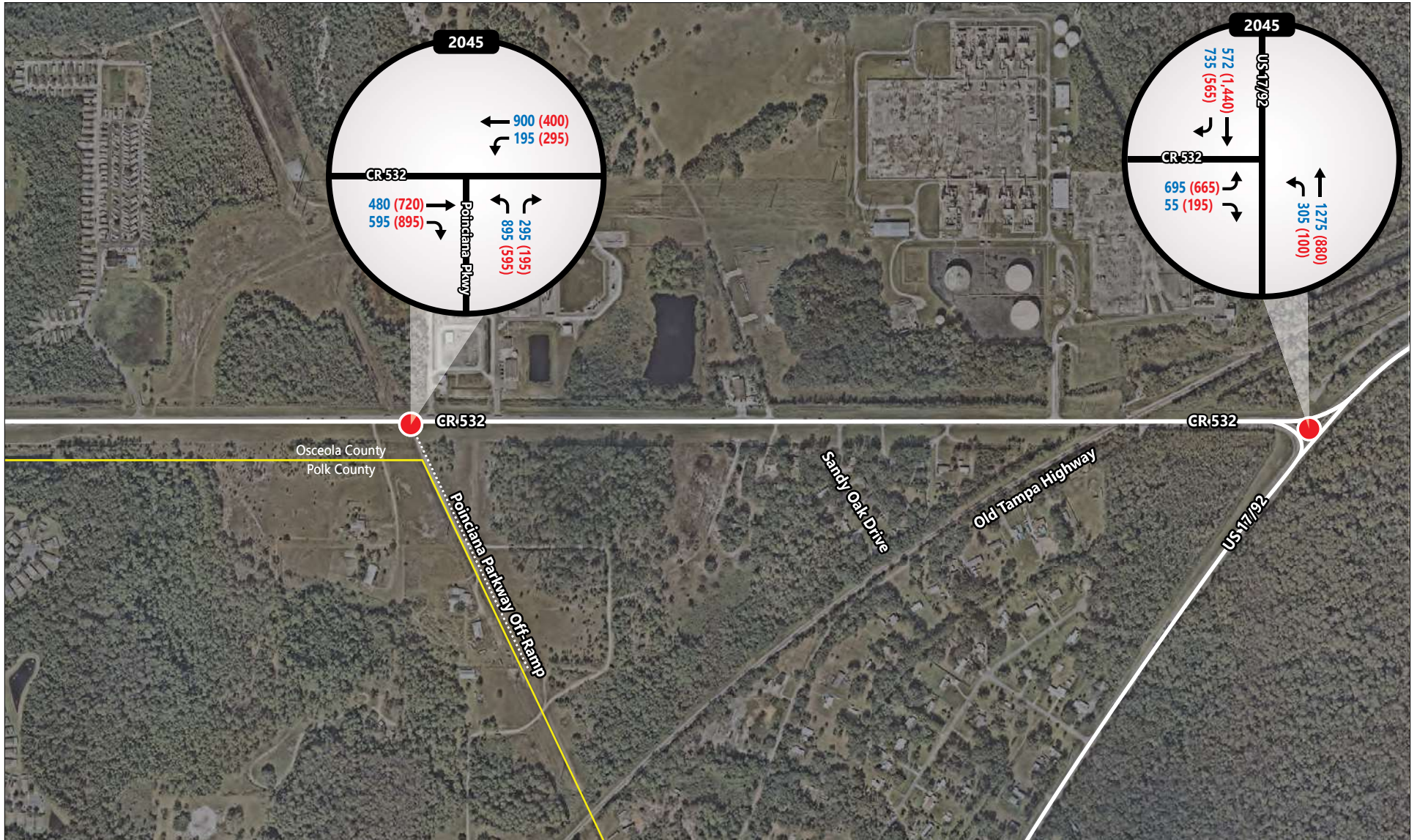
The AM and PM peak period projected future volumes in the year 2045 for the Orange County Site 1 No-Build conditions is shown in **Figure 4-8**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

No-Build Intersection LOS Analysis

Table 4-3 shows the projected operations for the year 2045 for the Orange County Site 1 No-Build condition. It is observed that all the study intersections on Sand Lake Road are projected not to meet the target LOS D for the year 2045 No-Build conditions.

Table 4-3: No-Build Intersection LOS Analysis - Orange County Site 1

Study Intersection	2045 No-Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Sand Lake Road at John Young Parkway	53.0	D	82.3	F
3-Sand Lake Road at Presidents Drive	44.5	D	154.7	F
4-Sand Lake Road at Turnpike SB Off-Ramp	69.6	E	96.3	F
5-Sand Lake Road at Turnpike NB Ramps	134.9	F	81.4	F







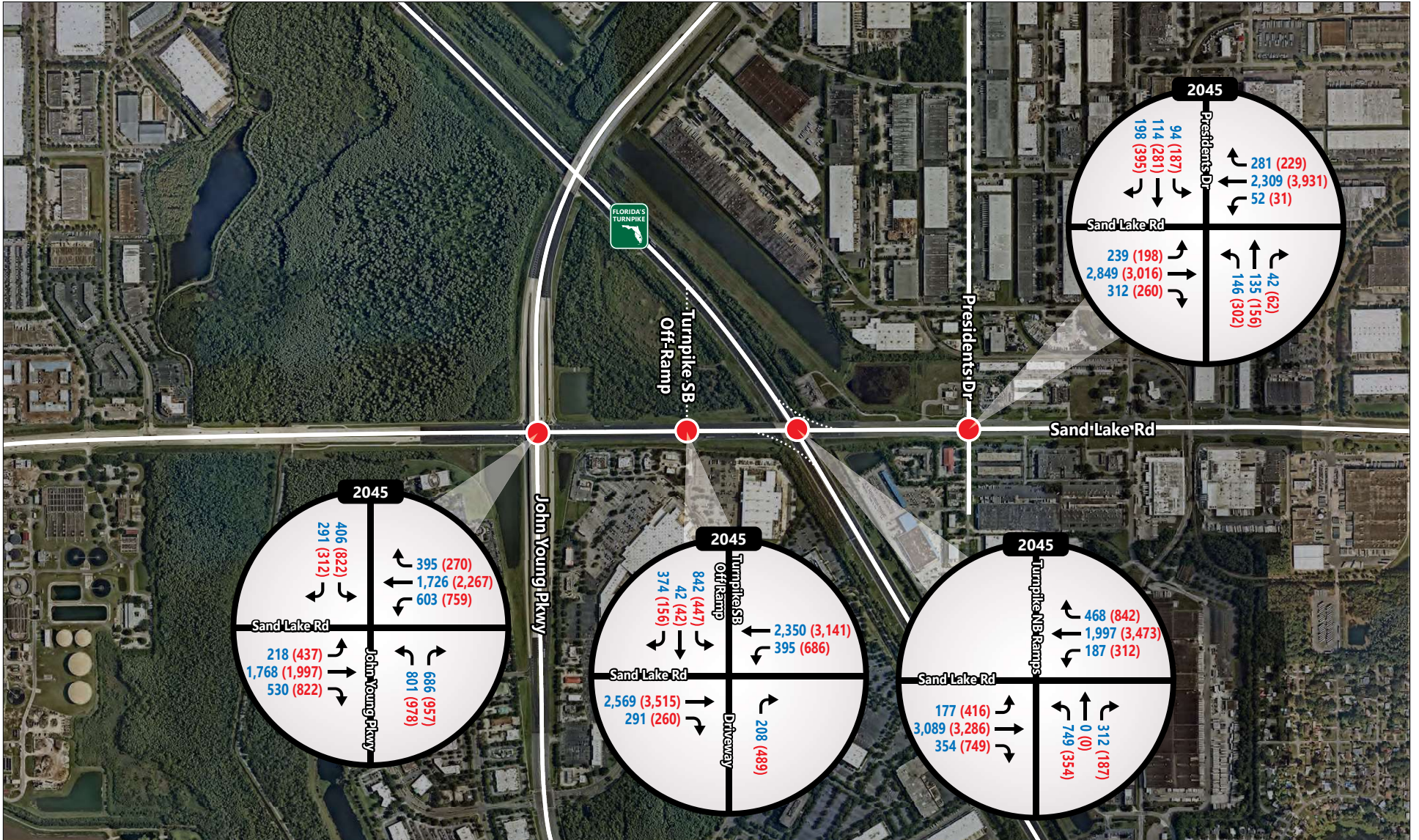
 N.T.S.
 Study Intersection
 Traffic Movement
 AM (PM) Peak Hour Traffic Volumes



Figure 4-7
Future No-Build Turning Movement Counts
Osceola County Site 1
 Preliminary Engineering Report



● Study Intersection

→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 4-8

**Future No-Build Turning Movement Counts
Orange County Site 1**

Preliminary Engineering Report

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

The AM and PM peak period projected future volumes in the year 2045 for the Orange County Site 2 No-Build conditions is shown in **Figure 4-9**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

No-Build Intersection LOS Analysis

Table 4-4 shows the projected operations for year 2045 Orange County Site 2 No-Build condition. Landstreet Road at US 411 is projected to fail with LOS F in the design year 2045 No-Build conditions. The minor street approach at Landstreet Road and SR 528 WB off-ramp is also projected to operate LOS F in the year 2045 No-Build conditions.

Table 4-4: No-Build Intersection LOS Analysis - Orange County Site 2

Study Intersection	2045 No-Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
2-Landstreet Road at US 441	129.6	F	259.3	F

*Note: 1) * Minor/major street worst delays are reported for the stop-control; 2) Synchro results are not available for Landstreet Road and SR 528 EB on-ramp because there is no stop control on the side street*

Orange County Site 4 – West Landstreet Road, East of SR 528

The AM and PM peak hour projected future volumes in the year 2045 Orange County Site 4 No-Build conditions is shown in **Figure 4-10**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

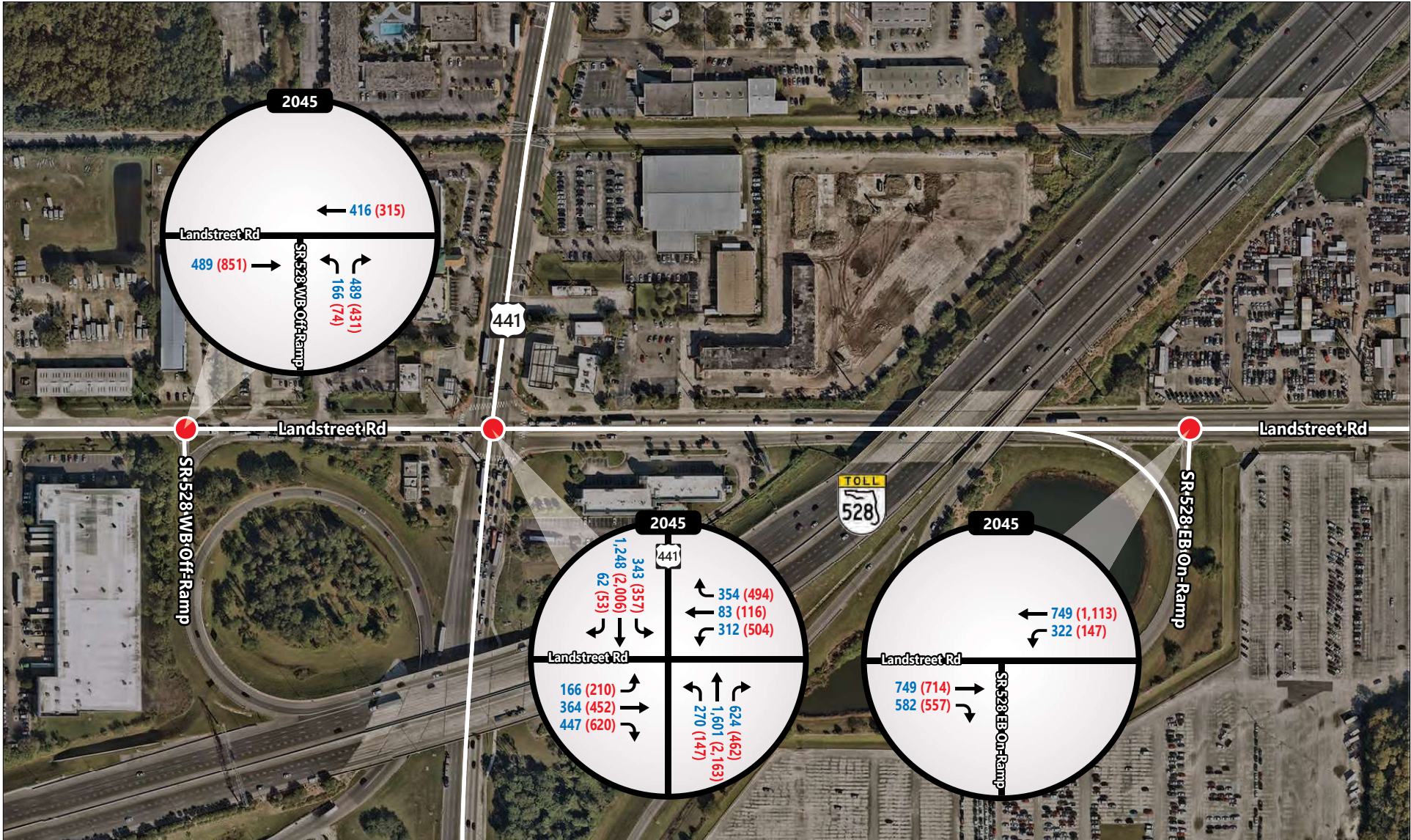
No-Build Intersection LOS Analysis

Table 4-5 shows the Orange County Site 4 No-Build projected operations for year 2045. It is observed that both the study intersections were projected to operate at LOS B or better by the year 2045 No-Build conditions.

Table 4-5: No-Build Intersection LOS Analysis - Orange County Site 4

Study Intersection	2045 No-Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Landstreet Road at Parkers Landing*	19.6/10.6	C/B	24.6/10.8	C/B
3-Landstreet Road at Sidney Hayes Road	18.1	B	25.6	C

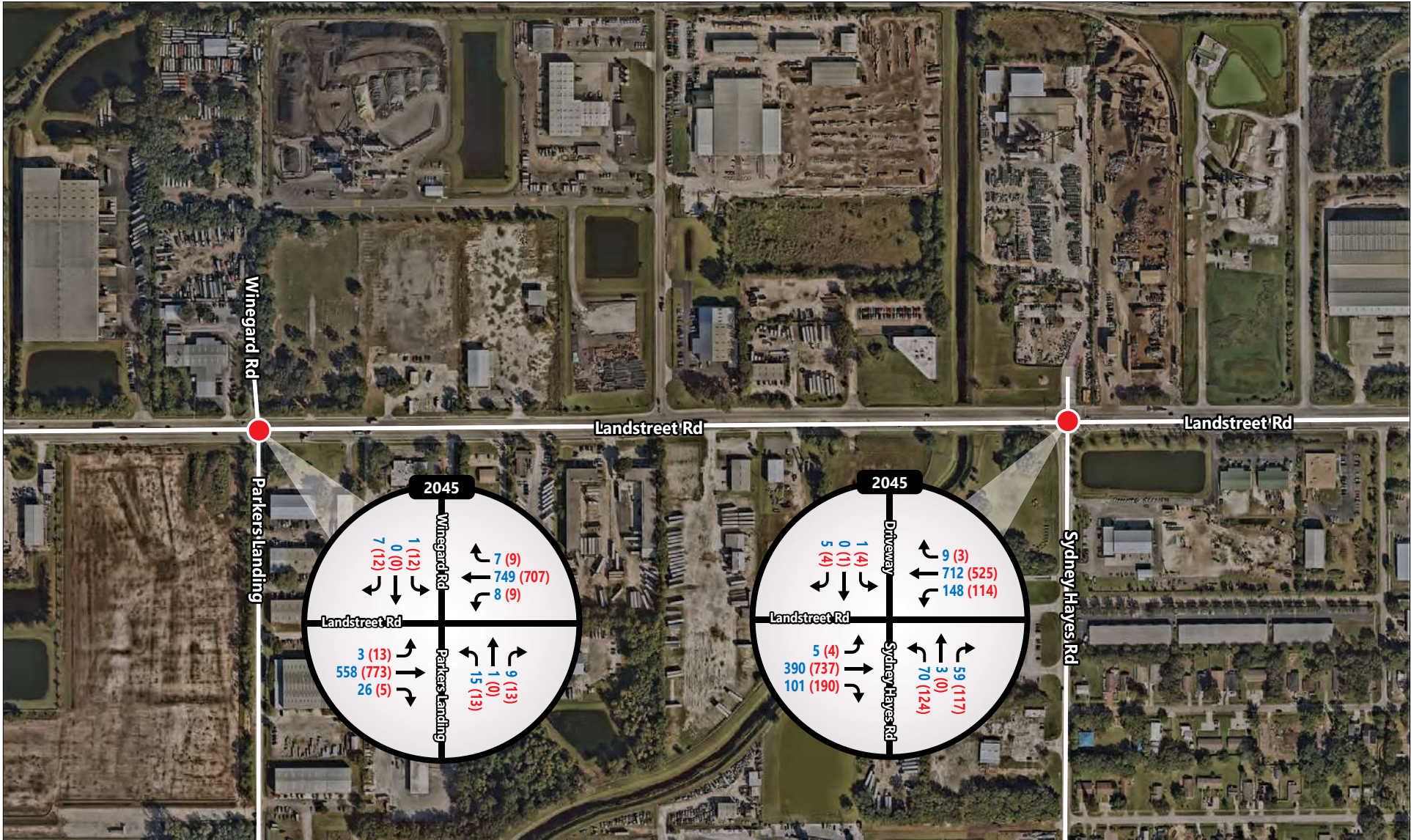
*Note: * Minor/major street worst delays are reported for the stop-control*



- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes



Figure 4-9
Future No-Build Turning Movement Counts
Orange County Site 2
 Preliminary Engineering Report



● Study Intersection

→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 4-10

**Future No-Build Turning Movement Counts
Orange County Site 4**

Preliminary Engineering Report

Seminole County Site 1B – I-4 at US 17/92

Two future scenarios were evaluated for this site: one with the existing I-4 and US 17/92 interchange configuration (existing configuration scenario) and one with the proposed I-4 BtU configuration at the I-4 and US 17/92 interchange (I-4 BtU configuration scenario). Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

The AM and PM peak period projected future volumes in the year 2045 Seminole County Site 1B No-Build conditions for the existing configuration scenario and I-4 BtU configuration scenario is shown in **Figure 4-11** and **Figure 4-12**, respectively.

Existing Configuration Scenario

No-Build Intersection LOS Analysis

As shown in **Table 4-6**, for the Seminole County Site 1B No-Build existing configuration scenario both signalized study intersections were projected to operate at LOS D or better through the year 2045 conditions. The major street movement – northbound left at US 17/Monroe Road at I-4 EB On-ramp intersection is projected to operate at LOS F in the year 2045 conditions. The minor street approach at US 17/Monroe Road at School Street is also projected to operate at LOS F in the year 2045 PM condition, but the delay is not significant.

Table 4-6: No-Build Intersection LOS Analysis (with Existing Configuration)- Seminole County Site 1B

Study Intersection	2045 No-Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/Monroe Road at Seminole Boulevard	44.1	D	48.7	D
2-US 17/Monroe Road at I-4 EB On-ramp*	9.5/106.5	A/F	16.2/189.0	B/F
3-US 17/Monroe Road at Orange Blvd	23.3	D	33.7	D
4-US 17/Monroe Road at School Street*	41.6/15.1	E/C	68.5/19.0	F/C

Note: * Minor/major street worst delays are reported for the stop-control

I-4 BtU Configuration Scenario

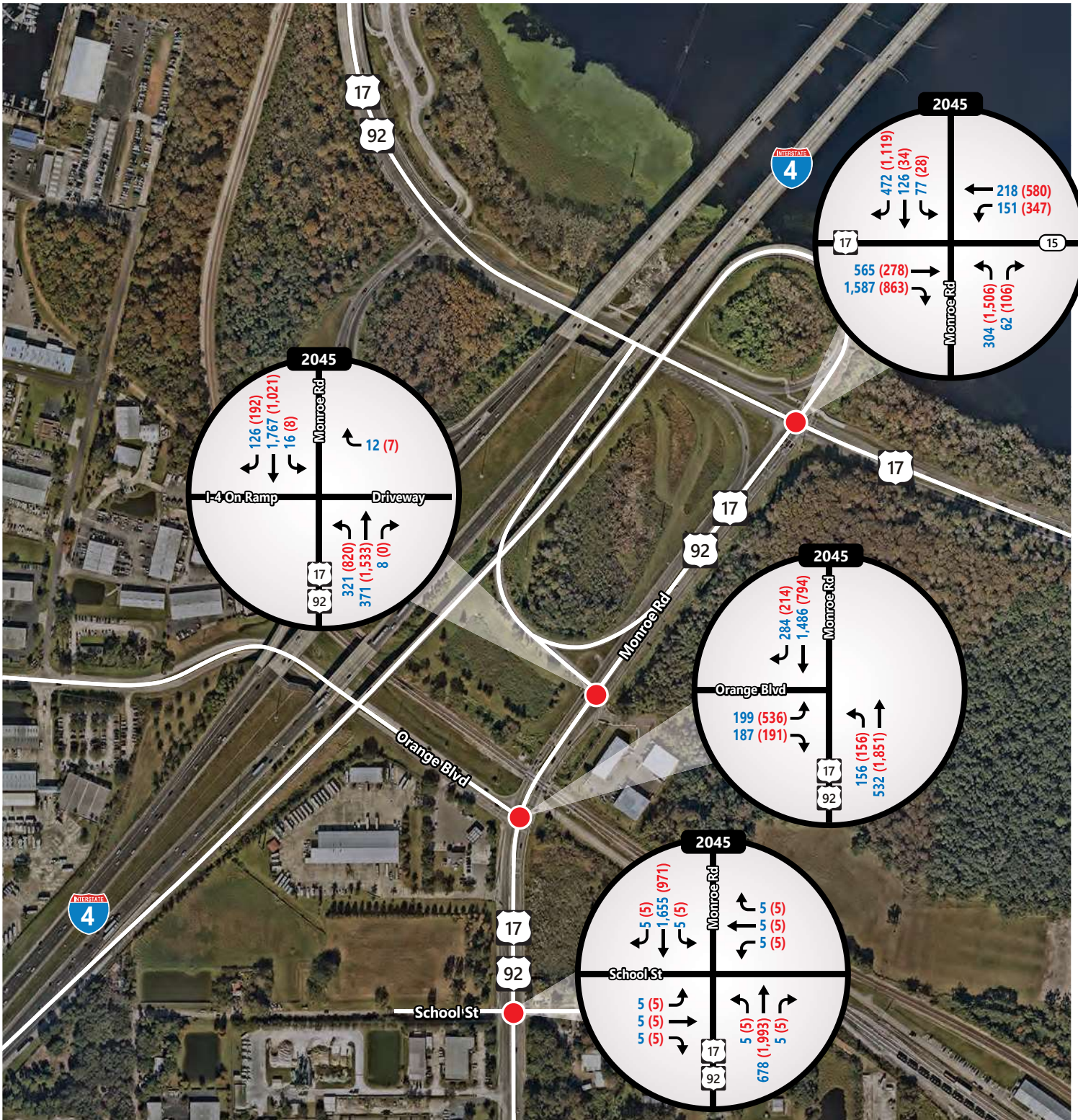
No-Build Intersection LOS Analysis

As shown in **Table 4-7**, for the Seminole County Site 1B No-Build I-4 BtU configuration scenario all the study intersections were projected to operate at LOS D or better by the year 2045 conditions.

Table 4-7: No-Build Intersection LOS Analysis (with I-4 BtU Configuration) - Seminole County Site 1B

Study Intersection	2045 No-Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/92 / Monroe Road at I-4 WB Ramps	33.1	C	54.5	D
2-US 17/92 / Monroe Road at I-4 EB Ramps	23.5	C	49.4	D
3-US 17/92 / Monroe Road at School Street	23.7	C	42.4	D

Note: A signal is recommended at the intersection of US 17/92 / Monroe Road at School Street in the I-4 BtU Study

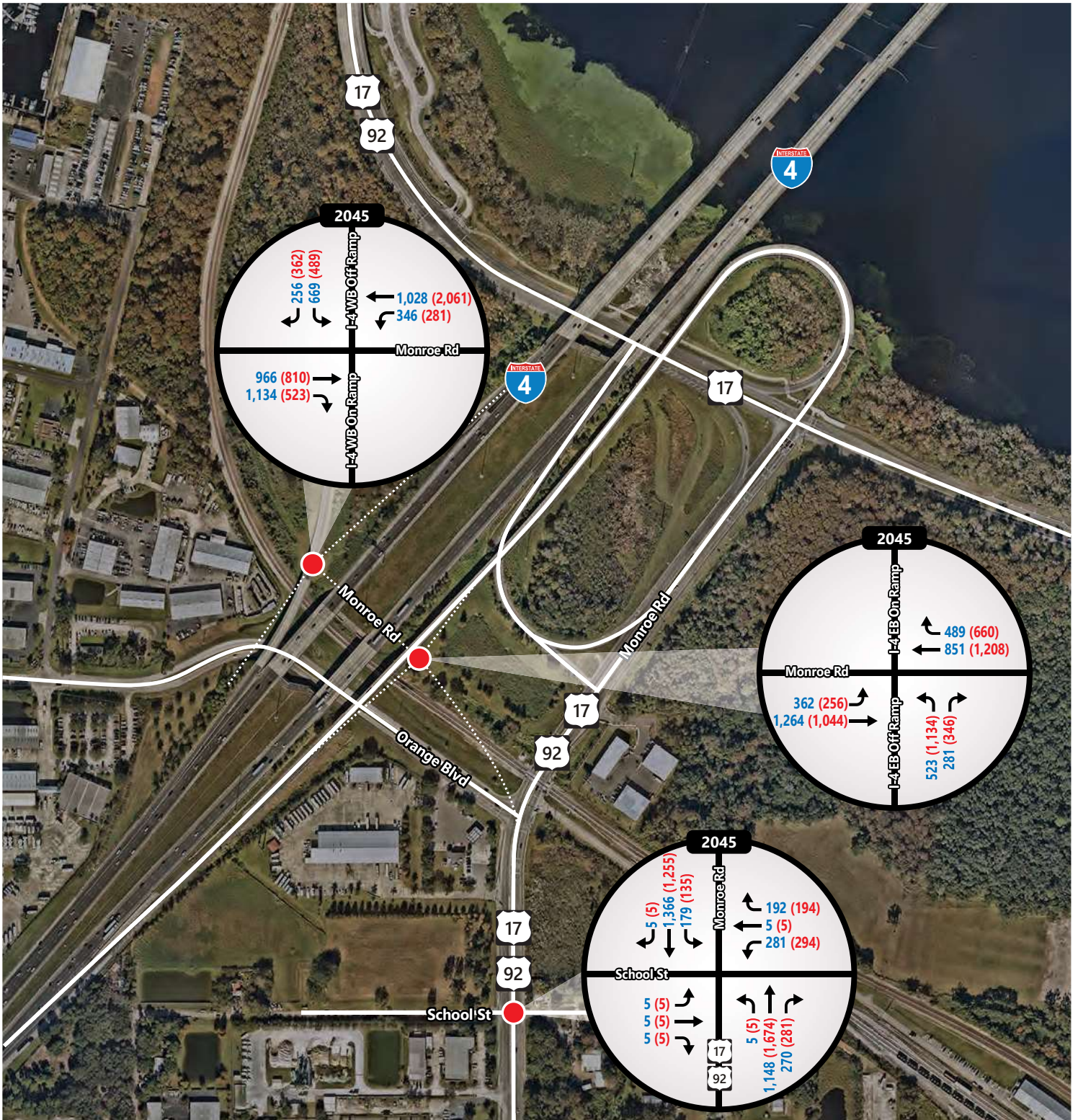


- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes



Figure 4-11

**Future No-Build Turning Movement Counts
Seminole County Site 1B
(with Existing Configuration)
Preliminary Engineering Report**



- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes



Figure 4-12

**Future No-Build Turning Movement Counts
Seminole County Site 1B
(with I-4 BtU Configuration)
Preliminary Engineering Report**

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The AM and PM peak hour projected future volumes in the year 2045 Volusia County Site 1A No-Build conditions is shown in **Figure 4-13**. Information relating to volume development, data collection, and HCS7 reports can be found in the PTAR in the project file.

No-Build LOS Analysis

Density and estimated LOS based on HCM metrics for the Volusia County Site 1A are provided for the freeway segment analysis as shown in **Table 4-8** for the year 2045. The analysis indicates that all freeway segments are expected to operate at LOS D or better through the year 2045 conditions.

Table 4-8: 2045 No-Build Freeway LOS Analysis – Volusia County Site 1A

I-4 Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Eastbound	28.3	D	19.0	C

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

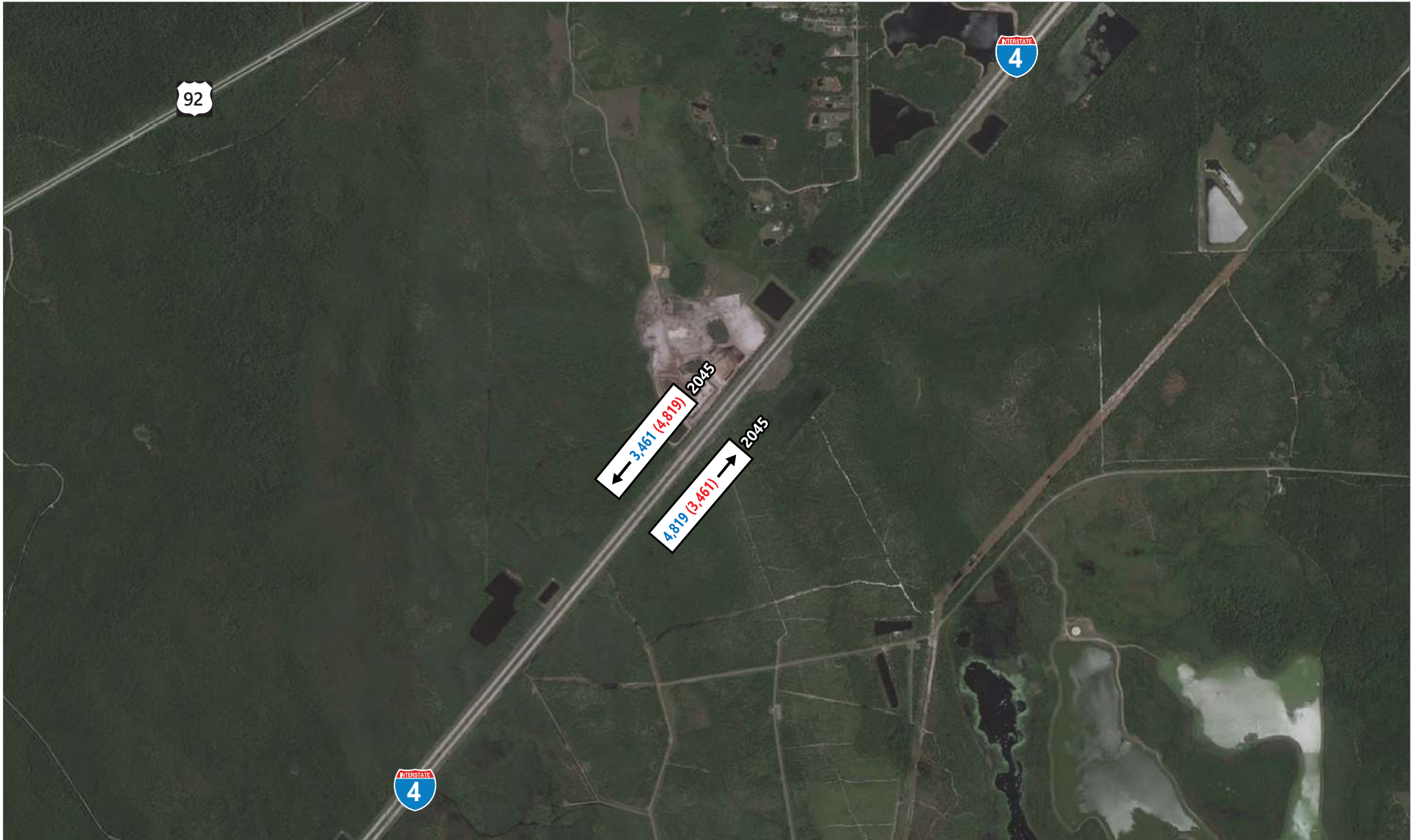
The AM and PM peak hour projected future volumes in the year 2045 Volusia County Site 1B No-Build conditions is shown in **Figure 4-13**. Information relating to volume development, data collection, and HCS7 reports can be found in the PTAR in the project file.

No-Build LOS Analysis

Density and estimated LOS based on HCM metrics for the Volusia County Site 1B are provided for the freeway segment analysis as shown in **Table 4-9** for the year 2045. The analysis indicates that all freeway segments are expected to operate at LOS D or better through the year 2045 conditions.

Table 4-9: 2045 No-Build Freeway LOS Analysis – Volusia County Site 1B

I-4 Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Westbound	19.0	C	28.3	D



→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 4-13

**Future No-Build I-4 Peak Hour Traffic Volumes
Volusia County Site 1A & Site 1B
Preliminary Engineering Report**

5

5. Design Controls & Criteria

5.1 Design Controls

The FDOT Context Classification (February 2022) guidebook provides detailed criteria to determine the context classification along state roadways. The 2023 FDOT Design Manual (FDM) design criteria are based on context classification, functional classification, and design speed. The 2018 Florida Greenbook was used for design criteria for non-state roads. The study team followed these criteria for the development of design geometry as it applies to the access roads leading to the truck parking sites. Specifically, the development of access driveways was guided by the 2023 FDM and the 2018 Florida Greenbook.

The context classification evaluation results are shown in **Table 5-1** for context, as context classification is used to determine many design decisions within the FDM.

Table 5-1: Summary of Context Classification Evaluation

County	Site	Access Road	Context Classification	Context Classification Description
Osceola	1	CR 532	C3R*	Mostly residential uses within large blocks and a disconnected or sparse roadway network.
Orange	1	Sand Lake Road	C3C	Mostly non-residential uses with large building footprints and large parking lots within large blocks and a disconnected or sparse roadway network.
	2	Landstreet Road	C3C*	
	4	Landstreet Road	C3C*	
Seminole	1B	US 17/92	C3C	
		School Street	C3C*	
Volusia	1A	I-4 Eastbound	C2*	Sparsely settled lands, may include agricultural land, grassland, woodland, and wetlands.
	1B	I-4 Westbound	C2*	

**FDOT does not define a context classification for these roads, therefore a context classification was determined based on a desktop review of the surrounding area.*

5.2 Design Criteria

5.2.1 Roadway Design Criteria

For four of the seven viable sites, new construction or improvements are proposed for the access roads to the sites. **Table 5-2** summarizes the access roads to each viable site, if any improvements are proposed, and which design guideline is used for the site.

Table 5-2: Viable Sites Access and Design Guidelines

Viable Site	Osceola County Site 1	Orange County Site 1	Orange County Site 2	Orange County Site 4	Seminole County Site 1B	Volusia County Site 1A	Volusia County Site 1B
Access Road	CR 532	Sand Lake Road/ John Young Parkway Ramp	West Landstreet Road	West Landstreet Road	School Street	I-4 Eastbound	I-4 Westbound
Access Road Improvements	Add left and right turn lane into site	None	Minor striping modifications	None	Widen School Street	Add on-ramps and off-ramps	Add on-ramps and off-ramps
Design Guideline Used	2018 Florida Greenbook	N/A	2009 MUTCD	N/A	2018 Florida Greenbook	2023 FDOT FDM	2023 FDOT FDM

The design criteria determined by the assigned context classification are provided in **Table 5-3**, as defined in the 2023 FDM, 2018 Florida Greenbook, and 2009 Manual on Uniform Traffic Control Devices (MUTCD). Note that **Table 5-3** only lists the roadways where roadway improvements are proposed; Sand Lake Road and West Landstreet Road are not shown below for this reason. All criteria are subject to change, and only the most current criteria will be used during the final Design phase.

Table 5-3: 2023 FDOT Design Manual Design Criteria by Context Classification

Design Control	CR 532 (Osceola County Site 1)	School Street (Seminole County Site 1B)	I-4 Ramps (Volusia County Site 1A)	I-4 Ramps (Volusia County Site 1B)	Source
Design Guideline	2018 Florida Greenbook	2018 Florida Greenbook	2023 FDOT FDM	2023 FDOT FDM	Selected by Study
Context Classification	C3C	C3C	N/A - Limited Access Facility	N/A - Limited Access Facility	Selected by Study
Functional Classification	Minor Arterial-Urban	Local Urban	Principal Arterial-Interstate Rural	Principal Arterial-Interstate Rural	FDOT Straight Line Diagram/ Selected by Study
Allowable Design Speed Range	35 – 55 mph	35 – 55 mph	50 (Direct Connection)	50 (Direct Connection)	Florida Greenbook Table 3-1 and FDM Table 201.5.2
Design Speed	45 mph	25 mph	50 mph	50 mph	Selected by Study
Lane Widths (Travel and Auxiliary)	12 ft	12 ft	15 ft	15 ft	Florida Greenbook Table 3-20 and FDM Section 211.2.1
Minimum Border Width	N/A	N/A	94 ft	94 ft	FDM Section 211.6
Minimum Clear Zone	18 ft	6 ft	14 ft	14 ft	Florida Greenbook Table 4-1 and FDM Table 215.2.1
On-Street Parking	N/A	N/A	N/A	N/A	Florida Greenbook Chapter 1 Section C.7.h and FDM Section 210.2.3
Standard Sidewalk Width	5 ft	5 ft	N/A	N/A	Florida Greenbook Chapter 8 Section B.1 and FDM Table 222.2.1
Curb & Gutter Type	Type F Curb and Gutter (Outside only)	Type F Curb and Gutter (Outside only)	N/A	N/A	Florida Greenbook Chapter 3 Section C.7.g and FDM Section 210.5

Table 5-4 provides additional design criteria not controlled by the context classification for each of the project segments.

Table 5-4: 2023 FDOT Design Manual Design Criteria Additional Standards

Design Control	CR 532 (Osceola County Site 1)	School Street (Seminole County Site 1B)	I-4 Ramps (Volusia County Site 1A)	I-4 Ramps (Volusia County Site 1B)	Source
Typical Section Type	Urban	Local	Interstate	Interstate	Selected by Study
Access Management Classification	N/A	N/A	1 – Freeway	1 – Freeway	FDOT Straight Line Diagram/Selected by Study
Access Class - Connection Spacing	N/A	N/A	Interchange Spacing Area Type 3 – 3 miles	Interchange Spacing Area Type 3 – 3 miles	FDM Table 201.4.1
Access Class – Median Opening Spacing	“Frequent median openings should be avoided”	“Frequent median openings should be avoided”	N/A	N/A	Florida Greenbook Chapter 3 Section C.8.b.2 and FDM Table 201.4.2
Access Class – Signal Spacing	N/A	N/A	N/A	N/A	FDM Table 201.3.2
Pavement Cross Slope	0.015 (minimum) 0.02 (recommended)	0.015 (minimum) 0.02 (recommended)	0.02	0.02	Florida Greenbook Chapter 3 Section C.7.b.2 and FDM Figure 211.2.1
Paved Shoulder Width	4 ft (to accommodate bicyclists)	5 ft	4 ft outside without shoulder gutter 2 ft inside without shoulder gutter	4 ft outside without shoulder gutter 2 ft inside without shoulder gutter	Florida Greenbook Chapter 9 Section B.5 and FDM Table 211.4.1
Unpaved Shoulder Width	N/A	N/A	2 ft outside without shoulder gutter 4 ft inside without shoulder gutter	2 ft outside without shoulder gutter 4 ft inside without shoulder gutter	FDM Table 211.4.1
Roadside Front Slopes	1:4 (minimum) 1:6 (recommended)	1:4 (minimum) 1:6 (recommended)	1:6	1:6	Florida Greenbook Chapter 4 Section B.1.a and FDM Table 215.2.3
Max Deflection Without a Curve	0°45'00"	2°00'00"	0°45'00"	0°45'00"	Florida Greenbook Chapter 3 Section C.4.b and FDM Section 211.7.1
Max Deflection for Through Lanes Through Intersections	N/A	11°00'00"	N/A	N/A	Florida Greenbook Chapter 3 Section C.4.b and FDM Table 212.7.1

Table 5-4: 2023 FDOT Design Manual Design Criteria Additional Standards (continued)

Design Control	CR 532 (Osceola County Site 1)	School Street (Seminole County Site 1B)	I-4 Ramps (Volusia County Site 1A)	I-4 Ramps (Volusia County Site 1B)	Source
Maximum Curvature	6°30'	34°18'18"	8°15'	8°15'	Florida Greenbook Tables 3-10 and 3-12 and FDM Table 210.9.1
Min Length of Curve	825 ft (Desirable) 400 ft (Minimum)	N/A	1500 ft (Desirable) 750 ft (Minimum)	1500 ft (Desirable) 750 ft (Minimum)	Florida Greenbook Table 3-8 and FDM Table 211.7.1
Max Profile Grade	5%	7%	5%	5%	Florida Greenbook Table 3-16 and FDM Table 211.9.1
Max Change in Grade w/o Vertical Curve	0.50	1.10	0.60	0.60	Florida Greenbook Table 3-17 and FDM Table 210.10.2
Minimum Grade	N/A	N/A	N/A	N/A	FDM Section 210.10.1.1
Min Sight Distance	495 ft (level profile)	155 ft (level profile)	495 ft (<2% downgrade and upgrade profile grade)	495 ft (<2% downgrade and upgrade profile grade)	Florida Greenbook Table 3-4 and FDM Table 211.10.1
Min Crest Vertical Curve (K)	114	12	136	136	Florida Greenbook Table 3-18 and FDM Table 210.10.3
Min Sag Vertical Curve (K)	115	26	96	96	Florida Greenbook Table 3-18 and FDM Table 210.10.3

5.2.2 Stormwater Management Criteria

The design criteria shown below is based on the *South Florida Water Management District (SFWMD) Environmental Resource Permit Applicant's Handbook, Volume II (2010)*, *St John's River Water Management District (SJRWMD) Permit Information Manual (2018)*, and the *FDOT Drainage Design Guide (2018)*.

SFWMD Criteria:

1. Flood Control/Water Quantity:
 - a. For a project or portion of a project located within an open drainage basin, the allowable discharge is either:
 - i. Historic discharge, which is the peak rate at which runoff leaves the parcel of land by gravity under existing site conditions, or the legally allowable discharge at the time of permit application
 - ii. Amounts determined in previous District permit actions relevant to the project

Offsite discharge and peak stages for the existing and proposed conditions shall be computed using the SFWMD's 25-year/72-hour rainfall maps and the NRCS Type II Florida Modified 24-hour rainfall distribution with an Antecedent Moisture Condition (AMC) II. SFWMD Orlando Office allows the County rainfall criteria to be substituted in place of the

SFWMD 25-year/75-hour rainfall event, and Orange County requires discharges computed using the 25-year/72-hour rainfall event.

2. Stormwater Quality:

- a. For wet detention ponds, treatment will be provided for the greater of one inch of runoff over the drainage area or 2.5 inches of runoff from the impervious area (excluding water bodies).
 - i. An outfall control structure shall be designed to drawdown a maximum of 0.5 inches of the detention volume in 24 hours.
- b. For dry retention ponds, treatment will be provided 50% of the volume provided for wet detention: equal to the greater of 0.5 inches over the drainage area or 1.25 inches of runoff from the impervious area (excluding water bodies).
 - i. Dry retention areas shall have mechanisms for returning the groundwater level in the area to the control elevation. The bleed-down rate for these systems is a maximum of 0.5 inches of the detention volume in 24 hours.
- c. When a project or portion of a project is located within a basin that discharges to an OFW, the required treatment volume shall be increased by 50%. SFWMD requires all projects that discharge to the Lake Okeechobee BMAP to meet OFW criteria.

The project traverses three WBIDs with SFWMD: 3170C – Reedy Creek Above Lake Russell, 3169A – Shingle Creek, and 3168B – Boggy Creek; of which none are impaired for nutrients (Chlorophyll-a) according to the current FDEP 303(d) list of impaired water bodies. However, a pre versus post nutrient loading analysis is required for this study due to these WBIDs discharging to the Lake Okeechobee BMAP.

SJRWMD Criteria:

1. Flood Control/Water Quantity:

- a. For a project or portion of a project located within an open drainage basin, the post-development peak discharge shall be at or below pre-development peak discharge for the 25-year/24-hour and mean annual storms.
 - i. Offsite discharges and peak stages for the existing and proposed conditions shall be computed using the SJRWMD 25-year/24-hour rainfall depth and the NRCS Type II Florida Modified 24-hour rainfall distribution with an AMC II.

2. Stormwater Quality:

- a. For wet detention ponds, treatment will be provided for the greater of 1 inch of runoff over the drainage area or 2.5 inches of runoff from the impervious area (excluding water bodies). The drainage area for this project is considered to be the total area of the site plus any additional required access roads or modifications to them.
 - i. An orifice should be set at the Average Wet Seasonal Water Elevation (AWSWE) and sized to drawdown one-half of the required treatment volume within 24 to 30 hours, but no more than one-half of this volume will be discharged within the first 24 hours.
- b. When a project or portion of a project is located within a basin that discharges to an OFW, the required treatment volume shall be increased by 50%.

FDOT Criteria:

1. Pond Configuration:

- a. Side Slopes of 1 (vertical) to 4 (horizontal) or flatter. Conserve established slope vegetation, where possible.

- b. Refer to the Drainage Manual for minimum widths and slopes for maintenance berms (15-foot minimum with a side slope of 1:8 or flatter). For ponds with permanent pools, keep the lowest point of the maintenance berm at least one foot above the top of the treatment volume.
- c. Use a radius of 30 feet or larger for the inside edge of the maintenance berm.
- d. Have a benchmark constructed near or in all ponds to check critical elevations or the pond and outlet control structure.
- e. Provide permanent pool volume based on Water Management District requirements.
- f. At least 1.0 foot of freeboard is required above the maximum design stage of the pond below the front of the maintenance berm.

5.2.3 Site Design

For the design of all the viable truck parking sites, consistent site design criteria were used, and are summarized in **Table 5-5** below. The design vehicle was decided to be WB-67 as it requires more off tracking than the WB-62FL and was determined to provide more room for error for truck drivers that normally come into this facility at the end of a shift.

Table 5-5: Truck Parking Site Design Guidelines

Design Control	Value	Source
Design Vehicle	WB-67	Selected by Study
WB-67 Parking Spot Width	15 ft	Selected by Study
WB-67 Parking Spot Length	90 ft	Selected by Study
WB-67 Parking Spot Angle	45°	Selected by Study
Oversize Vehicle Parking Spot Width	20 ft	Selected by Study
Oversize Vehicle Parking Spot Length	125 ft	Selected by Study
Oversize Vehicle Parking Spot Angle	Parallel Parking	Selected by Study
One-way Interior Lane Width	45 ft	Selected by Study
Two-way Interior Lane Width	22.5 ft	Selected by Study
Two-way Exterior Lane Width	25 ft	Selected by Study
Truck Parking Site Driveway Lane Width	15 ft	Selected by Study
Truck Parking Site Driveway Striped Median Width	10 ft	Selected by Study
Sidewalk Width	8 ft	Selected by Study

**Note: Design control values vary per site as needed to accommodate for design vehicle movements*

6

6. Alternatives Analysis

The objective of the alternatives analysis process is to identify feasible truck parking site alternatives which meet the needs of the project, are cost effective, and minimize environmental and community impacts. This chapter describes the alternatives considered during this study.

6.1 No-Build Alternative

The No-Build Alternative, carried as a viable option throughout the PD&E Study process, assumes no construction of a new freight parking facility and no additional freight parking capacity along I-4 within the Osceola, Orange, Seminole, and Volusia Counties because of this project. No public truck parking facilities are programmed or included in the No-Build Alternative. The No-Build Alternative includes programmed intersection improvements and roadway widening within the vicinity of the seven viable trucking parking sites, as documented in Section 6.3.3. The advantages of the No-Build Alternative include no additional ROW acquisition, no impacts to the environment from construction, no disruption of traffic during construction, and no project cost. The disadvantages of the No-Build Alternative are the purpose and need for the project are not satisfied: existing and future freight parking demand is not accommodated, safety for truck drivers is not improved, and freight mobility is not increased to support better movement of goods for the local communities.

6.2 Transportation Systems Management and Operations

Transportation Systems Management and Operations (TSM&O) alternatives focus on maximizing the capacity, safety, security, and reliability of the existing transportation facility by implementing a variety of short-term projects and services. As part of the study, the existing and planned intelligent transportation systems (ITS) infrastructure was identified based on available data.

The prior *FDOT District Five Truck Parking Study* determined that TSM&O alternatives alone would not adequately meet the project purpose and need, and additional parking capacity was needed. However, as part of the development of Build Alternatives, various TSM&O strategies were considered and identified in support of those Build Alternatives and the surrounding transportation network.

6.2.1 Existing and Planned ITS Infrastructure

FDOT has developed and deployed TPAS at freight parking facilities across the State to address the need for parking information management. The TPAS program was delivered in three stages: implementation of technology at state owned facilities to accurately assess and disseminate the availability of truck parking; development of predictive analysis for future parking availability; and incorporation of private parking locations for systemwide resource utilization. The information that is provided by TPAS assists truck drivers in identifying available parking locations where the technology is deployed.

FDOT Fiber Optic lines run adjacent to all sites with exception of the Osceola County site. During the proposed widening of CR 532, fiber optic lines will be installed.

6.2.2 Supportive TSM&O Deployments

The following are ITS devices that have recently been installed along I-4 as part of the TPAS program:

- Along I-4
 - Freight Parking Availability signs along I-4 (live parking space info connected to sites)
- At freight parking sites
 - Parking detection, cell modem, and other equipment needed to collect and communicate parking space availability for trucks traveling along I-4.

6.2.3 Electric Vehicle Charging Station Considerations

In July 2021, FDOT published the *Electric Vehicle Infrastructure Master Plan*, in compliance with Florida Statute 339.287, to establish a plan for installing EV charging stations along Florida's State Highway System (SHS). In August 2022, FDOT published *Florida's Electric Vehicle Infrastructure Deployment Plan* as a framework for implementing the National Electric Vehicle Infrastructure (NEVI) program and investing funds toward EV infrastructure improvements that address existing charging gaps within the State.

While neither document identifies specific locations for deployment along Florida's SHS, the viable truck parking sites discussed in this PD&E Study were examined as potential locations for freight-supportive EV charging stations. The standard EV charging station generates approximately 150 kilowatts (kW) of power. However, heavy-duty freight vehicles require heavy-duty EV charging equipment operating at more than 150 kW, up to 350 kW of power. Deploying heavy-duty EV charging equipment would require additional planning, design, and construction of supportive infrastructure at each site.

Various EV adoption projections are available for the national and global retail markets. However, there is less information available regarding heavy-duty freight EV adoption. More information regarding the future EV market is needed to determine the viability of heavy-duty EV charging stations at the viable truck parking sites discussed in this PD&E Study. Further coordination with FDOT Central Office is recommended during the Design phase. The PD&E concepts assumed subsurface infrastructure (conduit) to support shore power and EV charging stations.

6.3 Build Alternatives

During the PD&E Study, an initial screening analysis was conducted to identify potential sites. After further alternatives screening, 12 initial sites were identified for more detailed alternatives screening. As a result, seven viable sites were identified and detailed site concepts were developed for each of these seven viable sites. Further engineering and environmental analyses were completed and resulted in five preferred sites. Environmental features considered in the development of the Build Alternatives include wetlands, floodplains, threatened and endangered species, contamination sites, historical/archaeological resources, noise sensitive areas, and social environment factors (parcels, ROW, and relocations).

As the study progressed and sites were further analyzed, the number of parking spaces and sizes of each proposed site was refined. Further discussion of the five preferred sites can be found in **Section 6.6**. The alternatives screening, evaluation of the Build Alternatives, and the identification of the Preferred Alternative for the seven viable truck parking sites are documented within the following sections.

6.3.1 Initial Site Screening

Using the primary site selection criteria and methodology identified in Chapter 2, there were 5 criteria used to identify sites along the I-4 corridor within the study limits. The criteria included land use, zoning, size of parcel, proximity to I-4, and access. After identifying sites that met these criteria, the list was refined based on proximity to residential areas, if the parcel was already developed, if the site had significant environmental constraints, etc. Also, sites that were publicly owned took precedence over privately owned sites to reduce ROW impacts and project costs.

In support of the primary site selection criteria, local agency input was collected, and additional consideration was given to publicly owned properties, industrial clusters, and properties with access to connected major highways to help identify additional sites in Osceola and Orange Counties. As a result of the screening process (primary and secondary), 12 initial sites were identified as initial sites for further review during the PD&E process. **Figure 6-1** is a regional map indicating each site's location within Central Florida.

6.3.2 Initial Sites

As previously mentioned, over 77,000 parcels were screened for potential viability as truck parking sites near the I-4 corridor within Osceola, Orange, Seminole, and Volusia counties. After completing the initial screening of this portion of the I-4 corridor, 12 initial sites were identified and are briefly summarized in the sections below. **Figure 6-2** through **Figure 6-12** are detailed maps of each initial site.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located approximately 3.87 miles east of the I-4 interchange with CR 532 along the south side of CR 532. This site is immediately east of the planned PPE. The potential site is approximately 35.1 acres.

Osceola County Site 2 – CR 532 – Northside

Osceola County Site 2 is located approximately 4.06 miles east of the I-4 interchange with CR 532 along the north side of CR 532. This site is immediately west of the Duke Energy Florida site on CR 532. The potential site is approximately 24.3 acres.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is located along Sand Lake Road approximately 2.90 miles east of I-4. The site is located immediately west of the limited access facility Florida's Turnpike. The site is approximately 36.70 acres.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

Orange County Site 2 is located in a heavy industrial area along West Landstreet Road, adjacent to the SR 528 interchange. The site is approximately 4.86 miles east of I-4. The site is approximately 6.80 acres.

Orange County Site 3 – West Landstreet Road, East of SR 528 - Southside

Orange County Site 3 is in a heavy industrial area along the south side of West Landstreet Road, near the Parkers Landing intersection. The site is approximately 5.95 miles east of I-4. This site is owned by FDOT, who plans to reconfigure the site in the future. The site is approximately 9.90 acres.

Orange County Site 4 – West Landstreet Road, East of SR 528 - Northside

Orange County Site 4 is in a heavy industrial area along the north side of West Landstreet Road, near the Trussway Boulevard intersection. The site is approximately 6.03 miles east of I-4. Many local truck drivers store their vehicles at this site when the vehicles are not in use. The site is approximately 4.86 acres.



County Boundary



Freight Facilities

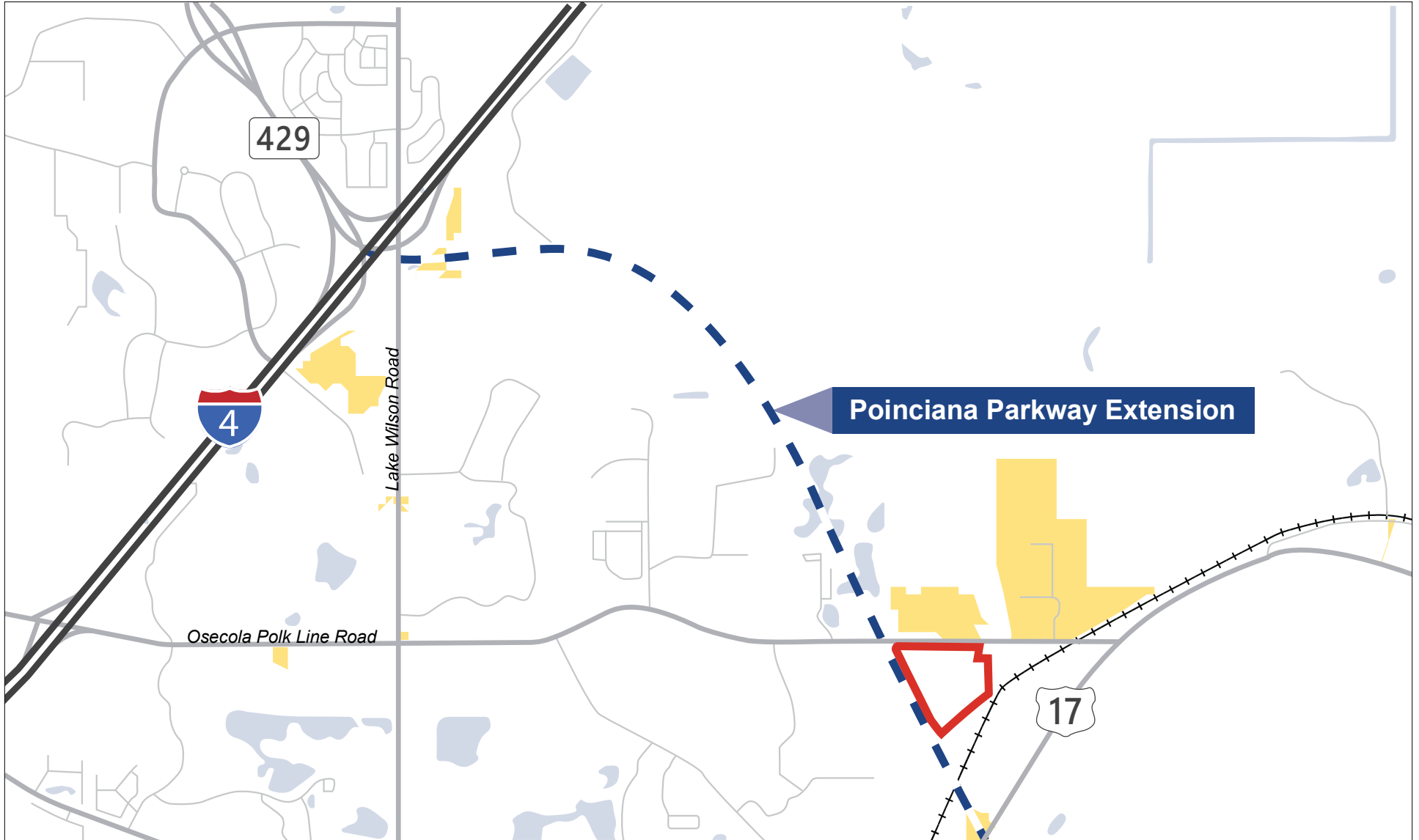


Site Location



Figure 6-1

Regional Map of Initial Sites
Preliminary Engineering Report



Potential Site

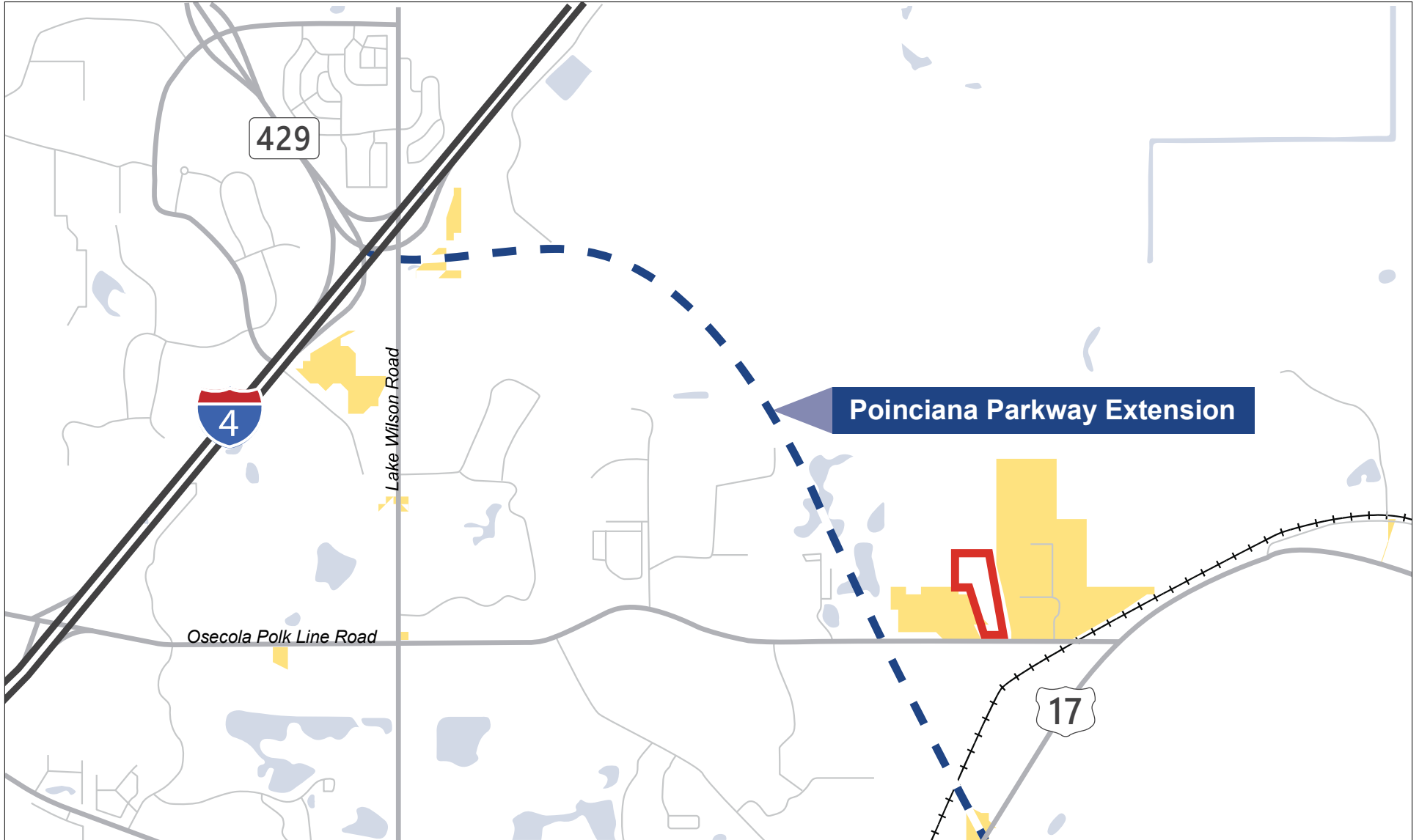


Freight Facilities



Figure 6-2

Osceola County Site 1
CR 532 and Poinciana Parkway Extension
Preliminary Engineering Report



Potential Site



Freight Facilities



Figure 6-3

**Osceola County Site 2
CR 532 - Northside**
Preliminary Engineering Report

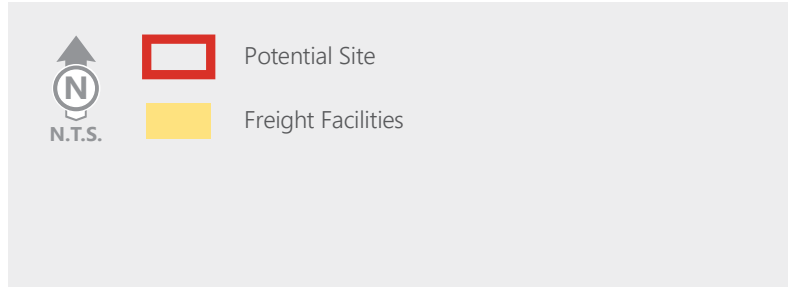
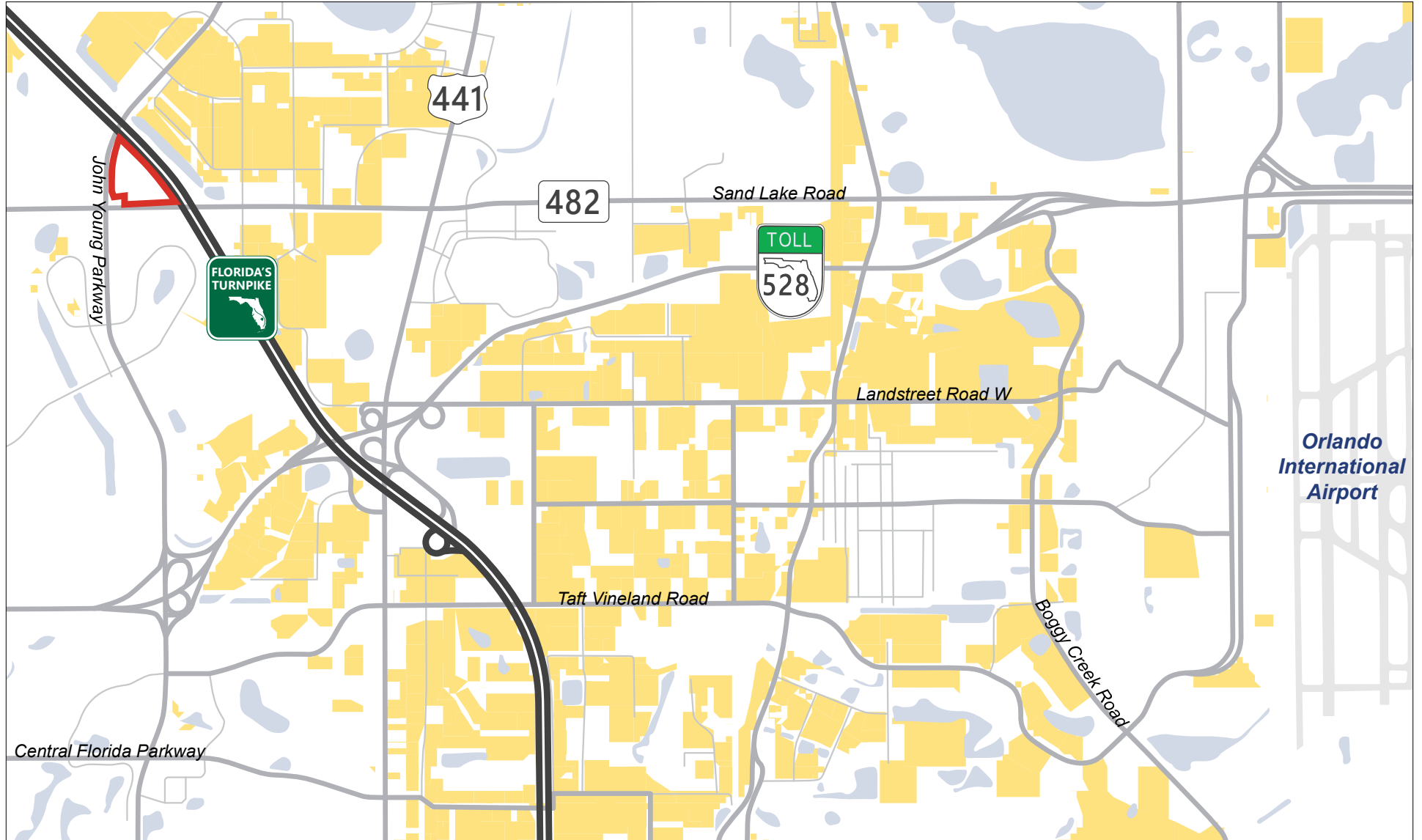


Figure 6-4

**Orange County Site 1
Sand Lake Road at John Young Parkway
Preliminary Engineering Report**

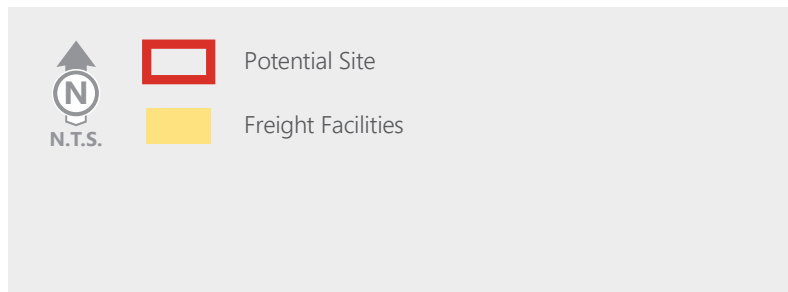
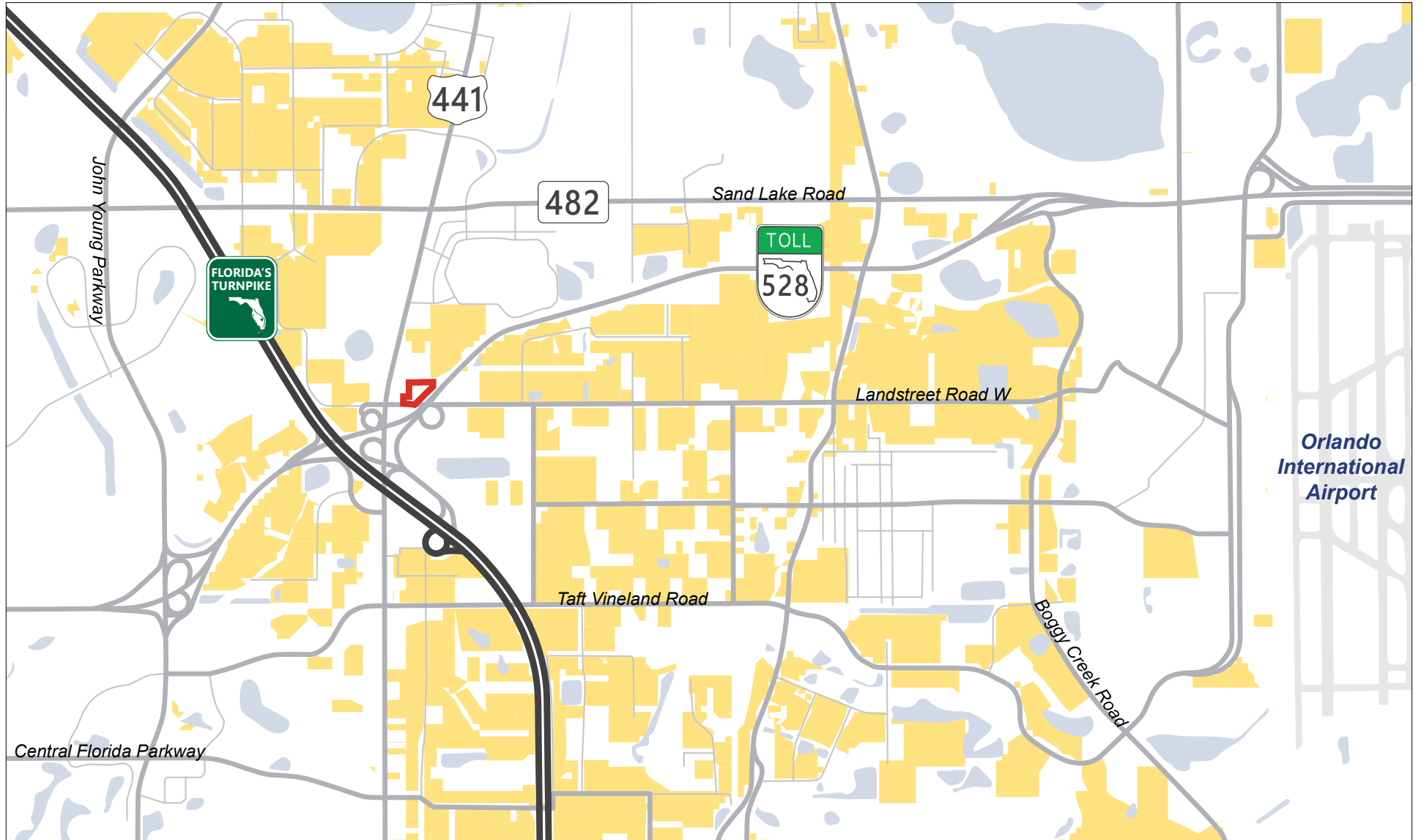
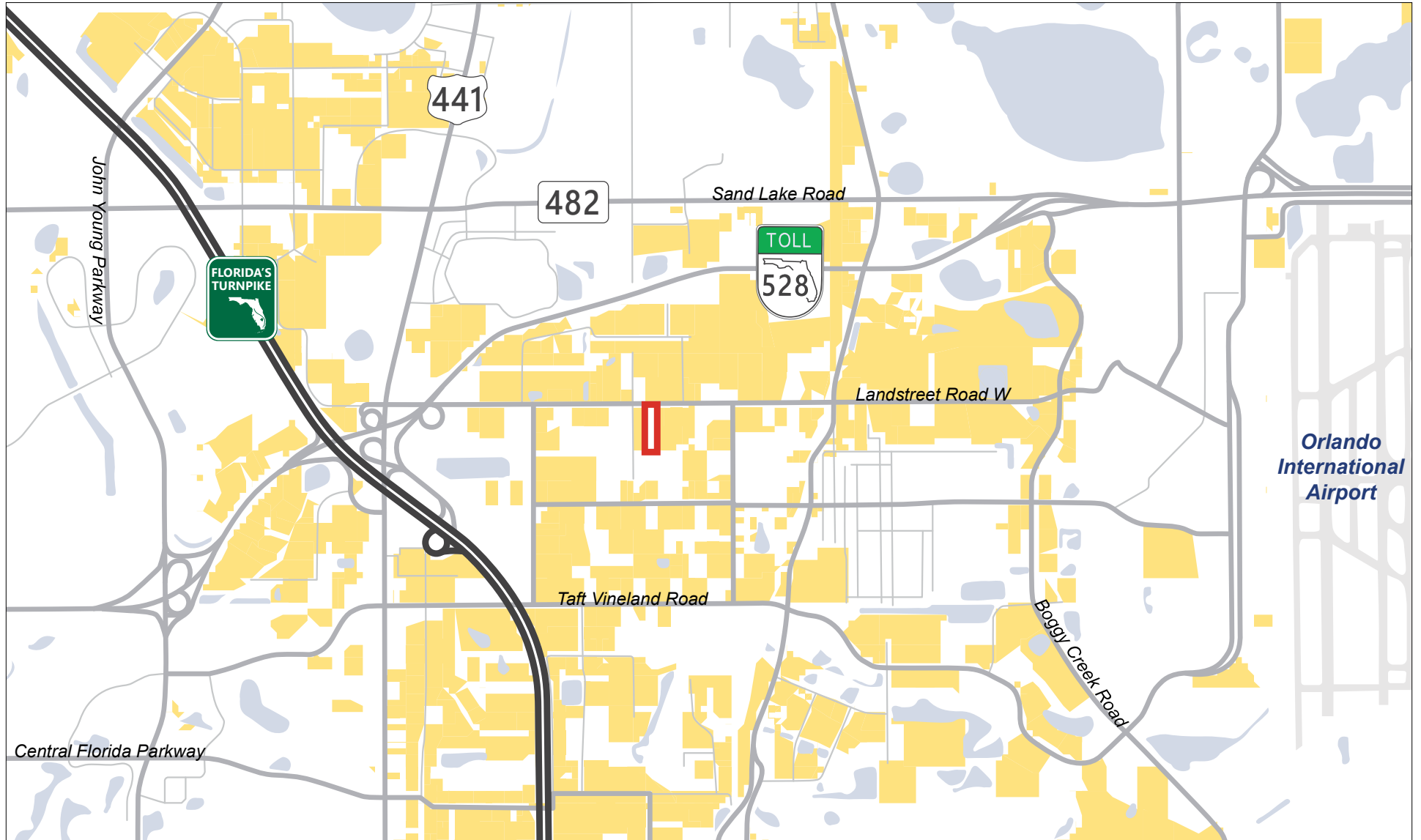


Figure 6-5

**Orange County Site 2
West Landstreet Road, Adjacent to SR 528
Preliminary Engineering Report**



Potential Site

Freight Facilities



Figure 6-6

Orange County Site 3
West Landstreet Road, East of SR 528 -
Southside
Preliminary Engineering Report

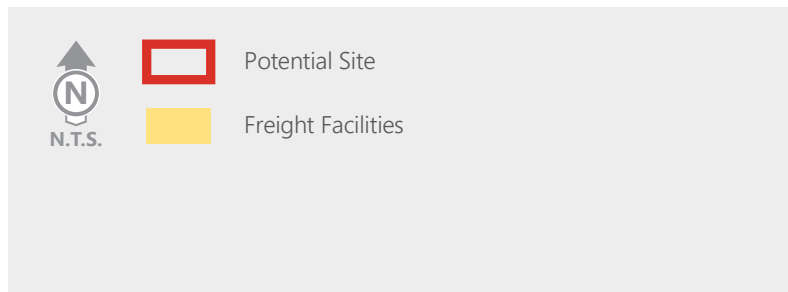
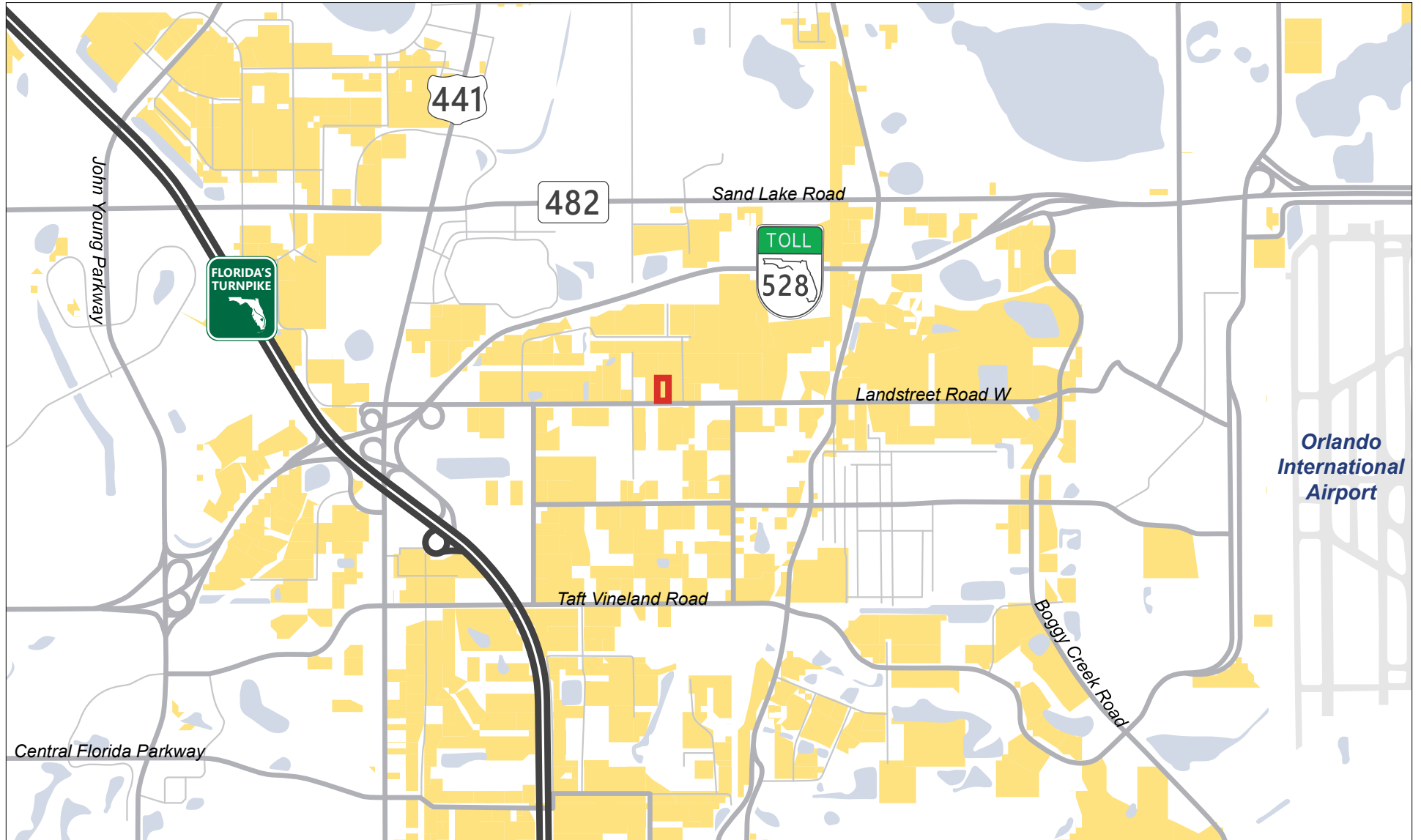


Figure 6-7

**Orange County Site 4
West Landstreet Road, East of SR 528 -
Northside
Preliminary Engineering Report**

Orange County Site 5 – Tradeport Drive, West of Central Port Drive - Southside

Orange County Site 5 is in a heavy industrial area along the south side of Tradeport Drive, just east of the South Orange Avenue intersection. The site is approximately 6.81 miles east of I-4. The site is approximately 16.30 acres.

Orange County Site 6 – Tradeport Drive, East of Central Port Drive - Southside

Orange County Site 6 is in a heavy industrial area along the south side of Tradeport Drive, on the south leg of the Ringhaver Drive intersection. The site is approximately 7.74 miles east of I-4. The site is approximately 25.30 acres.

Orange County Site 7 – Tradeport Drive, East of Ringhaver Drive - Northside

Orange County Site 7 is in a heavy industrial area along the north side of Tradeport Drive, just east of the Ringhaver Drive intersection. The site is approximately 8.04 miles east of I-4. The site is 12.40 acres.

Seminole County Site 1 – I-4 at US 17/92

Seminole County Site 1 is located near the planned I-4 BtU improvement at US 17/92, providing access to I-4 through a reconfigured ramp adjacent to the site. The site is approximately 0.32 miles southeast of I-4. The site is approximately 26.2 acres.

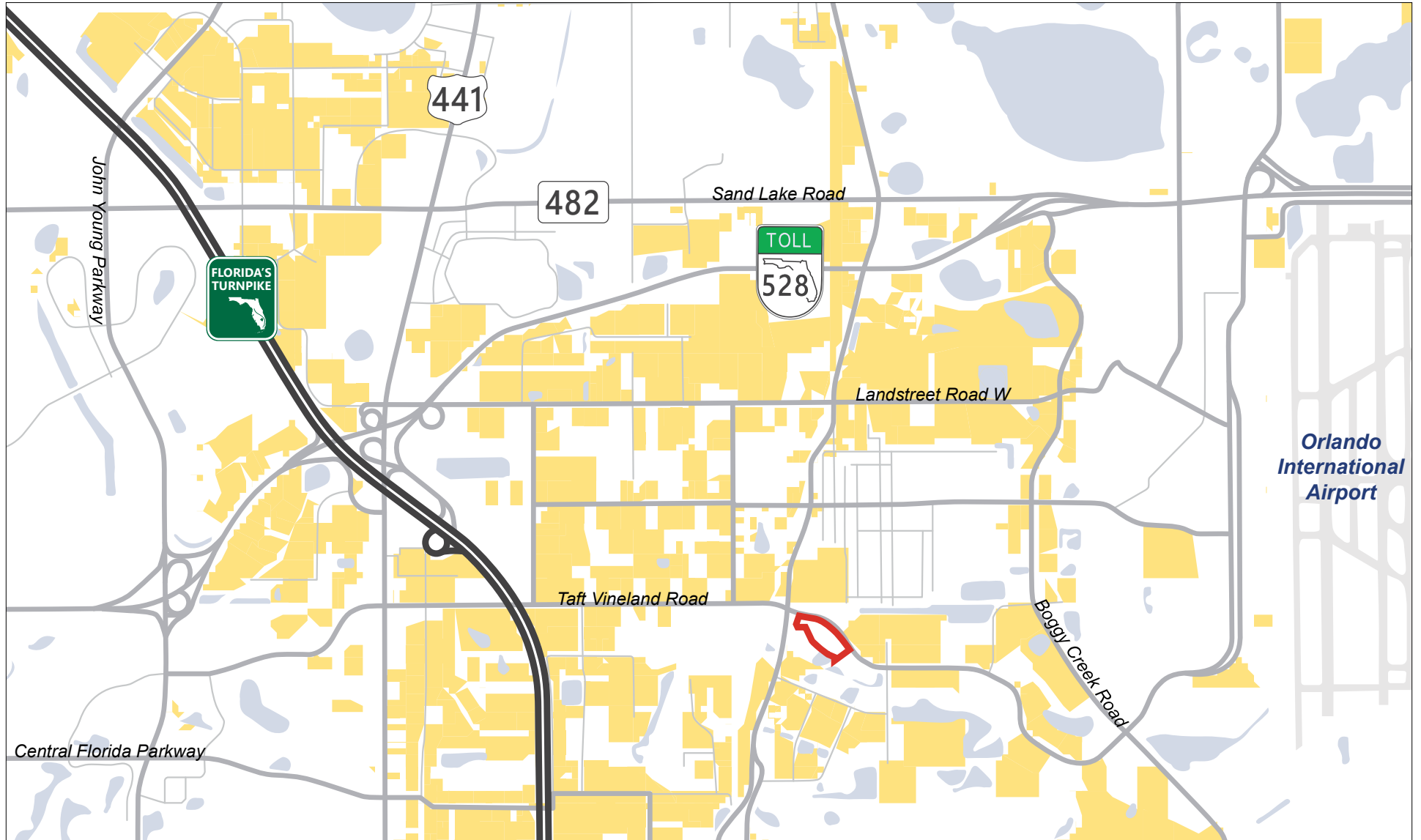
Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

At the Public Information Meeting, the initial Volusia County Site 1 was presented as one alternative encompassing both Volusia County Site 1A and Volusia County Site 1B. Volusia County Site 1A is located along I-4 approximately 4.50 miles southwest of the I-95 interchange. The truck parking facility would have immediate access to I-4 with construction of on- and off-ramps. The I-4 Eastbound truck parking site is located at the previous Volusia County rest area and is approximately 73.3 acres.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is located along I-4 approximately 4.50 miles southwest of the I-95 interchange. The truck parking facility would have immediate access to I-4 with construction of on- and off-ramps. The I-4 Westbound site is 116.8 acres.

These initial sites were presented to the public at the first round of public meetings, with the goal of obtaining feedback and public input about these sites.



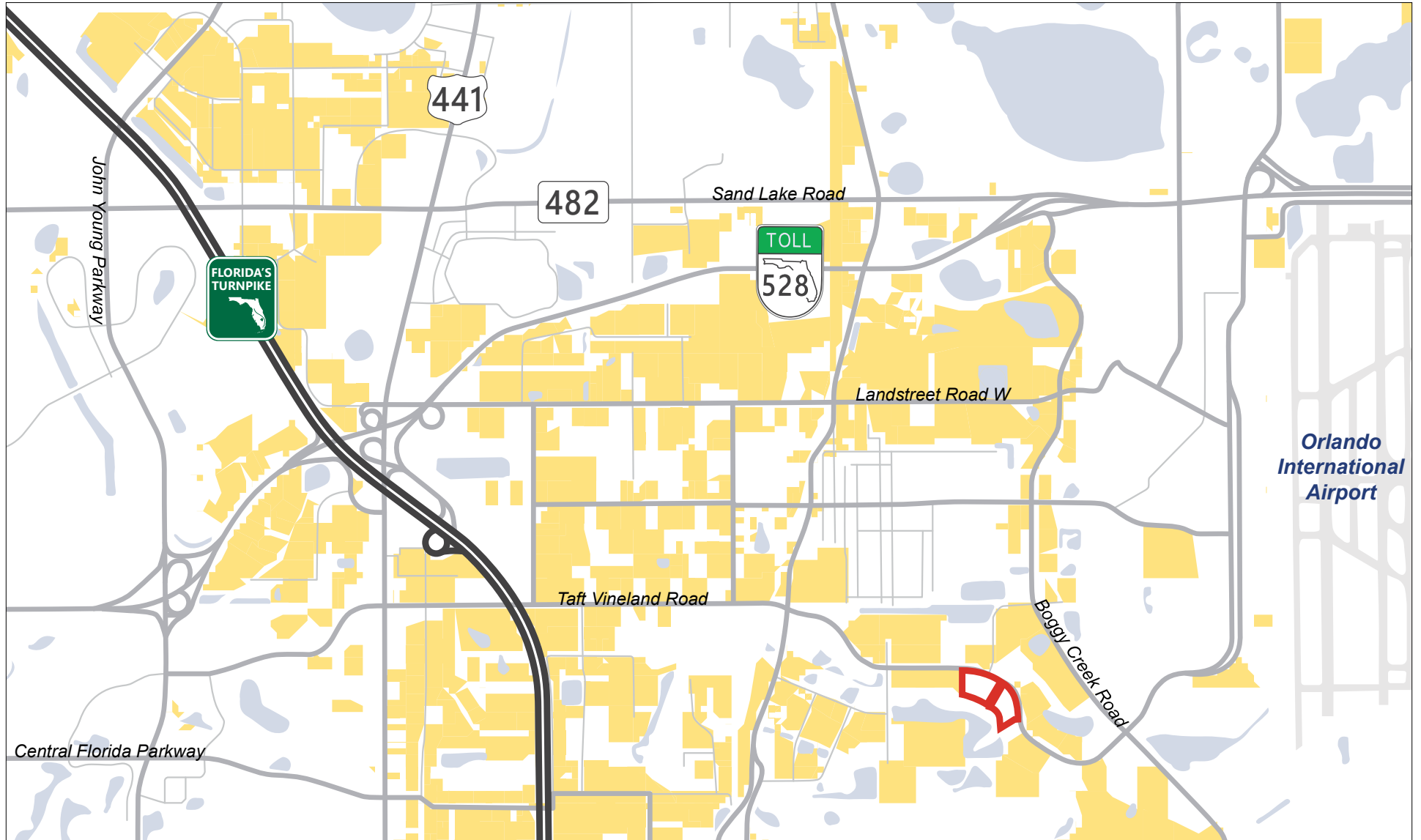
Potential Site

Freight Facilities



Figure 6-8

Orange County Site 5
Tradeport Drive, West of Central
Port Drive - Southside
Preliminary Engineering Report



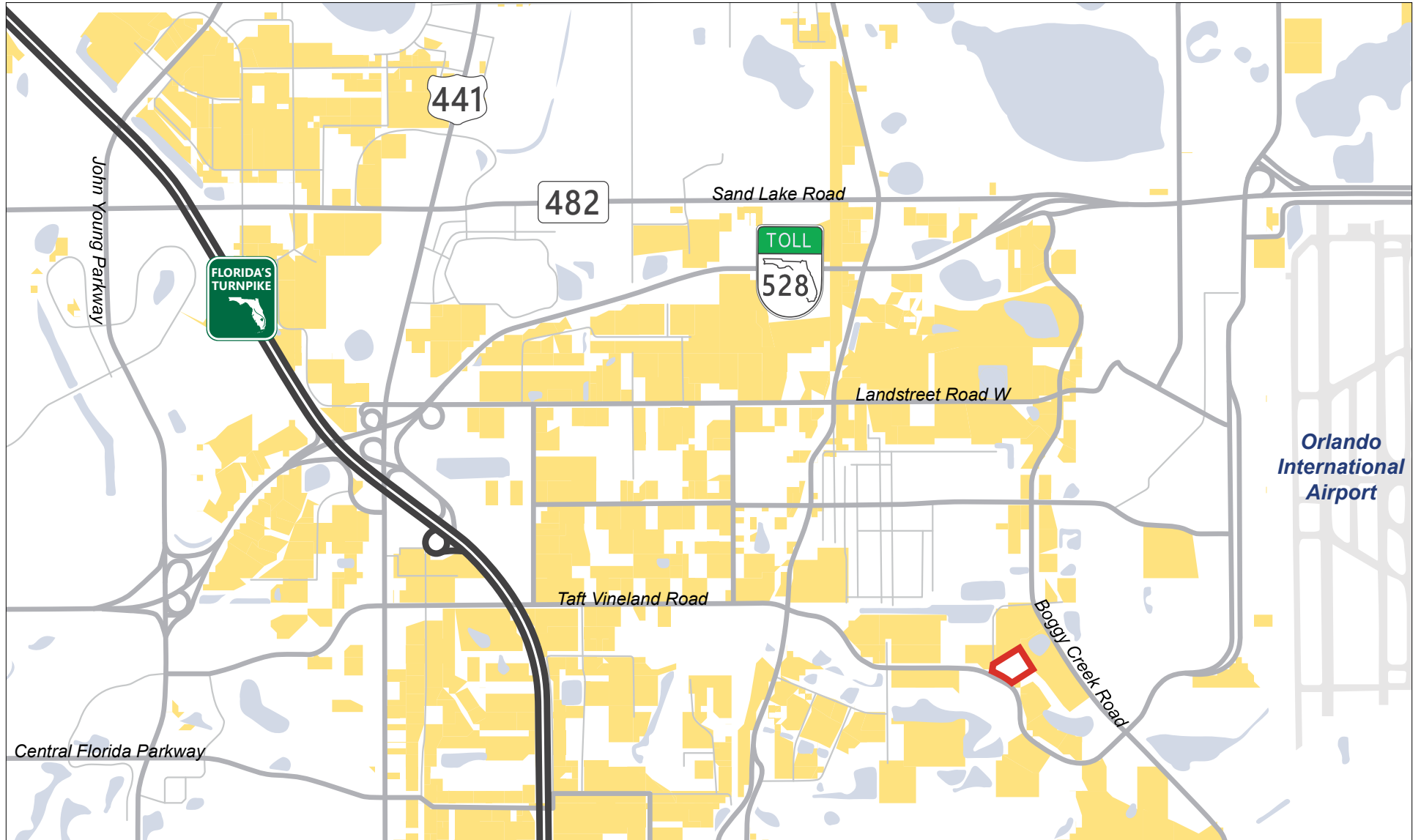
Potential Site

Freight Facilities



Figure 6-9

Orange County Site 6
Tradeport Drive, East of Central
Port Drive - Southside
Preliminary Engineering Report



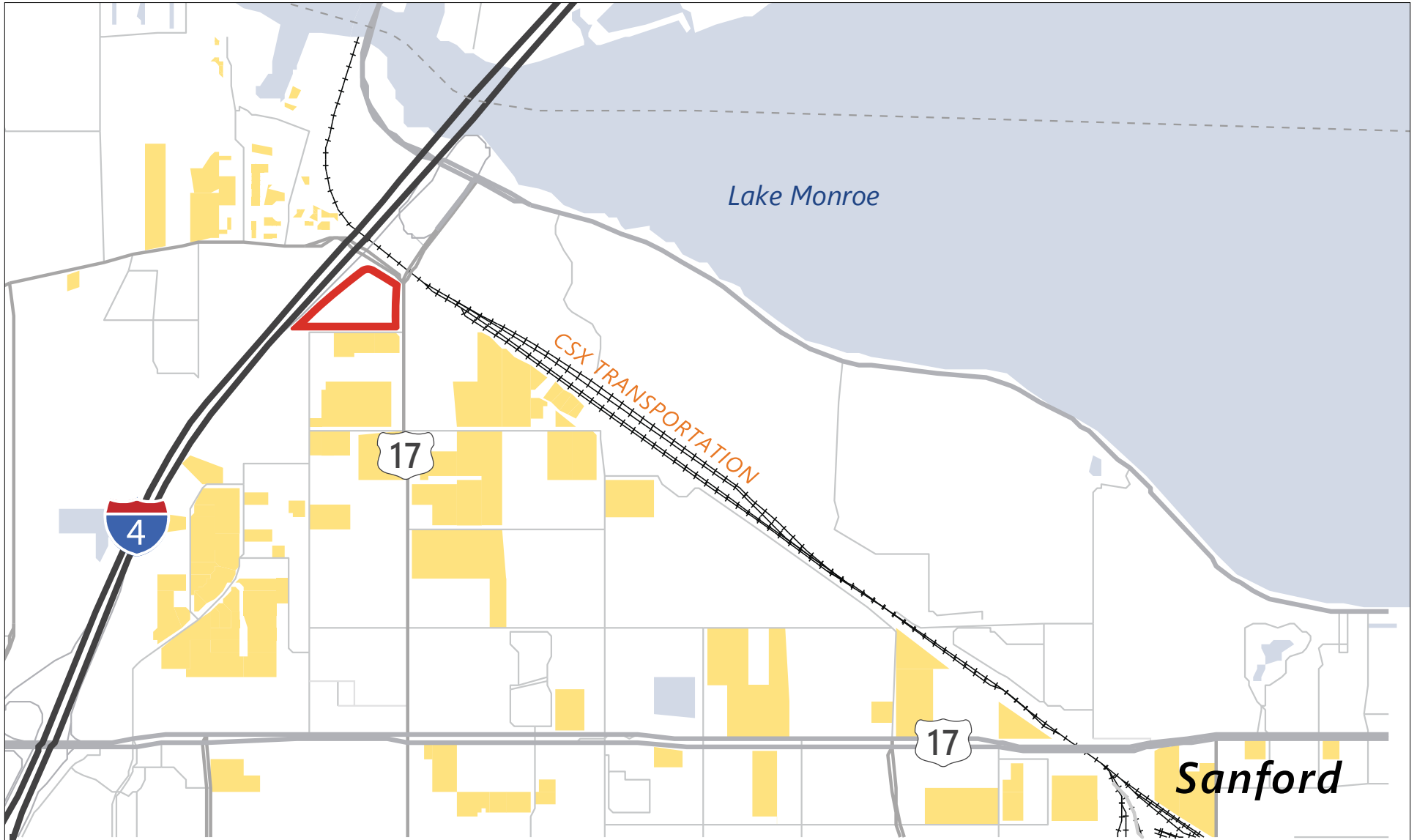
Potential Site

Freight Facilities



Figure 6-10

Orange County Site 7
Tradeport Drive, East of Ringhaver Drive -
Northside
Preliminary Engineering Report



Potential Site



Freight Facilities

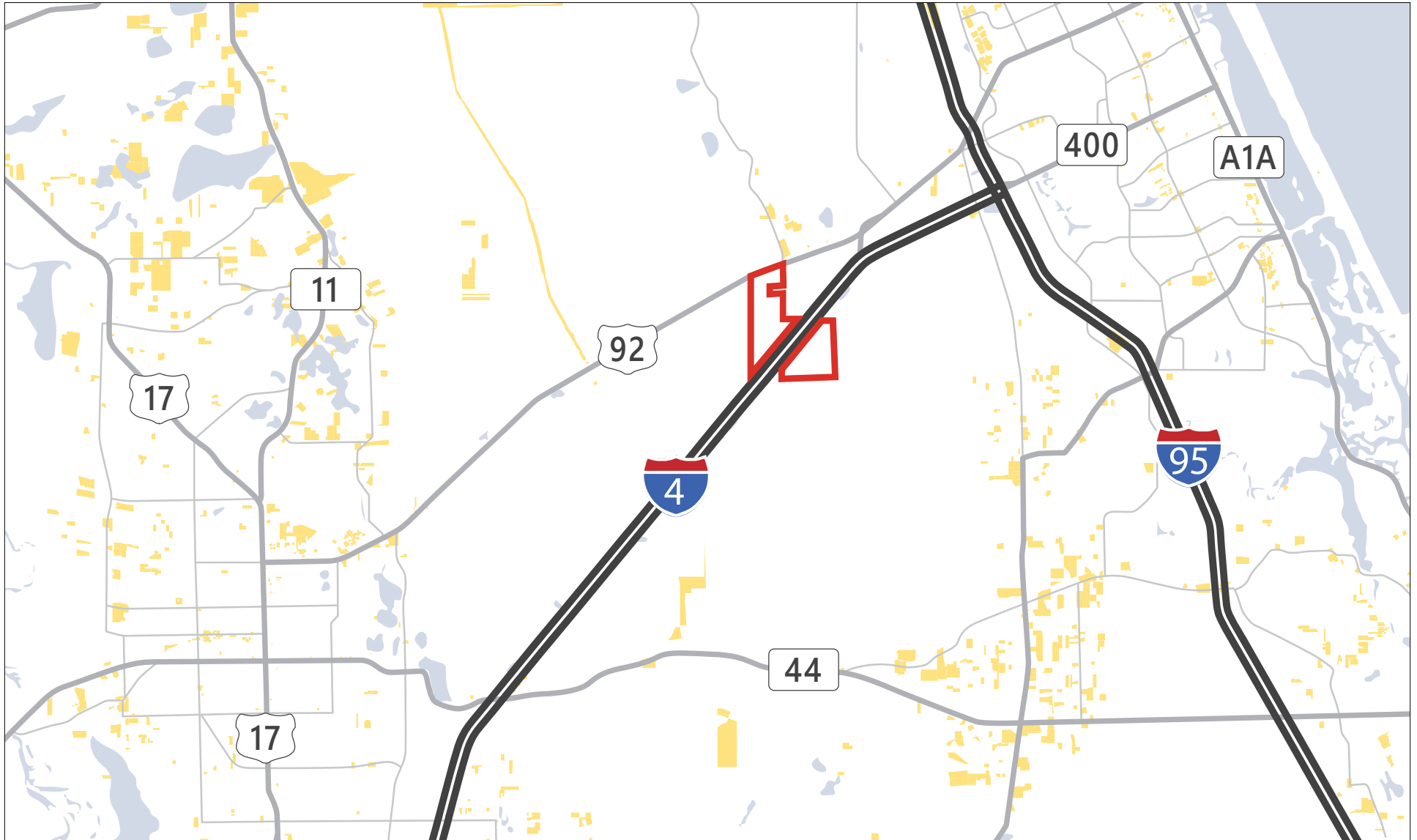


Figure 6-11

Seminole County Site 1

I-4 at US 17/92

Preliminary Engineering Report



Potential Site



Freight Facilities



Figure 6-12

Volusia County Site 1A & Site 1B
I-4 Direct Access, 4.5 miles west of I-95
Preliminary Engineering Report

6.3.3 Viable Sites

After presenting the 12 initial sites to the public and obtaining feedback at a Public Information Meetings, additional desktop screening analysis was completed on the sites. As a result of the screening analysis and public/agency input, seven of the 12 initial sites were selected as viable sites. The engineering and environmental screening analysis was summarized in an evaluation matrix and presented to the public for input at the Alternatives Public Meetings.



The key reasons for the selection of the viable sites, changes that occurred at the sites between the initial site stage and viable site stage, and the reasons for eliminating the non-viable sites from further consideration, are described below. The alternatives evaluation of the Build Alternatives at each of these seven sites, in comparison to the No-Build Alternative, is further documented in Section 6.4 of this report.

Osceola County

Osceola County Site 2 was eliminated from further consideration as the site configuration did not provide adequate truck parking capacity compared to Osceola Site 1. Osceola County Site 2 has a 50-foot Duke Energy Florida easement that has several large transmission poles in the middle of the site. To avoid impacting these transmission poles, the number of potential truck parking spots becomes greatly reduced. While both sites are approximately four miles away from I-4, Osceola County Site 1 is immediately east of the proposed PPE and will provide improved freight connectivity.

Between the initial site stage and the viable site stage of this project, Osceola County Site 1 increased in size from 35.1 acres to 40.1 acres. The net addition of 5.0 acres was due to the addition of several parcels on the east end of the site (06-26-28-4785-0001-0120, 06-26-28-4785-0001-0130, 06-26-28-4785-0001-0140, and 06-26-28-4785-0001-0150), and the removal of parcel 06-26-28-0000-0071-0000, which is to be used for SR 538 Pond 100 in the PPE project. See **Table 6-1** below for a summary of the Osceola County site alternatives evaluation matrix.

Table 6-1: Osceola County Site Alternatives Evaluation Matrix

Osceola County Alternatives Evaluation Matrix	NO BUILD	SITE 1	SITE 2
Evaluation Criteria			
Purpose & Need			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	257	71
Potential Community Impacts			
Parcels Impacted	0	19	3
Residential Parcels Impacted (occupied/vacant)	0 / 0	0 / 19	0 / 2
Relocations	0	0	0
Right-of-Way Required (acres)	0.0	40.1	24.3
Potential Environmental Impacts			
Wetlands (acres)	0.0	8.5	5.7
Floodplains (acres)	0.0	0.0	0.0
Threatened & Endangered Species	None	High	High
Contamination Sites	None	Moderate	Moderate
Historic/Archaeological Impacts	None	Moderate	Moderate
Noise Sensitive Areas within 500 feet	0	6	9
Estimated Project Cost			
Total Estimated Project Costs*	\$0	\$33.3M	\$21.8M

*Cost includes Design, Right of Way, and Construction

Orange County

Based on the screening analysis, Orange County Sites 3, 5, 6, and 7 were not selected as viable truck parking sites. Orange County Site 3 only allows for 26 total parking spaces and is not cost effective. Orange County Sites 5, 6, and 7 provide adequate parking capacity. However, the total estimated project cost of these sites is higher than other comparable sized truck parking sites. Additionally, these sites are farther from the I-4 corridor than Orange County Sites 1, 2 and 4.

Between the initial site stage and the viable site stage of this project, Orange County Site 1 decreased in size from 36.7 acres to 21.5 acres. This was due to the discovery of a large, existing floodplain compensation area located at the northeast side of the site, adjacent to Florida's Turnpike. No changes were made to Orange County Site 2 or Orange County Site 4 during viable alternatives development. See **Table 6-2** below for a summary of the Orange County site alternatives evaluation matrix.

Table 6-2: Orange County Site Alternatives Evaluation Matrix

Orange County Alternatives Evaluation Matrix	NO BUILD	SITE 1 	SITE 2 	SITE 3 	SITE 4 	SITE 5 	SITE 6 	SITE 7 
Evaluation Criteria								
Purpose & Need								
Accommodates Truck Parking Needs	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Truck Parking Spaces	0	109	59	26	48	114	177	88
Potential Community Impacts								
Parcels Impacted	0	2	1	1	1	2	2	2
Residential Parcels Impacted (occupied/vacant)	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Relocations	0	0	0	0	1	0	0	0
Right-of-Way Required (acres)	0.0	21.5	6.8	2.4	4.9	16.3	25.3	12.4
Potential Environmental Impacts								
Wetlands (acres)	0	8.2	0.0	0.0	0.0	1.0	0.2	0.0
Floodplains (acres)	0	21.5	0.0	9.9	4.8	0.0	1.6	0.0
Threatened & Endangered Species	None	Moderate	Low	Low	Low	Moderate	Moderate	Moderate
Contamination Sites	None	Moderate	High	High	High	Moderate	Moderate	Moderate
Historic/Archaeological Impacts	None	Low	Moderate	Low	Low	Moderate	Low	Low
Noise Sensitive Areas within 500 feet	0	0	1	0	0	0	0	0
Estimated Project Cost								
Total Estimated Project Costs*	\$0	\$12.5M	\$19.0M	\$4.6M	\$12.4M	\$28.4M	\$44.0M	\$22.5M

*Cost includes Design, Right of Way, and Construction

Seminole County

After the Public Information Meeting, a second alternative for the Seminole County site (Seminole County Site 1B) was designed and evaluated. Seminole County Site 1B only requires approximately 18.3 acres of ROW, and provides 157 parking spaces. This site is located on the northernmost portion of Seminole County Site 1A.

Seminole County Site 1A is a larger site and therefore, provides additional parking capacity. However, Seminole County Site 1B was selected as a viable site due to reduced project costs, community impacts, and potential environmental impacts. See **Table 6-3** below for a summary of the Seminole County alternatives evaluation matrix.

Table 6-3: Seminole County Site Alternatives Evaluation Matrix

Seminole County Alternatives Evaluation Matrix	NO BUILD	SITE 1A 	SITE 1B 
Evaluation Criteria			
Purpose & Need			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	219	157
Potential Community Impacts			
Parcels Impacted	0	25	9
Residential Parcels Impacted (occupied/vacant)	0 / 0	5 / 2	2 / 1
Relocations	0	8	4
Right-of-Way Required (acres)	0.0	26.0	18.3
Potential Environmental Impacts			
Wetlands (acres)	0.0	4.8	4.4
Floodplains (acres)	0.0	0.0	0.0
Threatened & Endangered Species	None	Moderate	Moderate
Contamination Sites	None	Moderate	Moderate
Historic/Archaeological Impacts	None	Moderate	Moderate
Noise Sensitive Areas within 500 feet	0	7	4
Estimated Project Cost			
Total Estimated Project Costs*	\$0	\$54.3M	\$25.6M

*Cost includes Design, Right of Way, and Construction



Volusia County

One initial site concept for Volusia County was identified and analyzed (Volusia County Site 1), with a parking site on each side of I-4: Volusia County Site 1A (eastbound direction), and Volusia County Site 1B (westbound direction). Both sites were recommended as viable sites due to direct I-4 access, regional freight connectivity, and they provide a significant number of parking capacity (528 total spaces). Volusia County Site 1A provides 253 parking spaces, while Volusia County Site 1B provides 275 parking spaces.

Between the initial site stage and the viable site stage of this project, Volusia County Site 1 increased in size from 107.7 acres to 190.1 acres (73.3 Acres for Volusia County Site 1A and 116.8 acres for Volusia County Site 1B). This was due to the desire to maintain the existing, dedicated wildlife corridor within the

ROW of Volusia County Site 1A and Volusia County Site 1B, connecting the existing wildlife crossing underneath I-4. This results in additional ROW than the minimum needed purely for the construction of the site. See **Table 6-4** below for a summary of the Volusia County site alternatives evaluation matrix.

Table 6-4: Volusia County Site Alternatives Evaluation Matrix

Volusia County Alternatives Evaluation Matrix	NO BUILD	SITE 1A	SITE 1B
			
Evaluation Criteria			
Purpose & Need			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	275	253
Potential Community Impacts			
Parcels Impacted	0	3	1
Residential Parcels Impacted (occupied/vacant)	0 / 0	0 / 0	0 / 0
Relocations	0	0	0
Right-of-Way Required (acres)	0.0	73.3	116.8
Potential Environmental Impacts			
Wetlands (acres)	0.0	35.5	34.3
Floodplains (acre-ft)	0.0	17.5	59.0
Threatened & Endangered Species	None	High	High
Contamination Sites	None	Low	Low
Historic/Archaeological Impacts	None	Low	Low
Noise Sensitive Areas within 500 feet	0	0	0
Estimated Project Cost			
Total Estimated Project Costs*	\$0	\$83.8M	\$92.4M

*Cost includes Design, Right of Way, and Construction

6.4 Comparative Alternatives Evaluation

Based on the identification of viable sites presented in Section 6.3.3, the following Build Alternatives were identified:

- Osceola County Site 1 – CR 532 and PPE
- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Orange County Site 2 – West Landstreet Road, Adjacent to SR 528
- Orange County Site 4 – West Landstreet Road, East of SR 528
- Seminole County Site 1B – I-4 at US 17/92
- Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Detailed concept plans were developed for each of the Build Alternatives for comparison to the No-Build Alternative. A preliminary evaluation of the No-Build Alternative and the Build Alternatives was completed to evaluate purpose and need, potential environmental impacts and project costs. The environmental analysis was based on desktop analysis and screening. Based on this alternatives analysis, the Build

Alternatives were further refined during the PD&E Study as documented in Section 6.6 of this report. More detailed engineering and environmental evaluations were conducted for the Preferred Alternative as documented in Section 8.

Osceola County – Site 1

The Build Alternative for Osceola County Site 1 proposes 257 truck parking spaces to provided needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. Osceola County Site 1 impacts 19 parcels, one of which contains an abandoned structure in a deteriorated state, the rest of which are truly vacant. Therefore no relocations are anticipated. Approximately 40.1 acres of ROW impacts are anticipated for this site. The Build Alternative involves potential wetland impacts and wildlife species and habitat involvement. See **Table 6-5** below for a summary of the Osceola County alternatives evaluation matrix.

Table 6-5: Osceola County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Osceola County – Site 1</i>
<i>Purpose and Need</i>		
Number of Truck Parking Spaces	0	257
Accommodates Truck Parking Needs	No	Yes
<i>Social Environment</i>		
Parcels Impacted (Total)	0	19
Potential Relocations	0	0
Parks and Recreational Impacts	None	None
Residential Parcels Impacted	0	0
ROW impacts (acres)	0	40.1
<i>Cultural Environment</i>		
Historic Potential	None	None
Archaeological Potential	None	High
<i>Natural Environment</i>		
Potential Wetland Impacts (acres)	0	8.5
Threatened & Endangered Species Potential Involvement	No	Yes
Potential Floodplain Impacts (acres)	0	None
<i>Physical Environment</i>		
Contamination Involvement	None	Low
<i>Estimated Project Cost</i>		
Total Estimated Project Costs	None	\$33.3M

Cost includes Design, Right of Way, and Construction. No special designations or bridge involvement.

Orange County – Site 1, Site 2, and Site 4

The Build Alternatives for Orange County provides a total of 216 truck parking spaces to provide needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. The Orange County Build Alternatives involve no residential impacts or relocations. Orange County Site 1 involves potential wetland impacts and wildlife habitat and species involvement. There are ‘No’ to ‘minimal’ potential environmental impacts associated with Orange County Site 2 and 4. While Orange County Site 2 and Orange County Site 4 are viable alternate sites, these sites are not moving forward as a Preferred Alternative at this time due to funding constraints. See **Table 6-6** below for a summary of the Orange County alternatives evaluation matrix.

Table 6-6: Orange County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Orange County – Site 1</i>	Build Alternative <i>Orange County – Site 2</i>	Build Alternative <i>Orange County – Site 4</i>
<i>Purpose and Need</i>				
Accommodates Truck Parking Needs	No	Yes	Yes	Yes
Number of Truck Parking Spaces	0	109	59	48
<i>Social Environment</i>				
Parcels Impacted (Total)	0	2	1	1
Residential Parcels Impacted	0	0	0	0
Potential Relocations	0	0	0	1
ROW impacts (acres)	0	21.5	6.8	4.9
Parks and Recreational Impacts	None	None	None	None
<i>Cultural Environment</i>				
Historic Potential	None	Low	Potential	Low
Archaeological Potential	None	Low	Low	Low
<i>Natural Environment</i>				
Threatened & Endangered Species Potential Involvement	No	Yes	No	No
Potential Wetland Impacts (acres)	0	9.5	0	0
Potential Floodplain Impacts (acres)	0	21.5	0	0
<i>Physical Environment</i>				
Contamination Involvement	None	Low	Medium	Medium
<i>Estimated Project Cost</i>				
Total Estimated Project Costs	None	\$12.5M	\$19.0M	\$12.4M

Cost includes Design, Right of Way, and Construction. No special designations or bridge involvement.

Seminole County – Site 1B

The Build Alternative for Seminole County Site 1B proposes 157 truck parking spaces to provided needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. Seminole County Site 1B impacts 9 parcels, three of which are residential, and involves four potential relocations. Approximately 18.3 acres of ROW impacts are anticipated for this site. The Build Alternative involves potential wetland impacts and wildlife species and habitat involvement. See **Table 6-7** below for a summary of the Seminole County alternatives evaluation matrix.

Table 6-7: Seminole County Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative <i>Seminole County – Site 1B</i>
<i>Purpose and Need</i>		
Accommodates Truck Parking Needs	No	Yes
Number of Truck Parking Spaces	0	157
<i>Social Environment</i>		
Parcels Impacted (Total)	0	9
Residential Parcels Impacted	0	3
Potential Relocations	0	4
ROW impacts (acres)	0	18.3
Parks and Recreational Facility Impacts	None	None
<i>Cultural Environment</i>		
Historic Potential	None	None
Archaeological Potential	None	High
<i>Natural Environment</i>		
Threatened & Endangered Species Potential Involvement	No	Yes
Potential Wetland Impacts (acres)	0	4.4
Potential Floodplain Impacts (acres)	0	0
<i>Physical Environment</i>		
Contamination Involvement	None	High
<i>Estimated Project Cost</i>		
Total Estimated Project Costs		\$40.1M

Cost includes Design, Right of Way, and Construction. No special designations or bridge involvement.

Volusia County – Site 1A and Site 1B

The Build Alternatives for Volusia County propose a total of 528 truck parking spaces to provide needed parking capacity. The No-Build Alternative does not meet the purpose and need and results in no environmental impacts or project costs. Volusia County Site 1A and Volusia County Site 1B impact four parcels, all of which are vacant non-residential, and no relocations are anticipated. Approximately 190.1 acres of ROW impacts are anticipated for these sites. The Build Alternative involves potential wetland impacts, floodplain involvement and wildlife species and habitat involvement. See **Table 6-8** below for a summary of the Volusia County alternatives evaluation matrix.

Table 6-8: Volusia County Alternatives Evaluation Matrix

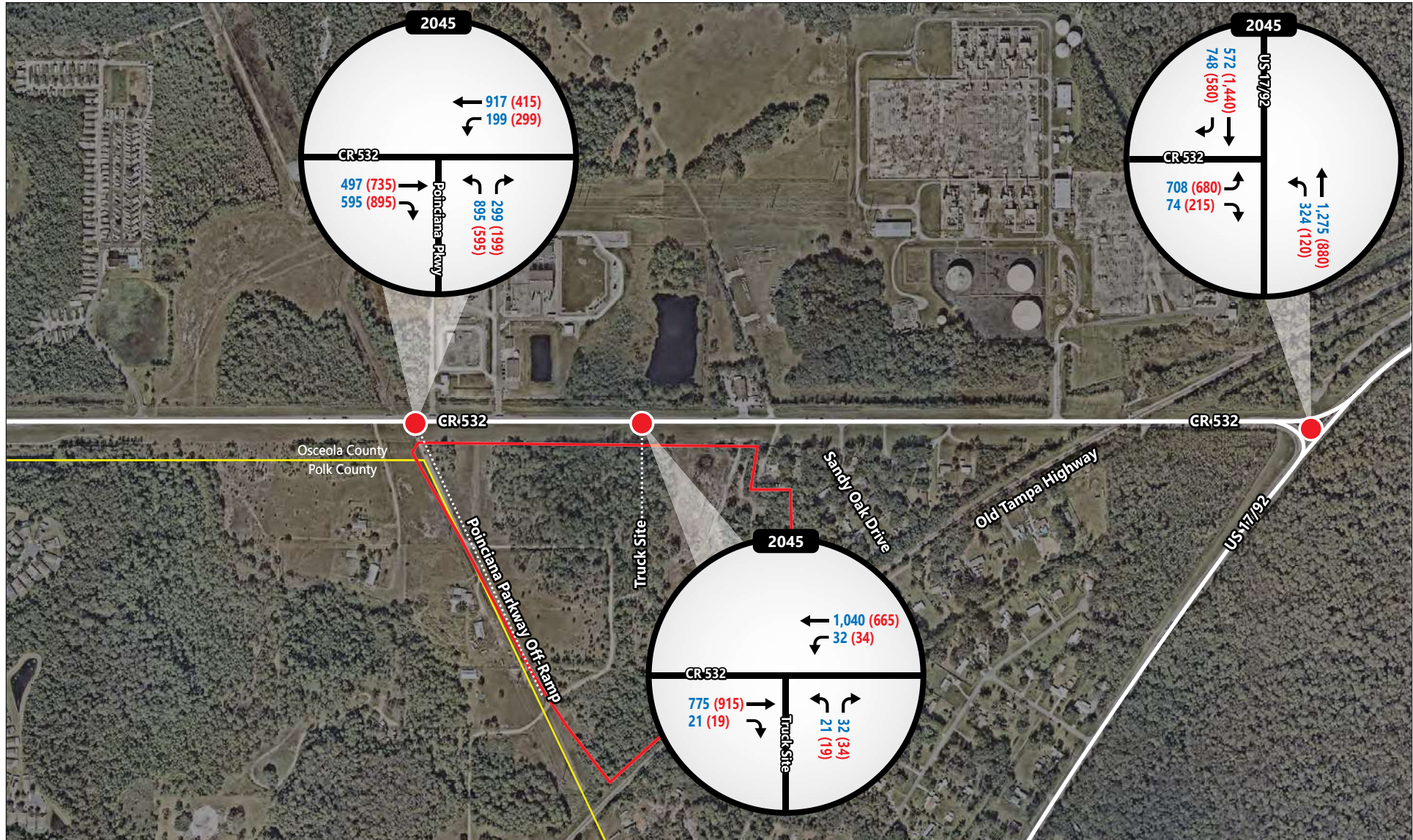
Evaluation Criteria	No-Build Alternative	Build Alternative <i>Volusia County – Site 1A</i>	Build Alternative <i>Volusia County – Site 1B</i>
<i>Purpose and Need</i>			
Accommodates Truck Parking Needs	No	Yes	Yes
Number of Truck Parking Spaces	0	275	253
<i>Social Environment</i>			
Parcels Impacted (Total)	0	3	1
Residential Parcels Impacted	0	0	0
Potential Relocations	0	0	0
ROW impacts (acres)	0	73.3	116.8
Parks and Recreational Facility Impacts	None	None	None
<i>Cultural Environment</i>			
Historic Potential	None	Low	Low
Archaeological Potential	None	Low	Low
<i>Natural Environment</i>			
Threatened & Endangered Species Potential Involvement	No	Yes	Yes
Potential Wetland Impacts (acres)	0	35.5	34.3
Potential Floodplain Impacts (acre-feet)	0	17.5	59.0
<i>Physical Environment</i>			
Contamination Involvement	None	Low	Low
<i>Estimated Project Cost</i>			
Total Estimated Project Costs		\$83.8M	\$92.4M

6.5 Future Traffic Operations (Build Alternative)

This section describes future traffic operations for the Build Alternatives. Future traffic operations related to the No-Build Alternative are provided in Section 4.4. The future traffic volumes presented in this section are for design year 2045. Future traffic volumes for the interim year 2025 are provided in the PTAR, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

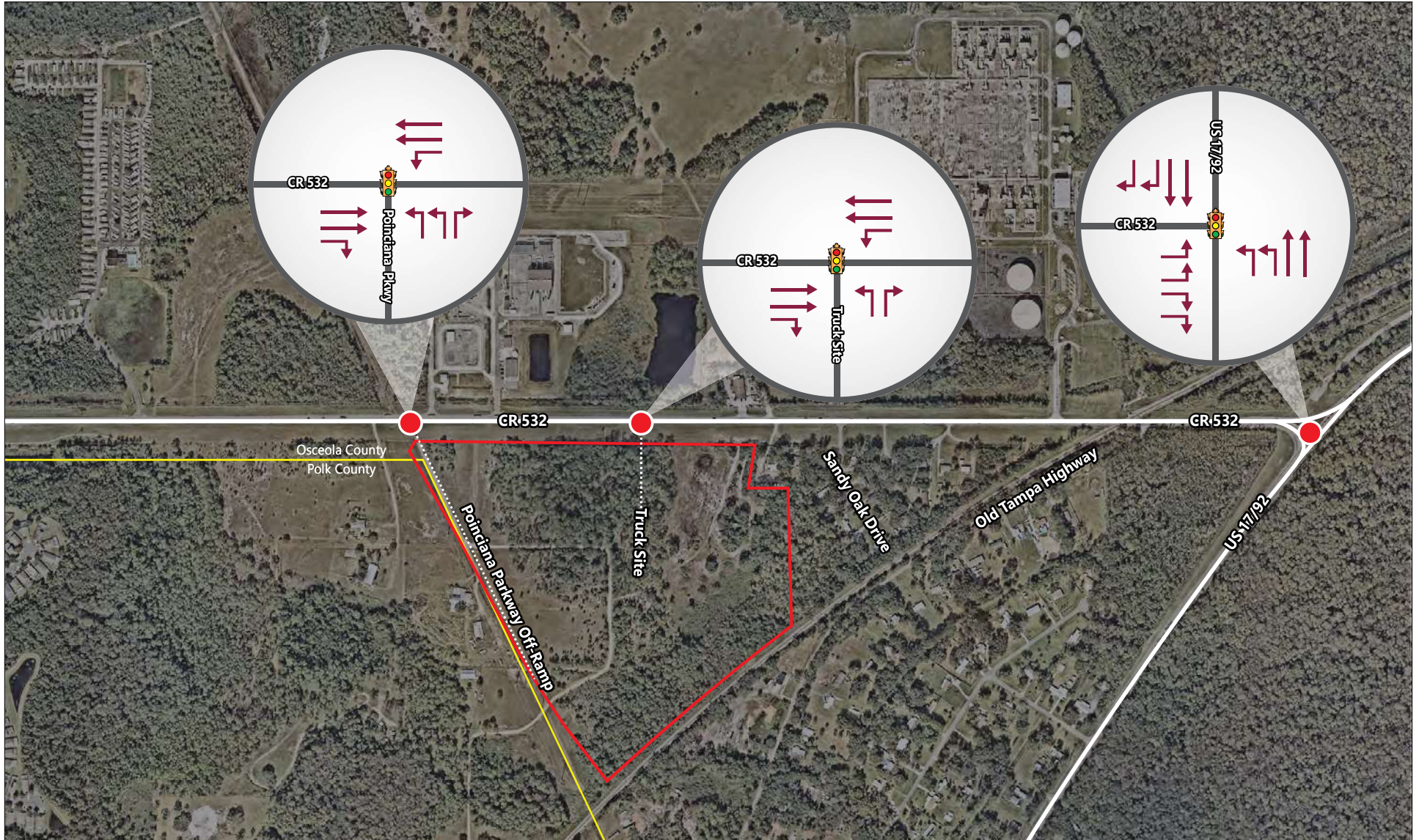
The AM and PM peak period projected future volumes in the year 2045 AM and PM future volumes for the Osceola County Site 1 Build condition are shown in **Figure 6-13**. Future intersection geometry for the study intersections is depicted in **Figure 6-14**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.



- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-13
Future Build Turning Movement Counts
Osceola County Site 1
 Preliminary Engineering Report






-  Study Intersection
-  Truck Site Location
-  Future Lane Geometry



Figure 6-14

**Future Build Geometry
Osceola County Site 1**
Preliminary Engineering Report

Build Intersection LOS Analysis

Table 6-9 shows the projected operations for the years 2025 and 2045 for the Osceola County Site 1 Build condition. In the Build conditions, the study intersections, CR 532 at US 17/92, and CR 532 at PPE off-ramp, are projected to operate similar to No-Build conditions (LOS C) with a slight increase in overall intersection delays.

A signal is recommended for the truck parking site intersection on CR 532 because of the number of parking spaces, proximity to the proposed PPE off-ramp intersection, and future four-lane widening of CR 532. With a stop-control at the truck parking site, the northbound left movement is expected to have high delays for the design year 2045.

Table 6-9: Build Intersection LOS Analysis - Osceola County Site 1

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-CR 532 at US 17/92	28.4	C	25.1	C
2-CR 532 at Potential Truck Parking Site	5.8	A	7.1	A
3-CR 532 at PPE off-ramp	29.8	C	34.9	C

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-10** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-10: Recommended Queue Lengths for Turn Lanes - Osceola County Site 1

Intersections on CR 532	Turn Lane Queue Length (feet)							
	CR 532				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-CR 532 at US 17/92	425	100	-	-	225	600	775	175
2-CR 532 at Potential Truck Parking Site	-	100	100	-	100	100	-	-
3-CR 532 at PPE off-ramp	-	675	400	-	450	175	-	-

Note: A minimum queue length of 100 feet is assumed

Future Safety Analysis

A Highway Safety Manual (HSM) safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Osceola County Site 1 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash per year, from roughly 11 to 12 crashes. This increase in the number of crashes for the year 2045 is not significant.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The AM and PM peak hour projected future volumes in the years 2025 and 2045 Orange County Site 1 for Build conditions are shown in **Figure 6-15**. Future intersection geometry for the study intersections is depicted in **Figure 6-16**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

Build Intersection LOS Analysis

Table 6-11 shows the projected operations for the years 2025 and 2045 Orange County Site 1 Build conditions.

All the study intersections are projected to operate similar to the No-Build conditions with only a slight increase in overall intersection delays, after introducing the potential truck parking site intersection.

The right-in/right-out at Sand Lake Road and potential truck parking site intersection is not expected to have significant movement delay for the southbound right movement by the year 2045.

Table 6-11: Build Intersection LOS Analysis - Orange County Site 1

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Sand Lake Road at John Young Parkway	53.9	D	82.5	F
2-Sand Lake Road at Potential Truck Parking Site*	12.3/0.0	B/A	13.2/0.0	B/A
3-Sand Lake Road at Presidents Drive	46.0	D	155.2	F
4-Sand Lake Road at Turnpike SB Off-Ramp	72.0	E	96.5	F
5-Sand Lake Road at Turnpike NB Ramps	136.7	F	81.8	F
6-John Young Parkway at Potential Truck Parking Site*	14.1/0.0	B/A	14.2/0.0	B/A

*Note: * Minor/major street worst delays are reported for the stop-control*

95th Queue Length Analysis

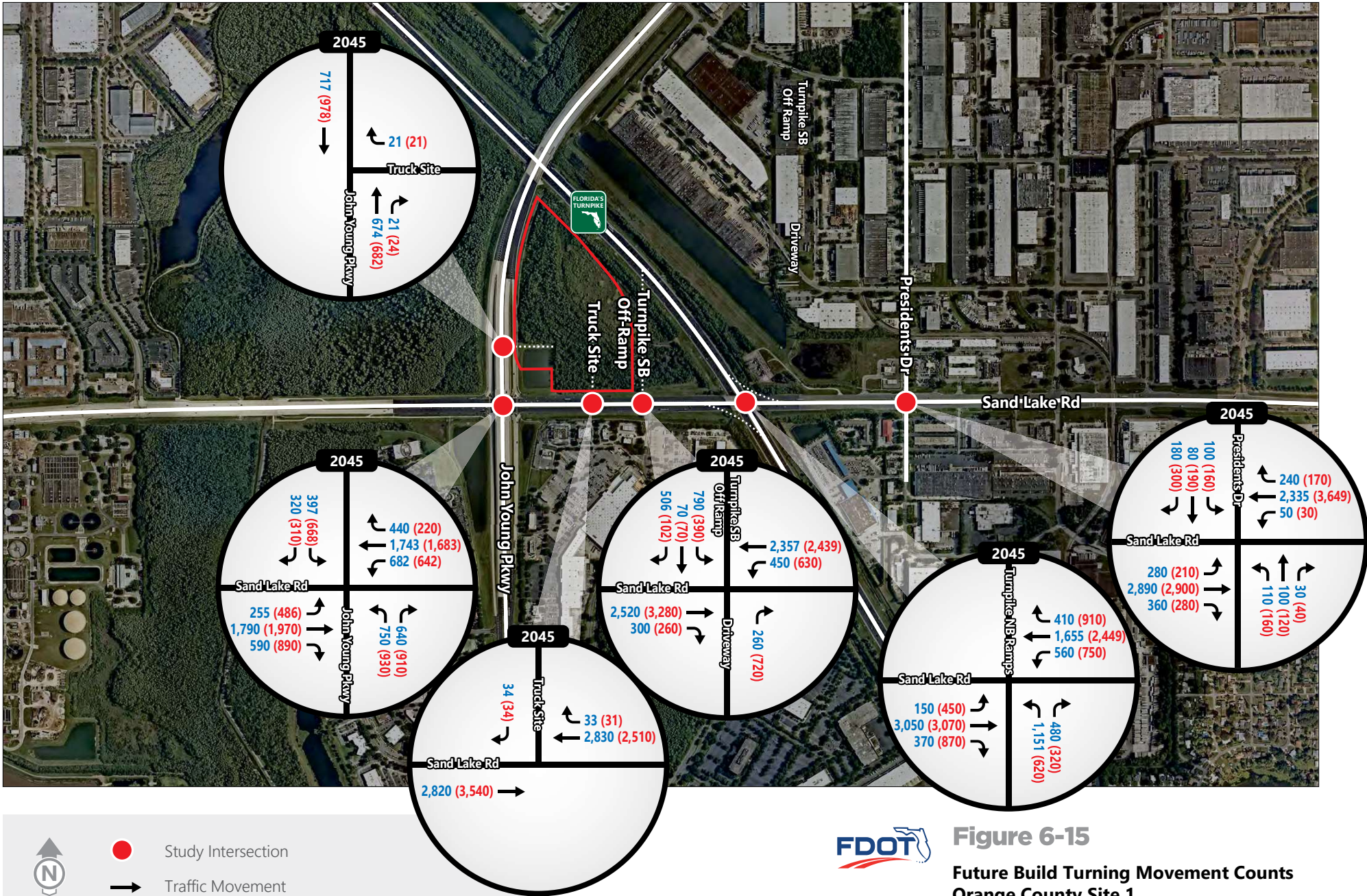
95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-12** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-12: Recommended Queue Lengths for Turn Lanes - Orange County Site 1

Intersections on Sand Lake Road	Turn Lane Queue Length (feet)							
	Sand Lake Road				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-Sand Lake Road at John Young Parkway	450	100	575	100	925	1,625	550	350
2-Sand Lake Road at Potential Truck Parking Site	-	-	-	100	-	-	-	100
3-Sand Lake Road at Presidents Drive	425	-	150	150	500	-	450	350
4-Sand Lake Road at Turnpike SB Off-Ramp	-	150	450	-	-	1,525	475	1,025
5-Sand Lake Road at Turnpike NB Ramps	250	100	550	100	1,200	625	-	-

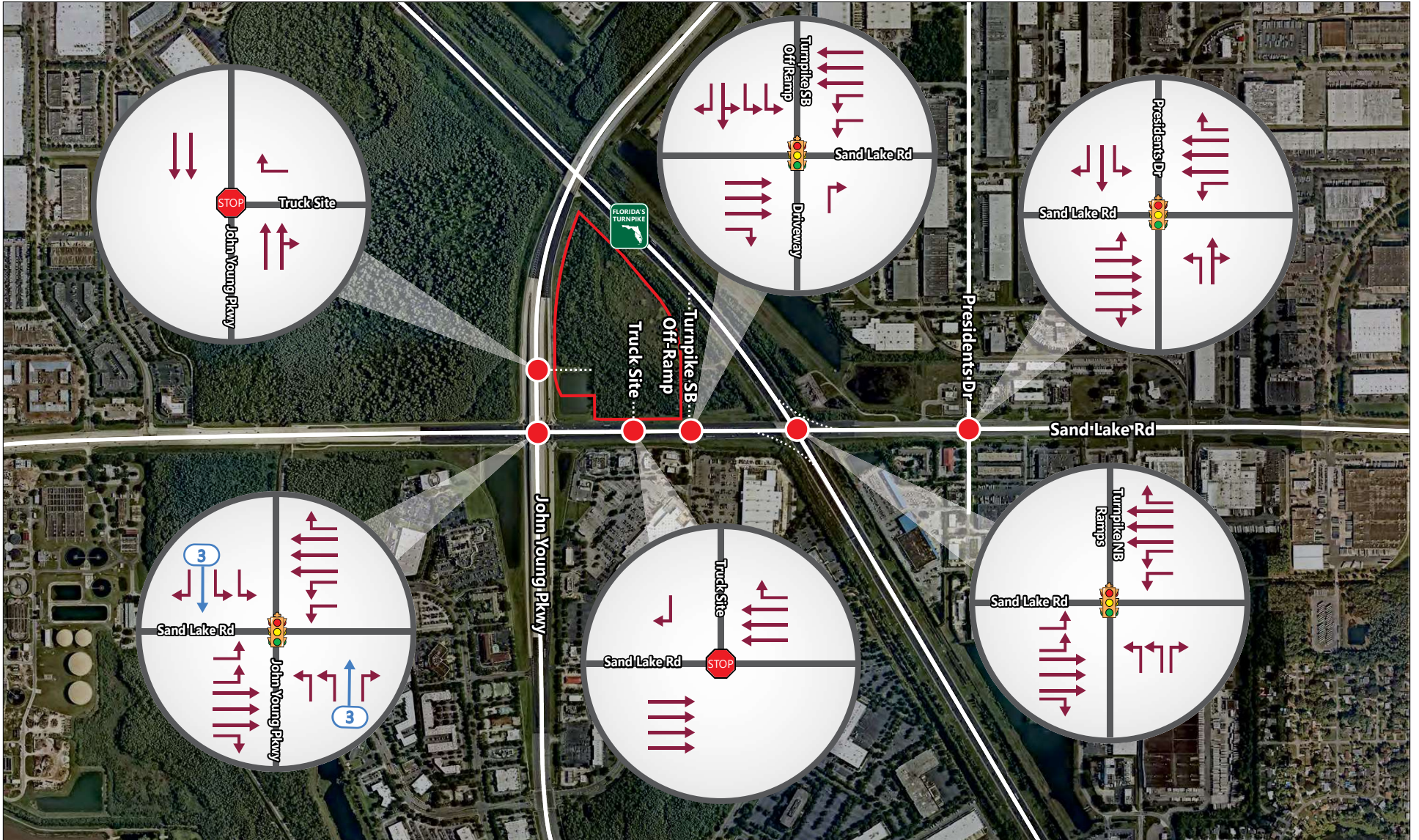
Note: A minimum queue length of 100 feet is assumed



- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-15
Future Build Turning Movement Counts
Orange County Site 1
 Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry
- 3 John Young Parkway Overpass Lanes



Figure 6-16
Future Build Geometry
Orange County Site 1
 Preliminary Engineering Report

Future Safety Analysis – Orange County Site 1

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Orange County Site 1 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 2 crashes from roughly 59 to 61 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Orange County Site 2 – West Landstreet Road, Adjacent to SR 528

The AM and PM peak period projected volumes in the years 2025 and 2045 Orange County Site 2 Build conditions are shown in **Figure 6-17**. Future intersection geometry for the study intersections is depicted in **Figure 6-18**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

Build Intersection LOS Analysis

Table 6-13 shows the projected operations for the year 2045 Orange County Site 2 Build conditions.

All the study intersections are projected to operate similar to No-Build conditions, with only a slight increase in intersection delays after introducing the potential truck parking site intersection.

The stop control at Landstreet Road and the potential truck parking site intersection is not expected to have significant movement delay for the southbound right movement by the year 2045.

Table 6-13: Build Intersection LOS Analysis - Orange County Site 2

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
2-Landstreet Road at US 441	130.9	F	266.7	F
3-Landstreet Road at Truck Parking Site	34.5/23.4	D/C	77.2/41.5	F/E

*Note: 1) * Minor/major street worst delays are reported for the stop-control; 2) Synchro results are not available for Landstreet Road and SR 528 EB on-ramp because there is no stop control on the side street*

95th Queue Length Analysis

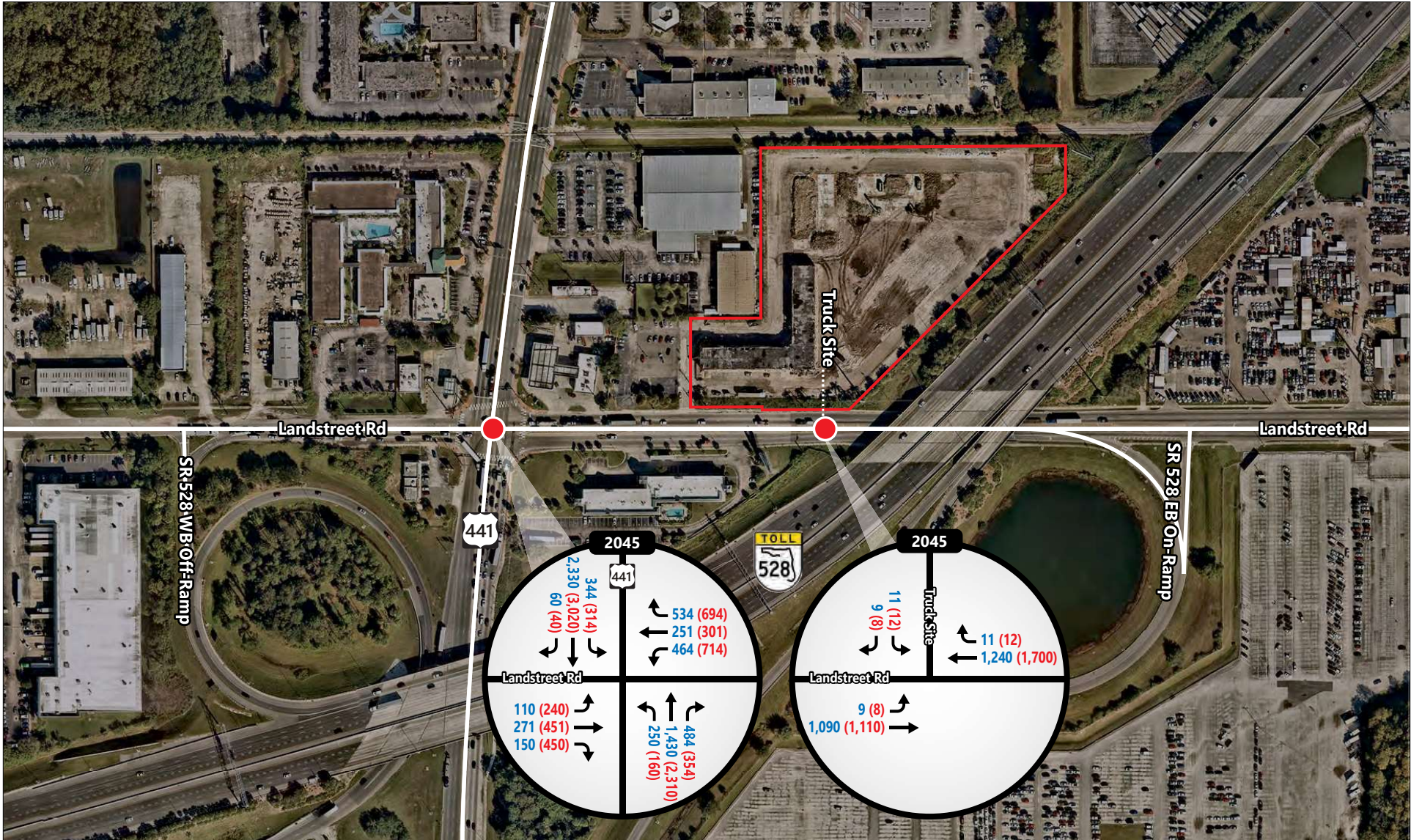
95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-14** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-14: Recommended Queue Lengths for Turn Lanes - Orange County Site 2

Intersections on Landstreet Road	Turn Lane Queue Length (feet)							
	Landstreet Road				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
2-Landstreet Road at US 441	525	750	1,125	1,200	625	450	800	-
3-Landstreet Road at Truck Parking Site	100	-	-	-	-	-	-	-

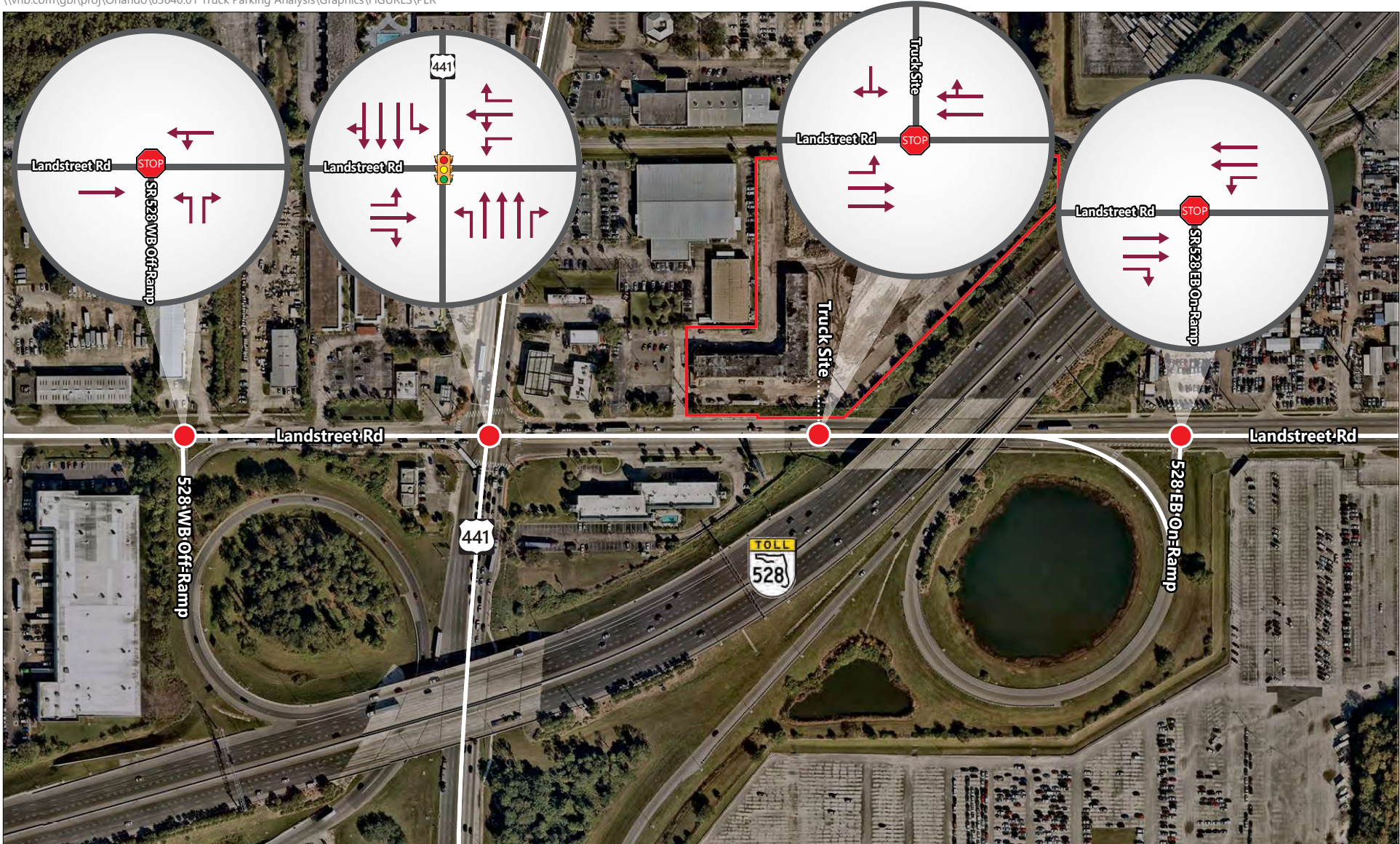
Note: A minimum queue length of 100 feet is assumed



- Study Intersection
- Traffic Movement
- ↔ AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-17
Future Build Turning Movement Counts
Orange County Site 2
 Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry



Figure 6-18
Future Build Geometry
Orange County Site 2
 Preliminary Engineering Report

Future Safety Analysis – Orange County Site 2

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Orange County Site 2 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash from roughly 18 to 19 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Orange County Site 4 – West Landstreet Road, East of SR 528

The AM and PM peak period in the years 2025 and 2045 Orange County Site 4 Build conditions are shown in **Figure 6-19**. Future intersection geometry for the study intersections is depicted in **Figure 6-20**. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

Build Intersection LOS Analysis

Table 6-15 shows the projected operations for the year 2045 Orange County Site 4 Build conditions.

All the study intersections were projected to operate similar to the No-Build conditions, after introducing the potential truck parking site intersection.

The stop-control at Landstreet Road at the potential truck parking site intersection is not expected to show significant delays with LOS C or better by the year 2045.

Table 6-15: Build Intersection LOS Analysis - Orange County Site 4

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-Landstreet Road at Parkers Landing*	19.7/10.6	C/B	24.7/10.8	C/B
2-Landstreet Road at Potential Truck Parking Site*	32.8/18.0	D/C	29.3/15.1	D/C
3-Landstreet Road at Sidney Hayes Road	18.6	B	26.7	C

Note: * Minor/major street worst delays are reported for the stop-control

95th Queue Length Analysis

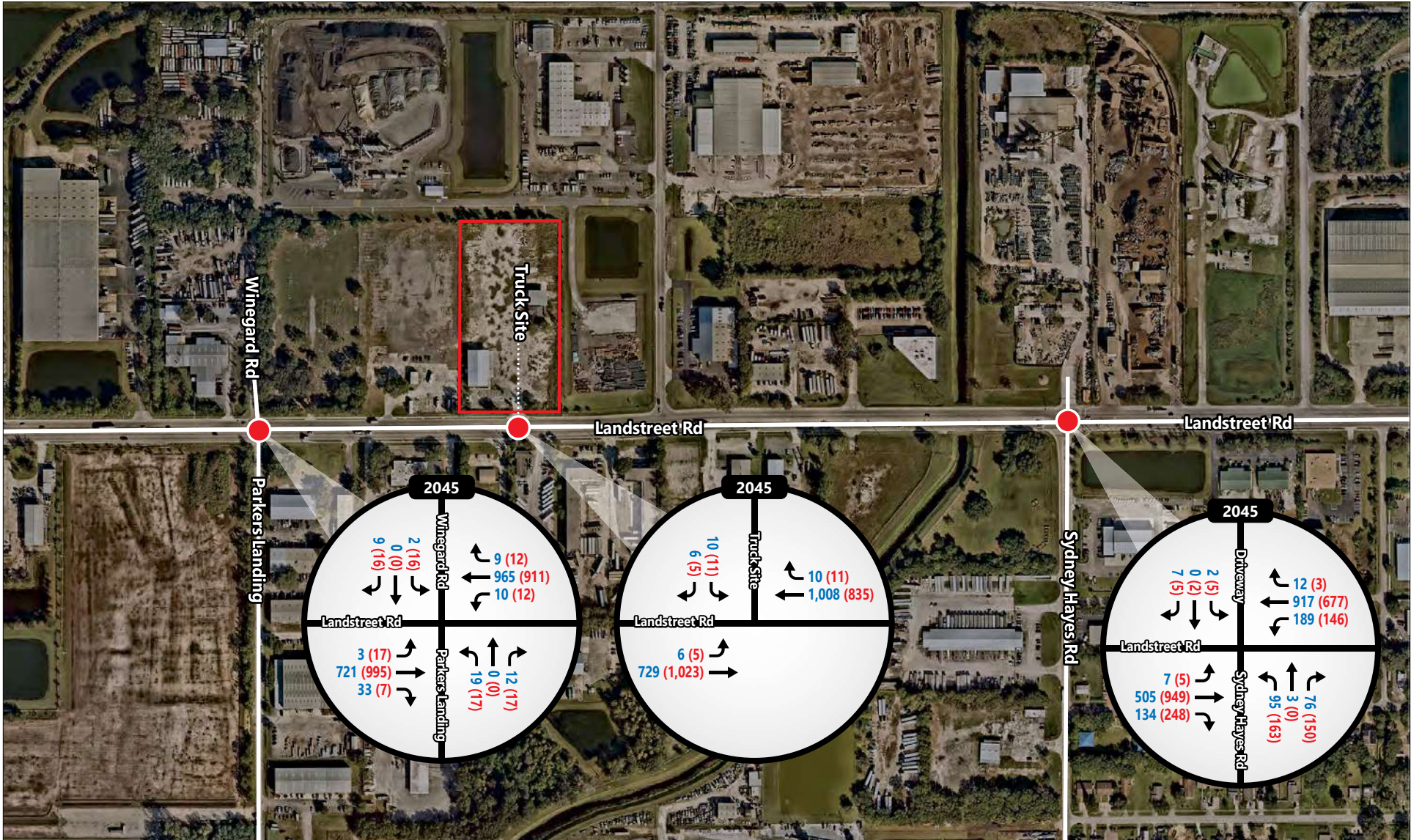
95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-16** shows the recommended queue lengths for the 2045 conditions.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-16: Recommended Queue Lengths for Turn Lanes - Orange County Site 4

Intersections on Landstreet Road	Turn Lane Queue Length (feet)							
	Landstreet Road				Side Streets			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-Landstreet Road at Parkers Landing	100	-	100	-	-	-	-	-
2-Landstreet Road at Potential Truck Parking Site	100	-	-	-	-	0	-	-
3-Landstreet Road at Sidney Hayes Road	100	-	250	-	225	-	-	-

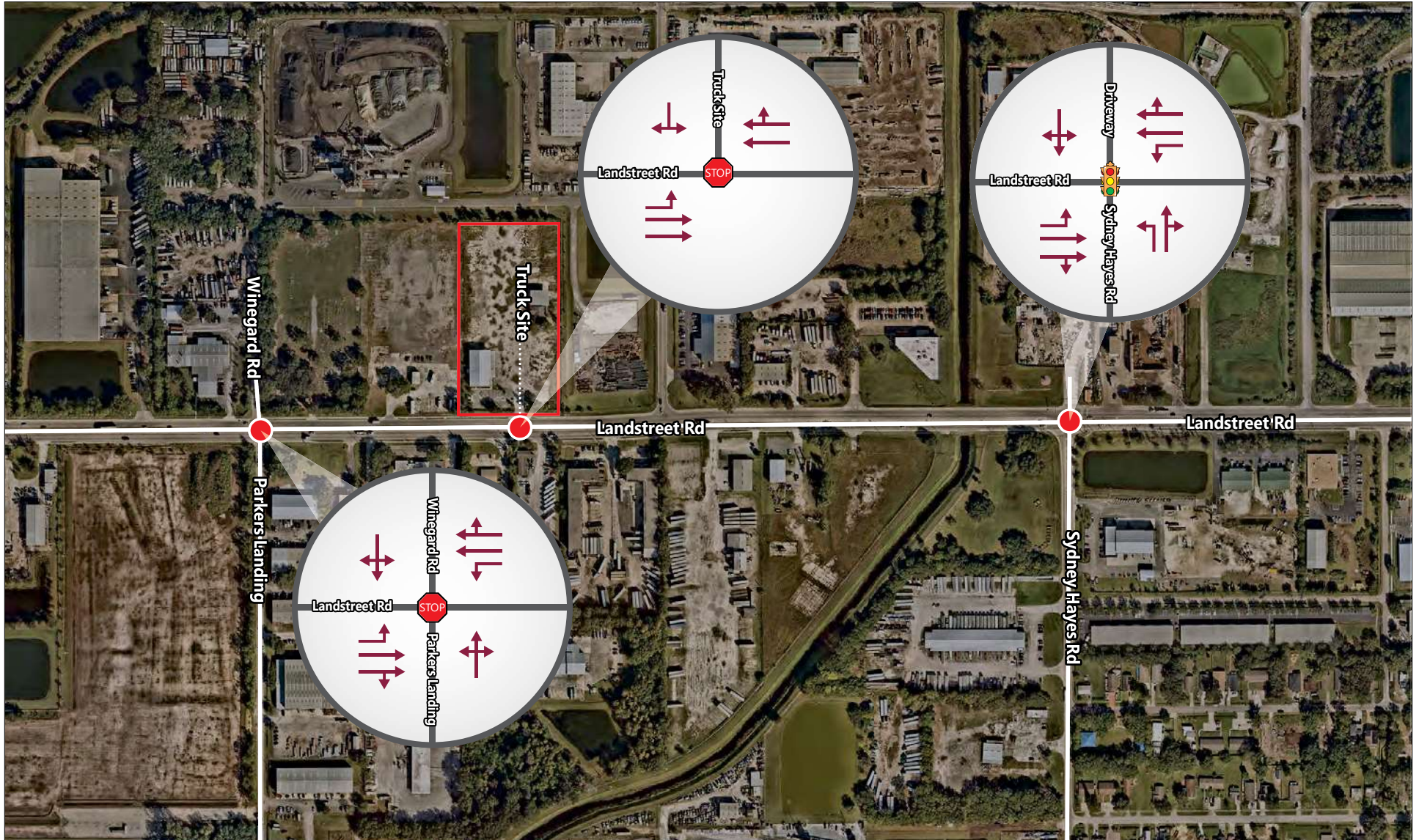
Note: A minimum queue length of 100 feet is assumed



- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-19
Future Build Turning Movement Counts
Orange County Site 4
 Preliminary Engineering Report



- Study Intersection
- ▭ Truck Site Location
- ➔ Future Lane Geometry



Figure 6-20
Future Build Geometry
Orange County Site 4
 Preliminary Engineering Report

Future Safety Analysis – Orange County Site 4

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods. With the inclusion of the Orange County Site 4 intersection in the Build alternative, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash from roughly 4 to 5 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Seminole County Site 1B – I-4 at US 17/92

Two future scenarios were evaluated for this site: one with the existing I-4 and US 17/92 interchange configuration (existing configuration scenario) and one with the proposed I-4 BtU configuration at the I-4 and US 17/92 interchange (I-4 BtU configuration scenario). For this site, the only difference between No-Build and Build conditions at this location will be the presence of the Seminole County Site 1B. Information relating to volume development, data collection, and Synchro outputs can be found in the PTAR in the project file.

The AM and PM peak period projected future volumes in the year 2045 for the Seminole County Site 1B Build conditions for the existing conditions scenario and the I-4 BtU configuration scenario are shown in **Figure 6-21** and **Figure 6-22**, respectively. The future intersection geometry for the existing configuration and I-4 BtU configuration scenarios are depicted in **Figure 6-23** and **Figure 6-24**, respectively.

Existing Configuration Scenario

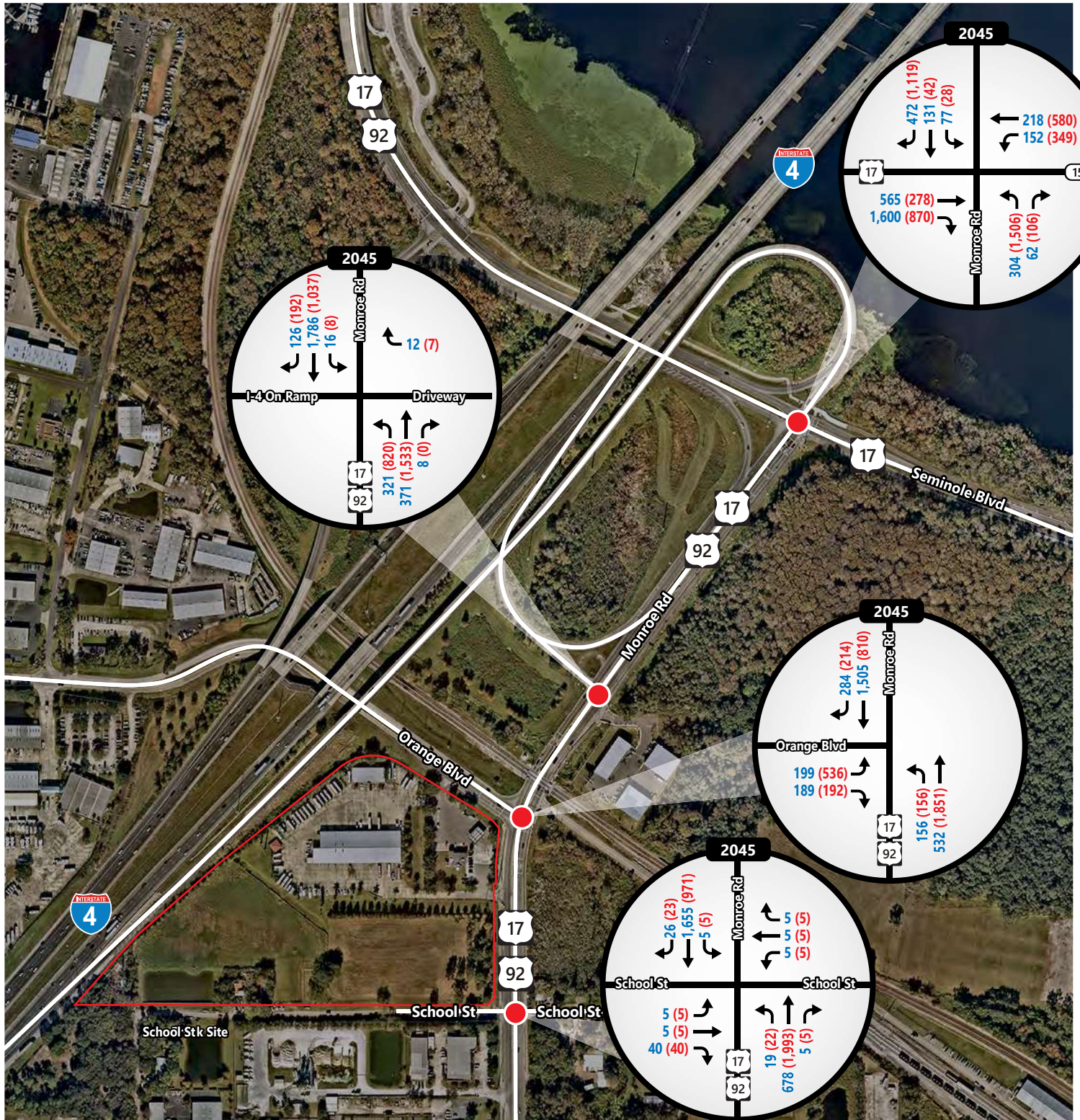
Build Intersection LOS Analysis

Table 6-17 shows the projected operations for the year 2045 Seminole County Site 1B existing configuration scenario. All the study intersections were projected to operate the same as No-Build conditions, with only a slight increase in delays after introducing the potential truck parking site intersection.

Table 6-17: Build Intersection LOS Analysis (with Existing Configuration)- Seminole County Site 1B

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/92 / Monroe Road at Seminole Blvd	47.2	D	50.0	D
2-US 17/92 / Monroe Road at I-4 EB On-ramp*	9.5/113.7	A/F	16.2/197.2	B/F
3-US 17/92 / Monroe Road at Orange Blvd	24.7	C	33.9	C/F
4-US 17/92 / Monroe Road at School Street*	52.7/44.4	E/D	78.8/19.0	F/C

Note: * Minor/major street worst delays are reported for the stop-control

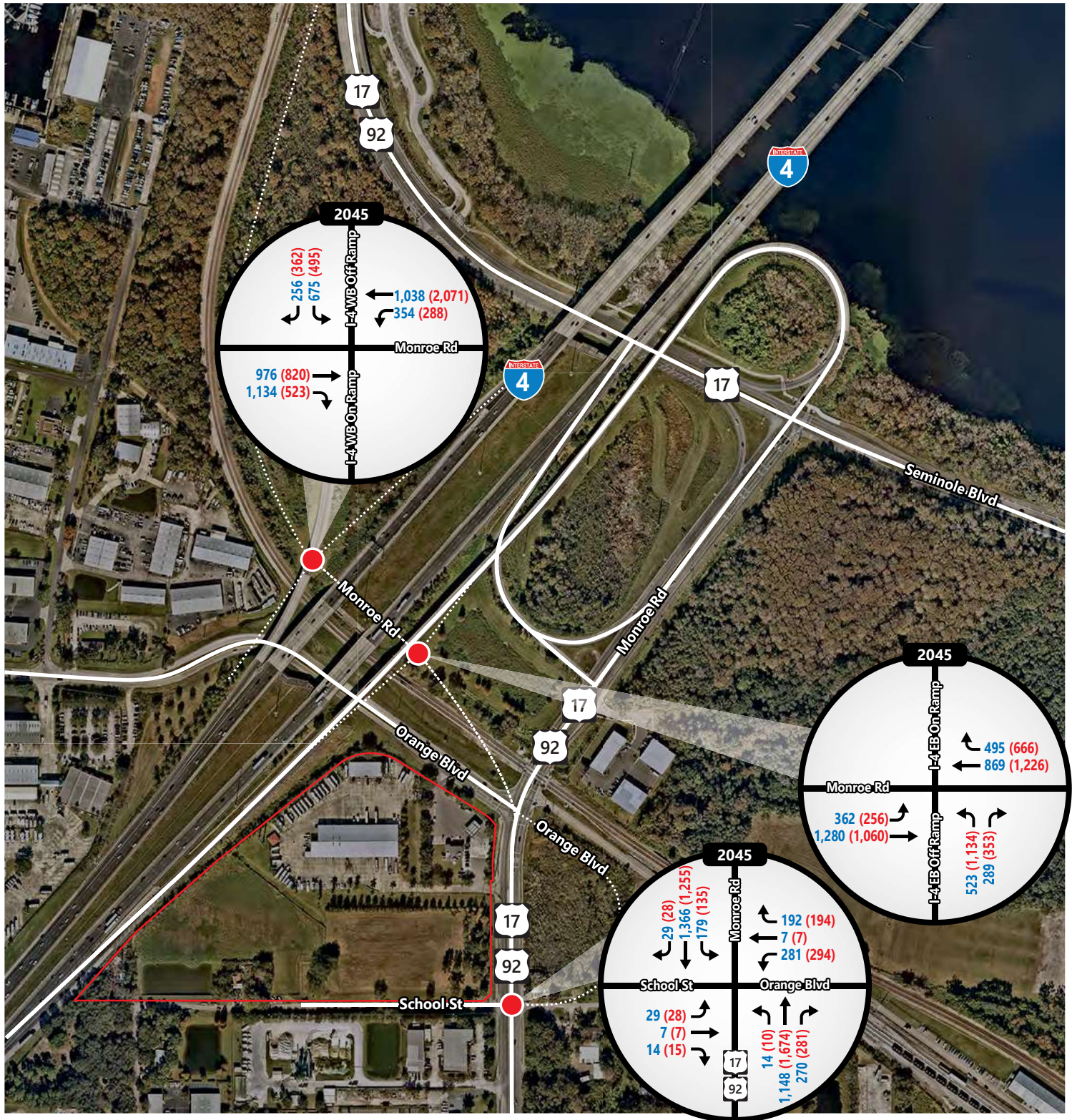


- Study Intersection
- Traffic Movement
- → Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-21

**Future Build Turning Movement Counts
Seminole County Site 1B
(with Existing Configuration)
Preliminary Engineering Report**

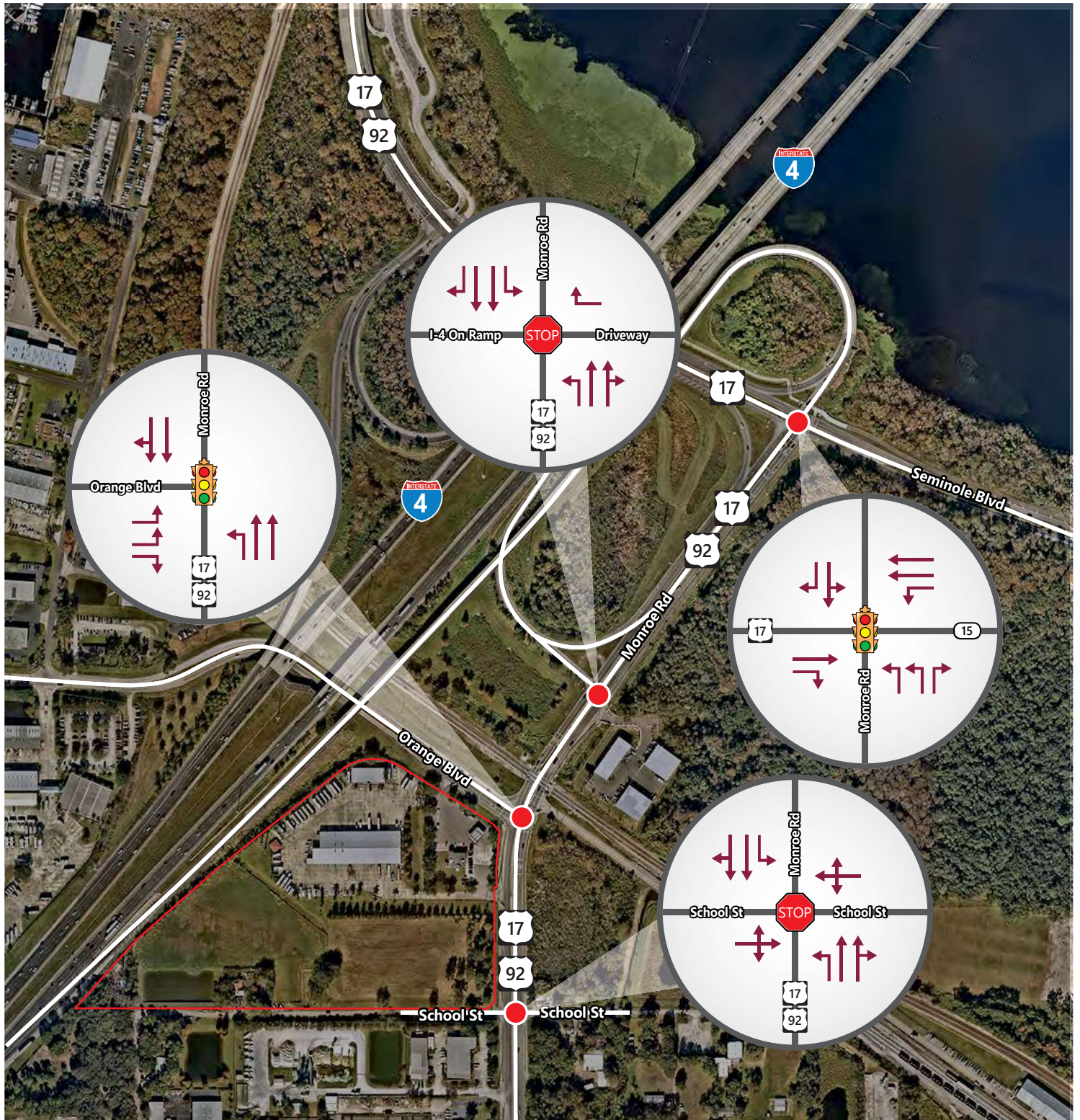


- Study Intersection
- Traffic Movement
- AM (PM) Peak Hour Traffic Volumes
- Truck Site Location



Figure 6-22

**Future Build Turning Movement Counts
Seminole County Site 1B
(with I-4 BtU Configuration)
Preliminary Engineering Report**

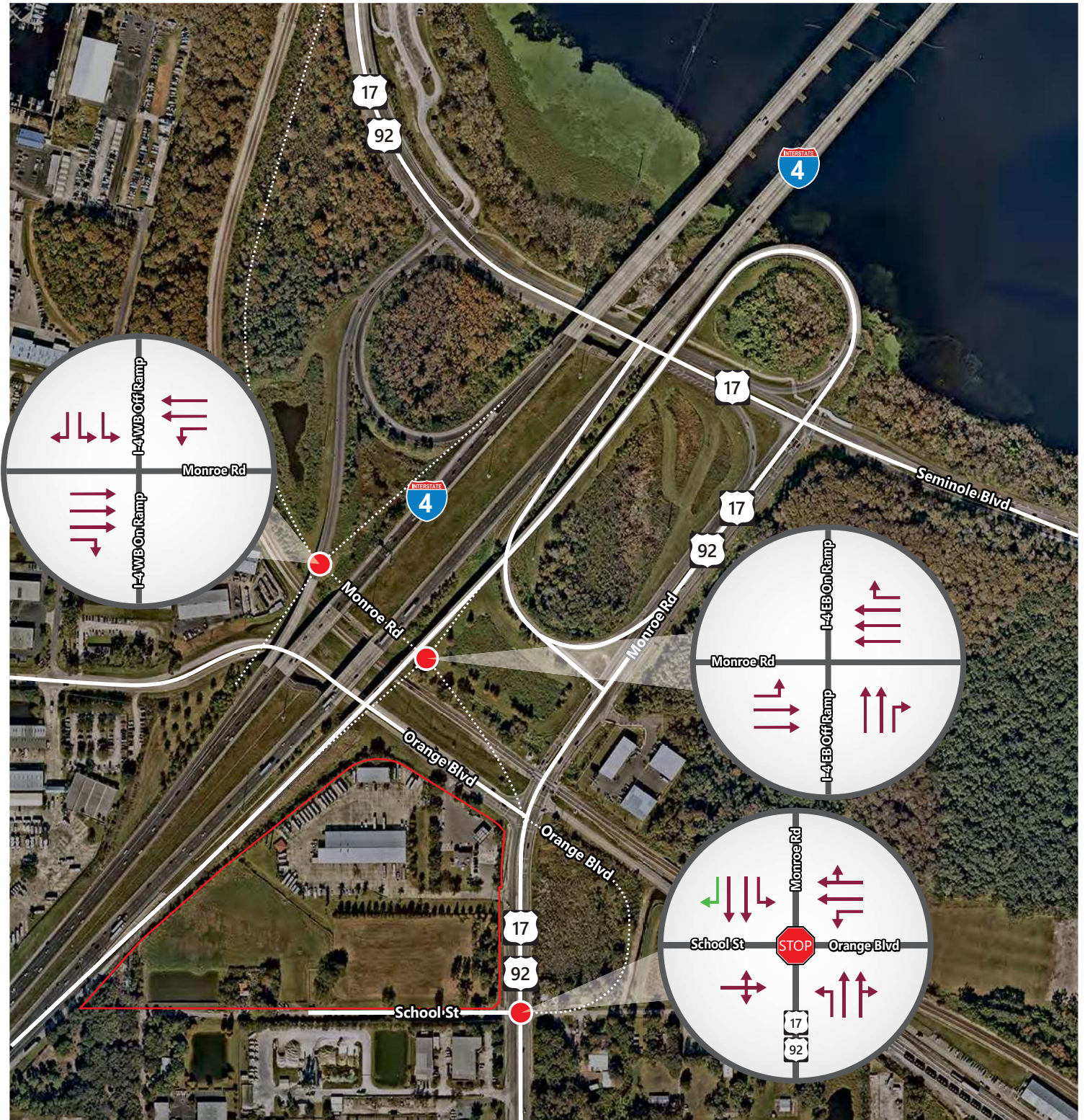


- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry



Figure 6-23

**Future Geometry
Seminole County Site 1B
(with Existing Configuration)**
Preliminary Engineering Report



- Study Intersection
- Truck Site Location
- ➔ Future Lane Geometry
- ➔ Future Lane Geometry - Build Only



Figure 6-24

**Future Geometry
Seminole County Site 1B
(with I-4 BtU Configuration)**
Preliminary Engineering Report

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths. **Table 6-18** shows the 2045 recommended queue lengths for the existing configuration scenario.

Table 6-18: Recommended Queue Lengths for Turn Lanes (with Existing Configuration) - Seminole County Site 1B

Intersections on US 17/92 / Monroe Road	Turn Lane Queue Length (feet)							
	Side Streets				US 17/92 / Monroe Road			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-US 17/92 / Monroe Road at Seminole Boulevard	-	-	625	-	1,050	-	-	100
2-US 17/92 / Monroe Road at I-4 EB On-ramp	-	-	-	-	950	-	-	-
3-US 17/92 / Monroe Road at Orange Blvd	350	100	-	-	250	-	-	-
4-US 17/92 / Monroe Road at School Street (with Potential Truck Parking Site)	-	-	-	-	100	-	100	-

Note: A minimum queue length of 100 feet is assumed

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

I-4 BtU Configuration Scenario Build Intersection LOS Analysis

Table 6-19 shows the projected operations for the 2045 Seminole County Site 1B I-4 BtU configuration scenario.

All the study intersections were projected to operate the same as No-Build conditions, with only a slight increase in delays after introducing the potential truck parking site intersection.

Table 6-19: Build Intersection LOS Analysis (with I-4 BtU Configuration) - Seminole County Site 1B

Study Intersection	2045 Build			
	AM Peak		PM Peak	
	Delay (s)	LOS	Delay (s)	LOS
1-US 17/92 / Monroe Road at I-4 WB Ramps	33.7	C	54.7	D
2-US 17/92 / Monroe Road at I-4 EB Ramps	24.0	C	49.7	D
3-US 17/92 / Monroe Road at School Street (with potential Truck Parking Site)	26.0	C	43.9	D

Note: A signal is recommended at the intersection of US 17/92 / Monroe Road at School Street in the I-4 BtU Study

95th Queue Length Analysis

95th percentile queues for the year 2045 at the study intersections were used to recommend the queue lengths.

Table 6-20 shows the 2045 recommended queue lengths for the I-4 BtU configuration scenario.

The specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. The actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

Table 6-20: Recommended Queue Lengths for Turn Lanes (with I-4 BtU Configuration) - Seminole County Site 1B

Intersections on US 17/92 / Monroe Road	Turn Lane Queue Length (feet)							
	Side Streets				US 17/92 / Monroe Road			
	EBL	EBR	WBL	WBR	NBL	NBR	SBL	SBR
1-US 17/92 / Monroe Road at I-4 WB Ramps	-	-	425	500	425	-	-	100
2-US 17/92 / Monroe Road at I-4 EB Ramps	475	325	-	-	-	100	475	-
3-US 17/92 / Monroe Road at School Street (with Potential Truck Parking Site)	-	-	475	200	100	-	275	100

Note: A minimum queue length of 100 feet is assumed

Future Safety Analysis

An HSM safety analysis was conducted for the No-Build and Build alternatives using predictive crash methods for both the existing configuration and the proposed I-4 BtU configuration scenarios.

With the existing configuration, the Build alternative resulted in a slight increase in crashes in the year 2045 for the study corridor. With the inclusion of the Seminole County Site 1B intersection, the number of crashes in the year 2045 for the study corridor is expected to increase by 1 crash from roughly 21 to 22 crashes per year. This increase in the number of crashes for the year 2045 is not significant.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The AM and PM peak period existing volumes for Volusia County Site 1A are shown in **Figure 6-25**. The AM and PM peak period projected future volumes in the year 2045 Volusia County Site 1A Build conditions are shown in **Table 6-21**. Information relating to volume development, data collection, and HCS7 reports can be found in the PTAR in the project file.

Build LOS Analysis

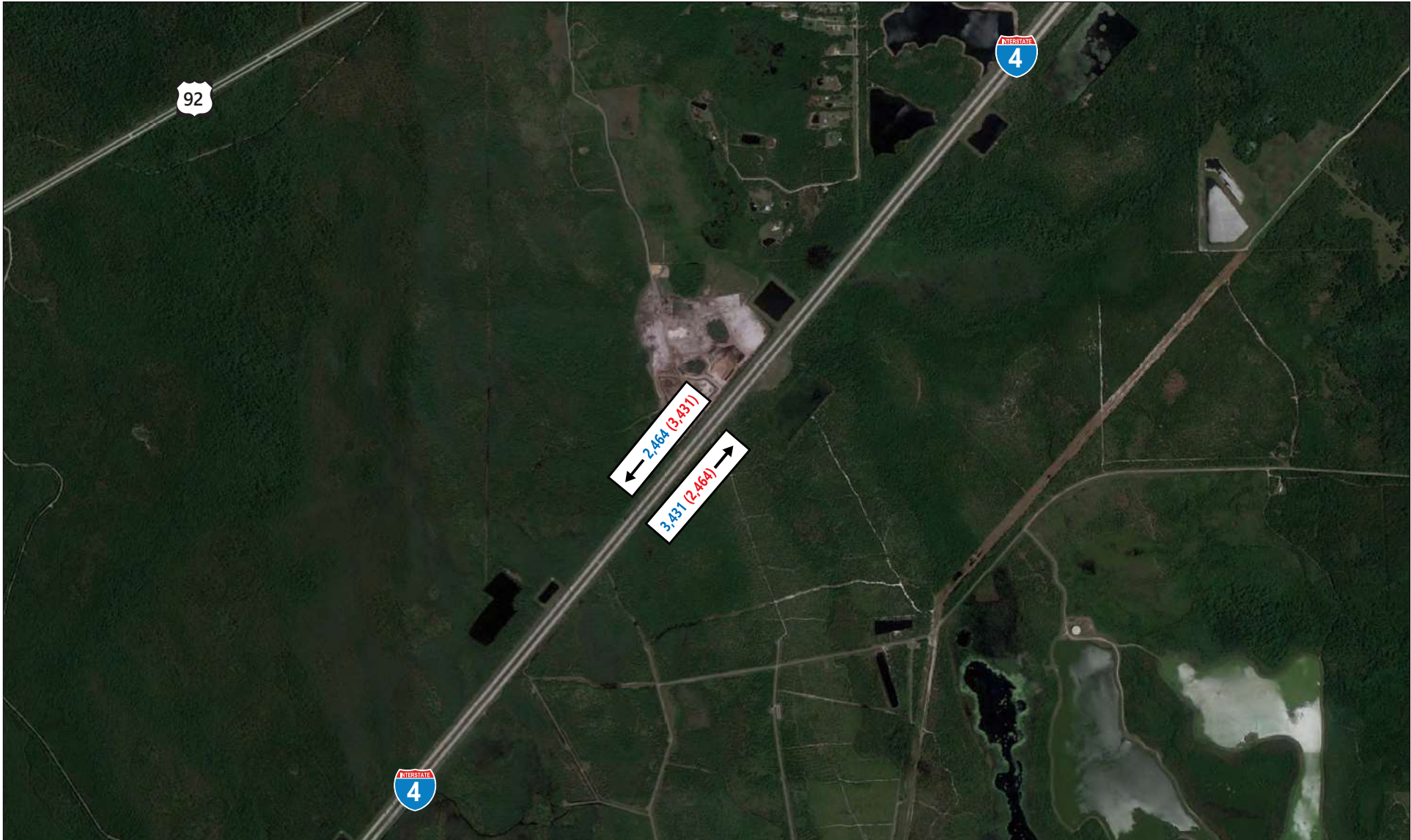
Density and estimated LOS based on HCM metrics are provided for the freeway segment analysis as shown in **Figure 6-25** for the year 2045. As part of the Build condition, an EB off-ramp to the Volusia County Site 1A will be added.

The analysis indicates that all freeway segments are expected to operate at LOS D or better through the year 2045 conditions, similar to the No-Build conditions.

Based on the Build analysis, the assumed deceleration/acceleration lengths for the off- and on-ramps should be adequate for the year 2045 traffic conditions.

Table 6-21: 2045 Build Freeway LOS Analysis – Volusia County Site 1A

Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Between SR 44 and EB Off-ramp to Truck Site	29.6	D	19.8	C
EB Off-ramp to Truck Site (Diverge)	30.3	D	21.9	C
I-4 Between EB Off-Ramp to Truck Site to EB On-ramp from Truck Site	28.8	D	19.3	C
EB On-ramp from Truck Site (Merge)	31.6	C	22.2	C
I-4 Between EB On-Ramp from Truck Site to US 92	29.6	D	19.8	C



→ Traffic Movement

AM (PM) Peak Hour Traffic Volumes



Figure 6-25

Existing Peak Hour Volumes
Volusia County Site 1A & Site 1B
Preliminary Engineering Report

Future Safety Analysis

An HSM Safety analysis was conducted for the No-Build and Build alternatives using the Enhanced Interchange Safety Analysis Tool (ISATe). The results of this analysis are presented in **Table 6-22**.

With the inclusion of the Volusia County Truck Site 1A intersections in the Build alternative, total crashes including fatal injury and property damage only in the year 2045 for the study corridor are expected to increase. However, fatal and incapacitating (KA) crashes are not anticipated to increase significantly. Due to the limitations of ISATe for the ramp deceleration and acceleration lengths (the sheet will not accept more than 1,600 feet), the number of crashes in the Build condition may be overestimated. As such, when the truck parking site is constructed, additional safety measures must be considered at this truck site to make it as safe as possible.

Table 6-22: Predicted Average Crash Frequency (Crashes/Year) for 2045 - Volusia County Site 1A and Site 1B

Study Intersection	Fatal/Injury (KA)		All Severities (Including PDO)	
	No-Build	Build	No-Build	Build
I-4 Freeway Segments	1.4	2.0	54.2	73.8
I-4 Ramp Segments	-	-	-	0.5
Total	1.4	2.0	54.2	74.3
Difference (Build minus No-Build)	0.6		20.1	

Notes: K-Fatal, A-Incapacitating

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The AM and PM peak period existing volumes for Volusia County Site 1B are shown in **Figure 6-25**. The AM and PM peak period projected future volumes in the year 2045 Volusia County Site 1B Build conditions are shown in **Table 6-23**. Information relating to volume development, data collection, and HCS7 reports can be found in the PTAR in the project file.

Build LOS Analysis

Density and estimated LOS based on HCM metrics are provided for the freeway segment analysis as shown in **Table 6-23** for the year 2045. As part of the Build condition, a WB on-ramp from the Volusia County Site 1B will be added.

The analysis indicates that all freeway segments are expected to operate at LOS D or better through the year 2045 conditions, similar to the No-Build conditions.

Based on the Build analysis, the assumed deceleration/acceleration lengths for the off- and on-ramps should be adequate for the year 2045 traffic conditions.

Table 6-23: 2045 Build Freeway LOS Analysis – Volusia County Site 1B

Segment	AM Peak Hour		PM Peak Hour	
	Density (pc/mi/h)	LOS	Density (pc/mi/h)	LOS
I-4 Btw US 92 44 and WB Off-ramp to Truck Site	20.0	C	29.9	D
WB Off-ramp to Truck Site (Diverge)	22.0	C	30.6	D
I-4 Btw WB Off-Ramp to Truck Site to WB On-ramp from Truck Site	19.5	C	29.2	D
WB On-ramp from Truck Site (Merge)	22.3	C	31.9	D
I-4 Btw WB On-Ramp from Truck Site to SR 44	20.0	C	29.9	D

Future Safety Analysis

An HSM Safety analysis was conducted for the No-Build and Build alternatives using the ISATe. The results of this analysis are presented in **Table 6-22**.

With the inclusion of the Volusia County Truck Site 1B intersections in the Build alternative, total crashes including fatal/ injury and property damage only in the year 2045 for the study corridor are expected to increase. However, fatal and incapacitating (KA) crashes are not anticipated to increase significantly. Due to the limitations of ISATe for the ramp deceleration and acceleration lengths (the sheet will not accept more than 1,600 feet), the number of crashes in the Build condition may be overestimated. As such, when the truck parking site is constructed, additional safety measures must be considered at this truck site to make it as safe as possible.

6.6 Selection of Preferred Sites

After analyzing the Build Alternatives from a purpose and need, engineering feasibility, potential environmental impact, and economic perspective, the Build Alternatives were further refined to minimize impacts where feasible and incorporate public and stakeholder feedback as summarized below. Engineering analysis and potential environmental impacts of the Preferred Alternative are documented in Section 8 of this report and included in the concept plans provided in **Appendix A**. The preferred sites are identified as follows:

- Osceola County Site 1 – CR 532 and PPE
- Orange County Site 1 – Sand Lake Road at John Young Parkway
- Seminole County Site 1B – I-4 at US 17/92 (*separate project*)
- Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95
- Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As a result of the engineering and environmental analyses completed during this study, and the comprehensive public engagement plan, two of the seven viable sites (Orange County Site 2 and Orange County Site 4) are not being advanced for project development and final design phases. While not being advanced, these two sites are still considered viable. No refinements were made to the two viable sites. As discussed previously, Seminole County Site 1B is being developed as part of a separate project as a PD&E Study Reevaluation for the *I-4 BtU Segment 3* project (FPID: 242592-4). As of June 2024, 60% of the Design phase has been completed for Seminole Site 1B, and further refinements to the site design have been made based on additional engineering analysis.

A VE Study was conducted in July 2023, which led to further refinements, including a modified site layout for Volusia County Site 1B.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Based on stakeholder input at the Alternatives Public Meeting, refinements were made to this site. A 300-foot landscaping buffer between the truck parking site and the nearest residential parcel was provided to reduce potential visual and aesthetic effects. Additionally, based on information received from utility companies, the site design was modified to maximize the number of spaces in the available ROW while maintaining existing utility easements. These refinements resulted in a reduced number of impacted parcels; from 19 to 18, and a reduced number of truck parking spaces. Approximately 230 standard-size parking spaces and 4 oversize parking spaces are provided in the Preferred Alternative for a total of 234 spaces.

Orange County Site 1 – Sand Lake Road at John Young Parkway

During the development of this site concept, FDOT and FTE coordinated concept development due to adjacent interchange design and stormwater management and floodplain compensation needs located within the footprint of the identified truck parking site. During the refinement of preferred Orange County site 1, FTE updated design plans to include a larger pond on the east end of Orange County Site 1 than what was originally used in the design of the site. This reduced the site size from 21.5 acres to 16.3 acres, and due to FDOT already owning a 1.7-acre parcel on the proposed site, the total ROW acquisition required for the preferred site was reduced to 14.6 acres.

Coordination with FTE led to modified ponds for the truck parking site. This resulted in a decrease of 16 parking spaces for the truck parking site, and Orange County Site 1 is proposed to contain 93 parking spaces. Orange County Site 1 will still maintain the right-in/right-out driveways at Sand Lake Road and John Young Parkway.

Seminole County Site 1B – I-4 at US 17/92

Coordination with Seminole County resulted in refinements to the site on the northeast corner to minimize potential visual and aesthetic effects from the site. Landscaping buffers were incorporated along Orange Boulevard within the truck parking site. Additional evaluation of stormwater management needs resulted in refinements to the site layout and configuration.

During the concurrent Design phase, additional refinements were made to the site to minimize relocation impacts. The parcel occupied by the Circle K gas station has been identified as a potential relocation for the I-4 BtU project, therefore this parcel is not considered impacted by Seminole County Site 1B. The number of parcel impacts and relocations for the site decreased from eight parcels and four relocations to seven parcels and three relocations. The Preferred Alternative for the site is consistent with the refined design for the site. The design plans used for the Preferred Alternative as of February 2024, are the 60% design plans, included in the project file. The design phase for Seminole County Site 1B is underway and is subject to further refinements. Based on the most recent design plans, the site is approximately 17.4 acres and will accommodate 132 truck parking spaces.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Between the viable site stage and selection of preferred sites, Volusia County Site 1 was divided into Volusia County Site 1A (I-4 Eastbound) and Volusia County Site 1B (I-4 Westbound), as the sites will be implemented independently as funding is programmed for construction. An existing wildlife crossing on I-4 is located under both the eastbound and westbound travel lanes within the vicinity of the preferred Volusia County Site 1A location. Based on stakeholder coordination, the westbound access ramp to the preferred site was modified to avoid impacts to the existing wildlife crossing. Additionally, enhanced features to the site including proposed wildlife fencing and conservation areas were incorporated into the site concept. Volusia County Site 1A involves 275 truck parking spaces and 10 maintenance vehicle spaces.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Between the viable site stage and selection of preferred sites, Volusia County Site 1 was divided into Volusia County Site 1A (I-4 Eastbound) and Volusia County Site 1B (I-4 Westbound), in order to advance the construction timeline. An existing wildlife crossing on I-4 is located under both the eastbound and westbound travel lanes within the vicinity of the preferred Volusia County Site 1B location. Additionally, enhanced features to the site including proposed wildlife fencing and conservation areas were incorporated into the site concept.



As a result of the VE Study recommendations, the previous layout of Volusia County Site 1B was rotated 90 degrees, the two restroom facilities at either end of the truck parking site were consolidated to a large, centralized restroom building, the length of Pond 1 was decreased, and the existing I-4 Pond I at the south side of the site was expanded to maximize use of the existing stormwater management area. These changes led to a wider wildlife corridor. Volusia County Site 1B involves 253 truck parking spaces and 10 maintenance vehicle spaces.

7

7. Project Coordination and Public Involvement

This chapter documents the public involvement activities accomplished throughout this PD&E Study. All materials for the various public involvement activities, including meeting agendas, comments received, and coordination records are included in the Comments and Coordination Report, in the project file.

7.1 Agency Coordination

The following agency coordination meetings took place over the course of the study. Meeting summaries are available in the project files.

7.1.1 Local Agency Meetings

- Seminole County Local Agency Meeting (December 16, 2021): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Seminole County, MetroPlan Orlando, and the study team.
- City of Sanford Local Agency Meeting (December 16, 2021): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, City of Sanford, MetroPlan Orlando, and the study team.
- Osceola County Local Agency Meeting (January 14, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Osceola County, MetroPlan Orlando, and the study team.
- City of Orlando Local Agency Meeting (February 1, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, City of Orlando, MetroPlan Orlando, and the study team.
- Orange County Local Agency Meeting (February 4, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Orange County, MetroPlan Orlando, and the study team.
- FTE Coordination Meeting (March 17, 2022): The purpose of this meeting was to discuss the viability of using the Sand Lake Road and John Young Parkway site as a location for truck parking. The meeting was attended by representatives of FDOT District 5, FTE, and the study team.
- CFX Coordination Meeting (March 18, 2022): The purpose of this meeting was to discuss the status and schedule of the PPE project and the CR 532 widening; and make the CFX aware that a site adjacent to the PPE and CR 532 widening was being looked at as a potential site. The meeting was attended by representatives of FDOT District 5, CFX, and the study team.

- Volusia County, City of Daytona Beach, and City of Port Orange Local Agency Meeting (March 25, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, Volusia County, City of Daytona Beach, City of Port Orange, and the study team.
- R2C TPO Local Agency Meeting (April 26, 2022): The purpose of this meeting was to gain input to help guide the PD&E Study and discuss potential site locations. The meeting was attended by representatives of FDOT District 5, R2C TPO, and the study team.
- Florida Highway Patrol (July 21, 2022): The purpose of this meeting was to give a background of the study and discuss potential site locations and security needs. The meeting was attended by representatives of FDOT District 5, Florida Highway Patrol, and the study team.

7.1.2 Local Agency Update Meetings

- City of Sanford Local Agency Meeting #2 (May 3, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, City of Sanford, and the study team.
- City of Orlando Local Agency Meeting #2 (May 5, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, City of Orlando, and the study team.
- Orange County Local Agency Meeting #2 (May 5, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, Orange County, MetroPlan Orlando, and the study team.
- Seminole County Local Agency Meeting #2 (May 6, 2022): The purpose of this meeting was to provide an update on the alternative analysis of the potential site locations and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, Seminole County, and the study team.
- Osceola County Local Agency Meeting #2 (May 10, 2022): The purpose of this meeting was to provide a project update, discuss the alternatives of the potential site locations, and gather input prior to the next public meeting. The meeting was attended by representatives of FDOT District 5, Osceola County, and the study team.
- FTE Coordination Meeting (May 18, 2022): The purpose of this meeting was to discuss the conceptual layout and traffic operations assessment for the potential site in the northwest quadrant of FTE's new interchange at Sand Lake Road and Florida's Turnpike. The meeting was attended by representatives of FDOT District 5, FTE, and the study team.
- FTE Coordination Meeting (November 11, 2022): The purpose of this meeting was to discuss the stormwater management needs and conceptual drainage design for the potential site in the northwest quadrant of FTE's new interchange at Sand Lake Road and Florida's Turnpike. The meeting was attended by representatives of FDOT District 5, FTE, and the study team.
- Seminole County Board of County Commissioners Meeting (August 8, 2023): The purpose of this presentation was to update the Board on the current project status.

7.1.3 Local Advisory Group Presentations

- R2C TPO Citizens' Advisory Committee (CAC) Presentation (June 21, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.

- R2C TPO Technical Coordinating Committee (TCC) Presentation (June 21, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- R2C TPO Board Presentation (June 22, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando CAC Presentation (June 22, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando Technical Advisory Committee (TAC) Presentation (June 24, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando TSM&O Presentation (June 24, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando Municipal Advisory Committee (MAC) Presentation (July 7, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- MetroPlan Orlando Board Presentation (July 27, 2022): The purpose of this presentation was to provide a project update, present the alternatives of the potential site locations, and gather input prior to the next phase of the study.
- R2C TPO Presentation (August 2, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- Seminole County Presentation (August 8, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- R2C TPO TCC Presentation #2 (August 15, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- R2C TPO CAC Presentation #2 (August 15, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.
- R2C TPO Board Presentation (August 23, 2023): The purpose of this presentation was to provide a project update and present the final recommendations of the study.

7.1.4 Public Private Partnership (P3) Meeting

- Unsolicited P3 Applicant Coordination Meeting (January 31, 2023): The purpose of the meeting was to coordinate with the potential unsolicited P3 applicant to help them understand the purpose and locations of the preferred truck parking sites. Also, information was requested to help the study team understand the potential P3 applicant's current truck parking operations and locations. The goal of the meeting was to begin the coordination with this potential applicant to inform them of the high-level approach to P3 unsolicited bid. The meeting was attended by representatives of FDOT District 5, FDOT Central Office, the potential P3 applicant, and the study team.

7.2 Public Involvement

7.2.1 Public Involvement Program

A PIP, in the project file, was developed at the beginning of this study and followed throughout the study. The purpose of the PIP was to provide information to and receive information from concerned citizens, agencies, private groups, organizations, governmental agencies, and elected and appointed officials. The PIP helped ensure that the study maintained the values and needs of the community it is intended to benefit. The general approach to the public involvement, including the contact persons, media outlets, agencies and project stakeholders, and the means used to involve them in the process is all documented in the PIP, in the project file.

7.2.2 Public Information Meetings

A Public Information Meeting was conducted in each county (Osceola, Orange, Seminole, and Volusia) to introduce the Potential Truck Parking Sites, explain the PD&E process, and provide an opportunity for input from the public and stakeholders. Each meeting was conducted as a hybrid meeting presenting the same information and presentation across all counties from 5:30 pm – 7:00 pm. In-person attendees could view a looping narrated presentation, project displays, and ask questions with available FDOT staff and members of the study team. Those attending virtually, using GoToWebinar, were able to log-in to the meeting starting at 5:30 pm. Online attendees were shown a looping narrated presentation (shown during the in-person meetings) and were encouraged to submit their comments and questions via the online meeting’s chat-box throughout the presentation. A handout and several materials were on display at each meeting, including:

- Welcome Board
- Title VI Board
- Study Location Board
- Study Schedule Board
- Interpretive Services Poster
- Osceola County Potential Truck Parking Site 1 Board
- Osceola County Potential Truck Parking Site 2 Board
- Orange County Potential Truck Parking Site 1 – 7 Boards
- Seminole County Potential Truck Parking Site Board
- Volusia County Potential Truck Parking Site Board

Eight comments were received during this round of public meetings. The following lists the general subjects of the comments received:

- Support for Osceola County Site 2, and Orange County Sites 3, 4, and 6
- Request for more information on traffic analysis results for the potential truck parking sites and anticipated impacts to Tradeport Drive in Orange County
- Requirements of truck drivers who will use the potential truck parking sites
- Concern for future land use plans in Osceola County
- Concern for State funding allocation plans for potential truck parking sites
- Alternative suggestion to utilize land in Polk County for potential truck parking site

All comments were responded to in writing immediately following the public comment period for each public meeting. The following Public Information Meetings were held over the course of the study. Sign in sheets, comments, comment responses, and display materials are in the project file.

Seminole County

A Public Information Meeting was held in Seminole County on March 3, 2022. Approximately 28 members of the public, 15 FDOT staff members, and 9 members of the study team attended the meeting. Additionally, five Seminole County representatives and staff members, two City of Sanford staff members, one MetroPlan Orlando staff member, and one Volusia County staff member attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Orange County

A Public Information Meeting was held in Orange County on April 5, 2022. Approximately nine members of the public, eight FDOT staff members, and eight members of the study team attended the meeting. Additionally, three Greater Orlando Aviation Authority staff members, one Orange County staff member, one Volusia County staff member, one Florida Department of State staff member, and one Yardco Representative attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Osceola County

A Public Information Meeting was held in Osceola County on April 12, 2022. Approximately five members of the public, three FDOT staff members, two Osceola County staff members, one MetroPlan Orlando staff member, and seven members of the consultant study team attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Volusia County

A Public Information Meeting was held in Volusia County on April 28, 2022. Approximately 31 members of the public, 10 FDOT staff members, and 9 members of the study team attended the meeting. Additionally, three Orange City Council members, one Port Orange staff member, and one Daytona Beach staff member attended the meeting. No comments were received during the public comment period. A Public Meeting Summary Report was prepared and is in the project file.

7.2.3 Alternatives Public Meetings

A second public meeting was held in each county noted above to present the alternatives considered and the Preferred Alternative and receive feedback from the community. Each Alternatives Public Meeting was conducted as a hybrid meeting presenting the same information and presentation across all counties from 5:30 pm – 7:00 pm. In-person attendees could view a looping narrated presentation, project displays (including concept plans for all seven viable site alternatives) and ask questions with available FDOT staff and members of the study team. Those attending virtually using GoToWebinar were able to log-in to the meeting starting at 5:30 pm. Online attendees were shown a looping narrated presentation (shown during the in-person meetings) and were encouraged to submit their comments and questions via the online meeting's chat-box throughout the presentation. Several materials were on display at each meeting, including:

- Welcome Board
- Title VI Board
- Viable Site Locations Board
- Study Schedule Board
- Interpretive Services Poster
- Orange County Viable Truck Parking Site Option 1 Board
- Orange County Viable Truck Parking Site Option 2 Board
- Orange County Viable Truck Parking Site Option 3 Board

- Orange County Evaluation Matrix Board
- Osceola County Viable Truck Parking Site Board
- Osceola County Evaluation Matrix Board
- Seminole County Potential Truck Parking Site Board
- Seminole County Evaluation Matrix Board
- Volusia County Viable Truck Parking Site – Eastbound Board
- Volusia County Viable Truck Parking Site – Westbound Board
- Volusia County Evaluation Matrix Board

Two comments were received during this round of public meetings. The following lists the general subject of the comment received:

- Request for more information about the chosen site for design and the timeline for implementing a truck parking site in Volusia County
- Request for information regarding the site that has been funded to advanced

All comments were responded to in writing immediately following the public comment period for each public meeting. The following Alternatives Public Meetings were held over the course of the study. All meeting information, sign in sheets, and display materials are in the project file.

Seminole County

An Alternatives Public Meeting was held in Seminole County on May 19, 2022. Approximately 7 members of the public, 12 FDOT staff members, and 7 members of the study team attended the meeting. Additionally, one MetroPlan Orlando staff member, one Seminole County staff member, and one EPA representative attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Orange County

An Alternatives Public Meeting was held in Orange County on June 14, 2022. Approximately one member of the public, one FDOT staff member, and seven members of the study team attended the meeting. Additionally, one Florida House Staffer and one MetroPlan Orlando staff member attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Osceola County

An Alternatives Public Meeting was held in Osceola County on June 23, 2022. Approximately two members of the public, two FDOT staff members, and five members of the study team attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

Volusia County

An Alternatives Public Meeting was held in Volusia County on June 30, 2022. Approximately 12 members of the public, 4 FDOT staff members, and 7 members of the study team attended the meeting. Additionally, one Volusia County staff member, two City of Daytona Beach staff members, one City of Port Orange staff member, one City of Deland staff member, and one press member from the West Volusia Beacon attended the meeting. A Public Meeting Summary Report was prepared and is in the project file.

7.2.4 Additional Communication

Additional communication with the public made throughout the study, but not during meeting comment periods, were also documented and are summarized in Table 7-1. This includes communication by mail, telephone, email, and through the website.

Table 7-1: Additional Public Communication

Name	Date	Method	Subject
Art Brent	4/8/2022	Email	Owns property adjacent to proposed Osceola County Site
Art Kratka	4/8/2022	Email	Osceola Site criteria and zoning
Ronnie	4/15/2022	Email	Rest Areas used for Extended Parking
Alissa Torres	4/20/2022	Email	Orange County Potential Sites
Rick Werbiskis	6/29/2022	Email	City of Deland questions Re: Volusia Sites
Eric Ryder, Policastro Law Group	7/7/2022	Email	Status of Seminole County Alternative 1A/1B
Amber Crooks, Conservancy of Southwest Florida	4/24/2023	Email	Volusia County Sites 1A/1B and impact on existing wildlife crossings

Truck Parking Championship Survey

Additional communication with the public was made at the Florida Truck Driving Championships hosted by the Florida Trucking Association. The event took place June 9-11, 2022 and June 15-17, 2023, in Daytona Beach, Florida. Over the course of each event, two FDOT staff members attended and conducted a survey via QR code. The survey, prepared by FDOT, was designed to gain a better understanding of truck driver’s needs and preferences for potential truck parking site concepts along the I-4 corridor. The surveys elicited 66 responses during the 2022 event and 32 responses during the 2023 event. Of the survey responses, feedback indicated that security, restrooms, and parking space design were a top priority as they received the highest favor. Results from the survey are summarized in **Table 7-2** and **Table 7-3**.

Table 7-2: June 2022 Truck Parking Championships Survey Feedback

Potential Truck Parking Site Concept Preferences	Favor
Security	25
Restrooms	24
Design/Parking Spaces	24
Quiet Parking (away from cars to rest)	15
Vending Machines	14
Other Food Sources (food court)	12
Showers	12
Dog Area	6
Lighting	4
Trash/Garbage Cans	4

Table 7-3: June 2023 Truck Parking Championships Survey Feedback

Potential Truck Parking Site Concept Preferences	Favor
Restrooms	27
Pull Through Spaces	23
Security	22
Enhanced Lighting	20
Vending Machines	18
Trash/Garbage Cans	13
TPAS	11
Pet Amenities (Dog Walk area)	9
Back-in Spaces	6
Generator Plug Ins	2

7.3 Public Hearing

As a result of all prior public involvement activities and minimal public participation, a Public Hearing was determined to not be required for the Osceola, Orange, and Seminole County preferred truck parking sites.

A Notice of Opportunity to request a Public Hearing was advertised on May 19, 2024, for Volusia County Site 1A and Volusia County Site 1B. The draft environmental documents, including attachments and all technical materials for both sites were made available for public review at the John H Dickerson Heritage Library (411 S Keech St, Daytona Beach, FL 32114) and on the study website from May 19, 2024, to June 9, 2024. The deadline to request a public hearing was June 9, 2024. No requests for a Public Hearing were received, therefore it was determined that a Public Hearing is not needed for Volusia County Site 1A and Volusia County Site 1B.

8

8. Preferred Alternative

This section discusses the results of the preliminary engineering analysis and environmental evaluation conducted for the Preferred Alternative. The Preferred Alternative for the *Truck and Freight Site Analysis PD&E Study* includes five sites: Osceola County Site 1, Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A (Eastbound), and Volusia County Site 1B (Westbound). This section documents the Preferred Alternative for the *Truck and Freight Alternative Site Analysis PD&E Study*.

The conceptual design features of the Preferred Alternative at each of the five preferred sites are summarized in this section. The Preferred Alternative was presented and compared to the No-Build Alternative at Public Meetings held in Summer 2022 (one public meeting held in each of the four counties between May 19, 2022, and June 30, 2022).

8.1 Truck Parking Site Design

8.1.1 Site Concepts

Preliminary site concepts were prepared during the PD&E Study including parking layouts, site access, proposed sidewalks, stormwater management, restroom facilities and landscaping/greenspace areas to identify the proposed ROW needs shown on the concepts provided in **Appendix A**. During the Design phase for each site, the site configuration within the proposed ROW will be re-evaluated based on further engineering and site analysis.

The Preferred Alternative includes five preferred site locations for truck parking within Osceola, Orange, Seminole, and Volusia Counties. The Osceola County site is accessible to the I-4 corridor and other high freight corridors including the PPE, CR 532, and US 17/92. The Orange County site is located in a heavily industrialized area serving existing freight origin-destinations that are experiencing truck parking shortages based on known parking on road shoulders and undesignated parking. The Orange County site provides regional connectivity to I-4, Florida’s Turnpike and SR 528. The Seminole County site is adjacent to I-4 near the US 17/92 interchange with significant freight activity. The Volusia County sites are located along the I-4 corridor, providing direct interstate access and regional freight connectivity.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located approximately 3.87 miles east of the I-4 interchange with CR 532 along the south side of CR 532. The preferred site is immediately east of the planned PPE, which is in the Design phase as of June 2024. This site would be bordered by the PPE, CR 532, and US 17/92, providing access to I-4 as well as other high freight corridors including the PPE, CR 532, and US 17/92. The site is planned to be developed around a proposed pond for the PPE.

The preferred site will be approximately 40.1 acres, supplying 234 truck parking spaces. Four of the 234 parking spaces are 125-foot extra length spaces, which can accommodate oversize load trucks. The PD&E site concept assumes a restroom building at the front of the parking site, along with a second restroom

building at the back of the parking site due to the large site. Based on the VE Study (conducted in July 2023) recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Osceola County Site 1. Per the VE Study, this will minimize walking distance to the restroom, reduce the utility and maintenance costs, and centralize the security area. The restroom building will accommodate restroom facilities, vending machines, and an office for security staff, and the green spaces adjacent to the restroom building will include picnic areas/shelters. Fencing is proposed around the perimeter of the truck parking area and other design features such as dumpster storage enclosures, pet walk areas, and windshield wash stations may be included in the site based on further evaluation during the Design phase.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is located along Sand Lake Road approximately 2.90 miles east of I-4. The site is proposed on the northeast corner of Sand Lake Road and John Young Parkway immediately west, and adjacent to the limited access Florida's Turnpike facility. As part of a separate project, Florida's Turnpike is adding a new interchange with Sand Lake Road, which will increase access to this truck parking site.

The preferred site is approximately 16.3 acres and is anticipated to require approximately 14.6 acres of ROW, accommodating 93 truck parking spaces. A restroom building which will accommodate restroom facilities, vending machines, and an office for security staff is assumed at the back of the parking site. The green spaces adjacent to the restroom building will include picnic areas/shelters. Fencing is proposed around the perimeter of the truck parking area and other design features such as dumpster storage enclosures, pet walk areas, and windshield wash stations may be included in the site based on further evaluation during the Design phase.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B is located adjacent to eastbound I-4 and southeast of the I-4 and US 17/92 interchange in unincorporated Seminole County, immediately outside the Sanford city limits. In the existing condition, the site can access I-4 via US 17/92 (0.45 miles) and via SR 46 (1.85 miles). Additionally, there are planned I-4 BtU improvements at the I-4 and US 17/92 interchange, which will modify access to I-4 through a reconfigured ramp adjacent to the site. Following the I-4 BtU construction, the distance to I-4 via US 17/92 will be shortened to 0.25 miles.

The preferred site is approximately 17.4 acres, accommodating 132 truck parking spaces. A restroom building which will accommodate restroom facilities, vending machines, and an office for security staff is assumed in the center of the truck parking site. Fencing is proposed around the perimeter of the truck parking area. A large, raised berm at the northeast corner of the site along Orange Boulevard is proposed to decrease the visibility of the site to nearby properties. Also, one of the ponds was proposed along the eastern portion of the truck parking site to provide a visual buffer adjacent to US 17/92.

The site will include other features such as dumpster storage enclosures, pet areas, a windshield wash, and an air compressor.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A is located along I-4 Eastbound approximately 4.5 miles southwest of the I-95 interchange (approximate Milepost (MP) 23.112). An on-ramp and off-ramp will be provided on I-4 Eastbound for direct access to and from Volusia County Site 1A. The truck parking site is located at a former Volusia County rest area and is approximately 73.3 acres, accommodating 275 truck parking spaces. The PD&E site concept includes a large restroom building at the front of the truck parking site, and a small restroom building at the back of the truck parking site. Based on the VE Study (conducted in July 2023) recommendations, FDOT will modify the site layout during the Design phase to centralize the

restroom for Volusia County Site 1A. Per the VE Study, this will minimize walking distance to the restroom, reduce the utility and maintenance costs, and centralize the security area. The restroom building will accommodate restroom facilities, vending machines, and an office for security staff. The green spaces adjacent to the restroom building will include picnic areas/shelters, and other design features such as dumpster storage enclosures, pet walk areas, and windshield wash stations may be included in the site based on further evaluation during the Design phase.

Wildlife fencing and wildlife sensitive lighting will be provided at the site due to the proximity of the existing wildlife crossing at MP 22.583. The site will include a 31-acre wildlife conservation area east of the truck parking area to remain as existing (undeveloped) with no site clearing. A conservation easement over the conservation area will be coordinated in the Design and ROW phases for the project.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is located along I-4 Westbound approximately 4.5 miles southwest of the I-95 interchange (approximate Milepost (MP) 22.161). An on-ramp and off-ramp will be provided on I-4 Westbound for direct access to and from Volusia County Site 1B. The truck parking site is 116.8 acres, supporting 253 truck parking spaces. The site includes a large restroom building which will accommodate restroom facilities, vending machines, and an office for security staff in the center of the truck parking site. The green spaces adjacent to the restroom building will include picnic areas/shelters, and other design features such as dumpster storage enclosures, pet walk areas, and windshield wash stations may be included in the site based on further evaluation during the Design phase.

Wildlife fencing and wildlife sensitive lighting will be provided at the site due to the proximity of the existing wildlife crossing at MP 21.523. The proposed ROW for the site includes a proposed conservation area and contiguous wildlife corridor, for a total of approximately 79.7 acres, extending from the existing I-4 wildlife crossing to the western boundary of the site to remain as existing (undeveloped) with no site clearing.

8.1.2 Site Access

Access to and from each preferred truck parking site varies based on site location and surrounding existing roadways and is described below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located along CR 532 approximately 0.66 miles west of the intersection with US 17/92. A new signalized entrance at CR 532 is proposed for access to the site. An eastbound right turn lane and a westbound left turn lane are proposed at the signalized intersection. The PPE project, which is in the Design phase as of June 2024, proposes to add a new interchange with CR 532 approximately 0.26 miles (1,350 feet) west of the site entrance, which will further increase access to this truck parking site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Two unsignalized driveways (right-in/right-out) are proposed at John Young Parkway and Sand Lake Road to provide site access. The new driveway on Sand Lake Road is located approximately 480 feet west of the proposed Turnpike off-ramp to Sand Lake Road. The new driveway on the west side of the site connects to the John Young Parkway northbound off-ramp (frontage road) and is located approximately 440 feet north of the John Young Parkway and Sand Lake Road intersection.

Seminole County Site 1B – I-4 at US 17/92

A stop-controlled entrance at School Street is proposed for site access. The *I-4 BtU Segment 3* (FPID 242592-4) will reconfigure the interchange of I-4 and US 17/92. The existing signalized intersection with

US 17/92 and Orange Boulevard will be removed and Orange Boulevard will be routed under US 17/92 and loop back and connect to US 17/92 at School Street at a future signalized intersection. The signal will be implemented as part of the I-4 BtU construction, but construction is not programmed at this time.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

An on-ramp and off-ramp will be provided on I-4 Eastbound to Volusia County Site 1A for direct access to the eastbound facility. No local road access is provided to the site or located nearby.

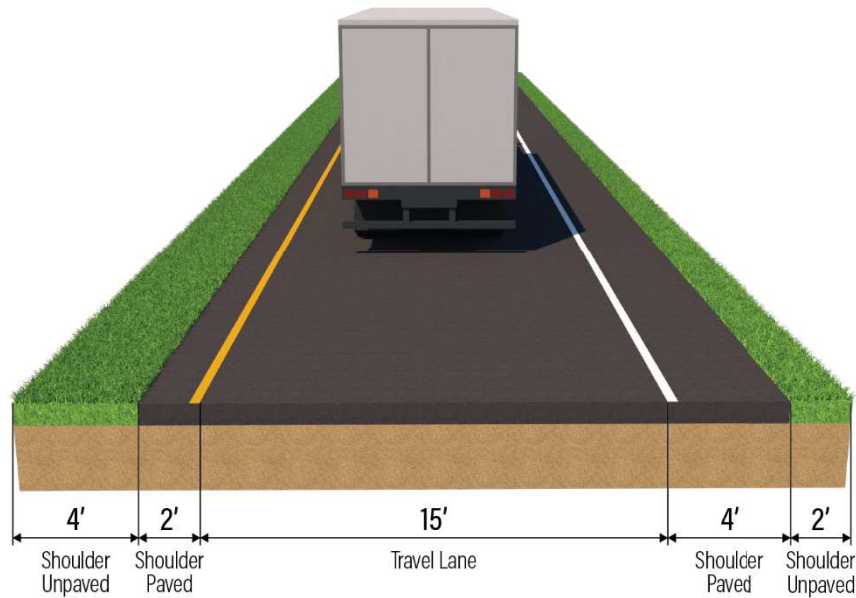
Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

An on-ramp and off-ramp will be provided on I-4 Westbound to Volusia County Site 1B for direct access to the westbound facility. No local road access is provided to the site or located nearby.

8.2 Typical Sections

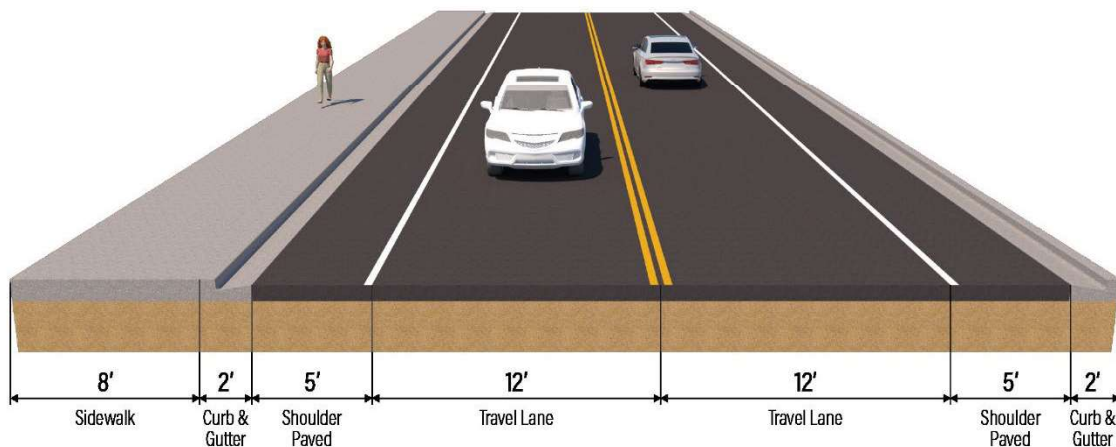
The existing typical section on local roadways adjacent to the proposed truck parking sites will be maintained for all sites except Seminole County Site 1B. Access to both Volusia County Site 1A and Volusia County Site 1B from I-4 Eastbound and I-4 Westbound will be accommodated via one-lane on- and off-ramps. The typical section for these ramps, depicted in **Figure 8-1**, includes a 15-foot travel lane, and a 6-foot inside and outside shoulder. The inside shoulder is two-foot paved and four-foot unpaved, while the outside shoulder is four-foot paved and two-foot unpaved.

Figure 8-1: Volusia County Site 1A and Site 1B – Ramp Typical Section



Additionally, School Street will be widened to provide easier access for trucks to reach Seminole County Site 1B. The proposed typical section for School Street, depicted in **Figure 8-2**, will be an undivided local road, with one 12-foot-wide travel lane, a 5-foot paved shoulder, and a Type F curb and gutter in each direction. The typical sections from the 60% design plans are included in **Appendix A**. Additionally, an eight-foot-wide sidewalk is proposed alongside the north side of School Street to provide pedestrian access between Seminole County Site 1B and the existing sidewalk along US 17/92. The total typical section width is 46 feet with ROW varying from 59 to 75 feet wide.

Figure 8-2: Seminole County Site 1B – School Street Typical Section



8.3 Access Management

Access management and/or median modifications are anticipated for several of the preferred truck parking sites and are further detailed below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

In the No-Build Alternative, the *CR 532/Osceola Polk Line Road Capacity Improvements* project will include a divided median on CR 532. As part of the Preferred Alternative for Osceola County Site 1, a new signalized entrance at CR 532 (new median opening) is proposed for access to the site. To access the site, a westbound CR 532 left turn lane and eastbound CR 532 right turn lane are proposed. This will increase the capacity of truck traffic entering the site without slowing down traffic on the two through lanes in each direction on CR 532.

The new signal meets Osceola County access management standards by providing 1,375 feet between the closest signal located at the proposed PPE northbound off-ramp. This exceeds the minimum signal spacing requirement of 1,320 feet. The No-Build Alternative includes a full median opening at the Sabal Trail Gas Company proposed for the *CR 532/Osceola Polk Line Road Capacity Improvements* project. Access management standards for the full median opening spacing requirement between the proposed truck parking entrance and the proposed Sabal Trail Gas Company entrance will not be met in the proposed condition. Based on discussions with Osceola County staff, this median opening west of the truck parking entrance will be very low volume and is needed for large trucks to enter and exit.

Orange County Site 1 – Sand Lake Road at John Young Parkway

One unsignalized driveway (right-in/right-out) is proposed at both John Young Parkway and Sand Lake Road to provide site access from surrounding roadways. No median modifications are proposed on either Sand Lake Road or John Young Parkway to accommodate the Preferred Alternative for this truck parking site. These driveways meet the minimum connection spacing requirements of 245 feet.

Seminole County Site 1B – I-4 at US 17/92

A raised traffic separator on School Street just west of the site entrance is proposed to prevent trucks leaving the site from heading westbound on School Street and ultimately, traveling on the narrower Elder Road. This median modification will still allow passenger vehicles to travel on School Street from US 17/92 to Elder Road. The raised traffic separator will guide trucks to turn east out of the site and take the shorter and quicker access to US 17/92 and I-4.

In the existing condition, there is a center bi-directional turn lane and no median on US 17/92 at School Street. This access will not be modified or changed from its current configuration. For the Preferred Alternative, signage will direct trucks leaving the site on eastbound School Street to turn right onto southbound US 17/92 which allows access to the I-4 and SR 46 interchange. This will reduce potential conflicts and delays at the US 17/92 and School Street intersection and improve safety. As part of the future I-4 BtU project, the intersection of School Street and US 17/92 is proposed as a signalized intersection, with trucks traveling on eastbound School Street able to make a left turn onto US 17/92.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

As part of this site, an on-ramp and off-ramp is proposed to provide direct access from I-4.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As part of this site, an on-ramp and off-ramp is proposed to provide direct access from I-4.

8.4 Right of Way

The total amount of ROW required for the Preferred Alternative is 262.2 acres. The Preferred Alternative is anticipated to require ROW from 31 parcels. **Table 8-1** summarizes the ROW impacts and potential relocations for the Preferred Alternative for each independent site. Many of the sites were located on vacant parcels. Therefore, no relocations are anticipated at Osceola County Site 1, Orange County Site 1, Volusia County Site 1A, or Volusia County Site 1B. The Seminole County Site 1B is anticipated to require three relocations, these are detailed in the CSRP, in the project file.

The site concepts shown in **Appendix A** provide an overview of the anticipated ROW impacts for the Preferred Alternative.

Table 8-1: Preferred Alternative ROW Impacts

Preferred Site	Impact (acres)	Parcels Impacted	Relocations
Osceola County Site 1	40.1	18	0
Orange County Site 1	14.6	2	0
Seminole County Site 1B	17.4	7	3
Volusia County Site 1A	73.3	3	0
Volusia County Site 1B	116.8	1	0

FDOT will carry out a ROW and Relocation Program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646 as amended by Public Law 100-17). FDOT provides several brochures that describe, in detail, the FDOT’s Relocation Assistance Program and ROW acquisition program including the “Residential Relocation Under the Florida Relocation Assistance Program”, and “Relocation Assistance Program Personal Property Moves”.

8.5 Design Variations and Design Exceptions

No design variations or design exceptions are anticipated with the construction of any of the truck parking facilities.

8.6 Multimodal Accommodations

Overall, the preferred truck parking sites seek to maintain or improve the existing multimodal accommodations and are further detailed below. Osceola County Site 1, Orange County Site 1, and Seminole County Site 1B provide sidewalk connections to the existing sidewalk of the adjacent roadway. As Volusia County Site 1A and Volusia County Site 1B are located along the limited access I-4, no external sidewalk connection is necessary. No bicycle or transit facilities were improved or impacted for any of the preferred sites.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

As part of the CR 532 widening project (Construction programmed for FY 2025 to FY 2026), a six-foot sidewalk is proposed to the south side of CR 532. Osceola County Site 1 has a proposed driveway to access the site that will intersect this sidewalk. Curb ramps are proposed at the new CR 532 sidewalk to allow pedestrians to cross the driveway. Additionally, an eight-foot sidewalk surrounding the truck parking area is proposed. This sidewalk will allow pedestrians to safely walk from their individual truck parking spot to the restroom building. Additionally, a sidewalk connection from the site to the sidewalk along CR 532 is proposed.

Orange County Site 1 – Sand Lake Road at John Young Parkway

As part of the Florida’s Turnpike interchange project at Sand Lake Road, a six-foot sidewalk is planned for the north side of Sand Lake Road. Orange County Site 1 has a proposed driveway to access the site that will intersect this sidewalk. Curb ramps are proposed at the new sidewalks to allow pedestrians to cross the driveway. Additionally, an eight-foot sidewalk surrounding the truck parking area is proposed. This sidewalk will allow pedestrians to safely walk from their individual truck parking spot to the restroom building. Additionally, a sidewalk connection from the site to the sidewalk along Sand Lake Road is proposed.

Seminole County Site 1B – I-4 at US 17/92

As of June 2024, there are not any sidewalks that run along School Street near the entrance of Seminole County Site 1B. To increase accessibility to this site, an eight-foot sidewalk is proposed to the north of School Street from the future entrance of Seminole County Site 1B east to the existing sidewalk that runs on the west side of US 17/92. Additionally, a five-foot sidewalk surrounding the truck parking site is proposed. This sidewalk will allow pedestrians to safely walk from their individual truck parking spot to the restroom building.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

As the site is located immediately off I-4, there are no existing multimodal accommodations. However, Volusia County Site 1A will have an eight-foot sidewalk surrounding the truck parking site to allow pedestrians to safely walk from their individual truck parking spot to the restroom building within the site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

As the site is located immediately off I-4, there are no existing multimodal accommodations. However, Volusia County Site 1B will have an eight-foot sidewalk surrounding the truck parking site to allow pedestrians to safely walk from their individual truck parking spot to restroom building within the site.

8.7 Intersection Concepts

The intersections and any proposed changes for each truck parking site are described below. The concept plans for each preferred site are included in **Appendix A**.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The site is located at the southeast corner of the future interchange of CR 532 and PPE. The entrance to this site is located about 1,350 feet east of this future interchange. As previously mentioned, a left turn lane for westbound traffic is proposed at this intersection, along with a right turn lane for eastbound traffic. Additionally, this intersection is proposed to be signalized as part of the Preferred Alternative.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The site is located at the northeast corner of the intersection of Sand Lake Road and John Young Parkway. No intersection changes are proposed at this intersection.

Seminole County Site 1B – I-4 at US 17/92

The entrance to this site is located just east of the intersection of US 17/92 and School Street. No intersection changes are proposed at this intersection.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

This site is located immediately off I-4; therefore, there are no intersections for this site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

This site is located immediately off I-4; therefore, there are no intersections for this site.

8.8 Intelligent Transportation System and TSM&O Strategies

Across all five preferred sites, several ITS and TSM&O strategies are proposed for further consideration during the Design phase for each site. These strategies are based on the existing site conditions and industry best practices for freight parking and described below.

Parking Detection Equipment

Several options exist for parking detection solutions and are summarized below.

- The VADE Camera Detection System, which has been successfully implemented at multiple Florida rest stops to monitor real time parking spaces
- The Pebble vehicle sensor, which does not rely on a camera system. This has not been as thoroughly tested as the VADE Camera system
- BlueBand offers a mat-based sensor which can be deployed at the entrance of each parking site to track vehicle occupancy

One of these TPAS solutions (or a different, equivalent TPAS solution) will be installed at each site to inform truck drivers on I-4 of the availability of parking spaces at the truck parking site.

Communications

FDOT prefers to connect the parking detection system to fiber optic cabling. Orange County Site 1, Seminole County Site 1B, Volusia County Site 1A and Volusia County Site 1B have fiber adjacent to the sites. Osceola County Site 1 will have fiber optic cable installed during the widening of CR 532.

Additional On-site Camera Coverage

In addition to the sensor or camera-based detection system, secondary CCTV cameras are recommended at each parking site for safety purposes and to verify parking availability.

Additional Merging-Lane Camera Coverage

For Volusia County Site 1A and B, CCTV cameras are recommended to be deployed to cover the merging lanes onto I-4. The ability for FDOT traffic operations to assess the merge condition in real time can improve response time when issues are presented.

Dynamic Message Signs (DMS) on I-4

Dynamic Message Signs are recommended to be deployed on I-4 upstream of freight parking sites. According to the National Coalition on Truck Parking, best practice established by other state DOTs is to deploy Dynamic Message Signs (DMS) on the mainline approximately 15-30 miles prior to the freight parking site. Typically, these DMS include the total number of available spaces for the next two to three freight parking sites.

DMS On-site

For larger truck parking sites, DMS is recommended to be deployed within the site to indicate to drivers which aisles have available parking spaces.

Electric Vehicle Charging Stations

Additional coordination with FDOT Central Office is recommended during the Design Phase of this project, to determine if, and to what extent, heavy-duty EV charging equipment should be installed at the preferred freight parking sites. Per FDOT District Five, the Design phase will assume that 15% of parking spaces have conduit infrastructure to support future EV charging stations or shore power for a minimum 10% EV compatibility.

SunGuide and FL 511

Data collected from each parking site is recommended to be automatically uploaded to SunGuide and FL 511, and to be available for any third-party traveler information systems via an application programming interface (API).

8.9 Landscape

Landscaping will be provided at each of the truck parking sites. In the Design phase, landscaping plans will be prepared based on site configurations. Landscaping concepts at each of the sites are described below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas surrounding the restroom building and within parking islands will be included at this site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas surrounding the restroom building and within parking islands will be included at this site.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas will be included at this site. A raised berm is proposed at the northeast corner of the site in order to maintain a visual barrier between the truck parking site and Orange Boulevard.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas will be included at this site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B will have landscaping installed around the perimeter of the truck parking site. Additionally, greenspace areas will be included at this site.

8.10 Lighting

Conventional lighting is proposed at all truck parking sites, but will need to be further evaluated in the Design phase for all truck parking sites. As part of a VE Study recommendation, high mast lighting will be considered for Orange County Site 1. Additionally, wildlife sensitive lighting will be provided around the preferred Volusia County sites due to the proximity of the existing wildlife crossing.

8.11 Wildlife Crossings

No wildlife crossings exist within the vicinity of Osceola County Site 1, Orange County Site 1, or Seminole County Site 1B. However, there are two wildlife crossings in the vicinity of Volusia County Site 1A and Volusia County Site 1B. The first wildlife crossing is located underneath I-4, 500 feet to the southwest of the Eastbound I-4 off-ramp to Volusia County Site 1A, and 900 feet to the northeast of the Westbound I-4 off-ramp to Volusia County Site 1B. The second wildlife crossing is located underneath I-4, 1,600 feet to the southwest of the Westbound I-4 on-ramp from Volusia County Site 1B.

The Volusia County wildlife crossings facilitate the movement of wildlife between Tiger Bay Wildlife Management Area on the north side of I-4 to South Tomoka Wildlife Management Area on the south side of I-4. The construction of Volusia County Site 1A and Volusia County Site 1B are not anticipated to affect the existing wildlife crossings due to the preservation of a wildlife corridor along the east side of Volusia Site 1B at the location of the existing crossing. However, Volusia Site 1A will impact an existing jump-out location, therefore this jump-out is proposed to be relocated approximately 2,700 feet further east. In addition to the two existing wildlife crossings, a wildlife corridor is proposed at Volusia County Site 1B. This 38.6-acre wildlife corridor will be located along the east parcel line of the site and will allow wildlife to safely travel from the existing wildlife crossing underneath I-4 to Tiger Bay Wildlife Management Area.

8.12 Permits

The environmental permits anticipated for each of the preferred sites are summarized in **Table 8-2**. Permits will be further coordinated in the Design phase for each site.

Table 8-2: Anticipated Permits

Site	Permit Jurisdiction	Permit
Osceola County Site 1	Federal	404 Permit
	State	DEP or WMD Environmental Resource Permit (ERP)
		National Pollutant Discharge Elimination System Permit (NPDES)
		FWC Gopher Tortoise Relocation Permit
FDEP	Dewatering Permits	
Orange County Site 1	Federal	404 Permit
	State	WMD ERP
		National Pollutant Discharge Elimination System Permit
		FWC Gopher Tortoise Relocation Permit
FDEP	Dewatering Permits	
Seminole County Site 1B	Federal	404 Permit
	State	WMD ERP
		NPDES Permit
		FWC Gopher Tortoise Relocation Permit
FDEP	Dewatering Permits	
Volusia County Site 1A	Federal	404 Permit
	State	DEP or WMD ERP
		NPDES
		FWC Gopher Tortoise Relocation Permit
FDEP	Dewatering Permits	
Volusia County Site 1B	Federal	404 Permit
	State	WMD ERP
		NPDES
		FWC Gopher Tortoise Relocation Permit
FDEP	Dewatering Permits	

8.13 Drainage and Stormwater Management Facilities

The PD&E Study included an assessment of potential stormwater treatments to accommodate each preferred truck parking site. The stormwater runoff from each site will be collected and conveyed to the recommended ponds at or near the same location the runoff in existing conditions discharges from each site. For detailed site plans, see **Appendix A**. The proposed ponds have been sized to achieve the required water quality treatment and water quantity attenuation in accordance with SFWMD, SJRWMD, and FDOT criteria. A summary of the drainage facilities for each site is described below.

For further information on proposed drainage conditions, see the Conceptual Drainage Report, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The preferred Osceola County Site 1 will include two wet detention stormwater ponds, with a combined pond area of 11.38 acres. Pond 1 is located along the east parcel line of the site and is 7.95 acres. Pond 2 is located in the southwest corner of the site and is 3.43 acres. The site is located within an open basin and discharges to an adjacent wetland to the south. The CR 532 widening project is in design (not yet permitted) adjacent to the site and includes construction of a new wet detention stormwater pond on the truck parking site. Since this pond will need to be removed to accommodate the preferred site, compensation has been provided for the lost pond volume as a joint use pond (shared).

Orange County Site 1 – Sand Lake Road at John Young Parkway

The preferred Orange County Site 1 will include two wet detention stormwater ponds, with a combined pond area of 5.01 acres. Pond 1 is located in the northern portion of the site along John Young Parkway and is a 3.91 acre wet detention pond. Pond 2 is located on the southern edge of the site along Sand Lake Road and is a 1.10 acre linear wet detention pond. The site is located within an open basin and discharges to wetlands associated with Shingle Creek via three cross drains beneath John Young Parkway.

As of June 2024, an existing wet detention pond “John Young Pond 4” is serving as the stormwater management system for portions of John Young Parkway and Sand Lake Road. The existing pond will be removed with the construction of the preferred Orange County Site 1; therefore, treatment and attenuation volumes must be replaced in kind, and the proposed stormwater ponds will serve as a joint-use stormwater management facility between the preferred site and John Young Parkway and Sand Lake Road.

This site is adjacent to a new proposed off-ramp from Florida’s Turnpike to Sand Lake Road (FPID #433663-1: Sand Lake Road and SR 91 Interchange), which was let for construction in March 2024, and includes construction of stormwater treatment ponds (“Pond 1A” and “Pond 1B”) on both sides of the off-ramp. The 5.62-acre pond proposed as a part of the Turnpike project was re-configured as part of the Preferred Alternative for Orange County Site 1 to optimize the number of truck parking spaces. The future pond modification will be verified during the Design phase of Orange County Site 1.

Based on coordination with FDOT and FTE, further evaluation of this area is needed once the subsequent Design phase for the truck parking site is initiated allowing more detailed design of the site plan which will facilitate further drainage analysis. As both projects move forward, more coordination will need to occur between both design teams, FDOT District 5 and FTE, to ensure that enough treatment and attenuation volume is provided to meet the requirements for both projects.

Seminole County Site 1B – I-4 at US 17/92

The preferred Seminole County Site 1B will include two stormwater ponds (one wet detention and one dry retention), with a combined pond area of 3.73 acres. This site has been divided into two basins to account for different control elevations in each pond and to better analyze the volumes on the site. Within Basin 1, Pond 100 is located in the west side of the site and is a 2.55-acre wet pond. Within Basin 2, Pond 200 is located along the eastern parcel line and is a 1.18-acre dry retention pond. The site is located within an open basin and discharges to Lake Monroe via a ditch within FDOT ROW.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The preferred eastbound Volusia County Site 1A will include one wet detention stormwater pond. Pond 1 is located along the southeast parcel line and is 7.15 acres. The site is located within an open basin and discharges to surrounding wetlands toward the Tomoka River OFW.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The preferred westbound Volusia County Site 1B will include two wet detention stormwater ponds for a combined area of 10.78 acres. Pond 1 is located adjacent to, and east of, the truck parking site and is 2.39 acres. The second pond will involve modification of existing Pond I, which was originally constructed with the I-4 widening project (FPID: 408464-2). Pond I will be expanded from its existing size (approximately 1.93 acres) to 8.39 acres, an increase of 6.46 acres. The site will also include one FPCA located adjacent to and south of the truck parking site which will provide 2.75 acre-feet of compensation. The site is located within an open basin and discharges to the Tiger Bay OFW.

8.14 Floodplain Analysis

Floodplain analysis for each site is described below. For further information on floodplain analysis, see the Conceptual Drainage Report and LHR, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

The FEMA FIRM for Osceola County, Community Panel Number 12097C0045G, dated June 18, 2013, indicate that the entire Osceola County Site 1 lies within Zone X of the 100-year floodplain, which are areas outside the 100-year floodplain and higher than the elevation of the 0.2 percent-annual-chance flood. There are no anticipated floodplain impacts associated with this site; therefore, no floodplain compensation is necessary. There are no federally regulated floodways within the site limits.

Orange County Site 1 – Sand Lake Road at John Young Parkway

The FEMA FIRM for Orange County, Community Panel Number 12095C0410F, dated September 25, 2009, indicates portions of Orange County Site 1 lie within Zone AE of the 100-year floodplain, which are areas that have a 1% chance of flooding every year. The site was determined to have 19.22 acre-foot (ac-ft) of floodplain impacts. Additionally, construction of the site will remove 5.40 ac-ft of floodplain compensation volume provided by the existing John Young Parkway and Sand Lake Road pond resulting in a total of 24.62 ac-ft of floodplain impacts.

Floodplain compensation volume will be provided within the stormwater ponds as they will be hydraulically connected to the 100-year floodplain, for a total of 10.30 ac-ft of provided compensation volume. Remaining floodplain impacts can be compensated for in multiple ways during the Design phase of the site. A preliminary estimate of the potential rise of the BFE was performed to show that there will be an insignificant rise in the floodplain elevation given the large extent of the floodplain boundary.

There are no federally regulated floodways within the site limits.

Seminole County Site 1B – I-4 at US 17/92

The FEMA FIRM for Seminole County, Community Panel Number 12117C0055F, dated September 28, 2007, indicate that the Seminole County Site 1B lies within Zone X of the 100-year floodplain, which are areas outside the 100-year floodplain and higher than the elevation of the 0.2 percent-annual-chance flood. There are no anticipated floodplain impacts associated with this site; therefore, no floodplain compensation is necessary. There are no federally regulated floodways within the site limits.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

The FEMA FIRM for Volusia County, Community Panel Number 12127C0500H, dated February 19, 2014, indicate portions of the eastbound Volusia County Site 1A lie within Zone A of the 100-year floodplain, which are areas that have a 1% chance of flooding every year with predicted flood water elevations that have not been established. The site was determined to have 17.48 ac-ft of floodplain impacts.

Floodplain compensation volume will be provided within the stormwater pond as it will be hydraulically connected to the 100-year floodplain, for a total of 4.26 acres of provided floodplain compensation. Additionally, two separate dedicated FPCAs were identified within the site. FPCA 1 and FPCA 2 provide 0.91 ac-ft and 1.00 ac-ft of compensation, respectively. The total compensation available within the site is 6.17 acres. The remaining floodplain impacts can be compensated for in multiple ways during the Design phase of the project. A preliminary estimate of the potential rise of the BFE was performed to show that there will be an insignificant rise in the floodplain elevation given the large extent of the floodplain boundary.

There are no federally regulated floodways within the site limits.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

The FEMA FIRM for Volusia County, Community Panel Number 12127C0500H, dated February 19, 2014, indicate the entire westbound Volusia County Site 1B lies within Zone A of the 100-year floodplain, which are areas that have a 1% chance of flooding every year with predicted flood water elevations that have not been established. The site was determined to have 62.75 ac-ft of floodplain impacts.

Floodplain compensation volume will be provided within the stormwater pond as it will be hydraulically connected to the 100-year floodplain, for a total of 13.53 acres of provided floodplain compensation between the pond and two additional FPCAs. The remaining floodplain impacts can be compensated for in multiple ways during the Design phase of the project. A preliminary estimate of the potential rise of the BFE was performed to show that there will be an insignificant rise in the floodplain elevation given the large extent of the floodplain boundary.

There are no federally regulated floodways within the site limits.

8.15 Transportation Management Plan

As the preferred sites become further refined in the Design phase of this project, a detailed transportation management plan will be developed for each site. Because the construction of each site is not expected to impact the traffic on adjacent roadways, no phasing is anticipated for the construction of each site.

8.16 Constructability

Overall, each of the truck parking sites are anticipated to have few constructability issues, as most of the sites are located on vacant parcels. Constructability will be further evaluated in the Design phase. Further details about constructability for each site are described below.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 is located on vacant parcels and the majority of the construction will be on-site. Temporary lane closures along CR 532 may be needed in order to construct the eastbound right turn lane, westbound left turn lane, and driveway connection to the site.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 is located on vacant parcels and the majority of the construction will be on-site. Temporary lane closures along the outer lanes of westbound Sand Lake Road and the northbound John Young Parkway on-ramp may be needed in order to construct the driveway connections to the site. Ramp access will be maintained during construction of the truck parking site. As there are no other improvements to either Sand Lake Road or John Young Parkway, no detours are anticipated.

Seminole County Site 1B – I-4 at US 17/92

Seminole County Site 1B is located on developed and undeveloped (vacant) parcels and the majority of the construction will be on-site. School Street will be modified in the vicinity of the truck parking site as discussed in Section 8.2. Temporary lane closures along School Street may be needed in order to construct the driveway connection to the site.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A is located on vacant parcels and the majority of the construction will be on-site. Temporary lane closures along the outer lane on eastbound I-4 may be needed in order to construct the on-ramp and off-ramp to the site.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B is located on vacant parcels, and as such, no phasing of construction is necessary. Temporary lane closures along the outer lane on westbound I-4 may be needed in order to construct the on-ramp and off-ramp to the site. Additionally, I-4 Pond I will need to be modified in order to increase the storage volume for both I-4 and Volusia County Site 1B.

8.17 Construction Impacts

Overall, each of the truck parking sites are anticipated to have few impacts resulting from the construction of each of the sites, as the sites are primarily located on vacant parcels. Construction impacts will be further evaluated in the Design phase. Further details about construction impacts for each site are described below.

8.17.1 Air Quality

The air quality analysis performed for all five preferred sites is documented in the AQTM, in the project file. All five preferred truck parking sites have been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and have not been linked with any special mobile source air toxic

(MSAT) concerns. An air quality screening was completed for all five preferred truck parking sites in accordance with the FDOT PD&E Manual. The No-Build and proposed Build conditions for the preferred truck parking sites were subject to a carbon monoxide (CO) screening model. Based on the results from the screening model, the highest project-related CO one-hour and eight-hour levels are predicted to be below the NAAQS. As such, the project "passes" the CO screening.

During the construction of each truck parking site, particulate emissions associated with construction activity are anticipated to temporarily increase. 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.

8.17.2 Noise and Vibration

A noise analysis was conducted for the five preferred truck parking sites and is documented in the NSTM, in the project file. The National Cooperative Highway Research Program (NCHRP) guidance for stationary sources (*Supplemental Guidance on the Application of FHWA's Traffic Noise Model*) states that in locations where there are existing highways with moving traffic, these roadways will dominate noise levels and therefore detailed modeling is not needed for the stationary source.

Orange County Site 1 is surrounded by and separated from noise sensitive sites by Florida's Turnpike, John Young Parkway, and Sand Lake Road. Therefore, mainline traffic noise on the surrounding roadways is expected to dominate the noise environment near Orange County Site 1. Per NCHRP guidance for stationary sources, no noise analysis was conducted for this location.

Due to the undeveloped nature of the surrounding land, no noise sensitive sites with areas of frequent human use are located within 1,000-feet of Volusia County Site 1A and Volusia County Site 1B. For this reason, no noise analysis was conducted for the two sites. Additionally, the two sites are located directly adjacent to I-4 and traffic noise levels on this roadway is expected to be similar to existing traffic noise levels, which dominate the noise environment in the vicinity of the two sites.

For Osceola County Site 1, 19 noise sensitive sites were modeled for future noise levels using the methodology detailed in the NCHRP guidance document for stationary sources. No noise impacts are anticipated at any of the receptors analyzed for Osceola County Site 1.

For Seminole County Site 1B, five noise sensitive sites were modeled for future noise levels using the methodology detailed in the NCHRP guidance document for stationary sources. Noise levels are anticipated to increase for three noise sensitive sites in both the No-Build and Build conditions, by a maximum of 2.1 dB(A). Noise barriers were evaluated for these three noise sensitive sites, but were found to not provide a 5 dB(A) reduction for any receptor. The predominant noise sources for the three noise sensitive sites were found to be the adjacent I-4 and US 17/92, therefore no noise barriers constructed for Seminole County Site 1B would be effective at blocking the noise from the roadways. For this reason, noise barriers are not a reasonable or feasible option for noise abatement.

During the construction of each truck parking site, noise and vibration associated with construction activity are anticipated to temporarily increase. It is anticipated that the application of the FDOT Standard Specifications for Road and Bridge Construction will minimize or eliminate most of the potential construction noise and vibration impacts. However, should unanticipated noise or vibration issues arise during the construction process, the project manager, in concert with the District Noise Specialist and the Contractor will investigate additional methods of controlling these impacts.

8.17.3 Contamination

The potential for construction contamination impacts varies among the preferred sites and is documented in detail in each of the CSERs, located in each site's project file. At Osceola County Site 1, the overall site risk for contamination is low, with one medium risk property and no high risk properties. The medium risk property is the CSX Rail whose ROW borders the site ROW and presents the potential for petroleum and pesticide contamination. During the construction phase, additional groundwater and soil sampling is recommended along the southeastern boundary of Osceola County Site 1, particularly near proposed stormwater facilities bordering the rail corridor to ensure the prevention of contamination on-site.

At Orange County Site 1, the overall site risk for contamination is low, with one medium risk property and no high risk properties. The medium risk property is an active Marathon gas station located across Sand Lake Road south of the truck parking site. During the Level I contamination screening, no records were found which indicated a release or a threat of release of contaminants, however due to its proximity to the truck parking site, final plans should be reviewed to evaluate the potential project impacts and need for a Level II Impact to Construction Assessment (ICA).

At Seminole County Site 1B, the overall site risk for contamination is high, with three medium risk properties and one high risk property. The medium risk sites are the North River Fisheries parcels located on the south boundary of the project site; historical agricultural land uses located in the southwest corner of the project site; and the Donnie Myers Luxury Coach parcel located in the center of the project site. The high risk site is the Circle K gas station located in the northeast corner of the project site. Due to the presence of these sites, final plans should be reviewed to evaluate the potential project impacts and need for Level II ICAs.

At Volusia County Sites 1A and 1B, the overall site risk for contamination is low, with no medium risk or high risk properties due to the sites being located on undeveloped forested tracts. As such, while the potential for encountering impacted soils does exist at these sites, no additional investigation is recommended for the design phase.

8.17.4 Water Quality Protection

FDOT stormwater impacts associated with transportation projects are addressed through permitting of stormwater management systems. In accordance with Chapter 62-330.301, F.A.C., to obtain an approval of an ERP, FDOT must provide reasonable assurance that the construction, alternation, operation, maintenance, removal, or abandonment of a project will not adversely affect the quality of receiving waters such that the state water quality standards will be violated.

8.17.5 Species and Habitat Protection

Based on the environmental analysis, the construction of the preferred parking sites may impact protected species at each site. For federally listed species these impacts are classed as "may affect, but is not likely to adversely affect" and for state listed species the impacts are classed as "no adverse effect is anticipated". The potentially impacted species are as follows:

- Osceola County Site 1:
 - Eastern Indigo Snake – Federally listed
 - Florida Panther – Federally listed
 - Sand and Blue-tailed Mole Skink – Federally listed
 - Wood Stork – Federally listed
 - Florida Burrowing Owl – State listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed

- Florida Pine Snake – State listed
- Florida Sandhill Crane – State listed
- Gopher Tortoise – State listed
- Southeastern American Kestrel – State listed
- Roseate Spoonbill – State listed
- Tricolored Bat – Other, candidate species for federal listing
- Orange County Site 1:
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Florida Sandhill Crane – State listed
 - Gopher Tortoise – State listed
 - Southeastern American Kestrel – State listed
 - Roseate Spoonbill – State listed
 - Tricolored Bat – Other, candidate species for federal listing
- Seminole County Site 1B:
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Florida Burrowing Owl – State listed
 - Florida Sandhill Crane – State listed
 - Roseate Spoonbill – State listed
 - Gopher Tortoise – State listed
- Volusia County Site 1A:
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Rugel’s Pawpaw – Federally listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Florida Pine Snake – State listed
 - Florida Sandhill Crane – State listed
 - Gopher Tortoise – State listed
 - Leafless Beaked Orchid – State listed
 - Tricolored Bat – Other, candidate species for federal listing
 - Florida Black Bear – Other
- Volusia County Site 1B:
 - Eastern Indigo Snake – Federally listed
 - Wood Stork – Federally listed
 - Little Blue Heron – State listed
 - Tricolored Heron – State listed
 - Florida Pine Snake – State listed
 - Florida Sandhill Crane – State listed
 - Gopher Tortoise – State listed
 - Hooded Pitcher Plant – State listed
 - Tricolored Bat – Other, candidate species for federal listing
 - Florida Black Bear – Other

To prevent impacts to protected species and habitat during construction, the following commitments will be kept:

- Osceola County Site 1
 - FDOT will utilize the most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* during project construction.
 - FDOT will provide mitigation for impacts to wetlands and to wood stork SFH within the Service Area of the Service-approved wetland mitigation bank and/or wood stork conservation bank.
 - The USFWS is proposing to list the tricolored bat as an endangered species. To prevent disturbance of potential arboreal roost habitat no tree clearing will occur when day-time high temperatures are below 45 degrees, nor during maternity season (May 1st through July 15th).
- Orange County Site 1
 - The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
 - FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of the Service-approved wetland mitigation bank or wood stork conservation bank.
 - If the listing status of the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.
- Seminole County Site 1B
 - The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
- Volusia County Site 1A
 - FDOT will utilize the most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* during project construction.
 - Lighting provided for the truck parking areas will be directed inward with shields to minimize light pollution into adjacent natural areas.
 - ROW acquisition will include a wildlife conservation area, as shown in the concept plans as the remaining area outside of the limits of construction but within the proposed ROW, to provide an enhanced natural buffer. This area will be placed under a conservation easement. The dimensions of the conservation area located outside the fenced truck parking will be coordinated further with regulatory agencies during the Design phase.
 - FDOT will require contractors to remove garbage daily from the construction site or use bear proof containers for securing of food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear (*Ursus americanus floridanus*). Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
 - The existing wildlife jump-out within the limits of the proposed truck parking site will be relocated approximately 2,500 feet northeast, along the existing FDOT ROW, from the tie in from the proposed eastbound on ramp. Additionally, the exclusionary fencing will be extended to accommodate the new jump-out location.
 - The existing wildlife jump-out within the limits of the proposed truck parking site will be relocated approximately 2,500 feet northeast, along the existing FDOT ROW, from the tie in from the proposed eastbound on ramp. Additionally, the exclusionary fencing will be extended to accommodate the new jump-out location.

- A survey for listed plant species, Rugel's pawpaw, and leafless beaked orchid will be performed during the Design phase and coordination with Florida Department of Agriculture and Consumer Services (FDACS) and USFWS will occur if impacts to the species are anticipated.
- If the listing status of the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.
- Volusia County Site 1B
 - The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
 - The FDOT will provide mitigation for impacts to wood stork SFH within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.
 - Lighting provided for the truck parking areas will be directed inward with shields to minimize light pollution into adjacent natural areas.
 - ROW acquisition will include a wildlife corridor and a wildlife conservation area, as shown in the concept plans, that will maintain wildlife movement via the existing wildlife crossing on I-4 adjacent to the truck parking facility. This area will be placed under a conservation easement. Natural buffers around truck parking areas will be maintained to reduce potential light, vibration, and noise impacts to adjacent natural areas. The dimensions of the wildlife corridor and conservation area located outside the fenced truck parking will be coordinated further with regulatory agencies during the Design and ROW phases.
 - FDOT will require contractors to remove garbage daily from the construction site or use bear proof containers for securing of food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear (*Ursus americanus floridanus*). Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
 - A survey for the State listed plant species, Hooded pitcher plant (*Sarracenia minor*) will be performed during the Design phase and coordination with FDACS will occur if impacts to the species are anticipated.
 - If the listing status of the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.

8.17.6 Maintenance of Traffic and Access

Temporary lane closures along adjacent existing roadways may be needed in order to construct the connections to the sites. These adjacent roadways include CR 532 for Osceola County Site 1, Sand Lake Road and John Young Parkway for Orange County Site 1, School Street for Seminole County Site 1B, and I-4 for both Volusia County Site 1A and Volusia County Site 1B. Additionally, pedestrian traffic may be rerouted near each site connection.

A maintenance of traffic plan shall be established in order to ensure businesses and residences located adjacent to each of the sites can maintain access to the local roadway system during the construction phase of each site.

8.17.7 Safety Considerations

The construction of the site shall adhere to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction. Traffic laws shall be enforced within the work zone area in order to decrease the number of crashes within the work zone area.

8.17.8 Public Involvement and Community Interaction

To combat crashes in work zone areas, a communication program shall be established to increase public awareness of the construction of each site, in addition to education regarding work zone safety.

8.18 Special Features

Overall, the preferred truck parking sites have many common features with each other and other truck parking spots across the county. However, some of the preferred truck parking sites have unique features at their sites and are described below. Typical restroom buildings at each site are 7,500 square feet and will have similar bathroom features to other FDOT rest stop restrooms. Security will be provided at each site and will be further evaluated in future phases. In general, aesthetics, lighting, landscaping buffers, and noise will be further evaluated in the Design phase.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Osceola County Site 1 has four oversize parking spaces. These spaces are 125-feet long and 20-feet wide, which is significantly bigger than the rest of the truck parking spots in this site, which are 90-feet long and 15-feet wide. Additionally, Osceola County Site 1 has a 300-foot buffer between any pavement for this site and Osceola County parcel 06-26-28-0000-0080-0000, which is the nearest residential parcel. This buffer is in place to minimize any noise coming from the truck parking site. Based on the VE Study recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Osceola County Site 1.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Orange County Site 1 has two right-in/right-out entrances, which increases accessibility to and from the site. The first entrance is located along westbound Sand Lake Road, and the second entrance is located on the northbound John Young Parkway on-ramp from Sand Lake Road. A restroom building is assumed at the back of the parking site.

Seminole County Site 1B – I-4 at US 17/92

In the northeast corner of Seminole County Site 1B, a large, raised berm is proposed along Orange Boulevard to decrease the visibility of the site to nearby properties. Also, one of the ponds was proposed along the eastern portion of the truck parking site to provide a visual buffer adjacent to US 17/92.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1A has a larger, 27,000 square foot restroom building at the front of the site, along with the standard 7,500 square foot restroom building at the back of the site. Additionally, the site has ten passenger vehicle parking spots. These are located between the larger restroom building and the main truck parking sites and are intended for maintenance vehicles. Based on the VE Study recommendations, FDOT will modify the site layout during the Design phase to centralize the restroom for Volusia County Site 1A.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Volusia County Site 1B has a larger, 27,000 square foot restroom building located in the center of the truck parking facility. Additionally, the site has ten passenger vehicle parking spots. These are located adjacent to the restroom building and are intended for maintenance vehicles.

8.19 Utilities

Existing utilities information was gathered regarding type and location, as described in Section 3.15. All the site location alternatives were developed to minimize utility impacts. Utilities will be verified during the Design phase and coordination with UAOs will occur to avoid and minimize utility relocations as feasible. If utilities eligible for reimbursement are located during the Design phase, all measures will be taken to avoid impacting facilities identified in lands of compensable interest. Details about potential utility impacts are described in the UAPs, in the project file.

Osceola County Site 1 – CR 532 and Poinciana Parkway Extension

Due to the nature of the existing conditions throughout the project area, it is not anticipated that Osceola County Site 1 will impact utilities within easements or lands of compensable interests. At the date of contact, relocations of facilities owned by CenturyLink Local were identified to be in easements near the residential properties just west of Sandy Oak Drive. Measures will be taken during the Design phase to avoid impacts to facilities within this easement. If relocation is determined necessary for the utility within this easement, they will be eligible for reimbursement.

Additionally, the preferred truck parking site is anticipated to be designed around the 50-foot natural gas easement on the west side of the site owned by Florida Southeast Connection, LLC and the private pipeline easement on the north side of CR 532 owned by Gulfstream Natural Gas/Williams.

Orange County Site 1 – Sand Lake Road at John Young Parkway

Due to the nature of the existing conditions throughout the project area, it is not anticipated that Orange County Site 1 will impact any utilities. A potential utility easement was identified on the southeast corner of the site where overhead electric enters the property outside of the ROW. Measures will be taken during the Design phase to avoid impacts to facilities within this easement.

Seminole County Site 1B – I-4 at US 17/92

Due to the nature of the existing conditions throughout the project area, it is anticipated that Seminole County Site 1B will impact utilities within easements or lands of compensable interests. At the date of contact, relocations of facilities owned by Bright House Networks/Charter, Florida Power and Light Distribution, and Seminole County Environmental Services were identified as located in easements. Measures will be taken during the Design phase to avoid impacts to facilities within these easements. If relocation is determined necessary for any of the utilities within these easements, they will be eligible for reimbursement.

Volusia County Site 1A – I-4 Eastbound Direct Access, 4.5 miles west of I-95

Due to the nature of the existing conditions throughout the project area, it is anticipated that Volusia County Site 1A will not impact any utilities. At the date of contact, no relocations of facilities located in easements were identified.

Volusia County Site 1B – I-4 Westbound Direct Access, 4.5 miles west of I-95

Due to the nature of the existing conditions throughout the project area, it is anticipated that Volusia County Site 1B will not impact any utilities. At the date of contact, no relocations of facilities located in easements were identified.

8.20 Cost Estimates

The five preferred sites have a total project cost of \$318.6 million which includes costs for final design, ROW acquisition, and construction. **Table 8-3** provides a summary of the Preferred Alternative cost estimates by site.

The detailed construction cost estimates are included in **Appendix D**. Note that the construction cost component of the total costs shown in the table below are higher than what is shown in the LREs. A 15% construction cost contingency was included in the table below.

Table 8-3: Preferred Sites Cost Estimates Summary

Preferred Site	Estimated Total Cost (millions)
Osceola County Site 1	\$62.3
Orange County Site 1	\$27.7
Seminole County Site 1B	\$55.1
Volusia County Site 1A (EB)	\$82.3
Volusia County Site 1B (WB)	\$91.2

*Notes:
 Project Costs are in 2024 dollars.*

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9. References

- American Transportation Research Institute (ATRI). 2020. *Critical Issues in the Trucking Industry*
- Central Florida Expressway Authority. 2020. *State Road 538 (Poinciana Parkway) Extension to County Road 532*. <https://www.cfxway.com/for-travelers/projects/state-road-538-poinciana-parkway-extension-to-county-road-532/>
- Central Florida Expressway Authority. 2022. *County Road 532/Osceola Polk Line Road Capacity Improvements*. <https://www.cfxway.com/for-travelers/projects/county-road-532-osceola-polk-line-road-capacity-improvements/>
- Federal Highway Administration (FHWA). 2002. *Model Development for National Assessment of Commercial Vehicle Parking*
- Florida Administrative Code, Chapter 62-345. 2005. *Uniform Mitigation Assessment Method*. <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-345>
- Florida Administrative Code, Chapter 14-97. 2009. *State Highway System Access Management Classification System and Standards*. <https://www.flrules.org/gateway/ChapterHome.asp?Chapter=14-97>
- Florida Department of Transportation. 2017. *District Four Truck Parking Supply and Demand Study*
- Florida Department of Transportation. 2017. *Districtwide Freight Truck Parking Inventory for District One*
- Florida Department of Transportation. 2019. *District Five Truck Parking Study Phase I Executive Summary*
- Florida Department of Transportation. 2020. *Building a Better I-4 Rest Area Handout*
- Florida Department of Transportation. 2021. *2022 FDOT Statewide Transportation Improvement Program*
- Florida Department of Transportation. 2021. *District Five Truck Parking Study Phase II Final Report*
- Florida's Turnpike. 2021. *Poinciana Parkway Extension PD&E*. <https://floridasturnpike.com/turnpike-projects/featured-projects/poinciana-parkway-extension/>
- Florida Department of Transportation. 2022. *2023-2027 FDOT Five Year Work Program*
- Florida Department of Transportation. 2022. *Florida's Electric Vehicle Infrastructure Deployment Plan* <https://www.fdot.gov/planning/policy/ev/default>

Florida International University. 2012. *Statewide Commercial Motor Vehicle Parking Trends at Rest Areas*

MetroPlan Orlando. 2013. *Central Florida Regional Freight and Goods Movement Study*

MetroPlan Orlando. 2021. *MetroPlan Orlando FY 2021/22 – FY 2025/26 Transportation Improvement Program*

MetroPlan Orlando. 2022. *MetroPlan Orlando Metropolitan Transportation Plan*

Miami-Dade Metropolitan Planning Organization (MPO). 2012. *Development of Truck Parking Facilities in Miami-Dade*

Miami-Dade Metropolitan Planning Organization (MPO). 2018. *Assessment for Potential Truck Parking Facilities in Miami-Dade - Final Report*

Osceola County. 2022. *Osceola County Comprehensive Plan 2040 (2019)*.
https://library.municode.com/fl/osceola_county/codes/comprehensive_plan

Osceola County. 2022. *Osceola County Land Development Code*. Retrieved from
https://library.municode.com/fl/osceola_county/codes/land_development_code

River to Sea Transportation Planning Organization (TPO). 2020. *River to Sea Transportation Planning Organization Long Range Transportation Plan (LRTP) Connect 2045*

Spear, Chris and Spencer, Todd of American Trucking Associations. (2022). *[Joint Letter to Secretary Buttigieg]*. <https://www.trucking.org/sites/default/files/2022-09/ATA-OOIDA%20Joint%20Letter%20to%20Secy%20Buttigieg%20re%20Truck%20Parking.pdf>

Trucker Path. 2018. *Truck Parking Report*

U.S. Department of Transportation. 2015. *Jason's Law Truck Parking Survey*.
https://ops.fhwa.dot.gov/freight/infrastructure/truck_parking/jasons_law/truckparkingsurvey/

U.S. Fish and Wildlife Service. 2010. *South Florida Programmatic Concurrence Key for the Wood Stork*

U.S. Fish & Wildlife Service. 2022. *Standard Protection Measures for the Eastern Indigo Snake*