WETLAND DELINEATION REPORT

South Florida Regional Transportation Authority

Northern Layover and Light Maintenance Facility

Palm Beach County, Florida

November 1, 2016

Prepared for:

Jacobs Engineering, Inc.

Prepared by:

Quest Ecology, Inc.

WETLAND DELINEATION REPORT
South Florida Regional Transportation Authority
Northern Layover and Light Maintenance Facility

Table of Contents

1.0 INTRODUCTION 1
1.1 Project Location 2
1.2 Past and Present Land Uses 2
2.0 WATER RESOURCES 3
2.1 Legal and Regulatory Context 6
2.2 Methods 9
2.3 Existing Conditions 9
2.3.1 Land Use 9
2.3.2 Soils 11
2.3.3 Floodplain Impacts 12
2.3.4 Historical Data 12
2.3.5 Seasonal High Ground Water Tables 12
2.3.6 Regional Hydrology 13
2.3.7 Navigable Waterways 13
2.3.8 Wetlands and Surface Waters 13
2.4 Wood Stork Core Foraging Area 15
2.5 Proposed Impacts 15
2.6 Mitigation 22
3.0 PERMITS 22
4.0 CONCLUSION 23

TABLES
Table 1. Land Use 10
Table 2. NCRS Soil Survey 11
Table 3. Historical Rainfall Data for Palm Beach County 12
Table 4. Seasonal High Ground Water Tables 12
Table. 5. Wetlands 14
Table 6. Surface Waters 15

FIGURES
Figure 1. Location Map 4
Figure 2. Northern Layover Maintenance Facility 5
Figure 3. National Wetland Inventory Map 16
Figure 4. Natural Resource Conservation Service (NRCS) Soil Survey Map 17
Figure 5. FEMA Flood Hazard Zones Map 18
Figure 6. Wetlands and Surface Waters 19
Figure 7. USFWS GIS Database Active Wood Stork Rookeries 20
Figure 8. Land Use Map 21

APPENDIX

Appendix 1. Field Review Photos
Appendix 2. UMAM Sheets
Appendix 3. SFWMD Meeting Minutes
Appendix 4. Historical Aerial Photos

1.0 INTRODUCTION

The purpose of this Wetland Delineation Report is to evaluate the proposed Northern Layover and Light Maintenance Facility to determine the potential impacts to wetlands and surface water features. The project site is within a section of Florida Department of Transport (FDOT) right-of-way (ROW) that crosses under Congress Avenue and Interstate 95 south of Dr. Martin Luther King, Jr. Boulevard and north of 45th Street, falling within the City of Riviera Beach, the City of West Palm Beach, and the Town of Mangonia Park.

Project Description:

The South Florida Regional Transportation Authority (SFRTA) is planning for the development of a new Northern Layover and Light Maintenance Facility that will both improve the efficiency of current Tri-Rail operations and facilitate further system enhancements and expansion. SFRTA's planning and operational analyses in recent years have resulted in plans for a new facility that would provide midday and overnight train storage for up to 10 five-car train sets, as well as service, inspection, fueling and cleaning activities. The proposed new facility would be located at a site known as Mission Spur, which is one-half mile north of the Mangonia Park Station (the northern terminus of the Tri-Rail system). The proposed new facility is within the South Florida Rail Corridor (SFRC) and adjacent parcels that are currently in public ownership.

The facility features include service and inspection areas, a train wash, on-site fueling and liquids tanks, layover yard, parts and supplies storage, new access drive from Dexter Way, walkways and vehicle access throughout the yard, landscaping, and on-site stormwater detention areas. Operational functions and specific design details include:

- Two covered service and inspection tracks with a four-foot deep well for undercarriage access, a covered train car wash
- Service and inspection tracks that also provide for train storage for two train sets
- Train car wash/ready track
- Storage tracks for up to ten 5-car trains with:
    - head-end power capability
    - access driveways and walkways between tracks
    - crossovers for vehicles and pedestrians
    - yard hydrants
    - sanitary servicing/ train sewage discharge
    - 17 turnouts
    - storage area adjacent to and east of the storage yard
- 7,000 square foot office and storage building
    - parking for up to 35 vehicles

  - vehicle circulation to accommodate a semi-tractor trailer
  - new access entryway from Dexter Way
  - emergency generator with automatic transfer switch
  - site fire protection, to include non-potable water storage
- On-site fuel tanks – two 12,000 gallon fuel tanks
- Sand storage
- Drainage facilities and on-site retention
- Sanitary sewage pumping station
- Drainage – detention pond installation
- Noise barrier – approximately 2,600 feet in length,15-16 feet above top of rail
- Track relocations includes the relocation of the mainline used by CSX Transportation freight and Amtrak passenger rail, and an existing siding that extends east to industrial land uses within the City of Riviera Beach
- Signal – Cut-over for southern end of project to allow interlocked control for rail traffic into the yard facility. A new electric switch lock will be installed at the existing switch at the northern end of the project.

1.1 Project Location

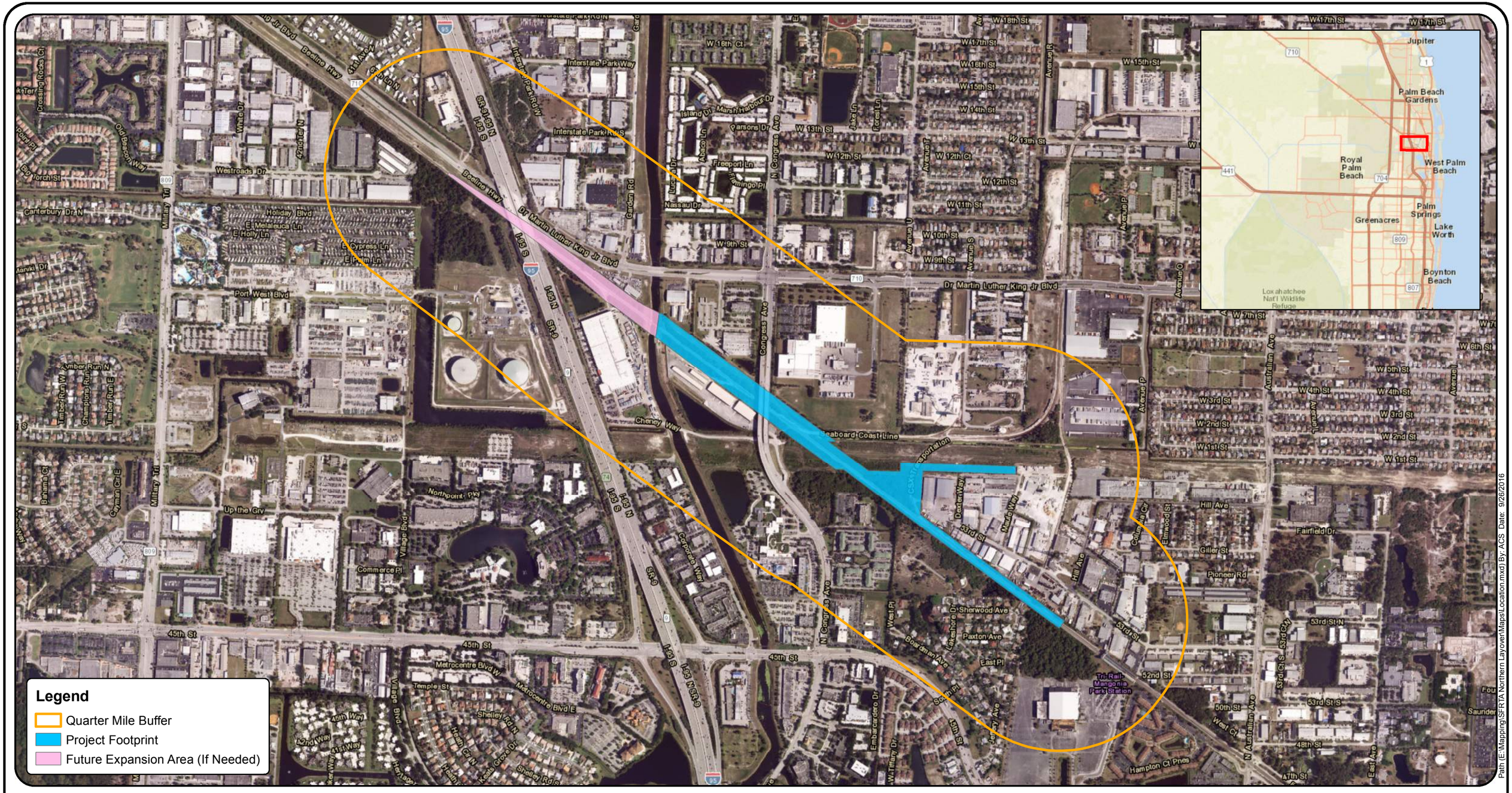
The project is located along the SFRC between milepost 964.9 on the north end and milepost 965.9 on the south end. The site is within a section of FDOT ROW that crosses under Congress Avenue and Interstate 95 south of Dr. Martin Luther King, Jr. Boulevard and north of 45th. The length of the project is approximately 1.2 miles. The project area is composed of a three-acre property owned by FDOT, and a 1.1 acre parcel owned by SFRTA. A 300-foot wide Florida Power & Light (FP&L) easement crosses the proposed project site.

1.2 Past and Present Land Uses

Properties adjacent to the project corridor consist of commercial and industrial parcels. Existing conditions include a single mainline rail line and three active spur tracks. Vegetation cover within the corridor includes mowed grasses, bare ground, scattered trees and unmaintained stands of exotic/invasive vegetation. No rare plant species or plant communities were observed within the study area. Historical aerial photographs suggest wetlands were gradually filled in south of the project between 1964 and prior to 1975. The north side of the project was largely undeveloped in 1975. Between 1975 and 1999, development increased on both sides of the project corridor. The borrow pit identified as Wetland 8-1 in the 2002 Environmental Assessment and described as an isolated surface water with deeply incised banks and an extremely narrow littoral shelf dominated by cat-tail (*Typha* spp.) has been filled by the Port of Palm Beach under an FDEP and ACOE Section 404 permit. Urbanization on both sides of the project corridor occurred between 1999 and 2010.

2.0 WATER RESOURCES

This section describes the hydrology and water features of the study area in terms of wetlands, surface water features, drainage, and floodplains.



QUEST ecology

Figure 1. Location Map

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 1,000
Feet

EXHIBIT 3.1

APP. NO. 180404-441

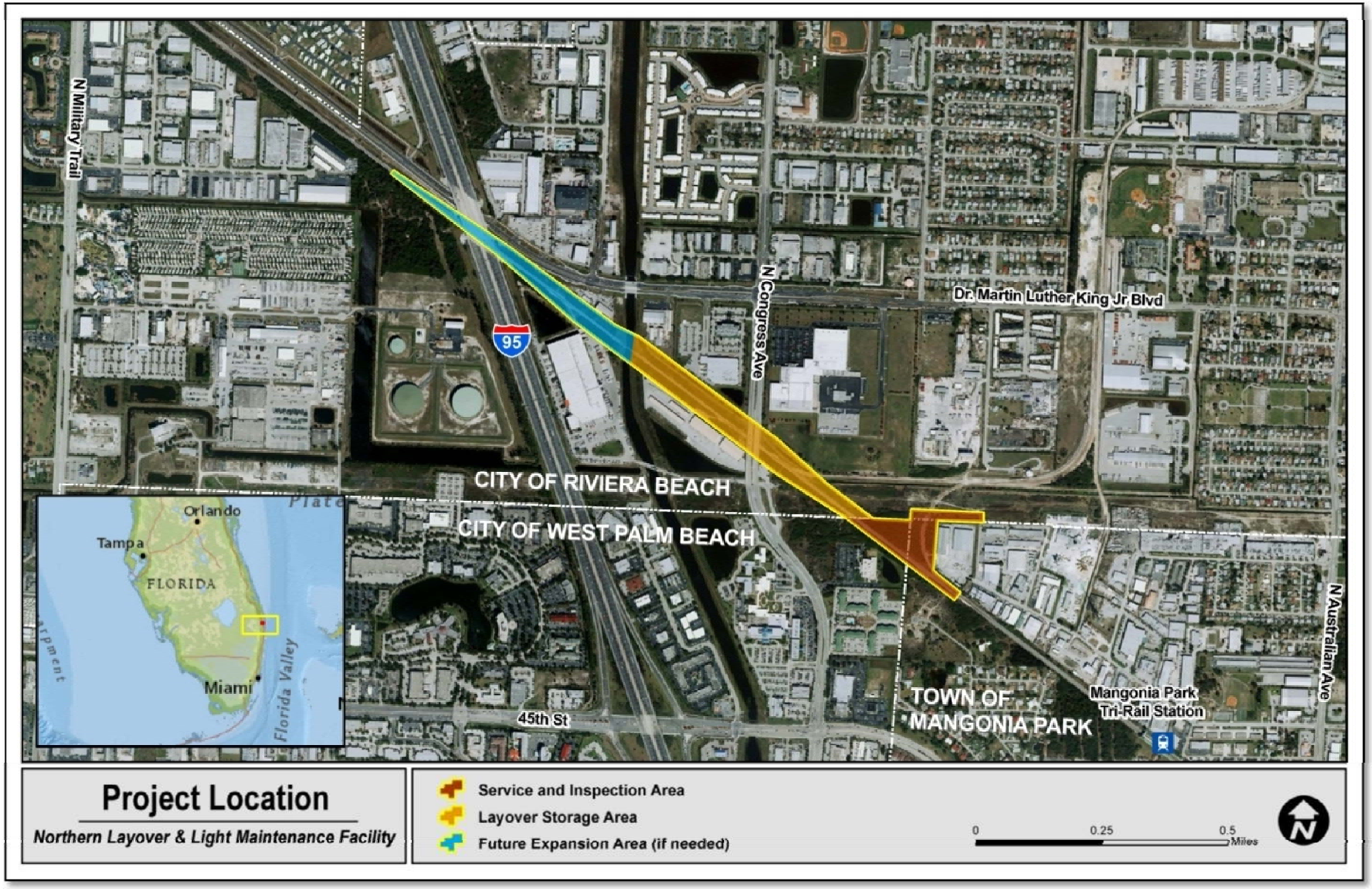


Figure 2. Northern Layover & Light Maintenance Facility

2.1 Legal and Regulatory Context

The Department of the Army, acting through the U.S. Army Corps of Engineers (Corps or USACE), has authority to permit the discharge of dredged or fill material in waters of the U.S. under Section 404 of the Clean Water Act (CWA). The Corps is also authorized to permit work and the placement of structures in navigable waters of the U.S. under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (RHA).

In the Corps/Environmental Protection Agency (EPA) CWA regulations (33 CFR 328.3(a)), the term "waters of the U.S." is defined as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

2. All interstate waters including interstate wetlands;

3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;

4. All impoundments of waters otherwise defined as waters of the U.S. under the definition;

5. Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;

6. The territorial seas;

7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.

In the Corps RHA regulations (33 CFR Part 329.4 (RHA)), the term "navigable waters of the U.S." is defined to include all those waters that are subject to the ebb and flow of the tide, and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Recent Supreme Court rulings on the jurisdictional scope of Section 404 of the Clean Water Act, specifically the term "waters of the United States", have created two new analytical standards for determining whether non-traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction: (1) if the water body is relatively permanent, or if the water body is a wetland that directly abuts a relatively permanent water body (RPW), or (2) if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW.

As such, the Corps will assert jurisdiction over:

- TNWs and wetlands adjacent to TNWs
- Non-navigable tributaries of TNWs that are relatively permanent (i.e., the tributaries that typically flow year-round or have continuous flow at least seasonally) and wetlands that directly abut such tributaries

In addition, the following waters will also be found jurisdictional based on a fact-specific analysis that they have a significant nexus with a TNW:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary

Furthermore, in accordance with the latest guidance:

- Certain geographical features (e.g., ditches, canals) that transport relatively permanent (continuous at least seasonally) flow directly or indirectly into TNWs or between two (or more) waters of the U.S., including wetlands, are jurisdictional waters regulated under the CWA;
- Certain geographic features (e.g., swales, ditches, pipes) may contribute to a surface hydrologic connection where the features: replace or relocate a water of the U.S., or connect a water of the U.S. to another water of the U.S., or provide relatively permanent flow to a water of the U.S.;
- Certain geographic features generally are not jurisdictional waters: swales, erosional features (e.g. gullies) and small washes characterized by low volume, infrequent, and short duration flow;
- ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water; and,
- uplands transporting over land flow generated from precipitation (i.e., rain events and snowmelt).

As such, all jurisdictional determinations for non-navigable, isolated waters will be elevated for Corps and Environmental Protection Agency (EPA) Head Quarters review prior to the district making the final decision on federal jurisdiction.

Once a waterbody has been officially determined to be jurisdictional, then Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands, and other special aquatic sites. CWA Section 404(b)(1) [40 (CFR) Part 230] presents the EPA guidelines evaluating activities regulated under Section 404 of the CWA. Discharges of dredge and fill material into waters of the U.S. can be authorized by individual or general permits under Section 404.

Disturbance from dredge and fill of up to one half acre at any single water of the United States crossing may potentially be covered by Section 404 Nationwide Permit (NWP) 14 (*Linear Transportation Projects*) if it meets the general conditions of the permit. NWP 14 requires that a preconstruction notification (PCN) be sent to the Corps if the project results in the permanent loss of more than 0.1 acre of waters of the U.S., or any amount of wetlands or other special aquatic sites. Disturbance of any special aquatic site, wetland, or other water of the U.S. over 0.5 acres may require an individual Section 404 Permit.

General Condition 21 of the Nationwide Permit Program requires applicants using NWP 14 to comply with Section 401 of the CWA. Compliance with Section 401 requires the use of best management practices (BMPs) to manage water quality on construction sites. In Florida, the Water Management Districts (WMD) enforce state water quality standards and conduct Section 401 certification reviews of Section 404 permit applications.

The State of Florida maintains statutory authority to protect water resources through Chapter 373 of the Florida Statutes. This authority is primarily governed by the state's five (5) Water Management Districts (WMD's or the Districts) and the Florida Department of Environmental Protection (FDEP). Wetlands, which are a large part of Florida's water resources, are specifically defined in Chapter 62-340 of the Florida Administrative Code (F.A.C.) which was finalized in July 1994. This rule provides a precise definition of the delineation of the landward extent of wetlands and surface waters, and was intended to provide a unified statewide methodology for the delineation of wetlands and surface waters. In addition to wetland jurisdiction, the State's WMD's and FDEP are also responsible for permitting construction and operation of surface water management systems. Permitting for these activities is conducted through the Environmental Resource Permitting (ERP) process. Part IV of Chapter 373, Florida Statutes authorizes the Districts to oversee and implement the ERP process. The ERP is a joint permit application which is submitted to the appropriate District or FDEP and the U.S. Army Corps of Engineers (ACOE). Although this is a joint application, separate approval and permits are required by these state and federal agencies.

The Palm Beach County Unified Land Development Code (ULDC) (Article 9, Sections 9.4 and 9.5) requirements dictate that separate permits should be obtained for work in wetlands and/or uplands from the Palm Beach County Department of Environmental Resources Management (ERM). On July 15, 2008 the Palm Beach County Board of County Commissioners (BCC) eliminated the regulatory portion of the Vegetation Protection Program from ERM effective October 1, 2008. The newly adopted language replaces the permitting controls over vegetation clearing and construction with a standard process of approval for vegetation alteration; eliminates the designation of specimen tree status; and secedes wetland permitting to the State and Federal governments.

2.2 Methods

Wetlands and surface water features within and immediately adjacent to the project corridor were identified and classified according to the *Florida Land Use Cover and Forms Classification System* (FLUCFCS). Wetlands and surface water features were delineated on aerial photographs with the aid of National Wetland Inventory maps (Figure 3), Natural Resource Conservation Service (NRCS) Soil Survey maps (Figure 4) and field observations performed on June 5th, 2012 and August 17th, 2016.

The most current existing 100-year and 500-year floodplain information was obtained from FEMA through the *Florida Geographic Data Library* (FGDL) and compared to the project corridor using GIS. Drainage basin information was retrieved from the South Florida Water Management District's (SFWMD) GIS Data Distribution page.

2.3 Existing Conditions

2.3.1 Land Use

Existing land use along the project corridor was determined using a variety of resources including the findings of the 2012 SFRTA Natural Resources Technical Memorandum and Preliminary Conditional Environmental Screening Report, South Florida Water Management District (SFWMD) land use data, National Wetlands Inventory (NWI), the Natural Resources Conservation Service (NRCS) soil surveys, U.S. Geological Survey (USGS) topographical maps, aerial photographs (1964, 1974, 1986, 1991, 2006 and 2014), and on-site verification during field reviews. Field reviews generally agreed with the recorded land use data. Figure 3 provides a broad overview of land use categories present in the project area.

Existing land uses have been classified using the Florida Land Use Cover and Forms Classifications System (FLUCFCS, FDOT, 1999) designation. The most common land use in the study area is Commercial and Services (FLUCFCS 1400). Table 1 provides a summary of land use cover types and prevalence within and immediately adjacent to the project corridor.

TABLE 1: LAND USE

FLUCFCS	Description	Acres	% Total Area
1210	Fixed Single Family Units	138.44	8.6%
1320	Mobile Home Units	71.72	4.5%
1330	Multiple Dwelling Units - Low Rise	89.93	5.6%
1340	Multiple Dwelling Units - High Rise	10.25	0.6%
1390	High Density Under Construction	0.02	0.0%
1400	Commercial and Services	681.04	42.5%
1411	Shopping Centers	5.73	0.4%
1460	Oil and Gas Storage - Not Industrial or Manufacturing	49.00	3.1%
1480	Cemeteries	8.68	0.5%
1490	Commercial and Services Under Construction	4.62	0.3%
1550	Other Light Industry	172.73	10.8%
1560	Other Heavy Industrial	74.67	4.7%
1710	Educational Facilities	9.42	0.6%
1850	Parks and Zoos	9.38	0.6%
1900	Open Land	69.47	4.3%
4340	Upland Mixed Coniferous - Hardwood	26.94	1.7%
5120	Channelized Waterways - Canals	22.91	1.4%
5300	Reservoirs	42.29	2.6%
7400	Disturbed Land	0.08	0.0%
8140	Roads and Highways	73.39	4.6%
8310	Electrical Power Facilities	1.02	0.1%
8320	Electrical Power Transmission Lines	42.58	2.7%
		1604.30	**100.0%**

2.3.2 Soils

According to the NRCS database, both upland and hydric soil types are present along the project corridor (Figure 4). The most common types of soils found within the corridor include: Basinger fine sand, 0 to 2 percent slopes, Myakka fine sand, 0 to 2 percent slopes and Arents-Urban land complex, 0 to 5 percent slopes. Considering the developed nature of the corridor, it is important to note that artificial berms and other artificially elevated areas are not always represented accurately in soils data. A description of the dominant soil type, Basinger fine sand, is provided below.

Basinger fine sand is described as a poorly drained and nearly level soil associated with sloughs and poorly defined drainage ways. Slopes range from 0 to 2 percent. Water is within 12 inches of the soil surface for 3 to 6 months in most years and it recedes to a depth of more than 40 inches during extended dry periods. During periods of high rainfall, this soil is typically covered by shallow, slow-moving water. This soil type is classified as hydric at both the state and federal levels.

TABLE 2: NCRS Soil Survey

Soil Type	Hydric Rating	Drainage Class	% Coverage
Anclote fine sand	100	Very poorly drained	2.0%
Arents-Urban land complex, 0 to 5 percent slopes	5	Somewhat poorly drained	9.3%
Arents-Urban land complex, organic substratum	0	Somewhat poorly drained	1.1%
Basinger fine sand, 0 to 2 percent slopes	96	Poorly drained	35.1%
Basinger-Urban land complex	56	Poorly drained	0.5%
Basinger and Myakka sands, depressional	100	Very poorly drained	14.4%
Immokalee fine sand, 0 to 2 percent slopes	10	Poorly drained	1.6%
Myakka fine sand, 0 to 2 percent slopes	6	Poorly drained	16.5%
Myakka-Urban land complex	7	Poorly drained	0.1%
Okeelanta muck, drained, 0 to 1 percent slopes	100	Very poorly drained	1.3%
Pits, 0 to 5 percent slopes	0	Somewhat poorly drained	0.8%
Pomello fine sand, 0 to 5 percent slopes	3	Moderately well drained	0.8%
Quartzipsamments, shaped, 0 to 5 percent slopes	0	Well drained	0.9%
Sanibel muck	100	Very poorly drained	1.1%
St. Lucie-Paola-Urban land complex, 0 to 8 percent slopes	0	Excessively drained	8.3%
Udorthents, 2 to 35 percent slopes	5	Well drained	0.4%
Urban land	0	N/A	2.5%
Water	0	N/A	3.4%

2.3.3 Floodplain Impacts

Based on the most recent available Flood Insurance Rate Map (FIRM) data from the Federal Emergency Management Agency (FEMA) for Palm Beach County, the proposed maximum build-out facility site footprint is partially located within the 100-year floodplain. Small areas on both sides of the C-17 Canal are classified as being within the 100-year flood zone. However, this portion of the available ROW would only be used if a long-term western expansion of layover capacity (west of the C-17 Canal) ever became necessary. All yards tracks, structures, roadways, walkways, and other facility features would be built up and constructed above the base flood elevation (BFE) as determined for Palm Beach County by the FEMA. Because the proposed facility would need to match the existing, elevated grade of the CSX mainline, no flood impacts are anticipated. Proper site drainage and Stormwater Pollution Prevention (SWPP) plan practices would be implemented to account for unexpected inundation of the proposed facility area.

2.3.4 Historical Rainfall Data

Historic rainfall data was obtained from usclimatedata.com. Table 3 represents the Historical Annual Rainfall Data for West Palm Beach, FL.

TABLE 3: HISTORICAL RAINFALL DATA FOR PALM BEACH COUNTY

JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
3.15	2.83	4.64	3.66	4.53	8.31	5.75	7.95	8.35	5.12	4.76	3.39

2.3.5 Seasonal High Ground Water Tables

Seasonal High Ground Water Tables (SHGWT) are affected by factors including soil composition, rainfall, adjacent surface water levels, tidal influences, topography, connectivity between aquifers, and seasonal trends. As soil composition is the primary factor that determines the level of the water table and the dominant soil types identified in this area has a known average distance to the water table from the surface, this information was used to estimate SHGWT in Table 4.

TABLE 4: SEASONAL HIGH GROUND WATER TABLES

Soil Type	Coverage	SHWT (inches)
Basinger fine sand, 0 to 2 percent slopes	35.1%	2
Basinger and Myakka sands, depressional	14.4%	0
Myakka fine sand, 0 to 2 percent slopes	16.5%	6

2.3.6 Regional Hydrology

The project falls within the Lake Worth Lagoon Watershed, the Lake Worth Lagoon Drainage Basin and the SFWMD C-17 Canal basin. The FEMA Flood Hazard Zones map for the project corridor is shown in Figure 5. The entire parcel, except for a small area in the vicinity of the C-17 Canal, is in FEMA zone X500 (or Zone B) which lies between the 100-year and 500 year flood elevation. The area adjacent to the C-17 Canal is FEMA flood zone AE (or A8).

The state list of designated *Outstanding Florida Waters* and the FDEP's list of *Coastal and Aquatic Managed Areas* were reviewed to confirm that he project study corridor is not located within or adjacent to any Outstanding Florida Waters or Coastal and Aquatic Managed Areas. There are no Outstanding Florida Waters within Palm Beach County and the closest Coastal and Aquatic Managed Area is the Loxahatchee River-Lake Worth Aquatic Preserve approximately 14 miles from the project.

2.3.7 Navigable Waterways

There are no functionally navigable waterways within the project corridor. The C-17 Canal or the Earman River Canal has a defined connection to the ocean but is not accessible by boat west of the S-44 Water Control Structure. The C-17 flows northeast from Clear Lake in West Palm Beach to the S-44 Water Control Structure in Palm Beach Gardens. The SFWMD regulates the flow of the canal at the S-44 structure for flood control purposes before water reaches the Atlantic Intracoastal Waterway.

2.3.8 Wetlands and Surface Waters

Northern portions of the project area have existing direct discharge connections to the C-17 Canal via surface waters features paralleling the rail corridor. The south portions of the site are isolated from any direct discharge to the C-17. A total of 2 wetlands and 8 surface water features were identified within or immediately adjacent to the project study corridor (Table 1, Table 2, and Figure 6). Areas identified as wetlands (W-1 and W-2.) are areas that support altered wetland systems, with the accompanying wetland vegetation, hydrology and soils. Both wetlands (W-1 and W-2) are remnant wetlands with dominant exotic and invasive vegetative coverage.

Wetland W-1 is a 0.16 acre disturbed forested system (FLUCCs code 619) dominated by dense Brazilian pepper (*Schinus terebinthifolius*), melaleuca (*Melaleuca quinquenervia*), and old world climbing fern (*Lygodium microphyllum*) with limited ground cover. Exotic vegetation has formed a canopy over 80% of the wetland. Small patches of remnant native wetland vegetation can be found within the interior of W-1 and is limited to a few arrowhead (*Sagittaria* spp.) and Duck Potato *(Sagittaria lancifolia)* individuals. Dense wood debris and vines exist throughout the wetland. No standing water was observed. W-1 is isolated with no benefits to downstream resources or natural habitats. No signs of wildlife utilization were observed. Wildlife usage is limited by adjacent railroad tracks, FPL's mowed easement, and industrial areas.

Wetland W-2 is a 0.14 acre herbaceous wetland (FLUCCs code 641) dominated by cat-tail (*Typha* spp.) and is in part outside of the project limits. Other wetland plants identified include willow (*Salix caroliniana*) and sawgrass *(Cladium jamaicense)*, as well as exotic species such as old world climbing fern and melaleuca saplings. Wetland strata are blanketed by old world climbing fern thus limiting potential wildlife utilization. W-2 is located within an FP&L easement which is maintained to allow access to overhead power lines. W-2 is an isolated wetland with no benefits to downstream resources or natural habitats. No wildlife or signs of wildlife were observed. Wildlife access is limited by adjacent railroad tracks, FPL's mowed easement, and industrial parcels.

Surface water features (SW-1 – SW-8) are those areas typically classified as "other surface waters" and consist of ditches, canals, and retention areas associated with surface water management systems or provide drainage or water storage functions, and are primarily man-made, excavated systems. Some of the surface water features within the project area support trace amounts hydrophytic vegetation; however, regulatory agencies typically do not require mitigation for impacts to surface waters associated with stormwater management systems. Extensive areas of SW-3, SW-5, SW-7, and SW-8 were covered with exotic floating vegetation including water lettuce (*Pistia stratiotes*) and water hyacinth (*Eichhornia crassipes*). SW-5, SW-7, and SW-8 are connected through drainage pipes. SW-5 connects with SW-3 (C-17 Canal), as well as a drainage pond located outside of the project limits. The C-17 Canal is regulated by the SFWMD control structure S-44 and is managed through dredging and routine vegetation removal. SW-7 is connected to a dry detention pond outside of the project limits through a weir. Surface waters SW-1, SW-2, SW-4, and SW-6 were deep drainage ditches overgrown with dense stands of exotic vegetation including Brazilian pepper, melaleuca, and old world climbing fern. Wood debris, vines, and trash (tires, metal, and household debris) were observed within the dry drainage ditches.

Table 5 – Wetlands

Wetland ID	Description	FLUCFCS
W-1	Remnant Exotic Forested Wetland with Dominant Exotic Species Coverage	619
W-2	Remnant Herbaceous Wetland with Dominant Cat-tail and Exotic Species Coverage	641

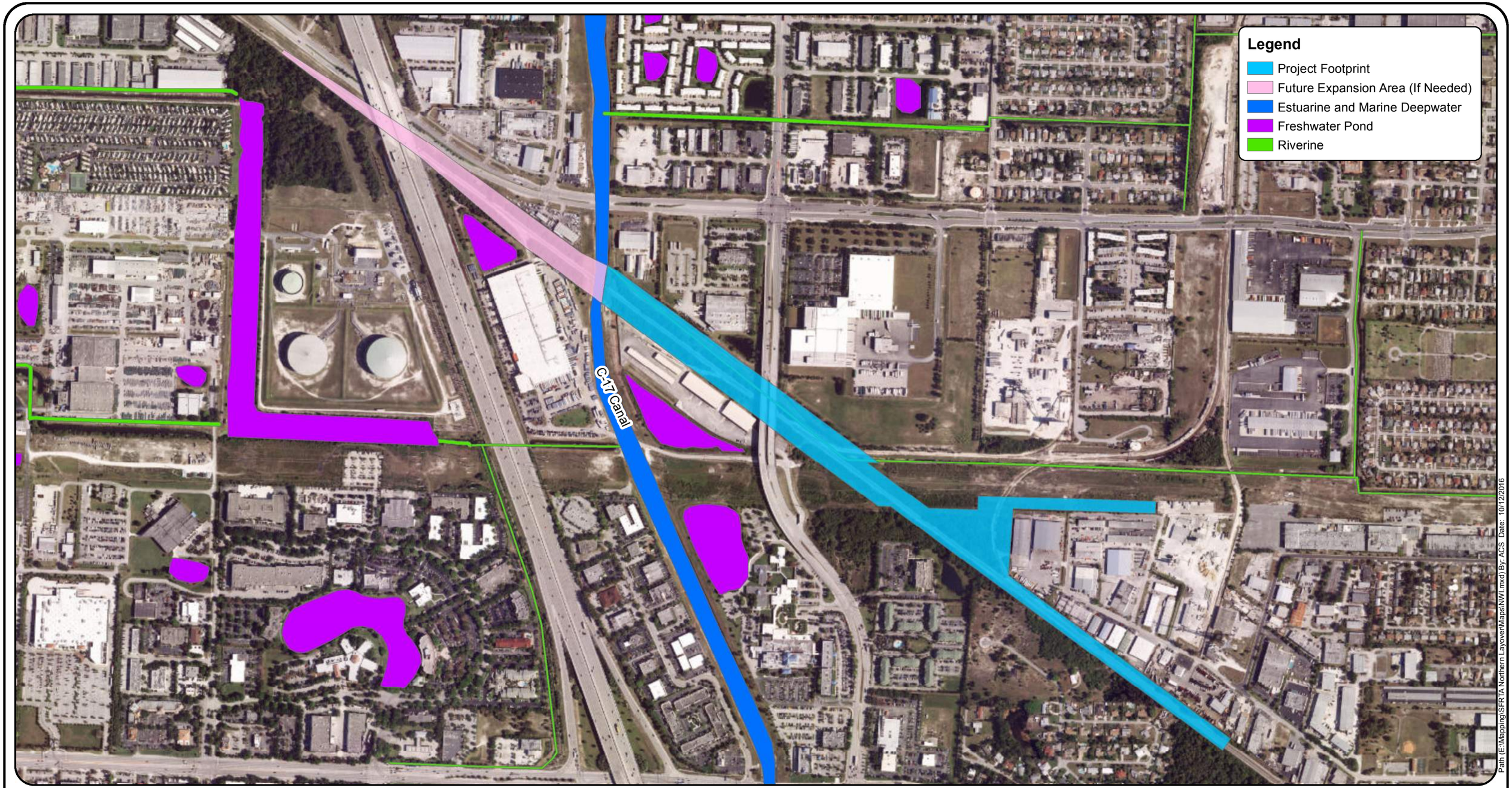
Table 6 - Surface Waters		
Surface Water ID	**Description**	**FLUCFCS**
SW-1	Surface Water Management Feature (Ditch)	510
SW-2	Surface Water Management Feature (Ditch)	510
SW-3	SFWMD C-17 Canal	510
SW-4	Surface Water Management Feature (Ditch)	510
SW-5	Surface Water Management Feature (Ditch)	510
SW-6	Surface Water Management Feature (Ditch)	510
SW-7	Surface Water Management Feature (Ditch)	510
SW -8	Surface Water Management Feature (Ditch)	510

2.4 Wood Stork Core Foraging Area

According to the USFWS GIS database, two active wood stork (*Mycteria americana*) nesting colonies are located within 18.6 miles of the project corridor (Figure 7). Wetlands within the 18.6 mile radius of an active wood stork rookery are considered Core Foraging Areas (CFA), and appropriate mitigation for any impacts to these areas must be considered. However, field reviews revealed that the wetlands and surface waters within the project area are not suitable wood stork foraging habitat. Wetland W-1, and surface waters SW-1, SW-2, SW-4 and SW-6 have too dense of a Brazilian pepper canopy and limited hydroperiods to provide adequate wood stork foraging habitat. Wetland W-2 had no standing water and surface waters SW-3, SW-5, and SW-8 have steep banks and no littoral shelves to support foraging activity. It was noted that a portion of the steep bank of SW-7, roughly 180 feet, has eroded and created a shallow shelf. This area will be regraded and maintained with a steep slope to maximize storage. Additional detention areas will be created within the project corridor to address stormwater runoff from the proposed facility. Based on review of the proposed project, no wood stork CFAs will be impacted by this project.

2.5 Proposed Impacts

Wetlands W-1 and W-2 are proposed to be impacted by the project. W-1 is within a proposed dry detention area within the Service and Inspection area (Figure 2). While a portion of W-2 is proposed to be impacted by a service walkway within the Layover Storage Area. Due to the relocation of the mainline tracks and the additional width of the multiple yard tracks, impacts to these wetlands are unavoidable. Preliminary consultation with SFWMD occurred in May 7, 2013 (Appendix 3) at the SFWMD headquarters with Barbara Conmy and Carlos De Rojas. No compensatory mitigation was anticipated due to the small sizes of the wetlands, which is below threshold limits, and the impacted wetlands do not appear to be habitat for protected species. The Agencies are authorized to determine, on a case-by-case basis, whether a specific activity falls under a "*de minimis*" exemption. A request to qualify for this exemption shall be submitted during permitting. Further coordination with the SFWMD and USACE will be required during permitting.



QUEST ecology

Figure 3. National Wetlands Inventory Map

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S
0 500
Feet

Map Unit Symbol	Map Unit Name
2*	Anclote fine sand
4	Arents-Urban land complex, 0 to 5 percent slopes
5	Arents-Urban land complex, organic substratum
6*	Basinger fine sand, 0 to 2 percent slopes
7	Basinger-Urban land complex
8*	Basinger and Myakka sands, depressional
18	Immokalee fine sand, 0 to 2 percent slopes
21	Myakka fine sand, 0 to 2 percent slopes
22	Myakka-Urban land complex
24*	Okeelanta muck, drained, 0 to 1 percent slopes
31	Pits, 0 to 5 percent slopes
33	Pomello fine sand, 0 to 5 percent slopes
35	Quartzipsamments, shaped, 0 to 5 percent slopes
39*	Sanibel muck
41	St. Lucie-Paola-Urban land complex, 0 to 8 percent slopes
47	Udorthents, 2 to 35 percent slopes
48	Urban land
99	Water
*Indicates hydric soil	

Legend

- Project Footprint & Expansion Area
- Half Mile Buffer
- Soils

Path (E:\Mapping\SFRTA Northern Layover\Maps\Soils.mxd) By: ACS Date: 9/26/2016

QUEST ecology

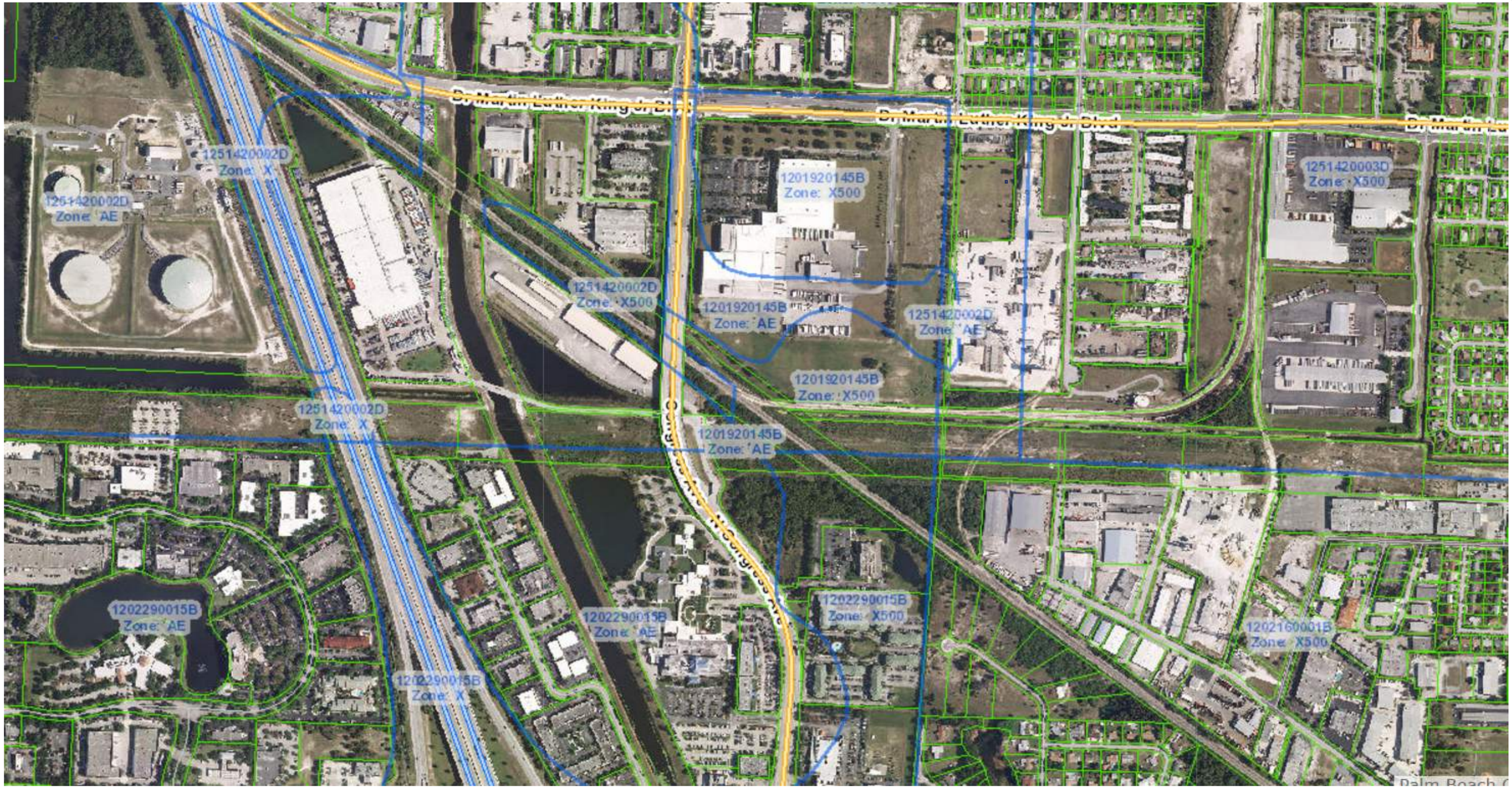
Figure 4. Natural Resource Conservation Service (NRCS) Soil Survey Map

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N W E S

0 1,000

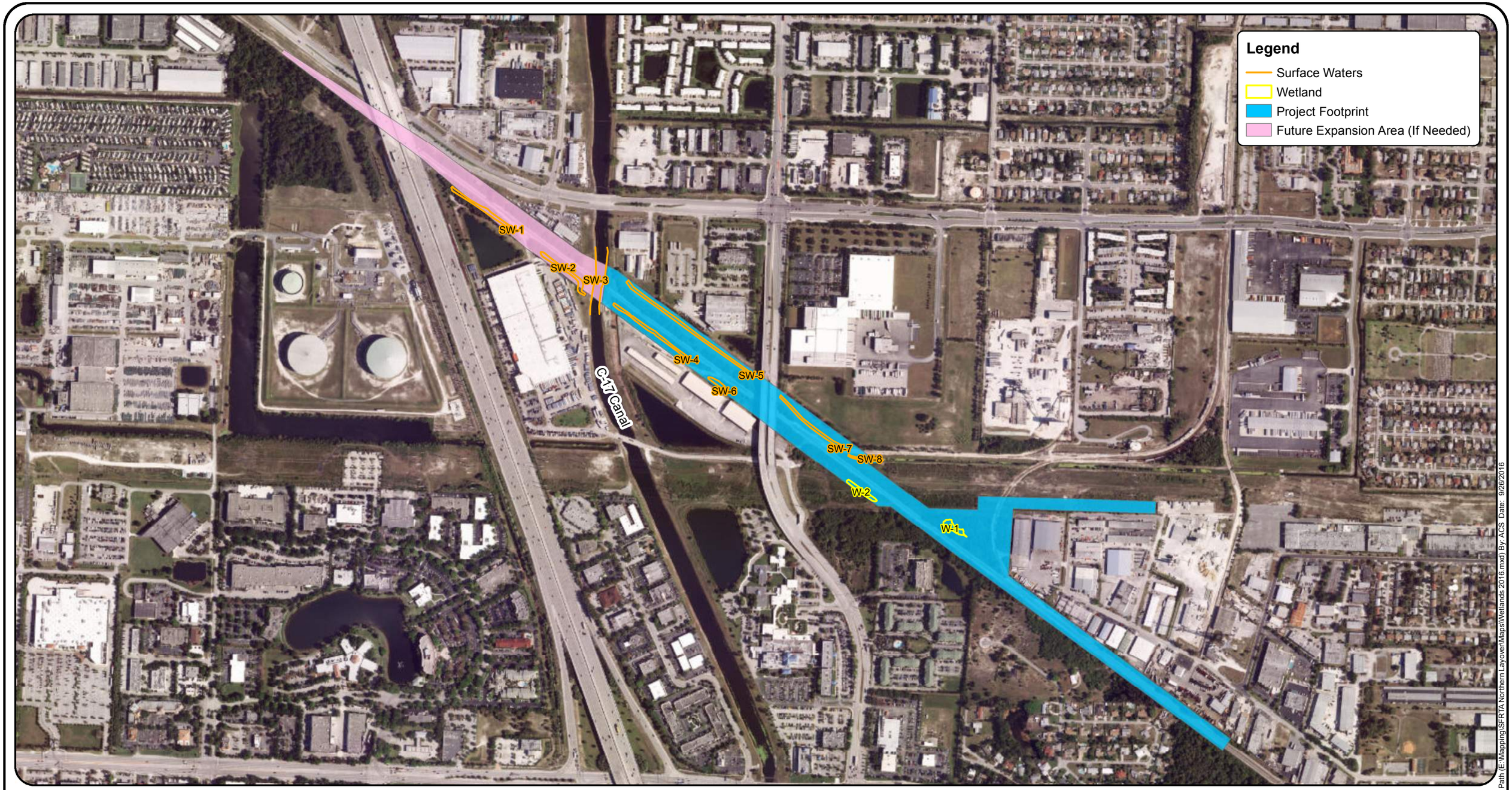
Feet



QUEST
ecology

Figure 5. FEMA Flood Hazard Zones Map

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida



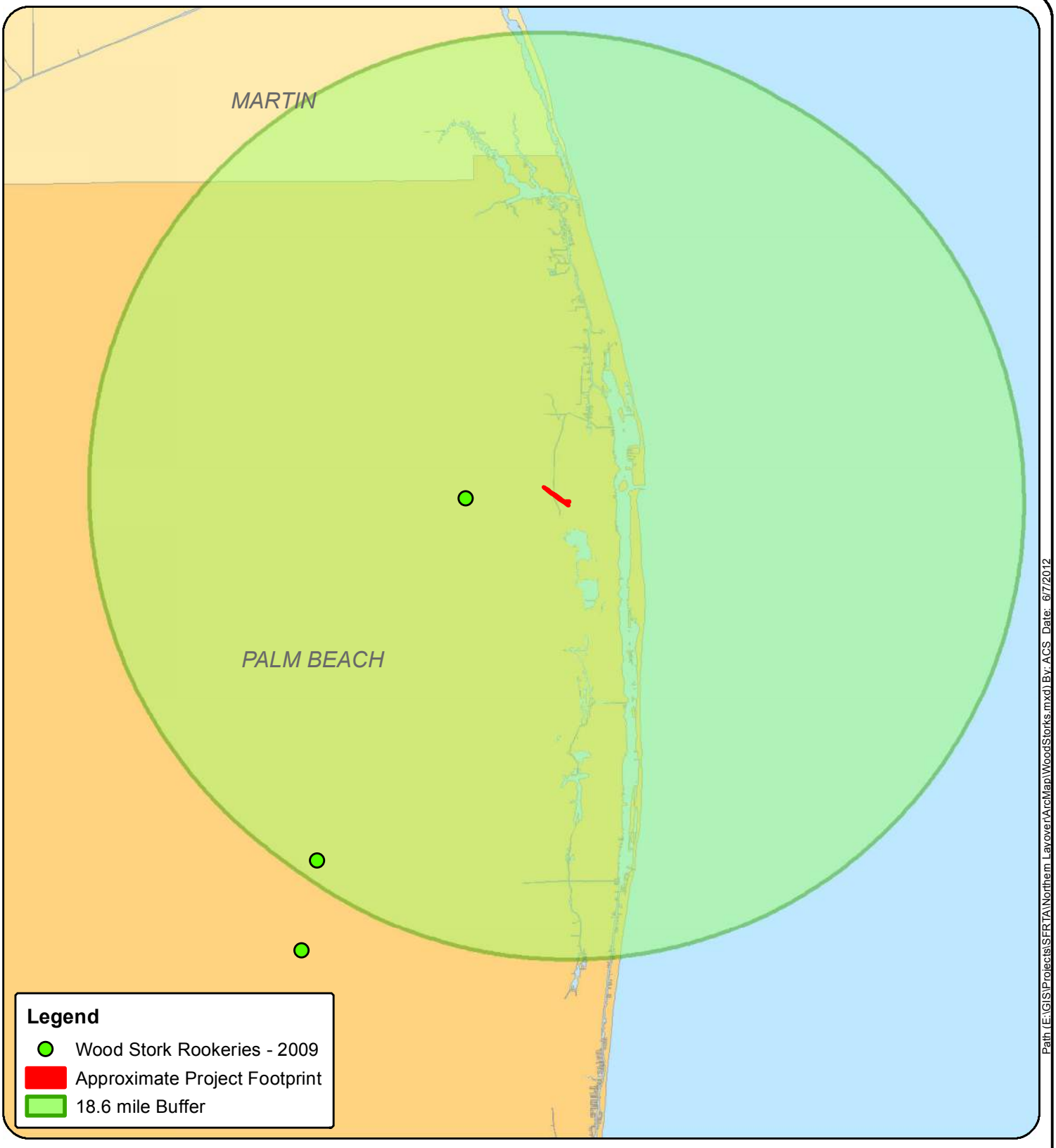
QUEST ecology

Figure 6. Wetlands and Surface Waters

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet



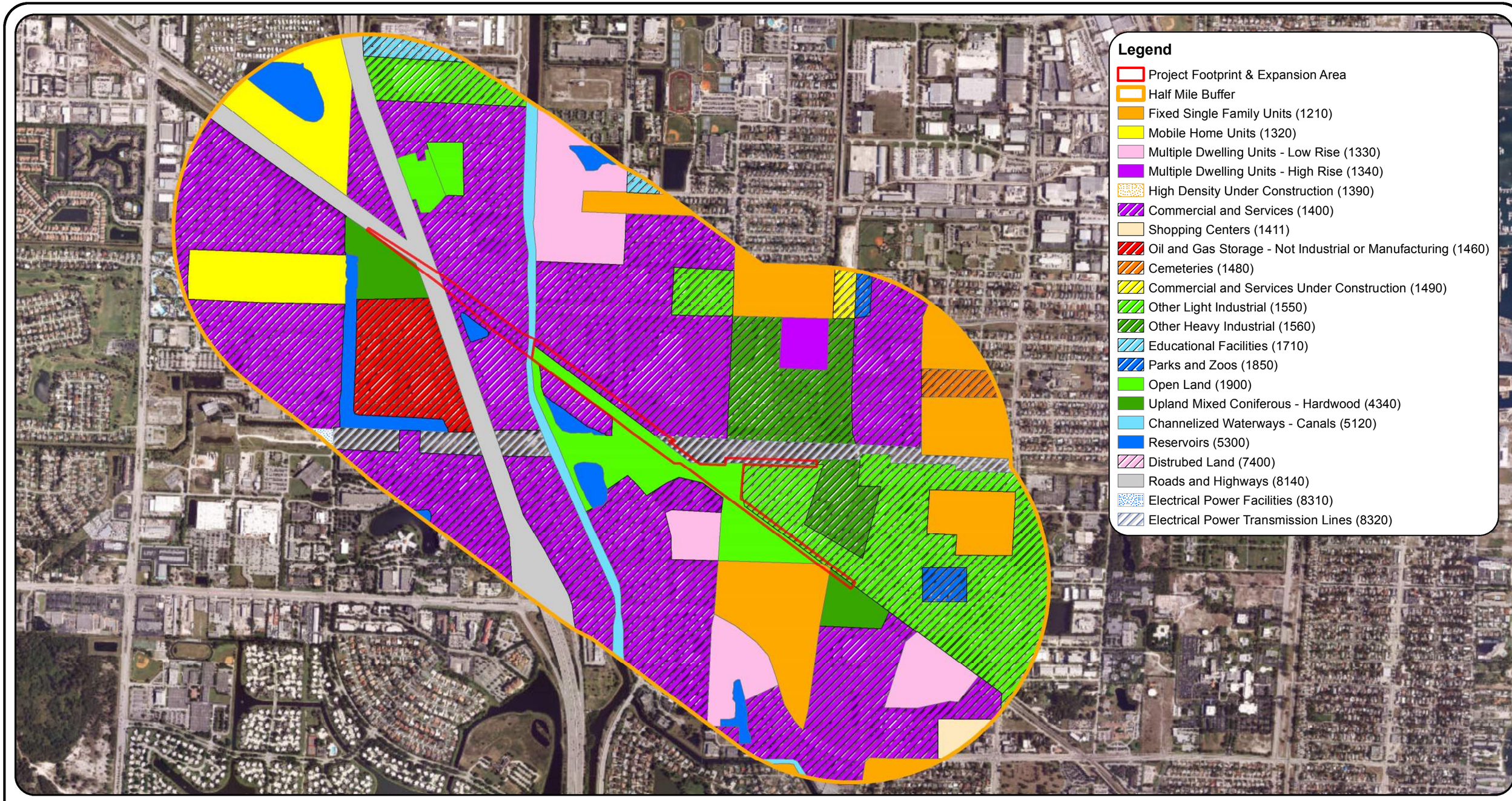
QUEST ecology
735 Lakeview Drive
Wimauma, FL 33598
Tel. 813.642.0799
Fax 813.642.0380

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

Figure 7.
Active Wood Stork Rookeries (USFWS)

N
W E
S

0 4
Miles



QUEST ecology

Figure 8. - Land Use (FLUCFCS)

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 1,000
Feet

Stormwater runoff from the proposed project would be contained within the limits of the project in order to eliminate water quantity or quality impacts caused by facility activities or an increase in new impervious surface. In order to contain the stormwater runoff depressed areas, swales and dry ponds would be created in available open areas. Impacts to surface waters are anticipated as the existing surface waters are to be modified and in some locations relocated. Stormwater runoff from the project, the ballest area of the rails, the new roof areas will be directed through swales and interconnected pipes to newly-created dry pond/swale areas and the existing canal on the west side of the SFRC corridor, just south of the C-17. A modification of the City of Riviera Beach RC-2 Canal where it is presently located in the railroad ROW will be required. The City of Riviera Beach has designed a modification of the existing RC-2 Canal culverts where the culverts cross under the Mission Spur tracks, just east of the FDOT ROW. These culverts will be extended in order to accommodate the proposed project. SW-7 is to be demucked and backfilled, as well as a portion of SW-8. Mitigation is not typically required for impacts to surface waters associated with stormwater management systems. Existing capacity will be replaced in-kind, as well as additional capacity provided for proposed new impervious surfaces.

2.6 Mitigation

Wetland delineations and quantification of impacts (*Uniform Mitigation Assessment Methodology*) have been prepared (Appendix 2). Due to the limited size, 0.3 acre, and quality of wetlands W-1 and W-2, it is anticipated that no mitigation is required. If permitting agencies should request mitigation during permitting, mitigation options could include making additional water quality improvements, removing exotic invasive vegetation, or purchasing a wetland mitigation credit from a private wetland mitigation bank. The project is located within the service area of the Loxahatchee Mitigation Bank. Wetland impacts will be coordinated and reviewed with the SFWMD and USACE. Best Management practices would be used during construction to minimize run-off from excavation and site grading. No impacts to wood stork CFAs are anticipated as wetlands within the project area have an insufficient hydrology period to support a prey base and are dense with exotic vegetation. In addition, the surface water features are too steep for wood stork feeding and the ditches are overgrown with Brazilian pepper and do not sustain enough water to support prey species.

3.0 PERMITS

The following permits are anticipated for the proposed project:

- U.S. Army Corps of Engineers Section 10 and 404 Permits – Fill into Waters of the U.S., including the portion of Canal RC-2 to be relocated, wetlands, and the stormwater outfall on Canal C-17.
- South Florida Water Management District (SFWMD):
    - Conceptual Environmental Resource Permit (ERP) Application - To ensure approval of Stormwater Pollution Protection Plan design and modeling.
        i. Conceptual permitting of the rail spur and maintenance facilities proposed under this phase. Does not include the design and permitting of future expansion of the maintenance facility west of the C-17. Includes permitting for two wetlands.

ii. Relocation of the meander of the City of Riviera Beach RC-2 Canal located southwest of Congress Avenue.

iii. Replacement City of Riviera Beach RC-2 Canal culverts under the eastern rail spur to accommodate the realignment of the eastern spur.

iv. Impacts to Waters of the U.S. and wetlands. The Environmental Resource Permitting application is a joint application with the U.S. Army Corps of Engineers.

v. Right-of-way Occupancy Permit – to construct the outfall into the C-17. This may be required by the SFWMD to obtain the Conceptual ERP.

4.0 CONCLUSION

Both wetlands (W-1 and W-2) are remnant wetlands with dominant exotic and/or invasive species coverage with minimal to no expected wildlife utilization. Due to the relocation of the mainline tracks and the additional width of the multiple yard tracks, impacts to these wetlands are unavoidable. Based on the size and quality of wetlands, no mitigation is anticipated. Mitigation is not required for impacts to surface waters associated with stormwater management systems. If permitting agencies should request mitigation for impacts to wetlands during permitting, mitigation options could include making additional water quality improvements, removal of exotic invasive species, or purchasing a mitigation credit from the Loxahatchee Mitigation Bank. Further coordination with the SFWMD and USACE will be required during permitting.

APPENDIX 1.

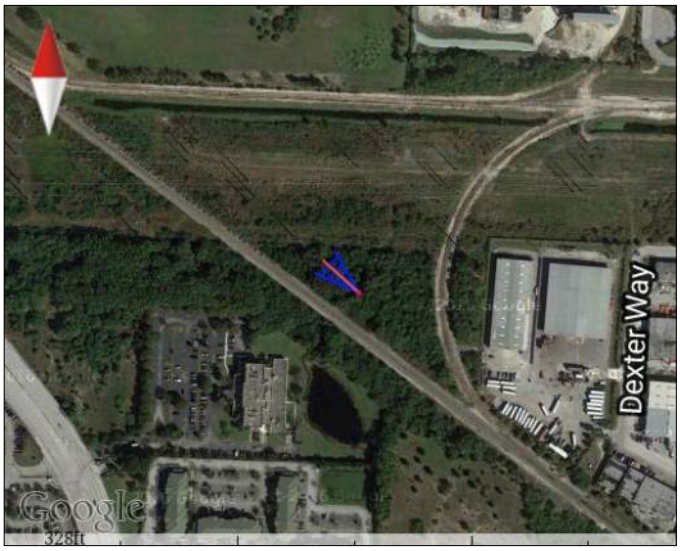
Field Review Photos

Site Evaluation

8/17/16 12:05 PM
2016:08:17 16:05 UTC

4700 North Congress Avenue, West Palm Beach, FL 33407, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.763834˚±105ft	W80.084033˚±105ft	41ft±105	312°±3	25°±1	-2°±1



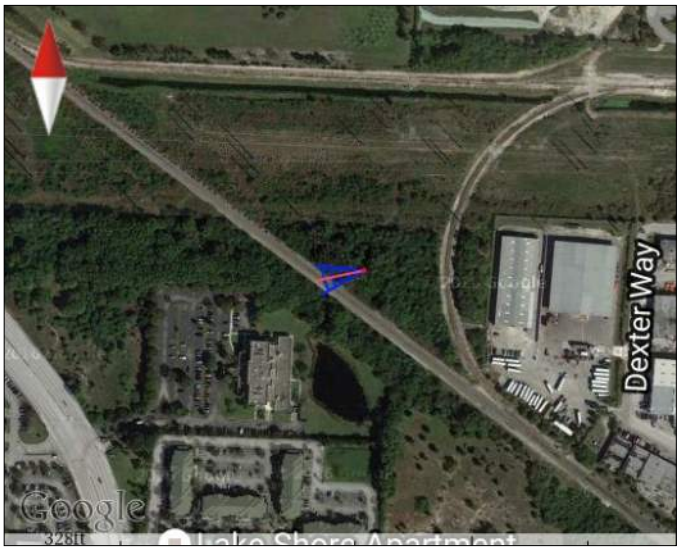
Remnant native wetland vegetation can be found within the interior of W-1 and is limited to a few arrowhead and Duck Potato plants.

Site Evaluation

8/17/16 12:05 PM
2016:08:17 16:04 UTC

4700 North Congress Avenue, West Palm Beach, FL 33407, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.763834˚±79ft	W80.084033˚±79ft	41ft±79	258°±3	19°±1	-1°±1



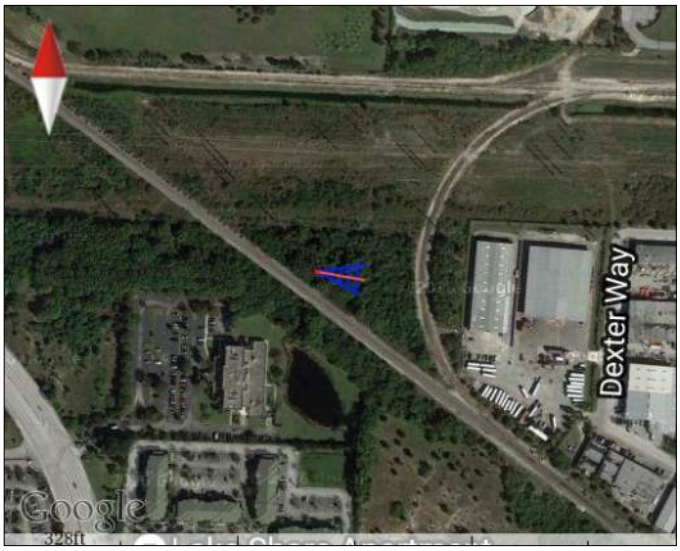
Small patches of remnant native wetland vegetation can be found within the interior of W-1 and is limited to a few arrowhead and Duck Potato plants.

Site Evaluation

8/17/16 11:57 AM
2016:08:17 15:56 UTC

4700 North Congress Avenue, West Palm Beach, FL 33407, US

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.763862˚±20ft	W80.084223˚±20ft	41ft±20	100°±1	7°±1	0°±1



W-1 has wood debris and no standing water.

Site Evaluation

8/17/16 12:24 PM
2016:08:17 16:23 UTC

5 Cheney Way, Riviera Beach, FL, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.764922˚±26ft	W80.086228˚±26ft	35ft±26	217°±2	3°±1	0°±1

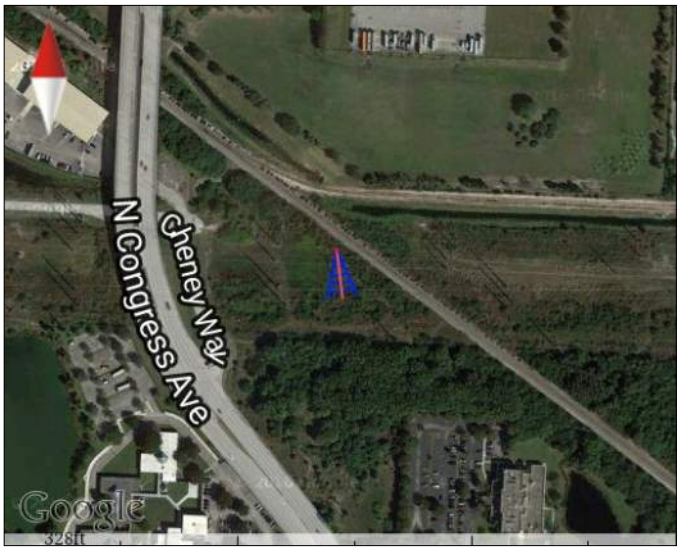
W-2 is located within an FP&L easement which is maintained to allow access to overhead power lines.

Site Evaluation

8/17/16 12:21 PM
2016:08:17 16:21 UTC

5 Cheney Way, Riviera Beach, FL, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
U		N26.764967˚ (Δ6ft)	W80.086440˚ (Δ12ft)		173° (Δ-85°)		



W-2 is located within an FP&L easement which is maintained to allow access to overhead power lines. No wildlife or signs of wildlife were observed in the field.

Site Evaluation

8/17/16 12:21 PM
2016:08:17 16:20 UTC

5 Cheney Way, Riviera Beach, FL, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
U		N26.764922˚ (Δ11ft)	W80.086485˚ (Δ26ft)		136° (Δ-35°)		

W-2 is a herbaceous wetland dominated by cat-tail. Other wetland plants identified include willow and sawgrass, as well as exotics such as Old World Climbing Fern and melaleuca saplings.

Site Evaluation

8/17/16 1:59 PM
2016:08:17 17:59 UTC

1 Cheney Way, West Palm Beach, FL 33404, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
U		N26.768450˚ (Δ5ft)	W80.092036˚ (Δ6ft)		290° (Δ7°)		

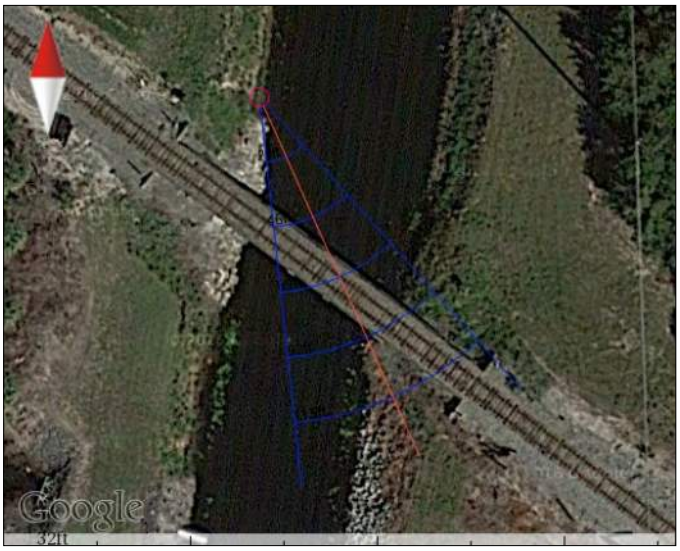
SW-2 ditch with water lettuce and water hyacinth. The remainder of the ditch becomes dense with exotic invasive trees.

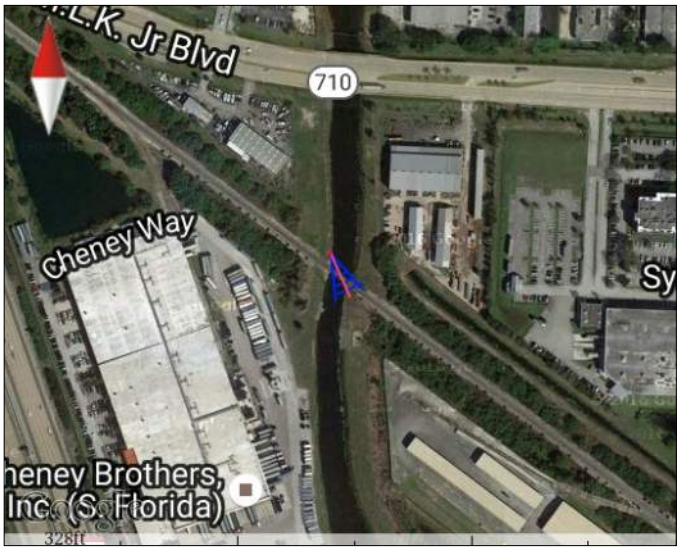
Site Evaluation

8/17/16 1:54 PM
2016:08:17 17:54 UTC

1 Cheney Way, West Palm Beach, FL 33404, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.768865˚±105ft	W80.091827˚±105ft	41ft±105	156°±2	2°±2	0°±1





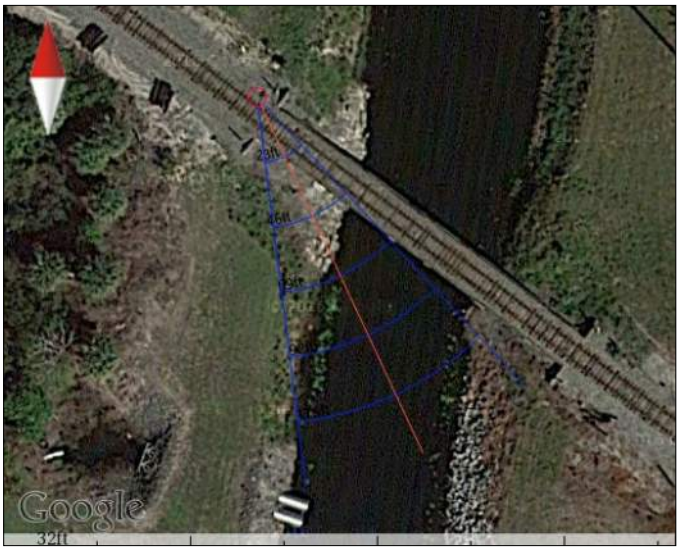
SW-3 or Canal-17 is a surface water that is managed by the SFWMD and regulated by control structure S-44. SW-3 is crossed by railroad.

Site Evaluation

8/17/16 1:55 PM
2016:08:17 17:55 UTC

1 Cheney Way, West Palm Beach, FL 33404, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.768832˚±13ft	W80.091940˚±13ft	40ft±13	155°±1	1°±1	-1°±1



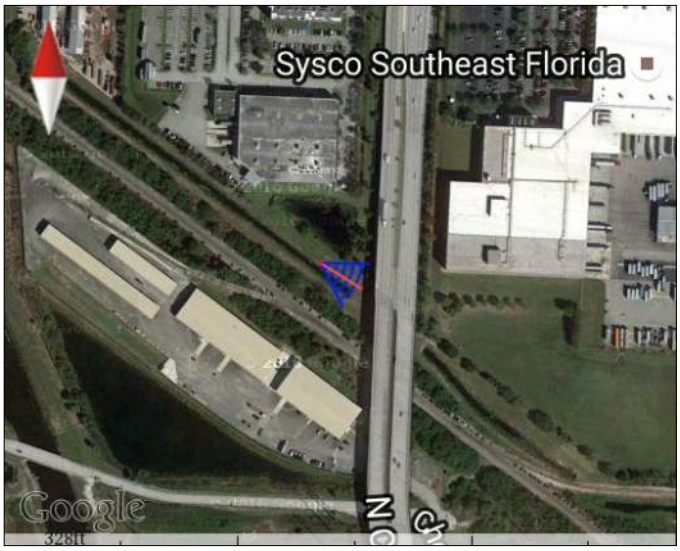
SW-3 or Canal 17 rail crossing.

Site Evaluation

8/17/16 11:12 AM
2016:08:17 15:12 UTC

4830-4902 North Congress Avenue, Riviera Beach, FL 33404, US

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.767156˚±20ft	W80.088766˚±20ft	15ft±20	122°±1	3°±1	0°±1



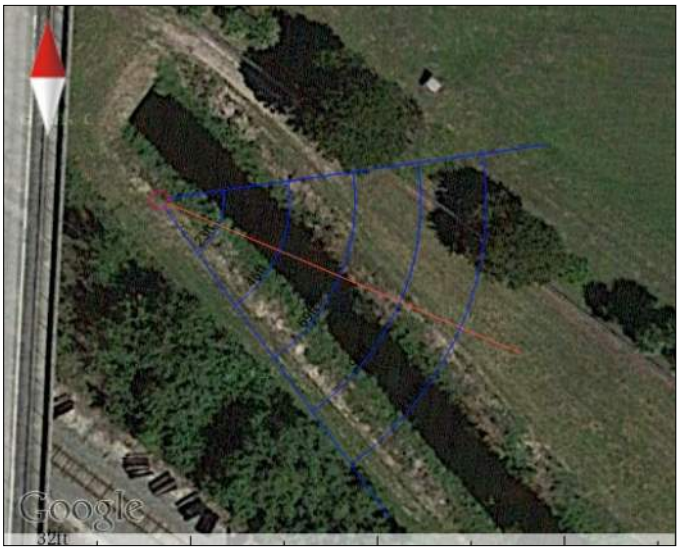
SW-5 is a steep surface water. Floating vegetation, including water lettuce and water hyacinth were noted.

Site Evaluation

8/17/16 11:18 AM
2016:08:17 15:18 UTC

4813-4829 North Congress Avenue, Riviera Beach, FL 33404, USA

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.766405˚±26ft	W80.087856˚±26ft	36ft±26	113°±2	2°±1	0°±1



SW-7 is a steep surface water with floating vegetation including water lettuce and water hyacinth.

Site Evaluation

8/17/16 11:18 AM
2016:08:17 15:18 UTC

4813-4829 North Congress Avenue, Riviera Beach, FL 33404, US

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
U		N26.766405˚ (Δ0ft)	W80.087856˚ (Δ0ft)		351° (Δ-321°)		

SW-7 is a steep surface water with floating vegetation including water lettuce and water hyacinth.

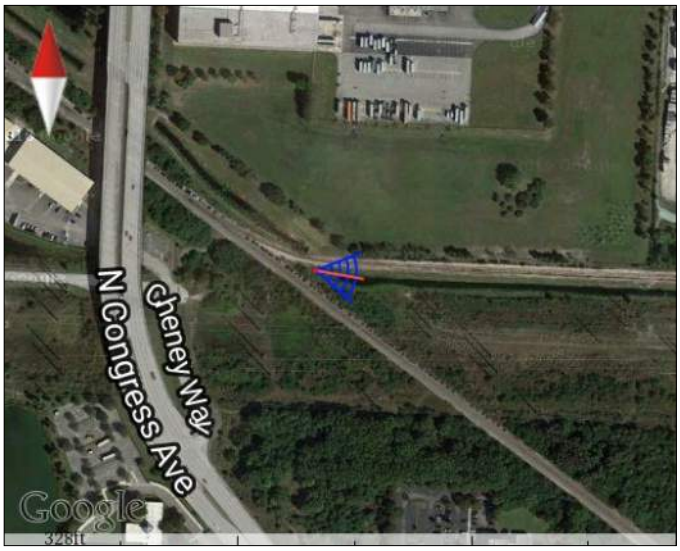
Site Evaluation

SW-8

8/17/16 11:26 AM
2016:08:17 15:25 UTC

5 Cheney Way, Riviera Beach, FL, US

		Latitude	Longitude	Altitude	Azimuth	Pitch	Roll
S		N26.765351˚±10ft	W80.086495˚±10ft	56ft±10	100°±2	2°±2	0°±1



SW-8 is a steep sloped surface water located adjacent to railroad tracks and a FPL power line easement. SW-8 has exotic floating vegetation including water lettuce and water hyacinth.

APPENDIX 2.

UMAM Sheets

PART I – Qualitative Description
(See Rule 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SFRTA - Northern Layover/Maintenance Facility		Wetland W-1

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
619 - Exotic Wetlands Hardwoods	Remnant wetland with dominant exotic species coverage	Impacted	0.16

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
L. Worth Lagoon Drainage Basin & Watershed/ HUC 03090202/WBID 3242/SFWMD C-17 Canal basin	Palustrine Forested Exotic	Not located within or adjacent to any Outstanding Florida Waters or Coastal Aquatic Managed Areas.

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Isolated wetland

Assessment area description

W-1 is a disturbed forested system dominated by dense Brazilian pepper (*Schinus terebinthifolius*), Melaleuca (*Melaleuca quinquenervia*), and Old World Climbing Fern (*Lygodium microphyllum*) with limited ground cover. Small patches of remnant native wetland vegetation can be found within the interior of W-1. Patches are limited to a few arrowhead (Sagittaria Spp.) and Duck Potato (Sagittaria lancifolia) plants.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Properties adjacent to the W-1 consist of railroad tracks, mowed FPL power line easement, and industrial use parcels.	Isolated wetland within an urbanized area. Wetland is highly disturbed based on its location between an FP&L powerline easement and rail tracks. W-1 is dominated by invasive exotics.

Functions	Mitigation for previous permit/other historic use
Low functioning seasonal wetland	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Literature review revealed that no historic wading bird rookeries are located within or adjacent to the project and no federally-listed species have been documented within one mile of the project study corridor.	Remnant wetland with invasive and exotic vegetation forming a dense canopy. Minimal wildlife utilization anticipated.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No state or federally listed species where observed during the field review.

Additional relevant factors:

Hydric soil identified on site, however no standing water.

Assessment conducted by:	Assessment date(s):
David Bogardus / Frank Kahoun	8/17/2016

Form 62-345.300(1) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(a), F.A.C.

PART II – Quantification of Assessment Area (impact or mitigation)
(See Rules 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SFRTA - Northern Layover/Maintenance Facility		W-1
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impacted	David Bogardus	8/17/2016

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	Minimal support of wildlife by outside habitats. Exotic invasive plants dominate wetland and surrounding area including dense Brazilian pepper, melaleuca, and old world climbing fern. Wildlife access is limited by railroad tracks, FPL's mowed easement, and industrial areas. Wetland is isolated with no benefits to downstream resources or natural habitats. Uplands dominated by exotic invasive species.	3	0
.500(6)(b)Water Environment (n/a for uplands)	Isolated wetland. Muck soil identified in the field. No observation of standing water. Dense Brazilian pepper, melaleuca, and Old World climbing fern with limited ground cover. Small patches of remnant native wetland vegetation can be found. Patches are limited to a few individual arrowhead and duck potato plants.	2	0
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Canopy and shrub stratum dominated by Brazilian pepper, melaleuca, and Old World climbing fern. Ground cover included bear earth and ferns with small patches of wetland vegetation. Patches are limited to a few individual arrowhead and duck potato plants. Dense wood debris and vines throughout the wetland. No observed standing water. Minimal upland habitat to support wildlife.	2	0

Score = sum of above scores/30 (if uplands, divide by 20)		
current or w/o pres	with	
0.233	0	

If preservation as mitigation,
Preservation adjustment factor = NA
Adjusted mitigation delta = NA

For impact assessment areas
FL = delta x acres = 0.037

Delta = [with-current]
0.233

If mitigation
Time lag (t-factor) = NA
Risk factor = NA

For mitigation assessment areas
RFG = delta/(t-factor x risk) = NA

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

PART I – Qualitative Description
(See Rule 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SFRTA - Northern Layover/Maintenance Facility	NA	Wetland W-2

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641 - Freshwater Marsh	Remnant wetland with invasive and exotic species coverage	Impacted	0.14

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)
L. Worth Lagoon Drainage Basin & Watershed/HUC 03090202/WBID 3242/SFWMD C-17 Canal basin	Palustrine Forested Exotic	Not located within or adjacent to any Outstanding Florida Waters or Coastal and Aquatic Managed Areas

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

Isolated wetland

Assessment area description

W-2 is an herbaceous cat-tail (*Typha* spp.) dominated marsh that is located within a FP&L power line easement. W-2 contains willow (*Salix caroliniana*) and sawgrass (*Cladium jamaicense*), as well as exotics such as old world climbing fern and melaleuca saplings. The wetland is highly disturbed from adjacent land use and mowed/maintained to allow access to the overhead power lines and structures.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Properties adjacent to W-2 consist of rail tracks and industrial use parcels. W-2 is located within a maintained FPL power line easement.	Isolated wetland within an urbanize area.

Functions	Mitigation for previous permit/other historic use
Low functioning wetland	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Literature review revealed that no historic wading bird rookeries are located within or adjacent to the project and no federally-listed species have been documented within one mile of the project study corridor.	Remnant wetland with invasive vegetation. Minimal to no expected wildlife utilization.

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

No state or federally listed species where observed during the field review.

Additional relevant factors:

Regularly mowed/maintained to allow access to FPL power lines.

Assessment conducted by:	Assessment date(s):
David Bogardus / Frank Kahoun	8/17/2016

Form 62-345.300(1) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(a), F.A.C.

PART II – Quantification of Assessment Area (impact or mitigation)
(See Rules 62-345.500 and .600, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
SFRTA - Northern Layover/Maintenance Facility		Wetland W-2
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impacted	David Bogardus	8/17/2016

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	30% of wetland optimal ecological value. Minimal to no support fo wildlife. Majority of plant cover consists of invasive (cat-tails) and exotic (old world climbing fern, melaleuca, and Brazilian pepper) species that adversely affect functions. Location limited by railroad lines and FPL power line easement. Isolated wetland that is mowed to allow access to overhead power lines. No downstream benefits from existing wetland function.	3	2
.500(6)(b)Water Environment (n/a for uplands)	Hydrology and water quality supports minimal benefits. Isolated wetland based on seasonal conditions. Vegetation contains invasive and exotic plants including old world climbing fern which is covering wetland strata. Lack of evidence of wildlife utilization.	3	2
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Vegetative community and physical structure provide minimal benefit to wildlife. Majority of vegetation is made up of undesireable species. Wetland is located underneath power lines and is mowed/maintained to allow for access to lines. Little to no habitat support.	3	2

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.3	0.2

Delta = [with-current]
0.1

If preservation as mitigation,
Preservation adjustment factor = NA
Adjusted mitigation delta = NA

If mitigation
Time lag (t-factor) = NA
Risk factor = NA

For impact assessment areas
FL = delta x acres = 0.014

For mitigation assessment areas
RFG = delta/(t-factor x risk) = NA

Form 62-345.300(2) [effective date 02-04-2004]
Incorporated by reference in paragraph 62-345.300(3)(b), F.A.C.

APPENDIX 3

SFWMD Meeting Minutes

MEMORANDUM

TO: **Lynda Mifsud**

FROM: **Frank Kahoun**

SUBJECT: **Northern Layover and Light Maintenance Facility Pre-application Meeting**

DATE: **May 7th, 2013**

QUEST ecology

In attendance:
Frank Kahoun, Quest Ecology: FK
Barbara Conmy, SFWMD Section Leader: Natural Resource Management Section: BC
Carlos de Rojas, SFWMD Senior Supervising Engineer: CR

During a project pre-application meeting at SFWMD headquarters on 5.7.13 at 11:00 AM preliminary comments regarding wetland impacts and potential regulatory requirements based on the findings of the Northern Layover and Light Maintenance Facility Natural Resources Draft Technical Memorandum were discussed:

BC stated that although an Environmental Resource Permit (ERP) would be required, compensatory mitigation would most likely not be required due to the limited size, functionality and habitat value of the wetlands within the project area.

CR stated that drainage calculations and water quality issues would also have to be addressed and approved during the ERP process and that there was a separate meeting concerning drainage. FK responded that the project's drainage engineers would be addressing drainage issues separately from wetland impact issues in the ERP application.

United States Fish and Wildlife Service preliminary comments, based on e-mail correspondence with John Wrublik, were also addressed:

FK stated that USFWS preliminary comments were limited to project's location within the core foraging area of an active breeding colony of the endangered wood stork, and that the USFWS believes the loss of wetlands within a CFA may reduce foraging opportunities for wood storks.

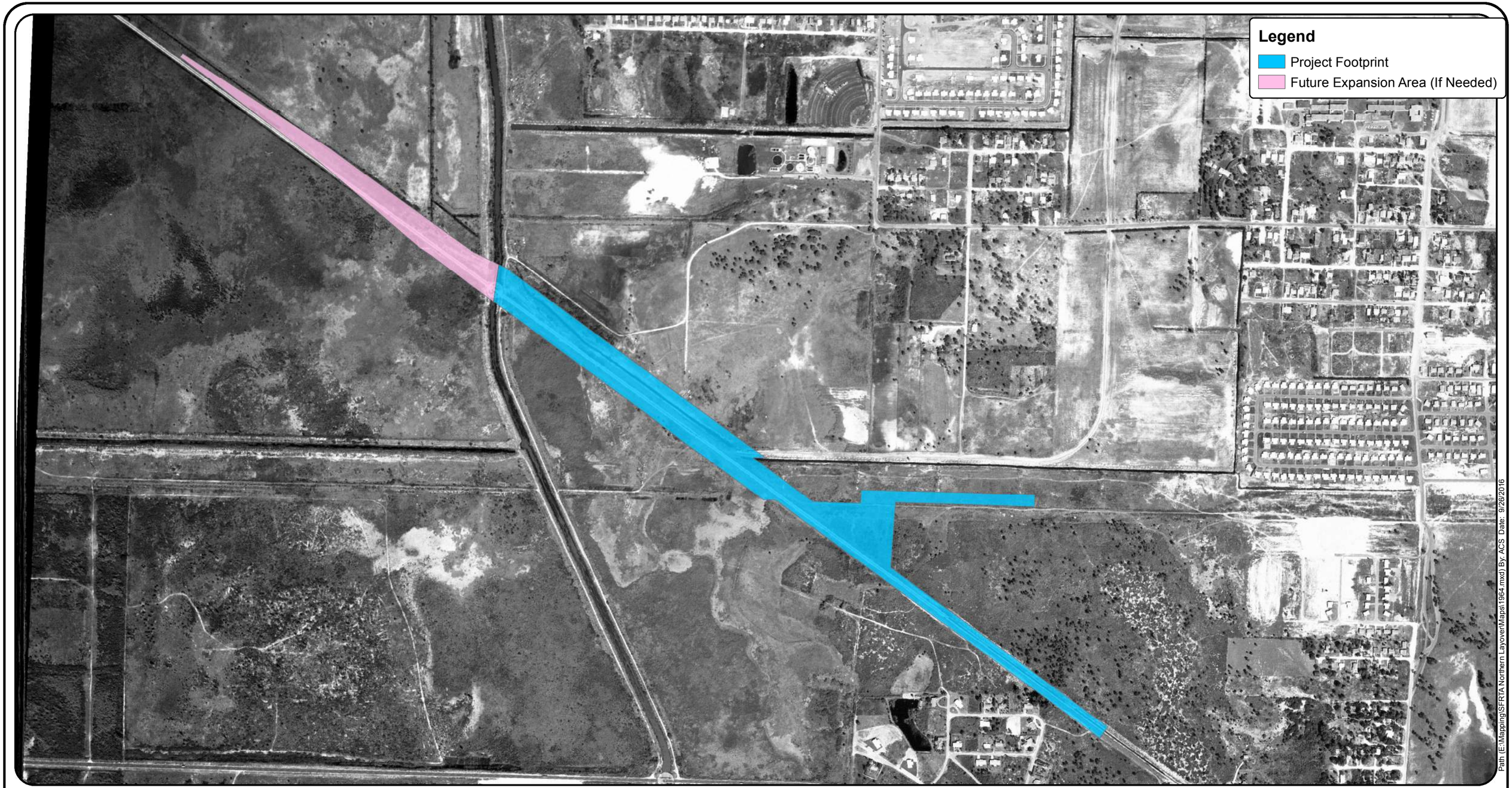
FK explained that the surface waters and wetlands within the project area were reviewed for potential CFA impacts and based on onsite project reviews, the surface waters and wetlands within the project area do not meet the definition of what typically constitutes suitable foraging habitat for the wood stork.

The meeting concluded with BC asking for a plain language (non-engineering) description of the project and its purpose ahead of the ERP application.

FK responded that the ERP process was expected but the exact timeframe for the ERP application was to be determined, and that he would revisit regulatory coordination when the timetable was more clearly defined.

APPENDIX 4.

Historical Aerial **Photos**



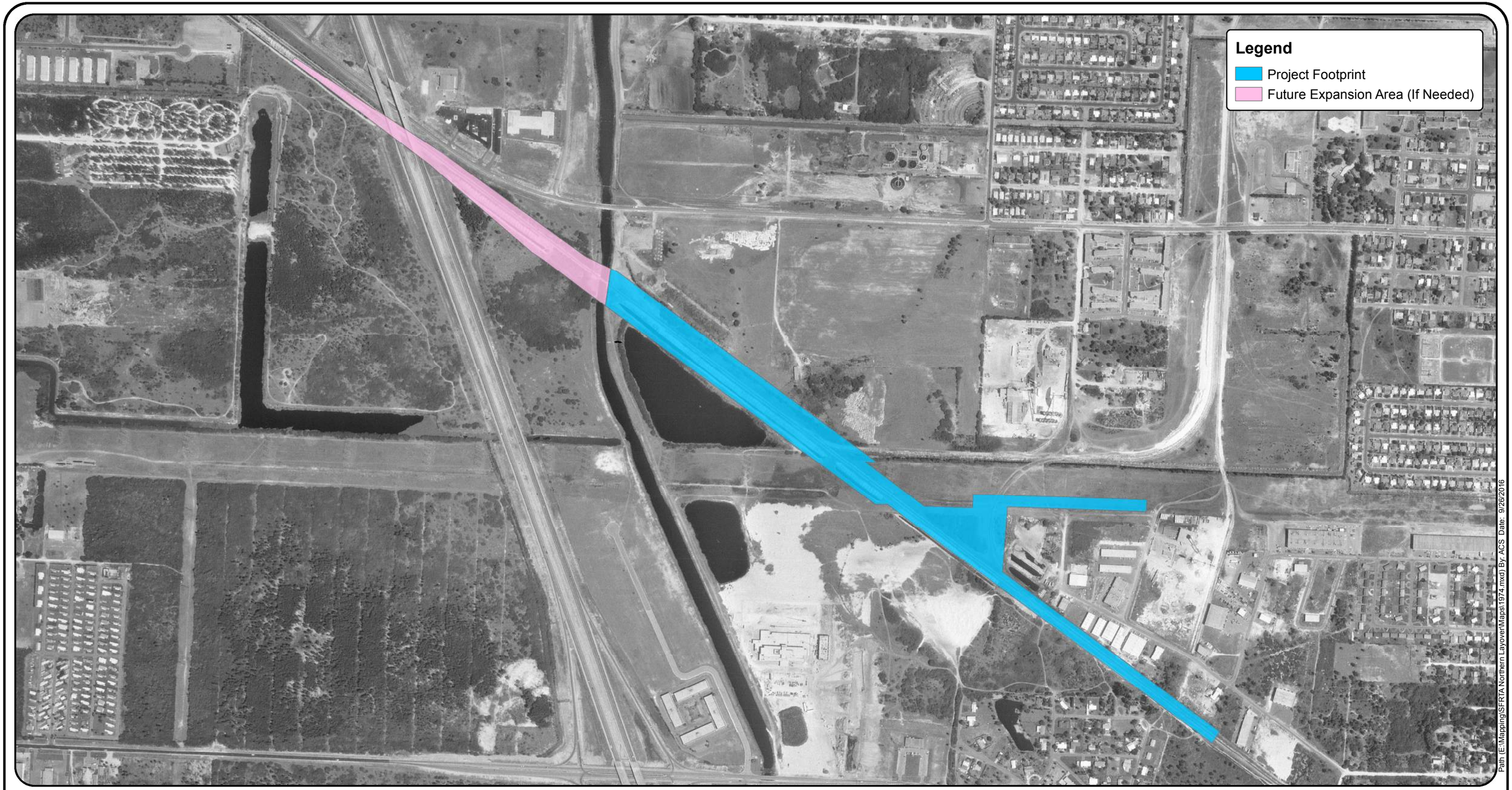
QUEST ecology

Historical Imagery - 1964

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet



QUEST ecology

Historical Imagery - 1974

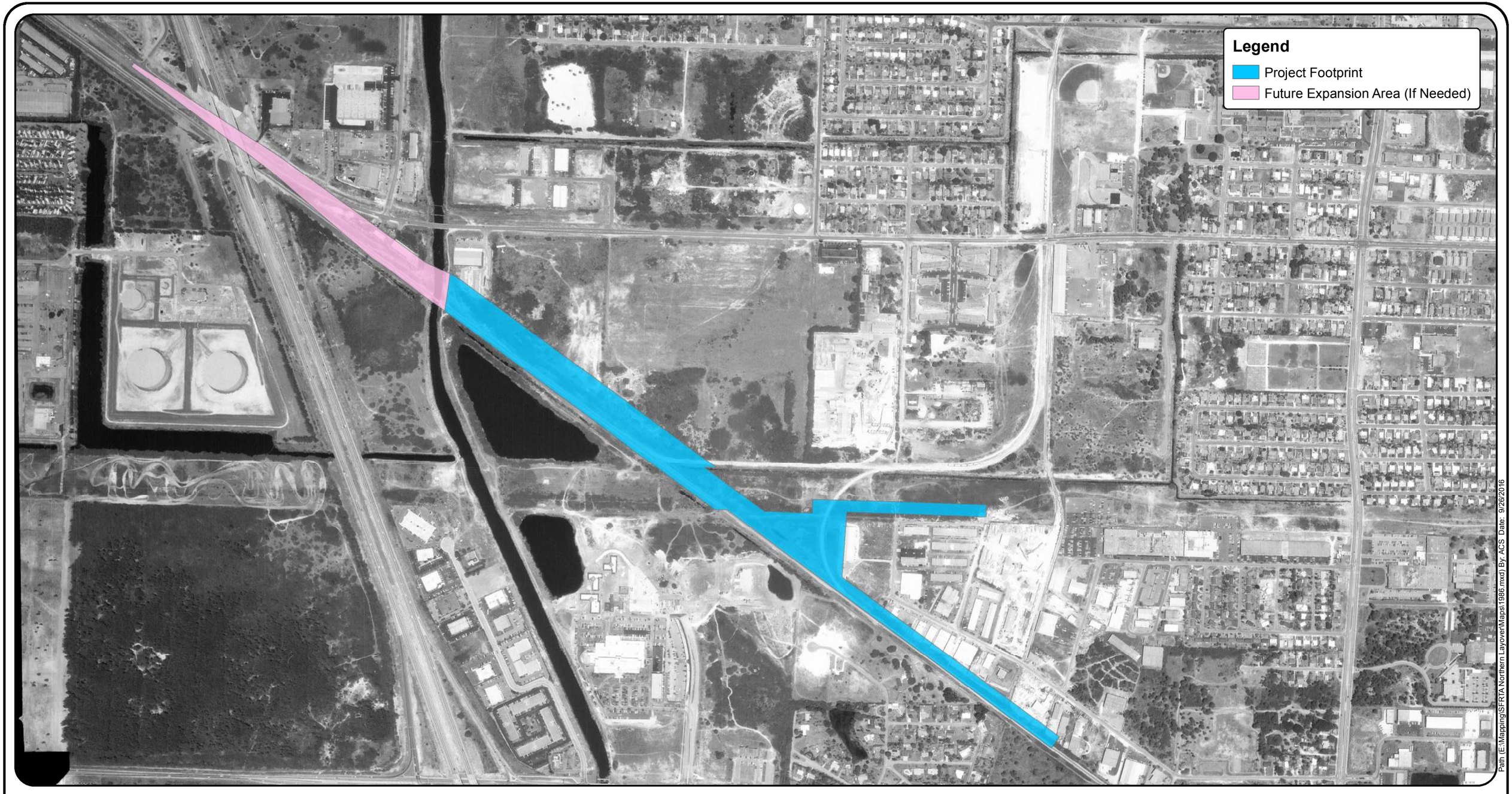
SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet

EXHIBIT 3.1

APP. NO. 180404-441



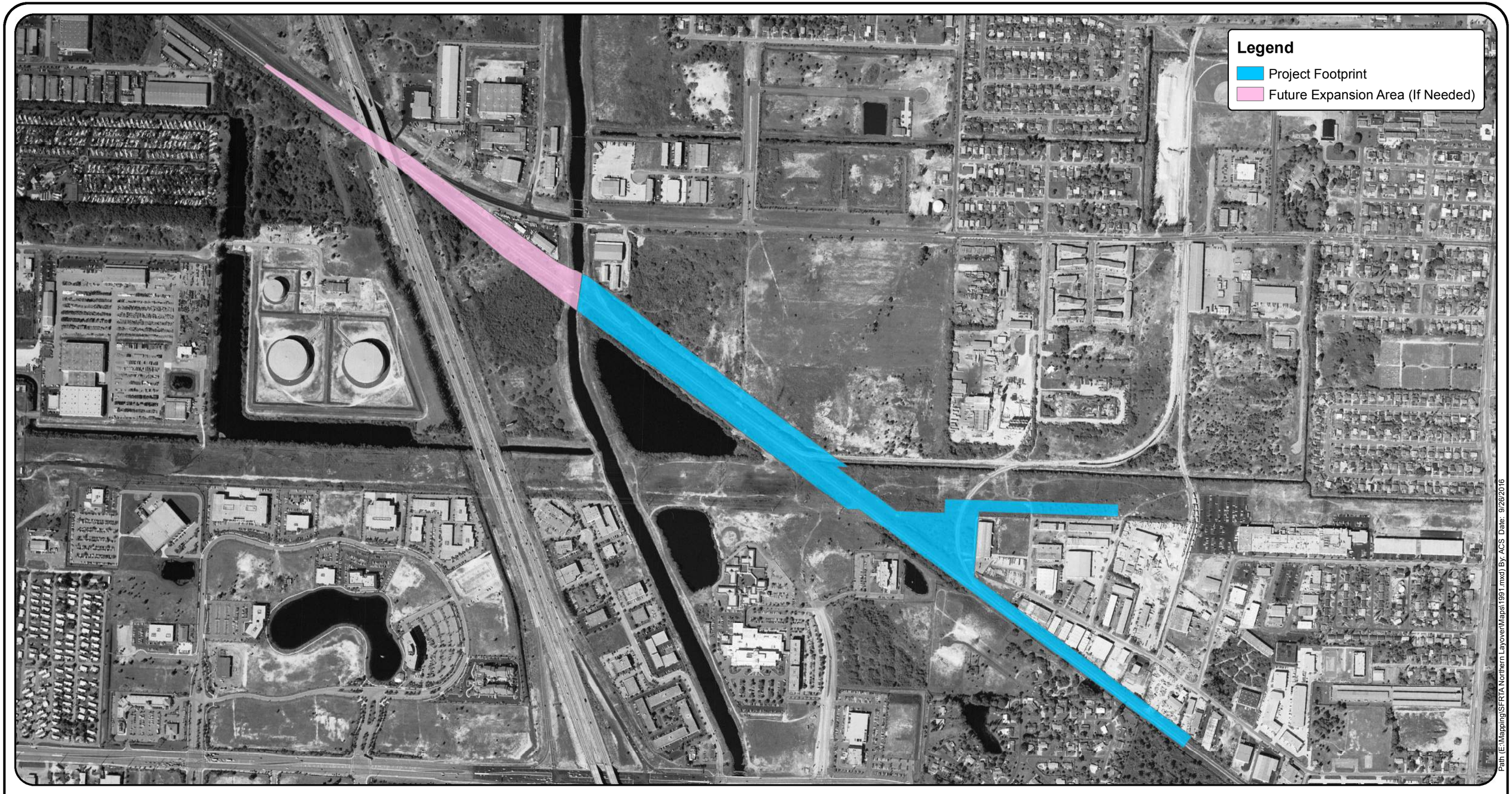
QUEST ecology

Historical Imagery - 1986

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet



QUEST
ecology

Historical Imagery - 1991

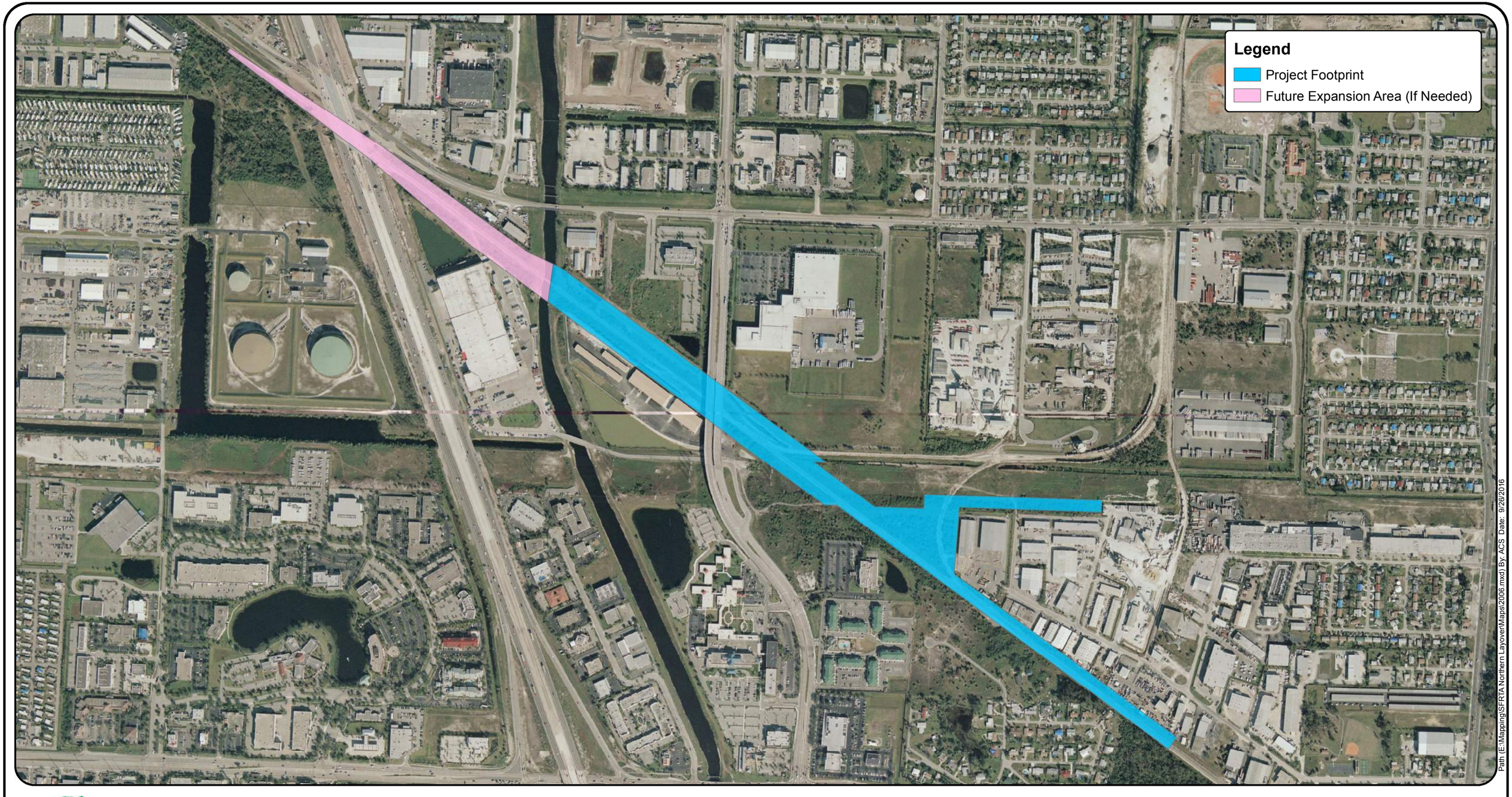
SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet

EXHIBIT 3.1

APP. NO. 180404-441



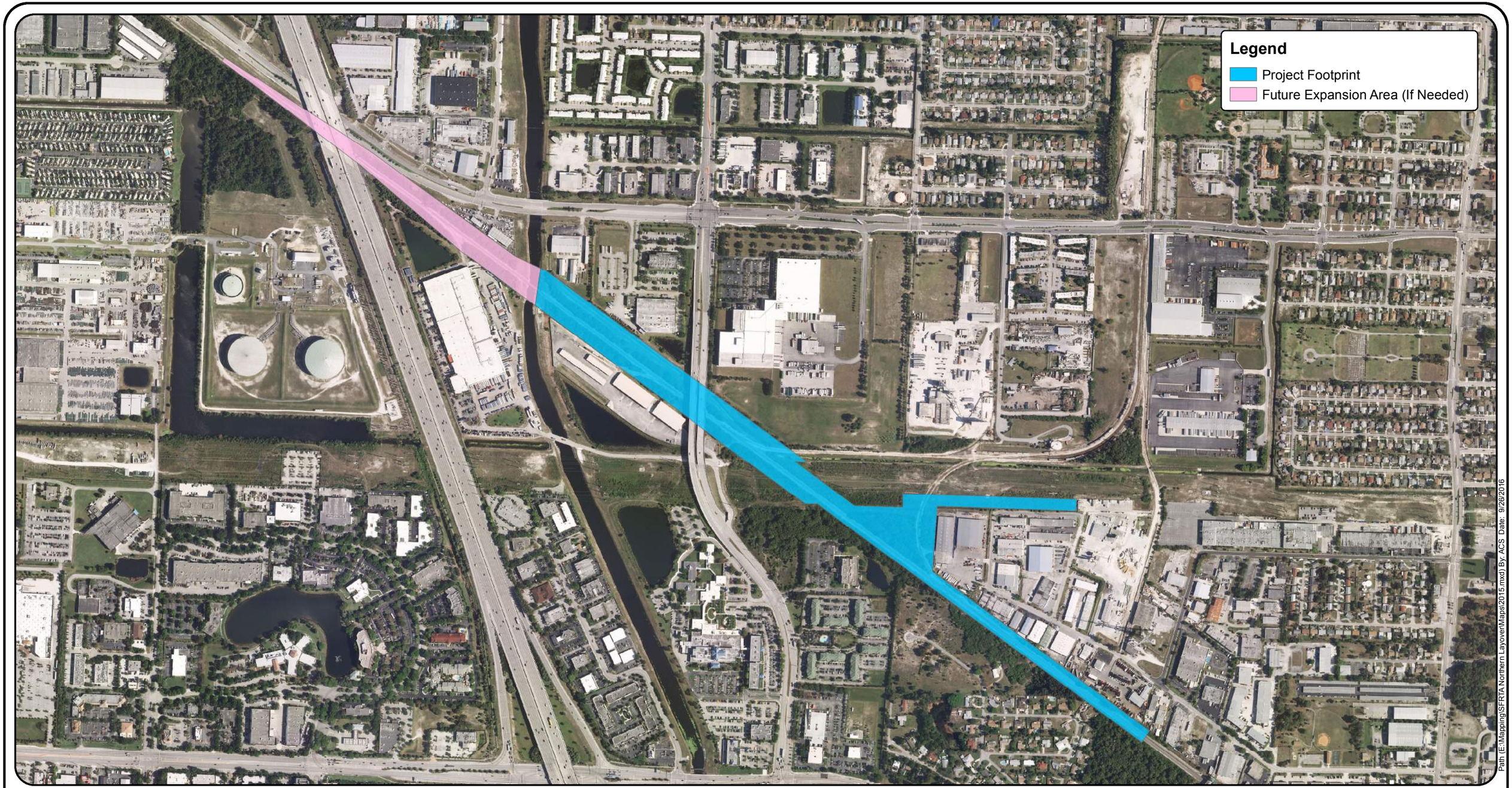
QUEST ecology

Historical Imagery - 2006

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet



Path (E:\Mapping\SFRTA Northern Layover\Maps\2015.mxd) By: ACS Date: 9/26/2016

QUEST ecology

Historical Imagery - 2015

SFRTA - Northern Layover & Light Maintenance Facility
Palm Beach County, Florida

N
W E
S

0 500
Feet

EXHIBIT 3.1

APP. NO. 180404-441