

## Project Environmental Impact Report Re-evaluation Form

### 1. GENERAL INFORMATION (originally approved PEIR)

a. Project Phase: Project Development and Environment (PD&E) Phase

b. PEIR Date of Approval: May 12, 2017

c. Project Numbers: 432134-1-22-01 and 432134-2-22-01 13789  
Financial Management ETDM

d. Project Name, Location and Limits (from original PEIR):

Osceola Parkway Extension from West of Boggy Creek Road to the Proposed  
Northeast Connector Expressway and Boggy Creek Road/SR 417 Access Road in  
Osceola and Orange counties

e. Segments of Highway Being Advanced:

Osceola Parkway Extension from West of Boggy Creek Road to the Proposed  
Northeast Connector Expressway and Boggy Creek Road/SR 417 Access Road in  
Osceola and Orange counties

f. Prior Re-evaluations: N/A

g. Name and title of Preparer: Daniel Kristoff, P.E.

## 2. EVALUATION OF CHANGES IN IMPACTS

	YES	NO	SUPPORTING INFORMATION
<b>A. SOCIAL &amp; ECONOMIC</b>			
1. Social	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2A.1.
2. Economic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Land Use Changes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Mobility	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2A.4.
5. Aesthetic Effects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2A.5.
6. Relocation Potential	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2A.6.
<b>B. CULTURAL</b>			
1. Historic Sites/Districts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2. Archaeological Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Recreational Areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2B.3.
<b>C. NATURAL</b>			
1. Wetlands and Other Surface Waters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2C.1.
2. Aquatic Preserves & Outstanding FL Waters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Water Quality and Stormwater	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. Wild and Scenic Rivers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. Floodplains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2C.5.
6. Coastal Barrier Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Protected Species and Habitat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2C.7.
8. Essential Fish Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>D. PHYSICAL</b>			
1. Highway Traffic Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2D.1.
2. Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3. Contamination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2D.3.
4. Utilities and Railroads	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2D.4.
5. Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Bicycles and Pedestrians	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 2D.6.
7. Navigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



### 3. EVALUATION OF MAJOR DESIGN CHANGES AND REVISED DESIGN

**CRITERIA** (e.g., Typical Section Changes, Alignment Shifts, Right of Way Changes, Bridge to Box Culvert, Drainage Requirements, Revised Design Standards)

**Attachment 1** includes a summary of the Preferred Alternative, including a summary of the alignment shift and design changes. **Attachment 2** summarizes the changes in impacts associated with the alignment shift and design changes.

### 4. COMMITMENT STATUS

Commitments developed during the Osceola Parkway Extension OCX PD&E Study (2017) were evaluated, and the commitments are as follows:

OCX PD&E (2017) Commitment	Revised, Re-evaluation (2019) Commitment	Reason for the Revision
OCX will seek approval from Orange County before constructing any portion of Osceola Parkway Extension within Orange County.	CFX will continue to coordinate with Orange County and Osceola County during the design and construction phases of the project.	Revised agency from OCX to CFX and revised language to indicate that coordination has occurred and will continue through all phases of the project.
OCX and Osceola County have entered into an Interlocal Agreement with the Central Florida Expressway (CFX) and CFX has initiated a Concept, Feasibility and Mobility Study for Osceola Parkway Extension. OCX recognizes that based on the agreement, the Concept and Feasibility Study for the Osceola Parkway Extension will consist of reviewing this PD&E study. OCX commits to coordinate with CFX on the Concept and Feasibility Study.	Commitment removed.	No longer needed, the CFX CF&M Study was completed in 2017.

<b>OCX PD&amp;E (2017) Commitment</b>	<b>Revised, Re-evaluation (2019) Commitment</b>	<b>Reason for the Revision</b>
<p>An interchange with Osceola Parkway Extension is planned at Cyrils Drive. Proposed changes to the Northeast District Element of Osceola County's Comprehensive Plan may alter the planned location of Cyrils Drive. The final location of the interchange with Cyrils Drive (and the interchange design) will be determined during design or during the Concept, Feasibility and Mobility Study. The proposed location of Cyrils Drive and the proposed interchange design are illustrated in Appendix A.</p>	<p>The Preferred Alternative will include a local interchange just east of Split Oak Forest. The interchange will provide access to the future Sunbridge Parkway and the local roadway network.</p>	<p>The proposed interchange provides access to Cyrils Drive but does not interchange directly with Cyrils Drive. Revised commitment allows for more flexibility during final design while being clear with the intent of the commitment.</p>
<p>Landscape buffers and/or privacy walls will be considered during design to minimize viewshed effects at existing residential areas.</p>	<p>No Change – commitment will be carried forward to CFX PD&amp;E Re-evaluation.</p>	
<p>Shifts in alignments may be considered during design to minimize impacts on conservation easements or preserves, listed plants or wildlife.</p>	<p>No Change – commitment will be carried forward to CFX PD&amp;E Re-evaluation.</p>	
<p>Conservation easements will require a release of easement from either SFWMD or Orange County and mitigation will be required to off-set the lost conservation area.</p>	<p>No Change – commitment will be carried forward to CFX PD&amp;E Re-evaluation.</p>	

<b>OCX PD&amp;E (2017) Commitment</b>	<b>Revised, Re-evaluation (2019) Commitment</b>	<b>Reason for the Revision</b>
Additional cultural resource analysis will be conducted for the preferred route within Split Oak and for proposed pond sites during the design phase.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Coordination will occur with Orange County on bridge aesthetics for the bridge through Split Oak.	Coordination will occur with Orange and Osceola Counties on bridge aesthetics for bridge crossings within Split Oak.	The commitment was revised to include coordination with Osceola County since Osceola and Orange Counties are co-owners of Split Oak Forest.
During design, non-intrusive roadway and bridge lighting will be evaluated adjacent to natural and residential areas. Measures to minimize illumination outside of the R/W will include the use of shielded light fixtures, mounting height or aiming adjustments, and using reduced wattage light fixtures.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Bridges or other structures will be considered during design to maintain water flows as well as connectivity in larger slough systems that would extend on either side of the proposed expressway.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
The road within Split Oak will be constructed on an elevated roadway.	The road within Split Oak Forest will generally be constructed at grade.	The alignment within Split Oak Forest was adjusted south to minimize impacts, eliminating the need for an elevated roadway through Split Oak.

<b>OCX PD&amp;E (2017) Commitment</b>	<b>Revised, Re-evaluation (2019) Commitment</b>	<b>Reason for the Revision</b>
Structures will be designed to accommodate flood flows and a no rise certification will be prepared as part of the design phase.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Compensating storage will be provided for impacts to the 100-year floodplain.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Panther telemetry or other available data will be reviewed to confirm no changes with regards to dispersal of panthers.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Wildlife crossings will be implemented and sized to allow for movement of both large and small mammals. Final location, number and design of crossings would be determined during design, based on site specific conditions and in coordination with Osceola and Orange counties, FWC, and SFWMD.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Fencing or other barriers will be considered to avoid accidental encroachment by wildlife into the R/W.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Conduct updated surveys for gopher tortoise, Florida sandhill crane nesting, Southeastern American kestrel, Sherman's fox squirrel, bald eagles, Everglade snail kite and Florida scrub-jay.	Surveys will be conducted for listed species as required.	Listing individual species limits potential agency requirements and some previously stated species are no longer considered listed species.

OCX PD&E (2017) Commitment	Revised, Re-evaluation (2019) Commitment	Reason for the Revision
Where practical, Sherman's fox squirrel nests will be avoided and a 50-foot buffer from the nest tree will be provided.	Commitment removed.	Although Sherman's fox squirrel nests may occur within the project limits, this species was removed from Florida's Endangered and Threatened Species List in 2018. This species-specific commitment to avoid nest trees is no longer required.
Gopher tortoise burrows will be avoided where practical and relocation permits obtained for unavoidable impacts.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Updated listed plant surveys will be conducted. Consider minor shifts in alignments where practical to avoid listed plants.	Updated listed plant surveys will be conducted as required. Unavoidable impacts to listed plant species will be coordinated with the appropriate regulatory authority.	Current mitigation for plant species utilizes community specific relocation as a more viable mitigation option.
Implement <i>Standard Protection Measures for the Eastern Indigo Snake</i> .	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Consider other structures to accommodate trails (pedestrian and equestrian) and mowers and other equipment used in management of preserves or combine trails with wildlife crossings for areas other than Split Oak which will be bridged.	Consider other structures, accommodations, and co-location opportunities for pedestrian trails, (such as the Florida Scenic Trails Path), wildlife crossings, equestrian trails, and equipment used in land management within and outside of Split Oak Forest.	The alignment within Split Oak Forest was adjusted south to minimize impacts, eliminating the need for an elevated roadway through Split Oak Forest. Connectivity and recreational access should be maintained.

<b>OCX PD&amp;E (2017) Commitment</b>	<b>Revised, Re-evaluation (2019) Commitment</b>	<b>Reason for the Revision</b>
Construct fire breaks and other features that will assist in continued maintenance of the preserve. The specific conditions would be determined through coordination with Osceola and Orange counties, FWC and, SFWMD.	Coordinate with Osceola and Orange Counties, FWC and SFWMD for features that will assist in the continued maintenance of the preserve.	Since the remainder of Split Oak has been significantly reduced the maintenance of the remainder is less critical and fire breaks are likely not needed.
Conduct listed species surveys of potential pond sites.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
Stormwater management facilities will be constructed outside the limits of the Split Oak and Eagles Roost properties. Additionally, low impact development stormwater treatment designs will be considered during design.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	
For those locations identified in Attachment 2.D.3 as “Medium” or “High” risk, Level II field screening will be conducted for sites potentially requiring R/W or in close proximity to the expressway that could potentially be affected during construction.	No Change – commitment will be carried forward to CFX PD&E Re-evaluation.	

OCX PD&E (2017) Commitment	Revised, Re-evaluation (2019) Commitment	Reason for the Revision
<p>The PD&amp;E phase noise analysis indicated that noise barriers are potentially feasible and reasonable at one location – generally from east of Boggy Creek Road (at its intersection with Simpson Road) to the eastern boundary of Turnberry Reserve. The noise barriers at this noise sensitive area will be reanalyzed during the design phase of this project, when more refined engineering data can be incorporated into the barrier analysis. OCX is committed to the construction of noise barriers found to be reasonable and feasible during the design phase of this project.</p>	<p>The PD&amp;E Re-evaluation indicated that noise barriers are potentially feasible and reasonable. The noise barriers will be re-analyzed during the design phase of this project, when more refined engineering data can be incorporated into the barrier analysis. CFX is committed to the construction of noise barriers found to be reasonable and feasible during the design phase of this project.</p>	<p>The adjusted alignment changes the number and location of potentially feasible and reasonable noise barriers. The number and location of potentially feasible and reasonable noise barriers are detailed in <b>Attachment 2, D.1.</b></p>
<p>As stipulated in the Florida Department of Transportation's Project Development and Environment Manual, any noise sensitive receptor that is permitted between the completion of the Noise Study Report and the Date of Public Knowledge, will be analyzed for traffic noise impacts and feasible and reasonable abatement considered during the design phase of a project.</p>	<p>No Change</p>	

## 5. STATUS OF PERMITS

All required permit applications will be filed during subsequent design phases.



## 6. CONCLUSION

Specific physical, cultural, natural environmental, social, and economic factors have been evaluated for each of the new alternatives. The Preferred Alternative (Lake Nona Alternative and Split Oak Minimization Alternative) selected through this re-evaluation has reduced impacts to the social, cultural, and natural environment as compared to the OCX PD&E Recommended Alternative (2017). Therefore, the PEIR determination remains valid.

## 7. APPROVAL RECOMMENDATION

Glenn Pressimone, Chief of Infrastructure  
Print Name

Glenn Pressimone  
Environmental Engineer/Manager or designee

1/28/2020  
Date

## 8. APPROVAL OF FINAL DOCUMENT

Laura Kelley, Executive Director  
Print Name

[Signature]  
Signing Authority

1/28/20  
Date

## 9. ATTACHMENTS

Attachment 1

Attachment 2



## **ATTACHMENT 1**

A Final Project Environmental Impact Report (PEIR) was approved by Osceola County Expressway Authority (OCX) in May 2017 as part of the OCX PD&E Study (2017). The OCX PD&E Recommended Alternative (2017) included an interchange at SR 417 and Boggy Creek Road with direct connections to the Orlando International Airport (OIA). The Osceola Parkway Extension (OPE) alignment then paralleled Boggy Creek Road before turning east near Simpson Road and paralleling the Orange / Osceola County line before turning southeast through Split Oak Forest and ultimately connecting to a future Northeast Connector Expressway. A project location map is shown on **Figure 1**.

The Preferred Alternative is the Lake Nona Alternative between SR 417 and Narcoossee Road and the Split Oak Minimization Alternative from Narcoossee Road to the eastern terminus, as shown on **Figure 2** and **Figure 3**, respectively.

The Lake Nona Alternative begins with a system interchange with SR 417 that provides access to the OIA. The system interchange is configured so that local access to an extended Medical City Drive is feasible in the future. The alignment then travels south through the Lake Nona property, where a partial interchange is proposed with Laureate Boulevard. The alternative continues south until the Orange / Osceola County line, where the alignment curves to the east. Simpson Road is proposed to be extended east of Boggy Creek Road to connect to the Poitras property. An interchange will be provided with this extension of Simpson Road, near the county line. The alignment continues along the Orange / Osceola County line and includes a proposed interchange at Narcoossee Road. Due to the proximity of the proposed interchange with Narcoossee Road, Clapp Simms Duda Road is proposed to be relocated south to align with the existing Boggy Creek Road signalized intersection on Narcoossee Road.

The Split Oak Minimization Alternative travels north of and parallel to Clapp Simms Duda Road before turning southeast near Canal C-29A. The alternative traverses the southwestern edge of Split Oak Forest and includes a local access interchange with Cyrils Drive just east of Split Oak Forest.

The following summarizes the design changes associated with the Lake Nona and Split Oak Minimization Alternatives since the completion of the OCX PD&E Study (2017).

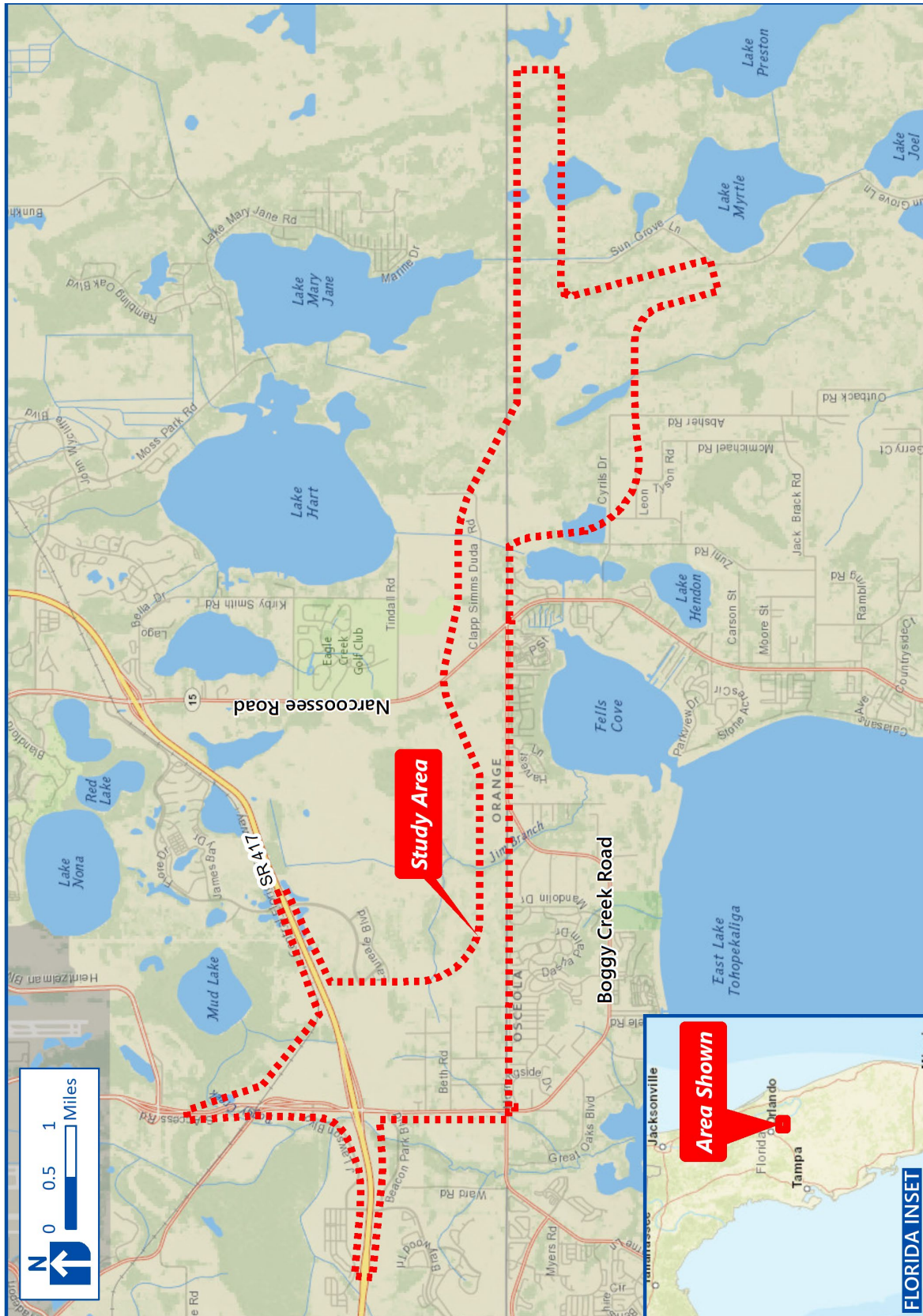
### **Lake Nona Alternative:**

- Does not include an interchange at SR 417 and Boggy Creek Road;
- Includes a new directional interchange between OPE and SR 417, approximately one mile east of the SR 417 and Boggy Creek Road interchange;
- Includes a partial interchange (ramps to and from the south only) with Laureate Boulevard to serve the Lake Nona properties;
- Includes the Boggy Creek Road / Simpson Road interchange but on the Poitras West property which results in long connector ramps to Boggy Creek Road;
- Does not include an interchange at the planned Medical City Drive extension on the Poitras property; and
- Relocates Clapp Simms Duda Road to align with the eastern terminus of Boggy Creek Road at Narcoossee Road.

Split Oak Minimization Alternative:

- A consistent 330-foot wide typical section (compared to 400-foot and 264-foot typical sections);
- Does not impact Split Oak Forest in Orange County;
- Crosses Split Oak Forest near the southern boundary instead of crossing in the middle;
- Includes a local interchange with Sunbridge Parkway extension / Cyrils Drive instead of a system-to-system interchange with the Northeast Connector; and
- Does not include the connection to the future Sunbridge Parkway (assumes it will be built by others).

**Figure 1: Project Location Map**

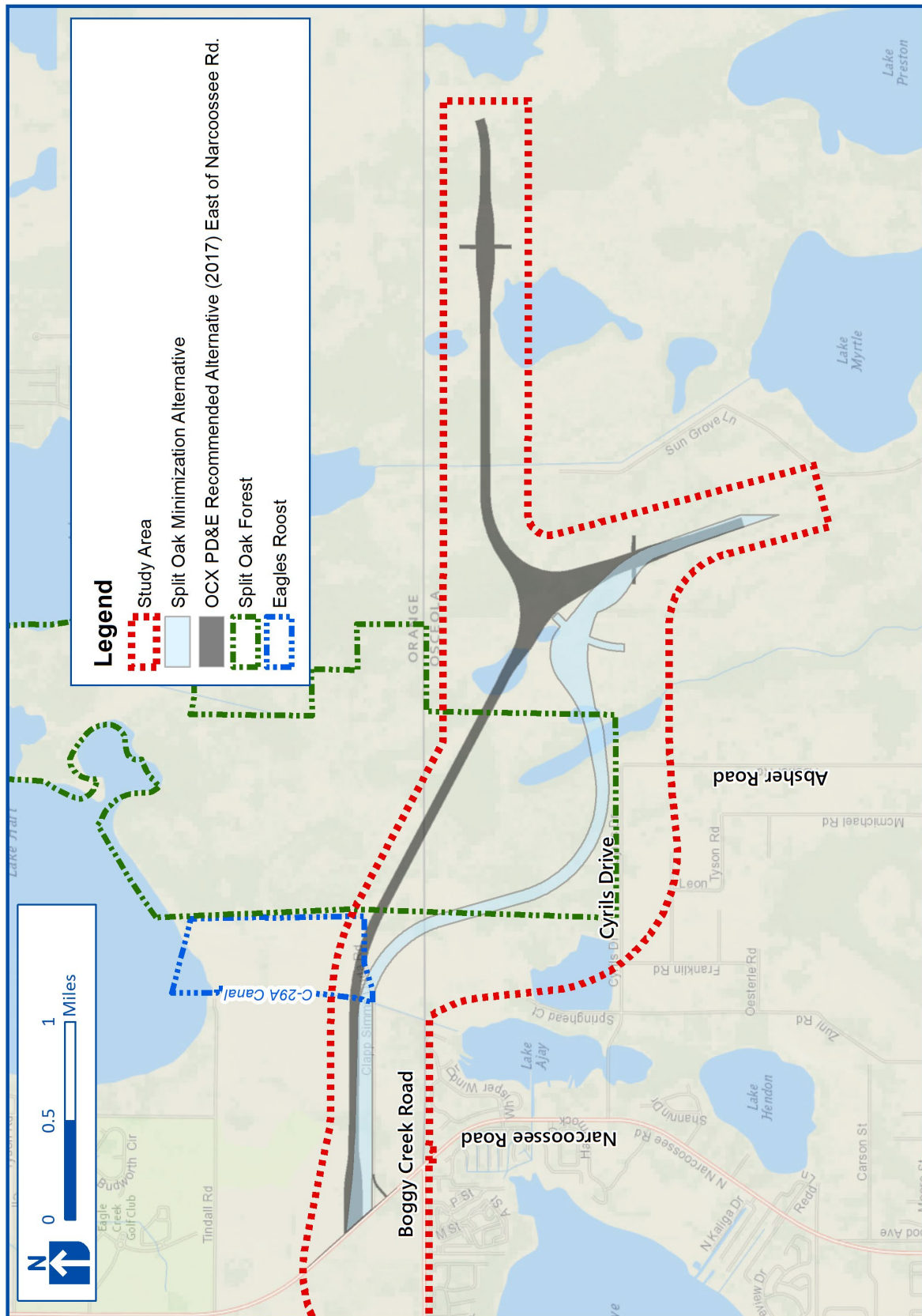




**Figure 2: Preferred Alternative West of Narcoossee Road**



**Figure 3: Preferred Alternative East of Narcoossee Road**



## **ATTACHMENT 2**

Attachment 2 summarizes the results of the re-evaluation of the original OCX PD&E Study (2017) for the Osceola Parkway Extension from West of Boggy Creek Road to the Proposed Northeast Connector Expressway and Boggy Creek Road/SR 417 Access Road in Osceola and Orange counties. These sections summarize the changes in impacts associated with the selection of the new Preferred Alternative, detailed in **Attachment 1**, over the OCX PD&E Recommended Alternative (2017). Throughout this document, the combination of the Lake Nona Alternative in the western segment and the Split Oak Minimization Alternative in the eastern segment will be referred to collectively as the “Preferred Alternative”.

### **A. SOCIAL & ECONOMIC**

#### **2.A.1. Social**

##### Community Cohesion

The Lake Nona Alternative has lower impacts to community cohesion than the OCX PD&E Recommended Alternative (2017) since the majority of the alternative is located on vacant property owned by Tavistock Development Company. The OCX PD&E Recommended Alternative (2017) had higher impacts to community cohesion since the alignment traveled parallel to Boggy Creek Road affecting a number of existing residential parcels. The Split Oak Minimization Alternative has a low impact to community cohesion since the majority of the alignment traverses across vacant or recreational property. Although the impacts to parks are high, the impacts to community cohesion are rated as low.

Socioeconomic impacts to special populations are lower for the Preferred Alternative as compared to the OCX PD&E Recommended Alternative (2017). The OCX PD&E Recommended Alternative (2017) impacted a higher percentage of minorities and a relatively higher percentage of Limited English Proficiency populations present along Boggy Creek Road, including twelve (12) anticipated displacements in this area.

##### Community Services

The Preferred Alternative has a reduced level of impacts to community services than the OCX PD&E Recommended Alternative (2017). Both alternatives impact the Iglesia Cristiana Luz de Salvacion Worship Center as a result of the Simpson Road extension and interchange. A strip of right-of-way is required from the back of the property, but no displacements are anticipated. The OCX PD&E Recommended Alternative (2017) also impacts the Iglesia Hispana Pentecostal Asamblea De Iglesias Cristianas Worship Center located on the east side of the existing Boggy Creek Road. This worship center would be displaced by the OCX PD&E Recommended Alternative (2017).

Overall, the Preferred Alternative has a reduced level of impacts to the social environment as compared to the OCX PD&E Recommended Alternative (2017). The Preferred Alternative offers reduced impacts to the community by avoiding community services and special populations located along Boggy Creek Road within the project’s western segment.

## **2.A.4. Mobility**

The Preferred Alternative offers improved mobility benefits over the OCX PD&E Recommended Alternative (2017). The Preferred Alternative relocates the interchange with SR 417 to offer better traffic operational characteristics as compared to the OCX PD&E Recommended Alternative (2017). The OCX PD&E Recommended Alternative (2017) had less travel demand as shown by lower projected AADT as compared to the Preferred Alternative. Overall, the Preferred Alternative offers enhanced mobility benefits as compared to the OCX PD&E Recommended Alternative (2017).

## **2.A.5. Aesthetic Effects**

Both the Preferred Alternative and the OCX PD&E Recommended Alternative (2017) offer similar impacts to the viewshed within the study area, which is already changing as additional development is planned, permitted, and constructed. Within the western segment of the Preferred Alternative, the proposed roadway alignment is shifted from a developed area (Boggy Creek Road) to a developing area (west of Medical City) which will experience viewshed changes associated with Tavistock Development Company's mixed-use development plans in the area. Along the county line, viewshed impacts would be similar for existing developments just south of the county line, including viewshed impacts to Fells Landing and Eagle Creek. Within the eastern segment, the Preferred Alternative passes between approximately 1,400 feet and 2,400 feet to the east of the Lake Ajay Village community. Overall, the Preferred Alternative and the OCX PD&E Recommended Alternative (2017) offer similar aesthetic impacts.

## 2.A.6. Relocation Potential

The reduced number of displacements was an important consideration in the selection of the Preferred Alternative. The Preferred Alternative reduces the overall number of existing residential relocations as compared to the OCX PD&E Recommended Alternative (2017). The OCX PD&E Recommended Alternative (2017) required the relocation of two (2) existing businesses, nine (9) existing residential units, and one (1) religious center, the Pentecostal Asamblea De Iglesias Cristianas Worship Center located on the east side of the existing Boggy Creek Road. The Preferred Alternative requires seven (7) residential relocations and no business or religious center relocations. **Table 1** presents a summary of the relocation potential comparison.

**Table 1: Relocation Potential Comparison**

Consideration	OCX PD&E Recommended Alternative (2017)	Preferred Alternative
Potential Residential Displacements	9	7
Potential Business Displacements	2	0
Potential Religious Center Displacements	1	0
TOTAL DISPLACEMENTS	12	7



## B. CULTURAL

### 2.B.3. Recreational Areas

Recreational areas within the study area include Split Oak Forest, Eagles Roost (conservation area), World DRI (mitigation site), and the Split Oak Forest Wildlife and Environmental Area Trail, which is part of the Florida Greenways Trail System. The OCX PD&E Recommended Alternative (2017) bisects the Split Oak Forest and impacts approximately 26.1 acres directly, and indirectly impacts additional acreage yet to be determined through environmental agency coordination. These indirect impacts include habitat fragmentation, increased edge effects, barriers to wildlife movement, noise, and effects on land management practices and recreation.

In order to minimize impacts associated with the OCX PD&E Recommended Alternative's bisection of the Split Oak Forest, the OCX PD&E PEIR included the following commitments:

- A. The road within Split Oak will be constructed on an elevated roadway.
- B. Coordination will occur with Orange County on bridge aesthetics for the bridge through Split Oak.
- C. Consider other structures to accommodate trails (pedestrian and equestrian) and mowers and other equipment used in the management of preserves or combine trails with wildlife crossings for areas other than Split Oak which will be bridged.

The Preferred Alternative curves south to avoid a direct bisection of the Split Oak Forest, but the curve is expected to impact approximately 60 acres of Split Oak Forest directly, and an additional 100-acre parcel remainder area in the southwest corner of the forest indirectly. As a result of this curve south, the commitment "A" above to elevate the roadway through Split Oak Forest will be revised to keep the roadway at grade. Commitments "B" and "C" above will be revised to specify the grade separation at the Florida Scenic Trails path intersection only, not through all of Split Oak Forest. The revised commitment "A" is as follows: *"The road within Split Oak Forest will generally be constructed at grade."*

Additionally, the OCX PD&E Recommended Alternative impacted approximately 8 acres of Eagles Roost and 11 acres of World DRI mitigation area directly, while the Preferred Alternative impacts approximately 3 acres and 17 acres, respectively. Both alternatives would impact the Split Oak Forest Wildlife and Environmental Area Trail, which would require an overpass to carry the proposed roadway over the trail.

**Table 2: Recreational Area Impact Comparison**

Consideration	OCX PD&E Recommended Alternative (2017)	Preferred Alternative
Split Oak Forest direct impacts (acres)	26	60
Eagles Roost Conservation Area (acres)	8	3
World DRI Mitigation Area (acres)	11	17
Split Oak Forest Wildlife and Environmental Area Trail	Yes	Yes

As shown in **Table 2**, the Preferred Alternative has higher impacts to the Split Oak Forest and the World DRI mitigation area, lower impacts to Eagles Roost, and similar impacts to the Split Oak Forest Wildlife and Environmental Area Trail as compared to the OCX PD&E Recommended Alternative (2017). Although the Preferred Alternative has higher impacts to Split Oak Forest, it impacts one corner of the recreation area as opposed to bisecting the resource.

## C. NATURAL

### 2.C.1. Wetlands and Other Surface Waters

The proposed project has been evaluated for potential impacts to wetlands in accordance with Executive Order 11990, "Protection of Wetlands". Wetlands and surface waters within the study area were identified and assessed in accordance with Part 2, Chapter 9 of the PD&E Manual and consistent with the state wetland jurisdictional methodology, as described in Chapter 62-340, Florida Administrative Code, and the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (1987). This evaluation is documented in the Natural Resource Evaluation (2019) prepared under a separate cover, and the results of that evaluation are summarized here.

Formal wetland boundary delineations and surveys were not conducted as a part of this study and will be completed as part of the state and federal permit process. Limited ground truthing by biologists was conducted during field reviews on August 13, August 14 and November 7, 2018. During field reviews, a representative sample of wetlands were visited by biologists. When appropriate, these communities are discussed collectively depending upon their hydrologic connection. There are no wetlands or surface waters designated as Outstanding Florida Waters within the project study area.

For comparison purposes the OCX PD&E Recommended Alternative (2017) was divided into a segment west of Narcoossee Road, and a segment east of Narcoossee Road, similar to Preferred Alternative. The west and east segments of the OCX PD&E Recommended Alternative (2017) and the Preferred Alternative are shown on **Figure 4** and **Figure 5**, respectively.

For the build alternatives, potential direct impacts to wetlands, surface waters, and other surface waters were assessed for the study area. **Table 3** shows the proposed wetland, other surface water, and surface water impacts within the study area for the OCX PD&E Recommended Alternative (2017) and the Preferred Alternative.



Figure 4: Western Alternatives Wetland and Surface Water Maps

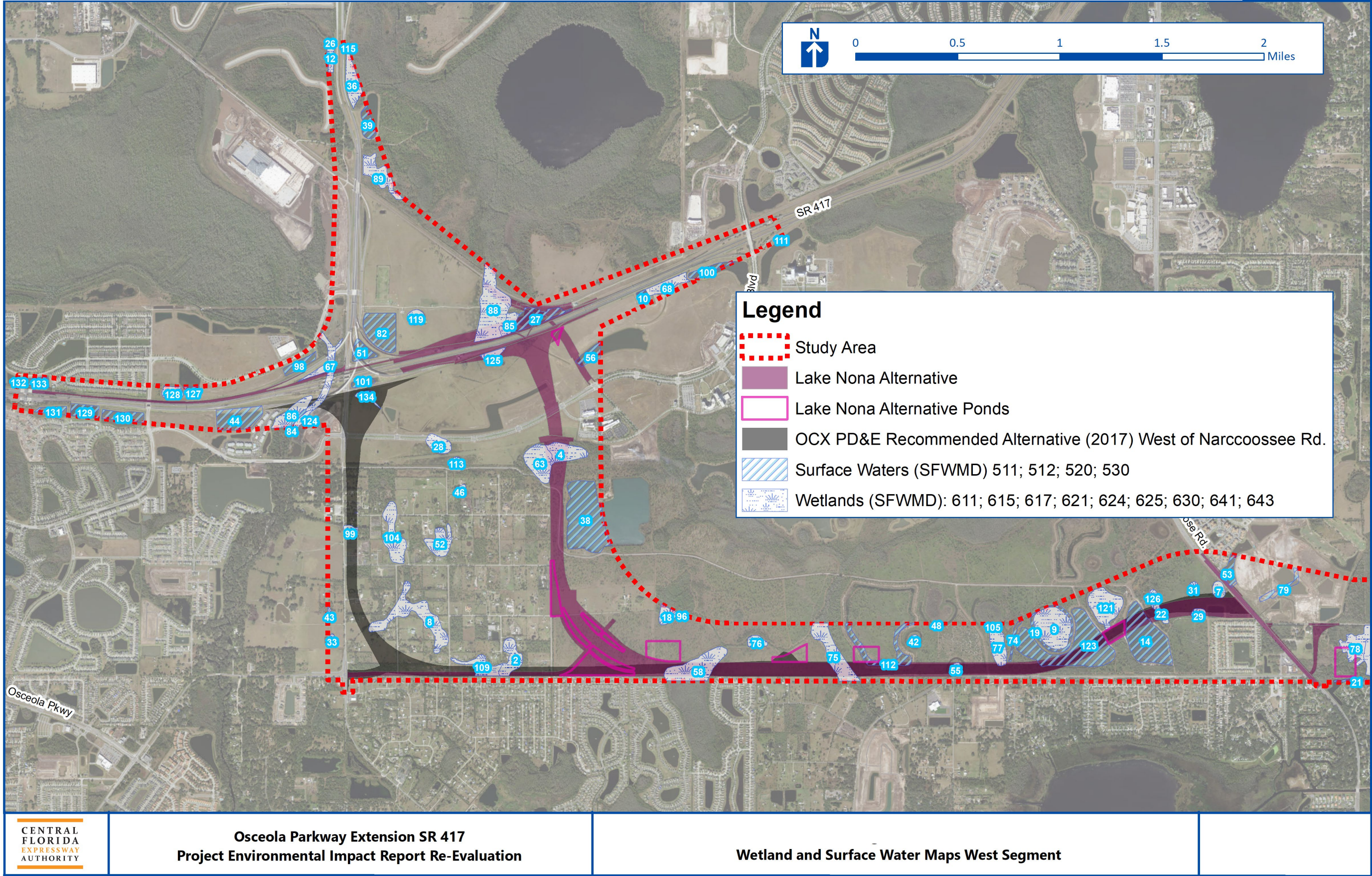
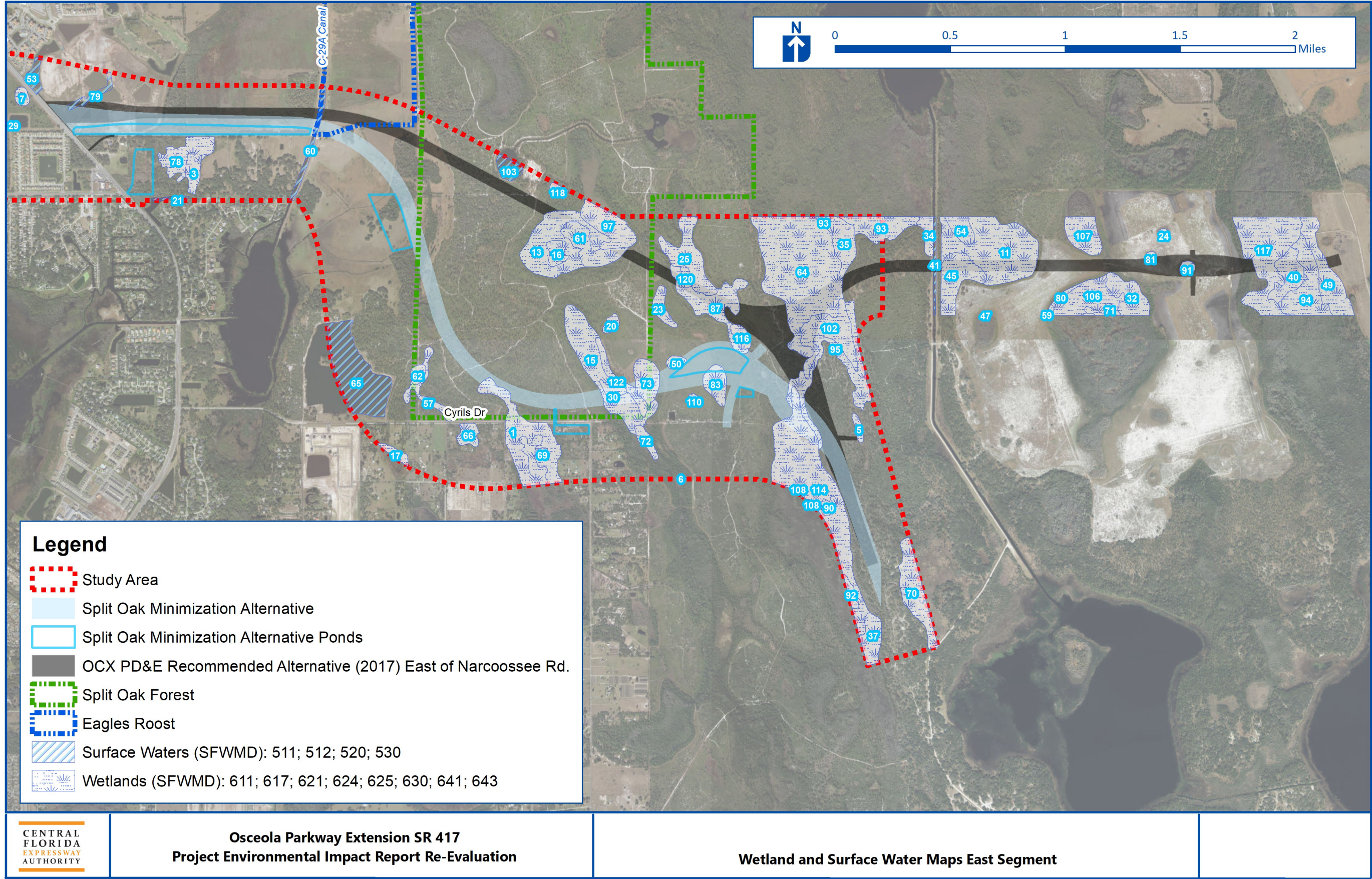




Figure 5: Eastern Alternatives Wetland and Surface Water Maps





**Table 3: Wetland Impact Analysis**

Alternative	Description	FLUCFCS	Map ID	Impact (Acres)
<b>OCX PD&amp;E Recommended (2017) Alternative</b>	Other Surface Waters	512, 530	14, 41, 53, 60, 79, 112, 123	19
	Mixed Wetland Hardwoods	617	61, 75, 86, 94, 120	18
	Cypress	621	2, 5, 8, 22, 58, 77, 87, 99, 117, 134	40
	Hydric Pine Flatwoods	625	11, 64	37
	Wetland Forested Mixed	630	13, 45, 49, 95, 109	32
	Freshwater Marshes	641	7, 25, 29, 35, 40, 55, 81, 91, 97, 102, 114, 116, 121, 126	17
	<b>Forested Wetland Impacts</b>			127
	<b>Non-Forested Wetland Impacts</b>			17
	<b>Total Wetland Impacts</b>			144
<b>Preferred Alternative</b>	Other Surface Waters	512, 530	14, 27, 53, 56, 60, 79, 112, 123	34
	Bay Swamps	611	30	3
	Streams and Lake Swamps	615	67	1
	Mixed Wetland Hardwoods	617	15, 75, 85	10
	Cypress	621	2, 4, 22, 58, 63, 77, 87, 88, 125	30
	Hydric Pine Flatwoods	625	122	2
	Wetland Forested Mixed	630	95, 109	6
	Freshwater Marshes	641	1, 7, 29, 50, 55, 73, 83, 114, 116, 121	26
	Wet Prairie	643	78	2
	<b>Forested Wetland Impacts</b>			48
	<b>Non-Forested Wetland Impacts</b>			32
	<b>Total Wetland Impacts</b>			80

The OCX PD&E Recommended Alternative (2017) is anticipated to include approximately 127 acres of impacts to forested wetlands and 17 acres of impacts to non-forested wetlands for a total of 144 acres of impacts to wetlands. The OCX PD&E Recommended Alternative (2017) also includes 19 acres of other surface waters. Total impacts to wetlands for the OCX PD&E Recommended Alternative (2017) is estimated at 144 acres. The Preferred Alternative is anticipated to include 48 acres of impacts to forested wetlands, and 32 acres of impacts to non-forested wetlands. The Preferred Alternative also includes 34 acres of impacts to other surface waters. Total impacts to wetlands for the Preferred Alternative are estimated at 80 acres.

Overall, the Preferred Alternative is anticipated to have a significantly lower wetland impact than the OCX PD&E Recommended Alternative (2017).

## 2.C.5. Floodplains

Based on a review of the Federal Emergency Management Agency, Flood Insurance Rate Maps (FEMA-FIRM), FIRMs panel numbers 12097C0080G (6/18/2013), 12097C0085G (6/18/2013), 12097C0105G (6/18/2013), 12097C0110G (6/18/2013), 12097C0120G (6/18/2013), 12095C0650F (9/25/2009), 12095C0675F (9/25/2009) - for Orange and Osceola counties, the study area lies in the 100-year floodplain within zones A, AE (elevations ranging from 63 to 70 NGVD) and AE (floodway). In addition, Boggy Creek is mapped as a regulatory floodway.

A drainage analysis was completed as part of the OCX PD&E Study (2017) to evaluate flow patterns, floodplain impacts and drainage needs. The OCX PD&E Recommended Alternative (2017) impacts approximately 235.6 acres of areas mapped in the 100-year floodplain (Zone A and AE) and approximately 2.60 acres of regulatory floodway.

**Table 4: Floodplain Impact Comparison**

Resource	OCX PD&E Recommended Alternative (2017)	Preferred Alternative
Canals / Regulated Floodways	3	0
Flood Hazard Areas – 100-year floodplain	236	167

This is a project on a new alignment with encroachments into the floodplain. Proposed cross drains and bridges will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. Floodplain encroachments will be mitigated on a cup-for-cup basis in floodplain compensation sites and treatment/attenuation pond sites, which should result in no increase to the floodplain elevations. These changes will not result in any adverse impacts on the natural and beneficial floodplain values or any changes in flood risk or damage. There will not be a change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that the encroachment type for this study is classified as “minimal”.

The Preferred Alternative shifts away from Boggy Creek, which results in avoidance of impacts to the regulated floodway, and an overall reduction in impacts to the 100-year floodplain (167 acres) as compared to the OCX PD&E Recommended Alternative (2017). **Table 4** shows a comparison of the floodplain impacts.

## 2.C.7. Protected Species and Habitat

A Natural Resource Evaluation (2019) was prepared as part of this re-evaluation under a separate cover, which confirmed that each of the alternatives is anticipated to have impacts to listed species. For comparison purposes, the OCX PD&E Recommended Alternative (2017) was divided into east and west segments similar to the proposed build alternatives.

Impacts to listed species west of Narcoossee Road are anticipated to be comparable between the OCX PD&E Recommended Alternative (2017) and the Preferred Alternative. As no species-specific surveys were conducted during the development of this study, it is not practical to rank one alternative within the west segment as having higher or lower impacts to listed species by using available data.

Impacts to listed species east of Narcoossee Road are anticipated to be highest with the OCX PD&E Recommended Alternative (2017). The Preferred Alternative and the OCX PD&E Recommended Alternative (2017) both have impacts within Split Oak Forest. The OCX PD&E Recommended Alternative (2017) has a higher potential for gopher tortoise and sandhill crane nest impacts. Due to the proximity of documented Florida scrub-jay habitat, both the Preferred Alternative and the OCX PD&E Recommended Alternative (2017) may affect Florida scrub-jay habitat. Due to a lack of documented Florida scrub-jay habitat, the Preferred Alternative is not anticipated to affect Florida scrub-jay habitat. The OCX PD&E Recommended Alternative (2017) will also impact several gopher tortoises observed by KHA & Inwood (2016) towards the east extent of the study area while the Preferred Alternative will not. Species observations within the west and east segments of the OCX PD&E Recommended Alternative (2017) and the Preferred Alternative are shown on **Figure 6** and **Figure 7**.



Figure 6: Western Alternatives Listed Species Maps

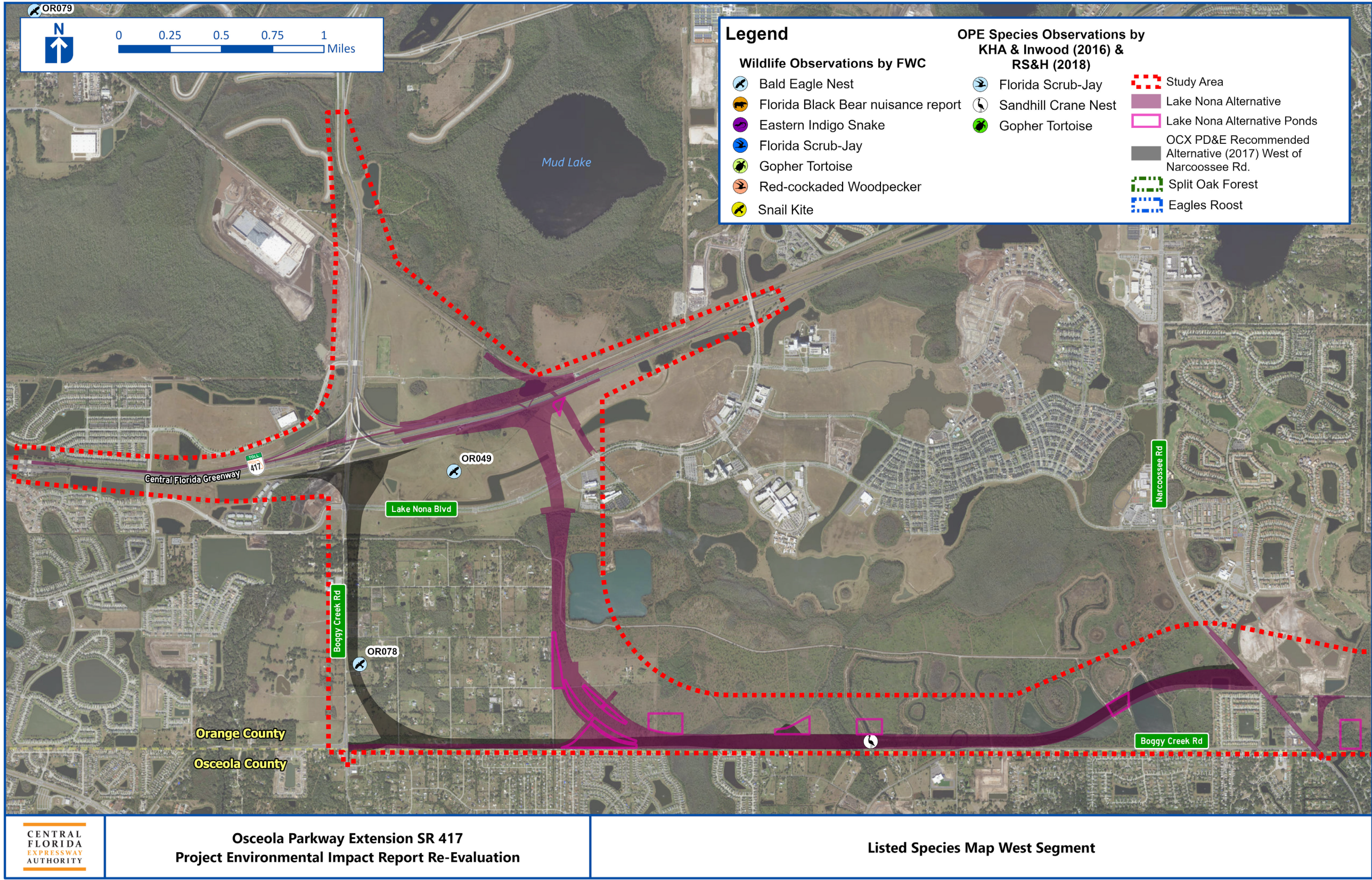
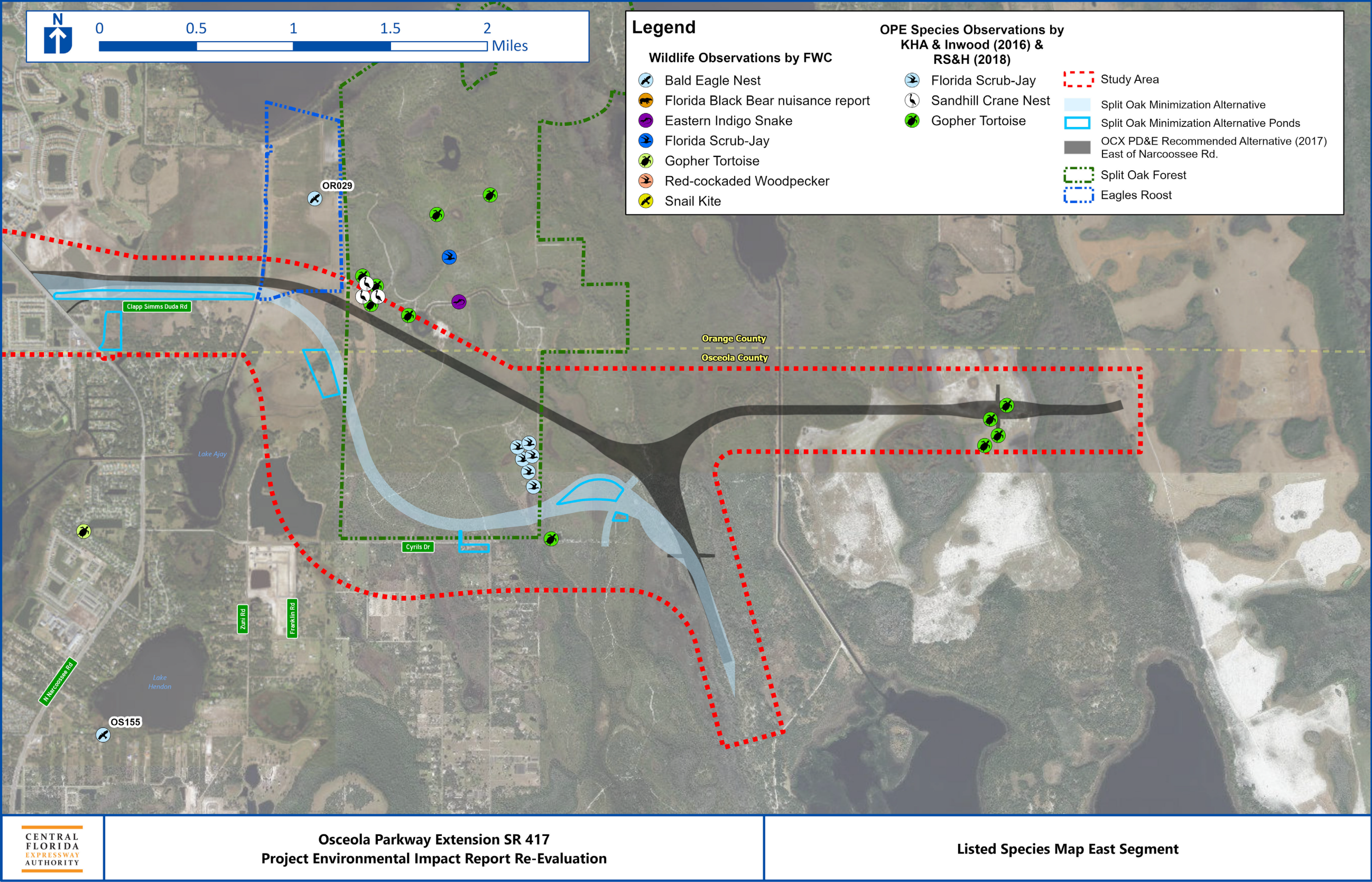




Figure 7: Eastern Alternatives Listed Species Maps





**Table 5: Effect Determination Comparison**

Species Common Name	Effect Determination	
	OCX PD&E Recommended Alternative (2017)	Preferred Alternative
Florida Panther	No effect	May affect, not likely to adversely affect
Eastern Indigo Snake	May affect	May affect, not likely to adversely affect
American Alligator	No effect	May affect, not likely to adversely affect
Sand Skink/Blue Tailed Mole Skink	May affect, not likely to adversely affect	May affect, not likely to adversely affect
Everglades Snail Kite	May affect, not likely to adversely affect	May affect, not likely to adversely affect
Red-cockaded Woodpecker	May affect, not likely to adversely affect	May affect, not likely to adversely affect
Wood Stork	May affect, not likely to adversely affect	May affect, not likely to adversely affect
Audubon's Crested Caracara	No effect	May affect, not likely to adversely affect
Florida Scrub-Jay	May affect, not likely to adversely affect	May affect, not likely to adversely affect

Of the species listed in the table, changes in anticipated degree of effect were identified for the Florida panther, Eastern Indigo snake, American Alligator, and Audubon's crested caracara.

#### Florida Panther

The Florida panther is considered Endangered by the United States Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC). The panther historically occurred throughout the southeastern United States but hunting pressure and habitat alteration severely reduced panther populations. Though the study area does not fall within the USFWS "Primary", "Secondary", or "Dispersal" Zones for the Florida panther, the species was designated as having a low potential for occurrence based on the absence of nearby FWC Panther Telemetry points. Telemetry points collected from FWC show that one collared male (FP062) was detected in February 2000 approximately 14 miles west of the study area in proximity of Reedy Creek Swamp. No panther telemetry data has been collected within the study area. Following the USFWS Panther Effect Determination Key (February 19, 2007), it has been determined that the proposed project "***may affect, not likely to adversely affect***" the Florida panther.

### Eastern Indigo Snake

The Eastern indigo snake, listed by both the FWC and the USFWS as *Threatened*, is a habitat generalist, using a variety of habitats from mangrove swamps to xeric uplands. These snakes are cold-sensitive and require gopher tortoise burrows, other animal burrows/dens, or stumps for protection during winter months. These snakes require large tracts of natural, undisturbed habitat, and prefer to forage in and around wetlands for their preferred prey – other snakes.

The Eastern indigo snake was designated as having a high potential for occurrence based on the presence of suitable upland habitat within the study area. To minimize potential adverse impacts to the eastern indigo snake, the Central Florida Expressway Authority (CFX) will implement the USFWS-approved *Standard Protection Measures for the Eastern Indigo Snake* (updated August 1, 2017) during the proposed roadway improvements. With the implementation of these measures, it has been determined that the project “**may affect, not likely to adversely affect**” the eastern indigo snake.

### American Alligator

The USFWS continues to protect the alligator under the Endangered Species Act classification as Threatened due to similarity of appearance. The USFWS thus regulates the harvest of alligators and legal trade in the animals, their skins, and products made from them, as part of efforts to prevent the illegal take and trafficking of endangered “look-alike” reptiles.

The American alligator was designated as having a high potential for occurrence based on visual observations of the species and the presence of suitable habitat within the study area. This species is common within Central Florida and the long-term viability of this species is not anticipated to be affected. The USFWS does not consult or make determinations of affect for this species due to its commonality, and listing is maintained primarily for law enforcement purposes. Based on the provision of compensatory mitigation to offset wetland and surface water habitat impacts, CFX has determined that the proposed project “**may affect, not likely to adversely affect**” the American alligator.

### Audubon's Crested Caracara

The Audubon's crested caracara is listed as *Threatened* by the USFWS. The crested caracara inhabits Florida's prairies and rangelands. They forage on many kinds of insects, fish, reptiles, birds, and mammals. They will feed on live captured prey, but also on carrion. Caracara nests are usually constructed within cabbage palms.

The project is located within the USFWS Audubon's Crested Caracara Consultation Area. The project occurs at the northernmost edge of the consultation area for this bird in Central Florida. During field reviews, no caracara or their nests were immediately observed, but full surveys were not conducted following the USFWS *Audubon's Crested Caracara Draft Survey Protocol –Additional Guidance (2016-2017 Breeding Season)*.

Based on the lack of documented caracara nesting within the study area, it has been determined that the proposed project “**may affect, not likely to adversely affect**” Audubon's crested caracara. Consultation regarding the caracara will occur during the design phase.

## Florida Scrub-Jay

The Florida scrub-jay, listed as Threatened by the USFWS, is an endemic species found in Florida scrub habitats. This gregarious jay is a habitat specialist and typically lives in scrub and scrubby flatwoods habitats. Potential suitable habitat was identified in several locations within Split Oak Forest. Surveys conducted during the OCX PD&E Study in 2016, identified occupied scrub-jay habitat less than one-half mile north of the project corridor within Split Oak Forest. This re-evaluation did not include scrub-jay surveys in accordance with the USFWS Scrub-jay Survey Guidelines (2007). As the project corridor has not been surveyed following USFWS Scrub-jay Survey Guidelines, surveys will be required during the design and permitting phase. If occupied habitat is documented during design-phase surveys, a mitigation plan will likely be required to offset unavoidable impacts.

As no occupied scrub-jay habitat has been documented within the design alternatives evaluated, it has been determined that the proposed project “**may affect, not likely to adversely affect**” the Florida scrub-jay. Consultation regarding the scrub-jay will occur during the design phase.

Overall, due to the southerly shift in the Preferred Alternative in the vicinity of Split Oak Forest, the Preferred Alternative has a lower degree of impact to protected species as compared to the OCX PD&E Recommended Alternative (2017).

## **D. PHYSICAL**

### **2.D.1. Highway Traffic Noise**

The OCX PD&E Noise Study Report (NSR) (2017) includes an evaluation of potential traffic noise impacts to the noise sensitive sites along State Road 417, Osceola Parkway, Boggy Creek Road, and crossroads within the project corridor. The 2017 PD&E NSR indicates noise impacts were predicted to occur at 166 residences and at a church located along Boggy Creek Road (Receptor Site REB09-013). Of these 166 residences, 14 residents would be relocated; 107 residences would be impacted due to an exceedance of the Noise Activity Criteria (NAC), and 45 residences would experience a substantial increase [15.0 dB(A) or greater] impact when compared to existing conditions.

Noise barriers were evaluated for each of the impacted sites, and barriers were found to be reasonable and feasible at one location [i.e., Noise Sensitive Area (NSA) EB08]. The optimal conceptual noise barrier design at this location represented a 22-foot tall ground mounted noise barrier. This noise barrier would provide benefit to 95 impacted residences within Morningside, Morningside Village, Silver Lake Estates, Springlake Village, and Raintree at Springlake Village. This noise barrier would be constructed along the right-of-way line of the eastbound side of OPE with an estimated cost of \$5,200,800 or \$29,393 per benefited receptor site. The 2017 NSR indicated that further consideration of a noise barrier at this location will be given during the Design phase of the project.

An updated traffic noise study was performed in accordance with 23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise (July 13, 2010) and the FDOT's PD&E Manual, Part 2, Chapter 18, Highway Traffic Noise (January 14, 2019). The purpose of this noise study is to update the noise analysis to reflect the design changes since the OCX PD&E NSR (2017), and the updated analysis is documented in the Noise Study Report (2019) prepared under a separate cover.

Design year (2045) traffic noise levels for the Preferred Alternative will result in impacts to 217 residences and two special land use sites within the project limits. The design year noise levels at these impacted sites will either approach, meet, or exceed the NAC or will result in a 15 dB(A) increase over the existing noise levels. The 219 noise sensitive sites impacted by the project are located within nine (i.e., EB10, EB11, EB12, WB05, EB08, EB07, EB06, EB03, and WB04) of the 17 NSAs evaluated. In accordance with Federal Highway Administration and Florida Department of Transportation policies, the feasibility and reasonableness of noise barriers were considered for these impacted noise sensitive sites within these nine NSAs.

Of the nine impacted NSAs, noise barriers were not considered a feasible abatement option for WB04. The four impacted sites within this residential community represent isolated residences. Since the impacted residential receptor sites represent isolated residences, noise barriers were not considered acoustically feasible. For a noise barrier to be considered an acoustically feasible abatement measure, it must benefit at least two impacted receptor sites.

The results of the noise barrier analysis for the other eight NSAs are summarized in **Table 6**. Noise barriers are recommended for further consideration during the project's design phase and for public input within seven (7) of the eight (8) NSAs. The locations and limits of the five (5) recommended noise barriers are presented in **Table 6** and are shown on **Figures 8, 9, and 10**. The five (5) recommended noise barriers within these seven (7) NSAs are expected to reduce traffic noise by at least 5 dB(A) at 354 residences, including 186 of the 217 impacted residences along the project corridor. The estimated cost of the recommended noise barriers is \$11,677,890. Additional noise barrier analysis will be performed during the project's design phase when more detailed project design information is available. It is during the project's design phase that final decisions regarding noise barrier length and height are made and an engineering constructability review is conducted to confirm that the noise barrier is feasible and support for noise barriers from the benefited noise sensitive sites is determined. Therefore, the heights of the noise barriers and costs are still subject to change during the project's design phase. Noise barriers are not recommended for further consideration at one NSA (i.e., EB06). The cost to construct noise barriers at this location exceeds FDOT's reasonable cost criteria of equal to or less than \$42,000 per benefited receptor site and/or the optimal/lowest cost conceptual noise barrier design did not meet the minimum noise reduction design goal of 7 dB(A) for at least one impacted residence.

Based on the noise analysis performed to date, there appears to be no apparent solutions available to mitigate the noise impacts at 31 of the 217 impacted residences. Therefore, impacts to these and other noise sensitive sites along the project corridor are an unavoidable consequence of the project.

Overall, the Preferred Alternative is anticipated to have increased noise impacts as compared to the OCX PD&E Recommended Alternative (2017). The PD&E Re-evaluation indicated that noise barriers are potentially feasible and reasonable at five locations protecting seven (7) NSAs (NSA EB08, NSA EB07, NSA EB03, NSA WB05, and NSA EB10/EB11/EB12). The noise barriers at these noise sensitive areas will be reanalyzed during the design phase of this project, when more refined engineering data can be incorporated into the barrier analysis. CFX is committed to the construction of noise barriers found to be reasonable and feasible during the design phase of this project.

Table 6: Recommended Noise Barriers

Noise Sensitive Area Name / Number	Conceptual Noise Barrier Design Number (Type)	Height (feet)	Length (feet)	Begin Station Number	End Station Number	Number of Impacted Receptor Sites	Number of Impacted/ Benefited Receptor Sites	Number of Benefited Receptor Sites/ Not Impacted	Total Number of Benefited Receptor Sites	Average Noise Reduction for all Benefited Receptor Sites dB(A)	Maximum Noise Reduction for all Benefited Receptor Sites dB(A)	Cost (\$30 per square foot)	Average Cost/Site Benefited	Does Optimal Barrier Design Meet FDOT's ReasonableNoise Abatement Criteria of \$42,000 per Benefited Receptor Site and 7.0 dB(A) Noise Reduction Design Goal?	Noise Barrier Recommended for Further Consideration and Public Input?	Comments
Noise Sensitive Areas EB08, EB07, EB06, and EB05 from Boggy Creek Road to Narcoossee Road																
Morningside Village, Silver Lake Estates, Springlake Village and Raintree at Springlake Village / From Boggy Creek Road to just East of Queen Alexandria Drive / NSA EB08	GM-CD5 (Ground Mounted Noise Barrier)	22	8,200	102+00 (Simpson Rd Extension)	207+00 (OPE)	33	30	116	146	8.0	12.9	\$5,412,000	\$37,068	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase.
Turnberry Reserve and Homes West / NSA EB08 / NSA EB07	GM-CD4 (Ground Mounted Noise Barrier)	22	2,600	213+00	238+00	33	28	15	43	8.3	12.7	\$1,716,000	\$39,907	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase. Barrier is able to provide some benefit to homes with NSA 07.
Scattered Residence along Eastbound Boggy Creek Road and Rustic Acres Neighborhood/ Fells Cove Neighborhood NSA EB06 / NSA EB05	GM-CD2 (Ground Mounted Noise Barrier)	22	4,200	272+00	312+00	9	2	0	2	5.1	5.1	\$2,772,000	\$1,386,000	NO	NO	The conceptual design does not meet FDOT's 7.0 dB(A) Noise Reduction Design Goal, or the Reasonableness Cost Criteria. A noise barrier is not recommended for further consideration or public input during the project's design phase at this location.
Noise Sensitive Area EB03 from West of Narcoossee Road and North of Boggy Creek Road																
Fells Landing Single Family residences / NSA EB03	GM-CD3 (Ground Mounted Noise Barrier)	18	80	349+20	350+00	23	16	0	16	6.1	7.2	\$667,890	\$41,743	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase.
		20	500	350+00	355+00											
		22	400	355+00	359+00											
		20	100	359+00	360+00											
Noise Sensitive Area WB05 Beacon Park - North of SR 417 from the Toll Booth to Wyndham Lakes Blvd																
Beacon Park / NSA WB05	SM-CD2 (Shoulder Mounted Noise Barrier)	8	300	933+00	936+00	45	42	0	42	8.6	11.0	\$1,122,000	\$26,714	YES	YES	Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase.
		14	2,500	908+00	933+00											
Noise Sensitive Areas EB10, EB11, and EB12 Somerset Park, Somerset Crossing and Lake Nona Ariel Apartments - South of SR 417 from the Toll Booth to EB Off Ramp to NB Boggy Creek Road																
Somerset Park/ Somerset Crossing/Lake Nona Ariel Apartments / NSA EB10 / NSA EB11/ NSA EB12	SM-CD4 (Shoulder Mounted Noise Barrier)	14	2,800	905+00	933+00	70	70	37	107	7.6	10.8	\$2,760,000	\$25,794	YES	YES	'Represents the optimal conceptual noise barrier design and is recommended for further consideration and public input during the project's design phase.
		8	300	933+00	936+00											
		14	3,600	936+00	972+00											



Figure 8: Noise Barrier Recommendation Map

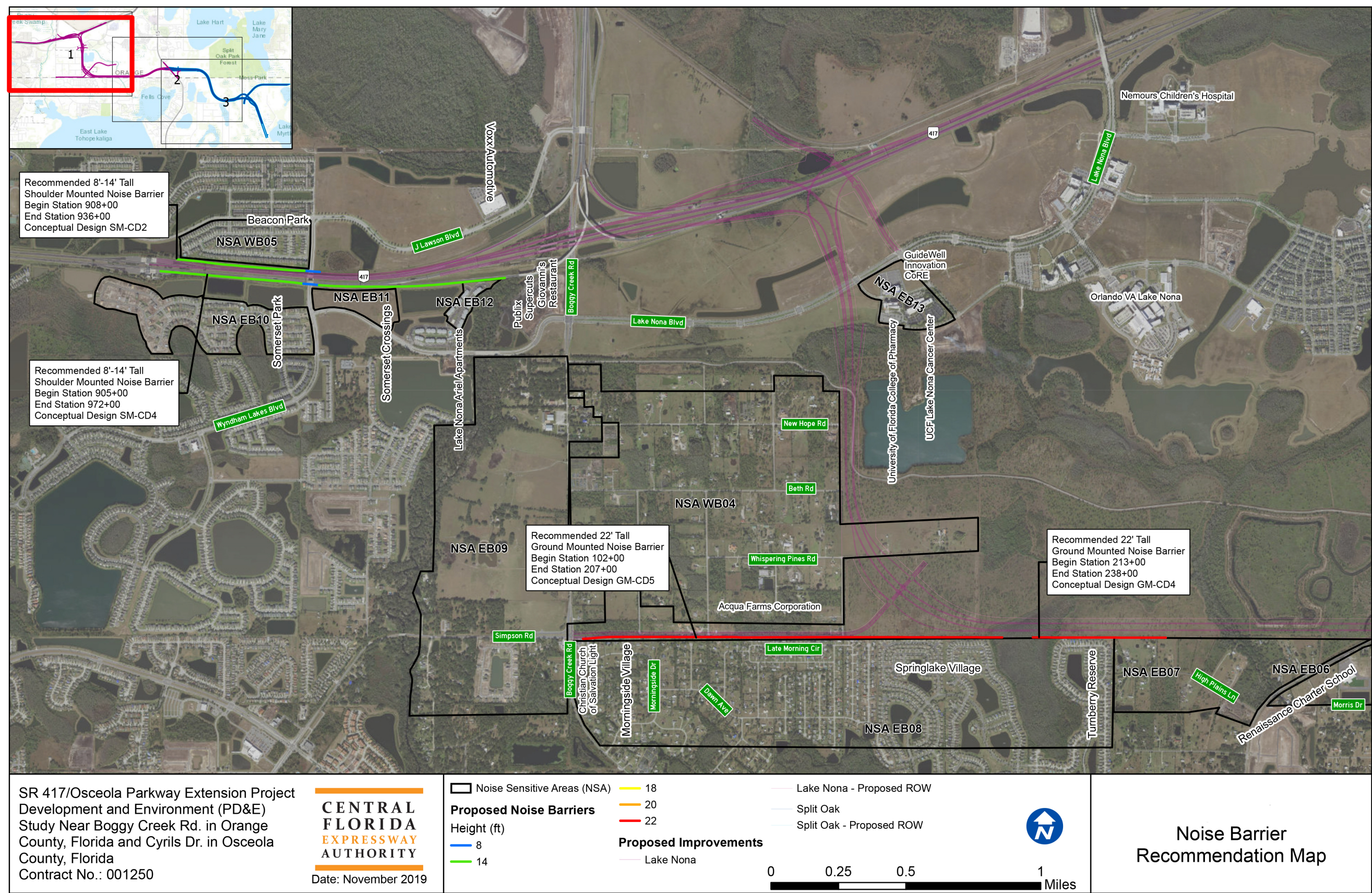




Figure 9: Noise Barrier Recommendation Map (Continued)

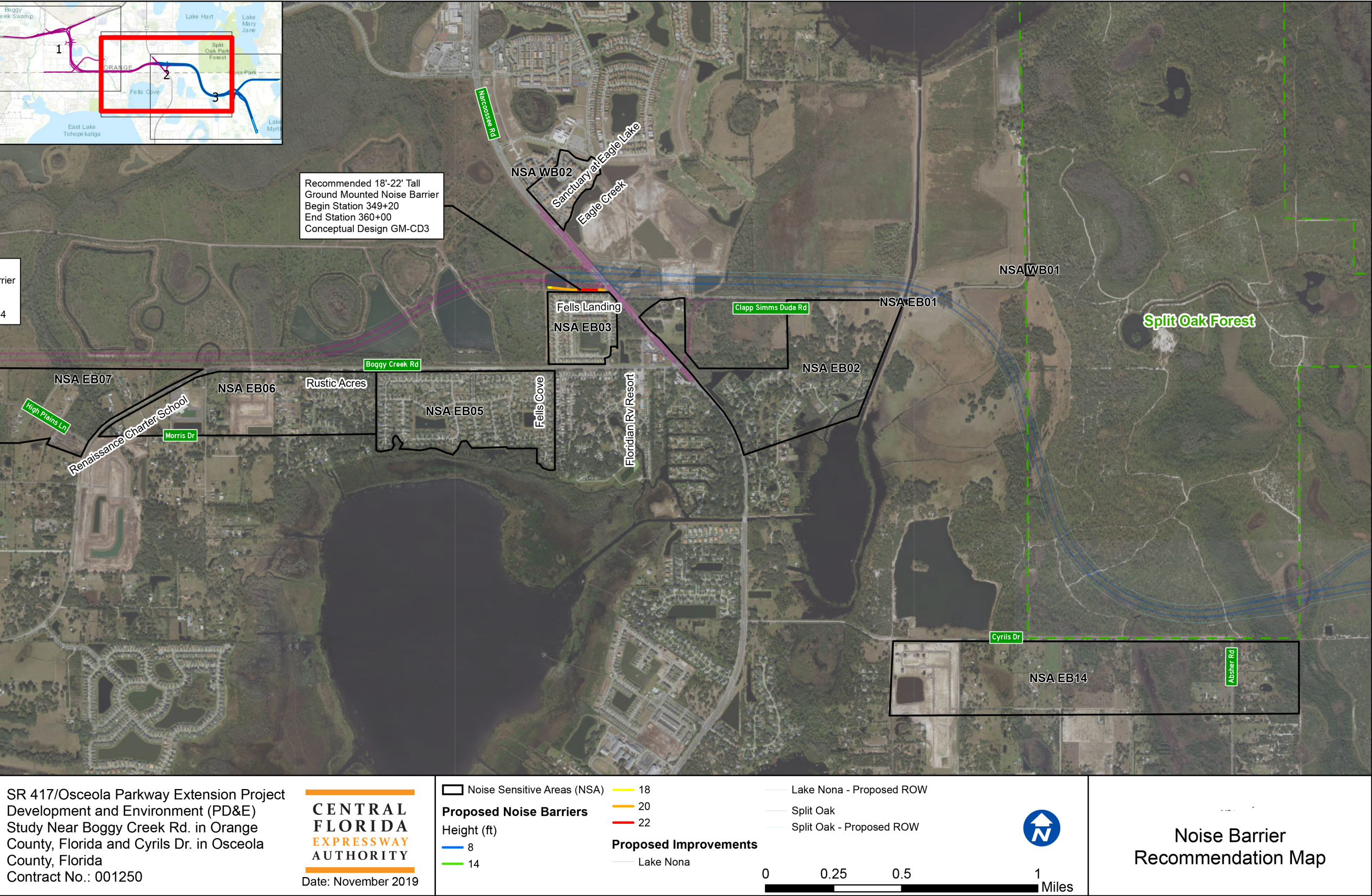
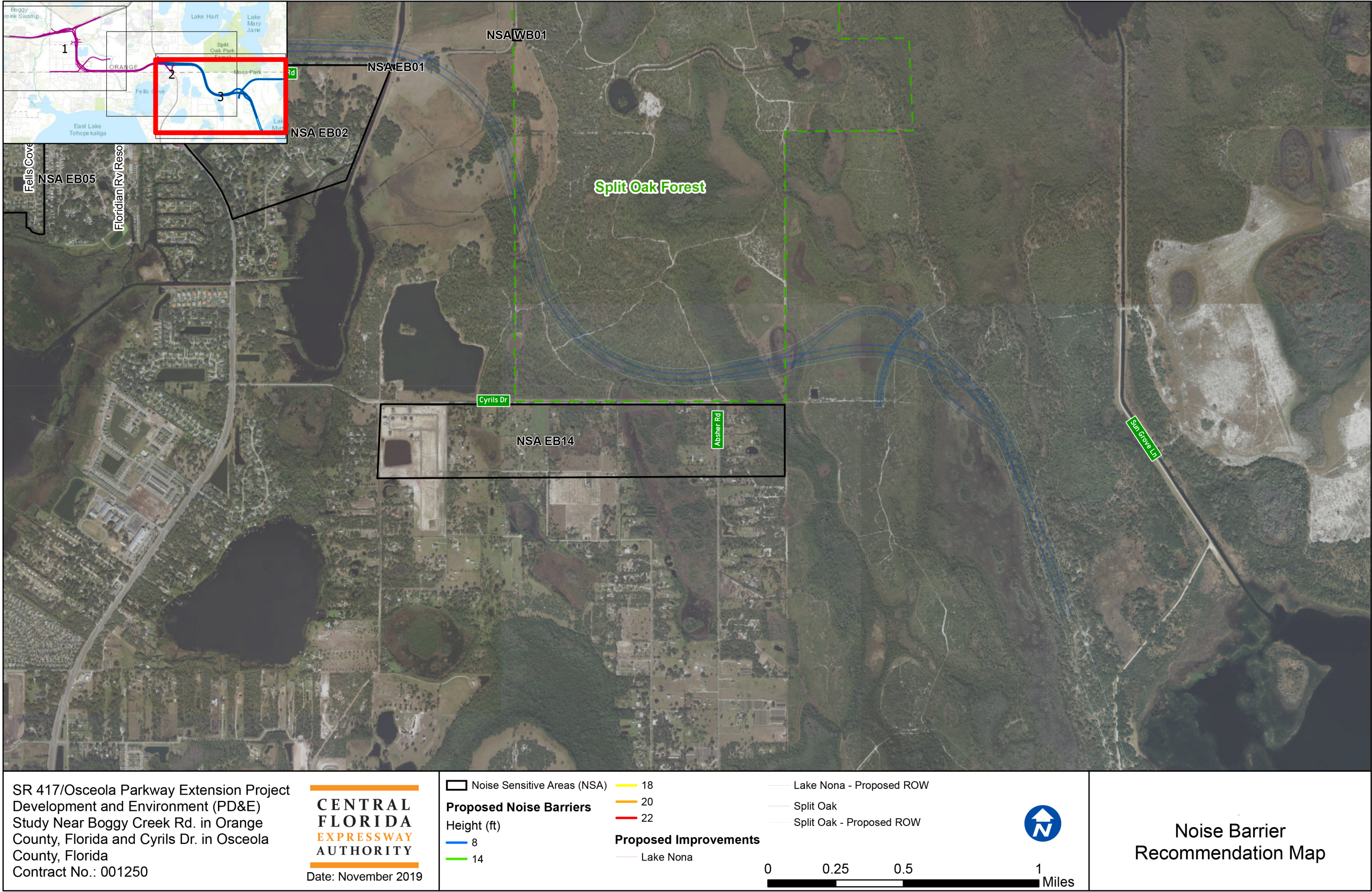




Figure 10: Noise Barrier Recommendation Map (Continued)





## 2.D.3. Contamination

The Contamination Screening Evaluation conducted as part of the OCX PD&E Study (2017) identified a total of 49 potentially contaminated and/or known to be contaminated sites within ¼ mile screening buffer of the study area. Each facility was evaluated and associated with risk evaluation ratings ranging from No Risk to High Risk. Of these, six (6) sites were identified as either High or Medium risk sites.

An updated Contamination Screening Evaluation Report (2019) was prepared under a separate cover as part of this re-evaluation. The CSER (2019) documents 25 potentially contaminated sites, listed in **Table 7**, that could be impacted by the Preferred Alternative. Of these sites, eight (8) were identified as High or Medium risk sites. The eight (8) High or Medium risk sites are shown on **Figures 11 and 12**.

**Table 7: Preferred Alternative Potential Contamination Sites**

SITE NO.	SITE NAME	SITE ADDRESS / LOCATION	RISK POTENTIAL
6	Historical Auto Salvage Yard	14857 Boggy Creek Road	High
7	Circle K #7466	3280 Boggy Creek Road	Medium
8	Showcase M.H. Sales, Inc.	3300 Morningside Drive	Low
9	Historical Ranching Structures and Existing Cattle Pens	0.45 mile east of the SR 417 and Boggy Creek Road interchange, 0.1 mile south of SR 417	Medium
10	Area of Dumping	0.8 mile northeast of the SR 417 and Boggy Creek Road interchange	Low
11	Railroad	300 feet north of SR 417	Low
12	Historical Cattle Pen - SR 417	350 feet north of SR 417	Low
13	Orlando City Lift Station #139	6655 Central Florida Greenway	Low
14	University of Florida-Lake Nona Research Center #3425	6550 Sanger Road	Low
15	Historical Ranch Structures	1 mile northwest of the Boggy Creek Road and Narcoossee Road intersection	Medium
16	Historical Citrus Grove - Boggy Creek Road and Narcoossee Road	West of the Narcoossee Road and Clapp Simms Duda Road intersection	Low
17	Hi-Acres Services	Northeast quadrant of the Narcoossee Road and Calpp Simms Duda Road intersection	Low
18	Historical Citrus Grove - Clapp Simms Duda Road	0.7 mile east of the Narcoossee Road and Clapp Simms Duda Road intersection	Medium
19	Historical Row Crops - Clapp Simms Duda Road	0.5 mile east of the Narcoossee Road and Clapp Simms Duda Road intersection	Medium
20	Lake Hart Property Area #12	1.1 miles east of the Narcoossee Road and Clapp Simms Duda Road intersection	Medium
25	Existing Cattle Pen	Northeast quadrant of SR 417 and Boggy Creek Road interchange	Medium



Figure 11: Western Alternatives Potential Contamination Site Maps

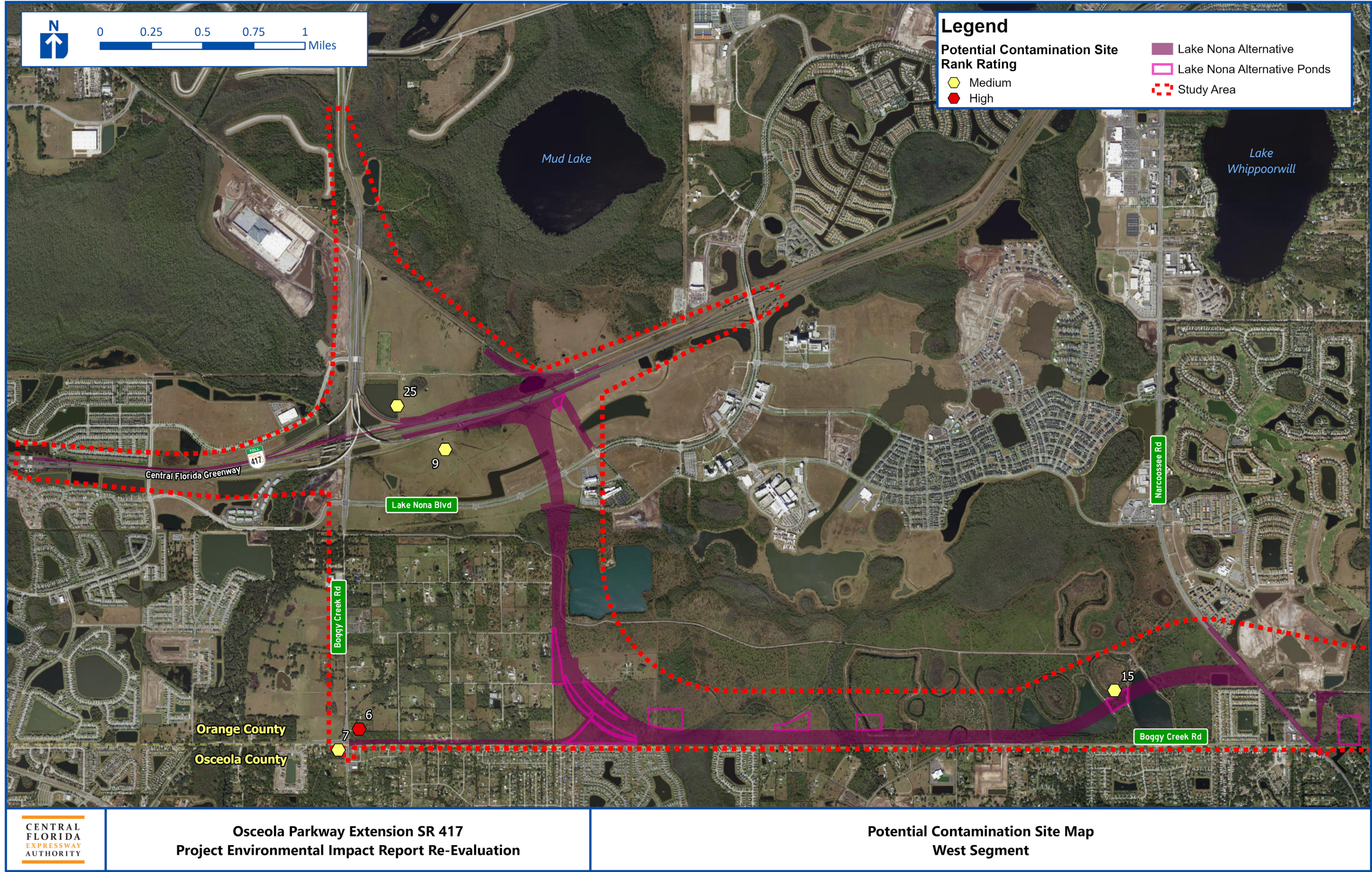
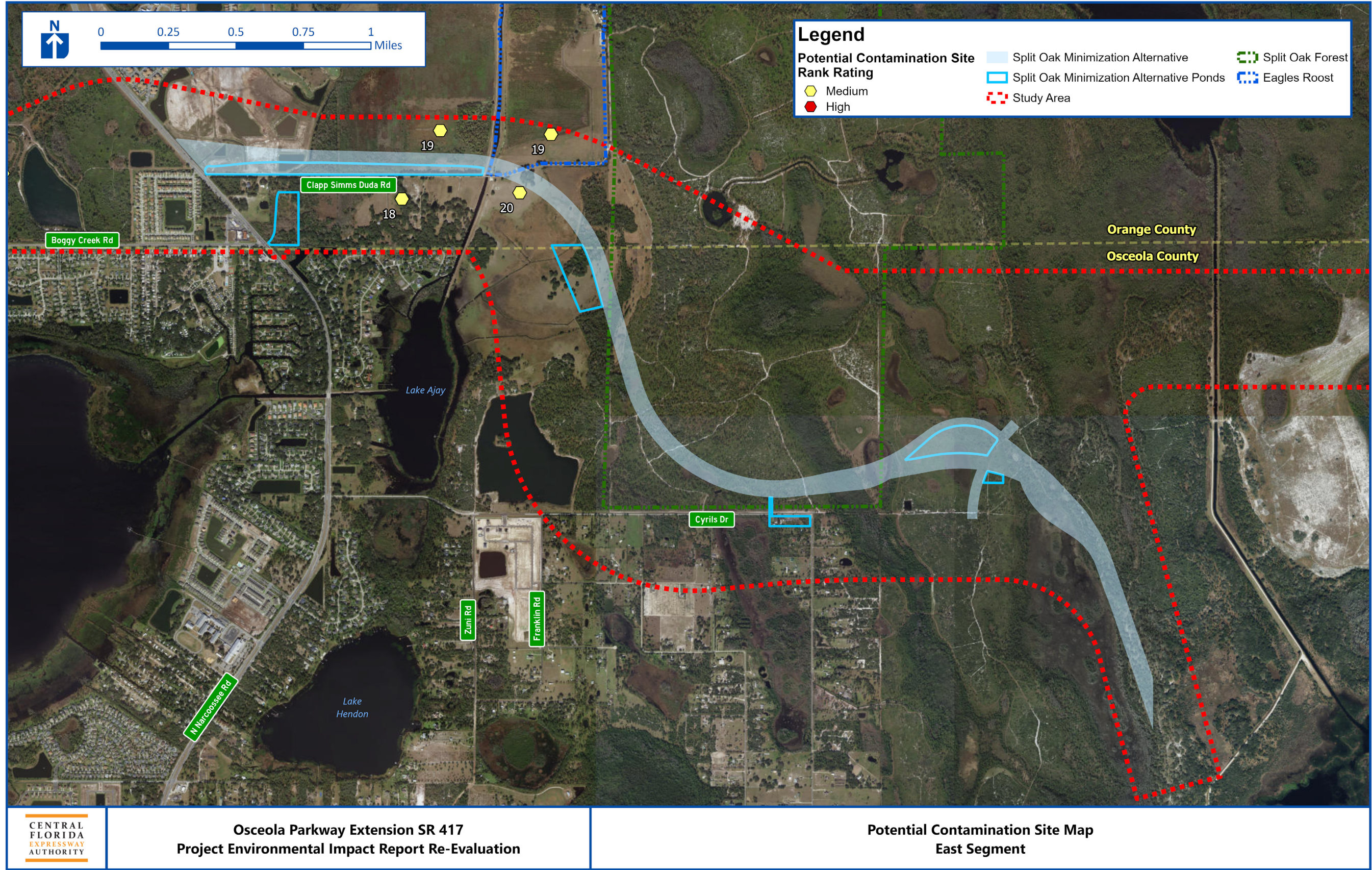




Figure 12: Preferred Eastern Alternative Potential Contamination Site Maps





Overall, the Preferred Alternative has two more potential contamination sites identified as High or Medium Risk sites than the OCX PD&E Recommended Alternative (2017). Level 2 Contamination Impact Assessments may be required for the seven (7) Medium risk sites and one (1) High risk site.

## 2.D.4. Utilities and Railroads

During the OCX PD&E Study (2017), fourteen (14) Utility Agency Owners (UAOs) were identified within the project area through Sunshine 811 Design Ticket and utility coordination efforts. In accordance with Part 2, Chapter 21 of the PD&E Manual, the providers were notified of the proposed improvements and submitted files to identify the location of their utilities within the project area.

As part of this re-evaluation, twenty-four (24) UAOs were identified within the study limits based on the Sunshine 811 Design Ticket. In addition, there were two (2) UAOs listed in the previous study (OCX PD&E Study) that were not identified in the Sunshine 811 Design Ticket. The result is a total of 26 UAOs evaluated for this study. Of the 26 UAOs identified, contacts for six could not be established based on the preliminary contact information. **Table 8** identifies the UAOs in the study area. Additionally, the Orlando Utilities Commission (OUC) railroad mainline runs north of and parallel to SR 417 from just east of Narcoossee Road to just west of Lake Nona Boulevard. The rail line then turns northwest and is at grade adjacent to Boggy Creek Road under the Jeff Fuqua Boulevard overpass. The Preferred Alternative impacts fourteen (14) existing utilities in the study area, with no impacts to the existing rail line anticipated. No known proposed / planned utilities are impacted.

**Table 8: Utility Agency Owners within the Study Area**

Utility Owner	Facilities
AT&T Distribution	Aerial and buried cables - Telephone
Charter Communications	Aerial and buried cables – Fiber, Telephone, CATV
CFX	Fiber
Century Link	Fiber, Telephone
City of St. Cloud	Reclaimed Water, Water, Sewer
City of Orlando – Water Reclamation	Reclaimed Water, Wastewater
City of Orlando – Traffic Eng Signal & Fiber Electric	Fiber, Traffic Signals, Electric
Comcast	CATV
Duke Energy Distribution	Distributed Electric
Duke Energy Transmission	Transmission
Embarq Communications Inc.	Fiber
Hotwire Communications	Fiber, Telephone, CATV
MCI	Fiber, Communication Lines
Orlando Telephone Company	Fiber, Telephone
Orlando Utilities Commission – Electric	Distributed Electric
Orlando Utilities Commission – Transmission	Transmission
Orlando Utilities Commission – Water	Water
Orange County Utilities Wastewater	Wastewater
Orange County Public Works	Fiber, Traffic Signals



Utility Owner	Facilities
Orange County Utilities Water	Water
Osceola County	Fiber, Traffic Signals
Sprint	Buried Fiber
Summit Broadband	Buried Fiber
Teco Peoples Gas – Orlando	Gas
Toho Water Authority	Water, Sewer
UNITI Fiber LLC	Fiber

## 2.D.6. Bicycles and Pedestrians

The Preferred Alternative crosses through the Split Oak Forest south of the OCX PD&E Recommended Alternative (2017). The resulting shift creates an intersection between the Preferred Alternative and the planned Florida Scenic Trails Path through Split Oak Forest. At this intersection, a bridge would be provided to act as a wildlife crossing that will also accommodate the future Florida Scenic Trails Path.