



SR 400 (I-4) Project Development and Environment (PD&E) Study
FM No.: 201210-2-22-01



Wetland Evaluation Report (WER)

**Segment 5: State Road 400 (SR 400)/Interstate 4 (I-4)
from West of SR 25/US 27
to West of CR 532 (Polk/Osceola County Line)**

Polk County (16320)

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1.0 SUMMARY OF PROJECT

The Florida Department of Transportation (FDOT) is conducting an update/reevaluation of the Project Development and Environment (PD&E) studies for the extension of proposed express lanes for State Road 400 (SR 400)/Interstate 4 (I-4). The project limits in the original PD&E studies were:

- West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line, (29.5 miles)
- CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) (13.7 miles), and
- West of SR 528 Beachline Expressway to SR 472 (43 miles).

The corresponding environmental documents associated with these PD&E studies include: Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for SR 400 (I-4) from West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line [Financial Project Number (FPN) 201210 (December 1998)] and from CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) [FPN 242526 and 242483 (December 1999)] and Final Environmental Impact Statement (FEIS) for I-4 from SR 528 (Beachline Expressway) to SR 472 [FPN 242486, 242592 and 242703 (August 2002, Record of Decision Pending)].

The project limits of the current SR 400 (I-4) PD&E reevaluation, herein referred to as I-4 Beyond the Ultimate (BtU) PD&E Reevaluation Study, include a total of approximately 43 miles of roadway sections east and west of the 21-mile, I-4 BtU project. The I-4 BtU project, which began construction in early 2015, is reconstruction to include new express lanes, of the section of I-4 that extends from west of SR 435 (Kirkman Road) to east of SR 434. For analysis purposes, the current I-4 BtU PD&E study has been divided into the following five segments:

- Segment 1: SR 400 (I-4) from West of CR 532 (Polk/Osceola County Line) to West of SR 528 (Beachline Expressway) - Osceola County (92130) and Orange County (75280)
- Segment 2: SR 400 (I-4) from West of SR 528 (Beachline Expressway) to West of SR 435 (Kirkman Road) - Orange County (75280)
- Segment 3: SR 400 (I-4) from 1 Mile East of SR 434 to East of SR 15-600/US 17-92 (Seminole/Volusia County Line) - Seminole County (77160)
- Segment 4: SR 400 (I-4) from East of SR 15-600/US 17-92 (Seminole/Volusia County Line) to 1/2 Mile East of SR 472 - Volusia County (79110)
- Segment 5: SR 400 (I-4) from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County (16320)

This Wetland Evaluation Report (WER) was prepared for Segment 5 of the SR 400 (I-4) BtU PD&E Reevaluation Study. This WER documents the jurisdictional wetland and surface water communities found within the project corridor, and assess the size and quality of each system and the likelihood of involvement during project implementation. Furthermore, this WER documents design changes in support of the PD&E reevaluation of Segment 5 portion of the FONSI for SR 400 (I-4) from West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line (FPN 201210, December 1998) and includes the environmental analysis of the original design concept, which provided six (6) general use lanes (GUL), and four (4) special use lanes (SUL) for high occupancy vehicles (HOV)/single occupant through vehicles (SOV), to the current proposed design that includes six (6) GULs

and four (4) express lanes (EL) operating under a variable pricing toll plan. Other changes being reanalyzed include stormwater management, access plan, and interchange configurations.

1.1 Description of Proposed Action

FDOT is proposing to reconstruct and widen I-4 as part of the I-4 BtU concept. This involves the build-out of I-4 to its ultimate condition through Central Florida, including segments in Polk, Osceola, Orange, Seminole and Volusia Counties. The concept design proposes the addition of two new express lanes in each direction, resulting in a total of 10 dedicated lanes. The project limits for the segment analyzed in this report are within an approximate 4.5-mile segment of I-4 which extends from west of SR 25/US 27 to west of CR 532 (Polk/Osceola County Line), from Milepost (MP) 27.145 to MP 31.607 in Polk County (herein referred to as I-4 Segment 5) and as shown in Appendix A, Exhibit 1 – Location Map. Although, the interstate is a designated east-west corridor, the alignment follows a southwest to northeast orientation through the limits of Segment 5. The study area in this section, from west of SR 25/US 27 to west of CR 532, includes only one (1) interchange located at US 27.

The proposed improvements to I-4 include widening the existing six (6) lane divided urban interstate to a 10 lane divided highway. Generally, the typical section will be consistent throughout Segment 5 and will have three (3) 12-foot GULs with 12-foot inside and outside shoulders and two (2) 12-foot express lanes with 10-foot inside (median) and 12-foot outside shoulders in each direction. A two-foot barrier wall between the adjacent shoulders will separate the express lanes from the general use lanes. The typical section includes a 44-foot transit envelope in the median within a minimum 300-foot right-of-way (ROW). Figure 1.1 illustrates the proposed mainline typical section for I-4 Segment 5. Figure 1.2 illustrates the previously recommended typical section from the originally-approved EA/FONSI for SR 400 (I-4) from West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line [Financial Project Number (FPN) 201210 (December 1998)].

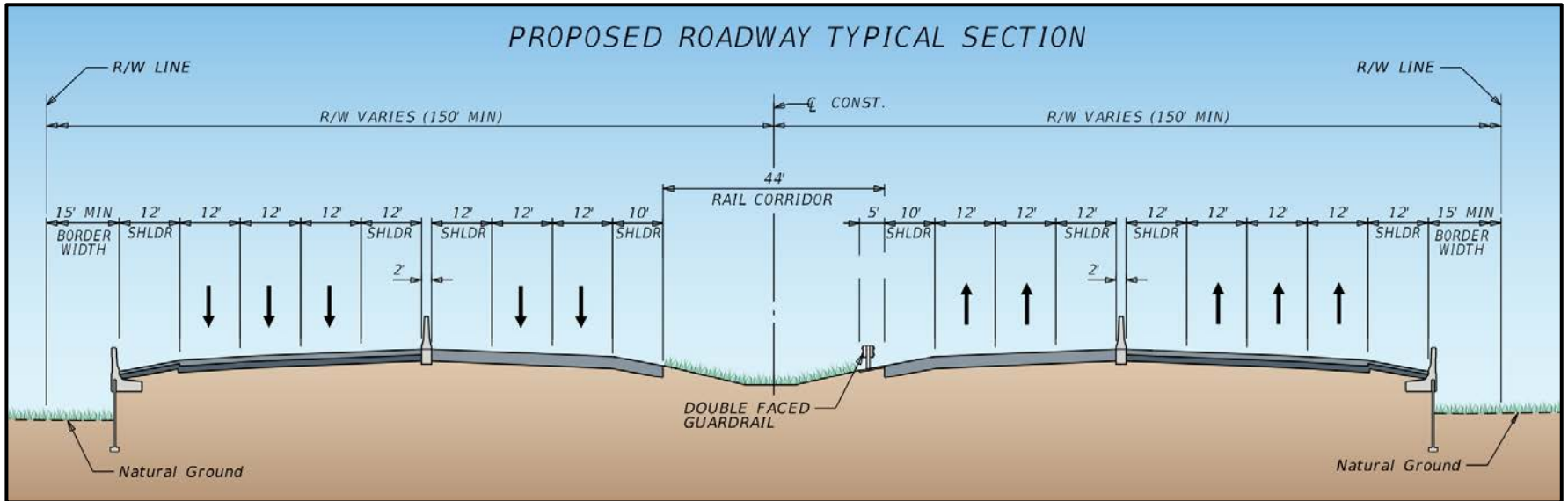


Figure 1.1 Segment 5 Proposed Typical Section (6+4 with rail envelope)

SR 400 (I-4) TYPICAL SECTION

Station 368 + 58.00 to Station 604 + 50.00, MP 27.145 to MP 31.613 (Polk County)

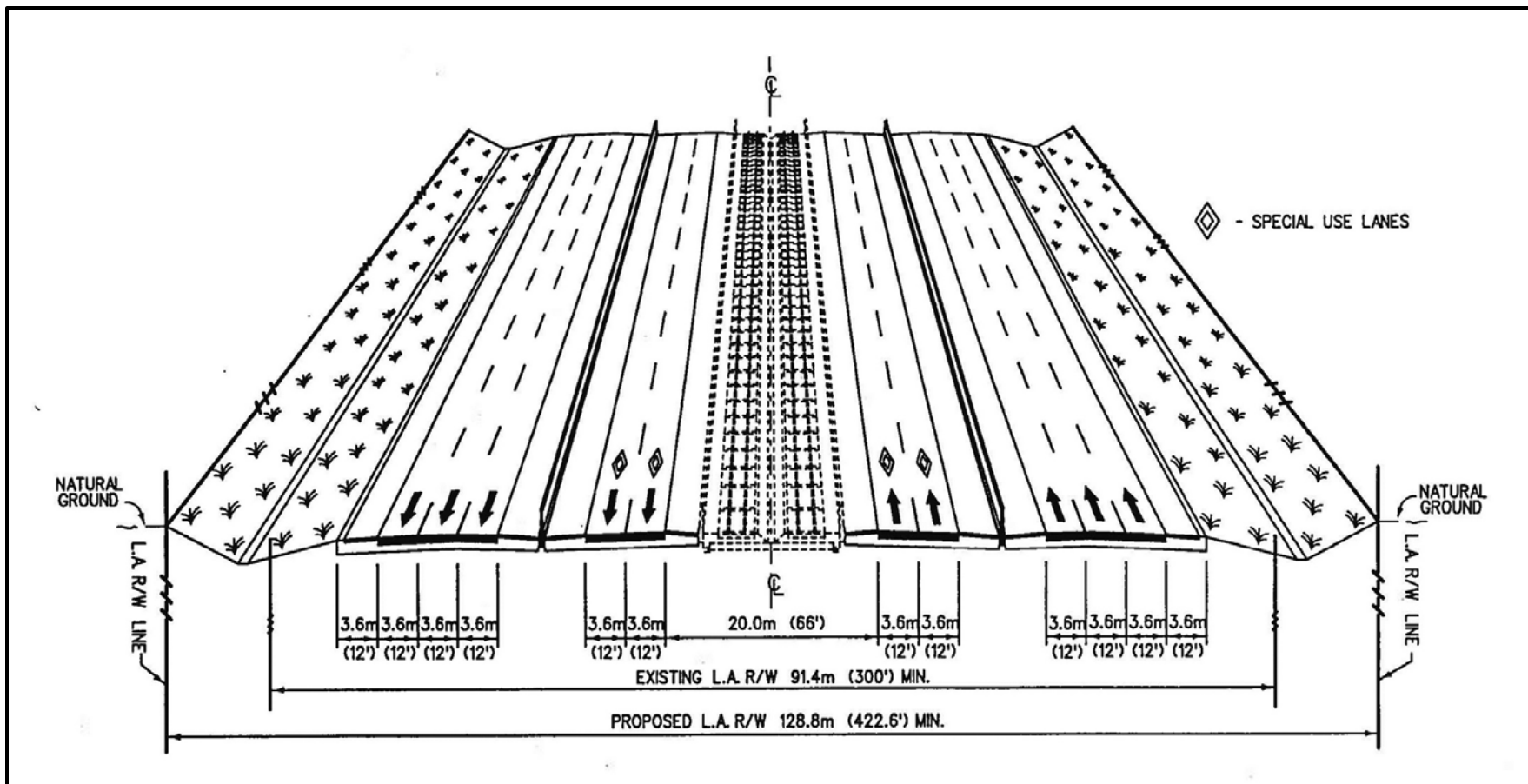


Figure 1.2 SR 400 (I-4) Previously Recommended Typical Section (1998 EA/FONSI)

SR 400 (I-4) 1998 EA/FONSI RECOMMENDED TYPICAL SECTION, [FPN: 20121012101, State Project No. 16320-1402 (Old)]
 (SR 33 to the Polk/Osceola County Line)

1.2 Purpose and Need

The proposed improvements to I-4 include widening the existing six (6) lane divided urban interstate to a 10 lane divided highway in order to improve traffic operations, enhance connectivity, and improve mobility by providing travel choices to the motoring public. I-4 is an east-west limited access freeway which links the west and east coasts of Florida, from I-275 in Tampa to I-95 in Daytona Beach. I-4 spans across six (6) counties in Central Florida, traversing many cities including Lakeland, Orlando, Altamonte Springs, Sanford, and DeLand. I-4 is a critical component of Florida's Strategic Intermodal System (SIS) which links seaports, rail, airports and other intermodal facilities. This aspect of I-4's significance is evidenced through connectivity provided by major junctions with I-275 and I-75 in the Tampa Bay area, SR 429 (Daniel Webster Western Beltway), SR 417 (Southern Connector/Central Florida Greenway/Seminole Expressway), SR 528 (Martin Andersen Beachline Expressway), SR 91 (Florida's Turnpike), SR 408 (Spessard Lindsay Holland East-West Expressway) in Central Florida, and I-95 on the east coast.

I-4 serves as the primary corridor in the movement of people and freight between major population, employment, and activity centers in the Central Florida region. When the entire Interstate was fully opened in the early 1960's, it was designed to serve intrastate and interstate travel by providing a critical link between the east and west coasts of Central Florida. Although this role continues to be a crucial transportation function of I-4, the highway also serves large volumes of local and commuter traffic with shorter trip distances. Today, the highway serves as the primary link between hotel/resort complexes and tourist attractions such as Walt Disney World®, Universal Orlando®, SeaWorld® Orlando, the International Drive Resort Area and downtown Orlando. Since I-4 is the only east-west limited access facility that is centrally located between the predominant employment centers and the major suburbs to the north, it has become the primary commuting corridor in the Central Florida metropolitan area.

Growth in Central Florida over the past decades has made it difficult for the transportation system to accommodate travel demand. Additionally, traffic congestion and crash incidents have resulted in major delays on the Interstate as well as other arterials surrounding the corridor. Increased congestion levels are experienced outside of the typical morning and afternoon rush-hour periods, affecting mobility levels for more hours of the day and impacting other non-commuter/non-weekday travel. The congestion on I-4 is further evidenced by the less than desirable levels of service on the Interstate as well as the crossroads.

Projections of future population and employment in the region indicate that travel demand will continue to increase well into the future. The ability to accommodate the new travel patterns resulting from growth must be provided to sustain the region's economy. Without the improvements, extremely congested conditions are expected to occur for extended periods of time in both the morning and evening peak periods. Due to these congested conditions, user travel times will continue to increase, the movement of goods through the urban area will be slower, and the deliveries of goods within the urban area will be forced to other times throughout the day. The need for improvements to I-4 is illustrated by the important transportation roles I-4 serves to the Central Florida region and the State of Florida. If no improvements are made to the Interstate, a loss in mobility for the area's residents, visitors, and commuters can be expected, resulting in a severe threat to the continued viability of the economy and the quality of life.

This reevaluation involves revising the original design concept (Figure 1.1) showing 6 GUL + 4 SUL from west of SR 25/US 27 to west of CR 532 (Polk/Osceola County Line, as recommended in the FONSI for SR 400 (I-4) from West of Memorial Boulevard (SR 546) to the Polk/Osceola County Line (FPN 201210, December 1998), to the current proposed design of six (6) GULs and four (4) express lanes. The express lanes are tolled lanes and will extend the full length of the project. The access to/from the tolled lanes will be evaluated as part of this effort to determine if changes are needed from the previously approved concept for access to/from the SUL/HOV Lanes.

The original I-4 PD&E Studies involved physical separation between the GULs and the SUL/HOV lanes on I-4, with demand management in the HOV lanes. The original demand management strategy was to control the use of the HOV lanes by requiring a minimum number of occupants per vehicle to maintain an acceptable level of service (Level of Service D). This reevaluation also addresses revising the demand management tool to convert the HOV lanes to tolled express lanes. The express lanes will be separated from the GULs by two (2) shoulders with a barrier wall between the shoulders. A variable pricing tolling plan is proposed for the express lanes. The tolls will vary by time of day and day of week to maintain acceptable levels of service in the express lanes. The tolls will be collected electronically through existing E-Pass®, SunPass®, and other systems currently in place in the Central Florida area. The conversion to express lanes will maintain the same right-of-way limits as documented previously and will not change the impacts to the social, natural or physical environment. An update to the Systems Access Modification Report (SAMR) prepared in January 2013 is being completed in conjunction with this effort.

In order for this project to proceed, potential environmental impacts must be identified, including impacts to wetlands and other surface waters. This report has been prepared following guidelines presented in the Project Development and Environment Manual, Part 2, Chapter 18 (FDOT, 4/22/2013) to identify jurisdictional wetlands and other surface waters along the project corridor and to document potential project related impacts. This report evaluates the jurisdictional limits of wetlands and other surface waters within I-4 Segment 5, assesses the potential for wetland and other surface water involvement, proposes conceptual mitigation needs using the Uniform Mitigation Assessment Method (Chapter 62-345.100, Florida Administrative Code) and updates previous project commitments.

The jurisdictional wetland and other surface waters limits were previously evaluated in the project corridor during a 1998 PD&E study. Review of the 1998 Environmental Assessment (EA) suggests that the study addressed the potential for wetland and surface water impacts, alternative analysis, and avoidance and minimization, as well as conducted a WET II Functional Analysis to assess the impacts and the conceptual mitigation plan. Commitments made at that time included: Mitigation for wetland impacts that will result from the construction of the project, and minimizing temporary impacts to wetlands within the ROW.

2.0 Methodology and Assessment

Existing and proposed right-of-way (ROW) of I-4 Segment 5 and newly proposed pond locations made up the study corridor in which the jurisdictional extent of on-site wetlands and other surface water systems were evaluated. The evaluation included a review of current and historic aerial photography of the study area and ground-truthing activities. Current and historical information reviewed included infrared digitally orthorectified

quadrangle map (DOQs), U.S. Geological Survey (USGS) Topographic Map (Exhibit 2 – USGS Topographic Quadrangle Map), National Wetlands Inventory (NWI) Map, and Soil Survey Map (Exhibit 3 – NRCS Soil Survey Map). Jurisdictional limits were identified and limits established in general accordance with the *1987 Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1); the *November 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* and the State of Florida's *Delineation of the Landward Extent of Wetlands and Surface Waters* (Chapter 62-340, Florida Administrative Code). In the event wetland boundaries differed between the two (2) methods, the more "wetland inclusive" extent was used to define that particular wetland system's boundary. The landward extent of other surface water systems were recognized to be at the top-of-bank for ditches with side slopes of 1-foot vertical to 4-feet horizontal or steeper or using the seasonal high water for swales with side slopes flatter than 1-foot vertical to 4-feet horizontal. Wetlands and other surface waters observed were classified using the FDOT's *Florida Land Use, Cover and Forms Classification System* (FLUCFCS) (Exhibit 4 – FLUCFCS Map) and the U.S. Fish and Wildlife Service's (FWS) classification system as described in their *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et. al, 1979).

Ground-truthing of wetland and other surface water assessments were conducted along the project corridor from April to October 2013, October 2014, August to September 2015 using handheld Global Positioning Systems (GPS) devices. In the field, wetlands and other surface waters were generally delineated from the western project limits to the eastern project limits within the existing and proposed I-4 ROW and all proposed stormwater management pond locations. Photographic representation of the wetland and/or surface waters current conditions are provided in Appendix B.

2.1 Existing Conditions

2.1.1 Land Use

Land use types found within the project corridor were identified through color aerial and infrared photograph interpretation along with site reconnaissance. Land Use types found within the project corridor are described below as listed in the FDOT Florida Land Use, Cover, and Forms Classification System Handbook (1999). Land use exhibits can be found in Appendix A, Exhibit 4 – FLUCFCS Map.

Residential (1200-1300) – These land use codes consist of areas containing medium and high density residential housing. These areas are found along adjacent roads at the US 27 and I-4 interchange, as well as along Ronald Reagan Parkway. This land use has a low likelihood for wildlife occurrence.

Commercial and Services (1400) – This land use includes numerous types of businesses in malls, strip malls and as stand-alone establishments along the corridor. These areas were primarily observed at the US 27 and I-4 interchange along the adjacent roadways. This land use has a low likelihood for wildlife occurrence.

Retail Sales and Services (1410) – This land use consists of office complexes, shopping centers, and other service/retail oriented businesses, which was observed at the US 27 and I-4 interchange along the adjacent roadways. This land use has a low likelihood for wildlife occurrence.

Professional Services (1430) – Several medical offices, dental offices, veterinary offices, and other professional offices are located along US 27 in the project corridor. This land use has a low likelihood for wildlife occurrence.

Tourist Services (1450) – There are several hotels and resorts located in the vicinity of the US 27 and I-4 interchange. This land use has a low likelihood for wildlife occurrence.

Institutional (1700) – This land use consists of schools and institutions. The only example of this land use was the Oak Hill Baptist Church on Osceola Polk Line Road at the eastern end of the project corridor. This land use has a low likelihood for wildlife occurrence.

Open Land (1900) – This land use consists of undeveloped land within urban areas and inactive land with street patterns, but without structures. This land use was observed in the vicinity of the US 27 and I-4 interchange. This land use has a low likelihood for wildlife occurrence.

Improved Pasture (2110) – This category of land use consists of land which has been cleared, tilled, reseeded with specific grass types and periodically improved with brush control and fertilizer application. Several small patches of this land use were observed along the project corridor. This land use has a moderate likelihood for wildlife occurrence.

Unimproved Pasture (2120) – This category of land use consists of land which has been cleared, with major stands of trees and brush where native grasses have been allowed to develop. Several small patches of this land use were observed along the project corridor. This land use has a moderate likelihood for wildlife occurrence.

Citrus Groves (2210) – Some citrus groves are located along Home Run Boulevard and US 27. This land use has a moderate likelihood for wildlife occurrence.

Other Open Lands (Rural) (2600) – This category of land use consists of agricultural lands whose intended usage cannot be determined. Several patches of this land use were observed along the project corridor. This land use has a moderate likelihood for wildlife occurrence.

Shrub and Brushland (3200) – This land use consists of primarily shrubs and brush species. A few small patches of this land use were observed along the project corridor. This land use has a high likelihood for wildlife occurrence.

Pine Flatwoods (4110) – This land use consists of natural pine flatwoods; a small patch is located at the southern end of the project corridor. This land use has a high likelihood for wildlife occurrence.

Coniferous Plantations (4410) – Some small areas of planted pine were observed along the right-of-way. This land use has a moderate likelihood for wildlife occurrence.

Reservoirs (5300) – This land use designates all retention ponds and other artificial impoundments used for irrigation and flood control along the project corridor and within residential developments. This land use has a high likelihood for wildlife occurrence.

Mixed Wetland Hardwoods (6170) – This land use is reserved for those wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill-defined

mixture of species. This habitat type was observed in a small patch within the median at the western end of the project area. This land use has a high likelihood for wildlife occurrence.

Cypress (6210) – Dominant vegetation consists of cypress and is present at the southern end of the project corridor. This land use has a high likelihood for wildlife occurrence.

Wetland Forested Mixed (6300) – This land use is defined as mixed wetlands forest communities in which neither hardwoods or conifers achieve a 66 percent dominance of the crown canopy composition. This habitat type was observed adjacent to the eastbound lanes east of US 27. This land use has a high likelihood for wildlife occurrence.

Freshwater Marsh (6410) – This land use designates vegetated non-forested wetlands usually defined as low-lying areas or depressions in the landscape. Several of these marshes can be found adjacent to the roadway, as well as in isolated patches within the project corridor. This land use has a high likelihood for wildlife occurrence.

Emergent Aquatic Vegetation (6440) – This land use is defined as being wetland areas where floating vegetation and vegetation which is found either partially or completely above the surface. Small patches of this land use were observed in the western portion of the project corridor. This land use has a high likelihood for wildlife occurrence.

Roads and Highways (8140) – This land use designates all major and minor roads throughout the project corridor. This land use has a low likelihood for wildlife occurrence.

Sewage Treatment Facilities (8340) – There is a sewage treatment facility south of I-4 at Westview Road. This land use has a low likelihood for wildlife occurrence.

2.1.2 Soils

According to the Soil Survey of Polk County, Florida (1990), the proposed project corridor consists of 15 mapped soil types including Candler sand, 0 to 5 percent slopes (3), Candler sand, 5 to 8 percent slopes (4), Eaton mucky fine sand, depressional (6), Pomona fine sand (7), Samsula muck (13), Tavares fine sand, 0 to 5 percent slopes (15), Urban land (16), Smyrna and Myakka fine sands (17), Immokalee sand (21), Pomello fine sand (22), Placid and Myakka fine sands, depressional (25), Adamsville fine sand (31), Basinger mucky fine sand, depressional (36), Felda fine sand (42), and Udorthents, excavated (58). A brief description of each of the mapped soil types occurring within the project site is provided below, and depicted on the NRCS Soils Map, Exhibit 3.

Candler sand, 0 to 5 percent slopes (3) – Candler sand, 0 to 5 percent slopes is an excessively drained, nearly level to gently sloping soil found on the uplands or knolls in the flatwoods. Typically, the surface layer is dark brown sand about 6 inches thick. The subsurface layer is sand to a depth of about 63 inches that is brownish yellow that grades to yellow. The next layer is yellow sand that has very thin, strong brown lamellae to a depth of 80 inches or greater.

The water table in this soil is typically 80 inches or more below the surface. The natural vegetation consists of turkey oak, post oak, live oak and slash pine and other pines. The understory consists of sparse indiagrass, pineland threawn, hairy panicum, and annual forbs.

Candler sand, 5 to 8 percent slopes (4) – Candler sand, 5 to 8 percent slopes is an excessively drained, sloping soil found on side slopes in the uplands. Typically, the surface layer is dark brown sand about 7 inches thick. The subsurface layer is sand to a depth of about 63 inches that is brownish yellow that grades to yellow. The next layer is yellow sand that has very thin, strong brown lamellae to a depth of 80 inches or greater.

The water table in this soil is typically 80 inches or more below the surface. The natural vegetation consists of turkey oak, post oak, live oak and slash pine and other pines. The understory includes indiagrass, pineland threawn, hairy panicum, and annual forbs.

Eaton mucky fine sand, depressional (6) - Hydric – Eaton mucky fine sand, depressional is a very poorly drained soil in wet depressions on flatwoods. Typically, the surface layer is a black mucky fine sand about 6 inches thick. The subsurface layer is light gray fine sand to a depth of about 29 inches. The subsoil is typically gray sandy clay loam to a depth of about 33 inches and sandy clay to a depth of at least 80 inches.

The water table is at or above the surface of this soil for 6 months or more each year. The natural vegetation consists of pond cypress and other water-tolerant trees. The understory includes waxmyrtle, gallberry, and other water tolerant grasses and forbs.

Pomona fine sand (7) – Pomona fine sand is a poorly drained soil in broad areas of flatwoods. Typically, the surface layer is a very dark gray fine sand about 6 inches thick. The subsurface layer is a light brownish gray in the upper part and light gray in the lower part to a depth of about 21 inches. The subsoil to a depth of 26 inches is dark reddish brown loamy fine sand, followed by very pale brown and light gray fine sand to a depth of about 48 inches, light gray fine sandy loam to a depth of about 60 inches, and light gray sandy clay loam to a depth of about 73 inches. The underlying material is light gray loamy sand to a depth of at least 80 inches.

The water table is at a depth within 12 inches of the surface during the seasonally high period of between 1 and 4 months in most years. The natural vegetation is mostly longleaf pine and slash pine. The understory includes saw palmetto, pineland threawn, chalky bluestem, fetterbush lyonia, gallberry, and low panicums.

Samsula muck (13) - Hydric – Samsula muck is a very poorly drained, nearly level, organic soil found in freshwater marshes and swamps. Typically, the surface layer is black to dark reddish brown muck about 31 inches thick. The underlying material is sand to a depth of 80 inches or more. It is black in the upper part and dark grayish brown in the lower part.

The water table is at or above the surface level except during extended dry periods. The natural vegetation consists mainly of loblolly bay, cypress, red maple, blackgum, and other water-tolerant trees and pine trees. The ground cover is greenbrier, fern, and other aquatic plants, which may dominate many areas.

Tavares fine sand, 0 to 5 percent slopes (15) – Tavares fine sand, 0 to 5 percent slopes is a moderately well drained, nearly level to gently sloping soil found on broad uplands and knolls in the flatwoods. Typically, the surface layer is dark grayish brown fine sand about 8 inches thick. The underlying material to a depth of at least 80 inches is light yellowish brown fine sand that grades to very pale brown.

The water table is at a depth of between 40 and 80 inches during the seasonally high period of 6 months or more. It recedes to a depth of greater than 80 inches during extended dry periods. The natural vegetation

consists mainly of slash pine, longleaf pine, turkey oak, bluejack oak, and post oak. The understory includes creeping bluestem, lopsided indiagrass, hairy panicums, low panicums, purple lovegrass, and pineland threeawn.

Urban land (16) – Urban land is a miscellaneous area covered by urban facilities including shopping centers, parking lots, industrial buildings, houses, streets, sidewalks, and airports. The natural soil cannot be observed and the depth to seasonal high water table is dependent on the functionality of established drainage systems.

Smyrna and Myakka fine sands (17) – Smyrna and Myakka fine sands are poorly drained, nearly level soils found on broad areas in the flatwoods. Typically, the surface layer of the Smyrna soil is black fine sand about 4 inches thick. The subsurface layer is gray fine sand to a depth of about 12 inches. The subsoil is dark brown and brown fine sand to a depth of about 25 inches. Below that is very pale brown fine sand to a depth of about 42 inches and very dark brown fine sand to a depth of about 48 inches. The underlying material is brown and light brownish gray fine sand to a depth of at least 80 inches. Typically, the surface layer of the Myakka soil is very dark gray fine sand about 7 inches thick. The subsurface layer is gray fine sand to a depth of about 25 inches. The subsoil to a depth of about 36 inches is fine sand. It is black in the upper part and dark brown in the lower part. The underlying material is yellowish brown fine sand to a depth of at least 80 inches.

The water table is at a depth within 12 inches of the surface during the seasonally high period of between 1 and 4 months in most years. The natural vegetation is mostly longleaf pine and slash pine. The understory includes saw palmetto, running oak, gallberry, wax myrtle, huckleberry, pineland threeawn, and scattered fetterbush lyonia. A few areas around large lakes are in oak hammocks.

Immokalee sand (21) – Immokalee sand is a poorly drained soil in broad areas of flatwoods. Typically, the surface layer is very dark gray sand about 7 inches thick. The subsurface layer is light gray sand that grades to white to a depth of about 39 inches. The subsoil to a depth of about 58 inches is black sand. The underlying material is gray sand to a depth of about 66 inches, very dark gray sand to a depth of about 75 inches, and black sand to a depth of at least 80 inches.

The water table is at a depth within 12 inches of the surface during the seasonally high period of between 1 and 4 months in most years. The natural vegetation on is mostly longleaf pine, slash pine, and oaks. The understory includes saw palmetto, gallberry, wax myrtle, fetterbush lyonia, and pineland threeawn.

Pomello fine sand (22) – Pomello fine sand is a moderately well drained soil on low, broad ridges and low knolls of flatwoods. Typically, the surface layer is dark gray fine about 7 inches thick. The subsurface layer is white fine sand to a depth of about 48 inches. The subsoil to a depth of about 53 inches is dark reddish brown fine sand that is coated with organic matter. In a few areas the subsoil is weakly cemented by organic matter. The underlying material is dark brown fine sand to a depth of at least 80 inches.

The water table is seasonally at its highest within 24 to 40 inches of the surface for 1 to 4 months in most years. The natural vegetation consists mainly of scrub oaks, longleaf pine, and sand pine. The understory includes saw palmetto, fetterbush lyonia, tar flower, and pineland threeawn.

Placid and Myakka fine sands, depressional (25) - Hydric – Placid and Myakka fine sands, depressional are very poorly drained, nearly level soils found in depressions, primarily in the flatwoods. Typically, the surface layer of the Placid soil is black fine sand about 18 inches thick. The underlying material is dark gray fine sand to a depth of about 28 inches, light gray fine sand to a depth of about 60 inches, and grayish brown fine sand to a depth of at least 80 inches. Typically, the surface layer of the Myakka soil is very dark gray fine sand about 3 inches thick. The subsurface layer is grayish brown fine sand to a depth of about 25 inches. The subsoil is black fine sand to a depth of about 35 inches. The underlying material is dark gray fine sand to a depth of at least 80 inches.

The water table is at or above the surface of these soils for 6 months or more for both of these soils. The natural vegetation consists mostly of bay, scattered cypress, blackgum, St. John's wort, maidencane, and other water-tolerant plants.

Adamsville fine sand (31) – Adamsville fine sand is a somewhat poorly drained, nearly level soil found on low ridges on in the flatwoods and in low areas on the uplands. Typically, the surface layer is very dark gray fine sand about 6 inches thick. The underlying material to a depth of 80 inches or more is light yellowish brown fine sand that grades to very pale brown.

The water table is seasonally at its highest within 20 to 40 inches of the surface for 2 to 6 months a year. The natural vegetation consists mainly of slash pine, longleaf pine, laurel oak, and water oak. The understory includes saw palmetto, pineland threeawn, indiagrass, bluestem, and panicums.

Basinger mucky fine sand, depressional (36) - Hydric – Basinger mucky fine sand, depressional is a very poorly drained, nearly level soil found in wet depressions in the flatwoods. Typically, this soil has a very dark gray mucky fine sand surface layer about 7 inches thick. The subsurface layer is light gray fine sand to a depth of about 35 inches. The subsoil is a mixture of grayish brown and very dark grayish brown fine sand to a depth of about 45 inches. The underlying material is brown fine sand to a depth of at least 80 inches.

The water table is at or above the surface of these soils for 6 months or more. The natural vegetation consists of broomsedge bluestem, chalky bluestem, maidencane, cutgrass, St. John's wort, pineland threeawn, cypress, and other water-tolerant trees.

Felda fine sand (42) - Hydric – Felda fine sand is a poorly drained soil in sloughs or low hammocks in flatwoods. Typically, the surface layer is very dark gray fine sand about 5 inches thick. The subsurface layer is light brownish gray fine sand to a depth of about 22 inches. The subsoil is gray sandy clay loam to a depth of about 45 inches and light gray sandy loam to a depth of about 50 inches. The underlying material is sandy loam to a depth of at least 80 inches.

The water table is at a depth within 12 inches of the surface during the seasonally high period of between 2 and 4 months in most years. The natural vegetation is mostly longleaf pine, slash pine, and cabbage palm. The understory includes saw palmetto, wax myrtle, pineland threeawn, and many grasses.

Udorthents, excavated (58) – Udorthents, excavated (also called borrow pits) are areas of unconsolidated or heterogeneous soil and geologic materials which have been removed mainly for road construction or fill

material. Most areas of Udorthents, excavated are between 5 and 40 feet deep and may be seasonally ponded at the bottom or hold water.

2.2 Wetland Function and Value Assessment

The Uniform Mitigation Assessment Method (UMAM) (Chapter 62-345.100, Florida Administrative Code) was used to qualify each jurisdictional system's condition. The UMAM is a matrix developed by the Florida Department of Environmental Protection (FDEP) for evaluating the functional characteristics of a wetland or other surface water system. The UMAM accomplishes this by assigning a numerical value, between 0 and 10 using whole number increments, to each of three (3) criteria: 1) Location and Landscape Support, 2) Water Environment and 3) Community Structure, where applicable. A criterion score of 10 represents optimal functions provided by a system while 0 represents a complete absence of function or negligible functions. Adding each score from each criterion and dividing that number by the maximum score attainable generates the final UMAM score. UMAM then calculates the functional loss (FL) of a wetland or other surface water by taking the UMAM score and multiplying the score by the acreage of area impacted. The result is a number between 0 and 1, qualifying the final UMAM score (functional loss of a wetland).

For the I-4 Segment 5 project, UMAM scoring for wetlands and surface water functional loss were summarized by assigning a criterion of Low, Moderate or High. Criteria of Low was given to systems with final UMAM scores between 0 and 0.49, Moderate scored between 0.50 and 0.79, while High scored 0.80 or better.

2.3 Wetland and Other Surface Water Descriptions

For this study, jurisdictional systems were identified as either Wetland (WL-#) or Surface Water (SW-#) and included the direction of the travel lanes of I-4 (i.e. East (E) or West (W)) relative to the location of the system. The term surface water generally categorizes existing stormwater ponds with a permanent pool, ditches and swales associated with the existing drainage conditions of I-4. Wetlands and other surface waters within the study area are described below, summarized in Table 1 and depicted in Exhibit 5 – Surface Water and Wetland Map.

EASTBOUND I-4

Wetlands

Wetland 1(E)

Wetland 1(E) (WL-1(E)) is located along the existing ROW of I-4 eastbound travel lanes near Station 365. The surrounding landscape consists of roads and highways, forested uplands, open pasture, and maintained ROW.

WL-1(E) is best classified as Wetland Forested Mixed (FLUCFCS 6300); however, the fringe of this wetland, near the existing I-4 travel lanes, is colonized by nuisance and exotic plant species (Chinese tallow and cattail). Overall, the quality of this system is moderate and is vegetated by slash pine (*Pinus elliottii*), pond pine (*P. serotina*), cypress (*Taxodium* sp.), loblolly bay (*Gordonia lasianthus*), swamp bay (*Persea palustris*), dahoon holly (*Illex cassine*), red maple (*Acer rubrum*), Chinese tallow (*Triadica sebifera*), wax myrtle (*Myrica cerifera*), saw palmetto (*Serenoa repens*), Carolina willow (*Salix caroliniana*), cattail (*Typha* sp.), *Ludwigia* sp., pickerelweed

(*Pontederia cordata*), cinnamon fern (*Osmundastrum cinnamomea*), Virginia chain fern (*Woodwardia virginica*), *Vitis* (*Vitis rotundifolia*), and standing water.

WL-1(E) is saturated or seasonally flooded and receives surface water runoff from surrounding land uses and appears to be isolated from wetland systems to the north by I-4. During site reconnaissance, no wildlife was observed using the system; however, it is anticipated that appropriate habitat for foraging, nesting and denning opportunities of wetland dependent species is present.

Approximately 2.20 acres of WL-1(E) is located within the existing I-4 ROW; however, it is anticipated that no impacts will result from I-4 Segment 5 improvements.

Wetland 1A(E)

Wetland 1A(E) (WL-1A(E)) is located along the eastbound travel lanes of I-4 near Station 375. Approximately 0.40 acres of this wetland is located within the existing I-4 ROW. Surrounding land uses include roads and highways, forested and herbaceous uplands and open pasture.

WL-1A(E) is best classified as Wetland Forested Mixed (FLUCFCS 6300) and vegetated by species that are also found in WL-1(E). The fringe of this wetland includes nuisance and exotic species (Chinese tallow and cattail), typical of a wetland's edge within a disturbed environment. Dominant vegetation present includes a canopy of slash pine, loblolly bays, swamp bay, dahoon holly, cypress, and red maple. Carolina willow, Chinese tallow, cattail, wax myrtle, saw palmetto, pickerelweed, cinnamon fern, Virginia chain fern, *Vitis* sp., and standing water compose the mid-story and groundcover.

This moderate quality system is saturated or seasonally flooded and receives surface water runoff from surrounding land uses. WL-1A(E) appears isolated from wetland communities to the north of I-4. No wildlife was observed using the system during site reviews; however, it is anticipated that appropriate habitat for foraging, nesting and denning opportunities of wetland dependent species is present.

It is anticipated that approximately 0.40 acres of WL-1A(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 2(E)

Wetland 2(E) (WL-2(E)) is located along the eastbound travel lanes of existing I-4 near Station 385. Surrounding land uses consist of the roads and highways, forested uplands and herbaceous uplands maintained by mowing. Approximately 0.26 acres lie within the I-4 Segment 5 improvements.

WL-2(E) is best classified as Cypress (FLUCFCS 6210) and is of moderate quality. The fringe of this wetland, at existing I-4 travel lanes, includes nuisance and exotic species (Chinese tallow and cattail), typical of a wetland's edge within a disturbed environment. Vegetation present includes cypress, Carolina willow, slash pine, pond pine, wax myrtle, Chinese tallow, and cattail. This system receives runoff from roads and highways and open maintained land.

During site reconnaissance, no wildlife was observed using the system, but it is anticipated that WL-2(E) could provide foraging habitat for wetland dependent species.

It is anticipated that approximately 0.26 acres of WL-2(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 2A(E)

Wetland 2A(E) (WL-2A(E)) is located near Station 400 along the eastbound travel lanes of existing I-4. Surrounding land uses consist of roads and highways, maintained ROW and forested uplands. Approximately 2.58 acres of WL-2A(E) lie within the existing I-4 ROW.

WL-2A(E) is best classified as Wetland Forested Mixed (FLUCFCS 6300) and is of moderate quality. The interior of this system is vegetated similar to that of WL-1A(E), with a fringe vegetated by a dense mid-story of Carolina willow. This wetland receives runoff from the eastbound travel lanes of I-4 and open land.

During site reconnaissance, no wildlife was observed using the system. It is anticipated that foraging and roosting opportunities for wetland dependent species could be provided by WL-2A(E).

It is anticipated that approximately 2.58 acres of WL-2A(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 3(E)

Wetland 3(E) (WL-3(E)) is located within the median of the existing I-4 eastbound/westbound travel lanes near Station 410. Surrounding land use consists of roads and highways and maintained herbaceous ROW. Approximately 1.24 acres lie within the ROW of I-4 Segment 5 improvements.

This forested wetland system is best classified as cypress (FLUCFCS 6210) and is of moderate quality receiving runoff from surrounding roads and highway. WL-3(E) appears isolated from wetland communities to the north or south of this system. Vegetation present includes cypress, Carolina willow, *Ludwigia* sp., maidencane (*Panicum hemitomon*), duck potato (*Sagittaria lancifolia*), and standing water.

No wildlife was observed using the system; however, it is anticipated that appropriate habitat for foraging opportunities by wetland dependent species is present.

It is anticipated that approximately 1.24 acres of WL-3(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 3A(E)

Wetland 3A(E) (WL-3A(E)) is located along the I-4 eastbound travel lanes, approximately 0.85 miles east of US 27 near Station 525. Surrounding land uses consist of roads and highways, forested wetlands, open pasture, freshwater marshes and maintained ROW. Approximately 0.12 acres lie within the I-4 ROW.

WL-3A(E) is best classified as a Freshwater Marsh (FLUCFCS 6410) and is of moderate quality. Vegetation present includes saw grass (*Cladium jamaicense*), cattail, dog fennel (*Eupatorium capillifolium*), broomsedge (*Andropogon virginicus*), redroot (*Lachnanthes caroliniana*), maidencane, cinnamon fern, meadow beauty (*Rhexia* sp.), with dahoon holly, loblolly bay, slash pine, Carolina willow (*Salix caroliniana*), wax myrtle, saltbush (*Baccharis halimifolia*), and saw palmetto at the ecotone.

WL-3A(E) is seasonally flooded and appears to maintain an adequate hydro-period, receiving surface flow runoff from roads and highways, open maintained ROW and surrounding natural lands.

No protected wildlife species were observed, however, tracks of bobcat (*Lynx rufus*) and white-tailed deer (*Odocoileus virginianus*) were observed. It is anticipated that WL-3A(E) could provide foraging, nesting and denning opportunities for wetland dependent species.

Approximately 0.12 acres of WL-3A(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 4(E)

Wetland 4(E) (WL-4(E)) is located within the existing ROW of I-4 along the eastbound travel lanes, east of WL-3(E) near Station Number 535. Land use types immediately surrounding WL-4(E) include I-4 eastbound travel lanes, swales, open pastureland, forested uplands/wetlands and maintained ROW. Approximately 1.98 acres lie within the ROW of I-4 Segment 5 improvements.

WL-4(E) is best classified as Wetland Forested Mixed (FLUCFCS 6300) and is of moderate quality. Dominant features within this forested system consist of slash pine, loblolly bay, swamp bay (*Persea palustris*), dahoon holly, cypress, red maple, wax myrtle, saw palmetto, Caesar's weed, cinnamon fern, shield fern, *Vitis* sp., and standing water. The open water portion of this system is vegetated by primrose willow, giant cane (*Arundinaria gigantea*), pickerelweed, dog fennel, white top sedge (*Rhynchospora colorata*), soft rush (*Juncus effusus*), maidencane, carpet grass (*Axonopus* sp.), bidens (*Bidens alba*), sedges (*Carex* sp.), and royal fern (*Osmunda regalis*). WL-4(E) is saturated and/or seasonally flooded and receives surface water from surrounding land uses.

No wildlife was observed using the system; however, it is anticipated that appropriate habitat for foraging, nesting and denning opportunities of wetland dependent species is present.

It is anticipated that approximately 1.98 acres of WL-4(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 5(E)

Wetland 5(E) (WL-5(E)) is located within the existing ROW of I-4 along the eastbound travel lanes and east of WL-4(E) near Station 545. Surrounding land uses consist of forested uplands and wetlands, freshwater marshes, pastureland, I-4 eastbound travel lanes and maintained ROW. Approximately 0.55 acres lie within the ROW of I-4 Segment 5 improvements, and an additional 0.76 acres are within the limits of Pond 505 B2.

WL-5(E) is best classified as Wetland Forested Mixed (FLUCFCS 6300) and is of moderate quality. Dominant features of this system consist of slash pine, sweetgum (*Liquidambar styraciflua*), loblolly bay, dahoon holly,

Carolina willow, primrose willow, cattail, soft rush, maidencane, smartweed (*Polygonum* sp.), royal ferns on hummocks, Virginia chain fern, meadow beauty, rushes (*Rhynchospora* sp.), Bidens, pennywort (*Hydrocotyle* sp.), *Vitis* sp., and open water.

This system is seasonally flooded/saturated and receives runoff from the I-4 eastbound travel lanes and adjacent pasturelands. Standing water and royal ferns on hummocks were observed, suggesting an adequate hydro-period within the system.

During site evaluations, no wildlife was observed using the system; however, it is anticipated that foraging, nesting and denning opportunities for wetland dependent species could be provided by this system.

It is anticipated that approximately 1.31 acres of WL-5(E) will be directly impacted from I-4 Segment 5 improvements to the ROW and Pond 505 B2.

Wetland 6(E)

Wetland 6(E) (WL-6(E)) is located along the I-4 eastbound travel lanes, approximately 0.60 miles west of Ronald Reagan Parkway (CR 54) near Station 560. Surrounding land uses includes pastureland, roads and highways, freshwater and forested wetlands, and maintained ROW. Approximately 1.06 acres lie within the I-4 Segment 5 improvements.

WL-6(E) is best classified as a Fresh Water Marsh (FLUCFCS 6410) and is of moderate quality. Vegetation present includes duck potato, ragweed (*Ambrosia artemisiifolia*), dog fennel, smartweed, sedges, *Pluchea* (*Pluchea camphorata*), knotroot foxtail grass (*Setaria parviflora*), torpedograss (*Panicum repens*), frog's bit (*Phyla nodiflora*) and pennywort, with scattered Carolina willow, wax myrtle and saltbush at the ecotone.

WL-6(E) is seasonally flooded and receives surface flow runoff from roads and highways and the surrounding pastureland.

No wildlife was observed using the system, however; it is anticipated that foraging opportunities for wetland dependent species is available.

It is anticipated that approximately 1.06 acres of WL-6(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 6A(E)

Wetland 6A(E) (WL-6A(E)) is located south of WL-6(E) and east of WL-5(E) near Station 565 and south of the ROW limits associated with I-4. WL-6A(E) is located adjacent to proposed Pond 505 B2. Surrounding land uses consist of freshwater and forested wetlands, and pasturelands.

This system is best classified as a Wetland Forested Mixed (FLUCFCS 6300) and is of moderate quality. Dominant vegetation present includes slash pine, swamp bay, water oak (*Quercus nigra*), with an understory of canopy saplings, saw palmetto, gallberry (*Ilex glabra*), wax myrtle, ferns, and pine duff.

WL-6A(E) is saturated or seasonally flooded and receives runoff from the surrounding pasturelands and forested uplands.

No wildlife was observed using the system; however, it is anticipated that foraging, nesting and denning opportunities for wetland dependent species is present.

It is anticipated that no impacts to WL-6A(E) will result from I-4 Segment 5 improvements.

Wetland 7(E)

Wetland 7(E) (WL-7(E)) is located along the I-4 eastbound travel lanes, approximately 0.45 miles west of Ronald Reagan Parkway near Station 575. Surrounding land uses consist of pastureland, I-4 eastbound travel lanes, shrub and brush land, maintained ROW, and herbaceous wetlands. Approximately 0.63 acres lie within the I-4 Segment 5 improvements.

This system is best classified as a Freshwater Marsh (FLUCFCS 6410) and is of moderate quality. Dominant features include scattered Carolina willow, primrose willow, wax myrtle, and saltbush with duck potato, maidencane, fragrant water lily (*Nymphaea odorata*) and open water.

WL-7(E) is seasonally flooded and receives runoff from the I-4 eastbound travel lanes and open land.

No wildlife was observed using the system, however; foraging, nesting and denning opportunities for wetland dependent species is anticipated.

It is anticipated that approximately 0.63 acres of WL-7(E) will be directly impacted from I-4 Segment 5 improvements.

Wetland 8(E)

Wetland 8(E) (WL-8(E)) is located along the I-4 eastbound travel lanes, approximately 0.20 miles west of CR 54 near Station 585. Surrounding land uses consist of open pastureland, shrub and brushland, roads and highways and maintained ROW. Approximately 0.65 acres lie within the ROW for I-4 Segment 5 improvements.

WL-8(E) is best classified as a Freshwater Marsh (6410) and is of moderate quality. Dominant features consist of scattered Carolina willow, primrose willow, saltbush and wax myrtle with an understory of cattail, goldenrod (*Solidago* sp.), dog fennel, vaseygrass (*Paspalum urvillei*), duck potato, torpedograss, pickerelweed, sedges, pennywort, fragrant water lily and open water.

WL-8(E) is an isolated system that is seasonally flooded and receives runoff from roads and highways, maintained ROW, and adjacent pasturelands.

No wildlife was observed using the system, however; it is anticipated that foraging, nesting and denning opportunities for wetland dependent species is likely.

It is anticipated that approximately 0.65 acres of WL-8(E) will be directly impacted from I-4 Segment 5 improvements.

SURFACE WATER COMMUNITIES

Swales¹

Surface Water 1(E)

Surface Water 1(E) (SW-1(E)) is located within the median of the I-4 eastbound/westbound travel lanes near Station 405. Surrounding land use consists of roads and highways, and maintained ROW. Approximately 0.43 acres lie within the I-4 ROW.

This system is best characterized as Streams and Waterways/Swales (FLUCFCS 5130) and has been constructed within upland soils. Dominant vegetation present includes primrose willow, vaseygrass, knotroot foxtail grass, sedges, frog's bit, pennywort and bahiagrass (*Paspalum notatum*).

SW-1(E) is hydrologically connected to WL-3(E) and is seasonally inundated. This system appears to serve the existing I-4 stormwater management system.

During site reviews, no wildlife was observed using this swale; however, this system may provide seasonal foraging opportunity for wetland dependent species.

It is anticipated that approximately 0.43 acres of SW-1(E) will be directly impacted from I-4 Segment 5 improvements.

Surface Water 2(E)

Surface Water 2(E) (SW-2(E)) is located along the existing eastbound travel lanes of I-4, approximately one (1) mile east of US 27 near Station 530. Surrounding land uses include forested wetlands and uplands, roads and highways and maintained ROW. Approximately 0.05 acres lie within the I-4 ROW improvements.

This system is best characterized as Streams and Waterways/Swales (FLUCFCS 5130). Dominant vegetation present includes primrose willow, vaseygrass, knotroot foxtail grass, sedges, frog's bit, pennywort and bahiagrass. SW-2(E) is routinely maintained by mowing.

SW-2(E) is hydrologically connected to WL-4(E) and is seasonally inundated.

During site reviews, no wildlife was observed using this swale; however, this system may provide seasonal foraging opportunity for wetland dependent species.

It is anticipated that approximately 0.05 acres of SW-2(E) will be directly impacted from I-4 Segment 5 improvements.

¹ Swales excavated through upland soils are non-jurisdictional, and therefore impacts associated with these surface waters do not require mitigation.

Borrow Pond

Surface Water 3(E)

Surface Water 3(E) (SW-3(E)) is located along the I-4 eastbound travel lanes, in between Station 600 and 605. Surrounding land uses consist of roads and highways, wetlands, pastureland, and maintained ROW. Approximately 0.57 acres lie within the ROW improvements.

This system is best classified as Reservoirs less than 10 acres, which are dominant features (FLUCFCS 5340), and is of low quality. Cattail is the dominant vegetation within this mostly open water system. Other vegetation includes red maple, Carolina willow, primrose willow, dog fennel, knotroot foxtail grass, rushes, bidens, and duckweed (*Lemna* sp.).

SW-3(E) is seasonally flooded and receives surface water runoff flow from the eastbound I-4 travel lanes and surrounding natural lands.

No wildlife was observed using the system, however; it is anticipated that foraging opportunities for wetland dependent species is feasible.

It is anticipated that approximately 0.57 acres of SW-3(E) will be directly impacted from I-4 Segment 5 improvements.

WESTBOUND I-4

Wetlands

Wetland 1(W)

Wetland 1(W) (WL-1(W)) is located along the existing westbound travel lanes of I-4, near Station 365. Surrounding land uses include I-4 westbound travel lanes, forested uplands and maintained ROW. Approximately 2.73 acres lie within the I-4 Segment 5 ROW.

WL-1(W) is best classified as Wetland Forested Mixed (FLUCFCS 6300) and is of moderate quality. The fringe of this wetland has nuisance and exotic species present (Chinese tallow and cattail), but the overall value to wild species is intact. Dominant features within the forested system consist of slash pine, loblolly bays, swamp bay, dahoon holly, cypress trees, red maple, Carolina willow, primrose willow, wax myrtle, Chinese tallow, cattail, pickerelweed, cinnamon fern, shield fern, *Vitis* sp., and standing water.

This system is saturated or seasonally flooded and receives surface water from surrounding land uses.

No wildlife was observed using the system; however, it is anticipated that appropriate habitat for foraging, nesting and denning opportunities of wetland dependent species is present.

Although 2.73 acres lie within the ROW of Segment 5, it is anticipated that approximately 0.94 acres of WL-1(W) will be directly impacted from I-4 Segment 5 improvements.

Wetland 2(W)

Wetland 2(W) (WL-2(W)) is located along the westbound travel lanes of existing I-4 near Station 385, just east of WL-1(W). Surrounding land uses consist of the I-4 westbound travel lanes, forested uplands, and maintained ROW. Approximately 2.76 acres lie within the ROW of I-4 Segment 5 improvements.

WL-2(W) is best classified as Wetland Forested Mixed (FLUCFCS 6300). Similar to WL-1(W), the fringe of this wetland has nuisance and exotic species present (cattail), but the overall quality of the system is moderate. Dominant features within this forested system include slash pine, loblolly bays, swamp bay, dahoon holly, cypress, red maple, Carolina willow, primrose willow, cattail, wax myrtle, saw palmetto, cinnamon fern, Virginia chain fern, knotroot foxtail grass, *Vitis* sp., and standing water.

This system is saturated or seasonally flooded and receives surface water from surrounding land uses.

During site evaluations, no wildlife was observed using the system; however, it is anticipated that appropriate habitat for foraging, nesting and denning opportunities of wetland dependent species is present.

It is anticipated that approximately 2.76 acres of WL-2(W) will be directly impacted from I-4 Segment 5 improvements.

Wetland 3(W)

Wetland 3(W) (WL-3(W)) is located along near Station 425 along the westbound travel lanes of existing I-4, just east of WL-2(W). This system receives runoff from roads and highways and open maintained land. The surrounding land uses include the existing I-4 westbound travel lanes, forested upland and maintained ROW. Approximately 2.30 acres lie within the existing ROW of I-4 and within I-4 Segment 5 improvements.

This wetland is best classified as Cypress (FLUCFCS 6210) and is of moderate quality. The fringe of this wetland, at existing I-4 travel lanes, includes nuisance and exotic species (cattail), typical of a wetland's edge within a disturbed environment. Vegetation present includes cypress, Carolina willow, slash pine, pond pine, wax myrtle and cattail.

WL-3(W) is seasonally flooded and receives runoff from the surrounding landscape.

No wildlife was observed using the system; however, it is anticipated that foraging, nesting and denning opportunities for wetland dependent species is supported by this wetland community.

It is anticipated that approximately 2.30 acres of WL-3(W) will be directly impacted from I-4 Segment 5 improvements.

Wetland 4(W)

Wetland 4(W) (WL-4(W)) is located along the westbound travel lanes of I-4 near Station 540, outside of the I-4 segment 5 ROW, and adjacent to proposed ponds. Surrounding land uses include pine plantation, pastureland, other wetlands, herbaceous dry prairie and low density residential.

This system is best classified as a Freshwater Marsh (FLUCFCS 6410) and is of moderate quality. Dominant features within this system include duck potato, smartweed, cinnamon fern, redroot, maidencane, fragrant water lilies, and open water. Scattered dahoon holly, swamp bay and slash pine saplings were observed along the fringe.

WL-4(W) is seasonally flooded and receives runoff from the surrounding landscape.

Several southern leopard frogs (*Lithobates sphenoccephalus*) were observed within the WL-4 (W). No other wildlife was observed using the system; however, it is anticipated that foraging, nesting and denning opportunities for wetland dependent species is supported by this wetland.

It is anticipated that no impacts to WL-4(W) will result in I-4 Segment 5 improvements.

Wetland 4A(W)

Wetland 4A(W) (WL-4A(W)) is located along the 1-4 westbound travel lanes, near Station 550, just east of WL-4(W). Surrounding land uses consist of the I-4 westbound travel lanes, pastureland, and freshwater marsh and maintained ROW. Approximately 0.33 acres lie within the existing I-4 ROW.

WL-4A(W) is best characterized as a Freshwater Marsh (FLUCFCS 6410) and is of moderate quality. Dominant vegetation includes dog fennel, redroot, broomsedge, duck potato, yellow-eyed grass (*Xyris* sp.), sedges, cattails, water lilies, scattered red maple, Carolina willow, saltbush, and primrose willow, with an open water component.

This system is seasonally inundated and receives surface water runoff from I-4 westbound travel lanes, the maintained ROW and adjacent lands.

No wildlife was observed during site reconnaissance; however, it is anticipated that foraging and roosting habitat for wetland dependent species is present within WL-4A(W).

It is anticipated that approximately 0.33 acres of WL-4A(W) will be directly impacted from I-4 Segment 5 improvements.

Wetland 5(W)

Wetland 5(W) (WL-5(W)) is located along the I-4 westbound travel lanes, approximately 0.55 miles west of CR 54 near Station 570. Surrounding land uses consist of pastureland, roads and highways, and maintained ROW. Approximately 2.06 acres lie within the I-4 ROW improvements.

WL-5(W) is best characterized as a Freshwater Marsh (FLUCFCS 6410) and is of moderate quality. Dominant vegetation within this system include cattail, broomsedge, fire flag (*Thalia geniculata*), duck potato, maidencane, redroot, meadow beauty, sedges, coinwort (*Centella asiatica*), fragrant water lilies, wax myrtle, with scattered cabbage palms (*Sabal palmetto*), Carolina willow, buttonbush (*Cephalanthes occidentalis*) and primrose willow.

WL-5(W) is a seasonally flooded and receives runoff from surrounding roads and highways, and natural lands.

No wildlife was observed; however, these areas may provide seasonal foraging opportunity for wetland dependent species.

It is anticipated that approximately 2.06 acres of WL-5(W) will be directly impacted from I-4 Segment 5 improvements.

Wetland 6(W)

Wetland 6(W) (WL-6(W)) is located along the I-4 westbound travel lanes, approximately 0.20 miles west of CR 54 near Station 590. Surrounding land uses consist of wetlands, pasturelands, roads and highways, and maintained ROW. Approximately 0.39 acres lie within the ROW of I-4 Segment 5 improvements.

WL-6(W) is an isolated system, and is best classified as Willow and Elderberry wetland (FLUCFCS 6180) and is of low quality. The dominant vegetation within this system includes Carolina willow, primrose willow, saltbush, wax myrtle, cattail and dog fennel. Other vegetation includes duck potato, carpet grass, pickerelweed, sandcord grass (*Spartina bakeri*), finger grass (*Eustachys floridana*), rushes, and sedges.

This system is seasonally flooded and receives runoff from roads and highways, maintained open land and natural lands.

During site evaluations, no wildlife was observed; however, WL-6(W) may provide seasonal foraging opportunity for wetland dependent species.

It is anticipated that approximately 0.39 acres of WL-6 (W) will be directly impacted from I-4 Segment 5 improvements.

SURFACE WATERS

Swales²

Surface Water 1(W)

Surface Water 1(W) (SW-1(W)) is located along the I-4 westbound travel lanes near Station 395. Surrounding land uses consist of maintained ROW and roads and highways. Approximately 0.26 acres lie within the existing I-4 ROW.

SW-1(W) is best characterized as a Stream and Waterways/Swale (FLUCFCS 5130) associated with the stormwater management system of existing I-4, and is excavated through upland soils. This system is of low quality. Vegetation observed consists of cattail, smartweed, *Ludwigia*, torpedograss, knotroot foxtail grass, sedges and pennywort.

SW-1(W) is seasonally saturated/inundated and receives runoff from surrounding roads and highways, and maintained ROW.

² Swales excavated through upland soils are non-jurisdictional and therefore impacts associated with these surface waters do not require mitigation.

No wildlife was observed; however, it is anticipated that this system could be used by wetland dependent species for foraging.

It is anticipated that approximately 0.26 acres of SW-1(W) will be directly impacted from I-4 Segment 5 improvements.

Surface Water 1A(W)

Surface Water 1A(W) (SW-1A(W)) is located along the I-4 westbound travel lanes near Station 420. Surrounding land uses consist of forested uplands, maintained ROW, roads and highways. Approximately 0.20 acres lie within the ROW of I-4 Segment 5 improvements.

SW-1A(W) is best characterized as a Stream and Waterways/Ditch (FLUCFCS 5130) and is of low quality. This system is mostly open water and appears to have been excavated through upland soils.

SW-1A(W) is seasonally saturated/inundated and receives runoff from surrounding roads and highways, and maintained ROW.

No wildlife was observed; however, it is anticipated that it could be used by wetland dependent species for foraging opportunities.

It is anticipated that approximately 0.20 acres of SW-1A(W) will be directly impacted from I-4 Segment 5 improvements.

Surface Water 4(W)

Surface Water 4(W) (SW-4(W)) is located along the I-4 westbound travel lanes, approximately 0.02 miles west of CR 54 near Station 595. Surrounding land uses consist of open pastureland, maintained ROW, and roads and highways. Approximately 0.24 acres lie within the ROW improvements. SW-4(W) is located within the ROW of the I-4 westbound travel lanes and is routinely maintained.

SW-4(W) is best characterized as a Stream and Waterways/Swale (FLUCFCS 5130) and is of low quality. Dominant vegetation within this system includes bahiagrass, torpedograss, knotroot foxtail grass, sedges and pennywort.

SW-4(W) is seasonally saturated/inundated and receives runoff from surrounding roads and highways, maintained ROW, and pasturelands.

During site reconnaissance, no wildlife was observed; however, it is anticipated that this system could be used by wetland dependent species for foraging.

It is anticipated that approximately 0.24 acres of SW-4(W) will be directly impacted from I-4 Segment 5 improvements.

Surface Water 5(W)

Surface Water 5(W) (SW-5(W)) is located along the I-4 westbound travel lanes near Station 600. Surrounding land uses consist of roads and highways, maintained, pastureland, and forested wetlands. Approximately 0.07 acres of SW-5(W) lie within the ROW of I-4 Segment 5 improvements.

SW-5(W) is best classified as Streams and Waterways/Swale (FLUCFCS 5130) and is of low quality. Dominant vegetation consists of bahiagrass, knotroot foxtail grass, white top sedge and frog's bit.

This system is seasonally inundated/saturated and receives runoff from the I-4 westbound travel lanes and surrounding lands.

No wildlife was observed; however, it is anticipated that it could be used by wetland dependent species for foraging.

It is anticipated that approximately 0.07 acres of SW-5(W) will be directly impacted from I-4 Segment 5 improvements.

Existing Stormwater Ponds³

Surface Water(s) (SW) – 1B (W), 2(W), 2A(W), and 3(W)

SW-1B(W) is located near Station 440 along the existing westbound travel lanes of I-4. SW-2(W), SW-2A(W) and SW-3(W) are located within the median of I-4 eastbound and westbound travel lanes, between Stations 545 and 575. These systems consist of stormwater management ponds with control structures, defined banks, standing water and littoral zones. Surrounding land use types consist of roads, and highways and maintained ROW.

These systems are best classified as Reservoirs less than 10 acres that are dominant features (FLUCFCS 5340). Dominant vegetation within these systems includes red maple, Carolina willow, wax myrtle, saltbush, cattail, and broomsedge. SW-1B(W), SW-2(W), SW-2B(W) and SW-3(W) provide treatment for the existing I-4 eastbound/westbound travel lanes.

Existing and Proposed Ponds

Stormwater management for the I-4 Segment 5 improvements will be accommodated by using existing ponds, or constructing new ponds. Existing ponds 500, 501A, 501B, 501C, 503A, 503B, 503C will be regraded, enlarged or reduced in size to meet design criteria. Existing ponds 502 and 504 will not be modified. Below is a summary of ponds that are new, or existing and may be regraded or enlarged.

³ Permitted stormwater ponds are not considered jurisdictional other surface waters pursuant to Chapter 62-340, Florida Administrative Code (F.A.C), therefore, alterations or modifications to these systems were not assessed as a part of the total impacts to jurisdictional systems.

FPC 506 (Recommended)

FPC 506 is a proposed new pond located within the existing ROW of I-4 along the westbound travel lanes, near Station 365. FPC 506 is located within forested wetlands (WL-1(W), WL-2(W)) and other surface waters, SW-1(W)), as well as forested uplands and existing maintained ROW. WL-1(W) and WL-2(W) are mixed hardwood wetland systems that have been disturbed by routine maintenance and runoff from the existing roads and highways. SW-1(W) consists of a maintained swell associated with the roads and highways.

It is anticipated that 0.94 acres of WL-1(W), 2.27 acres of WL-2(W) and 0.26 acres of SW-1(W) will be directly impacted as a result of pond construction.

Pond 506 (Recommended)

Pond 506 is a proposed new pond located along the westbound travel lanes of I-4 near Station 420 and adjacent to WL-2(W). Land use within the proposed pond include forested uplands, herbaceous uplands, and SW-1A(W). SW-1A(W) is an upland cut ditch that receives runoff from planted pines, and existing roads and highways.

It is anticipated that 0.20 acres of direct impacts to SW-1A(W), and 0.37 acres of direct impacts to WL-2(W) will be associated with the construction of this pond.

Pond 500 (Recommended)

Pond 500 is an existing stormwater pond, SW-1B(W), located near Station 440 along the westbound travel lanes of I-4. This existing pond will be incorporated into the I-4 Segment 5 improvements and will be re-graded as part of Segment 5 improvements.

No impacts to jurisdictional wetlands or surface waters are anticipated.

Ponds 501A, 501B and 501C (Recommended)

Ponds 501A, 501B, and 501C are existing stormwater management areas located within the northwest quadrant of I-4 and US 27 interchange, near Station 465. These pond sites are located within upland herbaceous habitat and are maintained by mowing.

Impacts to jurisdictional wetlands and/or other surface waters are not anticipated to result from proposed modifications to these ponds for I-4 Segment 5 improvements.

Pond 502 (Recommended)

Pond 502 is an existing stormwater management area located near Station 465. This pond site is herbaceous upland habitat and is maintained by mowing.

No modifications to this pond are proposed for I-4 Segment 5 improvements.

Ponds 503A, 503B, 503C (Recommended)

Ponds 503A, 503B, and 503C are located along the eastbound travel lanes of I-4 near Station 490 at the southeast quadrant of I-4 and US-27 interchange. These are existing stormwater management areas that will be re-graded as a part of the I-4 Segment 5 improvements. Habitat present includes herbaceous uplands that are subject to routine mowing.

It is anticipated that no impacts to jurisdictional wetlands and/or surface waters will result from modifications to these pond areas.

Pond 503D (Recommended)

Pond 503D is located along the eastbound travel lanes of I-4 near Station 490 at the southeast quadrant of I-4 and US-27 interchange. This proposed new pond is located within an upland herbaceous community in close proximity to Pond 503C.

It is anticipated that no jurisdictional wetlands and/or surface water impacts will result from the construction of this pond for I-4 Segment 5 improvements.

Pond 504 (Recommended)

Pond 504 is an existing stormwater management area located near Station 10 along US 27, near the intersection of US-27 and Heller Brothers Boulevard. This pond site is herbaceous upland habitat and is maintained by mowing.

No modifications to this pond are proposed for I-4 Segment 5 improvements.

FPC 500C (Alternate)

FPC 500C is located along the eastbound travel lanes of existing I-4, near Station 530. Habitat associated with this proposed pond site consists of upland forested areas, and the fringe a mixed forested wetland (WL-4(E)). WL-4(E) receives runoff from adjacent uplands, roads and highways located along the north portion of the system.

It is anticipated that 0.98 acres of WL-4(E) will be directly impacted as a result of pond construction.

Regional Pond 1 (Recommended)

Regional Pond 1 is located along the westbound traffic lanes of existing I-4 near Station 520. This proposed new pond is located within a planted pine community adjacent to development, maintained uplands, and planted pine.

No jurisdictional wetland or surface water impacts are anticipated to result from the construction of this pond.

Regional Pond 2 (Recommended)

Regional Pond 2 is located north of Regional Pond 1 near Station 530. This pond site is a proposed new pond located within a planted pine community.

It is anticipated that no jurisdictional wetland or surface waters impacts will result in the construction of this pond for I-4 Segment 5 improvements.

Pond 505 A3 (Alternate)

Pond 505 A3 is located along the existing I-4 westbound travel lanes near Station 530. This is a proposed new pond site located within upland planted pine community.

It is anticipated that no jurisdictional wetlands or surface waters impacts will result in the construction of this proposed pond site for I-4 Segment 5 improvements.

FPC 500D (Recommended)

FPC 500D is located along the westbound travel lanes of existing I-4, near Station 535. This is a proposed new pond site that is located within a planted pine community.

FPC 500D is west of WL-4(W) and it is anticipated that impacts to WL-4(W) can be avoided during construction of this pond site for I-4 Segment 5 improvements.

Pond 505 B2 (Alternate)

Pond 505 B2 is located along the eastbound traffic lanes of I-4, near Station 560. This proposed new pond site is located within uplands and the fringe of a forested wetland system (WL-5(E)), and adjacent to WL-6A(E). WL-5(E) consists of a forested wetland system which has been impacted by upland activities, as well as runoff from existing roads and highways.

It is anticipated that 0.76 acres of WL-5(E) will be directly impacted as a result of pond construction. No impacts are anticipated to WL-6A(E).

Pond 100 (Recommended)

Pond 100 is located within the existing ROW of I-4 near Station 610, just east of the eastern limits of the I-4 Segment 5 improvements. This is an existing pond (SW-B(E)) that will be enlarged. Habitat types within this system consist of existing pond, wetlands, and maintained uplands.

Wetland involvement is anticipated to result from implementation of Pond 100, and have been addressed in the I-4 BtU PD&E Segment 1 improvement study. Pond 100 will also serve a portion of I-4 Segment 5 improvements.

Table 1 summarizes the classifications of the onsite wetlands and other surface waters using the Classification of Wetlands and Deep Water Habitats of the United States and the Florida Land Use, Cover and Forms Classification System.

Table 1
Summary of Jurisdictional Wetlands and Surface Waters

| ID | USFWS Classification* | FLUCFCS Code** | Description/ Vegetation Summary |
|----------|-----------------------|----------------|---------------------------------|
| SW-1(E) | PEM2E | 5130 | Swale/herbaceous |
| SW-2(E) | PEM2E | 5130 | Swale/herbaceous |
| SW-3(E) | L2EMH | 5340 | Borrow pond |
| WL-1(E) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-1A(E) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-2(E) | PFO2E | 6210 | Cypress |
| WL-2A(E) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-3(E) | PFO2E | 6210 | Cypress |
| WL-3A(E) | L2EMH | 6410 | Freshwater Marsh |
| WL-4(E) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-5(E) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-6(E) | L2EMH | 6410 | Freshwater Marsh |
| WL-6A(E) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-7(E) | L2EMH | 6410 | Freshwater Marsh |
| WL-8(E) | L2EMH | 6410 | Freshwater Marsh |
| SW-1(W) | PEM2E | 5130 | Swale/herbaceous |
| SW-1A(W) | PEM2E | 5130 | Ditch/herbaceous |
| SW-1B(W) | L2EMH | 5340 | Borrow pond |
| SW-2(W) | L2EMH | 5340 | Borrow pond |
| SW-2A(W) | L2EMH | 5340 | Borrow pond |
| SW-3(W) | L2EMH | 5340 | Borrow pond |
| SW-4(W) | PEM2E | 5130 | Swale/herbaceous |
| SW-5(W) | PEM2E | 5130 | Swale/herbaceous |
| WL-1(W) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-2(W) | PFO67E | 6300 | Wetland Forested Mixed |
| WL-3(W) | PFO2E | 6210 | Cypress |
| WL-4(W) | PEM2E | 6410 | Freshwater Marsh |
| WL-4A(W) | L2EMH | 6410 | Freshwater Marsh |
| WL-5(W) | L2EMH | 6410 | Freshwater Marsh |
| WL-6(W) | PSS67E | 6180 | Willow and Elderberry |

*US Fish and Wildlife Service (USFWS) CLASSIFICATIONS:

PEM2E: Palustrine/Emergent/Non-persistent/Seasonally Flooded/Saturated, PSS67E: Palustrine/Scrub-Shrub/Deciduous/Evergreen/Seasonally Flooded, PFO2E: Palustrine/Forested/Needle-leaf/Deciduous/Seasonally Flooded, PFO67E: Palustrine/Forested/Deciduous/Evergreen/Seasonally Flooded, L2EMH: Lacustrine/Littoral/Emergent/ Permanently Flooded

**Florida Land Use Cover and Forms Classification System (FLUCFCS Code):

4360: Upland, Scrub, Pine and Hardwoods, 5130: Streams and Waterways (Ditch/Swale), 5340: Reservoirs less than 10 acres which are dominant features, 6180: Willow and Elderberry, 6200: Wetland Coniferous Forest, 6210: Cypress, 6300: Wetland forested mixed, 6410: Freshwater Marshes

3.0 Wetland Impact Assessment

Preliminary estimates suggest that 1.82 acres of other surface waters and 19.01 acres of wetland communities will be impacted by proposed improvements associated with I-4 Segment 5 improvements, please reference Table 2. These estimates are based on field assessment of jurisdictional limits and preliminary plan preparation for design. Impacts to jurisdictional areas will be refined, and verified by state and federal agencies, as design

details are finalized. The impact areas, quality of each system, and likelihood of requiring mitigation for adverse impacts are summarized in Table 2.

Impacts to surface waters and wetlands during construction will also be classified as temporary or permanent, depending on the proposed level of disturbance. The type and amount of mitigation for adverse impacts will be based on the final impact acreages, the nature of disturbance (temporary or permanent), and the overall quality of the systems.

| Table 2 Summary of Proposed Impacts to Jurisdictional Wetlands/Other Surface Waters | | | | | |
|--|--------------|-------------------------------|--------------------------|-----------------|----------------------------------|
| ID | FLUCFCS Code | Total Area within ROW (acres) | Proposed Impacts (acres) | *Quality (UMAM) | **Mitigation Requirements (Y, N) |
| Wetlands | | | | | |
| WL-1(E) | 6300 | 2.20 | 0.00 | Moderate | N |
| WL-1A(E) | 6300 | 0.40 | 0.40 | Moderate | Y |
| WL-2(E) | 6210 | 0.26 | 0.26 | Moderate | Y |
| WL-2A(E) | 6300 | 2.58 | 2.58 | Moderate | Y |
| WL-3(E) | 6210 | 1.24 | 1.24 | Moderate | Y |
| WL-3A(E) | 6410 | 0.12 | 0.12 | Moderate | Y |
| WL-4(E) | 6300 | 1.98 | 1.98 | Moderate | Y |
| WL-5(E) | 6300 | 1.31 | 1.31 | Moderate | Y |
| WL-6(E) | 6410 | 1.06 | 1.06 | Moderate | Y |
| WL-6A(E) | 6300 | 0.00 | 0.00 | Moderate | N |
| WL-7(E) | 6410 | 0.63 | 0.63 | Moderate | Y |
| WL-8(E) | 6410 | 0.65 | 0.65 | Moderate | Y |
| WL-1(W) | 6300 | 2.73 | 0.94 | Moderate | Y |
| WL-2(W) | 6300 | 2.76 | 2.76 | Moderate | Y |
| WL-3(W) | 6210 | 2.30 | 2.30 | Moderate | Y |
| WL-4(W) | 6410 | 0.00 | 0.00 | Moderate | N |
| WL-4A(W) | 6410 | 0.33 | 0.33 | Moderate | Y |
| WL-5(W) | 6410 | 2.06 | 2.06 | Moderate | Y |
| WL-6(W) | 6180 | 0.39 | 0.39 | Low | Y |
| Subtotal Area | | 23.00 | | | |
| Subtotal Impacts | | | 19.01 | | |
| Other Surface Waters (Reservoirs and Swales) | | | | | |
| SW-1(E) | 5130 | 0.43 | 0.43 | Low | N |
| SW-2(E) | 5130 | 0.05 | 0.05 | Low | N |

| ID | FLUCFCS Code | Total Area within ROW (acres) | Proposed Impacts (acres) | *Quality (UMAM) | **Mitigation Requirements (Y, N) |
|--|--------------|--|--------------------------|-------------------------------------|----------------------------------|
| SW-3(E) | 5340 | 0.57 | 0.57 | Low | N |
| SW-1(W) | 5130 | 0.26 | 0.26 | Low | N |
| SW-1A(W) | 5130 | 0.20 | 0.20 | Low | N |
| SW-4(W) | 5130 | 0.24 | 0.24 | Low | N |
| SW-5(W) | 5130 | 0.07 | 0.07 | Low | N |
| Subtotal Area | | 1.82 | | | |
| Subtotal Impacts | | | 1.82 | | |
| Project Total | | 24.82 | 20.83 | | |
| *Low= UMAM Score between 0 and 0.49 | | Moderate= UMAM Score between 0.50 and 0.79 | | High= UMAM Score of 0.80 or better. | |
| **Y = Jurisdictional/Mitigation Required | | N = Jurisdictional/No Mitigation Required | | | |

Table 3 summarizes wetland and other surface water impacts, anticipated to require mitigation, by type (forested wetlands vs. freshwater wetlands) for the Segment 5 design and includes the hydrologic basin where impacts are located.

| Hydrological Basin | Forested Wetlands (acres) | Herbaceous Wetlands (acres) | Other Surface Waters (acres) |
|--------------------|---------------------------|-----------------------------|------------------------------|
| Ocklawaha River | 10.48 | 0.00 | 0.00 |
| Horse Creek | 3.29 | 5.24 | 0.00 |
| Totals | 13.77 | 5.24 | 0.00 |

4.0 Alternative Analysis

Reconstruction and widening of I-4 involves the build-out of the mainline of I-4 to its ultimate condition and modification of interchange configuration at US 27. As such, the build scenario of the I-4 mainline includes improvements to those land areas within the existing I-4 ROW and stormwater management ponds, thus rendering a single design for the mainline and alternative designs for the interchange. Design modifications (relocating, reconfiguring, reduction and removing) have been explored to avoid and/or reduce wetland impacts. The mainline and proposed pond designs will likely result in unavoidable impacts to jurisdictional wetland and other surface water communities.

5.0 Avoidance and Minimization of Impacts

The proposed reconstruction and widening of I-4 from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County is intended to improve the level of service and enhance safety for the traveling public. In meeting the FDOT and the American Association of State Highway and Transportation Standards (AASHTO) roadway design criteria, the ultimate condition build-out of the I-4 mainline presents little opportunities to avoid or minimize adverse wetland impacts within the existing I-4 ROW and alternative interchange designs. In addition, the wetlands and other surface water systems within the mainline ROW are of low to moderate quality, generally isolated from larger more regionally significant systems, or have been constructed through upland soils. A large percentage of the jurisdictional communities within the ROW have been altered or have experienced degradation by the presence of the existing I-4 travel lanes, routine maintenance of the ROW, and general edge effect experienced by wetlands near disturbed environments.

Site planning modifications include the use of existing stormwater management ponds, relocation of proposed stormwater management ponds, and the reconfiguration of ponds to avoid wetland impacts. It is anticipated that jurisdictional systems within the proposed stormwater treatment systems will be avoided and/or minimized to the greatest extent practical while maintaining safety and function. Further avoidance and minimization efforts of wetlands will be conducted during the design and construction phase. Appropriate mitigation will be proposed based on the final roadway design to offset any adverse impacts to jurisdictional wetlands or other surface waters.

6.0 Secondary & Cumulative Impacts

It is anticipated that improvements along the mainline of I-4 could result in adverse secondary and cumulative impacts in meeting the intent of sections 10.2.7 and 10.2.8 of Volume I of the Environmental Resource Permit Information Manual. In evaluation of the potential secondary (indirect) impacts to jurisdictional wetlands, the US Army Corps of Engineers (USACOE) matrix tool for determining secondary impacts was considered. The USACOE secondary impact matrix was used due to its more comprehensive approach in calculating the area of influence. In consideration of the USACOE matrix, current design improvements suggest that secondary impacts could range between 24 acres (75-foot into a wetland system) and 32 acres (100 feet into a wetland system) from I-4 Segment 5 improvements (Please reference Appendix A – Exhibit 6 – Surface Water/Wetland Impact Map).

It is presumed that cumulative impacts would result should direct impacts occur. However, a cumulative impact analysis and appropriate mitigation could satisfy the cumulative impact presumption. It is anticipated that the proposed project will not result in unacceptable cumulative impacts to wetland functions in the Ocklawaha and Kissimmee River Basins provided that there is appropriate and available mitigation within in the same basin as the adverse impacts or that a cumulative impact assessment analysis determines the mitigation plan is sufficient in addressing.

A secondary and cumulative impacts assessment for I-4 Segment 5 improvements will be refined during the permitting phase in determining the exact mitigation needed in offsetting adverse impacts.

7.0 Conceptual Mitigation

Mitigation requirements are based on a compilation of wetland parameters including quality, type, function and size. Impacts to wetlands and other surface waters will be avoided and minimized to the maximum extent possible while maintaining safe and sound engineering and construction practices. Primarily, avoidance and minimization efforts are involved at the proposed stormwater management pond locations and the ROW of the I-4 corridor from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County.

A mitigation plan that adequately offsets adverse impacts will be developed and implemented during the permitting phase and prior to construction activities. Adverse wetland impacts that may result from the construction of this project will be mitigated, satisfying the requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.s.1344. Compensatory mitigation for this project will be accomplished through the use of mitigation banks and/or other mitigation options that satisfy state and federal requirements.

Mitigation Bank service areas and mitigation credit availability for the Horse Creek, and Ocklawaha River Basins are listed in Table 4.

| Mitigation Bank | Mitigation Service Area | *Credits |
|------------------------------|---------------------------------|---|
| Reedy Creek Mitigation Bank | Horse Creek and Ocklawaha River | 40 UMAM/WRAP Credits (Forested) |
| Collany | Horse Creek and Ocklawaha River | 3.5 UMAM Credits (Herbaceous & Forested) |
| Southport Mitigation Bank | Horse Creek and Ocklawaha River | 174.74 UMAM Credits (Herbaceous & Forested) |
| Hammock Lake Mitigation Bank | Horse Creek and Ocklawaha River | 23 UMAM Credits (Herbaceous) |
| Lake Louisa/Green Swamp | Horse Creek and Ocklawaha River | 3 WRAP Credits (Herbaceous & Forested) |

*Based on 2014/2015/ 2016 mitigation credit ledger review & coordination with Mitigation Marketing Resources, LLC and Falling Springs, LLC.

8.0 Coordination

It is anticipated that project improvements will result in impacts to wetlands and other surface waters regulated by the USACOE and the State of Florida. A USACOE permit under Section 404 of the Clean Water Act is anticipated for proposed project improvements and an Environmental Resource Permit from the Southwest Florida Water Management District is needed for the project prior to implementation of construction activities. In addition, a National Pollutant Discharge Elimination System Permit from the Florida Department of Environmental Protection will be required.

During field investigation activities, conservation area signage was found within the area of WL-4(E). In our review of permitting documents from the Southwest Florida Water Management District, it was determined that the area of WL-4(E) and WL-3(E) are located within the Victor Posner City Center Development of Regional Impact (DRI) authorized in 2001. Permit documents suggests that portions of these wetlands, and adjacent

uplands, are being retained for conservation purposes. However, our research did not locate any official recorded conservation easements through Polk County government records. Additional coordination should be conducted during the design and permitting phase of I-4 Segment 5 improvements in verification of legal protected status of systems (Appendix C – Permit Information).

9.0 Discussion and Commitments

This wetland evaluation was conducted for I-4 PD&E Study Segment 5: SR 400 (I-4) from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County in compliance with Executive Order 11990, Protection of Wetlands, to assure that every practicable effort will be made to avoid short and long-term impacts to wetlands. The approximate total of jurisdictional wetland impacts is 19.01 acres and the total impacts to jurisdictional other surface waters is 1.82 acres. Sufficient mitigation to offset adverse impacts is currently available at the Reedy Creek, Collany, Southport Ranch, Hammock Lake and Lake Louisa/Green Swamp Mitigation Banks.

I-4 Segment 5 is located within two (2) wood stork Core Foraging Areas (CFAs). Wetland mitigation will adhere to the requirements of the *Corps of Engineers and U. S. Fish and Wildlife Service Effect Determination Key for the Wood Stork in South Florida* (2010).

The following commitments are being proposed to ensure that the I-4 Segment 5 project does not result in adverse impacts to wetland communities and the functions they provide.

- As required by FDOT Standard Specifications, the construction of equipment staging areas for storage of oils, greases, fuel, road bed material, and equipment maintenance will be sited in previously disturbed areas not adjacent to any streams, wetlands, or surface water bodies. The staging areas will be surveyed for listed species prior to their use.
- As required by FDOT Standard Specifications, if protected species are identified unexpectedly within the construction area during construction, coordination will be initiated with the appropriate resource agencies to avoid or mitigate impacts.
- FDOT will work with regulatory agencies during permitting to ensure that mitigation proposed for wetland impacts in any wood stork suitable foraging habitat (SFH) will adhere to the requirements of the *Corps of Engineers and U. S. Fish and Wildlife Service Effect Determination Key for the Wood Stork in South Florida* (2010).
- The project corridor and pond sites will be re-surveyed for listed species during project permitting and any changes from the PD&E results will be shared with USFWS.
- During the permitting process, FDOT will coordinate with federal and state agency personnel to ensure minimization and reduction of adverse wetland impacts have been explored to the fullest extent of the project while meeting engineering standards and practice.
- During the development of the design, a Quality Enhancement Strategies (QES) addressing the avoidance and minimization for losses of waters of the United States and alternative design changes to minimize wetland impacts (without jeopardizing safety) will be completed by others.

10.0 REFERENCES

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- US Department of Transportation, Federal Highway Administration, Region 4. *Administrative Action Draft Environmental Assessment*. Interstate 4 (SR 400) west of Memorial Boulevard to Polk/Osceola County Line in Polk County. August 1998.

US Department of Transportation Federal Highway Administration and Florida Department of Transportation District 1, Environmental Assessment and Finding of No Significant Impact for Interstate 4 (SR 400) from West of Memorial Boulevard (SR 546) to the Polk / Osceola County Line (FM No. 201210), December 1998.

US Fish and Wildlife Service. 1996. *National List of Plant Species that Occur in Wetlands – Region 2, Southeast*.

US Fish and Wildlife Service, Wood Stork Key for South Florida, September 2010.

APPENDIX A
PROJECT MAPS AND FIGURES

EXHIBIT 1
LOCATION MAP



Exhibit 1

EXHIBIT 2
USGS TOPOGRAPHIC QUADRANGLE MAP

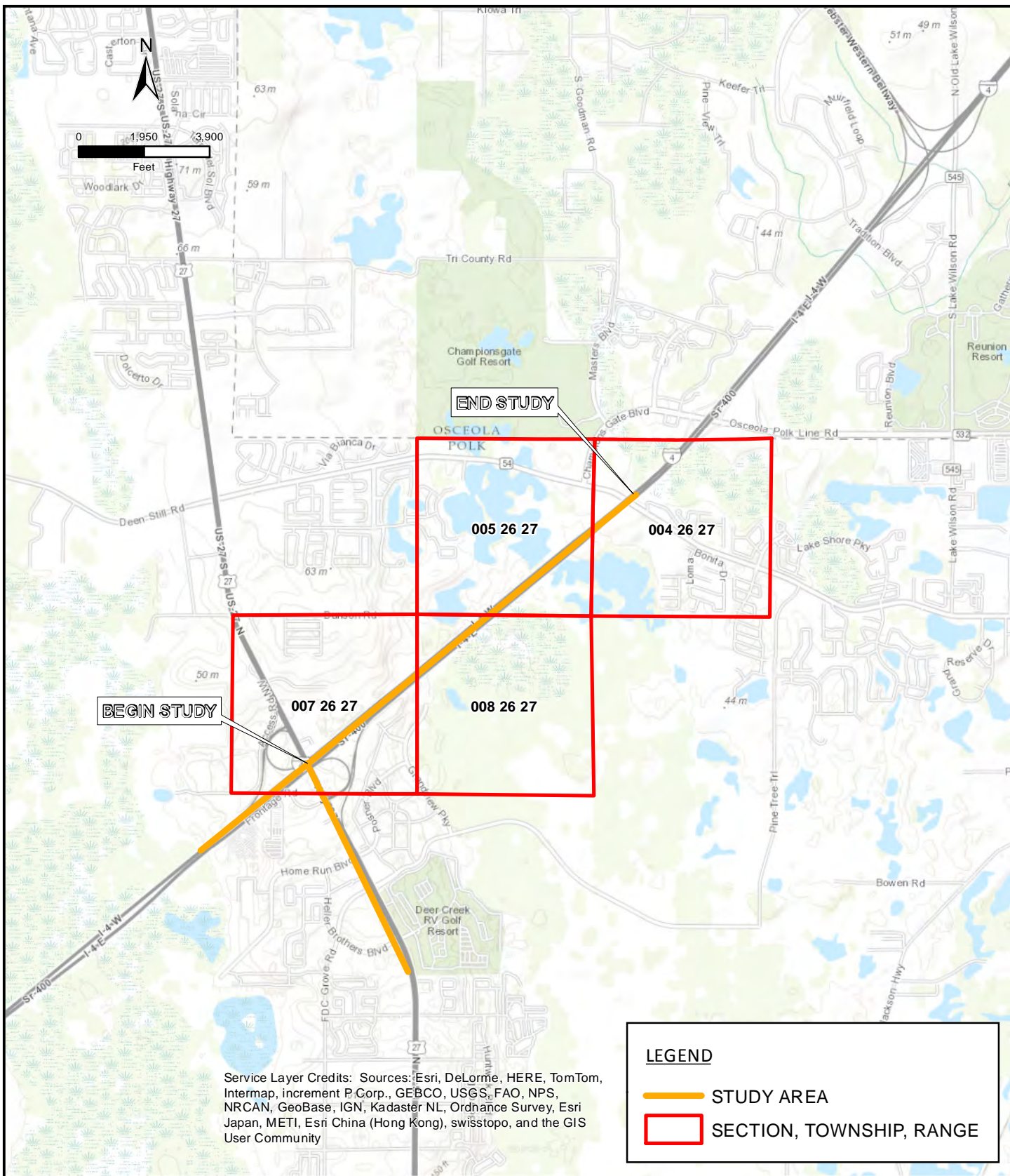
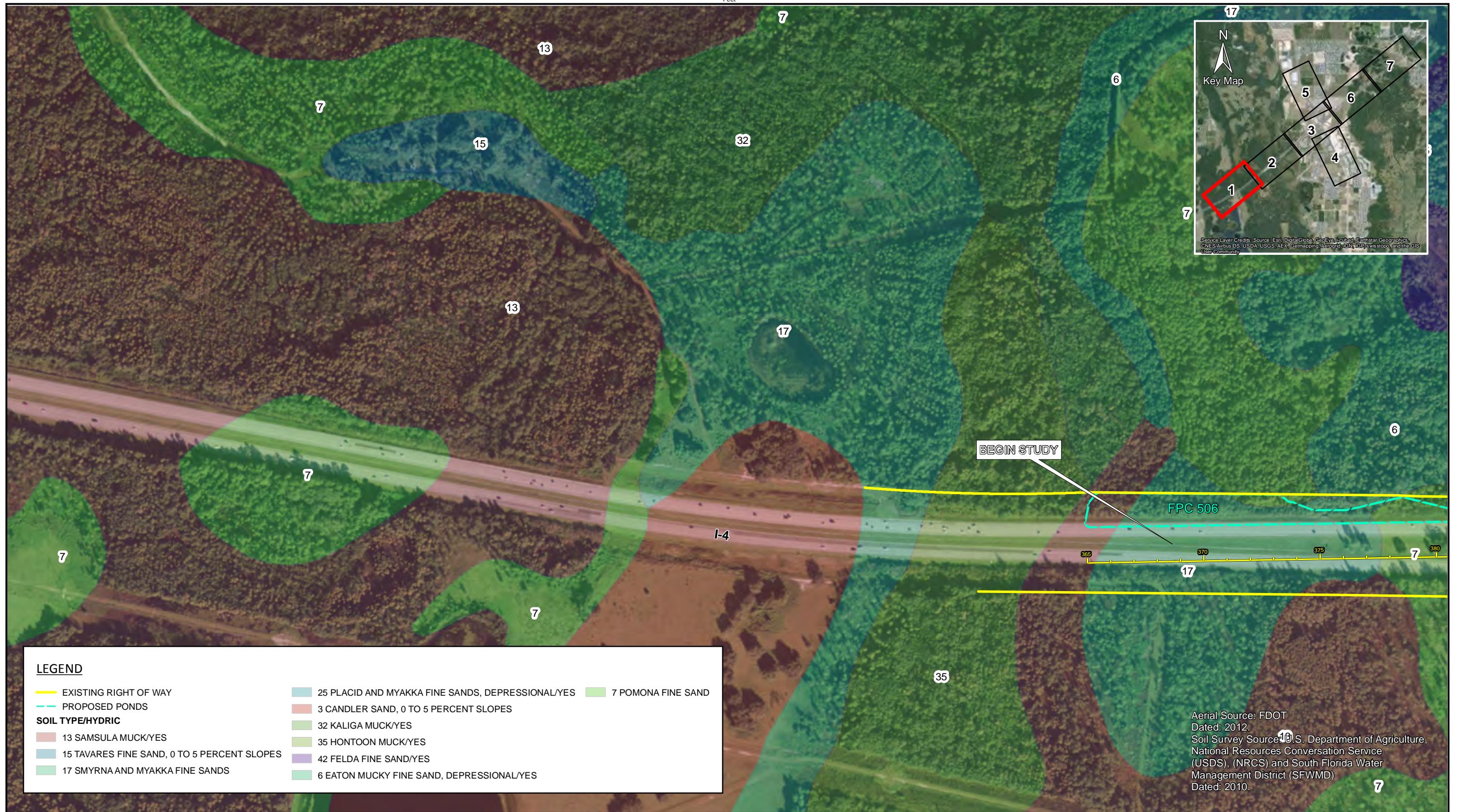
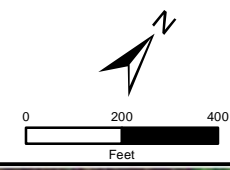


Exhibit 2

EXHIBIT 3
NRCS SOIL SURVEY MAP

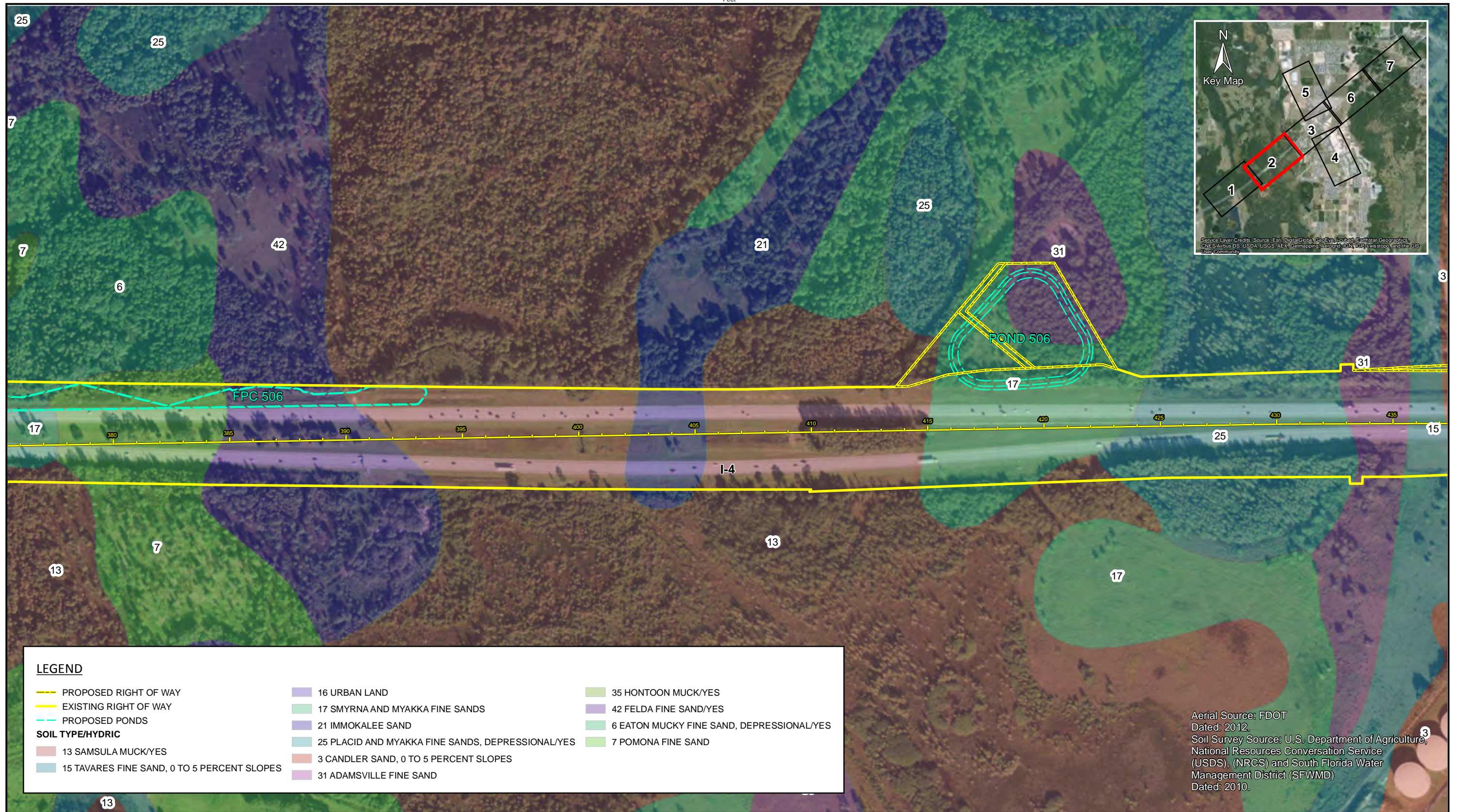
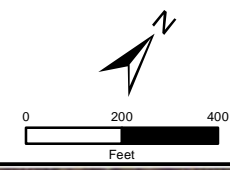


LEGEND

| | | |
|---|---|--------------------|
| EXISTING RIGHT OF WAY | 25 PLACID AND MYAKKA FINE SANDS, DEPRESSIONAL/YES | 7 POMONA FINE SAND |
| PROPOSED PONDS | 3 CANDLER SAND, 0 TO 5 PERCENT SLOPES | |
| SOIL TYPE/HYDRIC | | |
| 13 SAMSULA MUCK/YES | 32 KALIGA MUCK/YES | |
| 15 TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES | 35 HONTOON MUCK/YES | |
| 17 SMYRNA AND MYAKKA FINE SANDS | 42 FELDA FINE SAND/YES | |
| | 6 EATON MUCKY FINE SAND, DEPRESSIONAL/YES | |

Aerial Source: FDOT
 Dated: 2012.
 Soil Survey Source: U.S. Department of Agriculture,
 National Resources Conservation Service
 (USDS), (NRCS) and South Florida Water
 Management District (SFWMD)
 Dated: 2010.

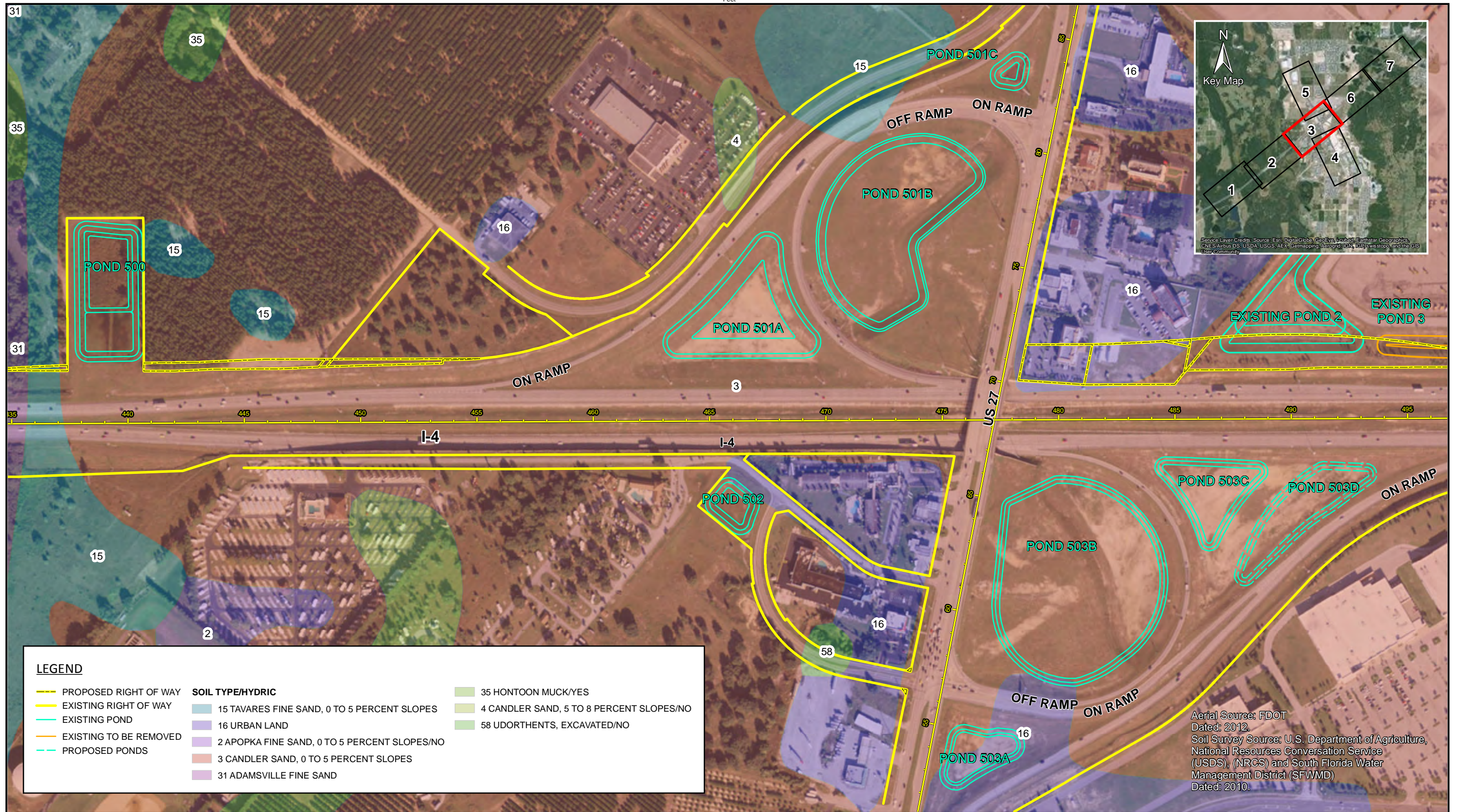
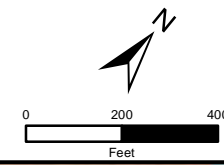
Exhibit 3.1



| LEGEND | | |
|------------------|---|--|
| | PROPOSED RIGHT OF WAY | |
| | EXISTING RIGHT OF WAY | |
| | PROPOSED PONDS | |
| SOIL TYPE/HYDRIC | | |
| | 13 SAMSULA MUCK/YES | |
| | 15 TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES | |
| | 16 URBAN LAND | |
| | 17 SMYRNA AND MYAKKA FINE SANDS | |
| | 21 IMMOKALEE SAND | |
| | 25 PLACID AND MYAKKA FINE SANDS, DEPRESSIONAL/YES | |
| | 31 ADAMSVILLE FINE SAND | |
| | 35 HONTOON MUCK/YES | |
| | 42 FELDA FINE SAND/YES | |
| | 6 EATON MUCKY FINE SAND, DEPRESSIONAL/YES | |
| | 3 CANDLER SAND, 0 TO 5 PERCENT SLOPES | |
| | 7 POMONA FINE SAND | |

Aerial Source: FDOT
 Dated: 2012.
 Soil Survey Source: U.S. Department of Agriculture,
 National Resources Conservation Service
 (USDS), (NRCS) and South Florida Water
 Management District (SFWMD)
 Dated: 2010.

Exhibit 3.2



| LEGEND | | | |
|--------|--|--|--|
| | PROPOSED RIGHT OF WAY | | |
| | EXISTING RIGHT OF WAY | | |
| | EXISTING POND | | |
| | EXISTING TO BE REMOVED | | |
| | PROPOSED PONDS | | |
| | SOIL TYPE/HYDRIC 15 TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES | | 35 HONTOON MUCK/YES |
| | 16 URBAN LAND | | 4 CANDLER SAND, 5 TO 8 PERCENT SLOPES/NO |
| | 2 APOPKA FINE SAND, 0 TO 5 PERCENT SLOPES/NO | | 58 UDORTHENTS, EXCAVATED/NO |
| | 3 CANDLER SAND, 0 TO 5 PERCENT SLOPES | | |
| | 31 ADAMSVILLE FINE SAND | | |

Aerial Source: FDOT
 Dated: 2012.
 Soil Survey Source: U.S. Department of Agriculture,
 National Resources Conservation Service
 (USDS), (NRCS) and South Florida Water
 Management District (SFWMD)
 Dated: 2010.

Exhibit 3.3

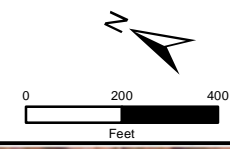
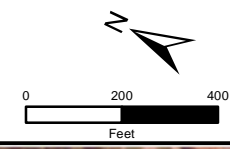


Exhibit 3.4



LEGEND

| | |
|---|---------------------------------------|
| EXISTING RIGHT OF WAY | 3 CANDLER SAND, 0 TO 5 PERCENT SLOPES |
| EXISTING POND | 4 CANDLER SAND, 5 TO 8 PERCENT SLOPES |
| SOIL TYPE/HYDRIC | |
| 15 TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES | |
| 16 URBAN LAND | |
| 21 IMMOKALEE SAND | |

Aerial Source: FDOT
 Dated: 2012.
 Soil Survey Source: U.S. Department of Agriculture,
 National Resources Conservation Service
 (USDS), (NRCS) and South Florida Water
 Management District (SFWMD)
 Dated: 2010.

Exhibit 3.5

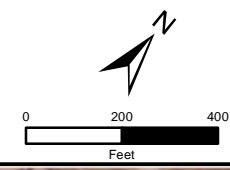
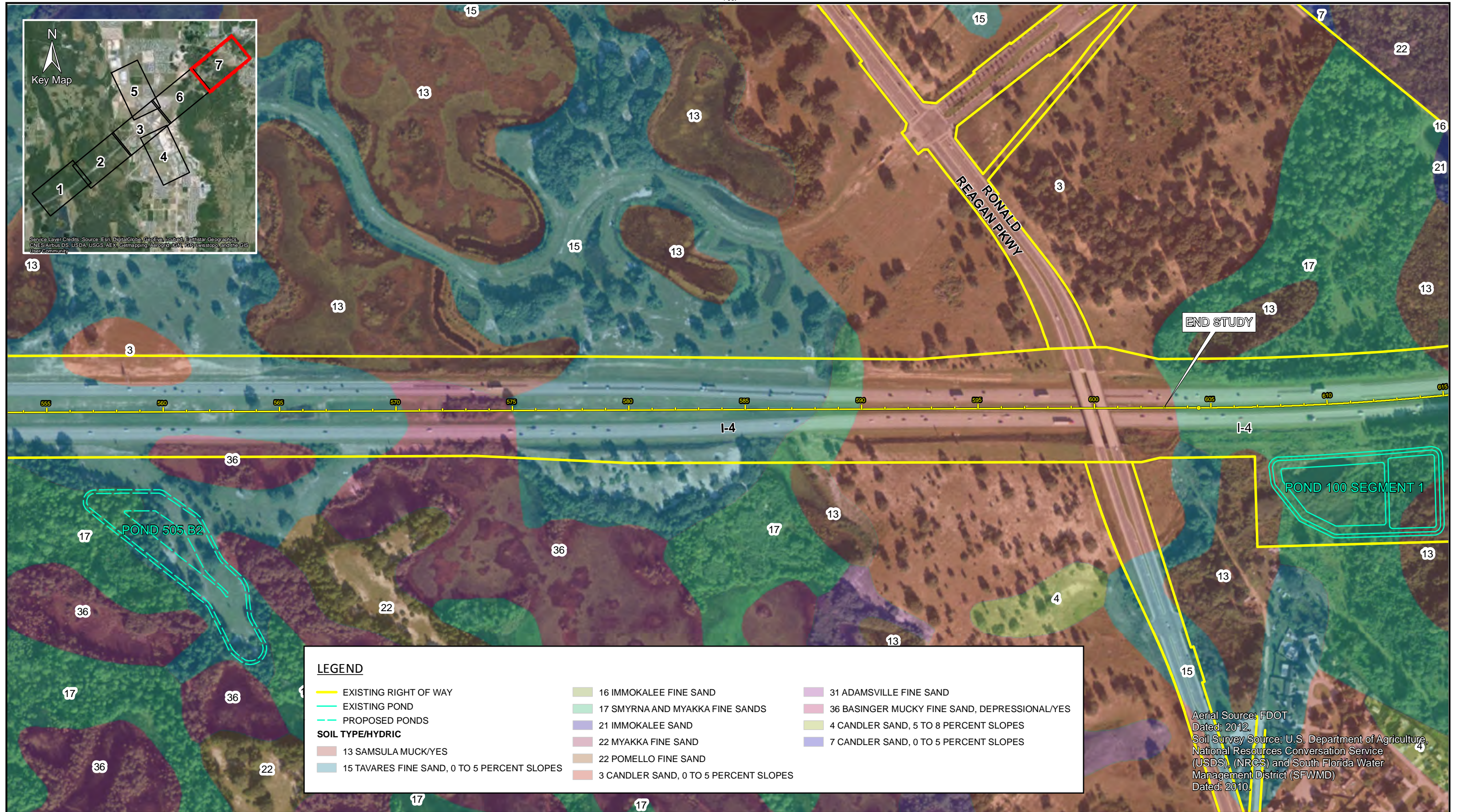
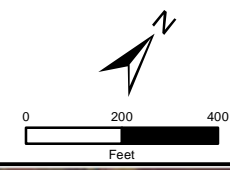


Exhibit 3.6



| LEGEND | | |
|------------------|---|--|
| | EXISTING RIGHT OF WAY | |
| | EXISTING POND | |
| | PROPOSED PONDS | |
| SOIL TYPE/HYDRIC | | |
| | 13 SAMSULA MUCK/YES | |
| | 15 TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES | |
| | 16 IMMOKALEE FINE SAND | |
| | 17 SMYRNA AND MYAKKA FINE SANDS | |
| | 21 IMMOKALEE SAND | |
| | 22 MYAKKA FINE SAND | |
| | 22 POMELO FINE SAND | |
| | 3 CANDLER SAND, 0 TO 5 PERCENT SLOPES | |
| | 31 ADAMSVILLE FINE SAND | |
| | 36 BASINGER MUCKY FINE SAND, DEPRESSIONAL/YES | |
| | 4 CANDLER SAND, 5 TO 8 PERCENT SLOPES | |
| | 7 CANDLER SAND, 0 TO 5 PERCENT SLOPES | |

Aerial Source: FDOT
 Dated: 2012.
 Soil Survey Source: U.S. Department of Agriculture,
 National Resources Conservation Service
 (USDS), (NRCS) and South Florida Water
 Management District (SFWMD)
 Dated: 2010.

Exhibit 3.7

EXHIBIT 4
FLUCFCS MAP

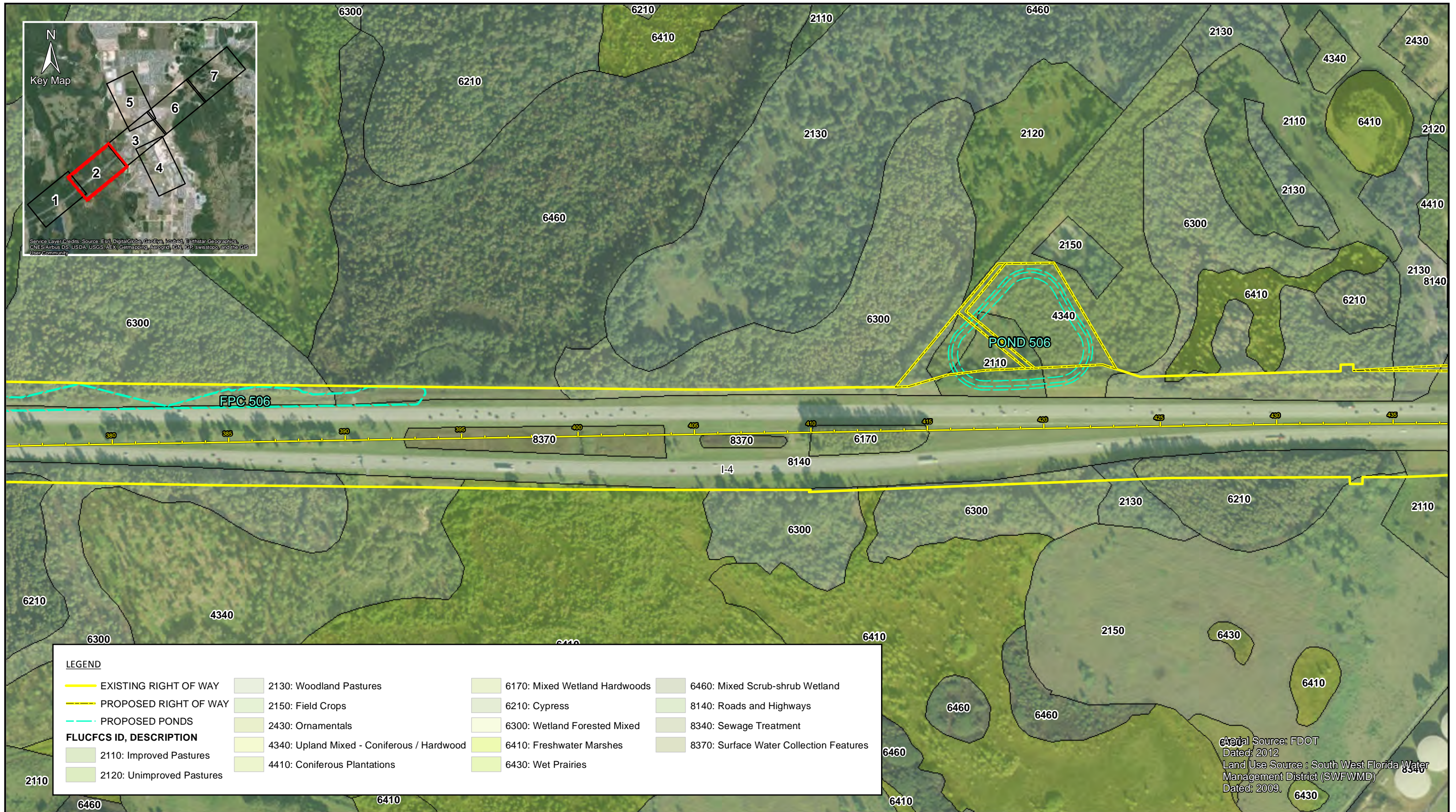
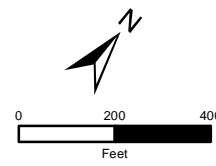


Exhibit 4.2

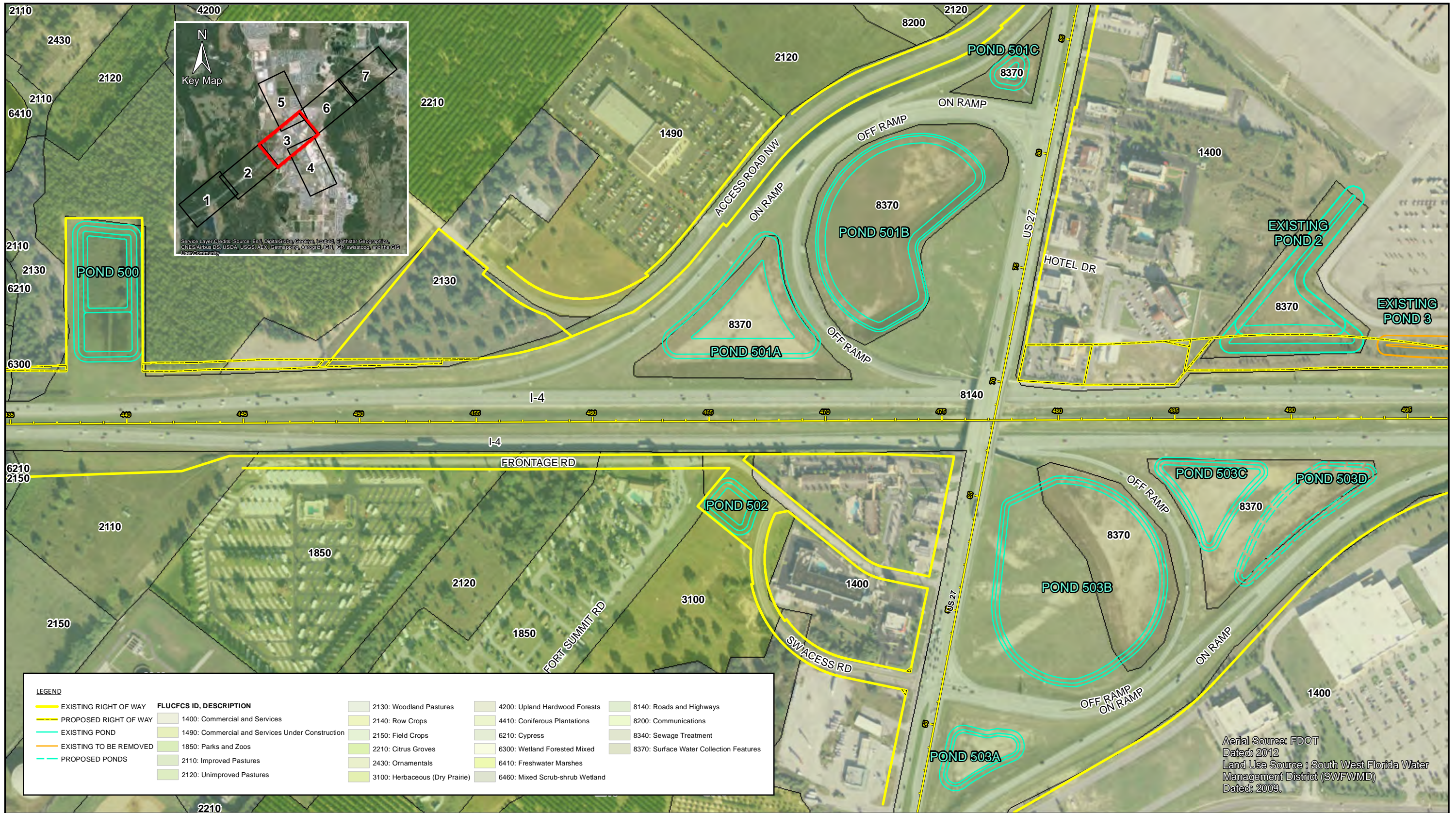
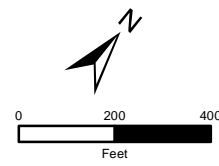
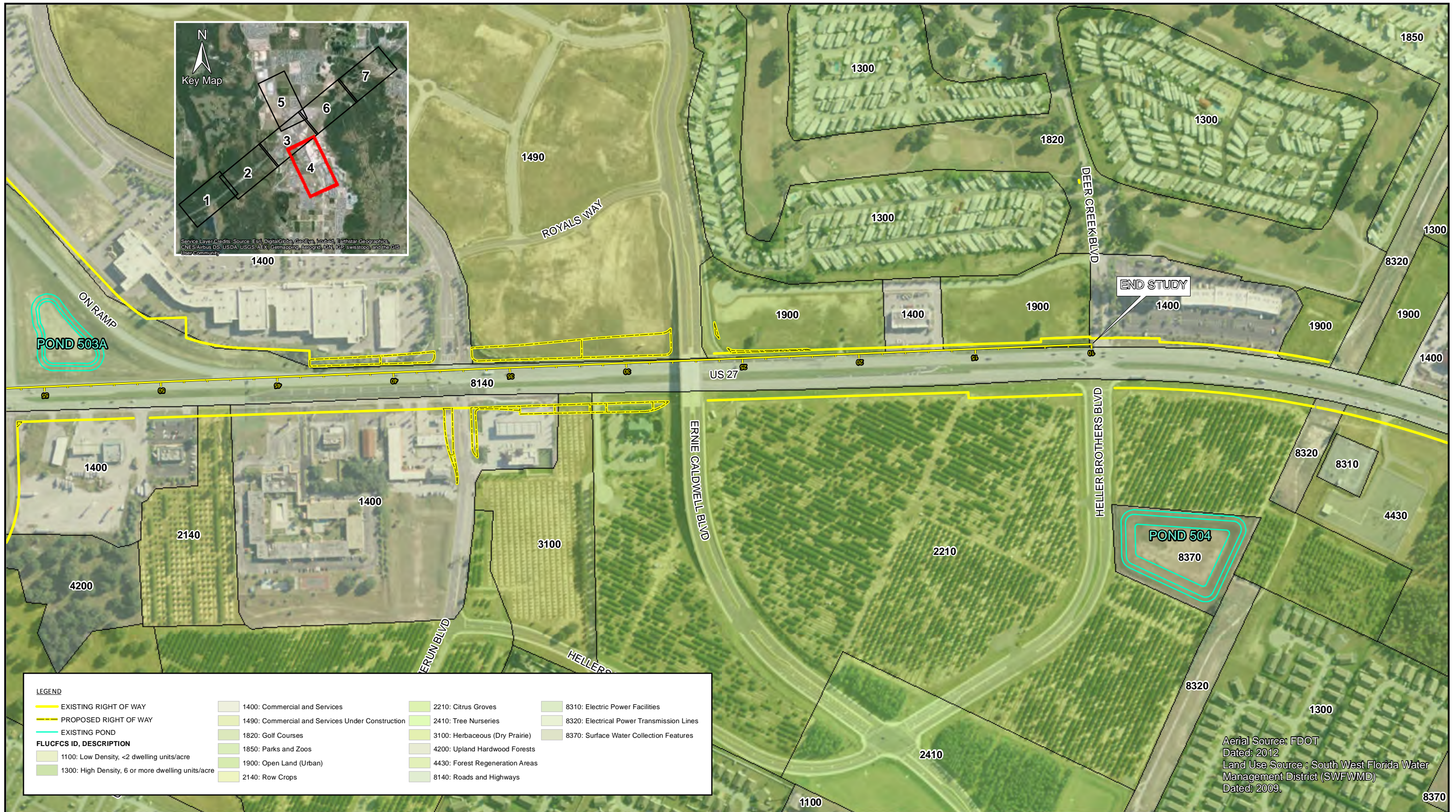
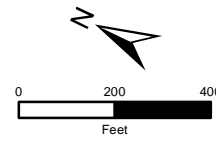


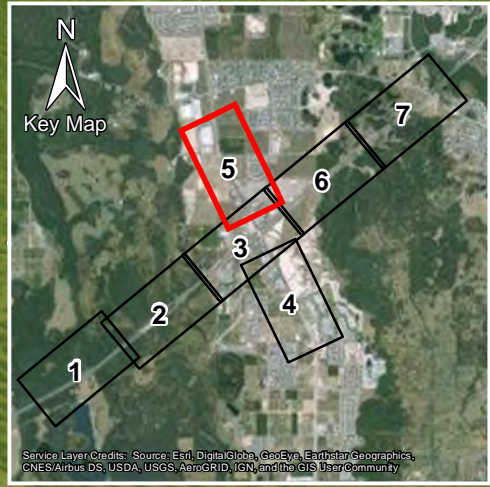
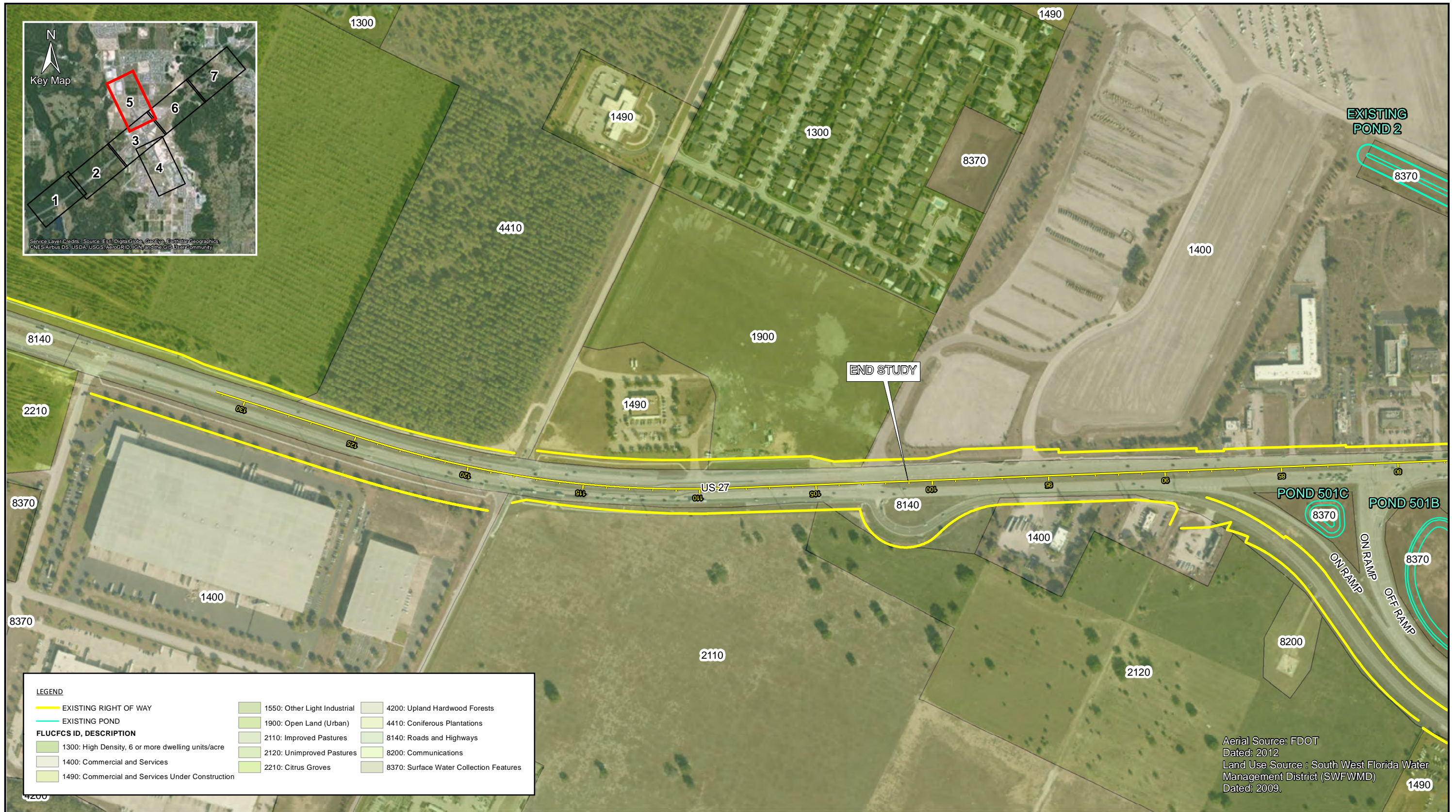
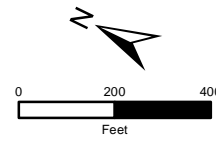
Exhibit 4.3



| LEGEND | | | |
|-------------------------|---|--|--|
| | EXISTING RIGHT OF WAY | | 1400: Commercial and Services |
| | PROPOSED RIGHT OF WAY | | 1490: Commercial and Services Under Construction |
| | EXISTING POND | | 1820: Golf Courses |
| FLUCFCS ID, DESCRIPTION | | | |
| | 1100: Low Density, <2 dwelling units/acre | | 1850: Parks and Zoos |
| | 1300: High Density, 6 or more dwelling units/acre | | 1900: Open Land (Urban) |
| | 2140: Row Crops | | 3100: Herbaceous (Dry Prairie) |
| | 2210: Citrus Groves | | 4200: Upland Hardwood Forests |
| | 2410: Tree Nurseries | | 4430: Forest Regeneration Areas |
| | 8310: Electric Power Facilities | | 8140: Roads and Highways |
| | 8320: Electrical Power Transmission Lines | | |
| | 8370: Surface Water Collection Features | | |

Aerial Source: FDOT
 Dated: 2012
 Land Use Source: South West Florida Water Management District (SWFWMD)
 Dated: 2009.

Exhibit 4.4

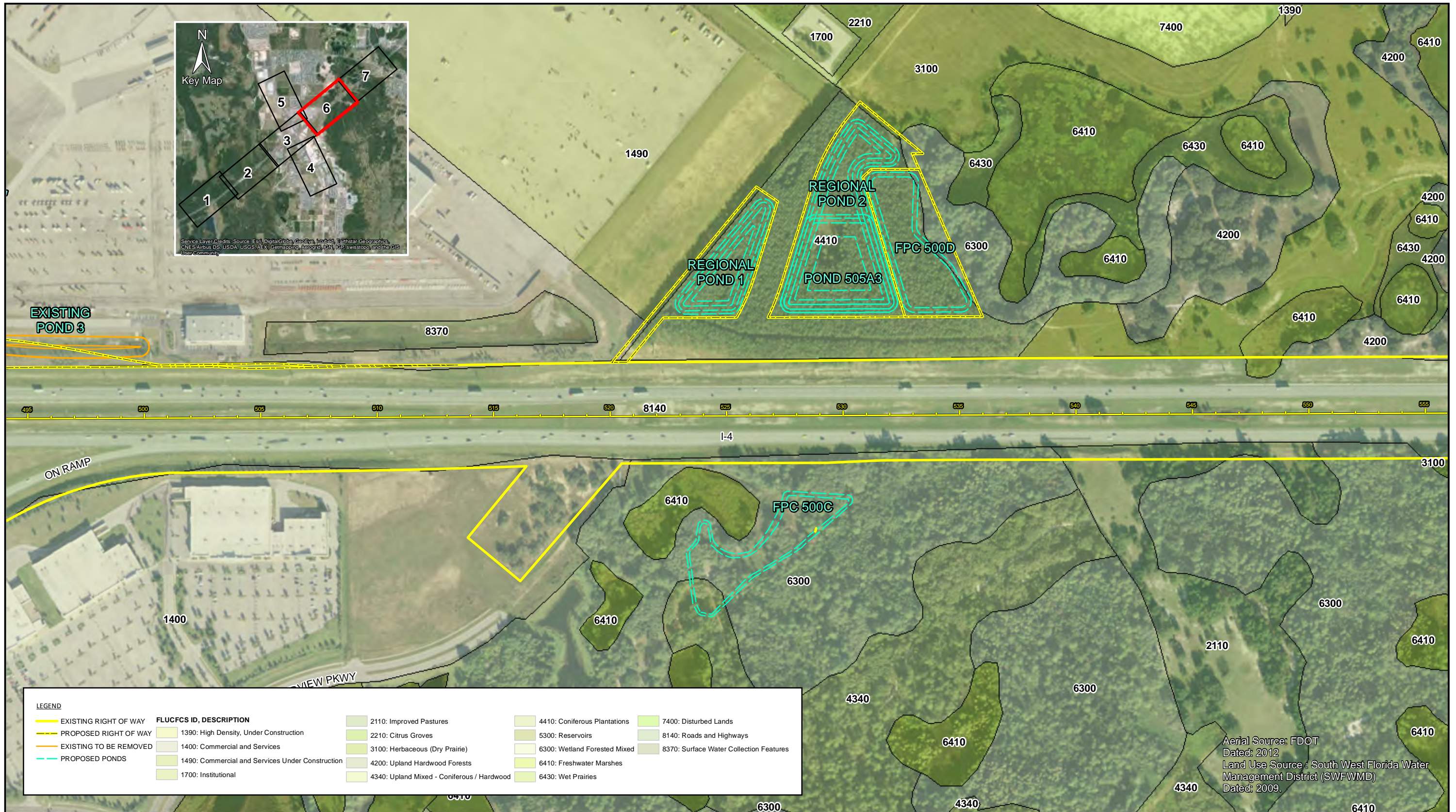
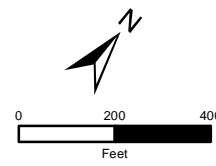


LEGEND

| | | |
|---|------------------------------|---|
| EXISTING RIGHT OF WAY | 1550: Other Light Industrial | 4200: Upland Hardwood Forests |
| EXISTING POND | 1900: Open Land (Urban) | 4410: Coniferous Plantations |
| FLUCFCS ID, DESCRIPTION | 2110: Improved Pastures | 8140: Roads and Highways |
| 1300: High Density, 6 or more dwelling units/acre | 2120: Unimproved Pastures | 8200: Communications |
| 1400: Commercial and Services | 2210: Citrus Groves | 8370: Surface Water Collection Features |
| 1490: Commercial and Services Under Construction | | |

Aerial Source: FDOT
 Dated: 2012
 Land Use Source: South West Florida Water Management District (SWFWMD)
 Dated: 2009.

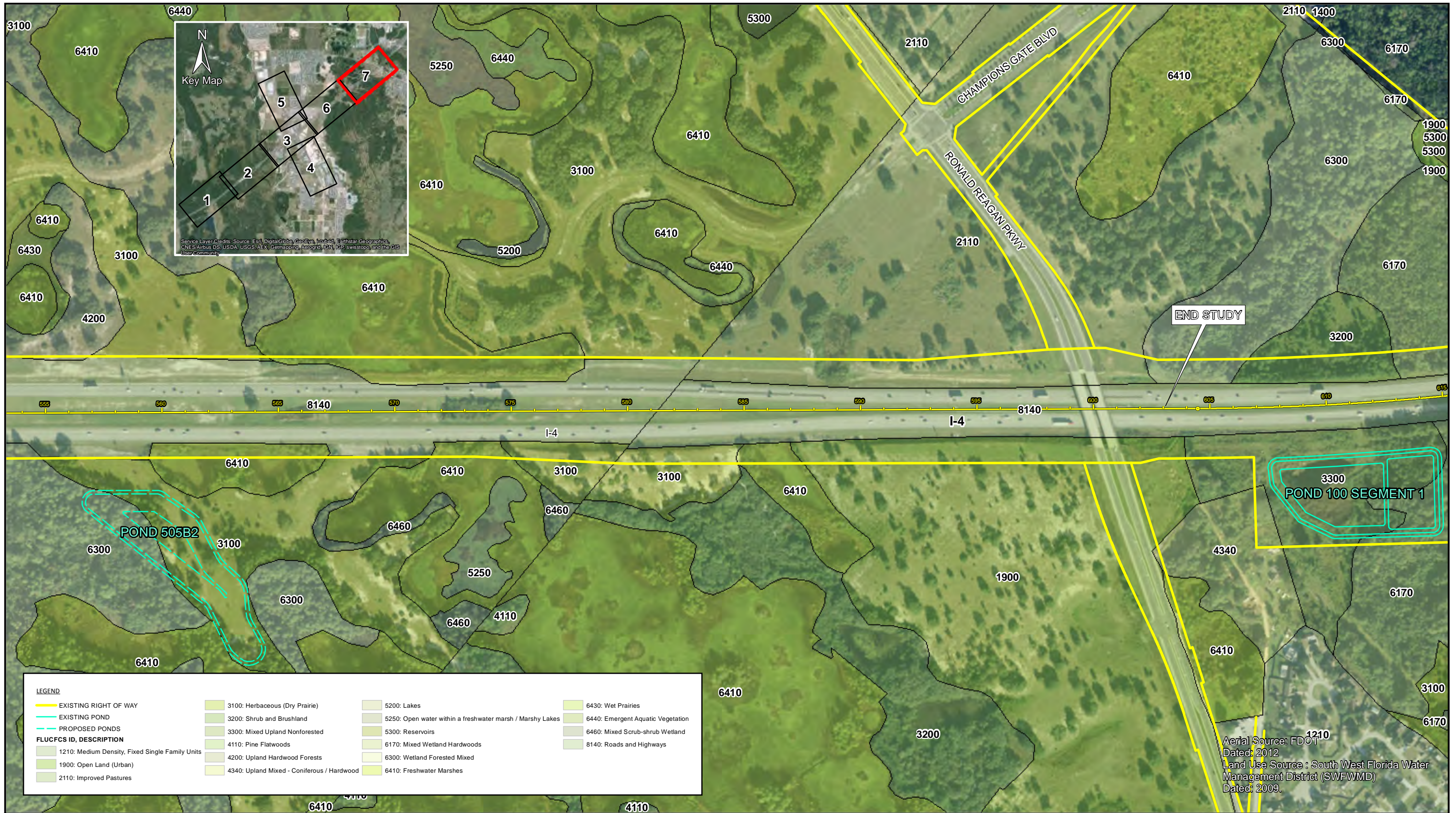
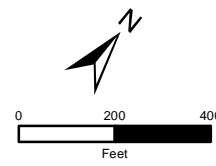
Exhibit 4.5



| LEGEND | | FLUCFCS ID, DESCRIPTION | | | | | | | |
|--------|------------------------|-------------------------|--|--|--|--|------------------------------|--|---|
| | EXISTING RIGHT OF WAY | | 1390: High Density, Under Construction | | 2110: Improved Pastures | | 4410: Coniferous Plantations | | 7400: Disturbed Lands |
| | PROPOSED RIGHT OF WAY | | 2210: Citrus Groves | | 5300: Reservoirs | | 8140: Roads and Highways | | 8370: Surface Water Collection Features |
| | EXISTING TO BE REMOVED | | 3100: Herbaceous (Dry Prairie) | | 6300: Wetland Forested Mixed | | 6410: Freshwater Marshes | | 6430: Wet Prairies |
| | PROPOSED PONDS | | 1400: Commercial and Services | | 6410: Freshwater Marshes | | 6430: Wet Prairies | | |
| | | | 1490: Commercial and Services Under Construction | | 4200: Upland Hardwood Forests | | | | |
| | | | 1700: Institutional | | 4340: Upland Mixed - Coniferous / Hardwood | | | | |

Aerial Source: FDOT
 Dated: 2012
 Land Use Source: South West Florida Water Management District (SWFWMD)
 Dated: 2009.

Exhibit 4.6



| LEGEND | | | |
|-------------------------|---|--|---|
| | EXISTING RIGHT OF WAY | | 3100: Herbaceous (Dry Prairie) |
| | EXISTING POND | | 3200: Shrub and Brushland |
| | PROPOSED PONDS | | 3300: Mixed Upland Nonforested |
| FLUCFCS ID, DESCRIPTION | | | |
| | 1210: Medium Density, Fixed Single Family Units | | 5200: Lakes |
| | 1900: Open Land (Urban) | | 5250: Open water within a freshwater marsh / Marshy Lakes |
| | 2110: Improved Pastures | | 5300: Reservoirs |
| | 4110: Pine Flatwoods | | 6170: Mixed Wetland Hardwoods |
| | 4200: Upland Hardwood Forests | | 6300: Wetland Forested Mixed |
| | 4340: Upland Mixed - Coniferous / Hardwood | | 6410: Freshwater Marshes |
| | 6430: Wet Prairies | | 6460: Mixed Scrub-shrub Wetland |
| | 6440: Emergent Aquatic Vegetation | | 8140: Roads and Highways |

Aerial Source: FDOT
 Dated: 2012
 Land Use Source: South West Florida Water Management District (SWFWMD)
 Dated: 2009.

Exhibit 4.7

EXHIBIT 5
SURFACE WATER AND WETLAND MAP

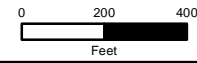


Exhibit 5.1

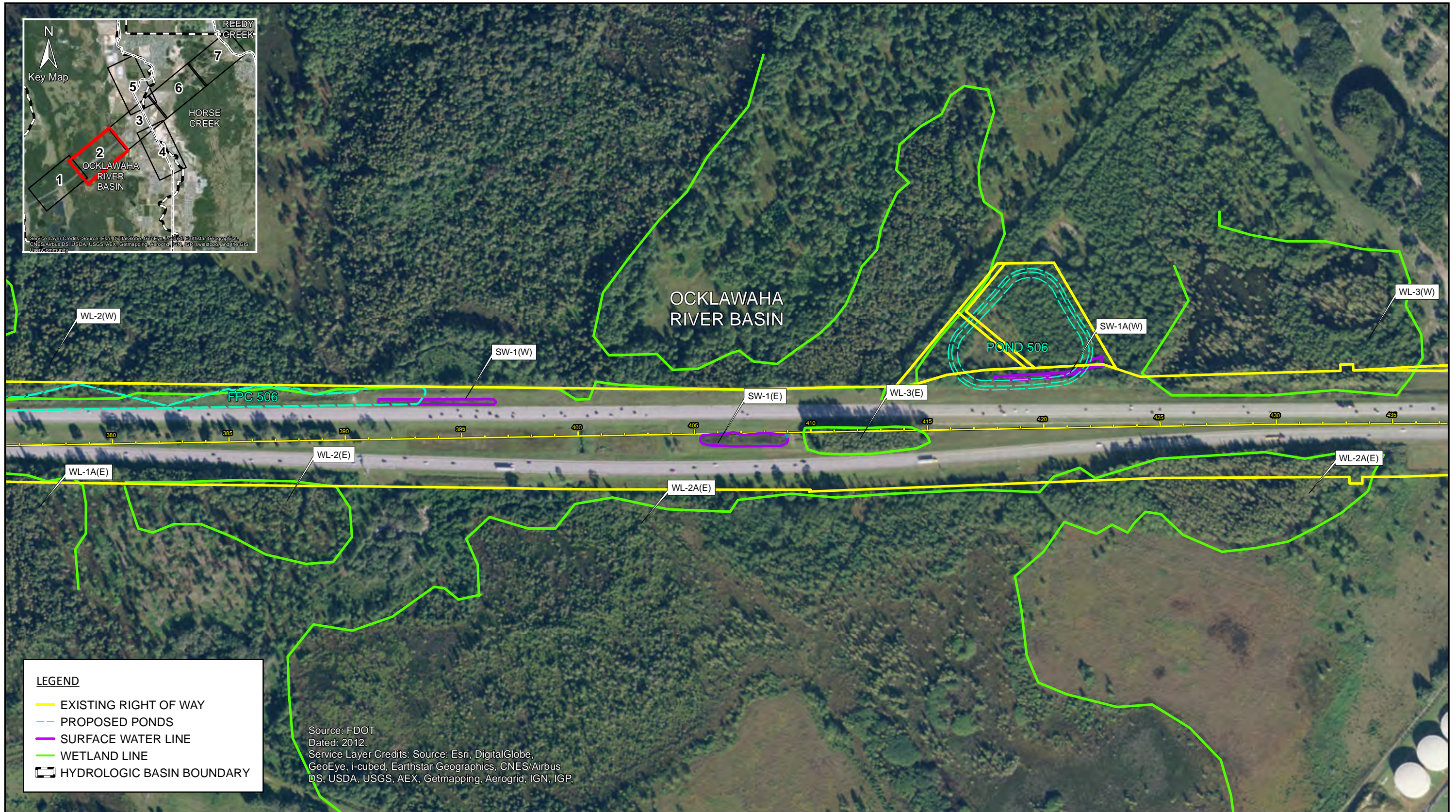
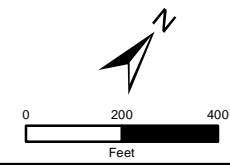


Exhibit 5.2

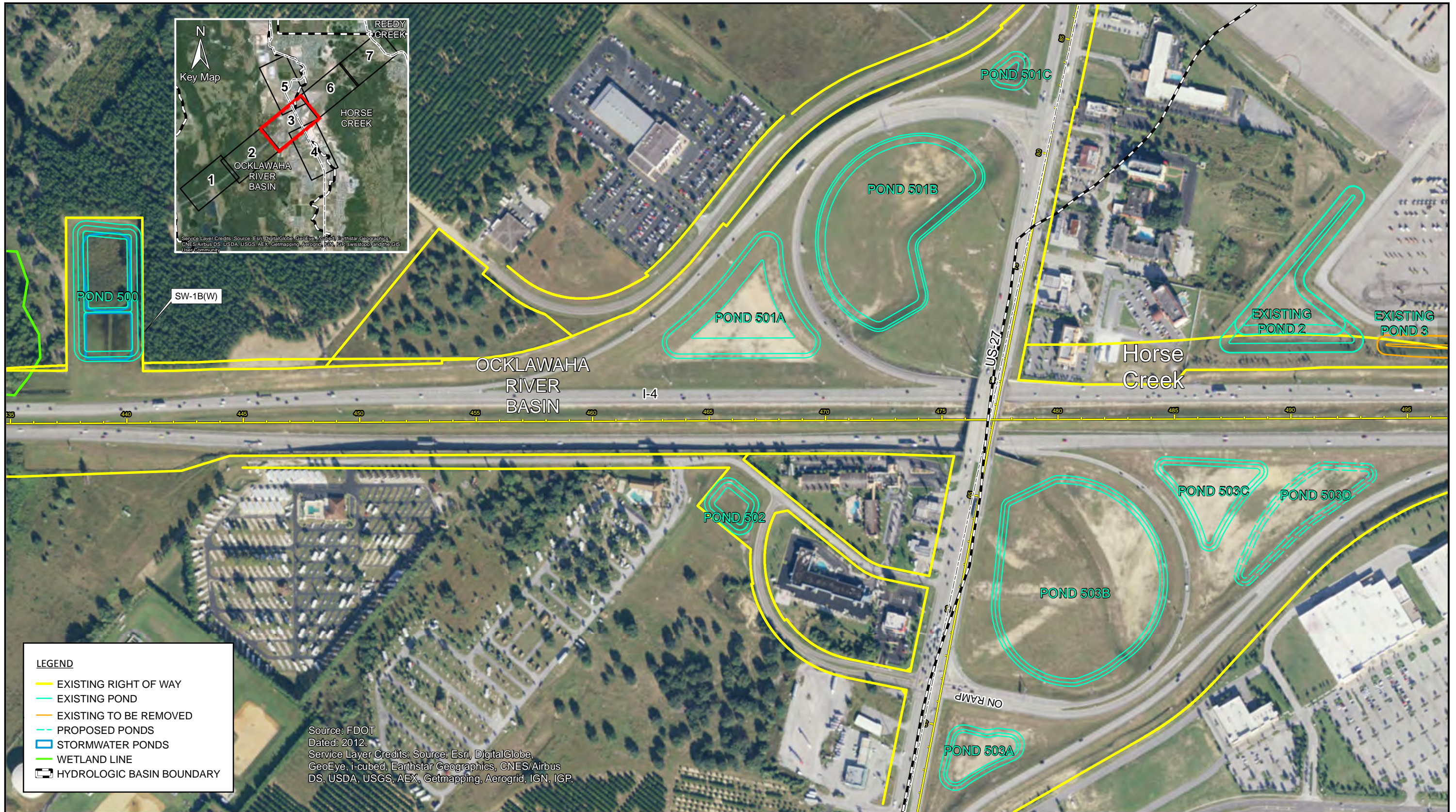
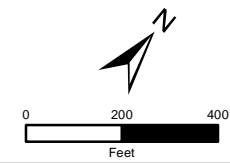
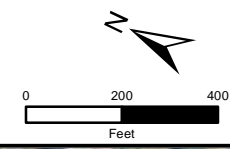


Exhibit 5.3



LEGEND

- EXISTING RIGHT OF WAY
- EXISTING POND
- HYDROLOGIC BASIN BOUNDARY

Source: FDOT
Dated: 2012.
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

Exhibit 5.4

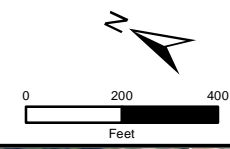
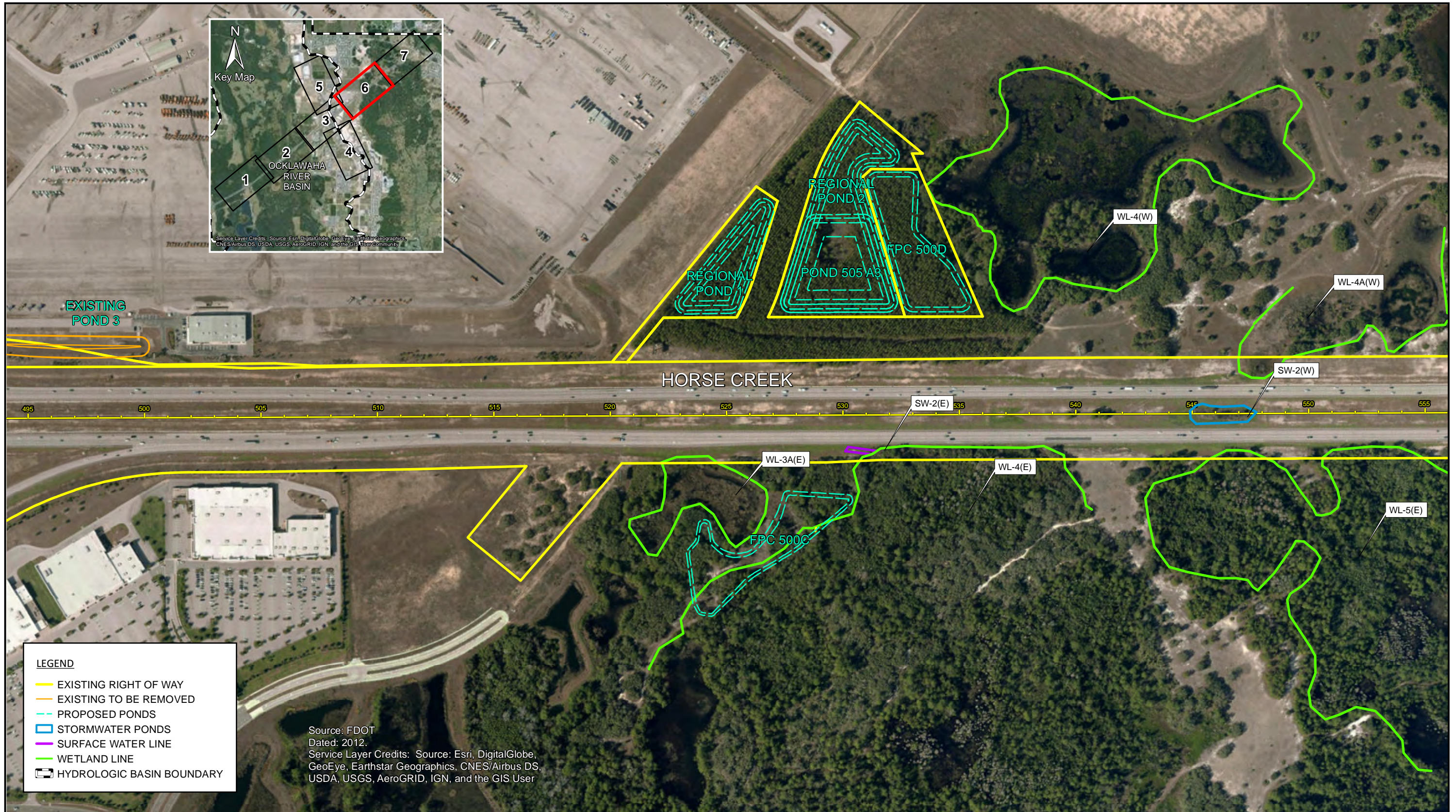
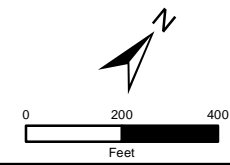


Exhibit 5.5



LEGEND

- EXISTING RIGHT OF WAY
- EXISTING TO BE REMOVED
- - - PROPOSED PONDS
- STORMWATER PONDS
- SURFACE WATER LINE
- WETLAND LINE
- HYDROLOGIC BASIN BOUNDARY

Source: FDOT
 Dated: 2012.
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User

Exhibit 5.6

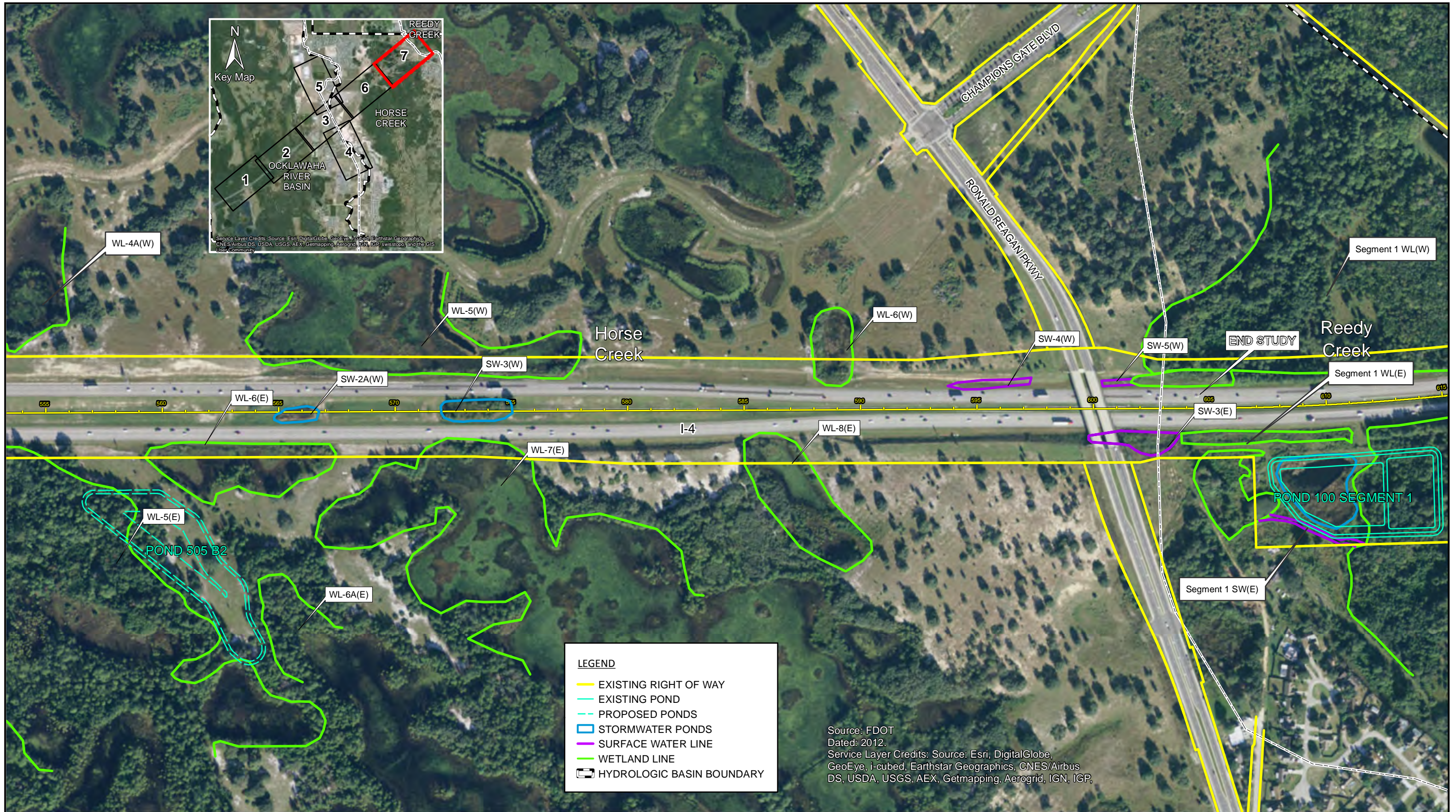
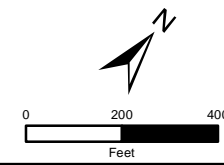
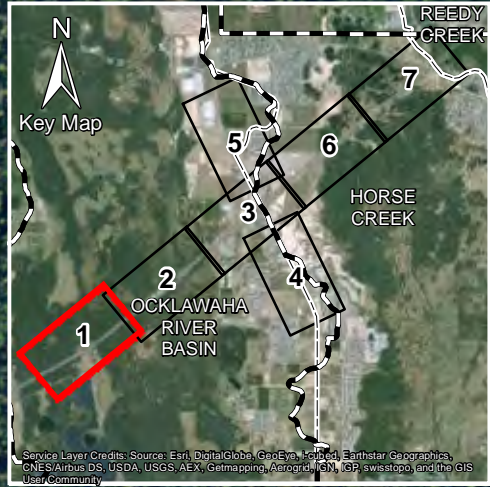
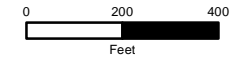


Exhibit 5.7

EXHIBIT 6
SURFACE WATER/WETLAND IMPACT MAP



LEGEND

- EXISTING RIGHT OF WAY
- - - PROPOSED PONDS
- WETLAND LINE
- WETLAND/SURFACE WATER IMPACTS (Ac.)
- SECONDARY IMPACTS (50 ft - 100 ft)
- HYDROLOGIC BASIN BOUNDARY

Source: FDOT
 Dated: 2012.
 Service Layer Credits: Source: Esri, DigitalGlobe,
 GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus
 DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

Exhibit 6.1

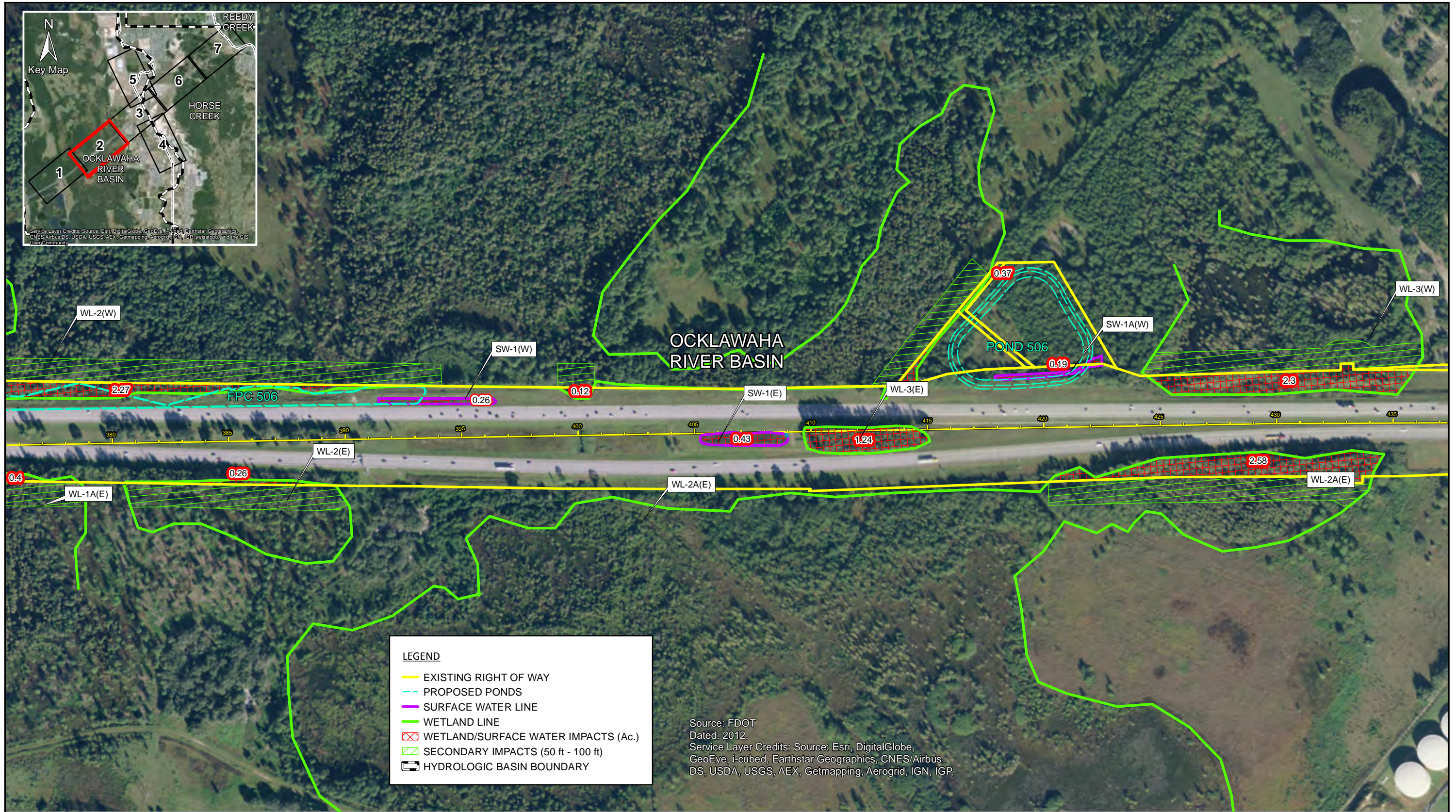
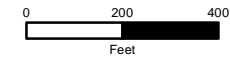
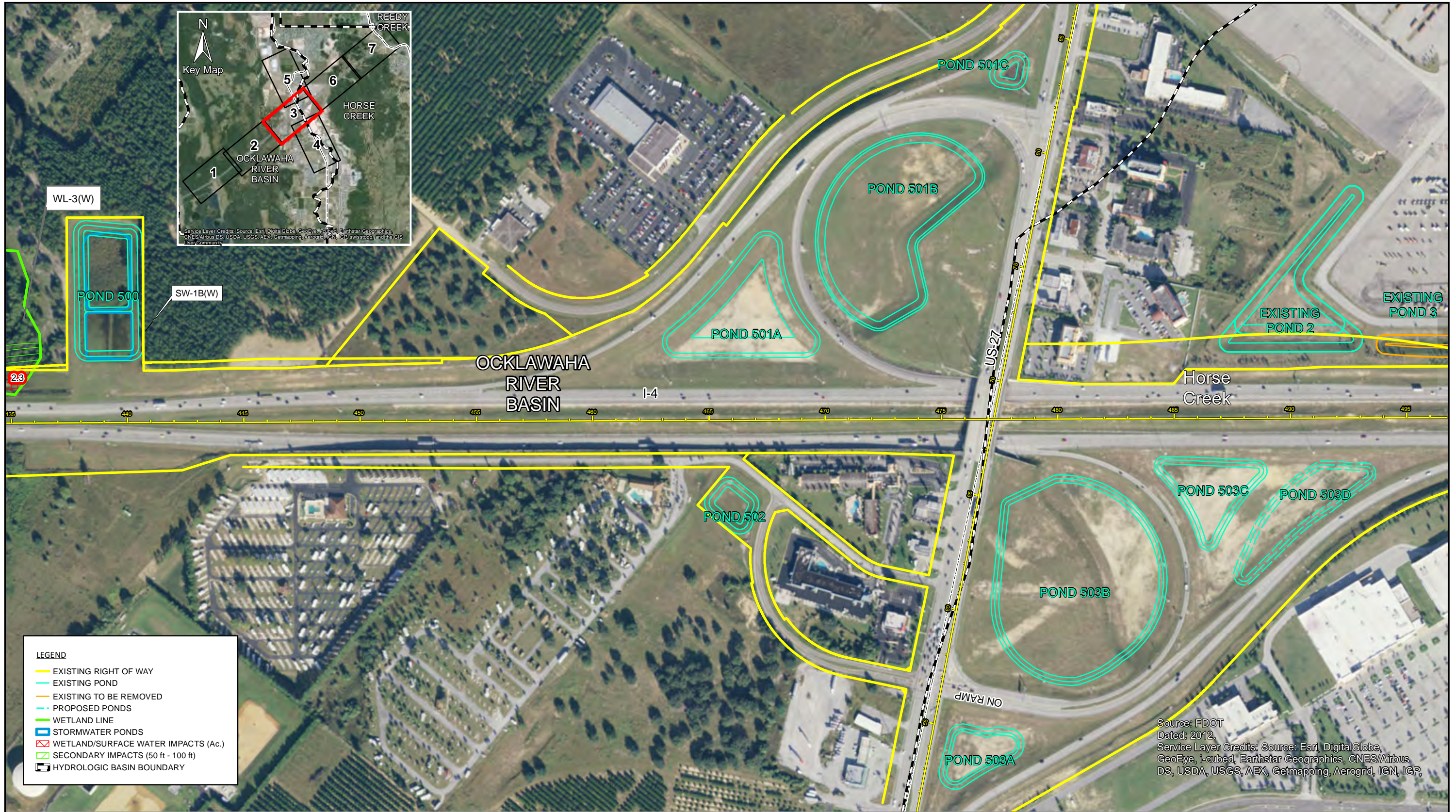
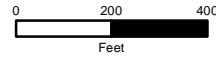
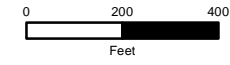


Exhibit 6.2



Source: FDOT
 Dated: 2012.
 Service Layer Credits: Source: Esri, DigitalGlobe,
 GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus
 DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

Exhibit 6.3



LEGEND

- EXISTING RIGHT OF WAY
- EXISTING POND
- HYDROLOGIC BASIN BOUNDARY

Source: FDOT
 Dated: 2012.
 Service Layer Credits: Source: Esri, DigitalGlobe,
 GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus
 DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP,

Exhibit 6.4

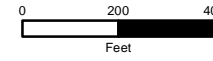


Exhibit 6.5

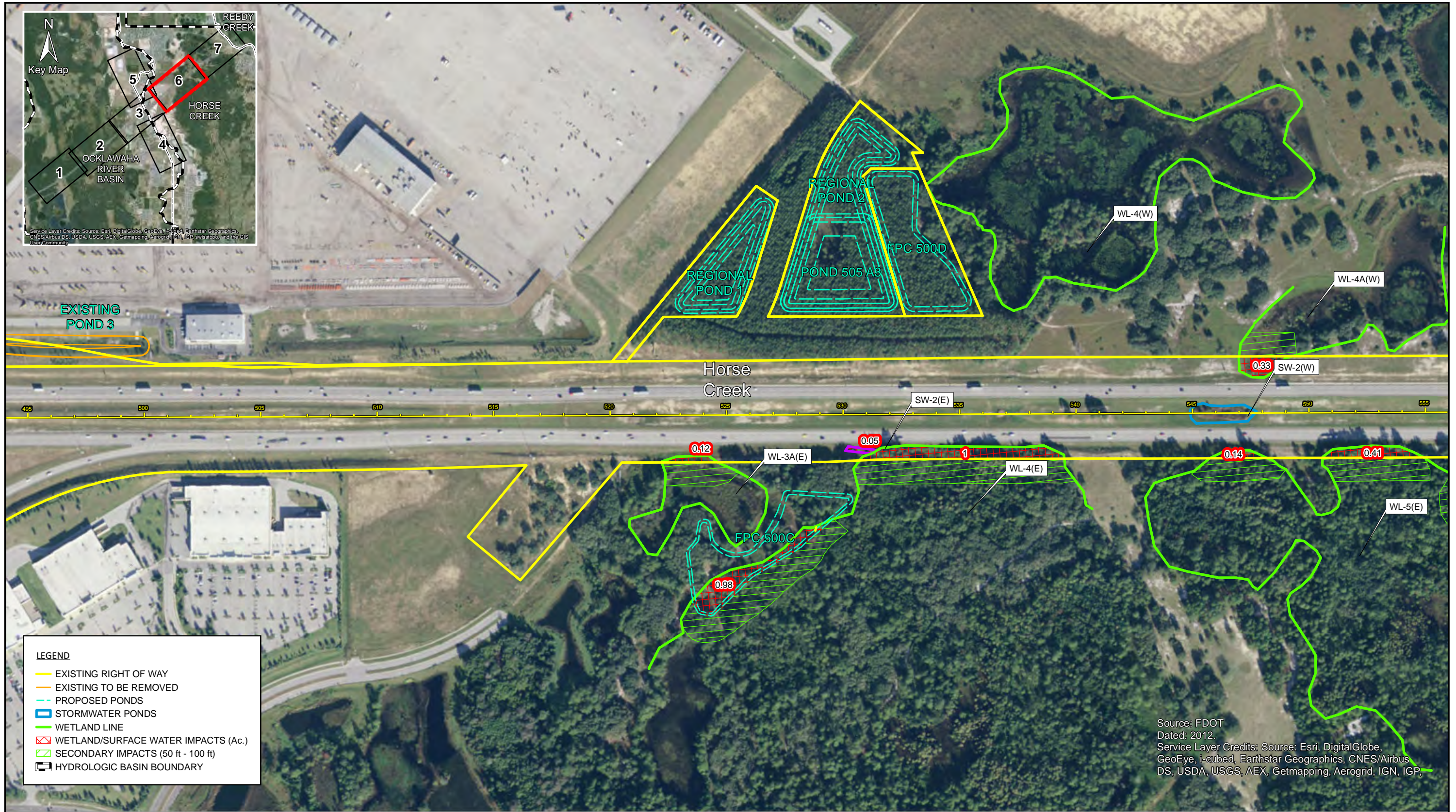
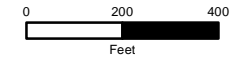


Exhibit 6.6

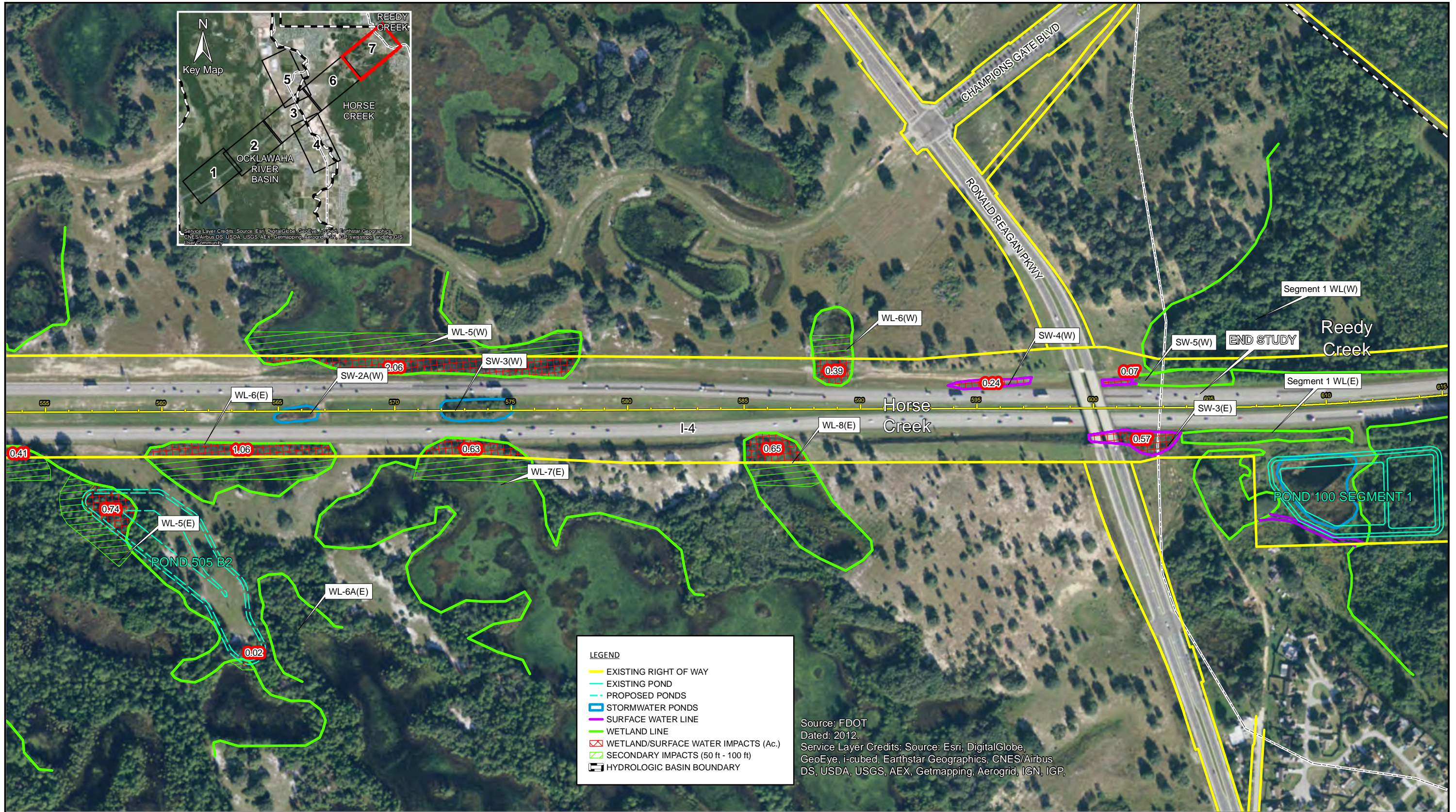
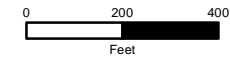


Exhibit 6.7

APPENDIX B
SITE PHOTOGRAPHS

Photographic Log

Client Name:

FDOT- District 5

Project Name:

Segment 5: SR 400 (I-4) from W. of SR 25/US 27 to W. of CR 532 (Polk/Osceola County Line)

Project Location:

Polk and Osceola Counties

3E Project No.:

1386-002

Photo:

1

Date:

8/23/2013

Description:
WL-3A(E) freshwater marsh
with a forested fringe
looking east.



Photo:

2

Date:

8/23/2013

Description:
WL-4(E)
Signage found posted at
wetland area.



Photographic Log

Client Name:

FDOT- District 5

Project Name:

Segment 5: SR 400 (I-4) from W. of SR 25/US 27 to W. of CR 532 (Polk/Osceola County Line)

Project Location:

Polk and Osceola Counties

3E Project No.:

1386-002

Photo:

3

Date:

8/23/2013

Description:
WL-4(E)
Mixed wetland hardwoods
looking east.



Photo:

4

Date:

8/23/2013

Description:
WL-4(E)
Mixed wetland hardwoods
(Conservation Area) looking
west.



Photographic Log

Client Name:

FDOT- District 5

Project Name:

Segment 5: SR 400 (I-4) from W. of SR 25/US 27 to W. of CR 532 (Polk/Osceola County Line)

Project Location:

Polk and Osceola Counties

3E Project No.:

1386-002

Photo:
5

Date:
8/23/2013

Description:
WL-6(E)
Shrub-marsh wetland
located along I-4 eastbound
looking east.



Photo:
6

Date:
8/23/2013

Description:
WL-5(E)
Wetland forested mixed
located along I-4 eastbound
looking east.



Photographic Log

Client Name:

FDOT- District 5

Project Name:

Segment 5: SR 400 (I-4) from W. of SR 25/US 27 to W. of CR 532 (Polk/Osceola County Line)

Project Location:

Polk and Osceola Counties

3E Project No.:

1386-002

Photo:

7

Date:

8/16/2013

Description:
WL-4(W)
Wet prairie interior of a mixed wetland hardwoods system looking south.



Photo:

8

Date:

9/13/2015

Description:
SW-1(W)
Ditch/swale along I-4 westbound travel lanes looking west



APPENDIX C
PERMIT INFORMATION



An Equal Opportunity Employer

Southwest Florida Water Management District

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)
SUNCOM 572-6200

Lecanto Service Office
Suite 226
3600 West Sovereign Path
Lecanto, Florida 34461-8070
(352) 527-8131

2379 Broad Street, Brooksville, Florida 34604-6899
(352) 796-7211 or 1-800-423-1476 (FL only)
SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)
On the Internet at: WaterMatters.org

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)
SUNCOM 531-6900

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)
SUNCOM 578-2070

January 16, 2008

Judith C. Whitehead
Chair, Hernando

Neil Combee
Vice Chair, Polk

Todd Pressman
Secretary, Pinellas

Jennifer E. Closshey
Treasurer, Hillsborough

Thomas G. Dabney
Sarasota

Patricia M. Glass
Manatee

Heidi B. McCree
Hillsborough

Ronald E. Oakley
Pasco

Sallie Parks
Pinellas

Maritza Rovira-Forlino
Hillsborough

Patsy C. Symons
DeSoto

David L. Moore
Executive Director

William S. Bilenky
General Counsel

Ed McGann, Chief Financial Officer
Boardwalk Land Development, Inc.
1250 E. Hallandale Beach Blvd., Ste. 300
Hallandale Beach, FL 33009

Subject: **Final Agency Action Transmittal Letter**
ERP General Construction
Permit No.: 44022620.009
Project Name: Victor Posner City Center Phase 1H
County: Polk
Sec/Twp/Rge: 7,8/26S/27E

Dear Mr. McGann:

This letter constitutes notice of Final Agency Action for **approval** of the permit referenced above. Final approval is contingent upon no objection to the District's action being received by the District within the time frames described below.

You or any person whose substantial interests are affected by the District's action regarding a permit may request an administrative hearing in accordance with Sections 120.569 and 120.57, Florida Statutes, (F.S.), and Chapter 28-106, Florida Administrative Code, (F.A.C.), of the Uniform Rules of Procedure. *A request for hearing must: (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action, or proposed action, (2) state all material facts disputed by the person requesting the hearing or state that there are no disputed facts, and (3) otherwise comply with Chapter 28-106, F.A.C.* Copies of Sections 28-106.201 and 28-106.301, F.A.C. are enclosed for your reference. A request for hearing must be filed with (received by) the Agency Clerk of the District at the District's Brooksville address within 21 days of receipt of this notice. Receipt is deemed to be the fifth day after the date on which this notice is deposited in the United States mail. Failure to file a request for hearing within this time period shall constitute a waiver of any right you or such person may have to request a hearing under Sections 120.569 and 120.57, F.S. Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding the District's action in this matter is not available prior to the filing of a request for hearing.

Enclosed is a "Noticing Packet" that provides information regarding the District Rule 40D-1.1010, F.A.C., which addresses the notification of persons whose substantial interests may be affected by the District's action in this matter. The packet contains guidelines on how to provide notice of the District's action, and a notice that you may use.

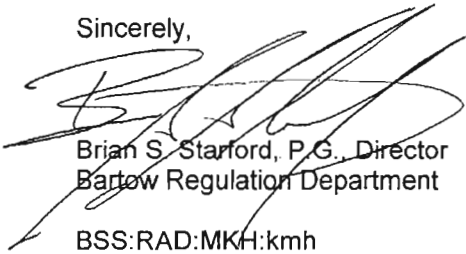
The enclosed approved construction plans are part of the permit, and construction must be in accordance with these plans.

RDDBS Record Updated
1-18-08 by CYS

File of Record
Permit No. _____

If you have questions concerning the permit, please contact Robert A. Dasta, P.E., at the Bartow Service Office, extension 6105. For assistance with environmental concerns, please contact Mark K. Hurst, extension 6151.

Sincerely,



Brian S. Starford, P.G., Director
Bartow Regulation Department

BSS:RAD:MKH:kmh

Enclosures: Approved Permit w/Conditions Attached
Approved Construction Drawings
Statement of Completion
Notice of Authorization to Commence Construction
Noticing Packet (42.00-039)
Sections 28-106.201 and 28-106.301, F.A.C.

cc/enc: File of Record 44022620.009

Jason A. Lewis, P.E., Kimley-Horn and Associates, Inc.
US Army Corps of Engineers
M. Hurst

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
GENERAL CONSTRUCTION
PERMIT NO. 44022620.009

Expiration Date: January 16, 2013

PERMIT ISSUE DATE: January 16, 2008

This permit is issued under the provisions of Chapter 373, Florida Statutes, (F.S.), and the Rules contained in Chapters 40D-4 and 40, Florida Administrative Code, (F.A.C.). The permit authorizes the Permittee to proceed with the construction of a surface water management system in accordance with the information outlined herein and shown by the application, approved drawings, plans, specifications, and other documents, attached hereto and kept on file at the Southwest Florida Water Management District (District). Unless otherwise stated by permit specific condition, permit issuance constitutes certification of compliance with state water quality standards under Section 401 of the Clean Water Act, 33 U.S.C. 1341. All construction, operation and maintenance of the surface water management system authorized by this permit shall occur in compliance with Florida Statutes and Administrative Code and the conditions of this permit.

PROJECT NAME: Victor Posner City Center Phase 1H

GRANTED TO: Boardwalk Land Development, Inc.
1250 E. Hallandale Beach Blvd., Ste. 300
Hallandale Beach, FL 33009

ABSTRACT: This permit authorization amends and replaces Construction Permit No. 44022620.007. This permit authorization is for the construction of a new surface water management system to serve a 43.15-acre commercial facility, as named above and as shown on the approved construction plans. The surface water management system, which includes two interconnected wet detention ponds, is designed to accommodate the stormwater runoff from the activities associated with the construction of a portion of Grandview Parkway, future development of two commercial lots at 70 percent impervious (Parcel Nos. 16A and 16B), future extension of Grandview Parkway within this permitted drainage basin, and other contributing pervious areas. This permit also authorizes the filling of Pond 1-1G that was authorized and constructed by Permit No. 44022620.007 and located within Parcel 16B. This authorization is conditioned to require separate formal permit modifications for the future construction on these parcels when more specific information is known. The project site is located on the east side of U.S. Highway 27 (State Road 25), just south of Interstate 4 in Polk County.

Since the project is located within a hydrologically open drainage basin, the surface water management system has been designed such that the post-development discharge rate for a 25-year, 24-hour storm event does not exceed the pre-development condition. Flood Insurance Rate Map 12105C0225 F indicates that the project lies adjacent to a floodplain. No adverse off-site/on-site water quantity impacts are expected.

Compliance with Chapter 40D-4, F.A.C., water quality requirements is assured, as the detention ponds will treat the first inch of stormwater runoff from the contributing drainage basin area through wet detention. This is consistent with Part B, Environmental Resource Permitting Information Manual, Subsection 5.2(a). The outfall structure will be equipped with a skimmer to ensure that oils, greases, and floating pollutants are not discharged into the down gradient receiving waters. No adverse on-site/off-site water quality impacts are expected.

The project area includes 0.94 acre of wetlands and surface waters consisting of 0.48 acre of herbaceous wetland, 0.33 acre of forested wetlands, and a 0.13-acre upland-cut surface water. Permanent impacts are proposed to 0.81 acre of wetlands and 0.13 acre of surface waters. Mitigation for 0.81 acre of permanent wetland impacts is provided by 1.95 acres of forested wetland creation.

OP. & MAINT. ENTITY: City Center Community Development District

COUNTY: Polk

SEC/TWP/RGE: 7,8/26S/27E

File of Record
Permit No. _____

TOTAL ACRES OWNED OR UNDER CONTROL: 365.00
PROJECT SIZE: 43.15 Acres
LAND USE: Commercial
DATE APPLICATION FILED: May 22, 2007
AMENDED DATE: N/A

I. Water Quantity/Quality

| POND NO. | AREA ACRES @ TOP OF BANK | TREATMENT TYPE |
|--------------|--------------------------|----------------|
| 1-1H | 1.41 | Wet Detention |
| 2-1H | 1.59 | Wet Detention |
| TOTAL | 3.00 | |

A mixing zone is not required.
 A variance is not required.

II. 100-Year Floodplain

| Encroachment (Acre-Feet of fill) | Compensation (Acre-Feet of excavation) | Compensation Type* | Encroachment Result**(feet) |
|----------------------------------|--|--------------------|-----------------------------|
| 1.20 | 1.27 | EE [X] | Depth [N/A] |

*Codes [X] for the type or method of compensation provided are as follows:
EE = Equivalent Excavation to offset project filling per Section 4.4 of the District's Basis of Review;
N/A = Not Applicable

Depth of change in flood stage (level) over existing receiving water stage resulting from floodplain encroachment caused by a project that claims **MI type of compensation.

III. Environmental Considerations

Wetland/Surface Water Information

Count of Wetlands: 3

| Wetland Name | Total Acres | Not Impacted Acres | Permanent Impacts | | Temporary Impacts | |
|---------------|-------------|--------------------|-------------------|------------------|-------------------|------------------|
| | | | Acres | Functional Loss* | Acres | Functional Loss* |
| Wetland F | 0.13 | 0.00 | 0.13 | 0.00 | 0.00 | 0.00 |
| Wetland G | 0.33 | 0.00 | 0.33 | 0.22 | 0.00 | 0.00 |
| Wetland H | 0.48 | 0.00 | 0.48 | 0.29 | 0.00 | 0.00 |
| Total: | 0.94 | 0.00 | 0.94 | 0.51 | 0.00 | 0.00 |

* For impacts that do not require mitigation, their functional loss is not included.

Wetland Comments:

The project area includes 0.94 acre of wetlands and surface waters consisting of 0.48 acre of herbaceous wetland (Wetland H), 0.33 acre of forested wetland (Wetland G), and a 0.13-acre upland-cut surface water (Wetland F). Permanent impacts are proposed to 0.81 acre of wetlands (Wetlands G and H) and 0.13 acre of surface water (Wetland F).

Mitigation Information

Count of Mitigation: 1

| Mitigation Name | Creation/Restoration | | Enhancement | | Preservation | | Other | |
|-----------------|----------------------|-----------------|-------------|-----------------|--------------|-----------------|-------|-----------------|
| | Acres | Functional Gain | Acres | Functional Gain | Acres | Functional Gain | Acres | Functional Gain |
| WCH | 1.95 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total: | 1.95 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Mitigation Comments:

Mitigation for 0.81 acre of permanent wetland impacts is provided by 1.95 acres of forested wetland creation (WCH). Mitigation is not required for impacts to the surface water because it was constructed in uplands, is wholly owned, is less than 1.0 acre in area, and does not provide significant habitat for threatened or endangered species, pursuant to Subsection 3.2.2.2 of the District's Basis of Review.

The functional loss of 0.51 due to the wetland impacts associated with this project is offset by the functional gain of 0.51 provided by the mitigation. The functional loss and gain were calculated using the Uniform Mitigation Assessment Method (Chapter 62-345, F.A.C.).

A regulatory conservation easement is not required.

A proprietary conservation easement is not required.

SPECIFIC CONDITIONS

1. If the ownership of the project area covered by the subject permit is divided, with someone other than the Permittee becoming the owner of part of the project area, this permit shall terminate, pursuant to Section 40D-1.6105, F.A.C. In such situations, each land owner shall obtain a permit (which may be a modification of this permit) for the land owned by that person. This condition shall not apply to the division and sale of lots or units in residential subdivisions or condominiums.

2. Unless specified otherwise herein, two copies of all information and reports required by this permit shall be submitted to:

Bartow Regulation Department
 Southwest Florida Water Management District
 170 Century Boulevard
 Bartow, FL 33830-7700

The permit number, title of report or information and event (for recurring report or information submittal) shall be identified on all information and reports submitted.

3. The Permittee shall retain the design engineer, or other professional engineer registered in Florida, to conduct on-site observations of construction and assist with the as-built certification requirements of this project. The Permittee shall inform the District in writing of the name, address and phone number of the professional engineer so employed. This information shall be submitted prior to construction.

4. Within 30 days after completion of construction of the permitted activity, the Permittee shall submit to the Bartow Service Office a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1.659, F.A.C., and signed, dated and sealed as-built drawings. The as-built drawings shall identify any deviations from the approved construction drawings.

- 5. The District reserves the right, upon prior notice to the Permittee, to conduct on-site research to assess the pollutant removal efficiency of the surface water management system. The Permittee may be required to cooperate in this regard by allowing on-site access by District representatives, by allowing the installation and operation of testing and monitoring equipment, and by allowing other assistance measures as needed on site.

6. WETLAND MITIGATION SUCCESS CRITERIA - MITIGATION AREA WCH

Mitigation is expected to offset adverse impacts to wetlands and other surface waters caused by regulated activities and to achieve viable, sustainable ecological and hydrological wetland functions. Wetlands constructed for mitigation purposes will be considered successful and will be released from monitoring and reporting requirements when the following criteria are met continuously for a period of at least one year without intervention in the form of irrigation or the additional or removal of vegetation.

- a. The mitigation area can reasonably be expected to develop into a Wetland Hardwood Forest (FLUCCS #610) as determined by the **Florida Land Use and Cover and Forms Classification System (third edition; January 1999)**.
- b. Topography, water depth and water level fluctuation in the mitigation area are characteristic of the wetlands/ surface water type specified in criterion "a".
- c. Planted or recruited and herbaceous species (or plant species providing the same function) shall meet the criteria specified:

| <u>ZONE</u> | <u>% COVER</u> | <u>SPECIES</u> |
|-------------|----------------|--|
| 1 | 85 | <i>Juncus effusus</i> <i>Spartina bakeri</i> |
| 2 | 85 | <i>Juncus effusus</i> <i>Sagittaria latifolia</i> |
| 3 | 85 | <i>Pontederia cordata</i> |

- d. Planted or recruited tree species that are greater than or equal to 12 feet in height and established for more than 3 years shall meet the criteria specified:

| <u>ZONE</u> | <u>DENSITY (#/acre)</u> | <u>SPECIES</u> |
|-------------|-------------------------|--------------------------------|
| 1 | 400 | <i>Acer rubrum</i> |
| 2 | 400 | <i>Acer rubrum</i> |
| 3 | 400 | <i>Nyssa sylvatica biflora</i> |

- e. Species composition of recruiting wetland vegetation is indicative of the wetland type specified in criterion "a".
- f. Coverage by nuisance or exotic species does not exceed five percent (5%) at any location in the mitigation site and five percent (5%) for the entire mitigation site.
- g. The wetland mitigation area can be determined to be a wetland or other surface water according to Chapter 62-340, F.A.C.

This criterion must be achieved within 5 years of mitigation area construction. The Permittee shall complete any activities necessary to ensure the successful achievement of the mitigation requirements by the deadline specified. Any request for an extension of the deadline specified shall be accompanied with an explanation and submitted as a permit letter modification to the District for evaluation.

The mitigation area may be released from monitoring and reporting requirements and be deemed successful at any time during the monitoring period if the Permittee demonstrates that the conditions in the mitigation area have adequately replaced the wetland and surface water functions affected by the regulated activity and that the site conditions are sustainable.

7. The Permittee shall monitor and maintain the wetland mitigation areas until the criteria set forth in the Wetland Mitigation Success Criteria Conditions above are met. The Permittee shall perform corrective actions identified by the District if the District identifies a wetland mitigation deficiency.
8. The Permittee shall undertake required maintenance activities within the wetland mitigation areas as needed at any time between mitigation area construction and termination of monitoring, with the exception of the final year. Maintenance shall include the manual removal of all nuisance and exotic species, with sufficient frequency that their combined coverage at no time exceeds the Wetland Mitigation Success Criteria Conditions above. Herbicides shall not be used without the prior written approval of the District.
9. A Wetland Mitigation Completion Report shall be submitted to the District within 30 days of completing construction and planting of the wetland mitigation areas. Upon District inspection and approval of the mitigation areas, the monitoring program shall be initiated with the date of the District field inspection being the construction completion date of the mitigation areas. Monitoring events shall occur between March 1 and November 30 of each year. An Annual Wetland Monitoring Report shall be submitted upon the anniversary date of District approval to initiate monitoring.

Annual reports shall provide documentation that a sufficient number of maintenance inspection/activities were conducted to maintain the mitigation areas in compliance with the Wetland Mitigation Success Criteria Conditions above. Note that the performance of maintenance inspections and maintenance activities will normally need to be conducted more frequently than the collection of other monitoring data to maintain the mitigation areas in compliance with the Wetland Mitigation Success Criteria Conditions above.

Monitoring Data shall be collected semi-annually.

10. Termination of monitoring for the wetland mitigation areas shall be coordinated with the District by:
 - a. notifying the District in writing when the criteria set forth in the Wetland Mitigation Success Criteria Conditions have been achieved;
 - b. suspending all maintenance activities in the wetland mitigation areas including, but not limited to, irrigation and addition or removal of vegetation; and
 - c. submitting a monitoring report to the District one year following the written notification and suspension of maintenance activities.

Upon receipt of the monitoring report, the District will evaluate the wetland mitigation sites to determine if the Mitigation Success Criteria Conditions have been met and maintained. The District will notify the Permittee in writing of the evaluation results. The Permittee shall perform corrective actions for any portions of the wetland mitigation areas that fail to maintain the criteria set forth in the Wetland Mitigation Success Criteria Conditions.

11. Following the District's determination that the wetland mitigation has been successfully completed, the Permittee shall operate and maintain the wetland mitigation areas such that they remain in their current or intended condition for the life of the surface water management facility. The Permittee must perform corrective actions for any portions of the wetland mitigation areas where conditions no longer meet the criteria set forth in the Wetland Mitigation Success Criteria Conditions.
12. The Permittee shall, within 60 days of initial wetland impact and prior to beneficial use of the site, complete all aspects of the mitigation plan, including the grading, mulching, and planting, in accordance with the design details in the final approved construction drawings received by the District on November 28, 2007, and information submitted in support of the application.

13. The construction of all wetland impacts and wetland mitigation shall be supervised by a qualified environmental scientist/specialist/consultant. The Permittee shall identify, in writing, the environmental professional retained for construction oversight prior to initial clearing and grading activities.
14. Wetland buffers shall remain in an undisturbed condition except for approved drainage facility construction/maintenance.
15. The following boundaries, as shown on the approved construction drawings, shall be clearly delineated on the site prior to initial clearing or grading activities:

wetland and surface water areas
wetland buffers
limits of approved wetland impacts

The delineation shall endure throughout the construction period and be readily discernible to construction and District personnel.

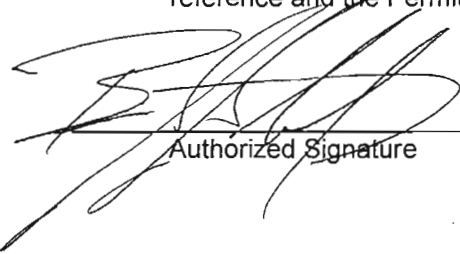
16. The operation and maintenance entity shall submit inspection reports in the form required by the District, in accordance with the following schedule.

For systems utilizing retention or wet detention, the inspections shall be performed two (2) years after operation is authorized and every two (2) years thereafter.

17. The removal of littoral shelf vegetation (including cattails) from wet detention ponds is prohibited unless otherwise approved by the District. Removal includes dredging, the application of herbicide, cutting, and the introduction of grass carp. Any questions regarding authorized activities within the wet detention ponds shall be addressed to the District's Surface Water Regulation Manager, Bartow Service Office.
18. The Permittee shall notify the District of any sinkhole development in the surface water management system within 48 hours of discovery and must submit a detailed sinkhole evaluation and repair plan for approval by the District within 30 days of discovery.
19. This permit is issued based upon the design prepared by the Permittee's consultant. If at any time it is determined by the District that the Conditions for Issuance of Permits in Rules 40D-4.301 and 40D-4.302, F.A.C., have not been met, upon written notice by the District, the Permittee shall obtain a permit modification and perform any construction necessary thereunder to correct any deficiencies in the system design or construction to meet District rule criteria. The Permittee is advised that the correction of deficiencies may require re-construction of the surface water management system and/or mitigation areas.
20. This permit, Construction Permit No. 44022620.009, amends the previously issued Construction Permit No. 44022620.007, and all conditions are replaced by the conditions herein.
21. For the area(s) shown on the construction drawings as Future, a permit modification shall be obtained for any construction in this/these area(s). As a requirement of the permit modification for this/these area(s), the Permittee shall submit a Statement of Completion and as-built drawings.

GENERAL CONDITIONS

1. The general conditions attached hereto as Exhibit "A" are hereby incorporated into this permit by reference and the Permittee shall comply with them.



Authorized Signature

EXHIBIT "A"

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. For general permits authorizing incidental site activities, the following limiting general conditions shall also apply:
 - a. If the decision to issue the associated individual permit is not final within 90 days of issuance of the incidental site activities permit, the site must be restored by the permittee within 90 days after notification by the District. Restoration must be completed by re-contouring the disturbed site to previous grades and slopes re-establishing and maintaining suitable vegetation and erosion control to provide stabilized hydraulic conditions. The period for completing restoration may be extended if requested by the permittee and determined by the District to be warranted due to adverse weather conditions or other good cause. In addition, the permittee shall institute stabilization measures for erosion and sediment control as soon as practicable, but in no case more than 7 days after notification by the District.
 - b. The incidental site activities are commenced at the permittee's own risk. The Governing Board will not consider the monetary costs associated with the incidental site activities or any potential restoration costs in making its decision to approve or deny the individual environmental resource permit application. Issuance of this permit shall not in any way be construed as commitment to issue the associated individual environmental resource permit.
4. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
5. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the District as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

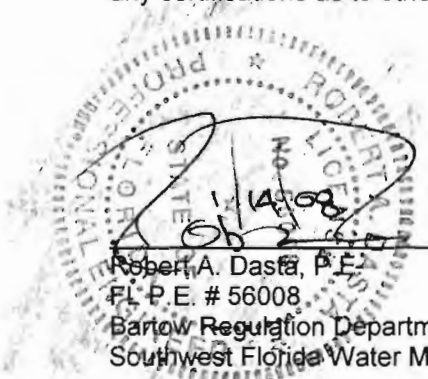
6. District staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the District as a permit prior to the dewatering event as a permit modification. A water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.
7. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
8. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operating schedules satisfactory to the District.
9. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading, mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.
10. The following shall be properly abandoned and/or removed in accordance with the applicable regulations:
 - a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.
 - b. Any existing septic tanks on site shall be abandoned at the beginning of construction.
 - c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.
11. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of offsite property.
12. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a written notification of commencement indicating the actual start date and the expected completion date.
13. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.
14. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1, F.A.C. Additionally, if deviation from the approved drawings are discovered during the certification process the certification must be accompanied by a copy of the approved permit drawings with deviations noted.

15. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the District, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.
16. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the District until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the District, if different from the permittee. Until a transfer is approved by the District, the permittee shall be liable for compliance with the terms of the permit.
17. Should any other regulatory agency require changes to the permitted system, the District shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.
18. This permit does not eliminate the necessity to obtain any required federal, state, local and special District authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.
19. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
20. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
21. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
22. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
23. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with District rules, regulations and conditions of the permits.
24. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District and the Florida Department of State, Division of Historical Resources.
25. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

PROFESSIONAL CERTIFICATION*
FOR THE ENGINEERING EVALUATION REPORT

MSSW/ERP Permit Number: 44022620.009
Date Application Received: May 22, 2007
Permittee's Name: Boardwalk Land Development, Inc.
Address: 1250 E. Hallandale Beach Blvd., Ste. 300
Hallandale Beach, FL 33009
Project Name: Victor Posner City Center Phase 1H
Project Description: Commercial
Project Size: 43.15 Acres
Activity: Construction
Section(s)/Township/Range: 7,8/26S/27E

I HEREBY CERTIFY that the engineering features described in the referenced application to construct and/or operate a surface water management system associated with the indicated project have been evaluated regarding provision of reasonable assurance of compliance with Part IV, Chapter 373, Florida Statutes, and Chapters 40D-4, 40D-40 or 40D-400, Florida Administrative Code, (F.A.C.), as applicable. I have not evaluated and do not make any certifications as to other aspects of the proposal.


_____(Seal)
Robert A. Dasta, P.E.
FL P.E. # 56008
Bartow Regulation Department
Southwest Florida Water Management District

* When required by Subsection 61G15-26.001(1), F.A.C., a professional engineer's seal, signature and date (i.e., "Professional Certification") means that the work indicated has been conducted under the responsible supervision, direction or control of a person licensed by the State to practice engineering, who by authority of their license is required to have some specialized knowledge of engineering. Professional Certification is not a guaranty or warranty of fitness or suitability, either explicit or implied.

CERTIFICATE OF MAILING

I hereby certify that a copy of the FAA letter on Application No. 44022620.009 was mailed by United States Mail to the below listed parties this January 16, 2008.

FAA Expiration Date: February 11, 2008

Permittee/Owner

Ed McGann, Chief Financial Officer
Boardwalk Land Development, Inc.
1250 E. Hallandale Beach Blvd.,
Ste. 300
Hallandale Beach, FL 33009

Engineer/Consultant

Jason A. Lewis, P.E.
Kimley-Horn and Associates, Inc.
3675 Innovation Drive
Lakeland, FL 33812-4106

USACOE

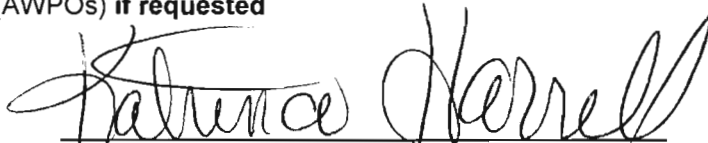
US Army Corps of Engineers
Tampa Regulatory Office
10117 Princess Palm Drive, Suite
120
Tampa, FL 33610

Required Noticing: See USACOE address above, if applicable
(w/ Letter & Copy of the Permit)

Documents sent by Regular FAA Transmittal Letter
US Mail to Approved Permit with Conditions Attached
Permittee/Consultant Sections 28-106.201 and 28-106.301, F.A.C.
Noticing Packet
Approved Construction Drawings (Permittee only)
Statement of Completion (Permittee only)
Notice of Authorization (Permittee only)

Documents sent by Regular FAA Transmittal Letter
US Mail to Approved Permit with Conditions Attached
FAA Requestors and others Sections 28-106.201 and 28-106.301, F.A.C.

- () ERP - Eminent Domain Property Owners (EPOs) **mailed regular U.S. Mail** (see list)
- () WRP - Adjacent Waterfront Property Owners (AWPOs) **if requested**



Administrative Section
Bartow Regulation Department

