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

Contamination Screening Evaluation Report

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)

April, 2017

Stantec
300 Primera Drive
Suite 300
Lake Mary, FL 32746

HNTB Corporation
610 Crescent Executive Court
Suite 400
Lake Mary, FL 32746

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1.0 Summary of Project

The Florida Department of Transportation (FDOT) is conducting an update/reevaluation for 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 (2002)].

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 Ultimate project. The I-4 Ultimate project consists of reconstruction, to include new express lanes, for the section of I-4 which extends from west of SR 435 (Kirkman Road) to east of SR 434, and began construction in early 2015. The current I-4 BtU project 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 ½ 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 Contamination Screening Evaluation Report (CSER) was prepared for Segment 5 of the I-4 BtU PD&E Reevaluation Study. The purpose of this report is to update the original PD&E study by documenting any changes that have occurred since the studies were completed. This includes changes in the current proposed concept being analyzed (the original design showed six general use lanes (GUL) and four special use lanes (SUL) for high occupancy vehicles (HOV)/single occupant through vehicles (SOV)), changes to the PD&E process, and changes in the environmental regulations that have occurred in support of the PD&E reevaluation of the Segment 5 portion of the 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)].

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 ten 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 **Figure 1.1**. 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 interchange at US 27.

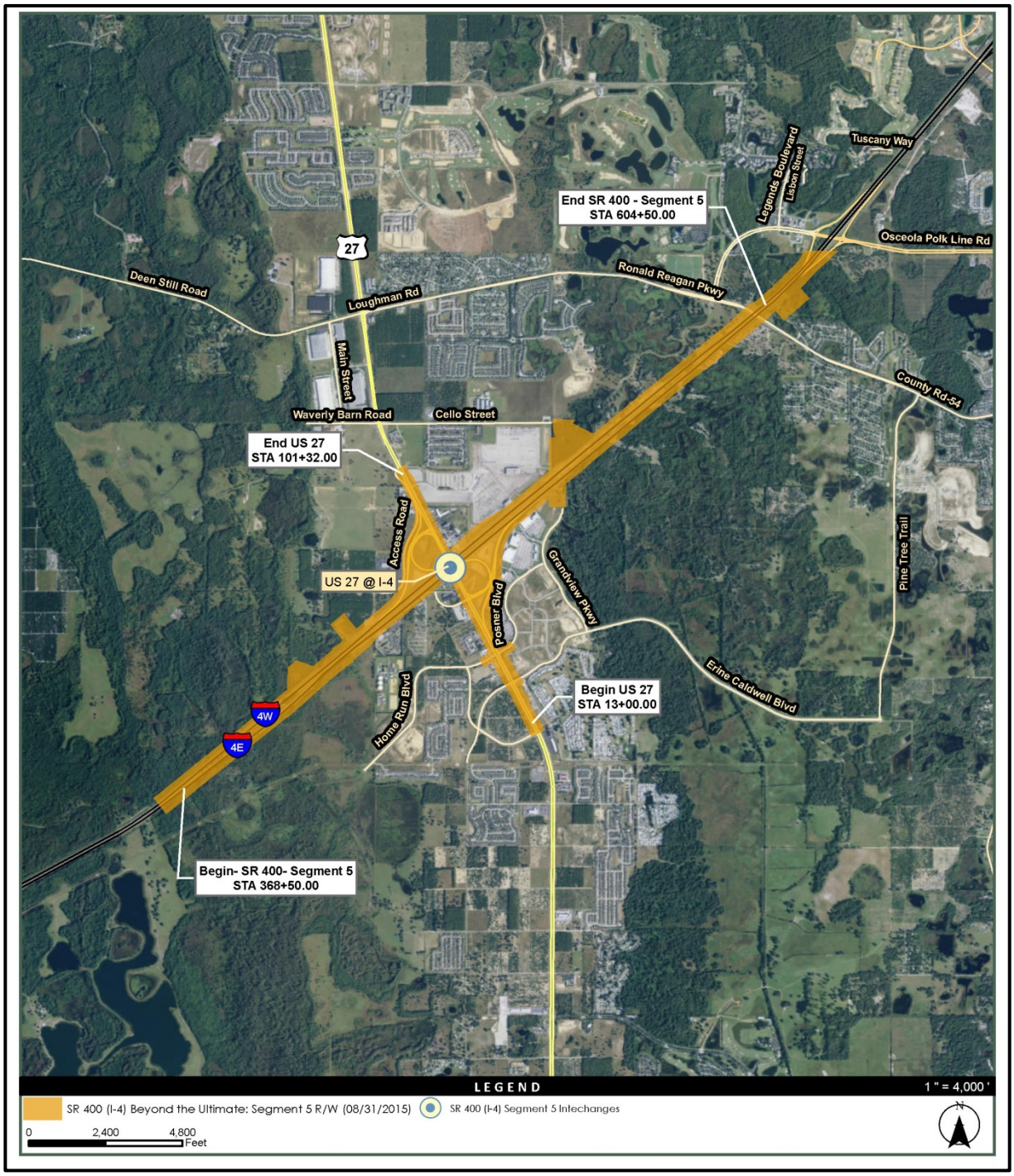


Figure 1.1 - Project Location Map

The proposed improvements to I-4 include widening the existing six lane divided urban interstate to a ten lane divided highway. Generally, the typical section will be consistent throughout Segment 5 and will have three 12-foot general use travel lanes with 12-foot inside and outside shoulders (10-foot paved outside) and two 12-foot express lanes with 10-foot inside and 12-foot outside shoulders in each direction. A 2-foot barrier wall between the adjacent shoulders will separate the express lanes from the general use lanes. The typical section includes a 44-foot rail corridor in the median within a minimum 300 foot right of way (ROW). **Figure 1.2** illustrates the proposed mainline typical section for I-4 Segment 5.

2.0 Purpose and Need

The proposed improvements to I-4 include widening the existing six lane divided urban interstate to a ten 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 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 Greeneway/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 Studios, Sea World, the International Drive Resort Area and downtown Orlando. Since I-4 is the only north-south 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. 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.

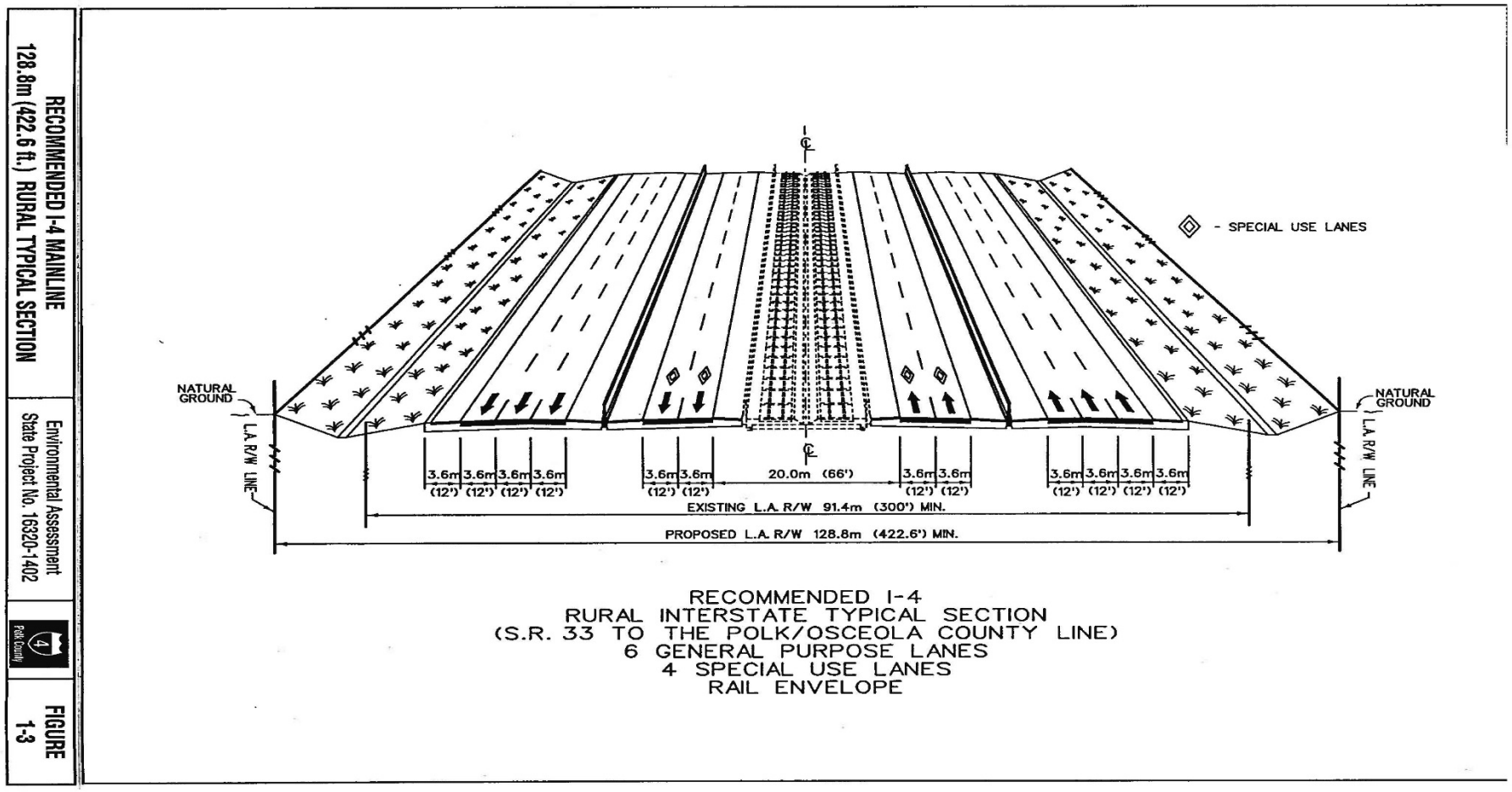


Figure 1.2 – SR 400 (I-4) 1998 EA/FONSI Typical Section

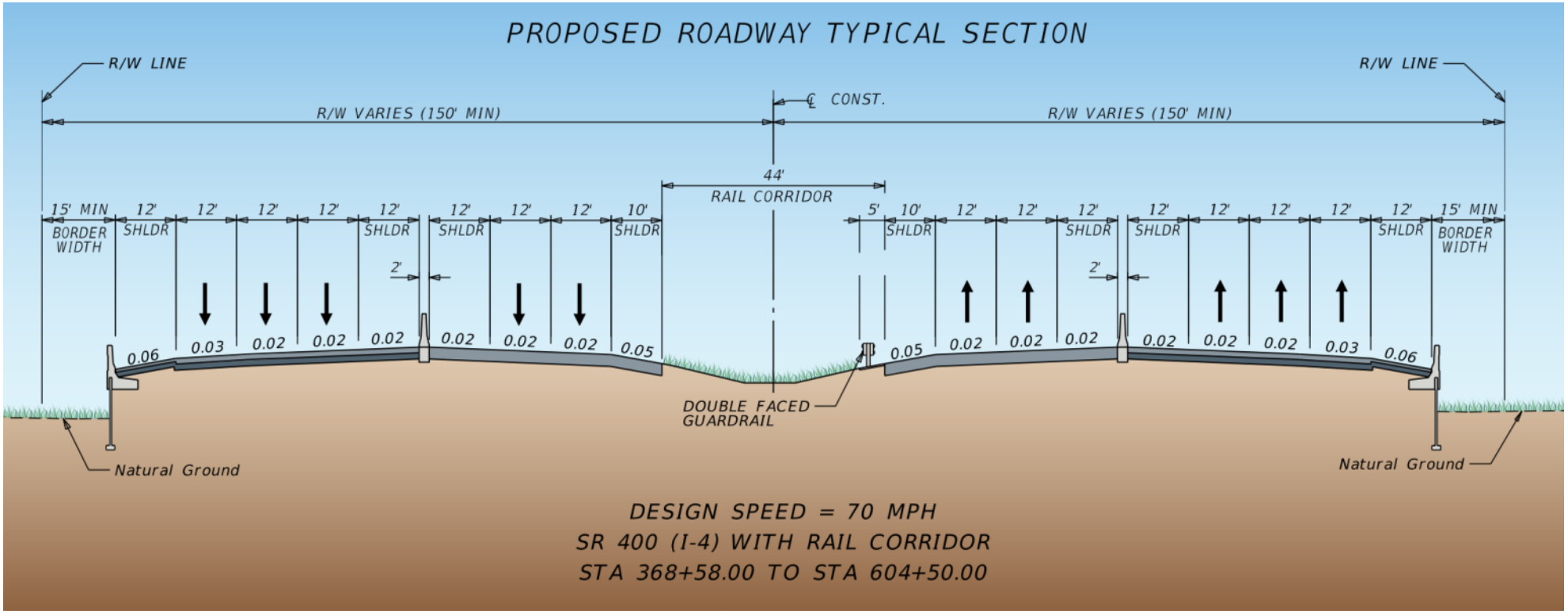


Figure 1.3 – SR 400 (I -4) Segment 5 Proposed Typical Section (6+4 with rail envelope)

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 1.2**) 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 general use and four express lanes (**Figure 1.3**). 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 general use lanes 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 general use travel lanes by two 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 Orlando metropolitan 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.

The purpose of this report is to present the findings of a contamination screening evaluation for the proposed improvements. This report identifies and evaluates known or potential contamination problems, presents recommendations concerning these problems, and discusses possible impacts to the proposed project. The discovery of all contamination problems as early in the project development process as possible is done in order to limit or avoid FDOT liability, establish remediation costs, prevent delay claims during construction, identify appropriate worker safety protocols, and supply information for the property valuation during the acquisition process. If the discovery is early enough, the problem may be avoided entirely. If avoidance is not possible, early discovery will allow proper handling in a logical, timely manner. The FDOT can be held liable for the acquisition of contaminated properties or the exacerbation of contamination due to its activities, even if the contamination source is not acquired.

The FHWA Technical Advisory T6640.8A, dated October 30, 1987 provides the following guidelines for conducting a contamination screening:

“Hazardous waste sites are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). During early planning, the location of permitted and non-regulated hazardous waste sites should be identified. Early coordination with the appropriate Regional Office of the EPA and the appropriate State agency will aid in identifying known or potential hazardous waste sites. If known or potential waste sites are identified, the locations should be clearly marked on a map showing their relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, information about the site, the

potential involvement, impacts and public health concerns of the affected alternative(s) and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the Draft EIS. If the preferred alternative impacts a known or potential hazardous waste site, the Final EIS should address and resolve the issues raised by the public and government agencies."

A CSER is used to determine the likelihood of petroleum or other hazardous substance impacts to the project. The CSER is a requirement of the PD&E process.

This CSER, completed in accordance with Part 2, Chapter 22 (January 17, 2008 revision) of the PD&E Manual contains results from a physical site investigation of the project corridor, a limited investigation of properties along the corridor adjacent to the ROW as viewed from areas of public access, a review of Florida Department of Environmental Protection (FDEP) files, Polk County records, and available environmental databases.

This CSER is a professional opinion of the possibility of contamination impacts to the I-4 corridor resulting from direct visual observation and review of available file information compiled by others. The report is limited to conditions that existed at the time of the investigation and does not address such environmental issues as naturally occurring toxic substances in the subsurface soils, rocks, water and/or toxicity of on-site flora; toxicity of common household products, building materials or consumables; contaminants or contaminant concentrations that are not now a concern but may be under future regulations; contamination by asbestos-containing materials, radon gas, or lead in drinking water or paint.

This level of environmental investigation is limited to documented historical conditions and does not include intrusive testing or analysis of soils or groundwater to verify any suspected contamination. This report recommends whether any further investigative action may be prudent to confirm suspected contaminants. Unreported or undocumented releases, spills, or other contamination sources are not contained in this report.

Dewatering or excavation activities adjacent to known or suspect contamination sites could potentially cause a contamination plume to migrate into the ROW.

3.0 Land Use

The land use adjacent to I-4, within the proposed project limits consists primarily of commercial and services, retail, residential, and natural lands. The commercial, retail, and residential development is concentrated around the interchange with US 27. Some undeveloped natural areas are located along both sides of I-4 south of the Ronald Reagan Parkway overpass and along the western limits of the project area. Some areas to the southeast of the US 27 interchange are classified as open land, and are not currently developed. The remaining land use within the corridor is primarily pine tree plantations and citrus groves with some areas of pasture (see Land Use and Habitat Coverage Maps, **Figure A** in **Appendix A**).

4.0 Hydrologic Features

The project corridor is within Polk County, Florida and is underlain by the Upper and Lower Floridan aquifer. The Upper Floridan Aquifer is generally located from the surface to a depth of approximately 350 to 900 feet where it interfaces with the Lower Floridan Aquifer. This carbonate-rock aquifer consists of layers of limestone and dolomite. The Floridan aquifer spans most of Florida, Alabama, Georgia, and some of South Carolina (see **Figure 4.1**). The transmissivity ranges from 25,000 to 1,000,000 feet squared per day in areas where the upper confining material of the aquifer is less than 100 feet thick. Groundwater flow in this portion of Polk County is generally to the east within the Floridan Aquifer. According to the U.S.

Department of the Interior Topographic Quadrangle maps for Gum Lake, Davenport, Lake Louisa SW, and Intercession City (see Index Map Sheet in **Appendix A**), the project corridor is relatively flat at the southwestern and northeastern portions of the project area and is divided by the Lake Wales Ridge. The majority of the elevations along the southwestern and northeastern portions of the project area are around 120 feet (NGVD) above mean sea level and rises to approximately 170 feet above mean sea level at the US 27 interchange. The majority of the project corridor is located in an area described as having a high potential for recharge of the Floridan Aquifer.

Figure 4.1 Floridan Aquifer Map

According to the Soil Survey of Polk County, Florida (1990), the proposed project area (I-4 with 500 ft. buffer) consists of fifteen 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.

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 indiangrass, pineland threeawn, 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 indiangrass, pineland threeawn, hairy panicum, and annual forbs.

Eaton mucky fine sand, depressional (6) – 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 threeawn, chalky bluestem, fetterbush lyonia, gallberry, and low panicums.

Samsula muck (13) – 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 indiangrass, 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, waxmyrtle, 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 year. The natural vegetation consists mainly of scrub oaks, longleaf pine, and sand pine. The understory includes saw palmetto, fetterbush lyonia, tarflower, and pineland threeawn.

Placid and Myakka fine sands, depressional (25) – 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, indiangrass, bluestem, and panicums.

Basinger mucky fine sand, depressional (36) – 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) – 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, waxmyrtle, 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.

5.0 Methodology

FDOT PD&E Manual guidelines (Part 2, Chapter 22, January 17, 2008 revision) were followed to assess potential contamination. Per these guidelines, current land use and potential contaminants were identified, and all available regulatory agency records were consulted.

Stantec Consulting Services, Inc. (Stantec) conducted a detailed site inspection of the I-4 corridor and proposed pond sites in July, August, and September 2014, as well as September 2015. Prior to the site inspection, a review of the FDEP OCULUS Database was conducted to determine locations of contaminated sites. Sanborn Fire Insurance maps were not reviewed since the project area was rural in nature during the time that they were printed. The corridor was inspected along the ROW via pedestrian and vehicular survey. The survey also included a limited visual inspection of the adjacent properties and properties within ½ a mile of the roadway. Pond sites were inspected via pedestrian transects. Any observed potential hazardous or petroleum sources were noted and can be found in the Results section (**Section 6.0**). A comprehensive list of potential contamination sites is provided in **Table 1**.

Known and potential contamination sites along the I-4 project corridor were recorded on aerial maps (see Contamination Sites Maps, **Figure B**, in **Appendix A**). Photographs of properties within the 0.5 mile radius with reported contamination as well as properties with potential contamination were taken to document site conditions within the study area (see Contamination Site Photographs**, Appendix B**).

Aerial photos from 1941-2014 were reviewed to identify any potential activities that may indicate that contamination from hazardous or petroleum substance generation, storage, or transportation may have occurred within the project area. Historic aerial photographs were reviewed using the State University System of Florida, Publication of Archival Library & Museum Materials website. Examples of the aerial flights over the project corridor from 1941–1994 can be found in **Appendix C**.

This CSER incorporates the FDEP's OCULUS Database information to identify available regulatory agency information pertaining to hazardous materials. The following sources were searched for any sites with hazardous or petroleum material records and/or violations: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), Toxic Site Directory (TSD), Generators (GEN), Emergency Response Notification System (ERNS), National Priority List (NPL), Resource Conservation and Recovery Information System (RCRIS), Facility Index System (FINDS), RCRA Administrative Action Tracking System (RAATS), Registered Underground Storage Tanks (UST), Leaking Registered Underground Storage Tanks (LUST), Toxic Release Inventory (TRI), State Superfund Sites, Solid Waste Facilities, and Polk County records.

A contamination potential rating for each potential pond site is listed in **Table 2** and that of each property within the proposed project limits is listed in **Table 3** (**Section 9.0**). The contamination rating system is divided into four degrees of risk: No, Low, Medium, and High. This system expresses the degree of concern for potential contamination problems based upon the available information. Known problems may not necessarily present a high cause for concern if the regulatory agencies are aware of the situation and actions, where necessary, are either complete or are underway, and these actions will not have an adverse impact on the proposed project. Definitions of the risk ratings are as follows:

- **No risk**: This rating means that after review of available information, there was nothing to indicate that contamination would be a problem. It is possible that contaminants could have been handled on the property; however, all information indicates problems should not be expected.

- **Low risk**: This rating means that the former or current operation has a hazardous waste generator identification number, or deals with hazardous materials; however, based on all the available information, there is no reason to believe there would be any involvement with contamination in relation to the project.
- **Medium risk**: This rating means that after reviewing all available information, indications were found that identify known soil and/or water contamination and that the problem does not need remediation, is being remediated, or that continued monitoring is required.
- **High risk**: This rating means that after review of all available information, there is a potential for contamination problems. Further assessment would be required after alignment selection to determine the actual presence or absence and/or levels of contamination and the need for remedial action.

During the course of field investigations and research, interviews with available property owners, and site managers were conducted to ascertain any additional relevant information to assist with the evaluation of potential risk ratings.

6.0 Results

6.1 Corridor Land Uses

Residential (1200-1300) – These land use codes consist of areas containing medium and high density residential housing. Low density housing was not observed in the project corridor. These areas are found along adjacent roads at the US 27 and I-4 interchange, as well as along Ronald Reagan Parkway.

Commercial and Services (1400) – This land use includes numerous types of businesses in malls, strip malls and as stand-alone establishments along the corridor. It was primarily observed at the US 27 and I-4 interchange and along the adjacent roadways.

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 and along the adjacent roadways.

Professional Services (1430) – Several medical offices, dental offices, veterinary offices, and other professional offices are located along US 27 in the project corridor.

Tourist Services (1450) – There are several hotels and resorts located in the vicinity of the US 27 and I-4 interchange.

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.

Open Land (1900) – This land use consists of undeveloped land within urban areas and inactive land with street patterns but without structures. Several patches of this land use were observed in the vicinity of the US 27 and I-4 interchange.

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.

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.

Citrus Groves (2210) – Some citrus groves are located along Home Run Boulevard and US 27.

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.

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.

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

Coniferous Plantations (4410) – Some small areas of planted pine were observed along the right-of-way.

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.

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.

Cypress (6210) – Dominant vegetation consisted of cypress is present at the southern end of the project corridor.

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.

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.

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.

Roads and Highways (8140) – This land use designates all major and minor roads throughout the project corridor.

Sewage Treatment Facilities (8340) – There is a sewage treatment facility south of I-4 at Westview Road.

6.2 Site Observations

Detailed field reviews were conducted within the I-4 right-of-way and, the proposed pond sites to determine if illicit dumping had occurred. The existing and proposed pond sites were reviewed to determine if any adjacent properties had caused contamination impacts to those sites. Site reconnaissance of properties within and adjacent to the corridor up to ½ mile away included inspection and photography.

The existing unpaved right-of-way within the project corridor consists primarily of areas of maintained grass. The right-of-way is lined with intermittent patches of landscaped vegetation, as well as other smaller areas of natural vegetation. Some depressions with emergent aquatic vegetation are present to the northeast of the US 27 interchange.

The project is developing alternatives for the proposed expansion, all of which will be assumed to impact the existing right-of-way in its entirety. In order to achieve the goals of the project (expansion to 6 general use lanes plus 4 express lanes), the designers must utilize as much of the existing right-of-way as possible, though the potential for the need to acquire minimal amounts of additional right-of-way for the improvements remains. New right-of-way for pond sites will be required as the existing right-of-way does not contain sufficient areas to provide the necessary treatment and retention, along with the capacity expansions. The project right-of-way is depicted on the Land Use and Habitat Coverage Maps (see **Figure A**, in **Appendix A**).

Sixteen (16) potential stormwater management facilities and three (3) potential floodplain compensation ponds (FPC) were evaluated for this segment, eleven (11) are existing facilities which were previously permitted and are being modified or enlarged to meet the requirements of the project. Eight (8) new pond sites are proposed. All but three of the ponds / FPC sites (FPC 500C, Pond Site 505A3, Pond Site 505B2) are recommended. The proposed and existing pond sites are depicted on the Contamination Sites Map (see **Figure B**, in **Appendix A**). A contamination potential rating for each pond site within the proposed project limits is given in the description below and listed in **Table 2** (**Section 9.0**) using the same system for ranking other contamination sites as described in the preceding methodology. Contamination risk ratings are based on nearby contamination sources, regardless of the plans for the ponds. Existing ponds that are not planned to be modified may not warrant further investigation due to the presence of contamination at the pond site not having a potential impact on the project. Water table depths at pond sites could not be determined in the review of contamination plume records. Pond sites where groundwater contamination has been documented to be present may be at depths sufficiently below proposed or existing pond basins, which would decrease the risk of encountering these contaminants at the pond sites.

Pond Site 500 (Recommended)

Pond Site 500 is located west of the US 27 interchange, along the westbound roadway. This is an existing pond site, proposed to be regraded. The pond site is primarily dominated by cattails at the north end and has a mix of duck potato, torpedo grass, primrose, and Carolina willow in the shallower south end. The banks are dominated by cogon grass and weedy herbaceous species. No obvious signs of contamination were observed in the field for this site. This pond site is within the delineated Groundwater Contamination Plume #53263279 (Site #8), which is a known contamination plume from the agricultural pesticide ethylene dibromide (EDB). This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site FPC 500C

Pond Site FPC 500C is located east of the US 27 interchange, to the east of the right-of-way. This is a proposed new floodplain compensation pond. The existing site is primarily scrub live with saw palmetto in the understory with some open patches of sand with mixed herbaceous vegetation. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site FPC 500D (Recommended)

Pond Site FPC 500D is located east of the US 27 interchange, to the west of the right-of-way. This is a proposed new floodplain compensation pond. The existing site is entirely planted pines with some small fallow citrus, persimmon, cherry, scrub live oak, and weedy herbaceous species in the understory. The presence of fallow citrus indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from EDB, but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on the presence of fallow citrus trees.

Pond Site 501A (Recommended)

Pond Site 501A is located within the US 27 and I-4 interchange in the northwest quadrant. This is an existing pond site being reduced in size and regraded. The pond site is primarily maintained Bahia grass with some patches of cogon grass and planted trees for landscaping. No obvious signs of contamination were observed in the field for this site. This pond site is partially within the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site 501B (Recommended)

Pond Site 501B is located within the US 27 and I-4 interchange in the northwest quadrant. This is an existing pond site proposed to be expanded and regraded. The pond site is primarily maintained Bahia grass with some patches of cogon grass and planted trees for landscaping. No obvious signs of contamination were observed in the field for this site. This pond site is located along the northwest edge of the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site 501C (Recommended)

Pond Site 501C is located within the US 27 and I-4 interchange in the northwest quadrant. This is an existing pond site proposed to be regraded. The pond site is primarily maintained Bahia grass with some patches of cogon grass and planted trees for landscaping. No obvious signs of contamination were observed in the field for this site, but this pond site may have been historically used for citrus production based on historic aerials and nearby land use. This pond site was given a **LOW RISK** rating based on no documented contamination.

Pond Site 502 (Recommended)

Pond Site 502 is located southwest of the intersection of Frontage Road and Southwest Access Road. This is an existing pond site, no modifications are proposed. The pond site is primarily maintained Bahia grass. No obvious signs of contamination were observed in the field for this site, but a drum labeled “bleach” (Site #18) was observed approximately 50 feet south of the pond site. No signs of contamination or a release from the drum were observed. This pond site is within the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination located near the site, but further investigation may not be warranted due to there being no modifications proposed for this pond site.

Pond Site 503A (Recommended)

Pond Site 503A is located within the US 27 and I-4 interchange in the southeast quadrant. This is an existing pond site proposed to be reduced in size and regraded. The pond site is primarily maintained Bahia grass and planted trees for landscaping. No obvious signs of contamination were observed in the field for this site. This pond site is within the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site 503B (Recommended)

Pond Site 503B is located within the US 27 and I-4 interchange in the southeast quadrant. This is an existing pond site which is proposed to be enlarged and regraded. The pond site is primarily maintained Bahia grass with some patches of cogon grass and planted trees for landscaping. No obvious signs of contamination were observed in the field for this site. This pond site is within the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume

from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site 503C (Recommended)

Pond Site 503C is located within the US 27 and I-4 interchange in the southeast quadrant. This is the western half of an existing pond site which is proposed to be reduced in size and regraded. The pond site is primarily maintained Bahia grass with some patches of cogon grass and torpedo grass with some planted trees for landscaping. No obvious signs of contamination were observed in the field for this site. This pond site is within the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site 503D (Recommended)

Pond Site 503D is located within the US 27 and I-4 interchange in the southeast quadrant. This is the eastern half of an existing pond site which is proposed to be modified by being split into two ponds and regraded. The pond site is primarily maintained Bahia grass with some patches of cogon grass and torpedo grass with some planted trees for landscaping. No obvious signs of contamination were observed in the field for this site. This pond site is within the delineated Groundwater Contamination Plume #53263278 (Site #24), which is a known contamination plume from the agricultural pesticide EDB. This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site 504 (Recommended)

Pond Site 504 is located west of US 27, along the south side of Heller Brothers Boulevard. This is an existing pond site, no modifications are proposed. The pond site is primarily maintained Bahia grass. No obvious signs of contamination were observed in the field for this site. Although this pond site is located approximately 0.26 miles northwest from the nearest delineated Groundwater Contamination Plume (#53263703, Site #1), which is a known contamination plume from the agricultural pesticide EDB, it is bordered by citrus groves on three sides and the historic use of the land was likely for citrus production. This pond site was given a **MEDIUM RISK** rating based on adjacent historic citrus use and nearby contamination plume, but further investigation may not be warranted due to there being no modifications proposed for this pond site.

Pond Site 505 A3

Pond Site 505 A3 is located east of the US 27 interchange, to the west of the right-of-way. This is a proposed new pond site that is an alternative of Regional Pond 2. The existing site is entirely planted pines with some small fallow citrus, persimmon, cherry, scrub live oak, and weedy herbaceous species in the understory. The presence of fallow citrus indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from EDB, but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on the presence of fallow citrus trees.

Regional Pond 2 (Recommended)

Regional Pond 2 is located east of the US 27 interchange, to the west of the right-of-way. This is a proposed new pond that is the recommended alternative to Pond Site 505 A3. The existing site is entirely planted pines with some small fallow citrus, persimmon, cherry, scrub live oak, and weedy herbaceous species in the understory. The presence of fallow citrus indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from

EDB, but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on the presence of fallow citrus trees.

Pond Site 505 B2

Pond Site 505 B2 is located east of the US 27 interchange, east of the right-of-way. This is a proposed new pond site. The pond site is primarily used for pasture and is comprised of an open upland and forested wetland. The open upland is mostly open Bahia grass with some patches of saw palmetto, persimmon, live oak, Cogon grass, goldenrod, and Florida lupine. The wetland is dominated by pines. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Pond Site 506 (Recommended)

Pond Site 506 is located west of the US 27 interchange, west of the right-of-way. This is a proposed new pond site. The pond site is primarily used for pasture and is comprised pines with some saw palmetto in the understory. An open area comprised of Bahia grass is present at the southern portion of the site. This pond site is partially within the delineated Groundwater Contamination Plume #53263279 (Site #8), which is a known contamination plume from the agricultural pesticide ethylene dibromide (EDB). This pond site was given a **MEDIUM RISK** rating based on the documented contamination present at the site.

Pond Site FPC 506 (Recommended)

Pond Site FPC 506 is located west of the US 27 interchange, along the westbound roadway. This is a proposed new floodplain compensation pond. The pond site is currently a mix of ditches and swales with associated berms, maintained right-of-way dominated by Bahia grass, and wetlands west of the right-of-way primarily comprised of pines with areas of cypress and standing water. Vegetation in the ditches and swales is comprised primarily of cattails, Carolina willow, primrose, and broomsedge. No obvious signs of contamination were observed in the field for this site. Therefore, this pond site was given a **LOW RISK** rating.

Regional Pond 1 (Recommended)

Regional Pond 1 is located east of the US 27 interchange, to the west of the right-of-way. This is a proposed new pond site. The existing site is entirely planted pines with some small fallow citrus, persimmon, cherry, scrub live oak, and weedy herbaceous species in the understory. The presence of fallow citrus indicate that this pond site could have been used for citrus production in the past and could potentially contain contamination from EDB, but no obvious signs of contamination were observed in the field for this site and it is not located in a known EDB contamination plume. This pond site was given a **MEDIUM RISK** rating based on the presence of fallow citrus trees.

Pond Site 100 (Segment 1) (Recommended)

Pond Site 100 is located to the east of I-4, just northeast of the Ronald Reagan Parkway overpass. It is part of the I-4 Segment 1 CSER, but is included in this report as well. This pond is proposed to be expanded. The existing pond is about half open water and half cattails and is surrounded by primrose, maidencane, torpedo grass, salt bush, and wax myrtle. The banks are primarily composed of mowed Bahia grass and some cogon grass. The area just north of the pond is forested with red maple, cabbage palm, wax myrtle, and salt bush. Some discarded concrete and metal were observed in the parcel directly south of the pond site, but no debris was observed within the proposed boundary of the pond. Therefore, this pond site was given a **LOW RISK** rating.

6.3 Adjacent Properties

A total of thirty eight (38) sites or properties within 0.50 miles of the current I-4 right-of-way and proposed pond sites were identified by searches in the FDEP contamination database or by field inspections. **Table 1** lists an assigned site number corresponding with the facility name and location. The sites are numbered on the Contamination Site Maps (see **Figure B**, in **Appendix A**) and pictured in their present condition (**Appendix B**) in order of south to north, west to east.

TABLE 1 – POTENTIAL CONTAMINATION SITES LISTING

Site #	Facility Name	Location
1	Groundwater Contamination Plume #53263703	S. of US 27 interchange
2	Posner Park Chrysler Dodge Jeep Ram	42650 US 27
3	Northridge Substation and Baseball City Meter Station	42398 US 27
4	Deer Creek LTD	42749 US 27
5	Polk County Utilities Division NE Region WWTF	200 Westview Rd.
6	Racetrac #2338	43250 US 27
7	7-Eleven Food Store #21260	43332 US 27
8	Groundwater Contamination Plume #53263279	W. of US 27 interchange
9	Tropicana Resort Hotel	43420 US 27
10	Boardwalk Warehouse Parcel 1, Busch Properties	Broad Way
11	I-4 Auto Truck Plaza	I-4 and US 27
12	BP, formerly Quality/Amoco #117	43568 US 27
13	FDOT Right-of-Way, formerly Hardee's Restaurant	43554 US 27
14	Florida Novelty Works Property	S.W. Access Rd. (5005 US 27)
15	Vacant Parcel, formerly Chevron #47333, John's Mini Mart	5025 US 27
16	Former Site of Exxon RAS #45536 and Exxon #5536	5033 US 27
17	Baseball City Sports Complex, Posner Park	300 Stadium Way
18	Undeveloped Parcel, Barnum City Grove 3 LLP	Fort Summit RV Camp
19	Bob Evans Restaurant	43700 US 27
20	Verizon Florida Haines City North	Access Drive Northwest
21	Quality Inn	43824 US 27
22	Four Corners Shell, formerly Star Enterprise	43750 US 27
23	Marathon Baseball City	43804 US 27
24	Groundwater Contamination Plume #53263278	I-4 and US 27
25	Jarret Gordon Ford	2600 Access Rd. N.W.
26	Kenan Transport Spill	I-4 Exit 23 Eastbound Exit Ramp
27	Target Store #2366	5000 Grandview Pkwy.
28	Elite Nails & Spa	4806 Grandview Pkwy.
29	Sunoco, Sunshine Food Mart #296	44009 US 27
30	Chevron Davenport #154	44039 US 27
31	Polk County Utilities NE Lift Station #106	2600 North Frontage Rd.
32	JC Penney	6200 Grandview Pkwy.
33	7-Eleven Food Store #16188	44249 US 27

Site #	Facility Name	Location
34	Ritchie Bros. Auctioneers, Focus 4 Inc.	700 Ritchie Rd.
35	Waverly Grower Co-op Anderson #402	Waverly Barn Rd.
36	Polk County Fleet Management Dunson 151	1300 Dunson Rd.
37	Lift Station with Diesel Powered Emergency Generator	3701 Ronald Reagan Pkwy.
38	Polk County Utilities Booster Station Chemical Building	2150 CR 54

***NOTE:** Information regarding these facilities was obtained from the FDEP files and available databases. This information and limited visual inspection of these facilities was used to determine the contamination ratings in **Table 3** (**Section 9.0**).

6.4 Regulatory Agency Review

A records review was conducted for any known contamination sites via the FDEP OCULUS electronic database site. Using the FDEP Map Direct database and field verified business names and addresses, available information for each site was reviewed to determine the nature of hazardous material(s) involvement. Records were reviewed for materials manufactured, stored, generated, or transported on the site. Each identified site will be discussed, if sufficient historical records were found, in terms of whether contamination or violations have occurred on the site, the extent of contamination present in the soil and/or groundwater, groundwater direction, and clean-up status of any known contamination issues. Photographs of all potential contamination sites are provided in **Appendix B.** Site diagrams including direction of groundwater flow for sites with known contamination are provided in **Appendix D**, where available.

Site 1 – Groundwater Contamination Plume #53263703 – The contaminant associated with this plume is the agricultural pesticide ethylene dibromide (EDB), which is usually associated with agricultural citrus production. According to FDEP Map Direct, the contamination plume is approximately 0.26 miles southeast of Pond Site 504 at its closest point to the project. This large plume begins approximately 1.42 miles southeast of where US 27 crosses over I-4, continuing south and west for approximately 7 miles (see **Appendix A**, **Figure B** for location). The majority of the area identified as a plume is currently being used for citrus production. This plume is rated **LOW RISK** due to the delineated area of the plume not being located within the right-of-way or pond sites.

Site 2 – Posner Park Chrysler Dodge Jeep Ram (no FDEP #s found) – No records were found for this automotive dealer and service center located at 42650 US 27. Automotive service centers typically use and store various petroleum products and ethylene glycol. The facility was built in 2011, and documentation regarding its status as a generator of hazardous waste in association with its service facility is unavailable at this time. This site is rated **LOW RISK** due to it not having any records or observed signs of contamination, and it is located approximately 0.25 miles south of Pond Site 504 at its closest point to the project. This site has also been identified as being partially within Groundwater Contamination Plume #53263703 (Site #1) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future, and the depth of planned construction activities reach the impacted groundwater.

Site 3 – Northridge Substation and Baseball City Meter Station (no FDEP #s found) – No records were found for these utility installations located at 42398 US 27. The Duke Energy Substation #0516 Northridge consists of a fenced gravel area with various transformers and electrical components. Substations may contain hazardous materials, including lead as part of their operation. The Baseball City Meter Station (Gulfstream Natural Gas System Station #7809) is a mainline valve station located to the north of the Northridge substation in a fenced gravel area. No obvious signs of contamination were visible during a site visit. Although this site is close (0.06 miles southeast) to Pond Site 504, it is rated **LOW RISK** due to it not having any records or observed signs of contamination.

Site 4 – Deer Creek LTD (53/8943959) – This RV resort and golf course is located at 42749 US 27. Two 1,000 gallon capacity ASTs (one for diesel fuel, one for gasoline) were installed at the site's maintenance building in 1989 for fueling maintenance equipment. There have been no reported discharges or violations associated with these ASTs. Golf courses have the potential to be sources of contamination because of the historical use of various pesticides, herbicides, and fertilizers that may now be considered hazardous, but records of contamination regarding this golf course were not found. This site is rated **LOW RISK** due to there being no reported contamination issues and its distance (0.41 miles southeast to the golf course and 0.61 miles southeast to the maintenance building) from the right-of-way and its distance (0.19 miles east to the golf course and 0.43 miles northeast to the maintenance building) from Pond Site 504.

Site 5 – Polk County Utilities Division NE Region WWTF (53/9803286) – This waste water treatment facility is located at 200 Westview Road. A 6,000 gallon capacity AST for use with a diesel powered emergency generator that also has a small dispensing unit was installed at the site in 2000. Violations regarding the release detection devices not being tested annually and improper record keeping were recorded in 2006, but these violations did not result in a discharge. The original AST was closed and removed in February 2011, and was replaced with two 10,000 gallon capacity ASTs for use with two diesel powered emergency generators. No violations have been recorded for the new ASTs and the site was in compliance as its most recent inspection in March 2013. This site is rated **LOW RISK** due to no reported discharges and its distance (0.13 miles southeast) from the right-of-way. This site has also been identified as being within Groundwater Contamination Plume #53263279 (Site #8) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 6 – Racetrac #2338 (53/8731911) – This LUST gasoline service station is located at 43250 US 27. Three 12,000 gallon capacity USTs for gasoline and one 20,000 gallon capacity UST for diesel fuel were installed at the site in 1986. A discharge was reported in March 1988, when an estimated 5,000 gallons of unleaded gasoline was released from a split in the underground piping. The site was given a priority ranking score of 63 due to its proximity to drinking water wells. Approximately 100 gallons of free product was recovered from the monitoring wells following the discharge between August 1989 and January 1990. Another discharge was reported in November 1990, when a rupture of a filter attached to the dispenser assembly released approximately 400 gallons of diesel fuel. Approximately 40 tons of contaminated soil were removed from the site in the area of the discharge three days after it was reported. An additional 57.36 tons of contaminated soil were removed from the site in January 1991. Air sparging and soil vapor extraction were used for remediation between October and December 2002. Groundwater is typically over 60 feet below the surface at this location and generally flows to the east according to a Supplemental Site Assessment Report (2004) as well as other relevant reports. Post remediation monitoring showed that contamination levels eventually dropped below target levels, leading to a No Further Action status being accepted for the 1988 and 1990 discharges in January 2008. The USTs were removed and replaced with one 20,000 gallon capacity and one 12,000 gallon capacity USTs for unleaded gasoline and a 12,000 gallon capacity UST for diesel fuel in January 2010. The former USTs were reportedly in good condition at the time of their removal, but the site did not properly alert authorities to their closure/removal activities, resulting in several violations. There have been no recorded violations or discharges associated with the new USTs, but the site had minor violations for having water in the spill containment and two diesel dispensers with small pipe leaks as of its most recent inspection in April 2014. Even though relatively high volume discharges of contamination occurred in the past and the site was recently out of compliance, this site is rated **LOW RISK** due to the source removal and remediation activities that were conducted, both recorded discharges received No Further Action status, the reported direction of groundwater flow, and the site's distance (0.20 miles south) from the right-of-way. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this

should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 7 – 7-Eleven Food Store #21260 (53/8623988) – This LUST gasoline service station is located at 43332 US 27. Three 10,000 gallon capacity USTs were installed at the site in 1979. One UST was originally used for storing leaded gasoline, but was later converted to unleaded gasoline storage, which is what the other two were used for as well. A discharge was reported in 1987 when testing at the site found contamination, but the source and volume of the discharge was unknown. The site was given a priority ranking score of 60 due to its proximity to drinking water wells. However, groundwater is typically at a depth greater than 60 feet at this location and no groundwater contamination above the acceptable limit was found. The USTs were closed and replaced with two 10,000 gallon capacity USTs for unleaded gasoline in 2004. Approximately 347 tons of contaminated soil was removed from the site during the UST replacement. Soil samples from the periphery of the excavation revealed no contamination, leading to the site being accepted for No Further Action status in May 2007. There have been no recorded violations at the site since the new USTs were installed and it was in compliance as of the most recent inspection in April 2014. This site is rated **LOW RISK** due to the extensive source removal that was conducted for its only reported discharge, No Further Action status was accepted for the discharge, the site being in compliance as of its most recent inspection, and its distance (0.17 miles south) from the right-of-way. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 8 – Groundwater Contamination Plume #53263279 – The contaminant associated with this plume is the agricultural pesticide EDB, which is usually associated with agricultural citrus production. According to FDEP Map Direct, the contamination plume encompasses approximately 0.75 miles of the current right-of-way and includes a small portion of the westbound onramp to I-4 from US 27. The plume begins approximately 0.34 miles southwest (west) of where US 27 crosses over I-4, continuing west for another 0.75 miles of the right-of-way in a southwesterly direction (see **Appendix A**, **Figure B** for location). Some portions of the area identified as the plume are currently being used for citrus production, and a large dilapidated building, possibly a historic nursery, was located in the northwest portion of the delineated plume. No records were found for the approximate depth to water table within this plume. A total of two additional identified contamination sites are already located within this plume, but the plume should have no impact on the project at these other sites in addition to any contamination issues they may already have. This plume is rated **MEDIUM RISK** due to the potential for contamination to be present within and adjacent to the right-of-way and the depth to the water table is unknown.

Site 9 – Tropicana Resort Hotel (no FDEP #s found) – No records were found for this hotel located at 43420 US 27. A tote filled with an unknown dark liquid was observed being stored outside in the parking area to the southwest of the building. No staining or evidence of a discharge from this tote was evident at the time of the site visit. Despite its proximity (0.06 miles southwest) to the right-of-way, this site is rated **LOW RISK** due to there being no observable evidence or records of a release of contamination. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 10 – Boardwalk Warehouse Parcel 1, Busch Properties (53/9800885) – This vacant parcel is listed as being located at Broad Way, to the east of Posner Boulevard and south of Main View Drive according to its placement on FDEP's Map Direct. Only one record was found for this site, which was the registration for a 550 gallon capacity used oil UST that developers became aware of in 1998. There is an attached letter to the registration document stating their intention to have the UST

properly closed and removed shortly after it had been discovered. This vacant parcel was previously part of the Circus World and then Boardwalk and Baseball theme parks, but is now part of the Posner Park Development. The parcel is bounded by Royals Way to the southwest, an un-named road to the southeast, Posner Boulevard to the west, Broad Way to the east, and Main View to the north. Although the records regarding this site are vague, it is rated **LOW RISK** due to there being no reported or observed contamination, removal of the used oil UST when it was discovered, and the site's distance (0.23 miles southeast) from the right-of-way. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 11 – I-4 Auto Truck Plaza (53/8628441) – This former UST site is listed as being located at I-4 and US 27, but the record does not give an address. Based on available documentation, this site was located behind (west) of the BP station (Site #11). Site diagrams and an approximate layout of the site are located in **Appendix D**. Based on registration records, nine USTs were installed at this site between 1968 and 1972. These USTs consisted of a 6,000 gallon capacity tank for leaded gasoline, two 10,000 gallon capacity tanks for unleaded gasoline, two 10,000 gallon capacity tanks for diesel fuel, a 2,000 gallon capacity tank for diesel fuel, two unused 2,000 gallon capacity tanks, and a 550 gallon capacity tank for used oil. All of the USTs were removed in 1991, but there are no closure or removal reports available. There are no records of any discharges or violations at this site. The approximate area where this station used to be located is now used for rental truck parking and a used grease dumpster. Some discarded household debris was observed in this area, including empty automotive fluid containers. Minimal staining was evident on the asphalt where the rental trucks were parked, but there were no obvious signs of a significant discharge. Although there are no reported discharges of contamination and it has not been an operational gasoline service station since 1991, this site is rated **MEDIUM RISK** due to its proximity (0.06 miles west) to the right-of-way, lack of detailed records regarding tank closure assessments, and evidence of some discarded debris. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 12 – BP, formerly Quality/Amoco #117 (53/8840533) – This closed LUST gasoline service station that most recently was a BP is located at 43568 US 27. Three 10,000 gallon capacity USTs for unleaded gasoline and a 10,000 gallon capacity UST for diesel fuel were installed at the site in May 1988 when it was a Hop-n-Save. There are no registration records for tanks prior to 1988, but a discharge was reported in September 1988 during the construction of the restaurant that is located at the site. According to available records, an abandoned diesel pump island had been located at the northern edge of where the restaurant was being built and contaminated soil was discovered when construction began. Subsequent testing found that soil contamination levels were below the acceptable limits of contamination and the groundwater is typically over 60 feet below the surface at the site and was not found to be contaminated. This led to the discharge receiving No Further Action status in October 1990. Several violations including having petroleum contacted water in the sumps and a small leak in the diesel dispenser lines were recorded prior to the next reported discharge but were not attributed to a specific release. In February 2005, a discharge was reported from an unknown source with an unknown volume based on testing. The USTs were removed in March 2005, along with approximately 1,041 tons of contaminated soil and installed two new 20,000 gallon capacity USTs (one for unleaded gasoline and one compartmentalized tank for unleaded gasoline and diesel fuel). Subsequent testing found no contamination levels above the target levels, leading to the discharge being accepted for No Further Action status in April 2005. An Incident was reported in April 2012 when a spill bucket for gasoline was observed to have a large crack in it. Soil samples taken during the spill bucket replacement did not indicate that a release had occurred, and a discharge was not reported. Despite its proximity (0.03 miles west) to the right-of-way, two reported discharges, and

a recent incident, this site is rated **LOW RISK** due to the site no longer being an active gasoline service station, extensive source removal conducted during the 2005 UST replacement, No Further Action status was accepted for both discharges, and the 2012 spill bucket incident did not result in a discharge. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 13 – FDOT Right-of-Way, formerly Hardee's Restaurant (53/8623504) –This closed site that is now part of the interchange of I-4 and US 27 was located at the eastbound onramp from northbound US 27. Records indicate that three USTs of an unknown size (one containing leaded gasoline, one containing unleaded gasoline, and one containing diesel fuel) were removed from the site in 1984, indicating that the site was likely used as a gasoline service station prior to it being a Hardee's Restaurant. Based on available aerials, this restaurant was located here until the I-4 and US 27 interchange was expanded in 2004. There are no records of any contamination issues associated with this site, but there are also no documents indicating that any contamination testing was done. Although there are no reported discharges of contamination, this site is rated **MEDIUM RISK** due to it being within the right-of-way, USTs were formerly present at the site, and lack of tank closure assessment information. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for ethylene dibromide EDB.

Site 14 – Florida Novelty Works Property (53/9804516) – This site is a vacant broken asphalt and shell rock parking area that is located at Southwest Access Road, behind a the BP gasoline station (Site #12), a closed fireworks store (Site #14), and the Grand China Buffet Restaurant. Its historic address was 5005 US 27. In September 2001, a semi-truck was parked at the parcel when it was broken into and vandalized during the night. The vandalism included the puncture of a fuel tank, releasing approximately 120 gallons of diesel fuel to the parking area. Based on available records, an emergency spill response crew arrived at the site the following morning but ceased cleanup activities upon the discovery that the owner of the parcel did not have insurance or the money needed for cleanup. A Site Assessment Report was not prepared on time, leading to enforcement and fines being brought against the owner. A Limited Site Assessment Report (2007) was finally conducted, which found no contamination above the acceptable limits in the soil where the spill had occurred. These findings led to a No Further Action status being accepted in April 2008. There are no records that indicate any cleanup or source removal has taken place at this site. Even though this site has received a No Further Action status for its only reported spill, it is rated **MEDIUM RISK** due to there being no record of source removal being conducted at the site and its proximity (0.06 miles west) to the right-of-way. An overview of the site and the extent of the spill are available in **Appendix D**. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 15 – Vacant Parcel, formerly Chevron #47333, John's Mini Mart (53/8623306) – This former UST site is listed as being located at 5025 US 27. There are no records showing the address of the site under the current numbering system for US 27. Registration records indicate that three 10,000 gallon capacity USTs for unleaded gasoline, a 10,000 gallon capacity UST for diesel fuel, and a 1,000 gallon capacity UST for used oil was installed at the site in 1982 and removed in 1990, but no tank closure assessment documents were found. There are no records of any contamination violations or discharges at the site. The site is currently comprised of a vacant store that was most recently used to sell fireworks and an open grassy area to its north. Although there are no reported discharges of contamination and it has not been an operational gasoline service station since 1990, this site is rated **MEDIUM RISK** due to its proximity (0.03 miles west) to the right-of-way and lack of tank closure assessment information. This site has also been identified as being within Groundwater Contamination Plume

#53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 16 – Former Site of Exxon RAS #45536 and Exxon #5536 (FLD984185561, 53/8624110) – This former gasoline service station was historically located at 5033 US 27. The former site is now where Southwest Access Road intersects with US 27 along with a small portion of vacant property at the southwest quadrant of this intersection. The site was registered as a small quantity generator in 1990, but later changed to a conditionally exempt small quantity generator is 2000. There are no records of any hazardous waste contamination discharges at this site. Two 6,000 gallon capacity USTs and a 10,000 gallon capacity UST were installed at the site in 1981 for storing unleaded gasoline. A 1,000 gallon capacity used oil UST was also installed at the same time. A discharge was reported in 1988 when petroleum vapors were encountered in the observation wells, but the cause and volume of the discharge was unknown. The site was originally given a priority ranking score of 40, but was later changed to 60. Another discharge was reported in 1994 when a puncture in the used oil UST was discovered while performing a tightness test. Based on available records, no source removal or remediation activities were conducted at this site and there are no records of the USTs being closed or removed. Soil samples in 2000 and 2001 showed all contamination levels to be below acceptable limits. Groundwater samples also showed contamination levels to be below acceptable limits, but some subsequent groundwater samples could not be obtained due to the water table being deeper than the limits of the sample equipment. The site was given No Further Action status in August 2001 based on the absence of contamination documented at the site. Despite its proximity (0.03 miles west) to the right-of-way and two reported discharges, this site is rated **LOW RISK** due to No Further Action status being accepted for the discharge, it is no longer an active gasoline service station, and the land use being modified into an existing road. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 17 – Baseball City Sports Complex, Posner Park (FLD984230672) – This former theme park and current development property is listed as being located at 300 Stadium Way, which no longer exists. The theme park Circus World occupied this site from 1974 to 1986, which was originally owned by Ringling Bros. and Barnum & Bailey Circus. The site was registered as a conditionally exempt small quantity generator in 1986 when the park was sold and transformed into a new theme park named Boardwalk and Baseball, which included a baseball stadium used for spring training and minor league teams. The theme park closed in 1990, but the stadium remained open for use. The site was briefly registered as a small quantity generator in 1999 when Baseball City Sports Complex was modifying the defunct theme park into practice fields and facilities, but returned to being registered as a conditionally exempt small quantity generator by the end of the year. The property was later sold to a development company, which has named the site Posner Park. Construction began at Posner Park in 2008, eliminating the remaining baseball and theme park facilities. The site is planned to be a mix of retail and residential, some of which has already been constructed. There are no records of any contamination issues associated with Baseball City Sports Complex or the historical theme parks. No records or database entries were found for Posner Park, but the large Posner Park property includes other identified contamination sites, specifically Boardwalk Warehouse Parcel 1 (Site #10), Target Store #2366 (Site #27), Elite Nails and Spa (Site #28), and JC Penny (Site #32). Although portions of the theme park and baseball grounds were located directly adjacent to the I-4 and US 27 interchange, the location of the main stadium and position of the location on the FDEP's Map Direct is 0.18 miles southeast of the right-of-way. Therefore, this site is rated **LOW RISK** due to having no reports of any contamination issues or discharges and its distance from the right-of-way. But other identified sites that are part of Posner Park should be evaluated separately. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the

site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 18 – Undeveloped Parcel, Barnum City Grove 3 LLP (no FDEP #s found) – No records were found for this site which is located between the Kampground of America (KOA) campground and Southwest Access Road, south of Pond Site 502. A drum labeled "BLEACH" was observed standing upright in the northeast corner of the parcel. No obvious signs of contamination, such as staining or stressed vegetation were observed. It appears that the drum still contains unknown product. This site is rated **MEDIUM RISK** due to the presence of a drum on the property and its proximity to Pond Site 502. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 19 – Bob Evans Restaurant (53/8623838) – This site is located at 43700 US 27. Based on available records, this site was owned by Humble Oil & Refining Company before it became a restaurant in 1986. Tank registration records indicate that three USTs totaling 18,000 gallons capacity for alcohol enriched gasoline and two USTs totaling 13,000 gallons capacity for leaded gasoline were installed at the site in 1969. Another 550 gallon capacity used oil UST that is listed as being closed, but its installation date is unknown. There are no available records regarding the closure or removal of any of these USTs or documentation of any site assessment activities taking place. Although there are no records of any discharges of contamination at this site, it is rated **MEDIUM RISK** due to the lack of records regarding USTs registered at the site which could potentially still be located there, and the site's proximity (0.03 miles west) to the right-of-way. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 20 – Verizon Florida Haines City North (53/8628709) – This communications service office is located at Access Drive Northwest. Registration records indicate that a 1,000 gallon capacity UST used for storing fuel oil was installed at the site in 1974 and a 1,000 gallon capacity AST for use with a diesel powered emergency generator was installed at the site in 1991. There are no records of the removal of the UST, but it is not included with site inspection reports, the oldest of which being from 2007. The AST had corrosion on the piping which needed repair in 2012, but this violation did not result in a discharge. The AST was closed in October 2013, but was moved and reinstalled in a new location on the site. The site was in compliance as of October 2013. Although there are no reported discharges of contamination, this site is rated **MEDIUM RISK** due to its proximity (0.10 miles northwest) to the right-of-way, and lack of detailed records regarding tank closure assessments. This site has also been identified as being within Groundwater Contamination Plume #53263279 (Site #8) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 21 – Quality Inn (no FDEP #s found) – This hotel is located at 43824 US 27. The site has its own wastewater treatment facility located to the west of the hotel, directly adjacent to I-4 and Frontage Road. No records were found for this site and no evidence of any spills or petroleum product storage or use was observed. Despite its proximity (0.1 miles south) to the right-of-way, this site is rated **LOW RISK** due to no records or observed signs of contamination. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 22 – Four Corners Shell, formerly Star Enterprise (FLD984174235, 53/8624129) – This gasoline service station that was formerly a Texaco is located at 43750 US 27. It was registered as a small quantity generator in 1990 and has a small vehicular repair station located on site. Four 10,000 gallon capacity USTs (three for unleaded gasoline and one for diesel fuel) and a 550 gallon UST for used oil were installed at the site in 1983. A discharge was reported at the site in 1994 when petroleum vapors were encountered in the observation wells during product piping replacement. The site was given a priority ranking score of 60 due to its proximity to drinking water wells. However, groundwater is typically at a depth greater than 60 feet at this location and no groundwater contamination above the acceptable limits were found. Contamination was encountered in the soil, but the concentration was lower than the acceptable limits. Based on these findings, the site was given No Further Action status for the discharge in 1995. Inspections in January 2010 documented multiple violations including not having financial responsibility, failure to perform annual and monthly testing, improper or missing records, and petroleum contacted water in the sumps. The necessary changes were not made at the site within an allotted amount of time, leading to the site receiving violation warnings and eventually being fined. The USTs were replaced in April 2010, except for the used oil UST, which was taken out of service and locked. The old USTs appeared to be in good condition at the time of their removal. No contamination was found in the UST excavation pit, although one soil sample around a fill port was found to have higher than acceptable levels of contamination, but a discharge report was never submitted. Records indicate that between one and two 55 gallon drums of soil were removed from the area around the fill port following the discovery of contamination. A new 20,000 gallon capacity UST for unleaded gasoline was installed at the site at the same time. The site was out of compliance as of its most recent inspection in May 2014 for having the used oil UST out of service for more than the allowable time period and needs to be removed. There are no records available that indicate whether the used oil UST issue has been resolved, but no discharge has been reported associated with this UST. Although a No Further Action status was accepted for the 1995 discharge, and source removal of a small area of contaminated soil during the 2010 UST replacement was conducted, this site is rated **MEDIUM RISK** due its proximity (0.03 miles west) to the right-of-way, and it is an active gasoline service station. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 23 – Marathon Baseball City (53/8623956) – This gasoline service station is located at 43804 US 27. Records indicate that two 5,036 gallon capacity USTs for leaded gasoline and an 8,060 gallon capacity UST for unleaded gasoline were installed at the site in 1967; a 6,045 gallon capacity UST for unleaded gasoline was added in 1970. There are no records of these tanks being removed, but there were no reported discharges associated with them either. Three 9,728 gallon capacity USTs for unleaded gasoline and a 550 gallon capacity UST for used oil were installed at the site in 1985. A discharge was reported in 1996 when petroleum vapors were observed around the dispensers, leading to the discovery of a faulty fixer filter. An unknown amount of unleaded gasoline was discharged as a result of this and the site was given a priority ranking score of 60. Subsequent soil testing at the site did not find any samples which contained higher than the target limits of contamination. This led to the discharge receiving No Further Action status in 2001. Another discharge was reported in 2007 when the USTs were being closed and replaced. The contamination was limited to the area around the dispensing system, which was attributed to a loose connection. Groundwater was not encountered during the excavation and samples were not collected, reportedly due to the water table being deeper than 20 feet below the surface. A remediation system for air sparging and vapor extraction was utilized at the site from January 2011 through September 2011. Post remediation monitoring showed that contamination levels dropped significantly and quickly were below the target levels. This led to a No Further Action status and Site Rehabilitation Completion Order being accepted in February 2012. A 26,000 gallon capacity compartmentalized UST for containing diesel fuel and unleaded gasoline was installed at the site in 2007. Several minor violations have been recorded at this site, but it was in compliance as of its most recent inspection in May 2012. Although a

No Further Action status was accepted for the 1996 and 2007 discharges and the successful remediation activities that were used following the 2007 UST replacement, this site is rated **MEDIUM RISK** due to its proximity (0.03 miles west) to the right-of-way, and it is an active gasoline service station. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 24 – Groundwater Contamination Plume #53263278 – The contaminant associated with this plume is the agricultural pesticide ethylene dibromide (EDB), which is usually associated with agricultural production. According to FDEP Map Direct, the contamination plume is under approximately 0.52 miles of the current right-of-way and includes almost the entire US 27 ramp system in the eastern quadrant of the interchange and a small portion of the westbound ramp from I-4 to US 27. The plume extends approximately 0.27 miles northeast (east) and 0.25 miles southwest (west) of where US 27 crosses over I-4 (see **Appendix A**, **Figure B** for location). A small portion of the area identified as the plume is currently being used for citrus production along Home Run Boulevard. No records were found for the approximate depth to water table within this plume. A total of eighteen additional identified contamination sites are already located within this plume, but the plume should have no impact on the project at these other sites in addition to any contamination issues they may already have. This plume is rated **MEDIUM RISK** due to the potential for contamination to be present within and adjacent to the right-of-way and the depth to the water table is unknown.

Site 25 – Jarret Gordon Ford (FLR000131102) – This automobile dealership is located at 2600 Access Road Northwest. The facility was registered as a conditionally exempt small quantity generator in August 2006. Records indicate that the site has an AST of unknown size for used oil and a 250 gallon capacity AST for waste antifreeze. There have been no reported discharges or violations at this site and it is in compliance as of its most recent inspection in September 2012. Despite its proximity (0.05 miles west) to the right-of-way, this site is rated **LOW RISK** due to there being no records of any contamination discharges and being in compliance as of its most recent inspection.

Site 26 – Kenan Transport Spill (53/9804909) – This fuel truck spill site is located within the right-of-way in the southeast quadrant of the I-4 and US 27 interchange. In January 2001, a fuel tanker truck overturned while exiting to US 27 from eastbound I-4 on the cloverleaf ramp, discharging an estimated 380 gallons of gasoline to the soil. An emergency response cleanup crew was able to recover an unknown amount of free product before continuing with soil cleanup. Approximately 314 tons of contaminated soil were removed from the site, but FDOT did not allow any installation of monitoring wells or excavation in the existing pavement. Subsequent testing at the site did not identify any contamination levels above the target limits, leading to the spill being accepted for No Further Action Status in October 2002. The I-4 and US 27 interchange began its expansion in 2004, which moved the southeast quadrant ramps from their previous alignment. The site of this spill is now within the cloverleaf of the southeast quadrant ramps and not along the pavement as it was in the previous alignment (see **Appendix B** for site location in current alignment and **Appendix D** for the location of the spill when it occurred). This site is rated **LOW RISK** due to the significant source removal that was conducted shortly after the spill leading to the spill being accepted for No Further Action status, and the spill site was modified and incorporated into the new design of the interchange. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB.

Site 27 – Target Store #2366 (FLR000145094) – This large retail facility is located at 5000 Grandview Parkway. It was registered as a conditionally exempt small quantity generator in March 2008 because of the batteries, pesticides, and mercury containing lamps it stores. There are no records of any reported discharges or violations at this facility. Despite its proximity (0.04 miles east) to the right-of-way, this site is rated **LOW RISK** due to there being no reported discharges of

contamination. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 28 – Elite Nails & Spa (no FDEP #s found) – No records were found for this retail nail salon located at 4806 Grandview Parkway. This site is rated **LOW RISK** due to the lack of any documented or observed signs of contamination and its distance (0.19 miles southeast) from the right-of-way. This site has also been identified as being within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 29 – Sunoco, Sunshine Food Mart #296 (53/8624250, 30415329) – This LUST gasoline service station is located at 44009 US 27. Registration records indicate that three 10,000 gallon capacity USTs for unleaded gasoline were installed at the site in 1977. A 20,000 gallon capacity and 10,000 gallon capacity UST for diesel fuel were added in 1986. This site has had five reported discharges. The first discharge was reported in 1988 following a Phase 1 assessment, which led to the site receiving a priority ranking score of 68 and it being accepted for the Early Detection Incentive program. The second discharge was reported in 1990 based on a release of an unknown volume in the area of the diesel dispensers based on the discovery of free product in the monitoring wells. A contamination plume extending approximately 300 feet down gradient from the site was identified as being east southeast of the property. The third discharge was reported in 1994 based on inventory discrepancies, but records do not indicate how much product was lost or from what source. Records indicate that the three 10,000 gallon capacity USTs for unleaded gasoline were replaced with USTs of the same size and for the same purpose in 1995. However, there are no records that indicate whether any source removal was conducted during their removal. A remediation system was approved for the site in 1996 that used a combination of soil vapor extraction, air sparging, and groundwater treatment for one well. The system operated from 1997 to 2002 and was monitored post remediation until 2003, when contamination levels had dropped below the target limits and led to the acceptance of a Site Rehabilitation Completion Order and No Further Action status for the discharges in December 2003. Records indicate that a surface spill occurred in 2004 when a diesel dispenser was struck by a vehicle, releasing approximately 200 gallons of diesel fuel to the asphalt. There are no incident or discharge records available that are related to this spill, but other records mention that most of the spill entered a containment grate that led to the oil/water separator and the rest of it was contained to the asphalt; FDEP closed the spill in the same year. The fourth discharge was reported in 2005 when soil contamination was discovered during spill bucket replacements. Approximately 16 tons of impacted soil was removed from the area around the spill bucket in 2009 and both diesel USTs were closed in-place and the dispensers were replaced. However, contamination was discovered in the area of the dispensers, which was not immediately reported as a discharge but was later listed as the fifth discharge at the site. A Natural Attenuation Monitoring plan was accepted for the site in September 2010 and is still being conducted. Only two monitoring wells showed contamination levels higher than the target limits according to the most recent Natural Attenuation Monitoring Report in December 2013, and the overall concentrations of contaminants in the groundwater at the site have been decreasing, based on previous sampling. This report also indicates that the general depth to groundwater is approximately 44 feet below the surface and is flowing in an east southeasterly direction, toward the right-of-way but not at its closest point, which is directly to the west of the site. The site was in violation in 2012 for having petroleum contacted water in the sumps, but a discharge was not associated with the violation and site was in compliance as of August 2013. The site had multiple violations in May 2014 for not having suitable insurance, improper record keeping, and not conducting annual testing of system components, but no discharges were reported. Although the site is currently in compliance and source removal along with remediation was conducted at the site, it is rated **HIGH RISK** due to contamination still being present at the site, its proximity (0.03 miles east of the ramps and 0.06 miles northwest of I-4) to the right-of-way,

having a reported spill and a total of five reported discharges of which two are still active, and the reported direction of groundwater flow. This site has also been identified as being partially within Groundwater Contamination Plume #53263278 (Site #24) for EDB, but this should have no impact on the project unless the site is acquired for the project in the future and the depth of planned construction activities reach the impacted groundwater.

Site 30 – Chevron Davenport #154 (53/8623299) – This gasoline service station is located at 44039 US 27. Registration records indicate that the site was formerly occupied by Pauline's Mini Mart, which installed a 10,000 gallon capacity UST for leaded gasoline, a 10,000 gallon capacity UST for unleaded gasoline, and a 5,000 gallon capacity UST for unleaded gasoline in 1971. There are no records of the removal of these USTs, but records indicate that three 10,000 gallon capacity USTs were installed at the site in 1985 when the site became a Chevron. These USTs were removed in 2007 without any evidence of contamination. They were replaced in 2007 with two 12,000 gallon capacity USTs for unleaded gasoline and a 10,000 gallon capacity UST for diesel fuel. Violations were reported for the facility in October 2013 for not having the system ready for a breach of integrity test, water in the sumps, minor leaking components in a diesel dispenser, and registration fees not paid. However, no discharges have been reported in association with these violations. Although there are no reported discharges of contamination, samples during UST replacement in 2007 revealed no levels of contamination that were above their acceptable limits, this site is rated **MEDIUM RISK** due to its proximity (0.03 miles east) to the right-of-way, it was not in compliance as of its most recent inspection, and it is an active gasoline service station.

Site 31 – Polk County Utilities NE Lift Station #106 (no FDEP #s found) – This wastewater lift station is located at 2600 North Frontage Road. No registration documents or records were found for the diesel powered emergency generator and AST containing diesel fuel at the site. No visible signs of contamination were observed at the site. Despite its proximity (0.07 miles west) to the right-of-way, this site is rated **LOW RISK** due to there being no reported or observed discharges at the site.

Site 32 – JC Penney (no FDEP #s found) – No records were found for this large retail facility is located at 6200 Grandview Parkway. A diesel powered emergency generator and its associated AST are located along the southwest side of the building. No visible signs of contamination were observed at the site. Despite its proximity (0.02 miles southeast) to the right-of-way, this site is rated **LOW RISK** due to there being no reported or observed contamination at the site.

Site 33 – 7-Eleven Food Store #16188 (53/8624014) – This gasoline service station is located at 44249 US 27. Two 10,000 gallon capacity USTs were installed at the site in 1976. Originally, one of these USTs was used for leaded gasoline and the other for alcohol enriched gasoline, but both were later used for the storage of unleaded gasoline. A discharge was reported in 1988 from an unknown source and an unknown volume when petroleum odors were observed in the vicinity of the dispensers. The site was originally given a priority ranking score of 40, but was later increased to 60. The USTs were replaced with three 10,000 gallon capacity USTs for unleaded gasoline in 1995. During the replacement, 20.02 tons of contaminated soil was removed from the area around the dispensers. Groundwater sampling in 2000 revealed no petroleum hydrocarbon contamination higher than the acceptable limits, but did find that the concentration of lead was higher than its acceptable limit. However, subsequent testing in 2001 found lead concentrations below their target limit, which led to the discharge being accepted for No Further Action status. Another discharge was reported in 2006 when contaminated soil was encountered during a spill bucket replacement. There are no records of any source removal being conducted from this discharge, but it was accepted for No Further Action status in 2008 following soil and groundwater samples which showed no contamination concentrations above the target levels. One UST was closed in place in 2007, and then all three were removed in September 2012. No evidence of contamination was observed during the removal; the USTs were replaced with a 20,000 gallon capacity UST for unleaded gasoline and a 20,000 gallon capacity compartmentalized UST for diesel fuel and

unleaded gasoline. In a Preliminary Site Assessment Activities Report (2000), groundwater flow at the site was found to be towards the southwest, towards the right-of-way, but a later Site Assessment Report (2006) indicated groundwater flow was to the southeast, parallel the right-of-way at this location (see **Appendix D** for site groundwater elevation contour maps). Although a No Further Action status was accepted for the 1988 and 2006 discharges, the recent replacement of USTs did not reveal any contamination issues, this site is rated **MEDIUM RISK** due to its proximity (0.03 miles east) to the right-of-way, the reported direction of groundwater flow, and it is an active gasoline service station.

Site 34 – Ritchie Bros. Auctioneers, Focus 4 Inc. (FLR000102525) – This large heavy equipment cleaning and painting facility is located at 700 Ritchie Road. The facility was originally registered as a conditionally exempt small quantity generator in 2003 when it was owned by McCandless Companies Inc., but it was changed to a small quantity generator from 2004 to 2008 before being changed back to a conditionally exempt small quantity generator. The site consists of a large gravel parking and staging area for their heavy equipment inventory, a building that has offices and a grit blasting and painting booth, and a washing station with a water recirculation and treatment system. The heavy equipment is prepared for auction, but the facility does not perform repairs that generate used oil or hydraulic fluids. When Focus 4 Inc. took ownership of the facility in 2009, approximately nine years' worth of hazardous waste in drums had accumulated at the site from the McCandless Companies Inc. operation. Focus 4 Inc. disposed of this waste appropriately. The site was inspected in 2010 without any violations or areas of concern. A diesel powered emergency generator and its associated AST are located in the parking area south of the main office building and directly adjacent to I-4. Despite its proximity (0.02 miles northwest) to the right-of-way, this site is rated **LOW RISK** due to the facility where the equipment and painting is conducted is approximately 0.12 miles northwest of the right-of-way, there are no reported contamination issues or discharges at the site, and it does not generate used oil.

Site 35 – Waverly Grower Co-op Anderson #402 (53/9102432) – This former citrus grove AST site is listed as being located at Waverly Barn Road, which is now Dunson Road. The site used an unregistered 500 gallon capacity diesel AST for use with an irrigation pump. In 1988, the owner of the site reported a discharge of approximately 10 to 15 gallons of diesel fuel due to overfilling the tank; the discharge received a priority ranking score of 29. The discharge was later deemed to be a non-program discharge and did not qualify for the Early Detection Incentive program. The owner of the site later claimed that he had been advised to report the discharge at the time to qualify the site for the Early Detection Incentive program, and that he had closed the unit sometime around 1988 or 1989. The owner also claimed that the contaminated soil was not hauled off, it was added to the nearest burn area where old citrus trees were being burned, but the quantity of soil was only about a half of a cubic yard. There were no pictures or detailed notes taken of the removal, but the owner claimed that a detailed inspection of the site would reveal no evidence of contamination. The site was declared No Cleanup Required in 2011. The location of the site on the FDEP's Map Direct places it along Dunson Road, approximately 0.46 miles north of the right-of-way. However, based on available records, the approximate site of the reported discharge occurred in the vicinity of what is now Henley Circle in the Manor at Westhaven residential community, approximately 0.89 miles northwest of the right-of-way. Historic citrus groves have the potential to have contamination from the use of EDB. This site is part of land that was previously used for agricultural citrus production, but the site is not located within a known EDB groundwater contamination plume. Although this site had a discharge that was never properly cleaned or investigated, it is rated **LOW RISK** due to the approximate distance (0.89 miles northwest) from the right-of-way of the location of the discharge, based on available information it received No Cleanup Required status, and it is now the location of a residential development.

Site 36 – Polk County Fleet Management Dunson 151 (53/9806511) – This AST site is located at 1300 Dunson Road. Two 15,000 gallon capacity ASTs (one containing unleaded gasoline and the other containing diesel fuel) that are used for fueling

vehicles were installed at the site in 2004. They are in a fenced-in gravel area, no buildings or other structures are located at the site. This site had numerous violations between 2008 and 2010 including multiple instances of rust and corrosion on the piping system and tanks, repeated records of liquid alarms going off without being reported, multiple instances where free product or petroleum contacted water was found in the spill buckets, and at one point the drain valve on the diesel spill cabinet was leaking on the ground. Based on available records, the site never received any fines for their violations and a discharge was never reported. The site has taken the necessary measures to be in compliance and was in compliance as of its most recent inspection in February 2013. Despite its history of violations, this site is rated **LOW RISK** due to there being no reported discharges at the site, its distance (0.26 miles northwest) from the right-of-way, and it was in compliance as of its most recent inspection.

Site 37 – Lift Station with Diesel Powered Emergency Generator (no FDEP #s found) – No records were found for this lift station located at 3701 Ronald Reagan Parkway. A diesel powered emergency generator and its associated AST are located at this site. No visible signs of contamination were observed at the site. This site is rated **LOW RISK** due to its distance (0.33 miles southeast) from the right-of-way and no records or observed signs of contamination.

Site 38 – Polk County Utilities Booster Station Chemical Building (no FDEP #s found) – No records were found for this chemical storage station located at 2150 CR 54. A diesel powered emergency generator and its associated AST are located at this site. Several vats of chemicals, identified as hypochlorite solutions, are present near the middle of the facility. No visible signs of contamination were observed at the site. This site is rated **LOW RISK** due to its distance (0.47 miles northwest) from the right-of-way and no records or observed signs of contamination.

6.5 Historic Aerial Photography Review

Available historical and current aerial photographs were reviewed from the Polk County Property Appraiser, the University of Florida Digital Collections (via internet), the National Resources Council Soil Conservation Service Soil Maps, and Google Images. Aerial photos from the years 1941, 1944, 1952, 1958, 1968, 1974, 1994, and 2000 through the present were utilized to help determine the evidence of land use that could indicate a potential for adverse environmental impacts within or adjacent to the project corridor. Examples of the aerial flights over the project corridor can be found in **Appendix C.** Aerials from 2000 and after were not included, as recent aerial images were used for the figures of this report.

1941

The majority of the project corridor was undeveloped, consisting of scrub habitat on the upland ridge, wetland sloughs, and scattered herbaceous wetlands. A small citrus grove was located in the southwest quadrant of where the I-4/US 27 interchange exists today. What appears to be an unimproved road was present where US 27 exists today. No residential or commercial development was present within the project area. There were no obvious signs of landfills or other potential contamination sites visible on the aerial photographs.

1944

Conditions within the project area were very similar to those observed on the 1941 aerial photographs. What appears to have been an un-improved road was present where Ronald Reagan Parkway exists today. There were no obvious signs of landfills or other potential contamination sites visible on the aerial photographs.

1952

Conditions within the project area had changed slightly. Additional citrus groves were present along the US 27 corridor. Most of the newer groves were located north, south, and west of where the I-4/US 27 interchange exists today. No commercial or

residential development had occurred within the project area. There were no obvious signs of landfills or other potential contamination sites visible on the aerial photographs.

1958

Conditions were the same as those observed on the 1952 aerial photographs. There were no obvious signs of landfills or other potential contamination sites visible on the aerial photographs.

1959

Only a small portion of the northeastern portion of the project area is visible in this set of aerials. Conditions in this portion of the project area were the same as those observed on the 1952 aerial photographs. There were no obvious signs of landfills or other potential contamination sites visible on the aerial photographs.

1968

The I-4/US 27 interchange was present. The entire project area had been transformed into citrus groves, except for wetland areas. Some retail facilities were located in the southwest quadrant of the I-4/US 27 interchange. It appears that several of these buildings were most likely gasoline service stations. The I-4/CR 532 interchange was present to the east of the project area. Other than the possible service stations in the southwest quadrant of the I-4/US 27 interchange, no potential contamination sites were observed.

1974

Commercial and retail development was expanding within the southwest, southeast, and northeast quadrants of the I-4/US 27 interchange. It appears additional service stations had been constructed within these quadrants along with several hotels/motels. Large scale development had occurred in the southeast quadrant of the I-4/US 27 interchange where the Boardwalk & Baseball theme park was once located. What appears to have been housing was located just east of the eastbound I-4 merge lane from US 27. A large portion of the project area remained as citrus groves. No evidence of potential contamination sites other than the gasoline service stations was observed in the project area.

1994

Additional commercial and retail development had occurred in all quadrants of the I-4/US 27 interchange, thus reducing citrus grove acreage in the project area. Residential development along with the KOA campground was present along the eastbound exit ramp from I-4 to US 27. Additional residential development was present south of Ronald Reagan Parkway, east of I-4. Land where the Champions Gate development is currently located appeared to have been in the process of being developed. Planted pine areas were present adjacent to I-4, east of US 27 on the west side of I-4. Potential contamination sites would include additional service stations and any hotel/motel which might have utilized diesel or gasoline powered emergency generators.

2000 to Present

This section of the I-4 corridor has experienced rapid commercial, retail, residential, and institutional development throughout the past two decades. Infrastructure improvements such as wastewater reclamation facilities, sewer systems, power and gas transmission sub-stations, and residential streets and developments can be found throughout the project area in the vicinity of the I-4/US 27 interchange. Some remnant citrus groves are present southwest of the I-4/US 27 interchange, and some wetlands and pasture areas are still present.

6.6 Interviews

Interviews were conducted with any available property owners or site managers at the times of the site visits. In general, the majority of those interviewed knew very little site specific information. No additional information was gathered beyond that found on the FDEP's Oculus Database.

Mrs. Amanda Hartsfield, a Government Operations Consultant for the FDEP Office of Emergency Response, Tallahassee office was contacted to provide a list of accidents on I-4 in Polk County. Mrs. Hartsfield provided a list of accidents along I-4 that the Office of Emergency Response responded to in Polk County from January 2010 to September 2014. Several spills occurred in the project right-of-way during this time, but none of the spills are considered open with cleanup required.

Members of the Polk County Fire Rescue Station 220 located at 126 Cottonwood Drive, Davenport were contacted in regards to any known contamination issues or accidents on or directly adjacent to I-4 or the US 27 interchange. No additional information was gathered beyond that found on the FDEP's Oculus Database.

7.0 Alternative Alignments

There are no alternative alignments included with this project as the project goal involves the expansion of the current roadway. The existing right-of-way and new pond sites will likely contain the full extent of the proposed project, with the potential for additional minimal right-of-way acquisitions adjacent to the current limits being the exception. The study area contains any likely additional right-of-way needed, unless a new pond site is proposed beyond what was reviewed for this study.

8.0 Project Impacts

Future construction activities within the existing and proposed right-of-way create the potential for contamination impacts within the project corridor. A total of thirty eight (38) sites were identified within the project corridor that could be potential contamination sites, with potential impacts that may occur both within the proposed right-of-way and the proposed pond sites.

One documented truck accident occurred on the ramp from eastbound I-4 to US 27 where contamination was an issue. Records indicate that the free product that had spilled was cleaned and the spill received a No Further Action status.

Photographs of all potential contamination sites are provided in **Appendix B.**

9.0 Regulatory Status of Sites

Impacts to known and/or potential contamination sites may occur adjacent to the existing right-of-way. Additional right-of-way required for future improvements consists of stormwater retention ponds. Out of the thirty eight (38) sites, one (1) was given a high risk rating, and thirteen (13) were given a medium risk rating. Twenty four (24) sites were given a low risk rating. The pond sites for this project were rated for their potential to have contamination and are listed in **Table 2**. The facilities with potential contamination in the vicinity of the existing and proposed right-of-way are listed and rated in **Table 3**.

TABLE 2 – POTENTIAL CONTAMINATION RATINGS FOR POND SITES

Table 2 Notes: No Reported Contamination (NRC), Ethylene Dibromide (EDB), Floodplain Compensation Pond (FPC)

Pond Site #	Contamination Source	Rating
500	EDB	Med.
FPC 500C	NRC	Low
FPC 500D	EDB	Med.
501A	EDB	Med.
501B	EDB	Med.
501C	NRC	Low
502	EDB	Med.
503A	EDB	Med.
503B	EDB	Med.
503C	EDB	Med.
503D	EDB	Med.
504	EDB	Med.
505 A3	EDB	Med.
Regional Pond 2	EDB	Med.
505 B2	NRC	Low
506	EDB	Med.
FPC 506	NRC	Low
Regional Pond 1	EDB	Med.
100 (Segment 1)	NRC	Low

TABLE 3 – REGULATORY STATUS & RATING OF POTENTIAL CONTAMINATION SITES

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location from Project (miles)	Contamination Source	Regulatory Status	Rating
1	Groundwater Contamination Plume #53263703	NDB	.26 SE	EDB	CRD	Low
2	Posner Park Chrysler Dodge Jeep Ram	NDB	.25 SE	No Listing	NRC	Low
3	Northridge Substation and Baseball City Meter Station	NDB	.06 SE	No Listing	NRC	Low
4	Deer Creek LTD	53/8943959	.19 E	AST	NRC	Low
5	Polk County Utilities Division NE Region WWTF	53/9803286	.13 SE	AST	NRC, ICOM	Low
6	Racetrac #2338	53/8731911	.20 S	LUST	NFA, ICOM	Low
7	7-Eleven Food Store #21260	53/8623988	.17 S	LUST	NFA, ICOM	Low

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location from Project (miles)	Contamination Source	Regulatory Status	Rating
8	Groundwater Contamination Plume #53263279	NDB	0	EDB	CRD	Med.
9	Tropicana Resort Hotel	NDB	.06 SW	No Listing	NRC	Low
10	Boardwalk Warehouse Parcel 1, Busch Properties	53/9800885	.23 SE	UST	NRC	Low
11	I-4 Auto Truck Plaza	53/8628441	.06 W	UST	NRC	Med.
12	BP, formerly Quality/Amoco #117	53/8840533	.03 W	LUST	NFA	Low
13	FDOT Right-of-Way, formerly Hardee's Restaurant	53/8623504	.03 W	UST	NRC	Med.
14	Florida Novelty Works Property	53/9804516	.06 W	Spill	NFA	Med.
15	Vacant Parcel, formerly Chevron #47333, John's Mini Mart	53/8623306	.03 W	UST	NRC	Med.
16	Former Site of Exxon RAS #45536 and Exxon #5536	FLD984185561, 53/8624110	.03 W	SQG, LUST	NFA, NRC	Low
17	Baseball City Sports Complex, Posner Park	FLD984230672	.18 SE	SQG, (CESQG)	NRC	Low
18	Undeveloped Parcel, Barnum City Grove 3 LLP	NDB	.08 S	Unknown Drum	NRC	Med.
19	Bob Evans Restaurant	53/8623838	.03 W	UST	NRC	Med.
20	Verizon Florida Haines City North	53/8628709	.10 W	UST, AST	NRC, ICOM	Med.
21	Quality Inn	NDB	.01 S	No Listing	NRC	Low
22	Four Corners Shell, formerly Star Enterprise	FLD984174235, 53/8624129	.03 W	SQG, LUST	NFA	Med.
23	Marathon Baseball City	53/8623956	.03 W	LUST	NFA, ICOM	Med.
24	Groundwater Contamination Plume #53263278	NDB	0	EDB	CRD	Med.
25	Jarret Gordon Ford	FLR000131102	.05 W	CESQG, AST	NRC, ICOM	Low
26	Kenan Transport Spill	53/9804909	0	Spill	NFA	Low
27	Target Store #2366	FLR000145094	.04 E	CESQG	NRC	Low
28	Elite Nails & Spa	NDB	.19 SE	No Listing	NRC	Low
29	Sunoco, Sunshine Food Mart #296	53/8624250, 30415329	.03 E	LUST, Spill	CRD, NFA	High
30	Chevron Davenport #154	53/8623299	.03 E	UST	NRC	Med.
31	Polk County Utilities NE Lift Station #106	NDB	.07 W	AST	NRC	Low
32	JC Penney	NDB	.02 SE	AST	NRC	Low
33	7-Eleven Food Store #16188	53/8624014	.03 E	LUST	NFA	Med.
34	Ritchie Bros. Auctioneers, Focus 4 Inc.	FLR000102525	.02 NW	CESQG, (SQG), AST	NRC, ICOM	Low
35	Waverly Grower Co-op Anderson #402	53/9102432	.46 N	LUST	CRD	Low
36	Polk County Fleet Management Dunson 151	53/9806511	.26 NW	AST	PCI, ICOM	Low

Site #	Facility Name	Site ID/ Facility ID/SQG Facility ID	Location from Project (miles)	Contamination Source	Regulatory Status	Rating
37	Lift Station with Diesel Powered Emergency Generator	NDB	.33 SE	AST	NRC	Low
38	Polk County Utilities Booster Station Chemical Building	NDB	.47 NW	AST	NRC	Low

Table Abbreviations: Not in FDEP database (NDB), In Compliance (ICOM), No Reported Contamination (NRC), Contamination Reported (CRD), No Further Action (NFA), Possible Contamination Issue (PCI), Cleanup Ongoing (CPO), Above ground storage tank (AST), Underground storage tank (UST), Leaking underground storage tank (LUST), Conditionally exempt small quantity generator (CESQG), Small quantity generator (SQG).

10.0 Conclusions and Recommendations

Stantec conducted a detailed site inspection of the I-4 corridor for this CSER from west of US 27 to west of Osceola Polk Line Road, including the interchange at US 27 as well as the nineteen (19) pond sites along the corridor in Polk County, Florida. This study includes site reconnaissance, regulatory file reviews, historic aerial photograph review, construction plans review, interviews, and reporting.

A total of thirty eight (38) sites within the study area were identified as being potential handlers of hazardous materials or having some type of involvement with potential contamination. Of these sites, one (1) had a HIGH risk rating (Site 29) and thirteen (13) had a MEDIUM risk rating including Sites 8, 11, 13, 14, 15, 18, 19, 20, 22, 23, 24, 30 and 33. The remaining twenty four sites identified received a LOW risk rating. It is recommended that any excavation, demolition or dewatering activities within or adjacent to any of the identified HIGH or MEDIUM risk sites should require soil and groundwater testing before construction.

Sites 1, 8, and 24 are groundwater contamination plumes of ethylene dibromide (EDB) and encompass twenty three (23) other listed sites, in addition to Pond Sites 500, 501A, 502, 503A, 503B, 503C, 503D, and 506. Pond Site 501B is located adjacent to a delineated groundwater contamination plume and Pond 504 is located near active and historic citrus groves. Pond Sites FPC 500D, Pond 505 A3/Regional Pond 2, and Regional Pond 1 have fallow citrus trees and were likely groves. All fourteen (14) pond sites that have the potential to have EDB contamination were given MEDIUM risk ratings. However, existing pond sites which are not proposed to be modified and were identified as having the potential to have groundwater contamination may not warrant additional testing based on depth to groundwater and/or not having proposed modifications. At a minimum, all pond sites selected for final design will be tested for arsenic and debris content in areas where excavation activities are planned. Select ponds will also be sampled for herbicides, pesticides, and PCBs. As such, Level II testing will be performed at those sites selected by the best available current data for contaminants of concern. Furthermore, additional testing may be required at these or other sites during the design phase based upon the construction plans.

Based on historic aerials, land use in the area before the construction of I-4 consisted of rural citrus groves, pasture land, and natural lands. Potential contamination impacts from anthropogenic activities include additional EDB contamination and pesticide/herbicide/fertilizer contamination from the citrus groves, and arsenic contamination from potential cattle dipping vats associated with the pastures. However, the existence, exact location, and severity of these potential sources of contamination are unknown.

All bridges and other structures which will require possible demolition or modification should be tested for asbestos containing materials, metals-based paint, or any other hazardous materials prior to construction.

All buildings or structures that occur on parcels that are to be acquired should be tested for asbestos, metals-based paint, x-ray equipment, lead-lined walls, chemicals, and pharmaceuticals during the design phase and prior to demolition.

11.0 References

Florida Department of Transportation, Florida Land Use, Cover, and Forms Classification System (FLUCFCS), Level III, third edition, 1999

Florida Department of Transportation, Project Development & Environment guidelines (Chapter 22, January 17, 2008 revision)

FHWA Technical Advisory T 6640.8A, dated October 30, 1987

Level 4 Site Assessment Report for Exxon Service Station Number 4-5536, Handex of Florida Inc., 10/2000

Limited Scope Site Assessment Report for Kenan Transport Company Overturn Tanker Incident, Earth Science Inc., 10/2001

Limited Site Assessment Report for Florida Novelty Works Inc. Property, Environmental & Analytical Management Inc., 4/2007

Natural Attenuation Monitoring Report Year 3 Event 1 for Sunshine Food Mart #296 (former Sunoco Station #0611-3393), EnviroTrac Ltd., 5/2013

Preliminary Site Assessment Activities 7-Eleven Store No 16188, IT Corporation, 10/2000

Site Assessment Report for Non-Program Site 7-Eleven Store No 16188, Shaw Environmental Inc., 10/2006

Supplemental Site Assessment Report for Racetrac No 349, Handex of Florida Inc., 11/2004

University of Florida George A. Smathers Library Digital Collections: Aerial Photography Florida (website), 2014

APPENDIX A
PROJECT MAPS AND FIGURES

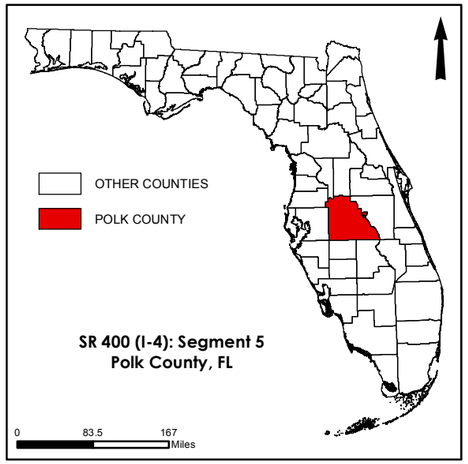
SR 400 (I-4) BEYOND THE ULTIMATE
PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY

SEGMENT 5

FDOT FM NO. 201210-2-22-01

CONTAMINATION SCREENING EVALUATION REPORT (CSER)

POLK COUNTY
FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT 1



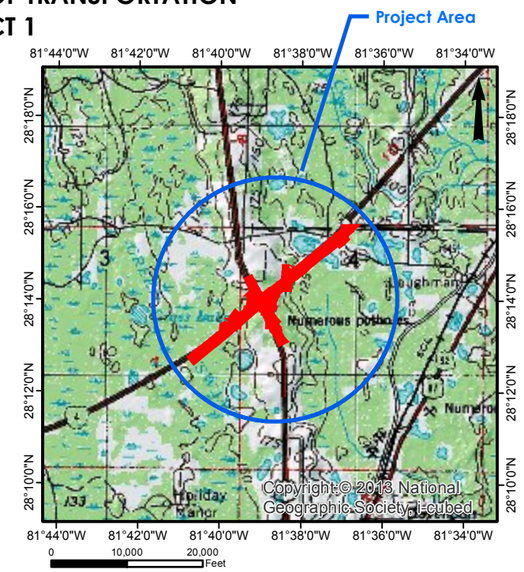


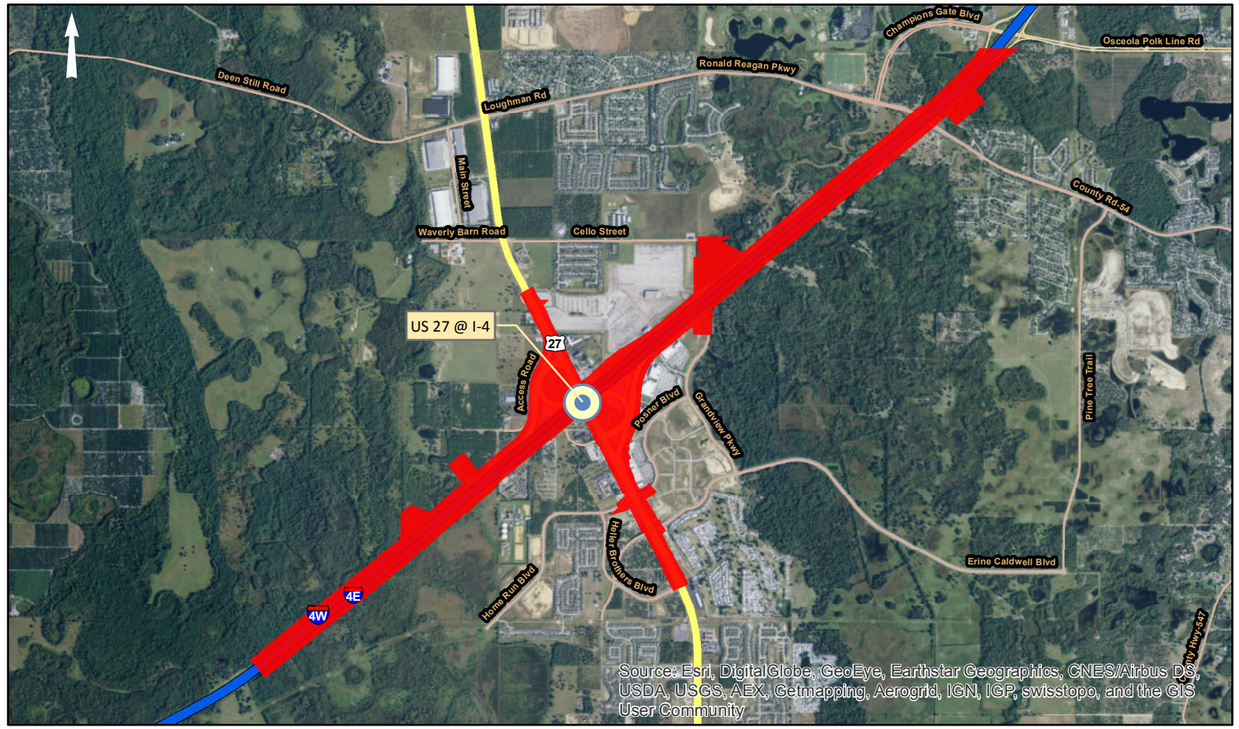
FIGURE NO.	SHEET NO.	TITLE
Figure A	Single Sheet	Land Use and Habitat Coverage Map
Figure B	Sheets 1-3	Contamination Sites Map

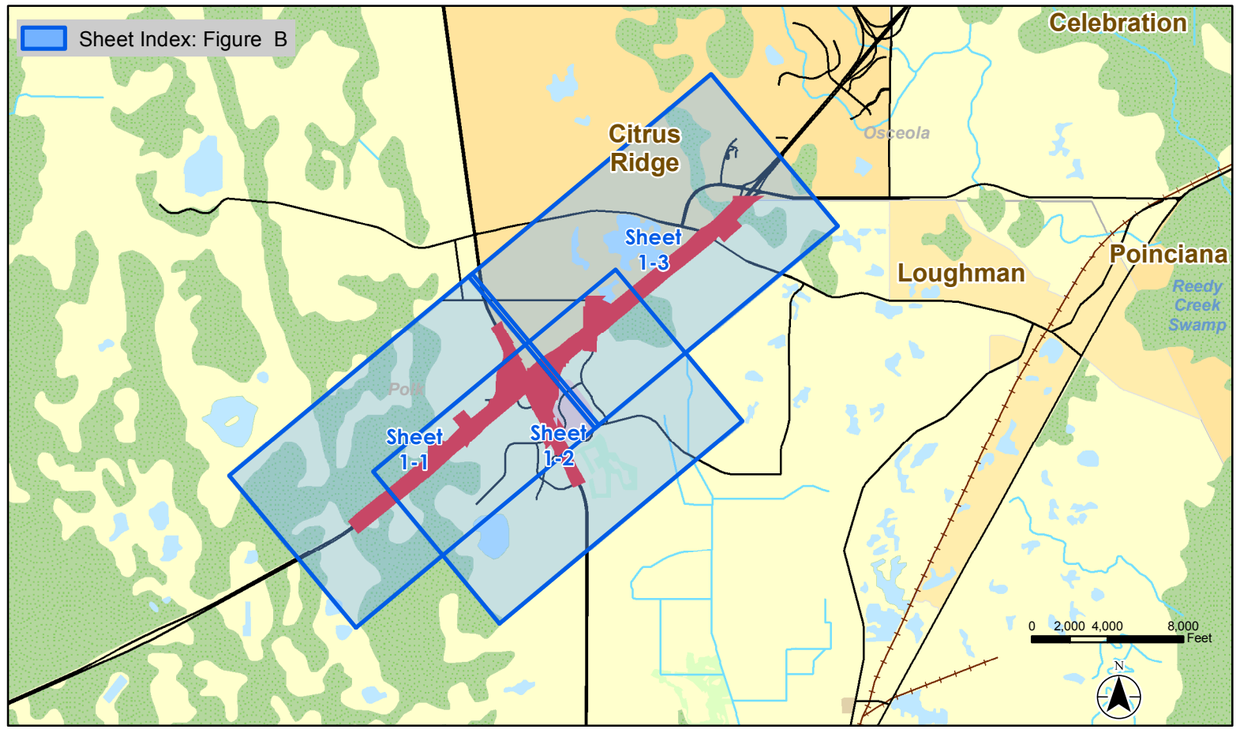
PROJECT DETAILS

CONTAMINATION SCREENING EVALUATION REPORT:
Segment 5 - Report Maps

SR 400 (I-4) from West of SR 25/US 27 to West of CR 532 (Polk/Osceola County Line) Polk County (16320)

16320 Polk County
STA 368+50.00 (Begin) / STA 604+50.00 (End)





STN No. 2024230168

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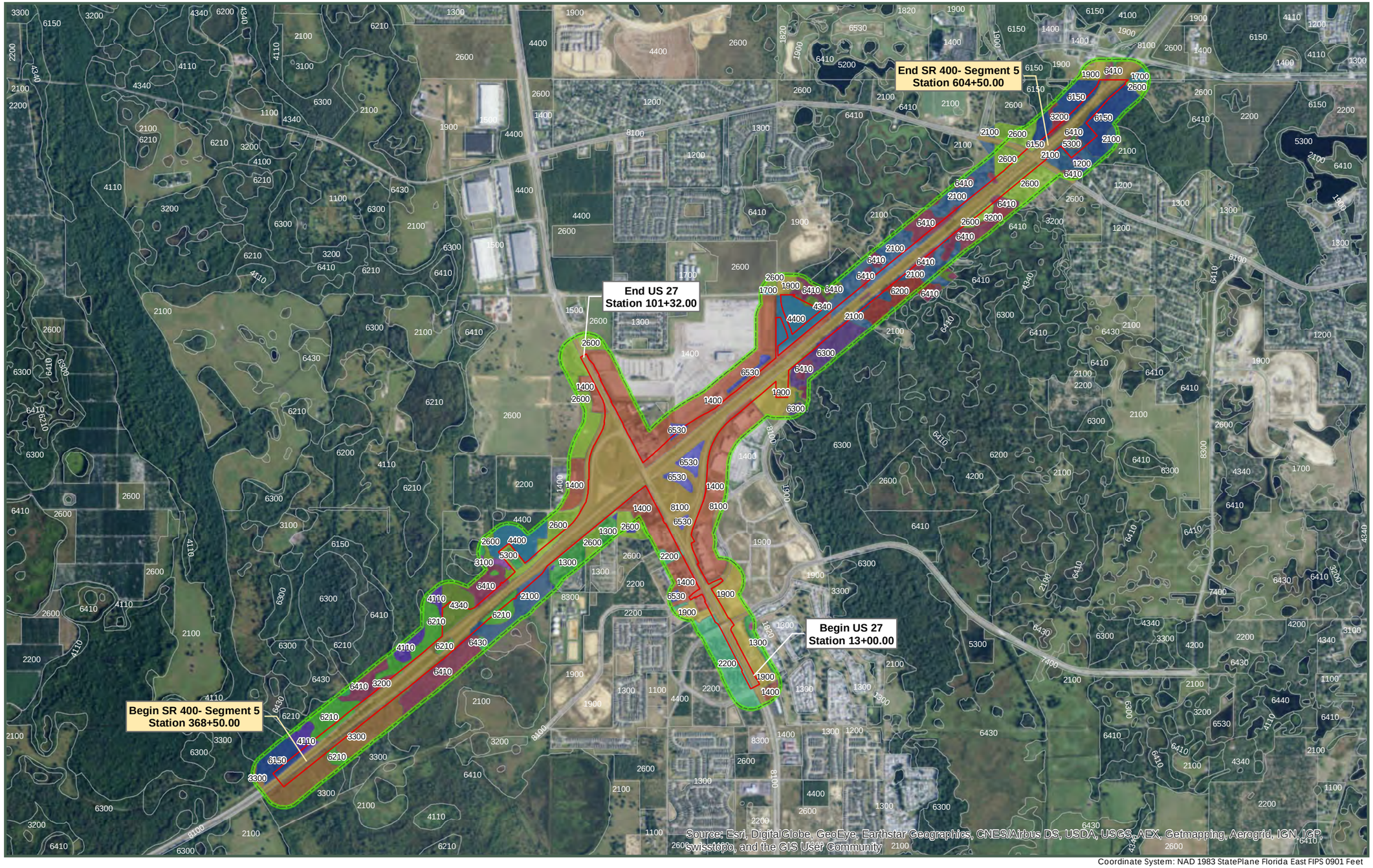

Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (8/31/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits

Land Use and Habitat Coverage

- 1200, RESIDENTIAL MED DENSITY (2-5 DWELLING UNITS)
- 1300, RESIDENTIAL HIGH DENSITY
- 1400, COMMERCIAL AND SERVICES
- 1700, INSTITUTIONAL
- 1820, GOLF COURSES
- 1900, OPEN LAND
- 2100, CROPLAND AND PASTURELAND
- 2200, TREE CROPS
- 2600, OTHER OPEN LANDS (RURAL)
- 3100, HERBACEOUS
- 3200, SHRUB AND BRUSHLAND
- 3300, MIXED RANGELAND
- 4110, PINE FLATWOODS
- 4340, HARDWOOD CONIFER MIXED
- 4400, TREE PLANTATIONS
- 5300, RESERVOIRS
- 6150, STREAM AND LAKE SWAMPS (BOTTOMLAND)
- 6200, WETLAND CONIFEROUS FORESTS
- 6210, CYPRESS
- 6300, WETLAND FORESTED MIXED
- 6410, FRESHWATER MARSHES
- 6430, WET PRAIRIES
- 6440, EMERGENT AQUATIC VEGETATION
- 6530, INTERMITTENT PONDS
- 8100, TRANSPORTATION
- 8300, UTILITIES
- Polk and Osceola County Landuse

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 5 - Land Use and Habitat Coverage Map

Client/Project:
Florida Department of Transportation- D5
SR 400 Project Development & Environment Study
Segment 5: SR 400 (I-4) from W of SR 25/US 27 to W of CR 532

Project Location:
16320 Polk County
STA 368+50.000 (Begin)
STA 604+50.00 (End)

Prepared by: mLeonard 9/16/2015
Technical Review by: mDrauer 9/16/2015
Independent Review by: jMoore 9/16/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 1,200 2,400 4,800 Feet

Figure A - Land Use and Habitat Coverage Map

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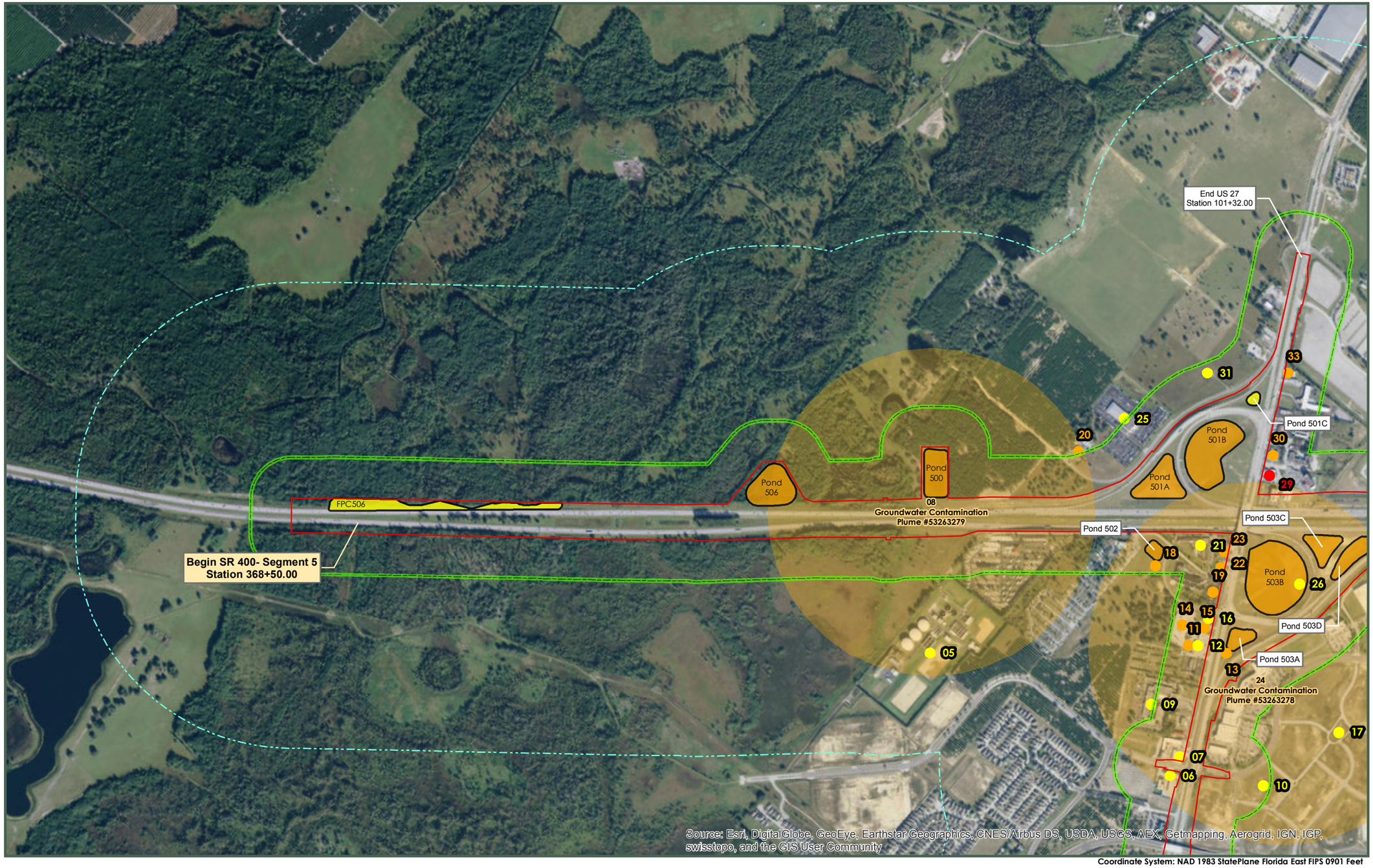

Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (8/31/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Contamination Screening Zone

Proposed Pond Risk (12/2/15)

- Low
- Med

Contamination Sites Risk

- LOW
- MEDIUM
- HIGH

Groundwater Contamination

- LOW
- MEDIUM

Medium and High Risk Sites & Ponds:

Site # 8: GCP #53263279
Site #11: I-4 Auto Truck Plaza
Site #13: FDOT R/W, FKA- Hardee's
Site #14: Florida Novelty Works Property
Site # 15: Vacant Parcel, FKA- Chevron #4773 John's Mini Mart
Site #18: Undeveloped Parcel, Barnum City Grove3 LLP
Site # 19: Bob Evan's Restaurant
Site # 20: Verizon Florida Haines City North
Site # 22: Four Corners Shell, FKA- Star Enterprises
Site # 23: Marathon Baseball City
Site # 24: GCP #53263278
Site # 29: Sunoco, Sunshine Food Mart #296
Site # 30: Chevron Devenport #154
Site # 33: 7-Eleven Food Sotre #16188

Pond 500	Pond 503C
FPC 500D	Pond 503D
Pond 501A	Pond 504
Pond 501B	Pond 505A3
Pond 502	Regional Pond 2
Pond 503A	Pond 506
Pond 503B	Regional Pond 1

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 5 - Contamination Site Map

Client/Project:
Florida Department of Transportation- D5
SR 400 Project Development & Environment Study
Segment 5: SR 400 (I-4) from W of SR 25/US 27 to W of CR 532

Project Location:
16320 Polk County
STA 368+50.00 (Begin)
STA 604+50.00 (End)

Prepared by: mLeonard 12/2/2015
Technical Review by: mDrauer 12/2/2015
Independent Review by: jMoore 12/2/2015

Figure B- Sheet 1 of 3: Contamination Sites Map

Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (8/31/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Contamination Screening Zone

Proposed Pond Risk (12/2/15)

- Low
- Med

Contamination Sites Risk

- LOW
- MEDIUM
- HIGH

Groundwater Contamination

- LOW
- MEDIUM

Medium and High Risk Sites & Ponds:

Site # 8: GCP #53263279
Site #11: I-4 Auto Truck Plaza
Site #13: FDOT R/W, FKA- Hardee's
Site #14: Florida Novelty Works Property
Site # 15: Vacant Parcel, FKA- Chevron #4773 John's Mini Mart
Site #18: Undeveloped Parcel, Barnum City Grove3 LLP
Site # 19: Bob Evan's Restaurant
Site # 20: Verizon Florida Haines City North
Site # 22: Four Corners Shell, FKA- Star Enterprises
Site # 23: Marathon Baseball City
Site # 24: GCP #53263278
Site # 29: Sunoco, Sunshine Food Mart #296
Site # 30: Chevron Devenport #154
Site # 33: 7-Eleven Food Sotre #16188

Pond 500	Pond 503C
FPC 500D	Pond 503D
Pond 501A	Pond 504
Pond 501B	Pond 505A3
Pond 502	Regional Pond 2
Pond 503A	Pond 506
Pond 503B	Regional Pond 1

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 5 - Contamination Site Map

Client/Project:
Florida Department of Transportation- D5
SR 400 Project Development & Environment Study
Segment 5: SR 400 (I-4) from W of SR 25/US 27 to W of CR 532

Project Location:
16320 Polk County
STA 368+50.00 (Begin)
STA 604+50.00 (End)

Prepared by: mLeonard 12/2/2015
Technical Review by: mDrauer 12/2/2015
Independent Review by: jMoore 12/2/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 600 1,200 2,400 Feet

Figure B- Sheet 2 of 3: Contamination Sites Map

1 " = 1,200 '

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

20242301 68

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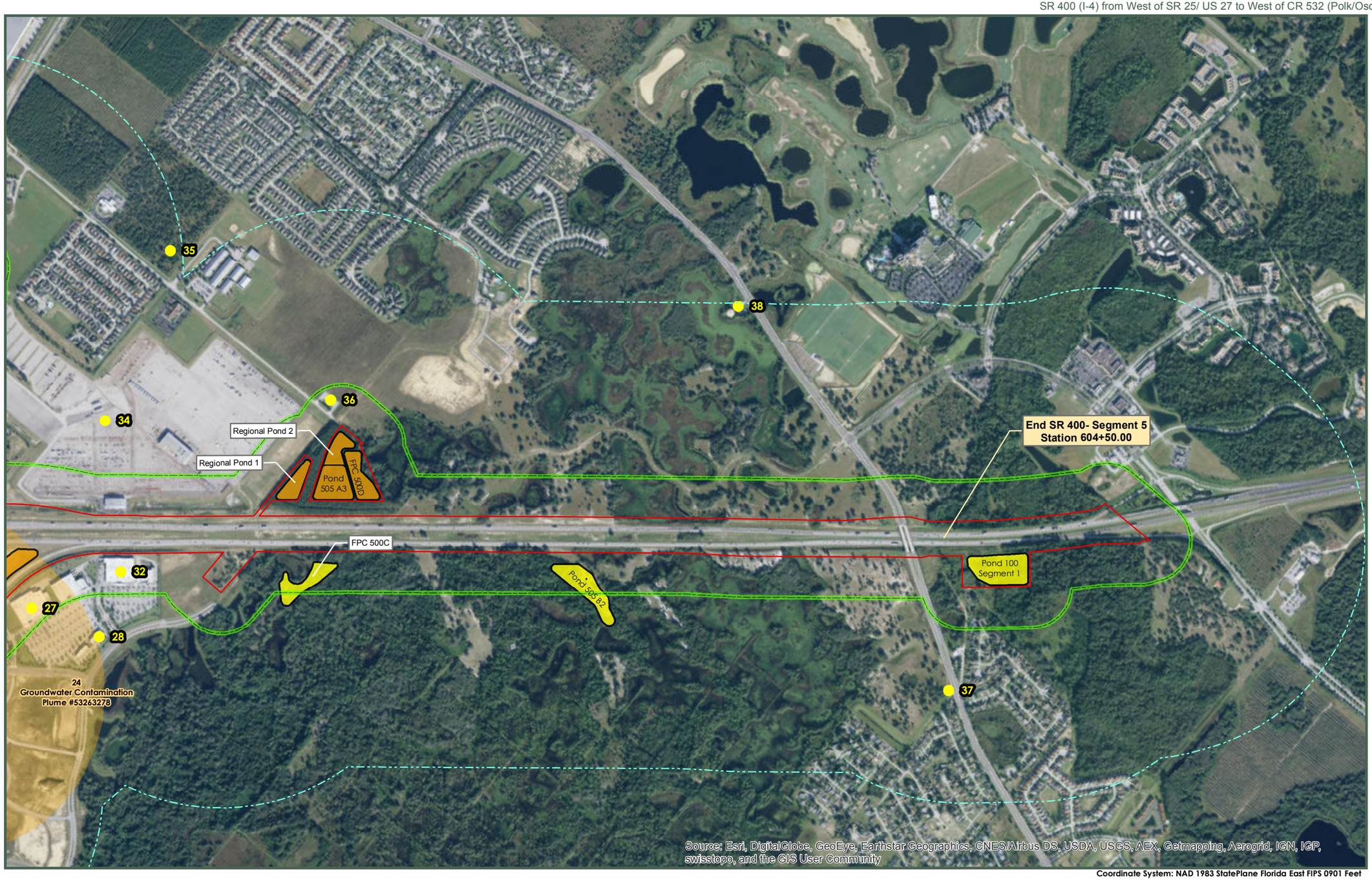


Map Key

- SR 400 (I-4) Beyond the Ultimate R/W (8/31/15)
- SR 400 (I-4) Beyond the Ultimate PD&E Study Limits
- Contamination Screening Zone

Proposed Pond Risk (12/2/15)

- Low
- Med

Contamination Sites Risk

- LOW
- MEDIUM
- HIGH

Groundwater Contamination

- LOW
- MEDIUM

Medium and High Risk Sites & Ponds:

Site # 8: GCP #53263279
Site #11: I-4 Auto Truck Plaza
Site #13: FDOT R/W, FKA- Hardee's
Site #14: Florida Novelty Works Property
Site # 15: Vacant Parcel, FKA- Chevron #4773 John's Mini Mart
Site #18: Undeveloped Parcel, Barnum City Grove3 LLP
Site # 19: Bob Evan's Restaurant
Site # 20: Verizon Florida Haines City North
Site # 22: Four Corners Shell, FKA- Star Enterprises
Site # 23: Marathon Baseball City
Site # 24: GCP #53263278
Site # 29: Sunoco, Sunshine Food Mart #296
Site # 30: Chevron Devenport #154
Site # 33: 7-Eleven Food Sotre #16188

Pond 500	Pond 503C
FPC 500D	Pond 503D
Pond 501A	Pond 504
Pond 501B	Pond 505A3
Pond 502	Regional Pond 2
Pond 503A	Pond 506
Pond 503B	Regional Pond 1

Title:
CONTAMINATION SCREENING EVALUATION REPORT: Segment 5 - Contamination Site Map

Client/Project:
Florida Department of Transportation- D5
SR 400 Project Development & Environment Study
Segment 5: SR 400 (I-4) from W of SR 25/US 27 to W of CR 532

Project Location:
16320 Polk County
STA 368+50.00 (Begin)
STA 604+50.00 (End)

Prepared by: mLeonard 12/2/2015
Technical Review by: mDrauer 12/2/2015
Independent Review by: jMoore 12/2/2015

Coordinate System: NAD 1983 StatePlane Florida East FIPS 0901 Feet

0 600 1,200 2,400 Feet

Figure B- Sheet 3 of 3: Contamination Sites Map

APPENDIX B
PHOTOS

Pond Site Photos

I-4 PD&E Segment 5 Pond Site Photographs

Pond Site 500

Pond Site FPC 500D

Pond Site FPC 500C

Pond Site 501A

Pond Site 501B

Pond Site 501C

Pond Site 502

Pond Site 503A

Pond Site 503B

Pond Site 503C and 503D

Pond Site 504

Pond Site 505 A3/ Regional Pond 2

Pond Site 505 B2

Pond Site 506

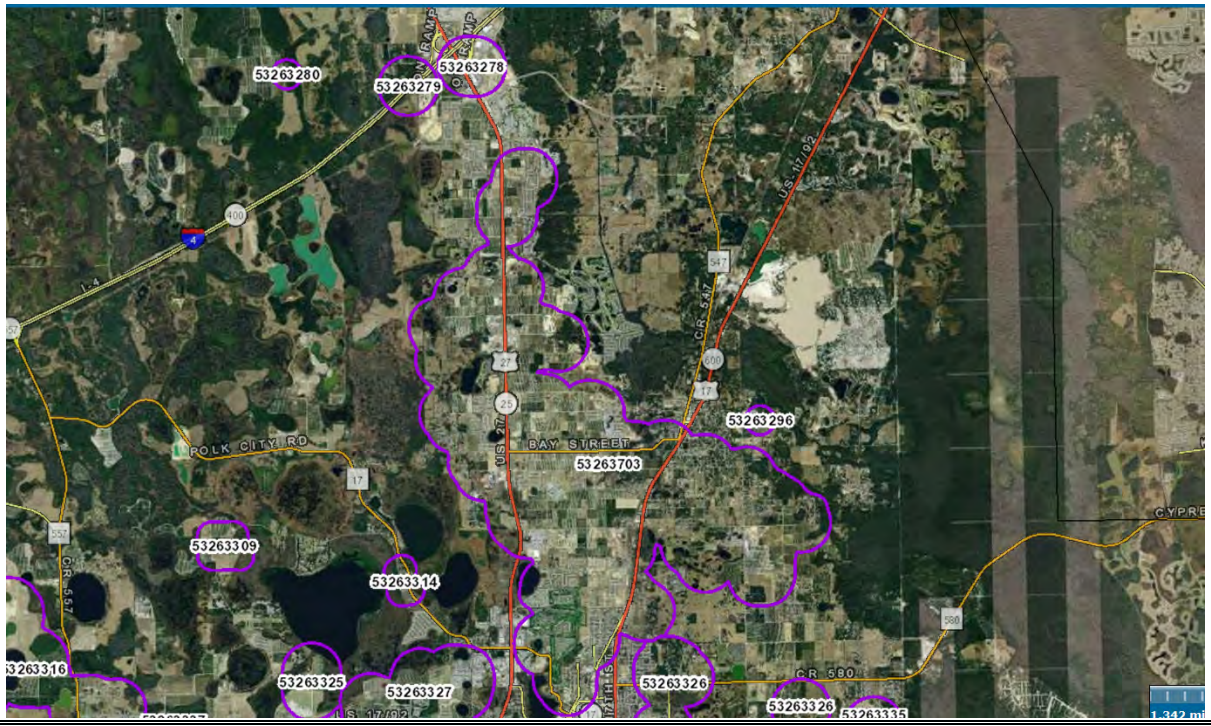
Pond Site FPC 506

Regional Pond 1

Pond Site 100 (Segment 1)

Contamination Site Photos

Contamination Site Photos



Site 1: Groundwater Contamination Plume #53263703

Site 2: Posner Park Chrysler Dodge Jeep Ram

Site 3: Northridge Substation and Baseball City Meter Station

Site 4: Deer Creek LTD

Site 5: Polk County Utilities Division NE Region WWTF

Site 6: Racetrac #2338

Site 7: 7-Eleven Food Store #21260

Site 8: Groundwater Contamination Plume #53263279

Site 9: Tropicana Resort Hotel

Site 9: Tropicana Resort Hotel – unlabeled tote

Site 10: Boardwalk Warehouse Parcel 1, Busch Properties

Site 11: I-4 Auto Truck Plaza

Site 12: BP, formerly Quality/Amoco #117

Site 13: FDOT Right-of-Way, formerly Hardee's Restaurant

Site 14: Florida Novelty Works Property

Site 15: Vacant Parcel, formerly Chevron #47333, John's Mini Mart

Site 16: Former Site of Exxon RAS #45536 and Exxon #5536

Site 17: Baseball City Sports Complex, Posner Park

Site 18: Undeveloped Parcel, Barnum City Grove 3 LLP

Site 19: Bob Evans Restaurant

Site 20: Verizon Florida Haines City North

Site 21: Quality Inn

Site 22: Four Corners Shell, formerly Star Enterprise

Site 23: Marathon Baseball City

Site 24: Groundwater Contamination Plume #53263278

Site 25: Jarret Gordon Ford

Site 26: Kenan Transport Spill

Site 27: Target Store #2366

Site 28: Elite Nails & Spa

Site 29: Sunoco, Sunshine Food Mart #296

Site 30: Chevron Davenport #154

Site 31: Polk County Utilities NE Lift Station #106

Site 32: JC Penny

Site 33: 7-Eleven Food Store #16188

Site 34: Ritchie Bros. Auctioneers, Focus 4 Inc.

Site 34: Richie Bros. Auctioneers, Focus 4 Inc.

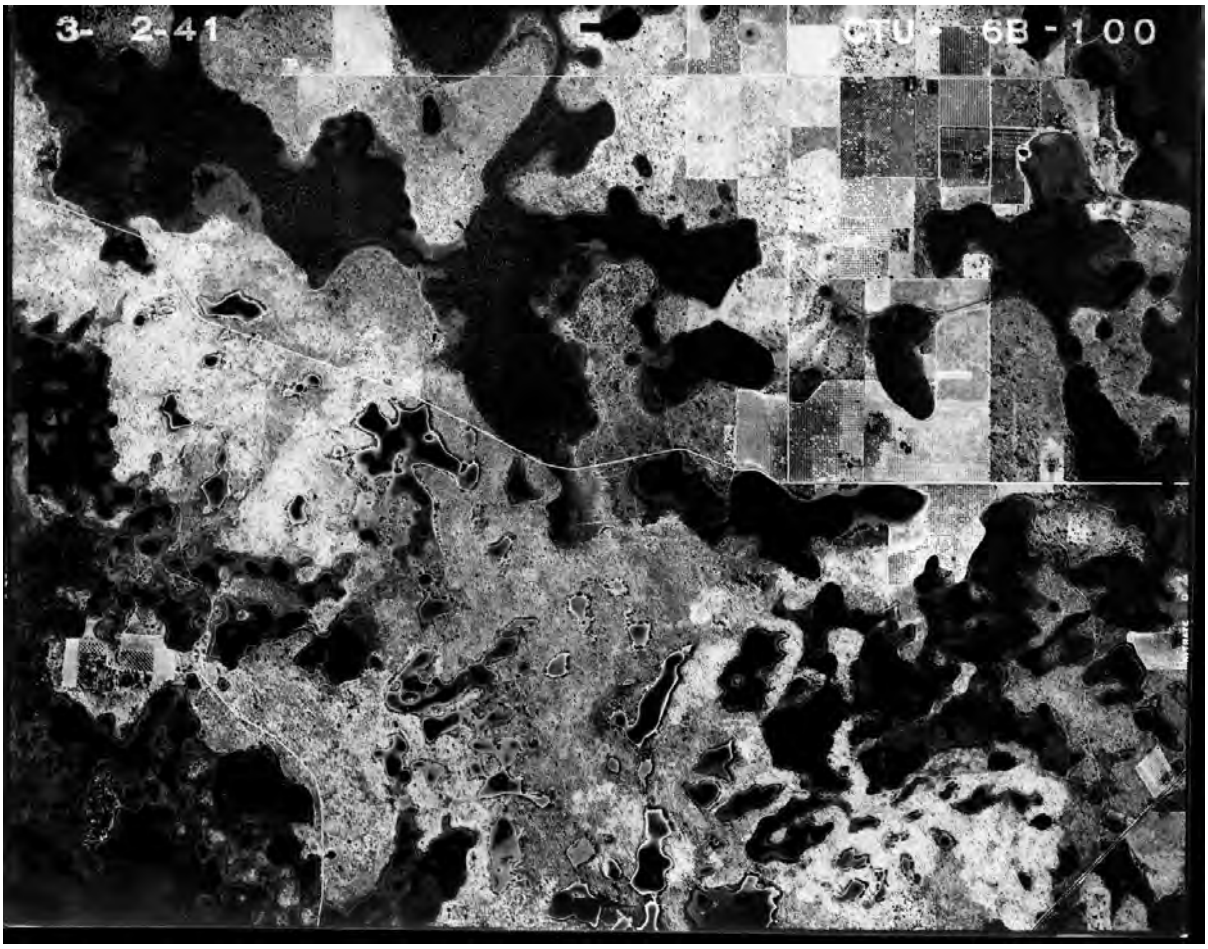
Site 35: Waverly Grower Co-op Anderson #402

Site 36: Polk County Fleet Management Dunson 151

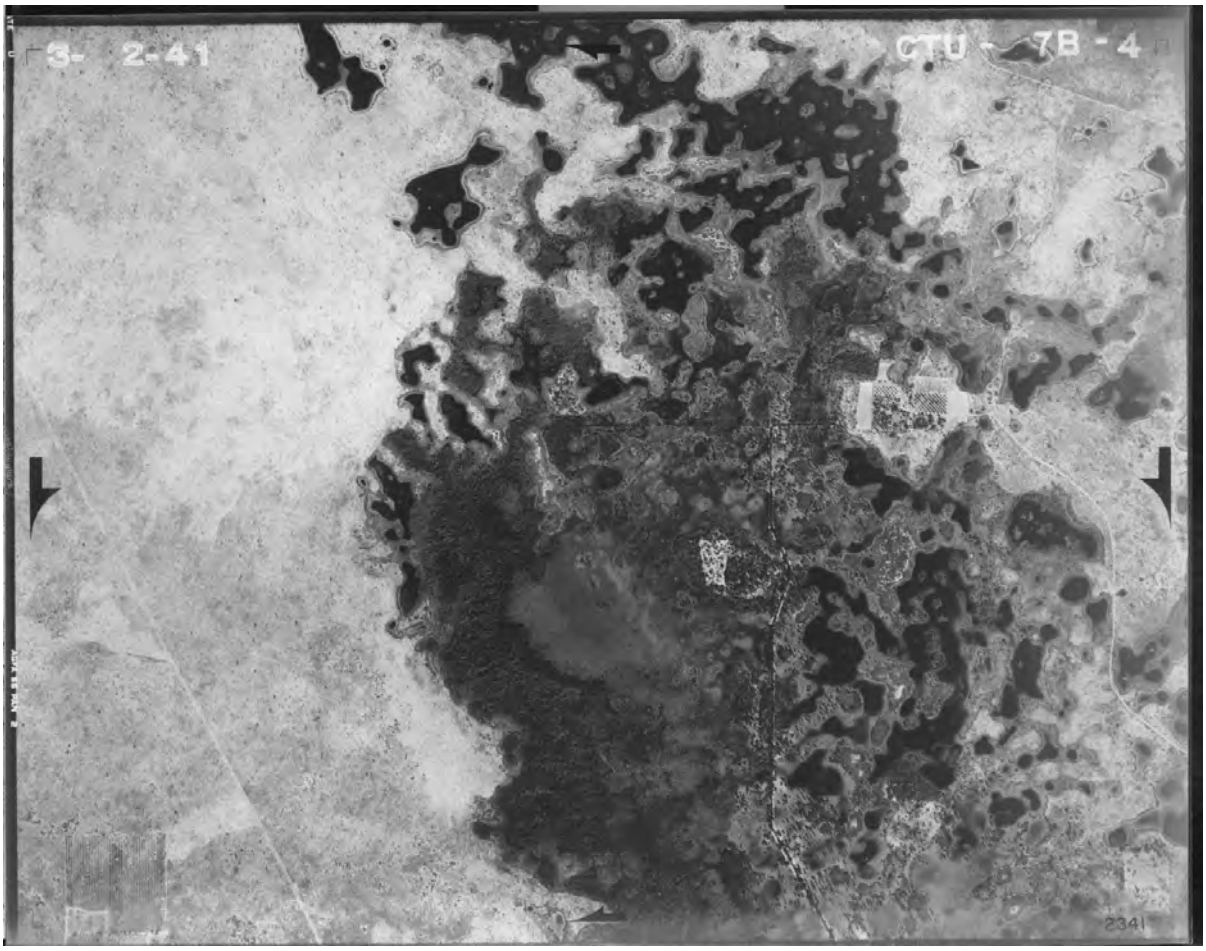
Site 37: Lift Station with Diesel Powered Emergency Generator

Site 38: Polk County Utilities Booster Station Chemical Building

APPENDIX C
AERIAL PHOTOGRAPHY



Aerial Photography: 1941A



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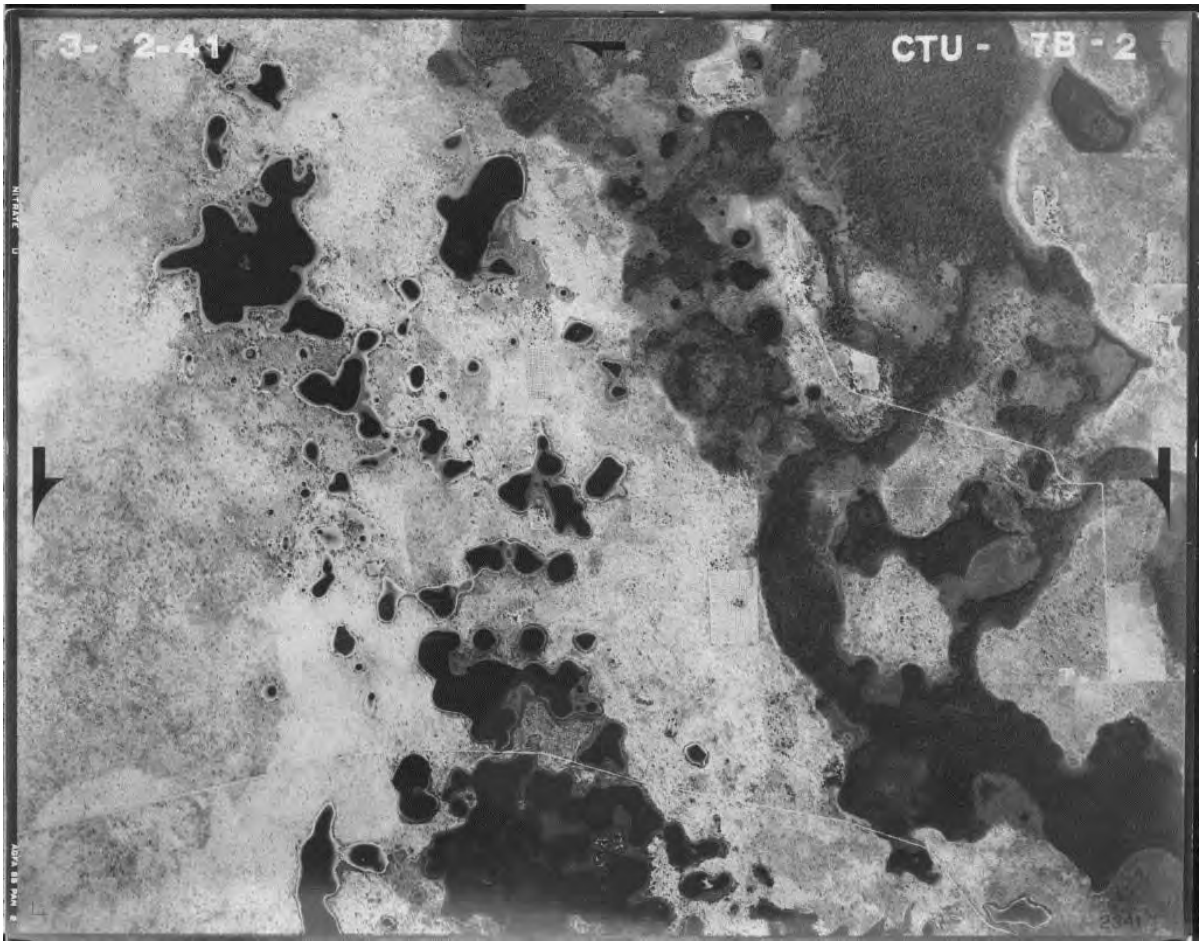
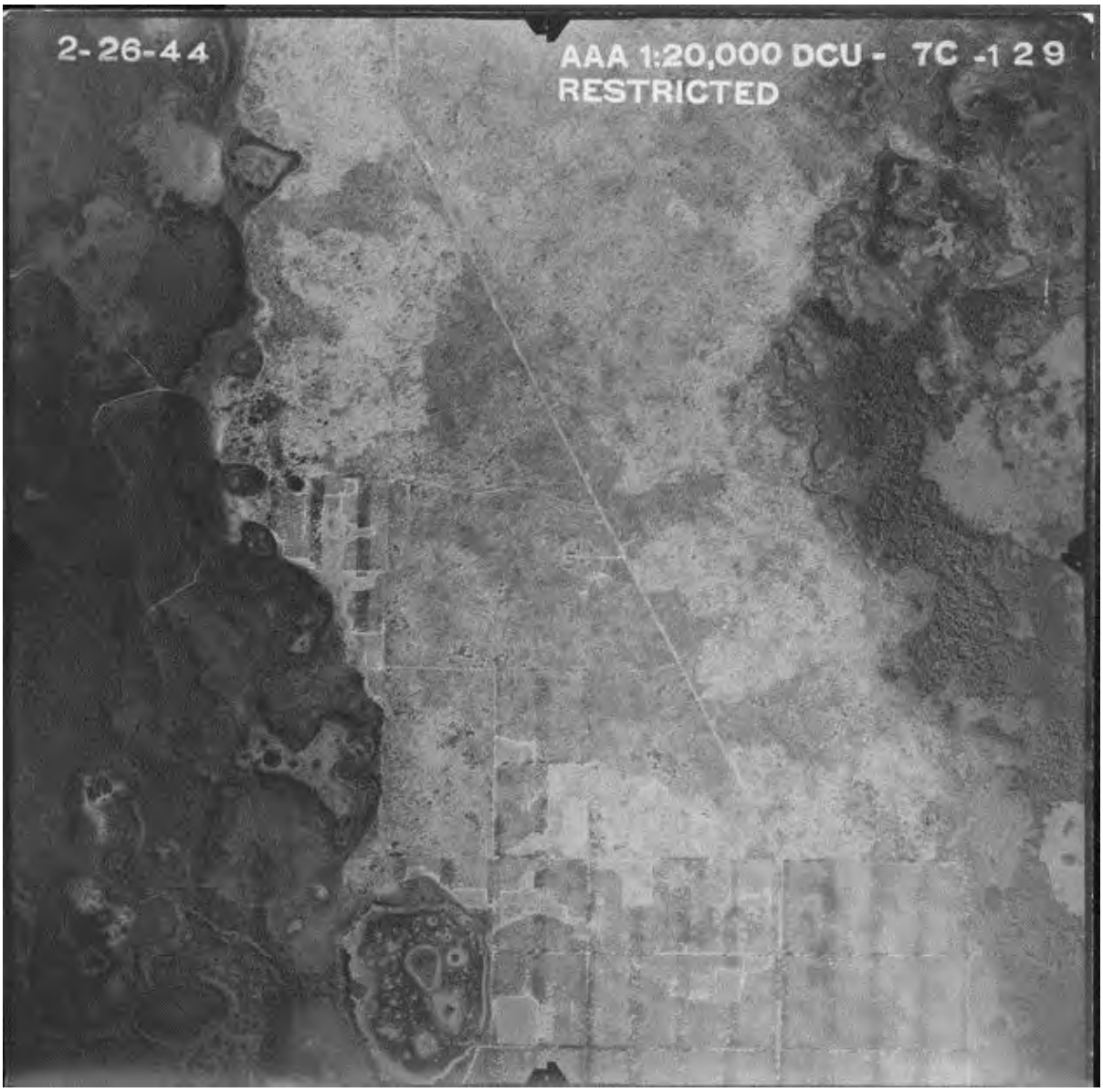


Aerial Photography: 1941C



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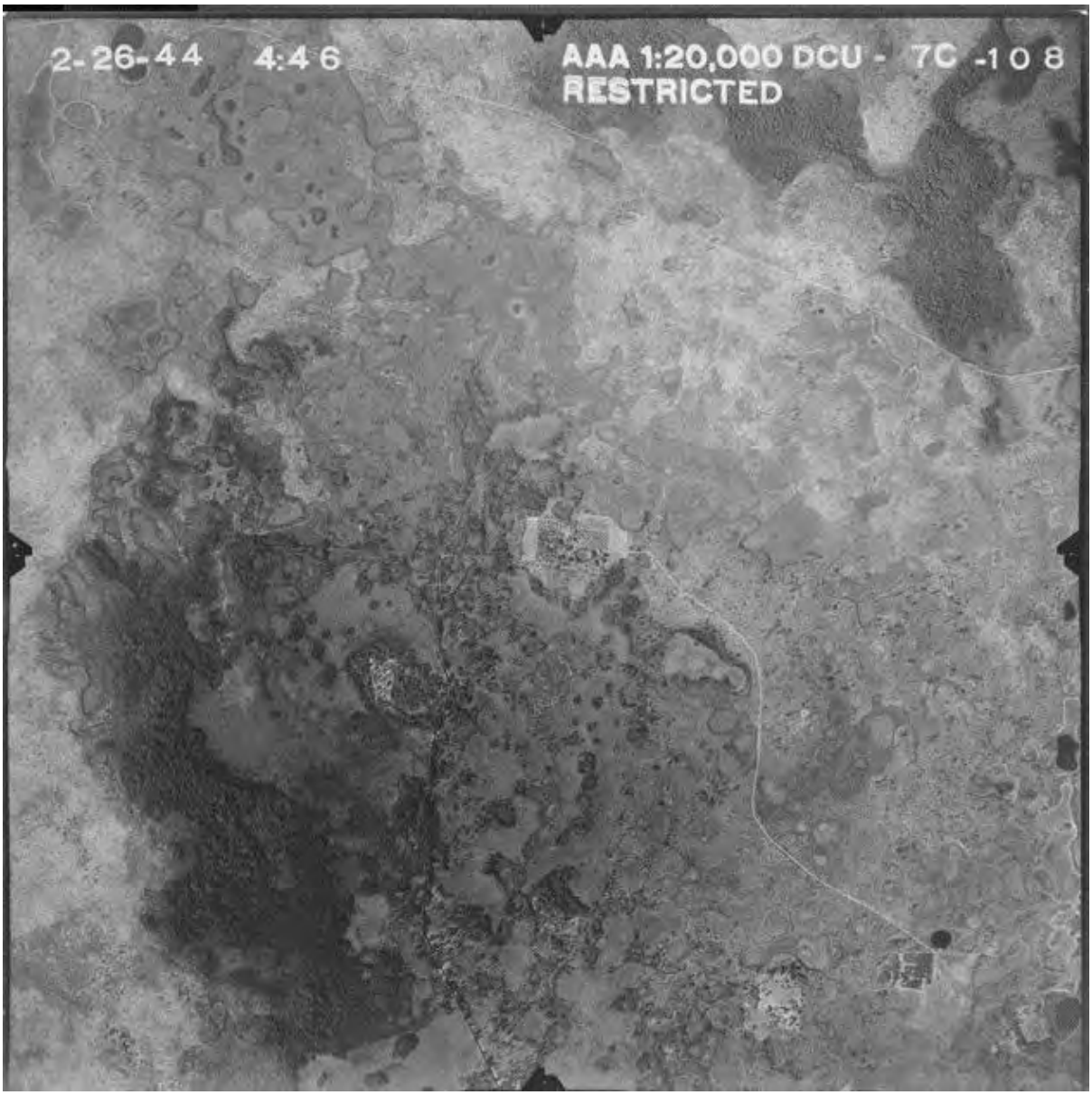
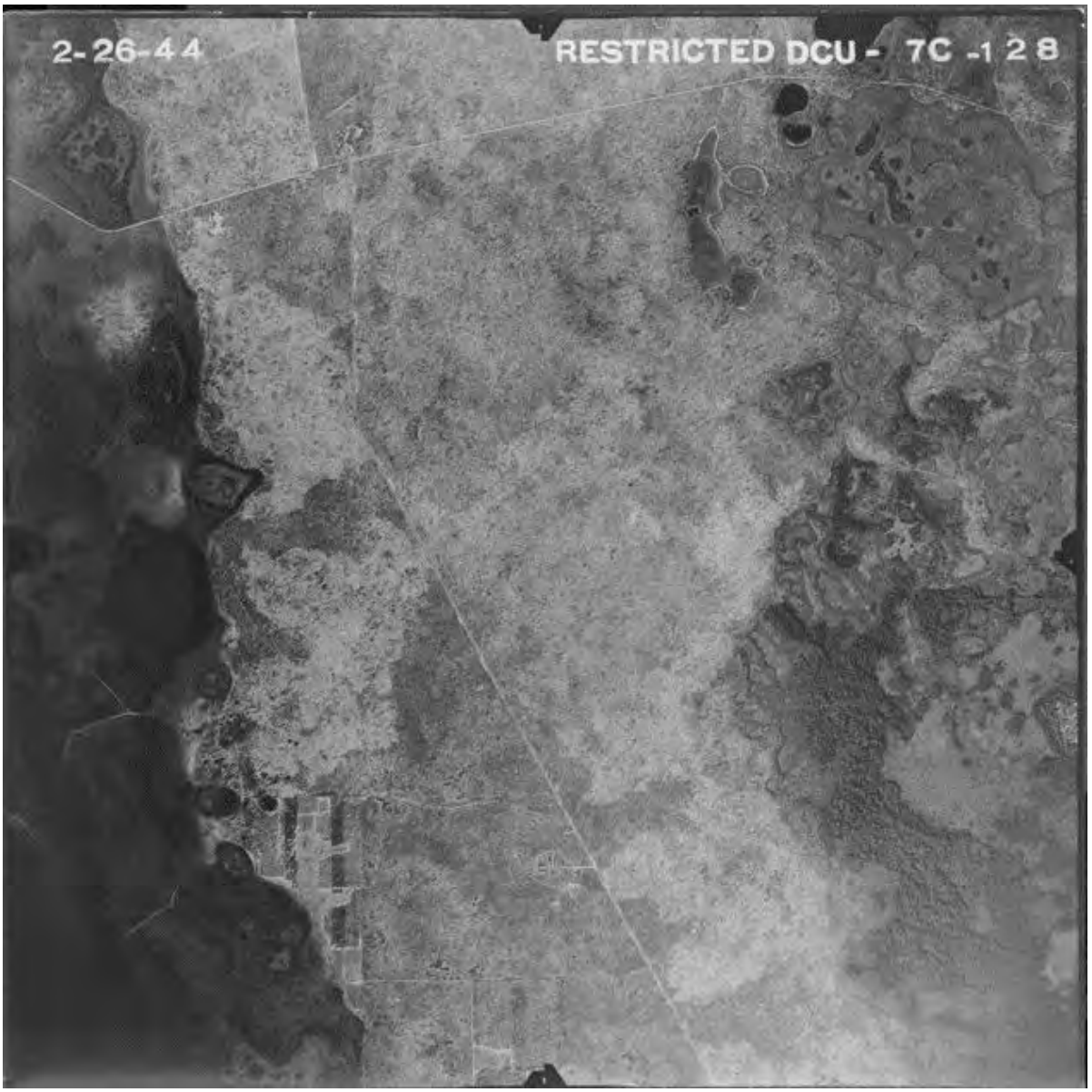
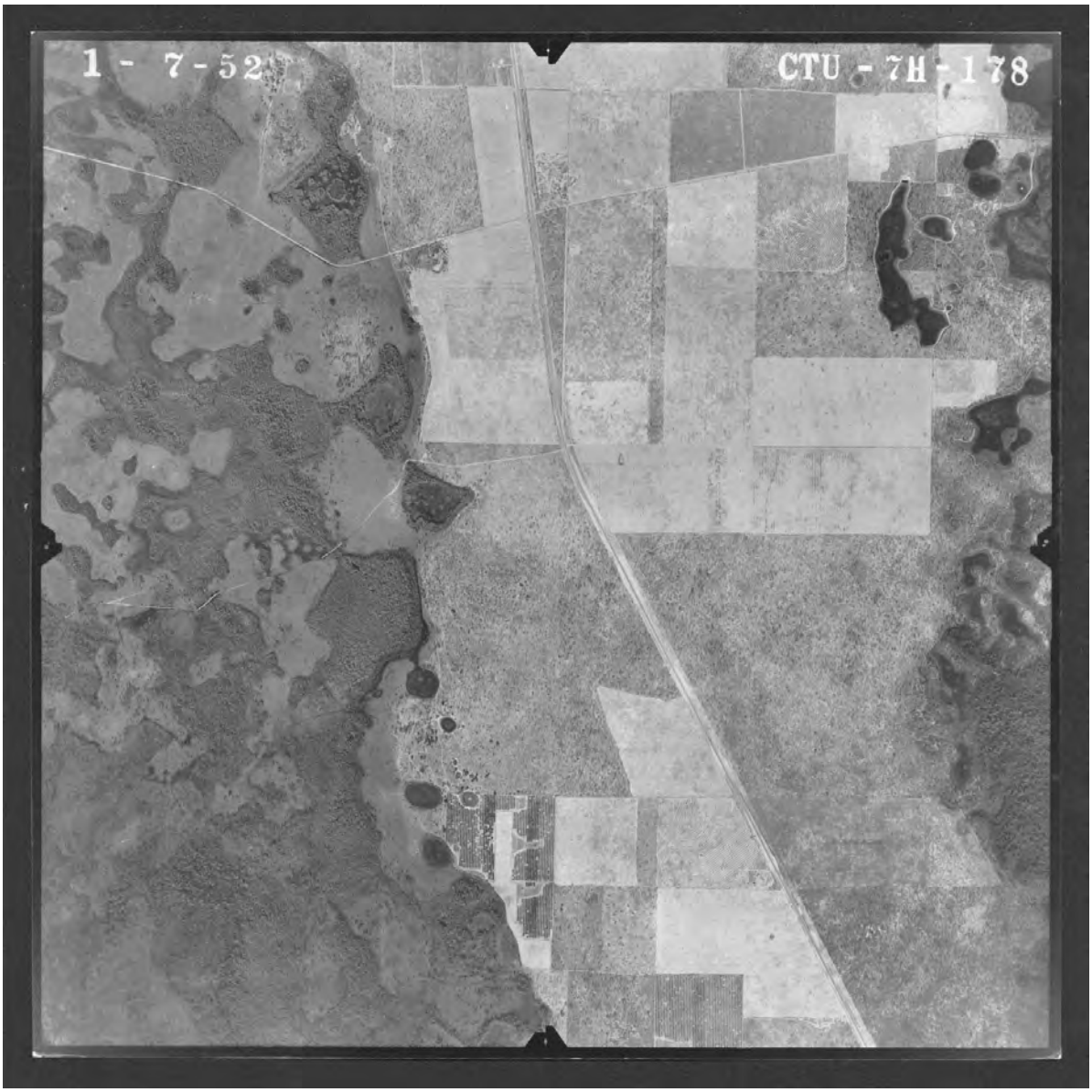


Aerial Photography: 1944B



Aerial Photography: 1944C

Aerial Photography: 1952A



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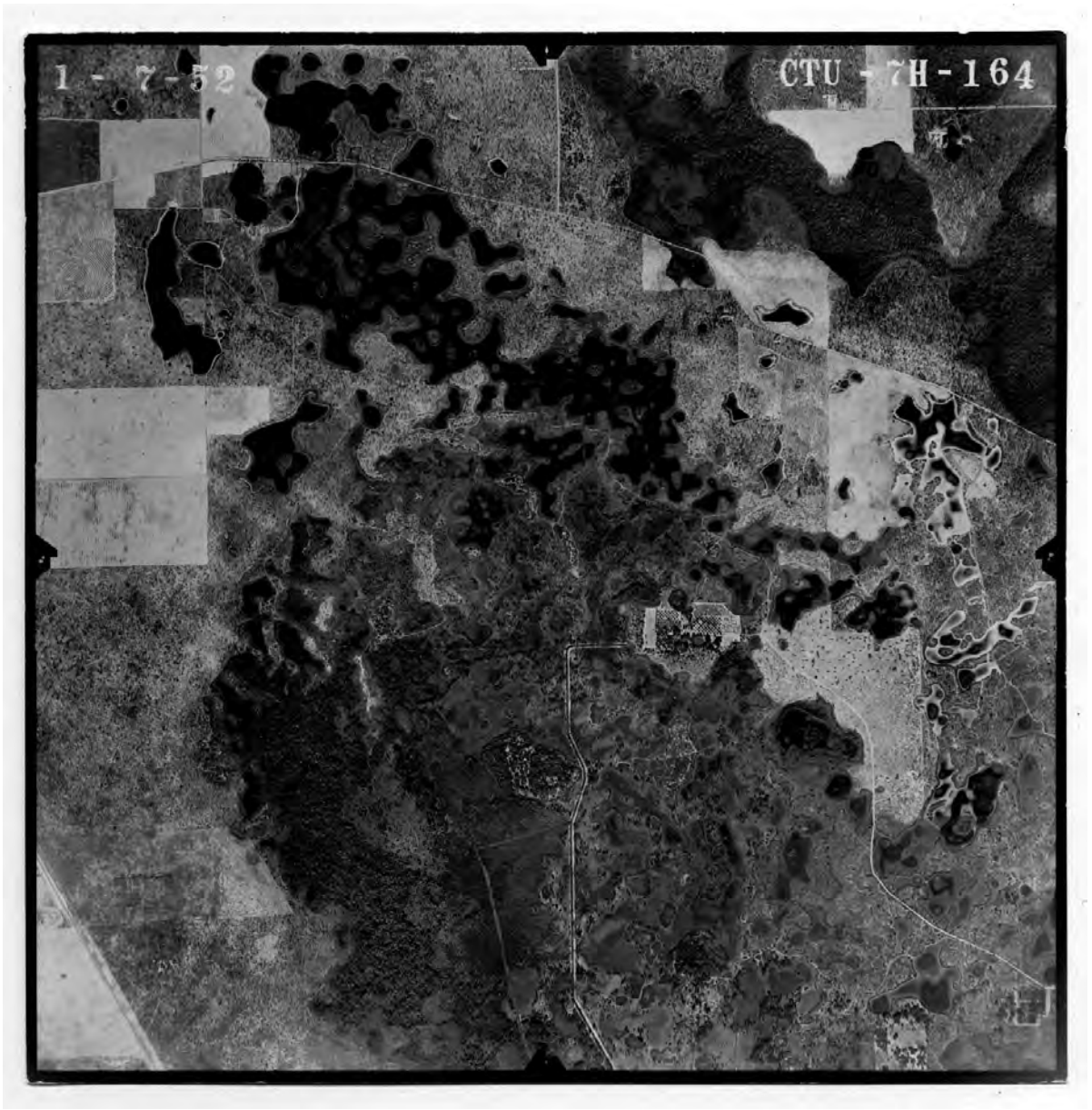

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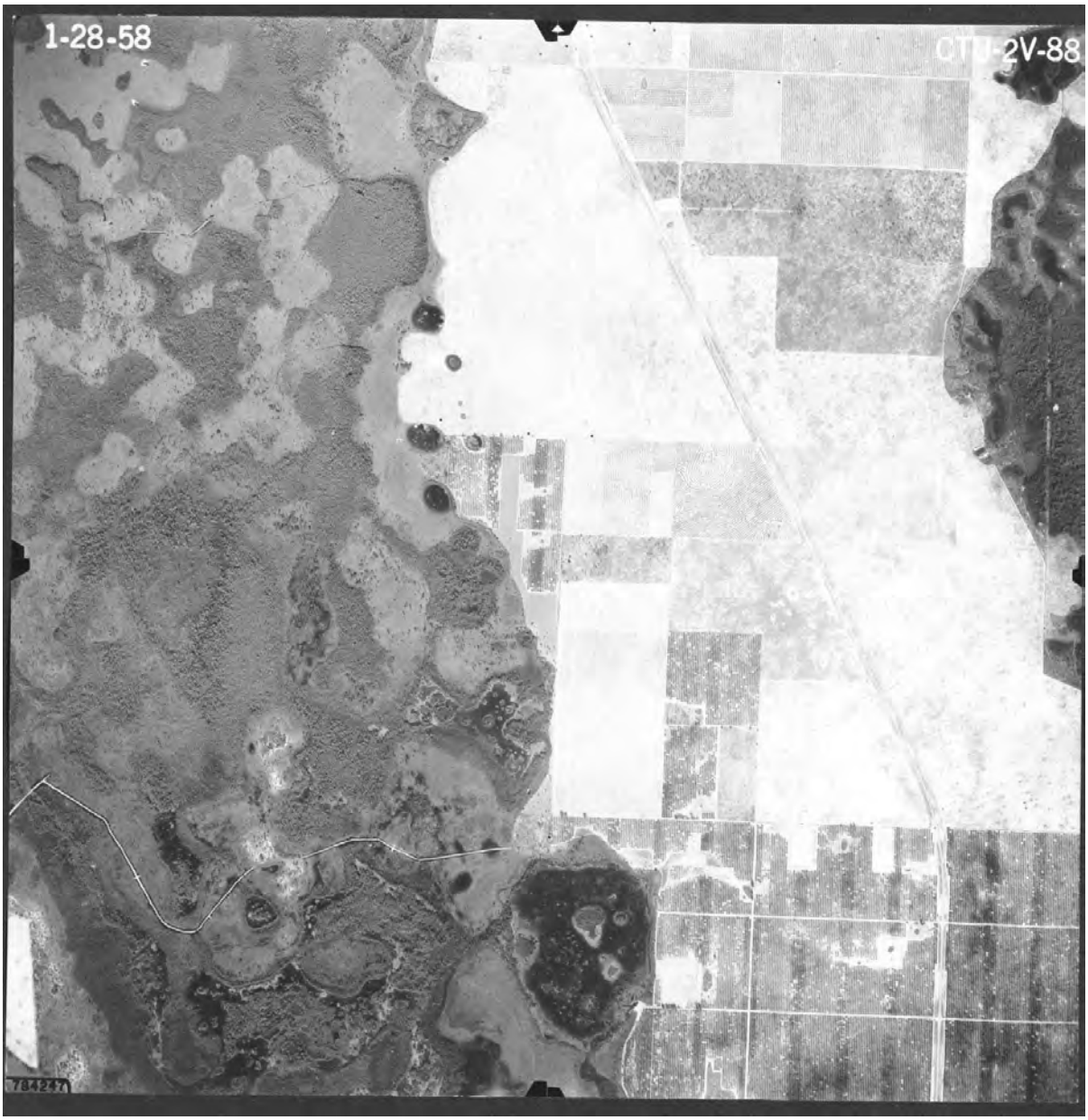

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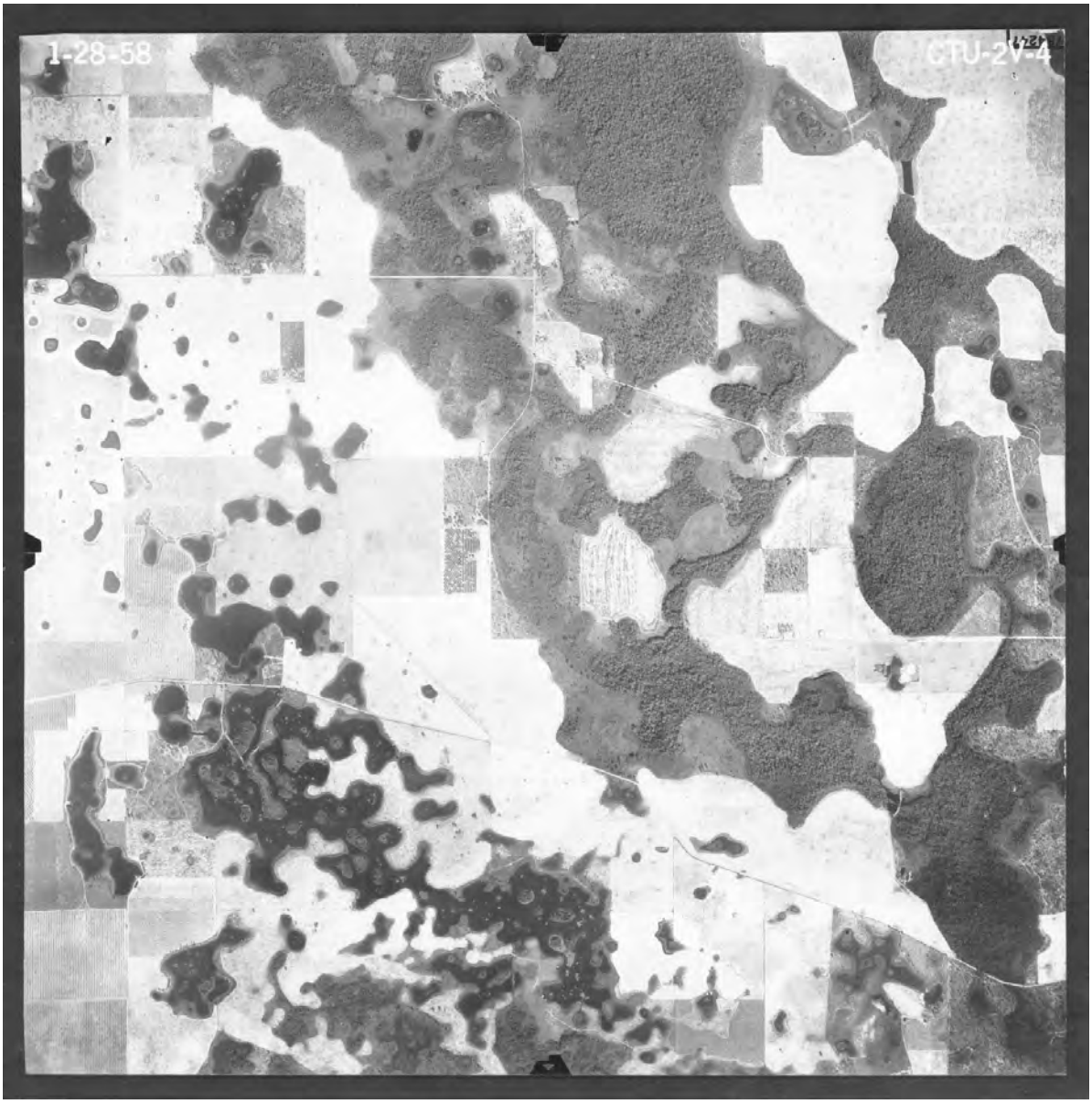

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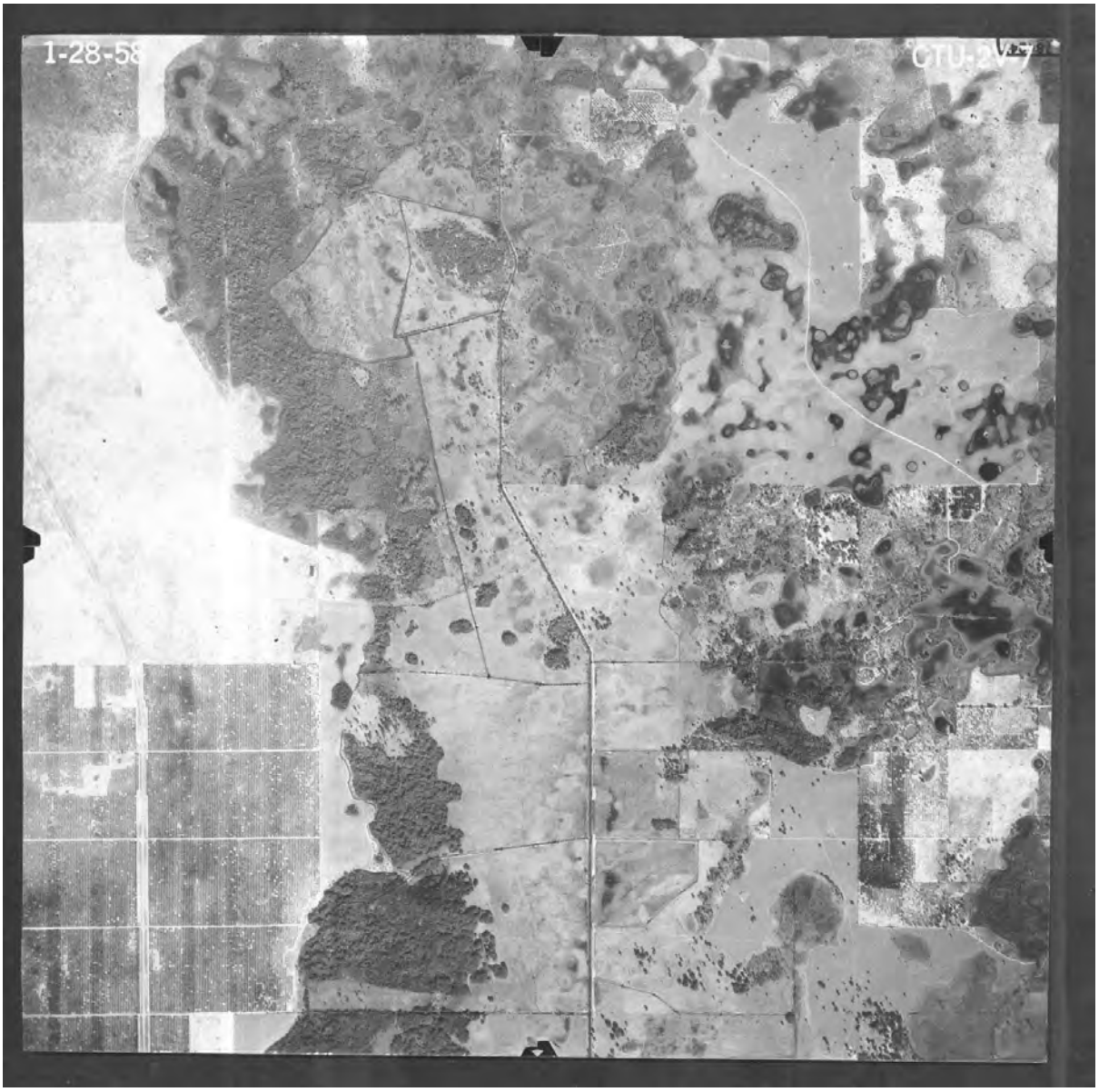

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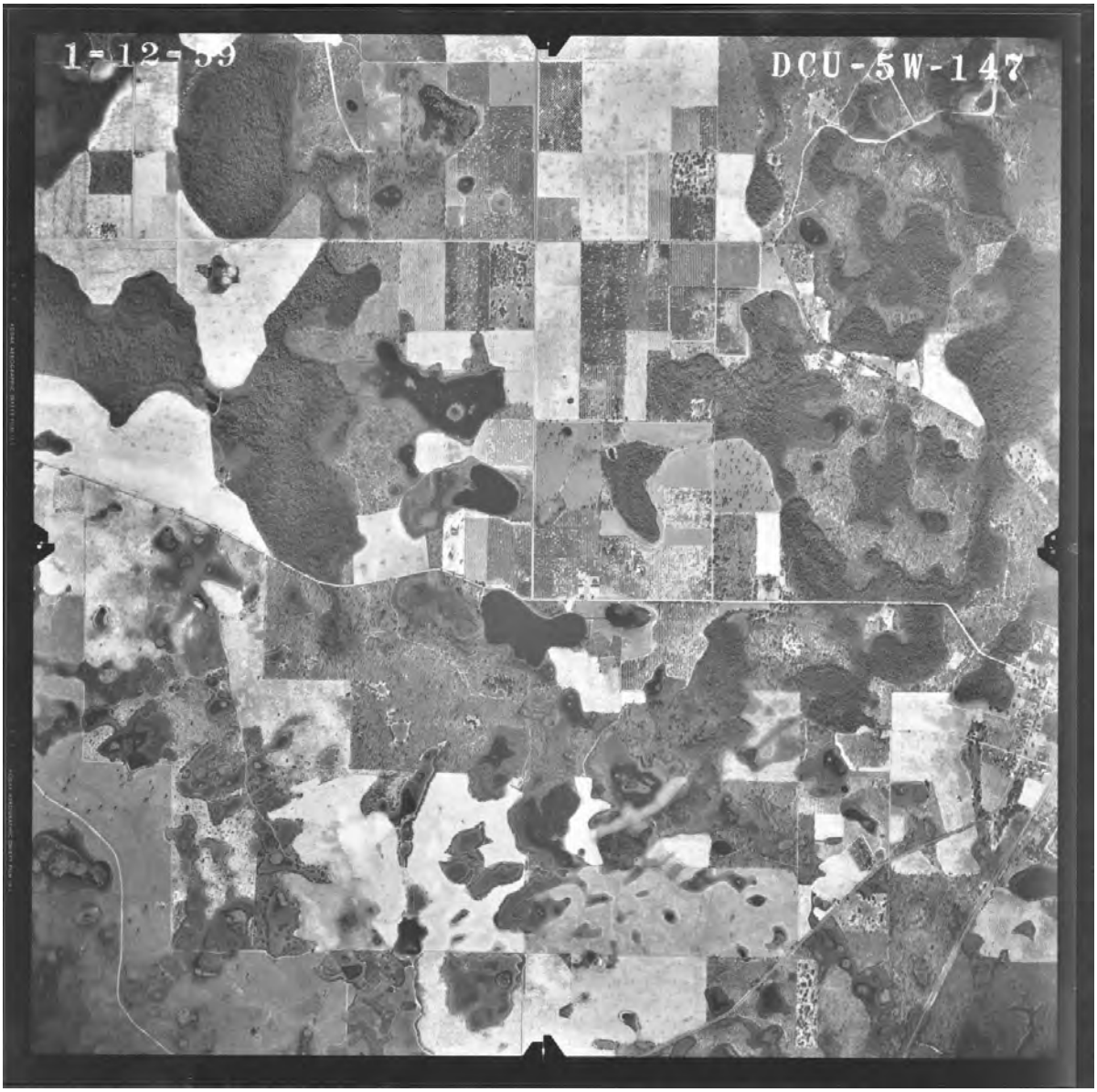
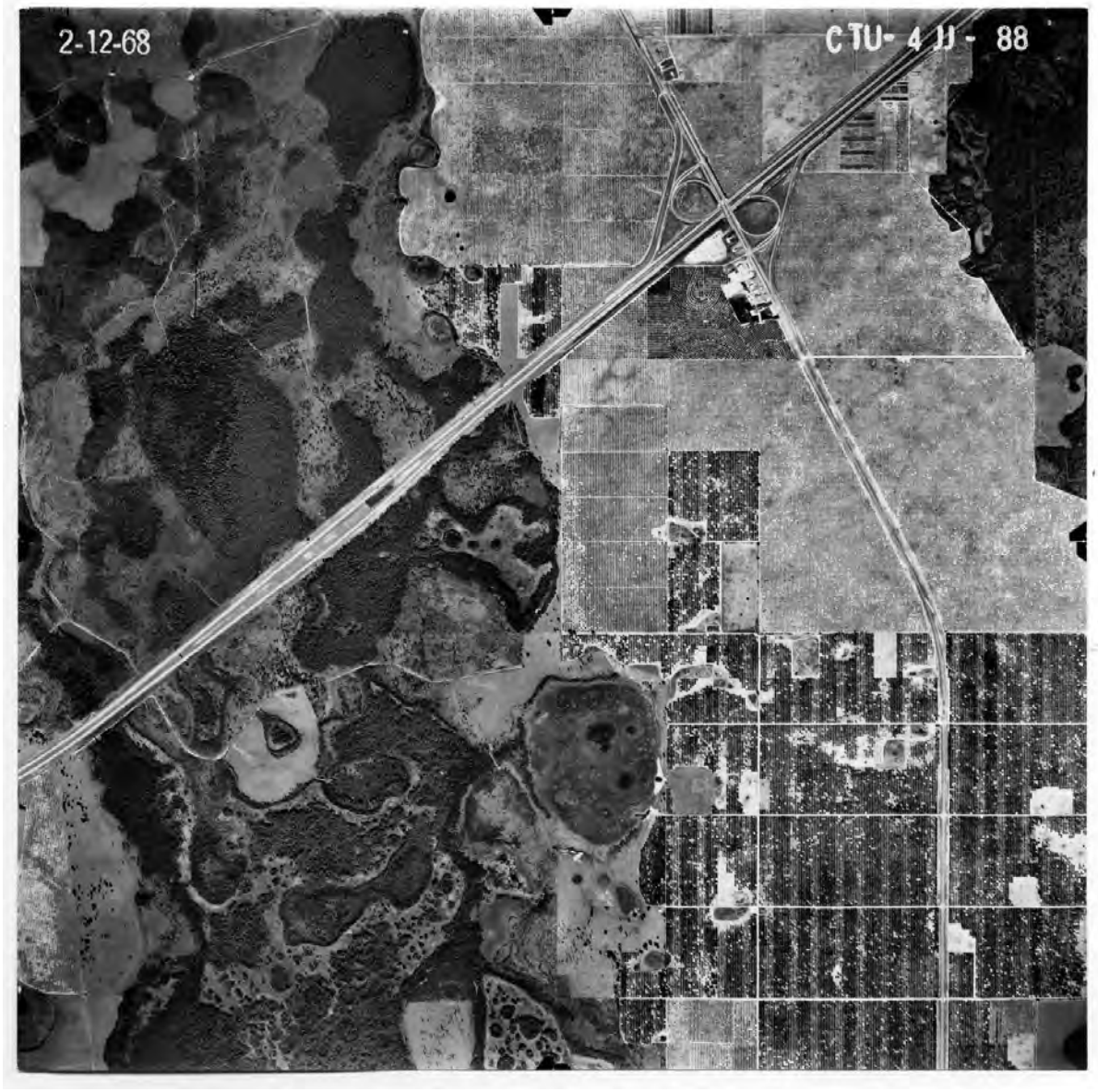


Aerial Photography: 1959



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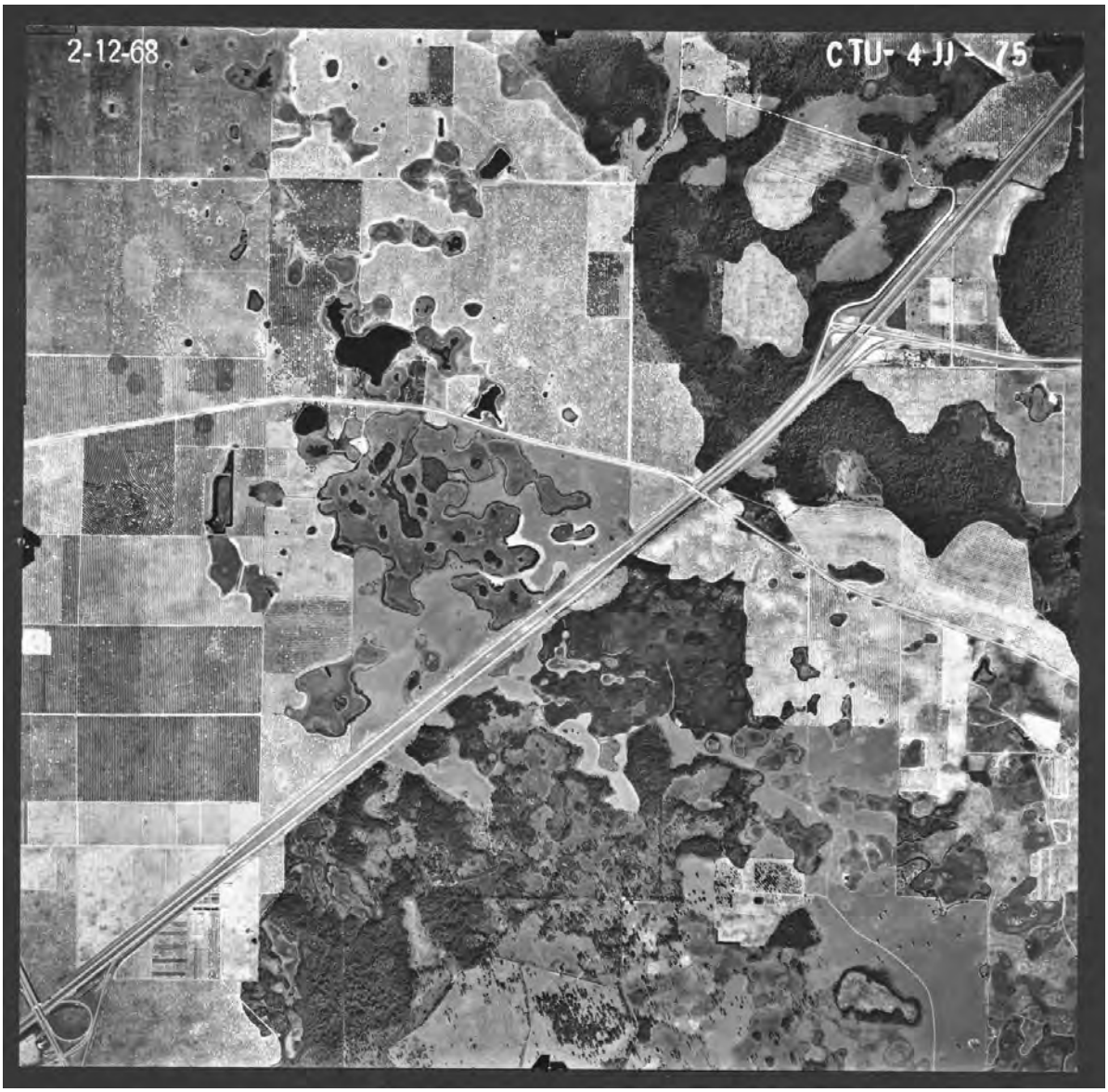
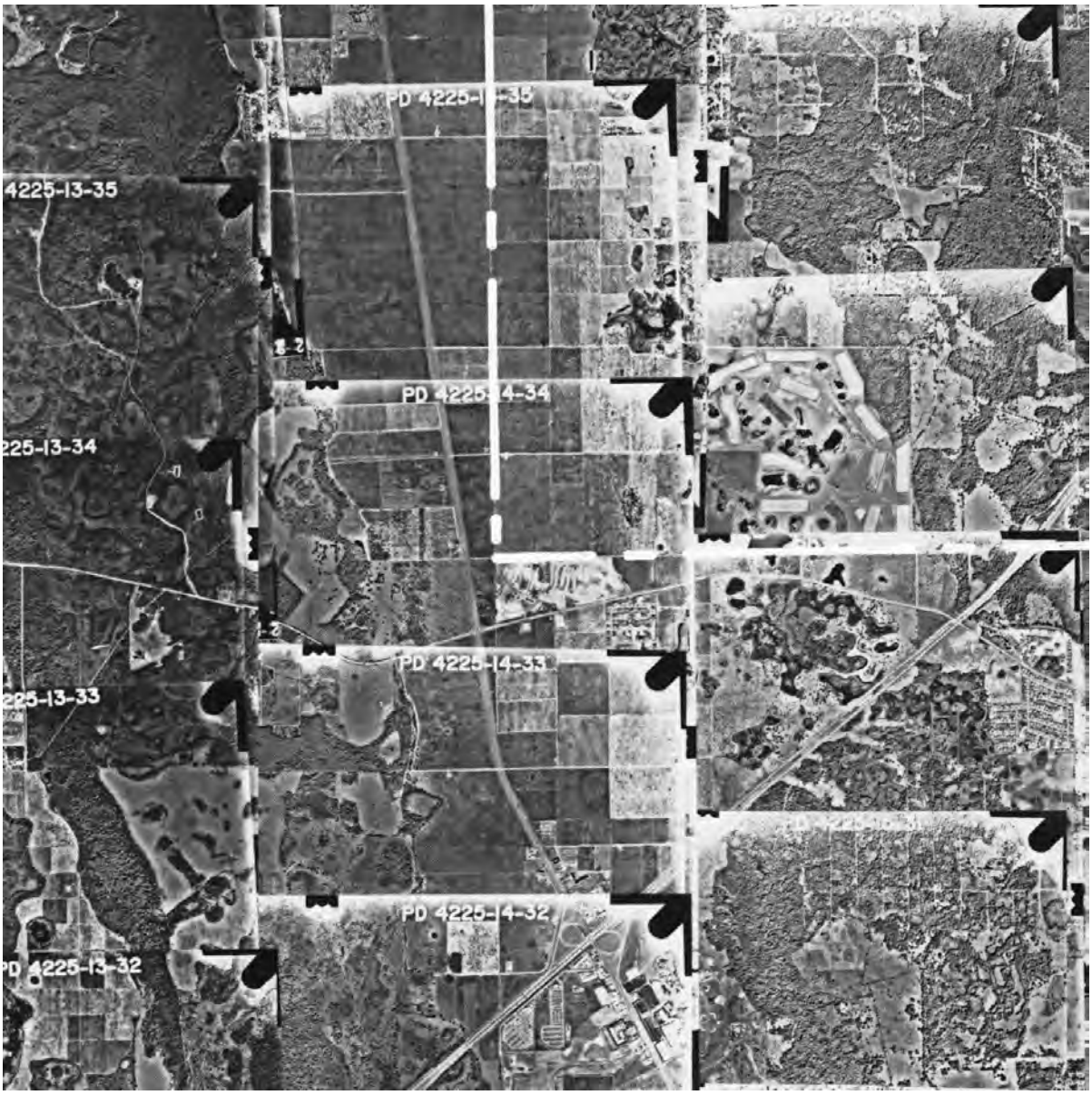


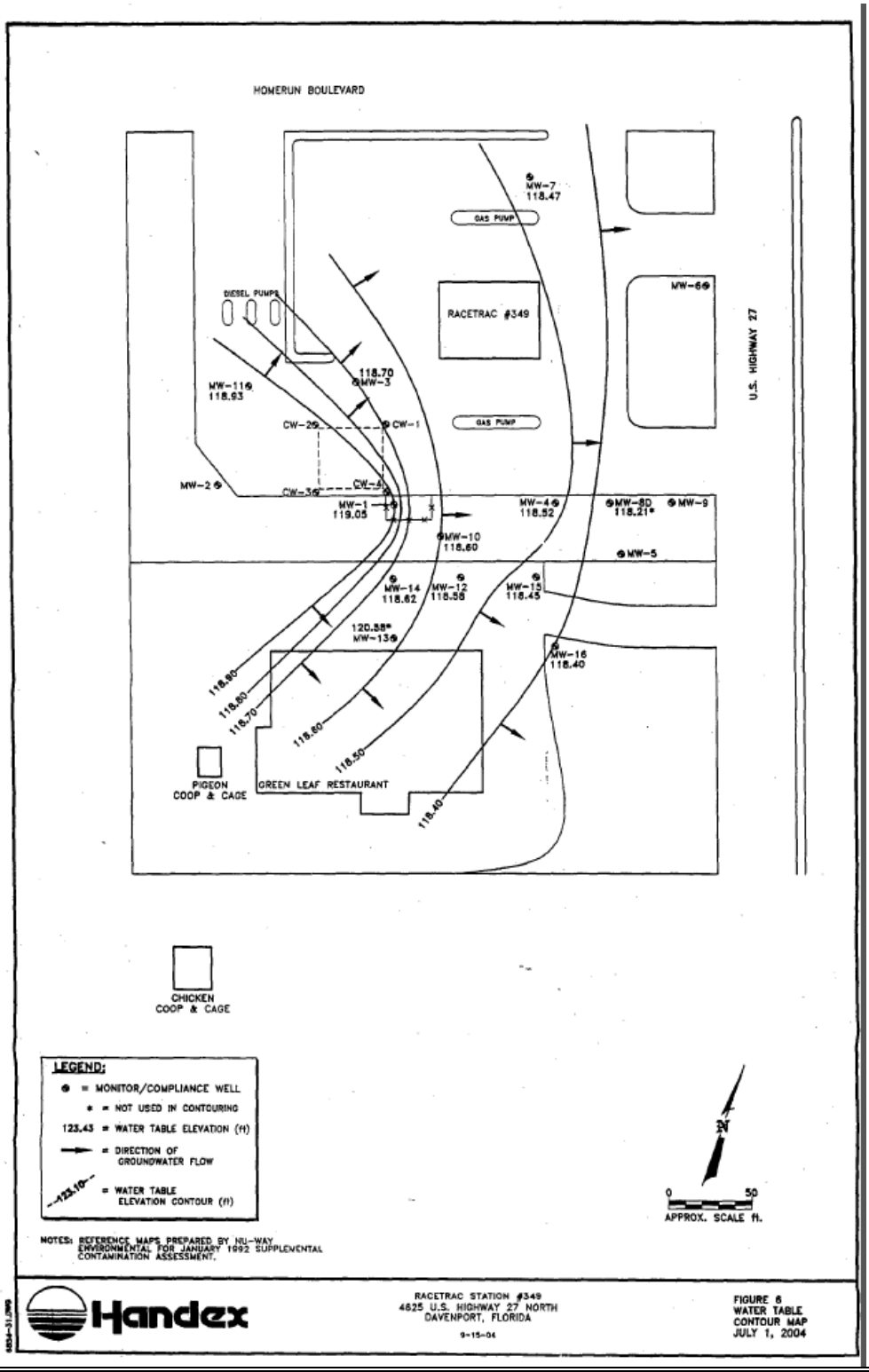
Aerial Photography: 1968B

Aerial Photography: 1974

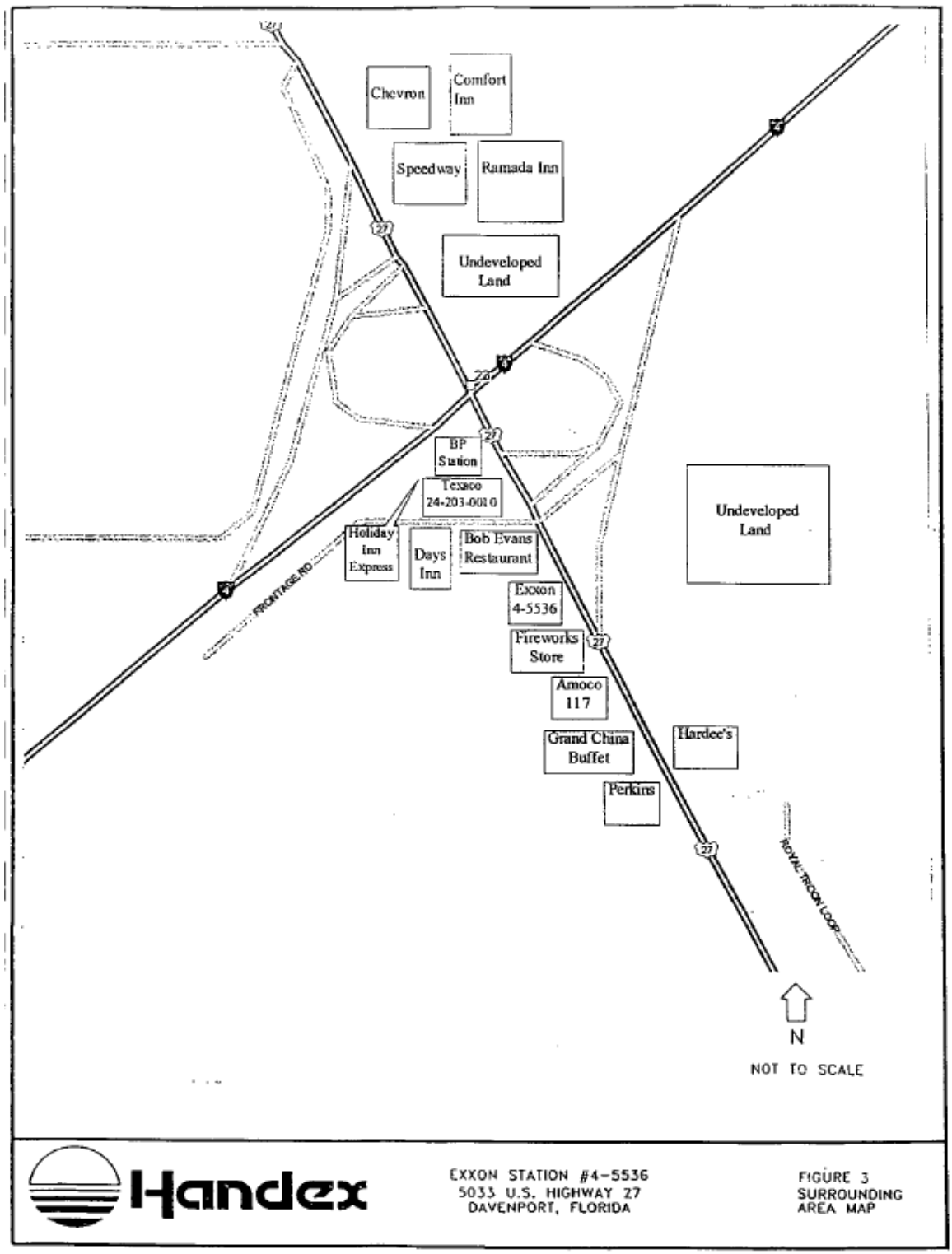


Aerial Photography: 1994

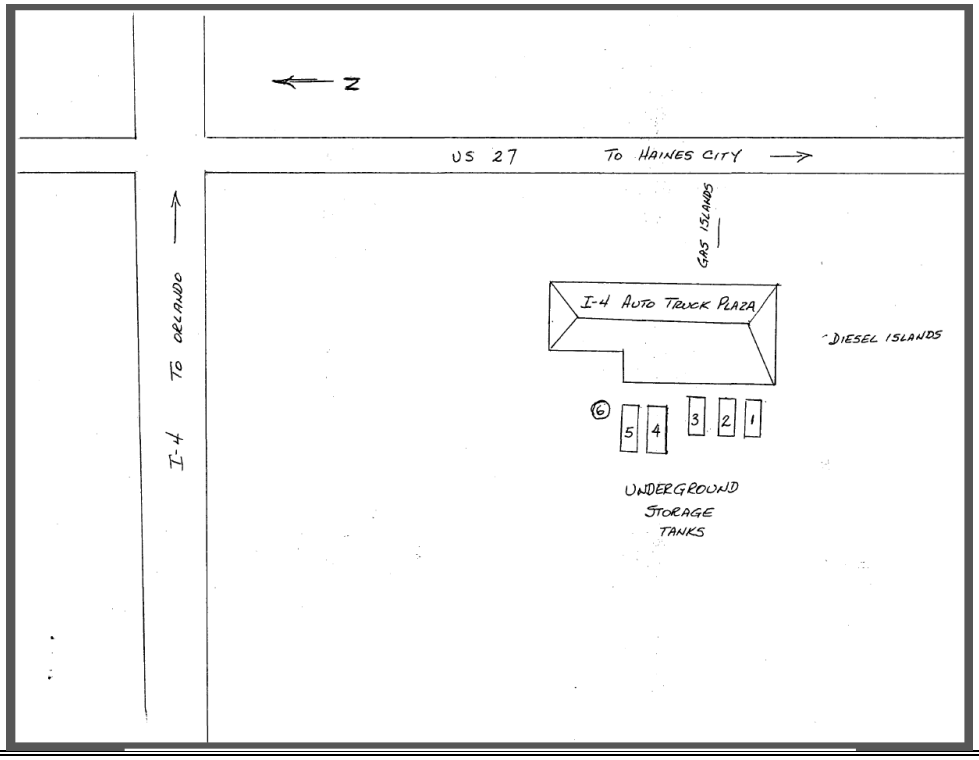
APPENDIX D
SITE DIAGRAMS



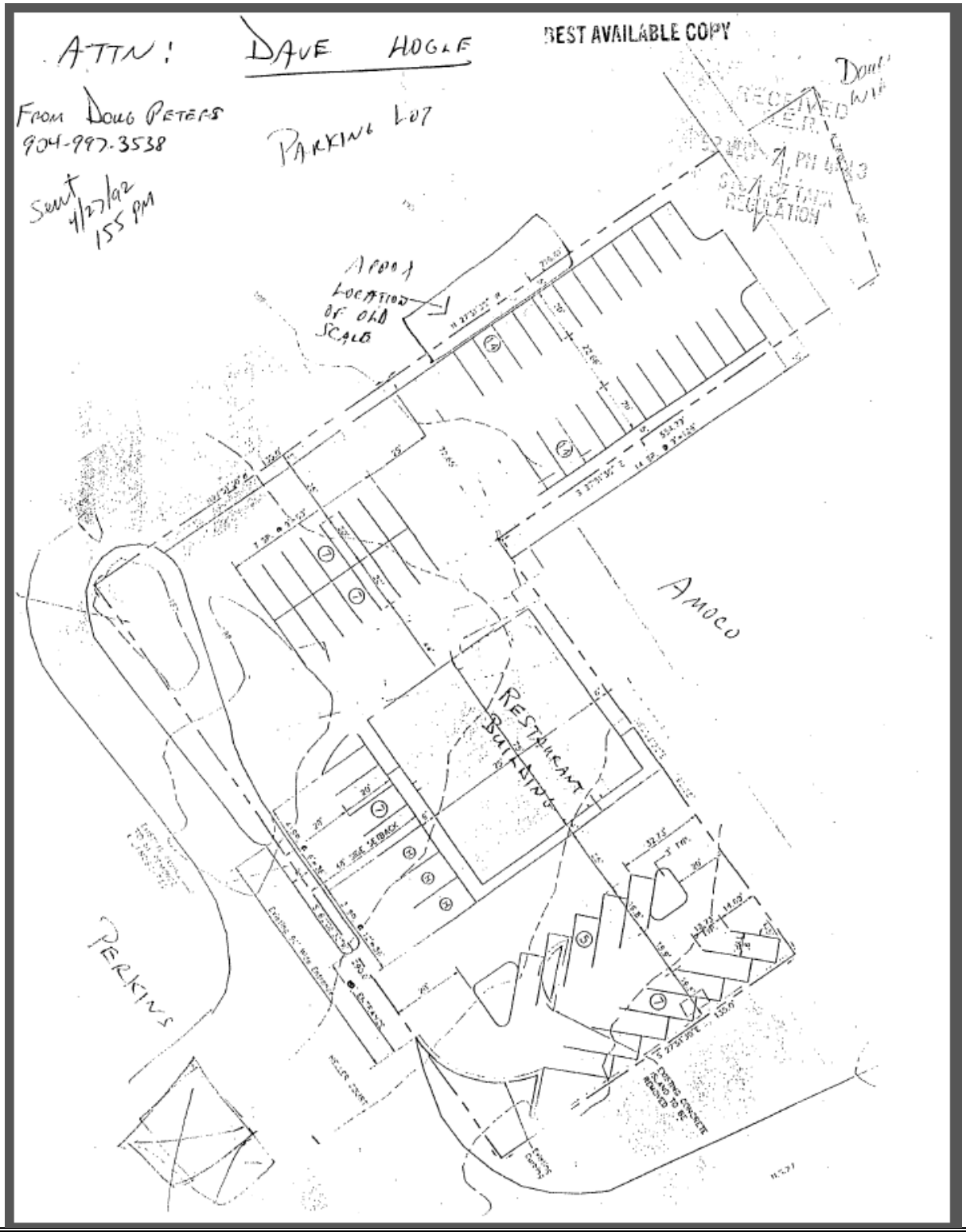
Site 6: Racetrac #2338 – Water Table Contour Map of old Racetrac station – by Handex Inc.



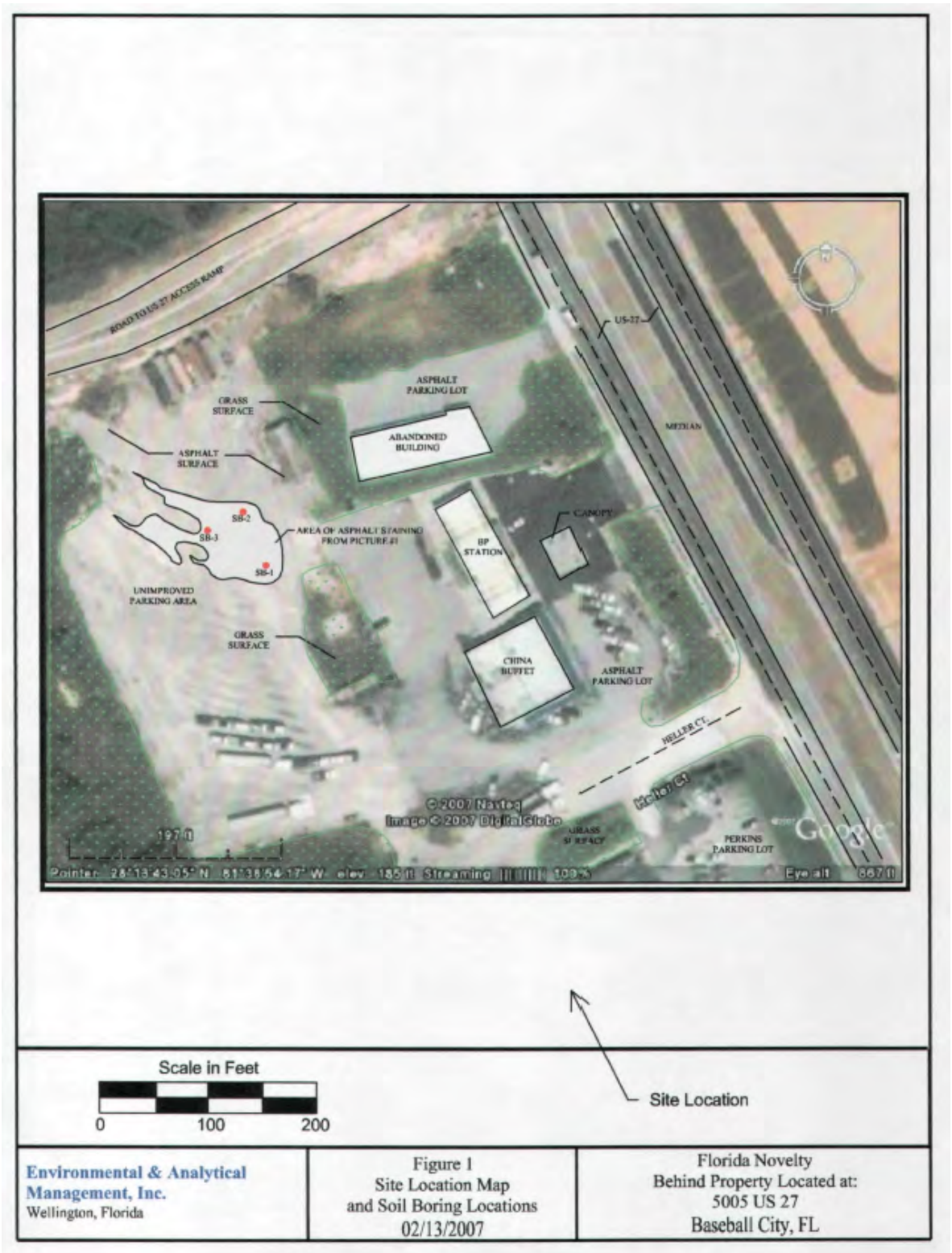
Site 16: Former Site of Exxon RAS #45536 and Exxon #5536 – Surrounding Area Map from October 2000 by Handex Inc.



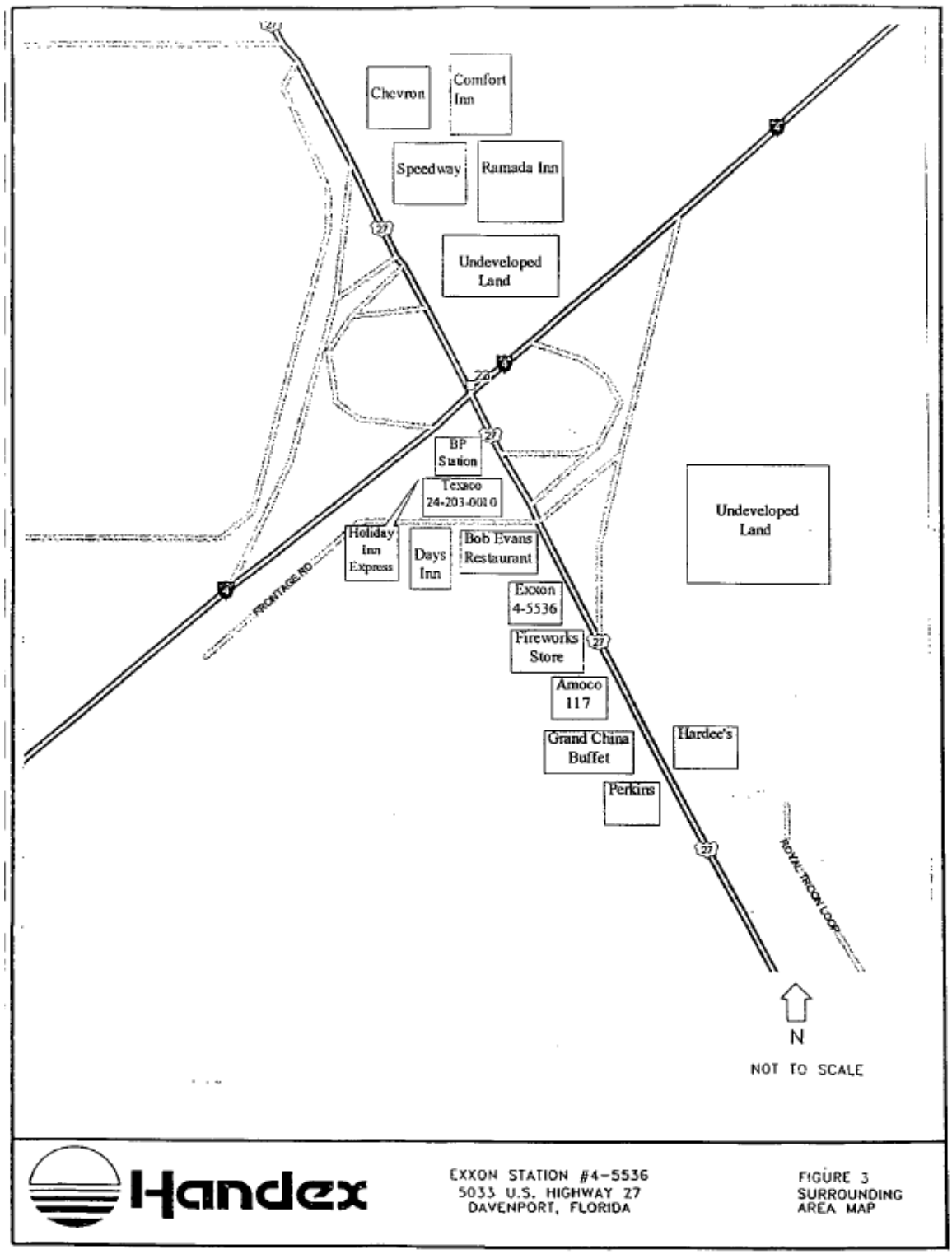
Site 11: I-4 Auto Truck Plaza – Historic location sketch



Site 11: I-4 Auto Truck Plaza – Historic location sketch

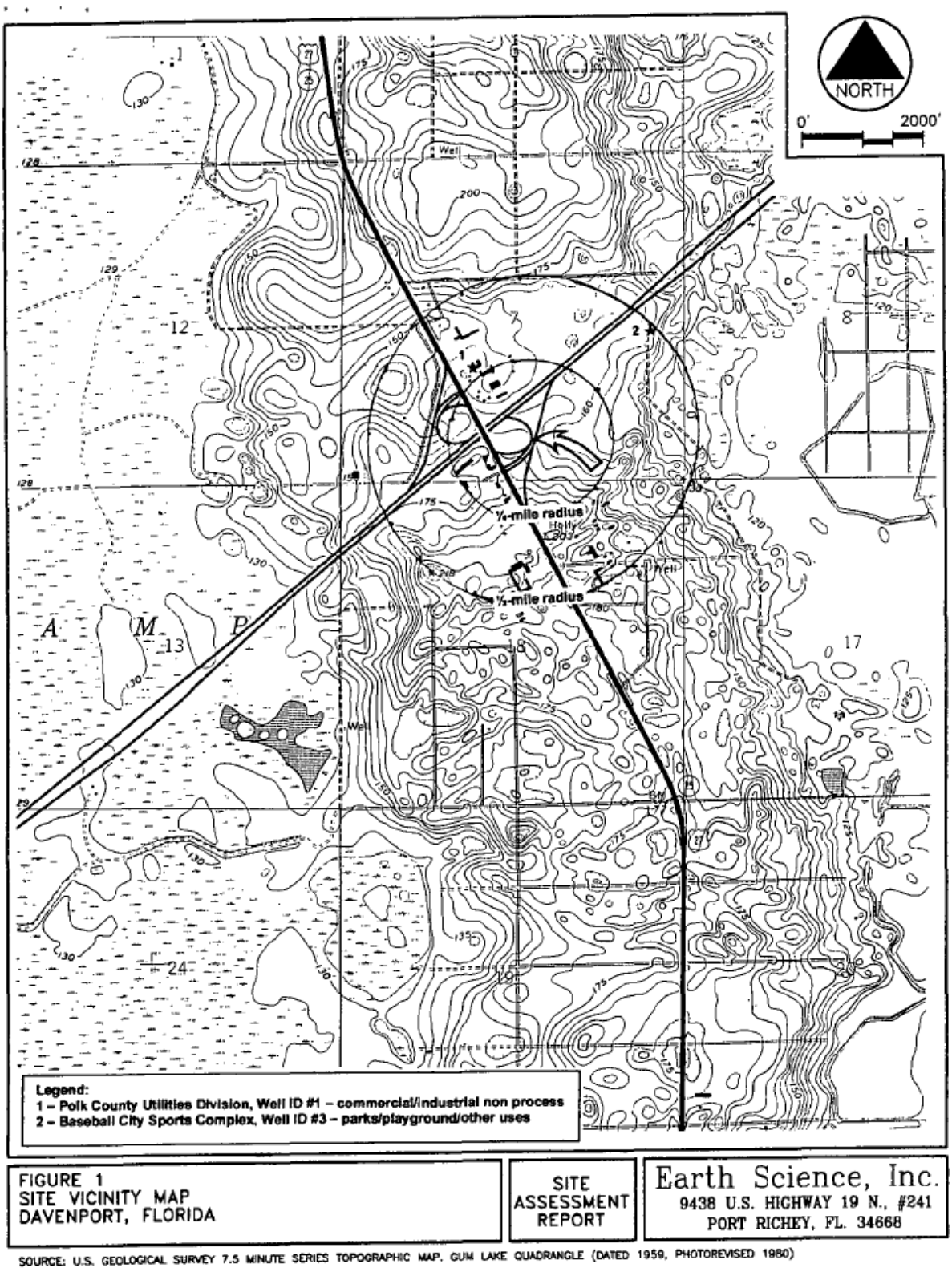


Site 14: Florida Novelty Works Property – Site Location Map and Soil Boring Locations by Environmental & Analytical Management Inc.



Site 16: Former Site of Exxon RAS #45536 and Exxon #5536 – Surrounding Area Map from October 2000 by Handex Inc.

Site 17: Baseball City Sports Complex, Posner Park – Theme Park Map



Site 26: Kenan Transport Spill – Site Vicinity Map by Earth Science Inc.

Site 29: Sunoco, Sunshine Food Mart #296 – Groundwater Elevation Map by Envirotrac Inc.