

# 1. Project Summary

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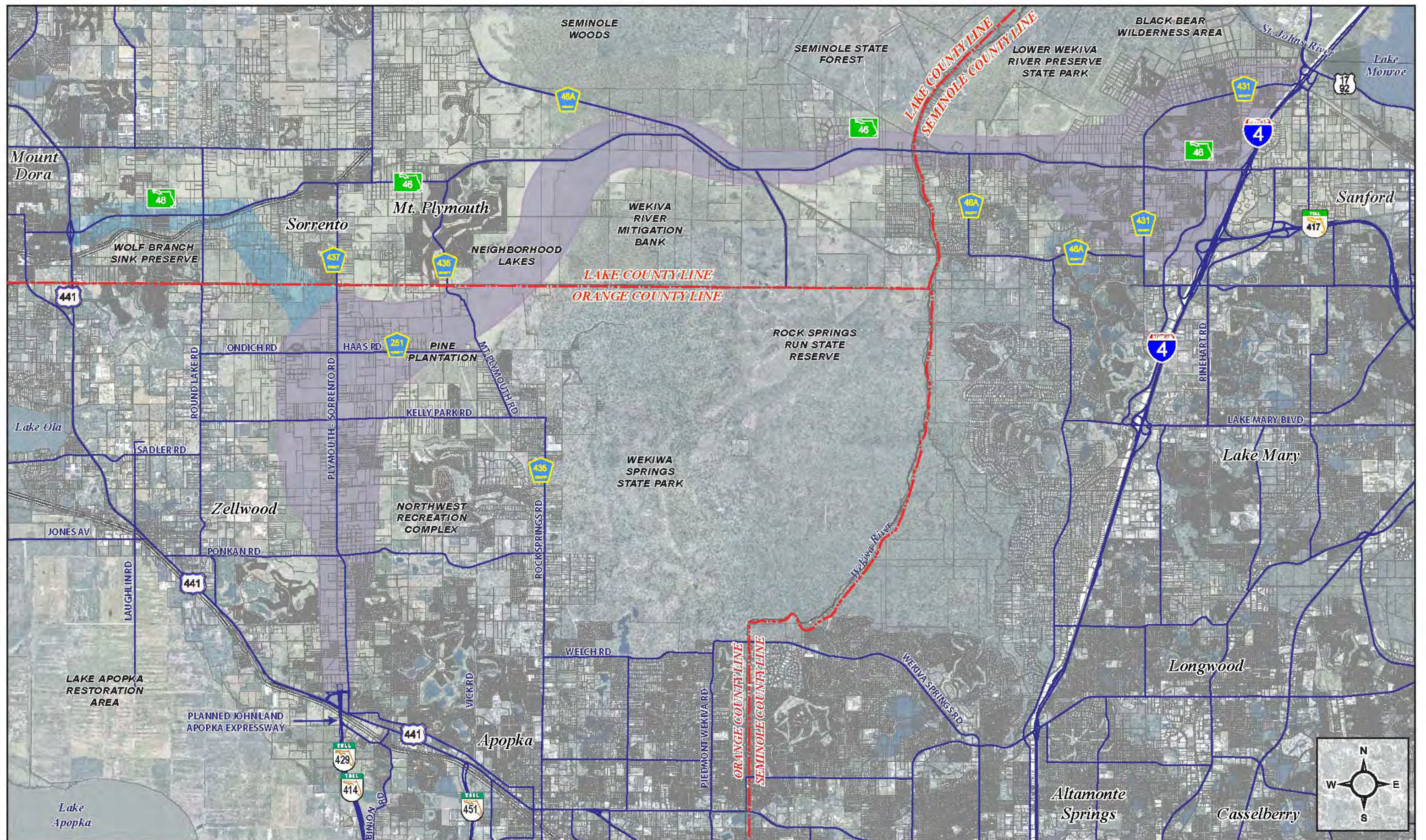
The Wekiva Parkway (SR 429)/SR 46 Realignment Project Development and Environment (PD&E) Study is jointly managed by the Florida Department of Transportation (FDOT), District Five and the Orlando-Orange County Expressway Authority (Expressway Authority). The proposed project would complete the Western Beltway (SR 429) around metropolitan Orlando, improve safety in the SR 46 travel corridor, and provide congestion relief on study area roadways; it includes significant measures to minimize harm to the environmentally sensitive Wekiva River Basin and enhance the connectivity of existing wildlife habitat corridors within the basin area.

## 1.1 Project Background

In 2004, the Florida Legislature enacted the *Wekiva Parkway and Protection Act*, Chapter 369, Part III, Florida Statutes (F.S.), in order to address the need for an expressway through the Wekiva River Basin by adopting the recommendations of the Wekiva Basin Area Task Force, the SR 429 Working Group, and the Wekiva River Basin Coordinating Committee. The legislation was the culmination of more than 20 years of discussions and various actions taken to complete the Western Beltway around metropolitan Orlando while protecting the fragile Wekiva River Basin and springshed. At the bill signing ceremony the Governor of Florida stated “This legislation represents unprecedented collaboration among diverse interests to safeguard the springs of the Wekiva and make Central Florida a better place to live and work. The parkway strikes a delicate balance between environmental protection and economic growth, providing relief for motorists and protection for Florida’s land and waters.”

The proposed Wekiva Parkway (SR 429) is one component of a comprehensive plan developed through Executive Orders, subsequent task force and committee findings of diverse stakeholders, and the resultant legislation. The strategic priorities address growth management and a sustainable environment, including master stormwater management, water supply protection, land use strategies, and land acquisition for conservation. The stakeholder’s findings and the subsequent legislation recognize the importance of the Wekiva Parkway since it would complete the Western Beltway (SR 429) around the Orlando metropolitan area and provide a safe, high capacity east-west travel facility between Lake County and Seminole County. A partial realignment of SR 46 in Lake County is integrated with the Wekiva Parkway project. The study area developed through the stakeholder’s findings, and subsequently recommended in the legislation, is depicted in **Exhibit 1-1**.





**LEGEND**

- Wekiva Parkway Study Area
- SR 46 Realignment Study Area

Exhibit 1-1  
Project Study Area



## 1.2 Project Purpose and Need

The purpose of and need for the project were originally documented in the October, 1989 state-level EIS prepared by FDOT for the Northwest Beltway Study, Part B. In November 2002, FDOT again documented the purpose of and need for the northwest portion of the Western Beltway (SR 429) in a presentation to the Wekiva Basin Area Task Force. The updated purpose and need for the project is summarized below:

- **Complete the Western Beltway (SR 429) around metropolitan Orlando**

The Wekiva Parkway will complete the Western Beltway (SR 429) from Interstate 4 (I-4) in Osceola County to I-4 in Seminole County. SR 429 currently terminates at US 441 in Apopka. The Wekiva Parkway will provide a system to system connection for regional mobility between the Eastern Beltway (SR 417), the Western Beltway (SR 429), and I-4.

The Wekiva Parkway is designated as a planned addition to Florida's Strategic Intermodal System (SIS). Florida's SIS is an integrated transportation network consisting of statewide and regionally significant transportation facilities, services, modes of transportation and linkages. The SIS was established to focus limited state resources on transportation facilities that are critical to Florida's economy and quality of life.

The regional transportation network in the metropolitan Orlando area currently consists of I-4 (SR 400), Florida's Turnpike, SR 408 (East-West Expressway), SR 528 (Beachline Expressway), SR 417 (Eastern Beltway), and completed portions of the Western Beltway (SR 429), all of which are heavily traveled SIS facilities. The Regional Transportation Network with the current and future heavily congested SIS corridors, based on 2008 Traffic Data by the FDOT Transportation Statistics Office, is shown in **Exhibit 1-2**. Heavy congestion in urban areas is considered bumper to bumper or stop and go traffic movement during peak periods (Level of Service (LOS) "E" or worse). For rural areas, passenger and truck traffic is so heavy during peak periods that changing lanes is very difficult (LOS "D" or worse). The future system includes all cost feasible improvements through 2035. All SIS facilities in the metropolitan Orlando area will be heavily congested by 2035, with the exception of portions of SR 429 (Western Beltway). The segments of SR 429 that are not projected to be heavily congested by 2035 include the recently constructed segment between I-4 in Osceola County and Florida's Turnpike in Orange County and the planned Wekiva Parkway.

Completion of the Western Beltway will allow regional traffic to bypass the most heavily congested segment of I-4 (from south of the Osceola/Orange County line to south of the Seminole/Volusia County line) which travels through the City of Orlando and is the main thoroughfare providing access to Walt Disney World, Sea World, Universal Studios, and other area attractions. In addition to providing relief to regional motorists, the completed Western Beltway will ease congestion on local roadways and provide a needed expressway connection between northwest Orange, eastern Lake, and western Seminole Counties.



- **Provide a higher capacity east-west travel facility in east Lake County and west Seminole County**

Most of the existing roadways within the study area consist primarily of local and collector roads. SR 46 is the only east-west connection between Lake County and Seminole County within the study area. SR 46 is a two-lane rural roadway which was constructed prior to current design standards. The majority of SR 46 through Lake and Seminole Counties consists of two 12-foot travel lanes with varying shoulder widths.

A safer, higher capacity east-west travel facility is needed. Many roads in the study area are currently operating at conditions below LOS "C". However, for SR 46 in east Lake County and west Seminole County, the existing LOS is "F", with annual average daily traffic of 23,700.

These LOS conditions, especially for SR 46, are projected to worsen significantly under the No-Build scenario. Growth in residential population and employment opportunities has contributed to an increasing travel demand in northwest Orange County, northern Lake County, and western Seminole County. Population and employment projections indicate that travel demand will continue to increase in the area for the foreseeable future. In the 2032 design year for the proposed project, the projected No-Build condition for SR 46 in east Lake County and west Seminole County is a further deteriorated LOS "F", with annual average daily traffic of 37,440. That would be a 58% increase in traffic on a facility that is currently operating at LOS "F".

The proposed project is a needed link between urbanized areas. Modes of transportation within the Wekiva Parkway study area are generally limited to personal vehicles and vehicles for hire. There are currently no public bus service routes within the study area. Much of the study area traverses rural residential and conservation lands; however, the corridor connects the urbanized areas of Apopka in Orange County, Mount Dora in Lake County, and Sanford in Seminole County. The proposed Wekiva Parkway project would meet increased travel demand from population growth in an environmentally sensitive and compatible manner.

- **Improve safety to reduce vehicle crash fatalities**

Many of the study area roadways are two-lane roads that do not meet the current design standards for safety and capacity. That is a major contributing factor in the high crash and fatality rates, especially for SR 46 through Lake and Seminole Counties. According to FDOT Crash Data Reports from 2000 to 2004, there were 27 fatalities resulting from vehicle crashes on the 18.5 mile segment of SR 46 from US 441 near Mount Dora in Lake County to I-4 near Sanford in Seminole County. FDOT data indicates that in 2004 alone there were 10 fatalities and 117 injuries resulting from 95 vehicle crashes on that section of SR 46.

Public awareness of this safety issue has been raised through media attention, such as an *Orlando Sentinel* article on September 28, 2005 which described SR 46 in Lake County as "Central Florida's Deadliest Road". The *Sentinel* stated that, according to their analysis of regional crash data from FDOT and the Florida Highway Patrol, on a per mile basis the section of SR 46 through Lake County is the most dangerous roadway in Central Florida, and the section of SR 46 through Seminole County was described as the region's second most dangerous roadway. While such media reports are not the basis for decision-making,

they have heightened public interest in the need for a safer travel facility in east Lake County and west Seminole County.

As traffic volumes grow on these unimproved local roadways, it is reasonable to expect that a similar increase in traffic incidents would continue to occur. The proposed Wekiva Parkway and the widened and realigned sections of SR 46 would be designed and constructed in accordance with all current standards and would be available to those regional motorists desiring to bypass local traffic. A modern facility, coupled with the opportunity for segregation of trip types, would help to reduce the potential for traffic incidents and fatalities when compared to existing conditions.

- **Develop a transportation facility that minimizes impacts to the Wekiva Basin Area resources and that specifically improves wildlife habitat connectivity between conservation lands and reduces vehicle-wildlife conflicts**

The recognition of the importance of the Wekiva River basin, its habitat, wildlife, conservation and recreation values, the associated spring systems, and the connection to the Ocala National Forest elevates the protection of this resource to a primary component of the purpose and need for the Wekiva Parkway. There are numerous publicly held conservation and recreation lands within or in close proximity to the study area, including Rock Springs at Kelly Park, Wekiwa Springs State Park, Rock Springs Run State Reserve, Seminole State Forest, and Lower Wekiva River Preserve State Park. Vast areas of floodplains and wetlands, including the Wekiva Swamp south of SR 46 and the Seminole Swamp north of SR 46, are located west of the Wekiva River. The natural environment includes the Wekiva River Basin ecosystem, springshed, and an expansive wildlife habitat area that connects to the Ocala National Forest.

An additional safety concern in the study area is vehicle-wildlife conflict. Since much of the study area consists of sparsely populated rural residential areas and large tracts of state conservation land, there have historically been many conflicts between vehicles and wildlife on roadways, particularly SR 46 in east Lake County. Over the past 20 years, more than 50 Florida Black Bears, a state-listed threatened species, have been killed by collisions with vehicles on a six mile segment of SR 46 adjacent to the state conservation lands. From 1994 to 2005 on that same section of SR 46, 23 bears were killed by vehicles. Both the proposed Wekiva Parkway and a parallel service road in Lake County East incorporate three long wildlife bridges to enhance wildlife habitat connectivity between state conservation lands, which would greatly reduce the number of vehicle-wildlife conflicts.

## 1.3 Project Description

In early 2005, the Expressway Authority and FDOT began the Wekiva Parkway (SR 429)/SR 46 Realignment PD&E Study under joint management. The study addresses the following proposed project components:

- **The Wekiva Parkway**, a four-lane divided (expandable to six-lane divided) limited access toll facility, which would begin in Orange County at the planned terminus of the John Land Apopka Expressway at US 441 just west of CR 437 and extend to the north/northeast into Lake County, turning east and crossing the Wekiva River into Seminole County and terminating at I-4. The approximate length of the Wekiva

Parkway is 20.94 miles, with 8.16 miles in Orange County, 7.37 miles in Lake County and 5.41 miles in Seminole County.

- **SR 46 Reconstruction and Realignment**, which would begin at the SR 46/US 441 interchange in Lake County and extend along the existing SR 46 corridor to the east, then turning southeast on a new alignment and entering Orange County with a systems interchange connection at the Wekiva Parkway. It is expected that the SR 46 improvements would provide six-lane divided controlled access along the existing alignment from US 441 to east of Round Lake Road, while the remaining alignment to the southeast is expected to be limited access. The approximate length of the SR 46 Reconstruction and Realignment is 4.79 miles, with 4.01 miles in Lake County and 0.78 mile in Orange County.
- **CR 46A Realignment**, a two-lane rural (expandable to four-lane rural) roadway, which would begin on existing CR 46A in east Lake County and extend to the south on a new alignment and tie into existing SR 46 with an access connection to the Wekiva Parkway. The approximate length of the CR 46A realignment is 2.72 miles.
- **Wekiva Parkway Access Improvements** would be required between the realignment of CR 46A in Lake County and Orange Boulevard in Seminole County to allow access to the private property along existing SR 46. A two-lane, non-tolled service road would be parallel to the Wekiva Parkway from north of the Wekiva Parkway interchange near Neighborhood Lakes to just east of the Wekiva River in Seminole County. Two-lane, one-way non-tolled frontage roads would be parallel to the Wekiva Parkway from east of the Wekiva River to Orange Boulevard in Seminole County. Those service and frontage roads would provide access to properties while also providing a non-tolled alternative for local trips.

## 1.4 Analysis of Alignment Alternatives

The following sections provide a brief summary of the process whereby the alignment alternatives for the proposed Wekiva Parkway (SR 429)/SR 46 Realignment project were developed and analyzed.

### 1.4.1 Initial Alternatives

Before the PD&E Study team developed initial alignment concepts in Orange, Lake, and Seminole Counties, a comprehensive data collection effort was undertaken within and adjacent to the study area. Controlled aerial photography of the corridor was used for base mapping. Along with property parcel lines/numbers, street names, geographic features and other identifiers, the data collected on such items as the locations of community facilities, public lands, known or potential historic sites, wetlands, floodplains, wildlife habitat, potential contamination sites, and others were put on the base map. Avoidance or minimization of impact to these facilities and sensitive areas, as well as homes and businesses, to the greatest extent possible was the primary focus in the development of the alignment alternatives. The initial alternatives were presented at three Public Workshops held in Orange, Lake, and Seminole Counties in November 2005.

### 1.4.2 Viable Alternatives

After the first Public Workshops and meetings with local and state governmental agencies and other stakeholders on the initial alternatives, the project team began the process of alternatives evaluation and refinement. The concepts and impact assessments developed in the initial alternatives phase of the study served as the basis for identification of potential viable alternatives. The initial alternatives presented at the Public Workshops in November of 2005 were analyzed and evaluated in greater detail, their impacts were assessed more thoroughly, and they were scrutinized for negative aspects. This resulted in the elimination or modification of some alternatives and the further evaluation of others as potential viable alternatives. The Viable Alternatives were presented at July/August 2006 Public Workshops held in Orange, Lake, and Seminole Counties. Two documents (*Technical Memorandum – Development and Analysis of Initial Alternatives* and *Technical Memorandum – Identification and Evaluation of Viable Alternatives*) were prepared in December 2006 to provide information on the process that was completed during the initial and viable alternatives phases of the PD&E Study.

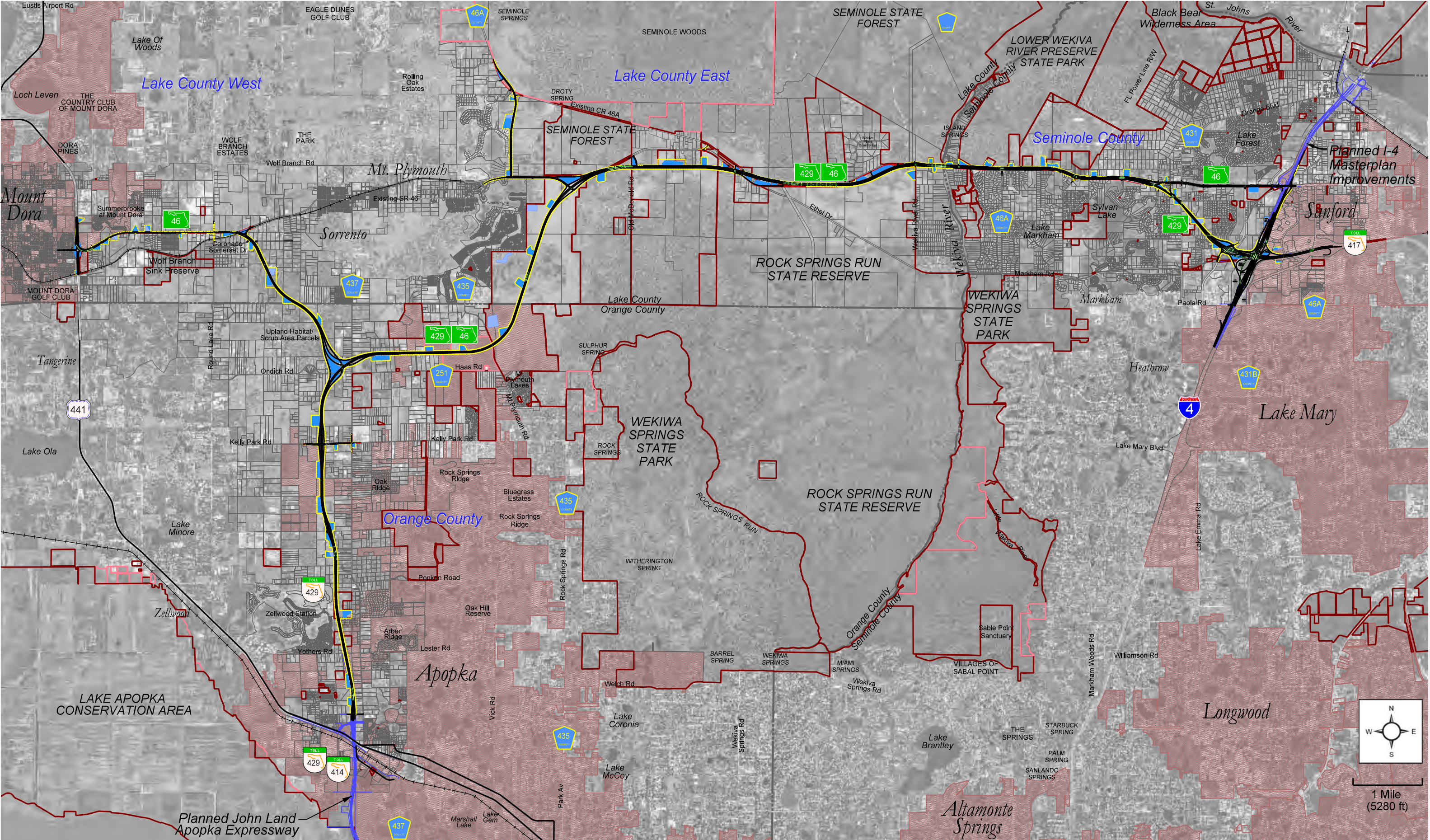
### 1.4.3 Recommended Preferred Alternative

Based upon comparative assessment of the results of the engineering/environmental analysis and the evaluation of impacts/costs, and after extensive coordination with multiple stakeholders, the Preferred Alternative was identified by the Expressway Authority and FDOT in April 2007. Subsequent coordination with state and local agencies, homeowners associations, and other stakeholders resulted in some refinements to that alternative.

Following the identification of the Preferred Alternative for the overall project, extensive discussions on funding options reached a crucial decision point in early 2009. Due to declining transportation dollars available to FDOT, it was determined that the preliminary estimated cost of the project (\$1.8 billion) would not be financially feasible to fund without tolls on the Wekiva Parkway in Lake and Seminole Counties. In response to residents in the east Lake County area who expressed concerns over paying a toll for a local trip, FDOT and the Expressway Authority analyzed options to provide a non-tolled alternative for local trips. After several meetings during mid to late 2009 with area residents, local government officials, the Florida Department of Environmental Protection, and representatives of the environmental stakeholder community, a two-lane, two-way service road concept parallel to the Wekiva Parkway was developed. To minimize impacts, the service road is proposed to be within the previously identified Wekiva Parkway right-of-way. The service road would extend from just north of the Wekiva Parkway interchange near Neighborhood Lakes to just east of the Wekiva River in Seminole County; that concept was presented at a Public Workshop in Lake County on December 17, 2009. Public comments resulting from the workshop were reviewed and incorporated into the preliminary design of the service road and the Wekiva Parkway mainline.

The overall recommended Preferred Alternative, depicted in **Exhibit 1-3**, will be presented at three Public Hearings to be held in Orange, Lake, and Seminole Counties. Coordination with federal, state, and local agencies, the project advisory group, the environmental advisory committee, the public and other stakeholders has been ongoing and will continue throughout the PD&E Study.





	PROPOSED RIGHT-OF-WAY		PROPOSED BRIDGE		PUBLIC LAND
	EXISTING RIGHT-OF-WAY		PROPOSED STORMWATER POND		POTENTIAL PUBLIC LAND ACQUISITION
	EXISTING PARCEL LINE		PROPOSED STORMWATER POND		MUNICIPAL BOUNDARY

Exhibit 1-3  
Overall Layout of Preferred Alternative



Early in the alternatives analysis phase of the PD&E Study, the project study area was divided into four general sub-areas, as described below, to aid in the analysis and understanding of the project segments:

- Orange County from the planned John Land Apopka Expressway/US 441 interchange north to the Lake County line;
- Lake County from US 441 to the Orange County line (referred to as Lake County West);
- Lake County from the Orange County line to the Seminole County line (referred to as Lake County East); and
- Seminole County from the Lake County line to I-4.

A final *Noise Study Report* (March, 2008) was prepared for the recommended Preferred Alternative that was identified prior to 2009. This updated final *Noise Study Report* (June, 2010) includes the necessary revisions to text and exhibits that resulted from incorporation of the non-tolled service road in Lake County East. The current recommended Preferred Alternative is described below for each of the four general project sub-areas.

**Orange County (see Exhibit 1-4)**

- Wekiva Parkway
  - Kelly Park Road Interchange Alternative
  - Orange County Alternative 1 (east of Plymouth Sorrento Road)
  - Systems Interchange Alternative 1
- SR 46 Realignment
  - Lake County West Alternative 1 (northwest to Lake County line)

**Lake County West (see Exhibit 1-5)**

- SR 46 Reconstruction and Realignment
  - US 441/SR 46 Interchange Modification Alternative 2
  - SR 46 North Widening Alternative from US 441 to east of Round Lake Road
  - Lake County West Alternative 1 (southeast to Orange County line)

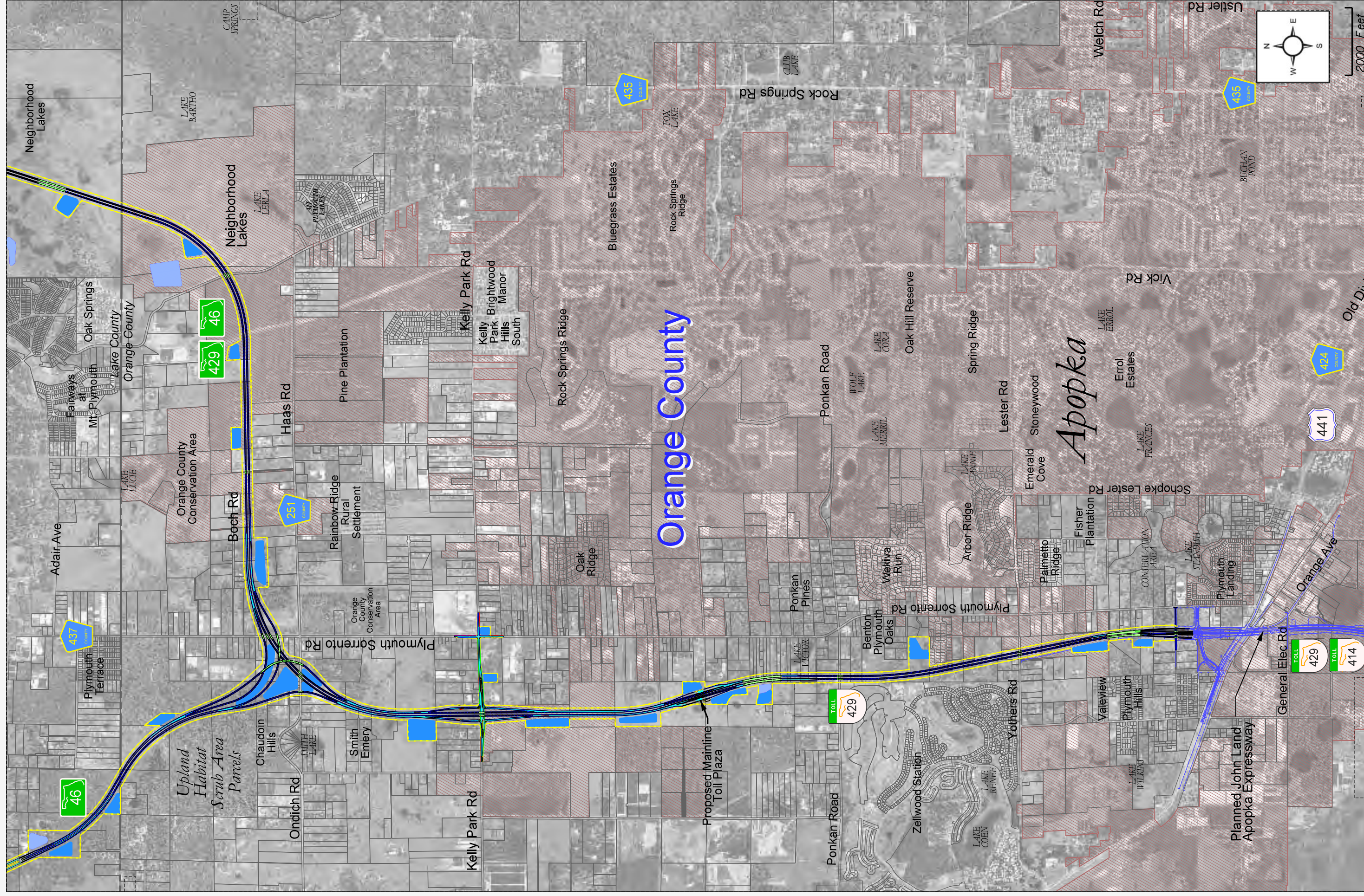
**Lake County East (see Exhibit 1-6)**

- Wekiva Parkway
  - Neighborhood Lakes Alignment Alternative 1
  - South (Red) Alignment Alternative 2, revised to incorporate the two-way, non-tolled Service Road within the Wekiva Parkway 300-foot limited-access right-of-way
- CR 46A Realignment
  - Alternative 1A, with SR 46 widening to the south

**Seminole County (see Exhibit 1-7)**

- Wekiva Parkway
  - North Widening Alternative from Wekiva River east to near Orange Avenue
  - SR 417/I-4 Interchange Modification Alternative B
- SR 46 Reconstruction
  - Widen to Six Lanes from Wekiva Parkway to the SR 46/I-4 Interchange

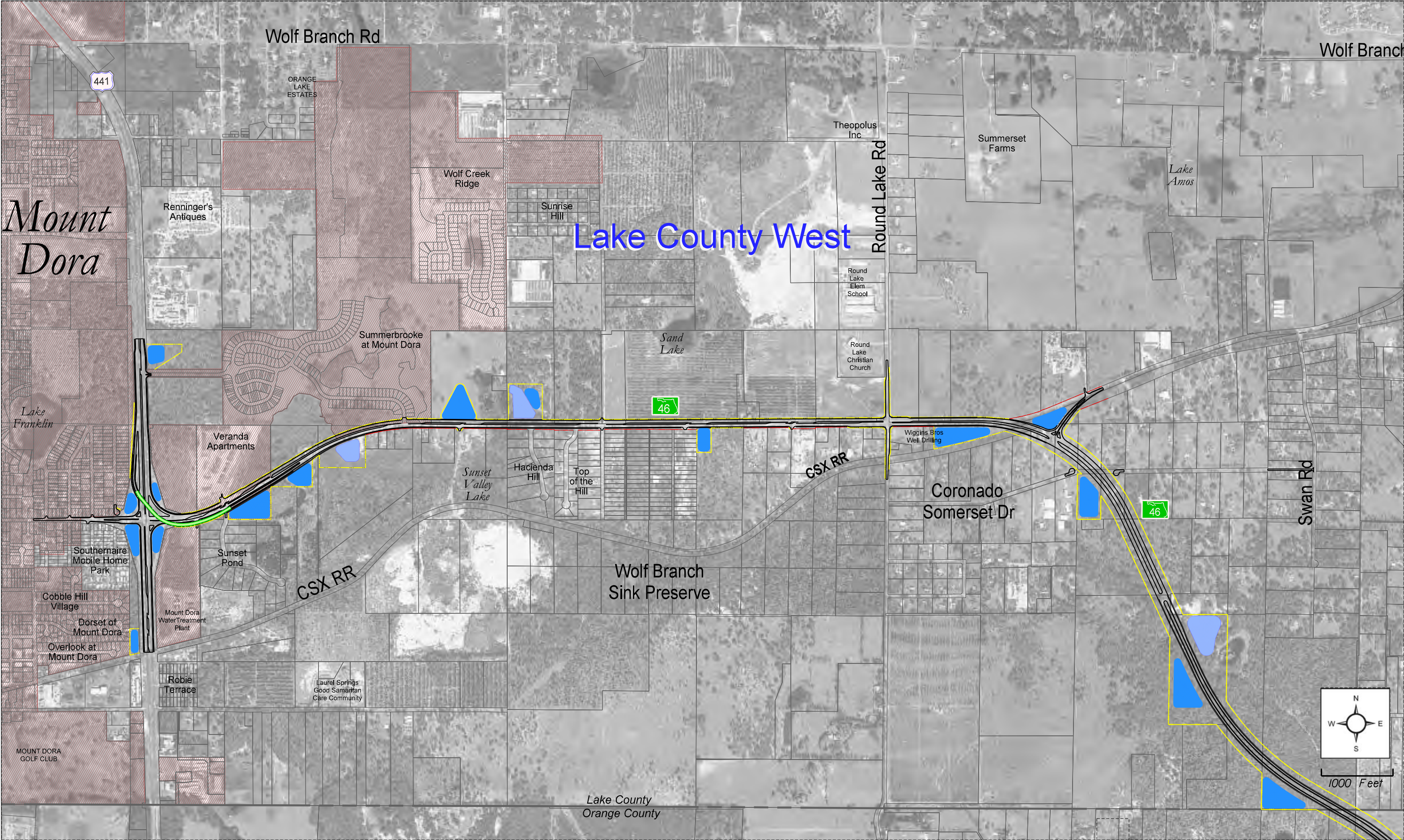




## LEGEND

-  Stormwater Ponds  
 Floodplain Compensation Ponds  
 Municipal Boundaries
-  Proposed Bridge  
 Preferred Alternative RW  
 Existing RW  
 Existing Parcel Line





LEGEND








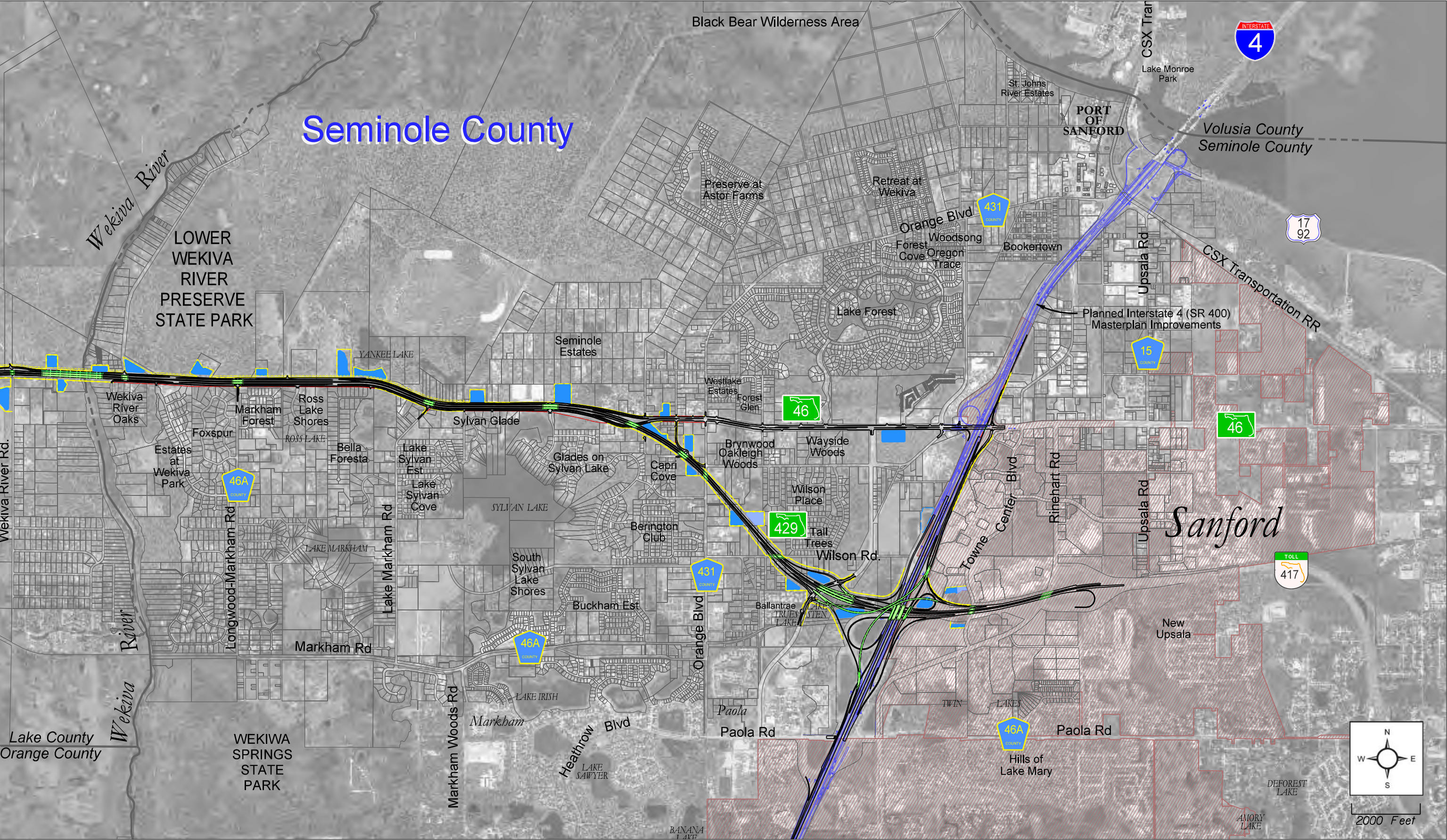
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|--|--|---|
|  Stormwater Ponds              |  Municipal Boundaries |  Preferred Alternative R/W |
|  Floodplain Compensation Ponds |  Proposed Bridge      |  Existing R/W              |
|  |  |  Existing Parcel Line      |

Exhibit 1-5  
Lake County West Preferred Alternative









- LEGEND
- Stormwater Ponds
  - Floodplain Compensation Ponds
  - Municipal Boundaries
  - Proposed Bridge
  - Preferred Alternative R/W
  - Existing R/W
  - Existing Parcel Lines

Exhibit 1-7  
Seminole County Preferred Alternative



## 1.5 Purpose of the Noise Study Report

The purpose of the *Noise Study Report* is to determine and document if the proposed project will have noise impacts to noise sensitive sites along the proposed corridor. The process used for the noise analysis involves the following steps, which are described in greater detail in later sections of this report:

- Collect noise measurements and traffic data in the field to establish ambient noise levels and to validate the noise prediction model;
- Prepare model inputs and run the noise prediction model for measurement site and compare data to confirm model accuracy;
- Prepare model inputs and run noise prediction model to establish future noise levels for Build Alternatives;
- Compare model results to noise abatement criteria and determine which noise sensitive sites/areas are expected to experience noise impacts;
- Examine noise abatement options at impacted noise sensitive sites/areas for the Preferred Alternative and determine feasibility and cost reasonableness of noise barriers.