LEVEL I
CONTAMINATION SCREENING
EVALUATION REPORT (PONDS)

Suncoast Parkway 2

From State Road 44 to County Road 486

Citrus County, Florida

FPID: 442764-1-32-01

November 10, 2020, Rev. 5

Executive Summary

The purpose of this report is to present the findings of a contamination screening evaluation for eleven proposed pond site alternatives for Suncoast Parkway 2 from south of State Road 44 to County Road 486 in Citrus County. This report identifies and evaluates known or potential contamination sites within or adjacent to the proposed pond sites that may affect implementation of the project. An evaluation of one additional pond site (DRA-1A) associated with the Citrus Sand & Debris I Construction and Demolition Debris Disposal Facility long-term care monitoring and maintenance permit in addition to a portion of the Knoll Road Realignment, not Suncoast Parkway 2 roadways, was conducted as a Supplemental Addendum to the Contamination Technical Memorandum and is included in **CSER Appendix G**. The first ***revision*** of this report was based on Florida Turnpike Enterprise (FTE) comments received on February 14, 2020. The second ***revision*** was based on additional FTE comments received on March 3, 2020 and March 5, 2020. The third ***revision*** was based on new or modified pond locations provided by the designer on September 9, 2020. This ***revision*** provided is based on additional FTE comments received on October 6, 2020.

This Level I Contamination Screening Evaluation Report has been prepared using the Florida Department of Transportation Project Development and Environment Manual (Chapter 20) reporting format and standard environmental assessment practices of reviewing records of regulatory agencies, site reconnaissance, literature review, and (when necessary) interviews of individuals and business owners that may provide additional relevant information.

A total of eleven pond site alternatives were evaluated in this report. **Table 1** below presents a summary of the risk ratings assigned to each pond site alternative:

Table 1 – Pond Alternative Risk Rating Summary

Basin	Pond Site	Risk Rating	Notes
2-5	Alt 1	Low	Woods, overgrown field, residences along Shady Knoll Place
	Alt 2	Low	Woods
	Alt 3	Low	Open field, woods
	Alt 4	No	Overgrown field, woods, existing retention pond
	DRA-E	Low	Woods and one residence
2-6	Alt 1	Low	Open soil excavations with soil stockpiles throughout; offsite, adjoining east is an inactive limerock mine
	Alt 2	Low	Woods and one residence
	Alt 3	Low	Open field, woods

Table 1 – Pond Alternative Risk Rating Summary			
Basin	**Pond Site**	**Risk Rating**	**Notes**
2-7	Alt 1	Low	Woods, two empty 55-gallon drums in east central area; no contamination concerns noted
	Alt 2	Low	Woods, overgrown field
	Alt 3	Low	Inactive open pit sand mine

Based on the conclusions of the study and the risk ratings noted above, the following recommendations are made for this project:

- Additional information may become available or site-specific conditions may change from the time this report was prepared and should be considered prior to acquiring right-of-way and/or proceeding with roadway construction.
- For the locations rated No or Low for potential contamination, no further action is required. These pond locations have been evaluated and determined not to have any contamination risk to the study area at this time.
- Once final design plans are available, additional review is recommended in consideration of dewatering operations that may be necessary under the National Pollutant Discharge Elimination System Generic Permit for Stormwater Discharges from Large and Small Construction Activities. Verification testing may be warranted for contamination issues within 500 feet of the dewatering area.

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Appendices

1.0 Introduction

The purpose of this report is to present the findings of a contamination screening evaluation for eleven proposed pond site alternatives for the Suncoast Parkway 2 roadway improvements from south of State Road (SR) 44 to County Road (CR) 486 in Citrus County. This report identifies and evaluates known or potential contamination sites within or adjacent to the proposed pond sites that may affect implementation of the project. Recommendations are provided in **Section 9**.

2.0 Project Description

The Suncoast Parkway 2 project is a four-lane, divided, limited access, toll highway. The Suncoast Parkway 2 in conjunction with Suncoast Parkway 1 and the Veterans Expressway would form a continuous limited access toll road from the Tampa Bay region into northern Citrus County. The objective of this report is to evaluate the pond site alternatives along a portion of the proposed Suncoast Parkway 2 from SR 44 to CR 486.

3.0 Project Alternatives

Eleven pond site alternatives under consideration for the Suncoast Parkway 2 project from SR 44 to CR 486 are evaluated in this report. **Table 2** below depicts the pond site alternatives evaluated in this document. An evaluation of one additional pond site (DRA-1A) associated with the Citrus Sand & Debris I Construction and Demolition (C&D) Debris Disposal Facility long-term care monitoring and maintenance permit in addition to a portion of the Knoll Road Realignment, not Suncoast Parkway 2 roadways, was conducted as a Supplemental Addendum to the Contamination Technical Memorandum and is included in **CSER Appendix G**.

Table 2 – Pond Site Alternatives

Basin	Pond Site
2-5	Alt 1
	Alt 2
	Alt 3
	Alt 4
	DRA-E
2-6	Alt 1
	Alt 2
	Alt 3
2-7	Alt 1
	Alt 2
	Alt 3

4.0 Methodology

This Contamination Screening Evaluation Report (CSER) was performed in general accordance with Chapter 20 of the Florida Department of Transportation (FDOT) PD&E Manual. The evaluation included the following tasks:

- Document review using the Citrus County Property Appraiser's website;
- A regulatory review of governmental databases for permits and/or violations associated with contamination issues;
- Obtaining and evaluating historical aerial photographs in an effort to determine potential contamination issues. Copies of select historical aerial photographs are presented in **CSER Appendix B**;
- Review of topographic maps to develop an understanding of previous land uses in the study area and to identify any areas that may show historical, natural and manmade features, which aid in determining potential contamination concerns. A copy of the topographic map is provided in **CSER Appendix C**;
- Conducting site visits to verify information provided and to identify other potential concerns within the vicinity of the project; and
- Determining the contamination potential and assigning a risk rating for each pond site alternative within the proposed project limits.

4.1 Regulatory Review

An environmental database search using Environmental Data Management, Inc. (EDM) was conducted on September 9, 2020 to identify sites, facilities or listings within the study area containing documented or suspected petroleum contamination or other hazardous materials. The EDM report is used as a preliminary screening tool to identify facilities that are registered with various county, state, and federal agencies. This report utilizes the search distances as specified in Part 2, Chapter 20 of the FDOT PD&E Manual. The search distances are as follows:

- 500 feet from the right-of-way (ROW) line for petroleum, drycleaners, and non-petroleum sites,
- 1,000 feet from the ROW line for non-landfill solid waste sites (such as recycling facilities, transfer stations, and debris placement areas), and
- ½ mile from the ROW line for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), National Priorities List (NPL) Superfund sites, or Landfill sites.

The regulatory review of federal and state environmental records utilizes an integrated geographic information system database. The database report provides geocoded and non-geocoded regulatory listings of interest that are identified within the study area. Each listing is located by address, facility identification number and field verified where possible. All are reviewed for the potential of contamination to impact the project. The reviewed records include information compiled by the United States Environmental Protection Agency (EPA), the Florida Department of Environmental Protection (FDEP), and other various reporting programs, as identified in the attached environmental database search report. The facilities identified in the

EDM report that are evaluated in **Section 8** are as follows: Citrus Sand & Debris Inc., Maylen Avenue Disaster Debris Management Site, Damron Auto Salvage, LKQ, and Crystal River Quarries Inc. – Maylen Mine. A complete list of all regulatory record databases searched is included in the environmental database search report, provided in **CSER Appendix D**.

4.2 Site Reconnaissance

A site visit was conducted on December 4, 2019 and September 9, 2020 to evaluate each property within and in close proximity to the pond sites for potential contamination concerns. The reconnaissance included a systematic inspection of each parcel within each pond site alternative boundaries and surrounding areas looking for signs of potential contamination. This was achieved by walking the parcels within and surrounding the pond site alternatives to gain specific information regarding the usage and condition of each pond site. Photographs of the pond site alternatives and potential contamination concerns were taken during the site inspection. Select images are presented in **CSER Appendix E**.

Some of the typical physical indicators for contamination concerns include: railroad tracks, fill ports and vent pipes associated with underground storage tanks (USTs); oil/petroleum staining; drums; chemical containers; refuse; illicit dumping; solid waste; stressed vegetation; dry cleaning facilities; material handling from adjacent businesses; petroleum dispensers; excavated areas; agricultural use; chemical mix/load areas; stormwater outfall areas; surface water indicators; groundwater monitor wells, restricted area/contamination/hazardous material/petroleum pipeline signage, and other property uses that may present contamination concerns.

A residential shooting range was discovered near Pond 2-6, Alt 3 and empty drums were found onsite at Pond 2-7, Alt 1 during the site reconnaissance. Details about these sites are included in **Section 8.1**. The site reconnaissance in conjunction with the review of historical aerial photography, regulatory database searches, and review/evaluation of available data allows the site to be rated as to the degree of contamination concern as discussed in **Section 4.4**.

4.3 Supplemental Regulatory Information

In addition to the environmental database search report, the regulatory records review was supplemented with readily available information from various online sources as listed below. A copy of useful documentation, if any, is included in **CSER Appendix F**.

- FDEP Map Direct (see map included in **CSER Appendix F**)
- FDEP OCULUS Document Management System
- FDEP Storage Tank/Contaminated Facility search
- FDEP Hazardous Waste Facilities Search
- FDEP Solid Waste Facility Inventory
- EPA EnviroMapper for Envirofacts Multi-system Search
- United States Geological Survey (USGS) Mineral Resource database

Additionally, Tierra reviewed the PD&E Technical Memorandum (Tech Memo), issued in June 2009. The Tech Memo included the evaluation of an approximate 26-mile corridor from US 98 to US 19 in Citrus and Hernando Counties. The following contamination sites from the 2009 PD&E Tech Memo were evaluated for this project: Crystal River Quarries, Maylen Property, Former Limerock Mine, Damron Auto Salvage/LKQ, and Citrus Sand & Debris. Specific details regarding these contamination sites are discussed in **Section 8.1**.

4.4 Determination of Potential Risk

After gathering and reviewing all readily available public information and conducting site reconnaissance, contamination risk ratings were assigned to sites of potential contamination concern. The rating system is divided into four categories of risk as defined by the FDOT in the PD&E Manual, Part 2, Chapter 20, Section 20.2.2.4, Determination of Risk Rating. These four degrees of risk ratings are "No," "Low," "Medium," and "High." This system expresses the degree of concern for potential contamination problems.

No Risk Site

A review of available information on the property and a review of the conceptual or design plans indicates there is no potential contamination impact to the project. It is possible that contaminants have been handled on the property. However, findings from the Level I evaluation indicate that contamination impacts are not expected.

Low Risk Site

A review of available information indicates that past or current activities on the property have an ongoing contamination issue; the site has a hazardous waste generator identification (ID) number, or the site stores, handles, or manufactures hazardous materials. However, based on the review of conceptual or design plans and/or findings from the Level I evaluation, it is not likely that there would be any contamination impacts to the project.

Medium Risk Site

After a review of conceptual or design plans and findings from a Level I evaluation, a potential contamination impact to the project has been identified. If there is insufficient information (such as regulatory records or site historical documents) to make a determination as to the potential for contamination impact, and there is reasonable suspicion that contamination may exist, the property should be rated at least as a "Medium." Properties used historically as gasoline stations and which have not been evaluated or assessed by regulatory agencies, sites with abandoned in place underground petroleum storage tanks or currently operating gasoline stations should receive this rating.

High Risk Site

After a review of all available information and conceptual or design plans, there is appropriate analytical data that shows contamination will substantially impact construction activities, have implications to ROW acquisition or have other potential transfer of contamination related liability to the FDOT.

5.0 Land Uses

Land use is an important factor when evaluating historical and current environmental conditions. Evaluating the past use of properties can assist in determining possible chemical constituents that may have been used or associated with a particular parcel. For this project, a site reconnaissance was performed, and the following items were reviewed: historical aerial photographs and topographic maps.

Historical aerial photographs were reviewed to develop a history of the previous land uses within the study area and to identify any areas which may have historical uses that pose potential contamination concerns.

Historical aerial photographs dated 1951, 1960, 1967, 1973, 1985, 1994, 1995, 1998, 2004-2008, 2010, 2011, 2013, 2016, and 2017 were reviewed from the University of Florida, FDOT Survey & Mapping, and Google Earth online libraries. A summary of our review is discussed in **Table 3** below. A copy of the 2017 aerial photograph is presented in **CSER Appendix A**. Copies of select historical aerial photographs are presented in **CSER Appendix B**.

Additional site-specific current land use details regarding facilities/sites of concern are included in **Section 8**.

Table 3: Summary of Aerial Photograph Review

Basin	Pond Site	Historical Use	Contamination Concerns
2-5	Alt 1	Woods, roadway (West Shady Knoll Place), residences	No contamination concerns noted
	Alt 2	Woods, pasture	No contamination concerns noted
	Alt 3	Pasture	No contamination concerns noted
	Alt 4	Pasture, woods	No contamination concerns noted
	DRA-E	Woods, residence	No contamination concerns noted
2-6	Alt 1	Pasture Offsite east: former limerock mine	Offsite east: Limerock mine along east boundary since circa 1985
	Alt 2	Woods, residence	No contamination concerns noted
	Alt 3	Woods, pasture	No contamination concerns noted
2-7	Alt 1	Woods, residence	No contamination concerns noted
	Alt 2	Woods, cleared land, salvage yard adjacent north	Salvage yard along north boundary since circa 1985
	Alt 3	Woods; sand mine since 1985	Sand mine onsite since circa 1985

5.1 USGS Quadrangle Map

Topographic maps are reviewed to develop an understanding of previous land uses in the study area and to identify any areas that may show historical, natural and manmade features, which aid in determining potential contamination concerns. USGS 7.5-Minute "Crystal River, Florida" Quadrangle dated 1954, photo-revised 1988 and the "Homosassa, Florida" Quadrangle dated 1954, photo-revised 1988 were reviewed as part of this study. Copies of the topographic maps reviewed are provided in **CSER Appendix C**. A summary of findings for each pond alternative is included in **Table 4** below.

Table 4: Summary of USGS Topographic Map Review

Basin	Pond Site	Land Use	Contamination Concerns
2-5	Alt 1	Two small structures, roadway (Shady Knoll Place), wooded land (green shading), undeveloped land (unshaded)	No contamination concerns noted
	Alt 2	Wooded land (green shading)	No contamination concerns noted
	Alt 3	Wooded land (green shading), undeveloped land (unshaded)	No contamination concerns noted
	Alt 4	Wooded land (green shading), undeveloped land (unshaded)	No contamination concerns noted
	DRA-E	Wooded land (green shading), one structure onsite in west area	No contamination concerns noted
2-6	Alt 1	Wooded land (green shading)	No contamination concerns noted
	Alt 2	Wooded land (green shading), mined land at south end	Mined land
	Alt 3	Wooded land (green shading)	No contamination concerns noted
2-7	Alt 1	Wooded land (green shading), one small structure at east boundary	No contamination concerns noted
	Alt 2	Wooded land (green shading), roadway (North Knoll Road)	No contamination concerns noted
	Alt 3	Wooded land (green shading), mined land	Mined land

Additional site-specific current land use details regarding facilities/sites of concern listed above are included in **Section 8**.

6.0 Hydrologic Features

6.1 Aquifers of Florida

The Floridan aquifer is found throughout Florida and extends into the southern portions of Alabama, Georgia, and South Carolina. This aquifer system is comprised of a sequence of limestone and dolomite, which thickens from about 250 feet in Georgia to about 3000 feet in south Florida. The Floridan aquifer system has been divided into an upper and lower aquifer separated by a unit of lower permeability. The upper Floridan aquifer is the principal source of water supply in most of north and central Florida. In the southern portion of the state, where it is deeper and contains brackish water, the aquifer has been used for the injection of sewage and industrial waste. Groundwater flow is generally from high elevations within the central portion of the state towards the east and west coasts.

In southwestern Florida, aquifers that lie between the surficial aquifer system and the Floridan aquifer system are collectively referred to as the intermediate aquifer system. This aquifer system starts in Hillsborough and Polk Counties and extends south through Collier County. The intermediate aquifer system is under confined conditions and is mainly comprised of permeable layers of sand, shell and limestone separated by clay confining units. It is the main source of water supply for Sarasota, Charlotte and Lee counties where the underlying Floridan aquifer contains brackish water. Much of the water pumped from this aquifer system is used for agriculture. In most places, water percolates down from the surficial aquifer system above to the intermediate aquifer system. Lateral flow is generally from a high area in Polk County towards major surface water features and the Gulf of Mexico.

The surficial aquifer system in Florida includes any otherwise undefined aquifers that are present at land surface. The surficial aquifer is mainly used for domestic, commercial, or small municipal supplies. The surficial aquifer system is generally under unconfined, or water table conditions and is made up of mostly unconsolidated sand, shelly sand, and shell. The aquifer thickness is typically less than 50 feet. Groundwater in the surficial aquifer generally flows from areas of higher elevation towards the coast or streams where it can discharge as base flow. Water enters the aquifer from rainfall and exits as base flow to streams, discharge to the coast, evapotranspiration, and downward recharge to deeper aquifers.

6.2 Hydrology – Site Reconnaissance

During the site reconnaissance, surface waters observed within the study area included manmade roadside ditches and stormwater ponds, and low, wet areas. No monitor wells, irrigation wells or potable wells were identified within the boundaries of the proposed pond sites during the site reconnaissance. Land generally sloped towards surrounding manmade drainage features, and low, wet areas within and near the project limits.

6.3 Potentiometric Surface Map – Upper Floridan Aquifer

Tierra's review of the Potentiometric Surface Map dated September 2017 for the Upper Floridan Aquifer depicts groundwater flow direction generally toward the southwest. See Potentiometric Surface Map excerpt in **CSER Appendix F**.

7.0 Interviews

Communication with land owners, facility operators, residents, and governmental agencies can aid in the understanding of past and current land uses within the study area. Where possible or when necessary, interviews or requests for information are collected in an effort to identify potential concerns associated with petroleum storage tanks; automotive or marine, maintenance, service or repair facilities; dry-cleaning processes; and other industrial or agricultural operations that could affect the project. Documentation of interviews, if any, is provided in **CSER Appendix F**. An information request was emailed to FDEP Southwest District regarding the former limerock mine (Carroll's Lecanto Pit). However, no response has been received as of this writing.

8.0 Project Impacts

8.1 Pond Sites

When facilities/sites are identified in proximity to the ROW, they are assigned a risk rating using the FDOT's standard methodology (High, Medium, Low or No). In a similar manner, pond sites are assigned a risk rating so they can be evaluated as part of the overall engineering design process. Details for the pond sites investigated are provided in **Table 5** below. Pond locations are shown on a recent aerial photograph presented in **CSER Appendix A**. Detailed information for the nearby sites of concern are presented in the table below.

Table 5: Pond Site Risk Rating Summary

Basin	Pond Site	Risk Rating	Comments
2-5	Alt 1	Low	**Current Land Use:** During the site reconnaissance, the majority of Pond 2-5, Alternative 1 was observed as woods and overgrown field with West Shady Knoll Place located within the southeastern area of the pond site. Residences are located onsite along the south side of West Shady Knoll Place. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include Saint Michael the Archangel Church and a utility easement to the north; SR 44 to the south and west; and residences followed by a utility easement to the east. **Contamination Concern(s):** No contamination sites/facilities that would be expected to impact the project were noted within or in close proximity to the pond site boundaries. **Risk rating:** No contamination concerns were identified, therefore Pond 2-5, Alternative 1 is assigned a risk rating of Low.
	Alt 2	Low	**Current Land Use:** During the site reconnaissance, Pond 2-5, Alternative 2 was observed as woods. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include woods and a residence to the north; Woods to the east; grassy field followed by a utility easement to the west; and a utility easement to the south. **Contamination Concern(s):** ***Maylen Property, located approximately 250 feet east of Pond 2-5, Alternative 2 –*** this listing was identified as Site 31 in the 2009 PD&E report and was assigned a risk rating of Medium. The 2009 PD&E noted several types of agricultural equipment and containers on the property. No regulatory information is available for this listing. During the site reconnaissance conducted on December 4, 2019, no agricultural equipment or suspect containers were observed within the boundaries of Pond 2-5, Alternative 2. This listing is not considered a contamination concern to Pond 2-5, Alternative 2. **Risk rating:** No contamination concerns were identified, therefore Pond 2-5, Alternative 2 is assigned a risk rating of Low.
	Alt 3	Low	**Current Land Use:** During the site reconnaissance, the majority of Pond 2-5, Alternative 3 was observed as open field with woods at the southwest boundary. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include woods to the north and west; a utility easement to the south; and North Maylen Avenue followed by overgrown field and Crystal River Quarries to the east. **Contamination Concern(s):** ***Maylen Avenue DDMS, 261 North Maylen Avenue, located approximately 100 feet east of Pond 2-5, Alternative 3 –*** During the site reconnaissance, this site was observed as an overgrown field with no structures onsite. According to the EDM report and files found on FDEP's OCULUS database, this site is an inactive Disaster Debris Management Site (DDMS). When a hurricane/storm occurs, DDMS sites are utilized to store and process disaster debris. This site has not been utilized to store disaster debris as of the writing of this report. Therefore, this site is not considered a contamination concern to Pond 2-5, Alternative 3. ***Crystal River Quarries, 287 North Maylen Avenue, located approximately 70 feet east of Pond 2-5, Alternative 3 –*** During the site reconnaissance, this facility was observed as an active mine. This listing was identified as Site 30 in the 2009 PD&E report and was assigned a risk rating of Low. The facility currently maintains one 10,000-gallon diesel fuel aboveground storage tank (AST). No discharges or current violations are noted. Due to the regulatory status, this facility is not considered a contamination concern to Pond 2-5, Alternative 3. **Risk rating:** No contamination concerns were identified, therefore Pond 2-5, Alternative 3 is assigned a risk rating of Low.
	Alt 4	No	**Current Land Use:** During the site reconnaissance, Pond 2-5, Alternative 4 was observed as an existing retention pond in the southwest area and woods throughout the remaining area of the pond alternative. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include woods to the north, east, and west; and SR 44 to the south. **Contamination Concern(s):** No contamination sites/facilities that would be expected to impact the project were noted within or in close proximity to the pond site boundaries. **Risk rating:** No contamination concerns were identified, therefore Pond 2-5, Alternative 4 is assigned a risk rating of No.

Table 5: Pond Site Risk Rating Summary			
Basin	**Pond Site**	**Risk Rating**	**Comments**
2-5	DRA-E	Low	**Current Land Use:** During the site reconnaissance, DRA-E was observed as woods with a residence onsite in the western area. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include woods to the north, east, and west; and SR 44 to the south. **Contamination Concern(s):** No contamination sites/facilities that would be expected to impact the project were noted within or in close proximity to the pond site boundaries. **Risk rating:** No contamination concerns were identified, therefore DRA-E is assigned a risk rating of Low.
2-6	Alt 1	Low	**Current Land Use:** During the site reconnaissance, Pond 2-6, Alternative 1 was observed as open excavations with soil stockpiles throughout. The excavations and stockpiles onsite do not appear to be associated with the former mining operations located offsite, adjacent east. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include woods to the north and west; a former limerock mine to the east; and open field followed by Providence Baptist Church to the south. **Contamination Concern(s):** ***Former Limerock Mine, 1150 North Maylen Avenue, located offsite, adjoining east of Pond 2-6, Alternative 1 –*** during the site reconnaissance, this site was observed as an inactive limerock mine with vegetation growing in the remaining open excavation pits. This facility was identified as Site 33 in the 2009 PD&E report and was assigned a risk rating of No. The 2009 PD&E noted a large excavated area with overgrown vegetation throughout. No contamination concerns were observed in 2009 or during the site reconnaissance conducted on December 4, 2019. Documents found on the USGS Mineral Resource database indicates that this facility formerly operated as a limerock mining facility known as Carroll's Lecanto Pit (AKA Lecanto Materials Co.). No further information is available on the USGS online database. An email was sent to FDEP's Public Records department requesting additional information about this site. No response was received as of the writing of this report. See email and USGS excerpts in **CSER Appendix F**. This facility is not considered a contamination concern to Pond 2-6, Alternative 1. **Risk rating:** No contamination concerns were identified, therefore Pond 2-6, Alternative 1 is assigned a risk rating of Low.
	Alt 2	Low	**Current Land Use:** During the site reconnaissance, Pond 2-6, Alternative 2 was observed as open field and woods. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include woods to the north and east; a former limerock mine to the south; and residences to the west. ***Former Limerock Mine, 1150 North Maylen Avenue, located adjacent south of Pond 2-6, Alternative 2 –*** during the site reconnaissance, this site was observed as an inactive limerock mine with vegetation growing in the remaining open excavation pits. This facility was identified as Site 33 in the 2009 PD&E report and was assigned a risk rating of No. The 2009 PD&E noted a large excavated area with overgrown vegetation throughout. No contamination concerns were observed in 2009 or during the site reconnaissance conducted on December 4, 2019. Documents found on the USGS Mineral Resource database indicates that this facility formerly operated as a limerock mining facility known as Carroll's Lecanto Pit (AKA Lecanto Materials Co.). No further information is available on the USGS online database. An email was sent to FDEP's Public Records department requesting additional information about this site. No response was received as of the writing of this report. See email and USGS excerpts in **CSER Appendix F**. This facility is not considered a contamination concern to Pond 2-6, Alternative 2. **Risk rating:** No contamination concerns were identified, therefore Pond 2-6, Alternative 2 is assigned a risk rating of Low.
	Alt 3	Low	**Current Land Use:** During the site reconnaissance, Pond 2-6, Alternative 3 was observed as open field, woods, and a construction site. The south and east ends of the pond site are comprised of open field. The majority of the pond site consists of woods. What appears to be a residence is being constructed onsite in eastern area of the pond site. A small shooting range with assorted targets and spent bullet casings on the ground were situated in front of a soil berm located offsite north of the northwest corner of the pond site. The shooting range is not a commercial operation. It appears to be associated with personal use. Surrounding properties in the vicinity of the pond site include woods to the north and east; open field to the south; and open field followed by a residence to the west. **Contamination Concern(s):** ***Shooting range, located approximately 60 feet north of Pond 2-6, Alternative 3 –*** A small shooting range was observed approximately 60 feet north of the pond site (coordinates: 28.88448611° -82.50888889°). The range consisted of household plastic items placed directly on land surface and paper targets attached to wooden boards in front of a soil berm measuring approximately 5 feet tall and 30 feet wide. Spent bullet casings were noted throughout the shooting range area. Due to the separation distance (60 feet), the soil berm is not considered a contamination concern to Pond 2-6, Alternative 3. **Risk rating:** No contamination concerns were identified, therefore Pond 2-6, Alternative 3 is assigned a risk rating of Low.

Table 5: Pond Site Risk Rating Summary			
Basin	**Pond Site**	**Risk Rating**	**Comments**
2-7	Alt 1	Low	**Current Land Use:** During the site reconnaissance, Pond 2-7, Alternative 1 was observed as woods. Two steel 55-gallon drums, wooden boards, and metal shelves were observed in the east central area of the pond site. Surrounding properties in the vicinity of the pond site include Damron Auto Salvage to the north; and woods to the south, east, and west. **Contamination Concern(s):** ***Damron Auto Salvage/LKQ, located approximately 60 feet north of Pond 2-7, Alternative 1 –*** During the site reconnaissance, this facility was observed as an active automotive salvage yard**.** This listing was identified as Site 15 in the 2009 PD&E report and was assigned a risk rating of Low. The 2009 PD&E noted this facility as an automotive salvage yard that maintained a 500-gallon non-regulated diesel fuel AST and was identified as a registered small quantity generator (SQG) of hazardous waste with no violations reported. Currently, this facility maintains two 500-gallon unleaded gasoline ASTs. One diesel fuel discharge was reported on August 9, 2016 and was granted No Further Action (NFA) status on October 6, 2016. No current contamination concerns are reported. Therefore, this facility is not considered a contamination concern to Pond 2-7, Alternative 1. ***Empty drums, located in east central area of Pond 2-7, Alternative 1 –*** Two steel 55-gallon drums, wooden boards, and metal shelves were observed in the east central area of the pond site. A small amount of shotgun shells were observed near the area. The drums were rusted and empty with bullet holes visible. These discarded items did not appear to be used extensively for target practice such that spent bullets would be a concern. No unusual odors, stressed vegetation, soil staining, or other indications of contamination were noted. This site is not considered a contamination concern to Pond 2-7, Alternative 1. **Risk rating:** No contamination concerns were identified, therefore Pond 2-7, Alternative 1 is assigned a risk rating of Low.
2-7	Alt 2	Low	**Current Land Use:** During the site reconnaissance, Pond 2-7, Alternative 2 was observed as woods with an area of overgrown field at the south end of the pond site. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include Damron Auto Salvage to the north; and woods to the south, east, and west. **Contamination Concern(s):** ***Citrus Sand and Debris, Inc., 1590 North Quarterback Terrace, located approximately 180 feet west of Pond 2-7, Alternative 2 –*** During the site reconnaissance, this facility was observed as an inactive open pit sand mine**.** This listing was identified as Site 17 in the 2009 PD&E report and was assigned a risk rating of Low. The 2009 PD&E identified this facility as an open pit sand mining operation. No regulatory information was provided during the 2009 evaluation. Three closed landfill cells are located in the southeast portion of the property. The landfill cells were permitted to receive Construction and Demolition (C&D) waste, yard trash, tires, asbestos, carpet, glass, plastic, and furniture. The most recent analytical data included in the 1st Semi-annual Water Quality Monitoring report dated July 10, 2019 indicates that concentrations of arsenic above the Groundwater Cleanup Target Level (GCTL) were detected in one monitoring well (MW-7R), dissolved iron concentrations were detected above GCTLs in three monitoring wells (MW-4R, MW-5R, MW-7R), and concentrations of nitrogen ammonia above GCTLs were detected in one monitoring well (MW-4R). The dissolved iron concentrations are presumed to be naturally occurring aquifer constituents based on historical sampling data. The nearest contaminated monitoring well is located approximately 800 feet southwest of Pond 2-7, Alternative 2. Groundwater flow direction was measured to the southwest (away from Pond 2-7, Alternative 2). Additionally, two 1,000-gallon ASTs were formerly maintained onsite (one removed in 2012, one removed at an unknown date). No location information was found. No discharges are reported. Although GCTL exceedances were detected onsite during the most recent sampling event, due to the separation distance from the pond site (800 feet), this facility is not considered a contamination concern to Pond 2-7, Alternative 2. ***Mars LLC, 1959 North Iron Point Road, located adjacent east of the northern portion of Pond 2-7, Alternative 2 –*** During the site reconnaissance, this facility was observed as warehouses with numerous tenants including Keep it Safe Storage & Moving and Penske Truck Rental. This site was registered as a SQG on July 14, 2008. The facility was closed on May 28, 2009 and is no longer regulated. No discharges or other contamination concerns were reported. This site is not considered a contamination concern to Pond 2-7, Alternative 2. **Risk rating:** No contamination concerns were identified, therefore Pond 2-7, Alternative 2 is assigned a risk rating of Low.
	Alt 3	Low	**Current Land Use:** During the site reconnaissance, Pond 2-7, Alternative 3 was observed as part of an inactive open pit sand mine. Woods were noted in the northwest area of the pond site and soil stockpiles were observed sporadically throughout the western portion of the pond site. No obvious signs of fuel storage tanks, hazardous materials, buried debris, or other contamination concerns were noted. Surrounding properties in the vicinity of the pond site include CR 486 to the north; and an inactive sand mine to the south, east, and west. **Contamination Concern(s):** ***Citrus Sand and Debris, Inc., 1590 North Quarterback Terrace, located within the boundaries of Pond 2-7, Alternative 3 –*** During the site reconnaissance, this facility was observed as an inactive open pit sand mine**.** This listing was identified as Site 17 in the 2009 PD&E report and was assigned a risk rating of Low. The 2009 PD&E identified this facility as an open pit sand mining operation. No regulatory information was provided during the 2009 evaluation. Three closed landfill cells are located in the southeast portion of the property. The landfill cells were permitted to receive C&D waste, yard trash, tires, asbestos, carpet, glass, plastic, and furniture. The most recent analytical data included in the 1st Semi-annual Water Quality Monitoring report dated July 10, 2019 indicates that concentrations of arsenic above the GCTL were detected in one monitoring well (MW-7R), dissolved iron concentrations were detected above GCTLs in three monitoring wells (MW-4R, MW-5R, MW-7R), and concentrations of nitrogen ammonia above GCTLs were detected in one monitoring well (MW-4R). The dissolved iron concentrations are presumed to be naturally occurring aquifer constituents based on historical sampling data. The nearest contaminated monitoring well is located approximately 1,400 feet south of Pond 2-7, Alternative 3. Groundwater flow direction was measured to the southwest (away from Pond 2-7, Alternative 3). Additionally, two 1,000-gallon ASTs were formerly maintained onsite (one removed in 2012, one removed at an unknown date). No location information was found. No discharges are reported. Although GCTL exceedances were detected onsite during the most recent sampling event, due to the separation distance from the pond site (1,400 feet), this facility is not considered a contamination concern to Pond 2-7, Alternative 3. **Risk rating:** No contamination concerns were identified, therefore Pond 2-7, Alternative 3 is assigned a risk rating of Low.

9.0 Conclusions and Recommendations

A total of eleven pond site alternatives were evaluated as part of this Contamination Screening Evaluation Report. **Table 6** below presents a summary of the risk ratings assigned to each pond site alternative:

Table 6 – Pond Alternative Risk Rating Summary

Basin	Pond Site	Risk Rating	Notes
2-5	Alt 1	Low	Woods, overgrown field, residences along Shady Knoll Place
	Alt 2	Low	Woods
	Alt 3	Low	Open field, woods
	Alt 4	No	Overgrown field, woods, existing retention pond
	DRA-E	Low	Woods and one residence
2-6	Alt 1	Low	Open soil excavations with soil stockpiles throughout; offsite, adjoining east is an inactive limerock mine
	Alt 2	Low	Woods and one residence
	Alt 3	Low	Open field, woods
2-7	Alt 1	Low	Woods, two empty 55-gallon drums in east central area; no contamination concerns noted
	Alt 2	Low	Woods, overgrown field
	Alt 3	Low	Inactive open pit sand mine

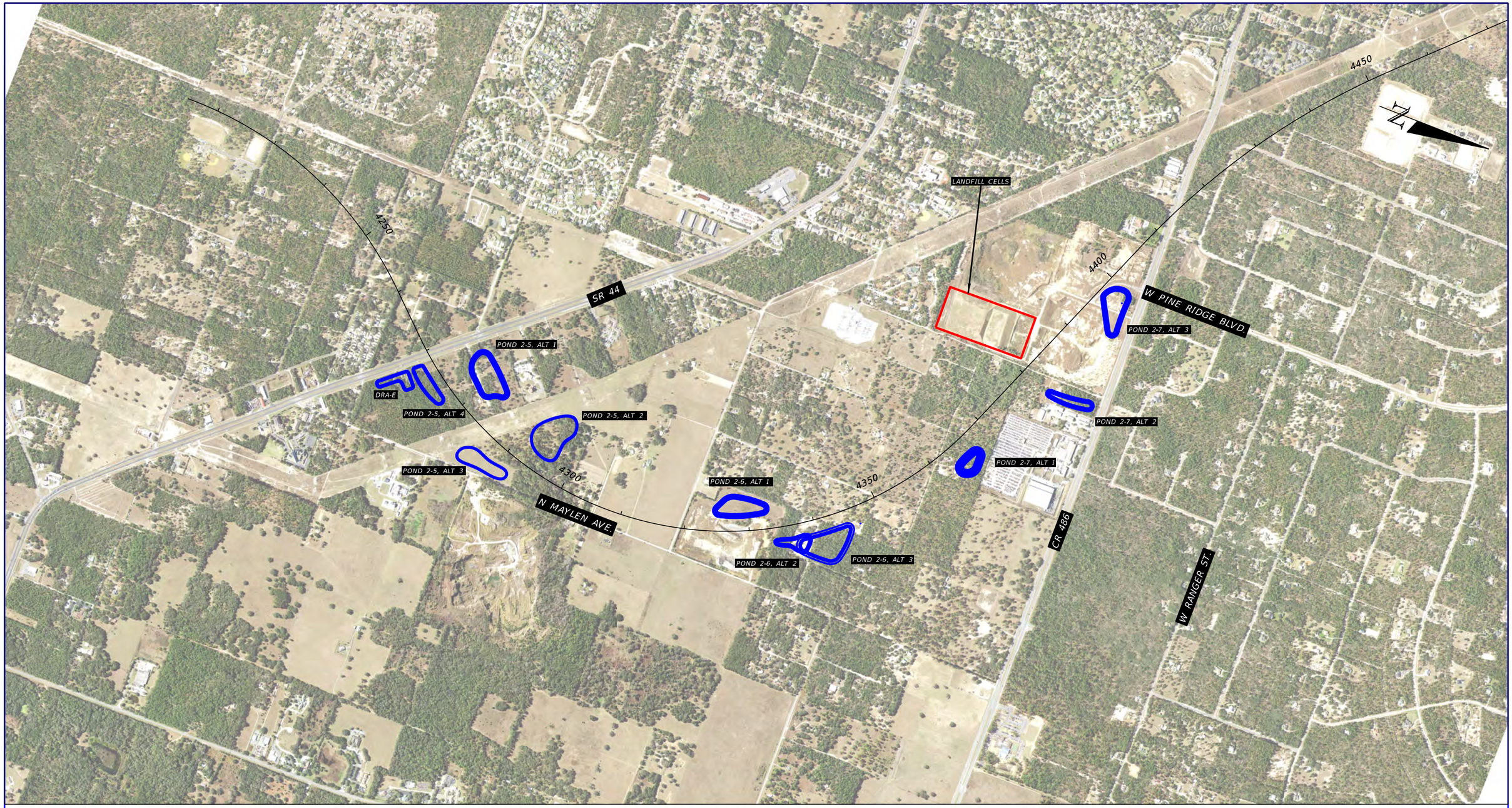
Based on the conclusions of the study and the risk ratings noted above, the following recommendations are made for this project:

- Additional information may become available or site-specific conditions may change from the time this report was prepared and should be considered prior to acquiring right-of-way and/or proceeding with roadway construction.
- For the locations rated No or Low for potential contamination, no further action is required. These pond locations have been evaluated and determined not to have any contamination risk to the study area at this time.
- Once final design plans are available, additional review is recommended in consideration of dewatering operations that may be necessary under the National Pollutant Discharge Elimination System Generic Permit for Stormwater Discharges from Large and Small Construction Activities.

Verification testing may be warranted for contamination issues within 500 feet of the dewatering area.

CSER APPENDIX A

Project Location and Pond Alternative Location Maps



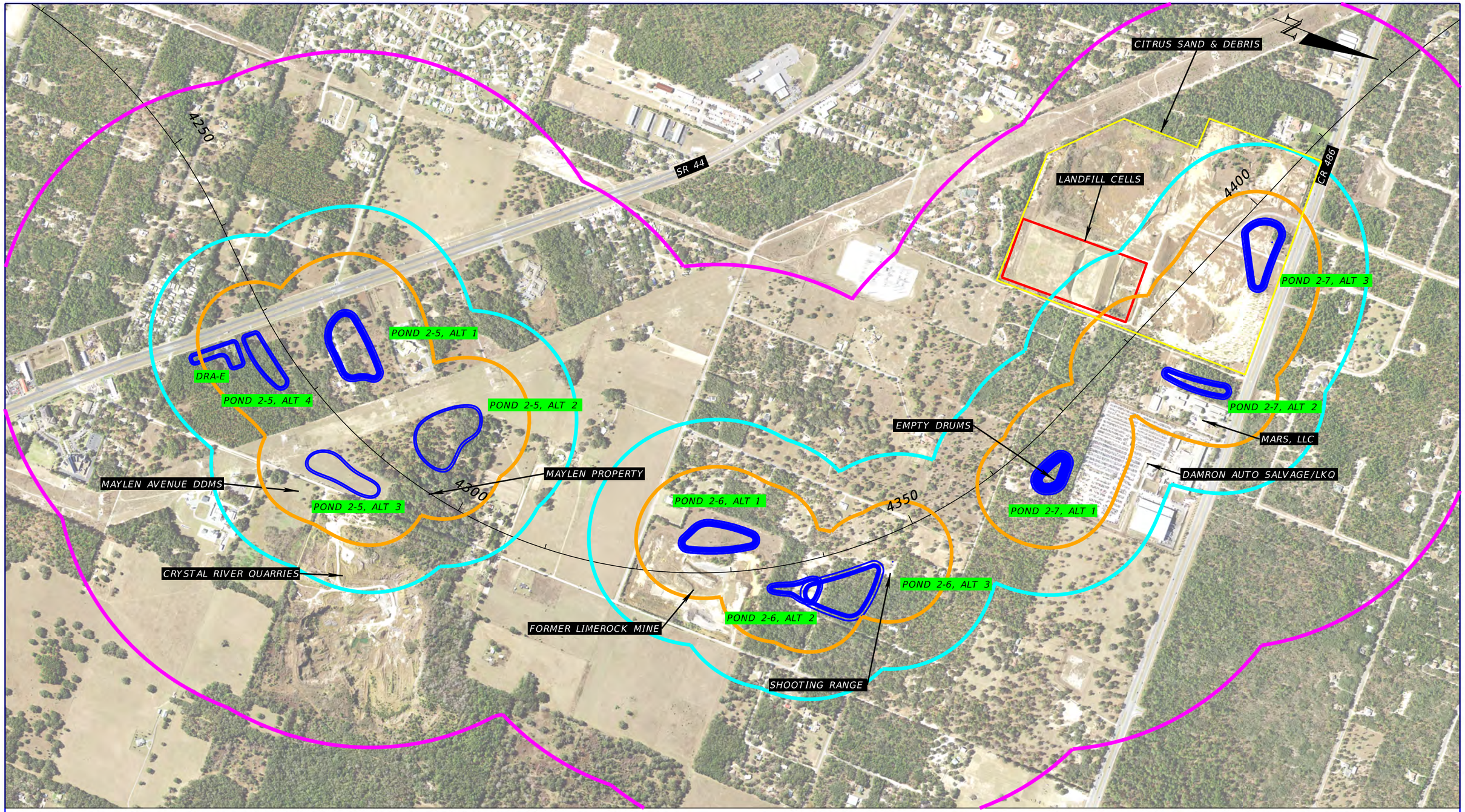
SOURCE: FDOT SURVEY AND MAPPING DATED 2017

0 300 1500
Feet

PROJECT LOCATION MAP

REVISIONS				TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNCOAST PARKWAY 2 FROM SR 44 TO CR 486	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
			TIERRA PROJECT NO.: 6511-18-108E		SR 44	CITRUS	442764-1-32-01		A-1

bgarcia 9/15/2020 1:34:02 PM J:\6511\2018 Files\6511-18-108 Suncoast Pkwy 2\Microstation\pdgeoEnvProj01.dgn



500 FEET RADIUS

1,000 FEET RADIUS

0.5 MILE RADIUS

POND

SOURCE: FDOT SURVEY AND MAPPING DATED 2017

0 200 1000

Feet

POND NAME GREEN = NO/LOW RISK RATING

POND NAME RED = HIGH/MEDIUM RISK RATING

POND ALTERNATIVES LOCATION MAP

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO. A-2

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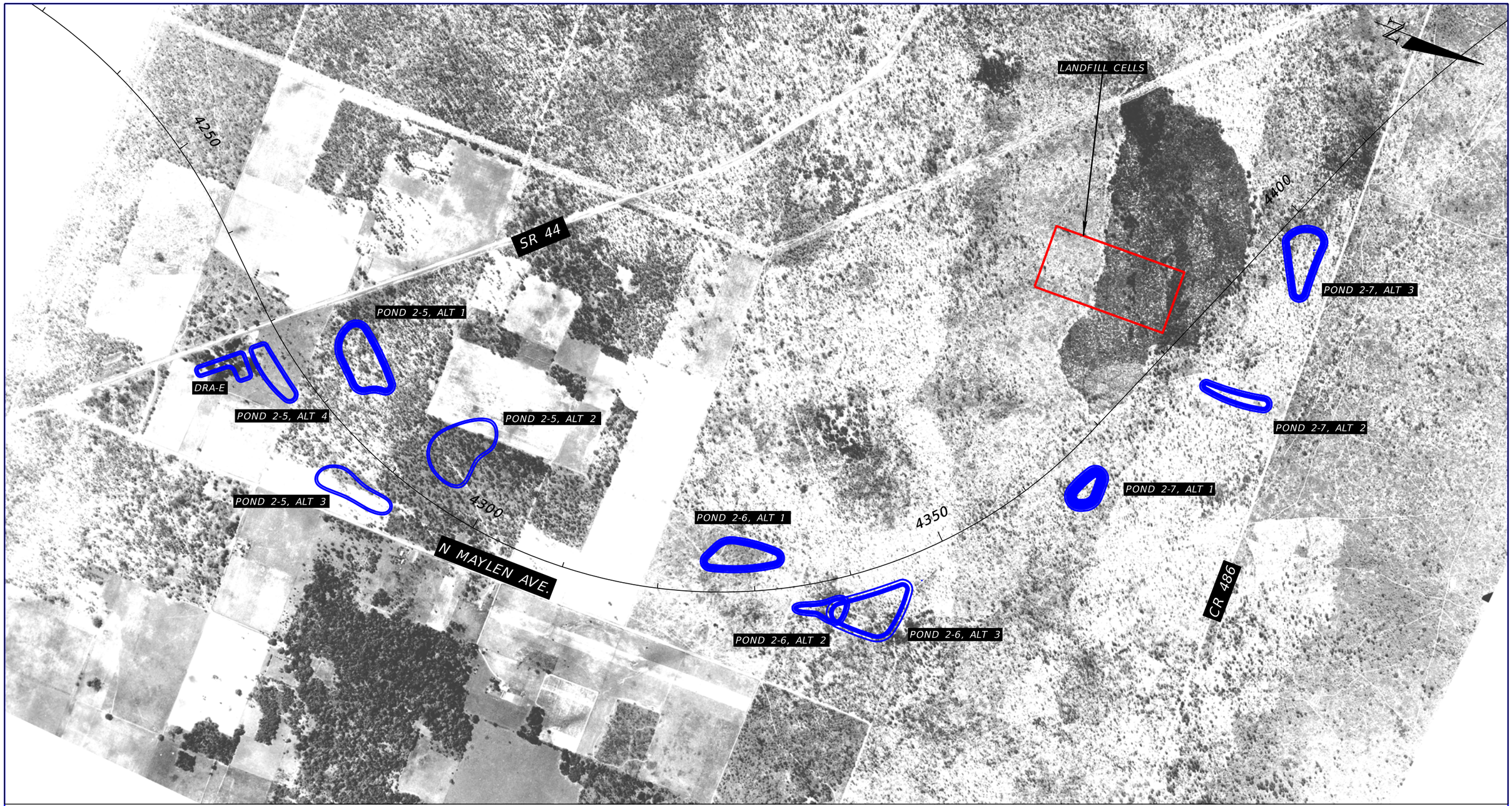
CSER APPENDIX B

Historical Aerial Photographs



SOURCE: UNIVERSITY OF FLORIDA

1951 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

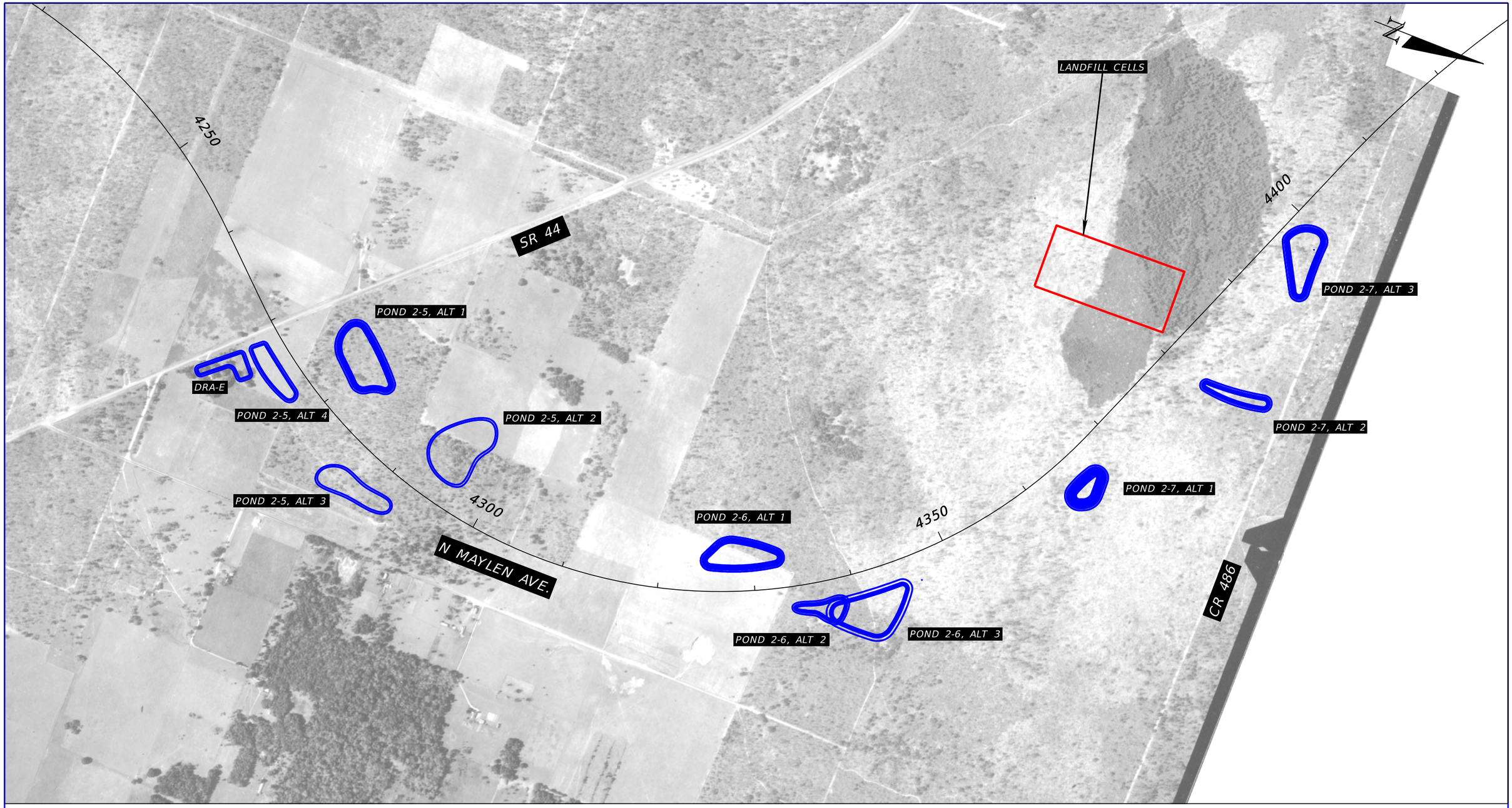
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO.
B-1



SOURCE: UNIVERSITY OF FLORIDA

1960 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO.
B-2

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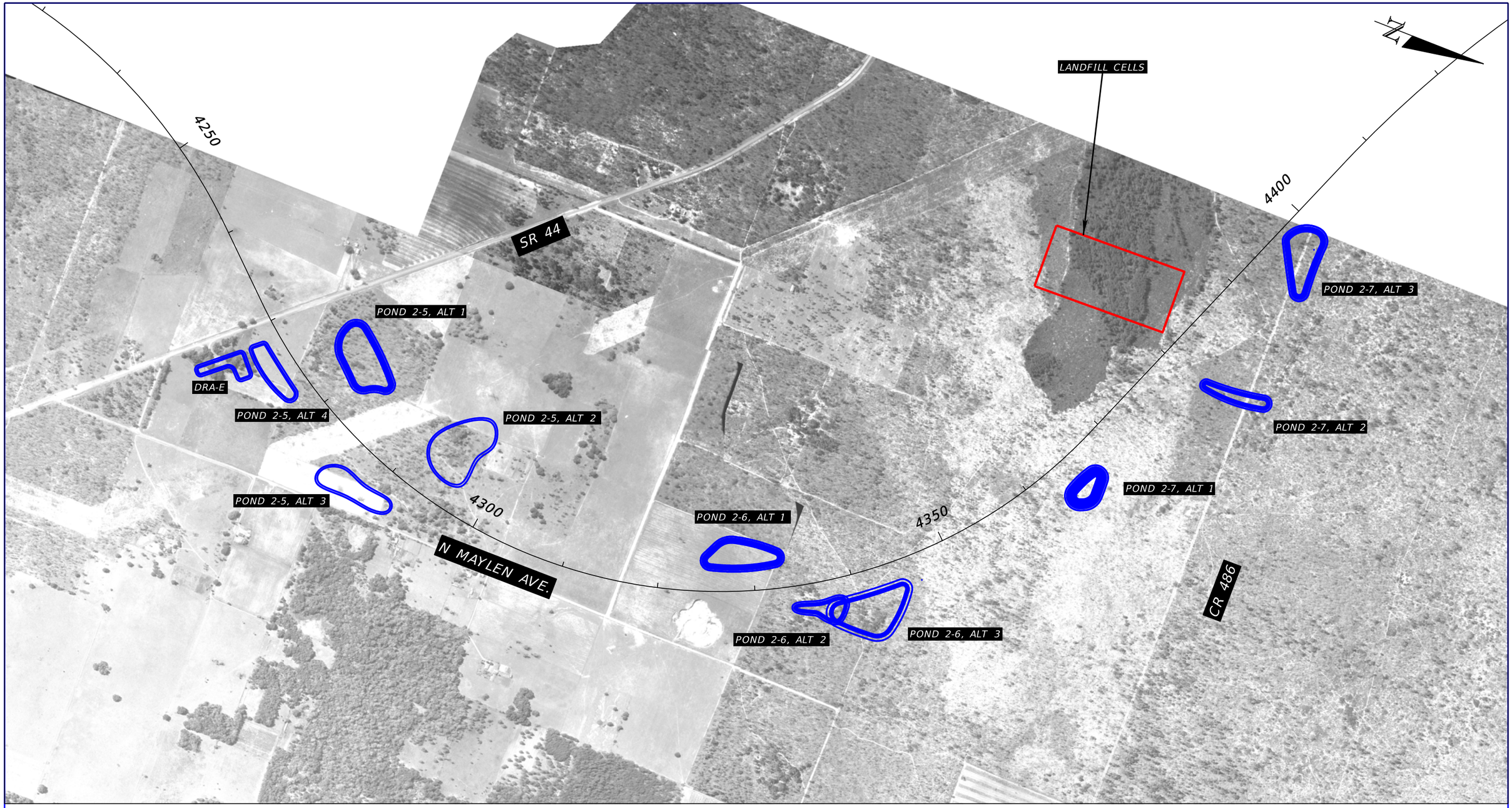


SOURCE: FDOT SURVEY AND MAPPING

1967 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

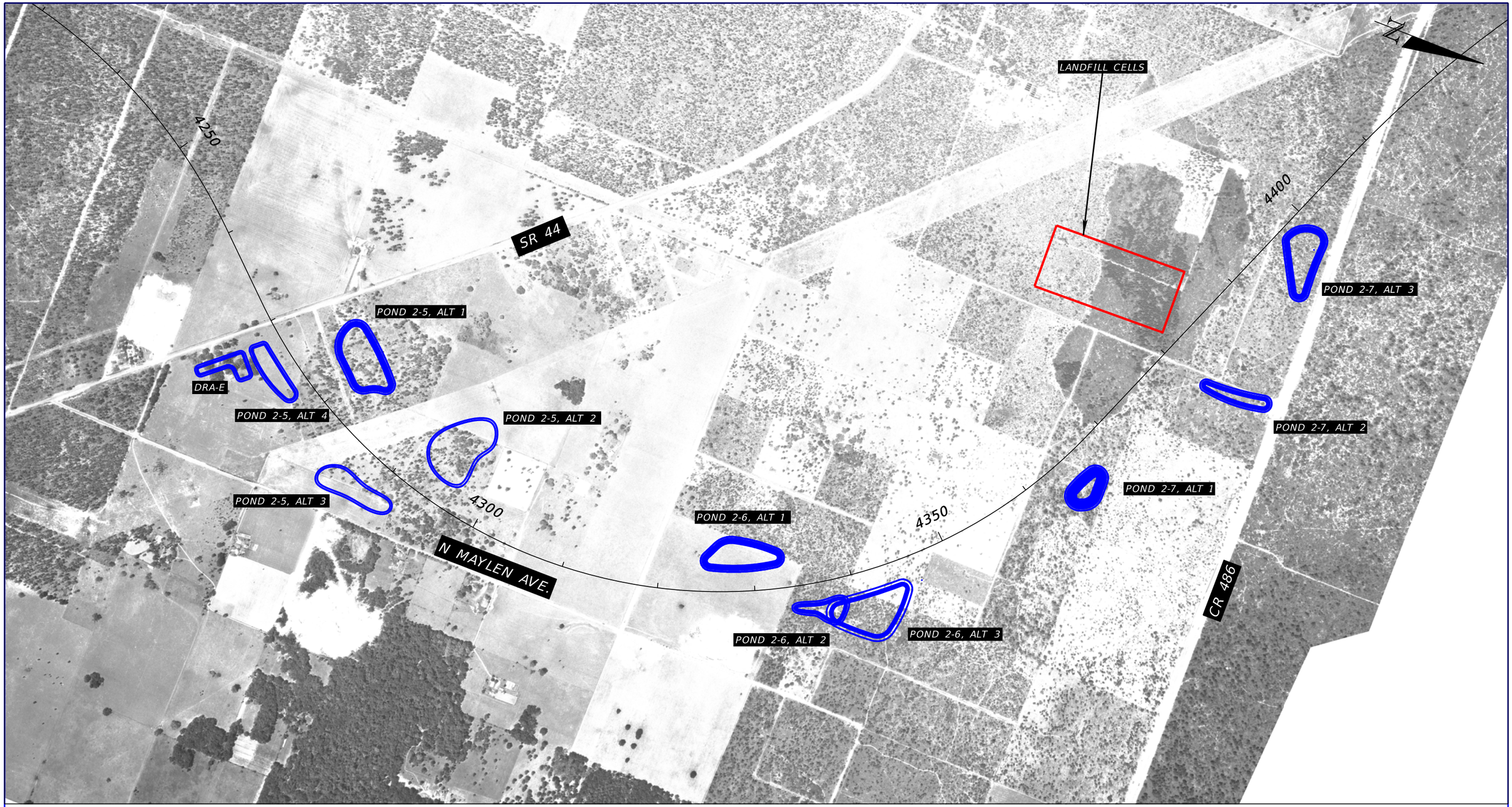
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO.
B-3



SOURCE: FDOT SURVEY AND MAPPING

1973 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS				TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNCOAST PARKWAY 2 FROM SR 44 TO CR 486	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
			TIERRA PROJECT NO.: 6511-18-108E		SR 44	CITRUS	442764-1-32-01		B-4

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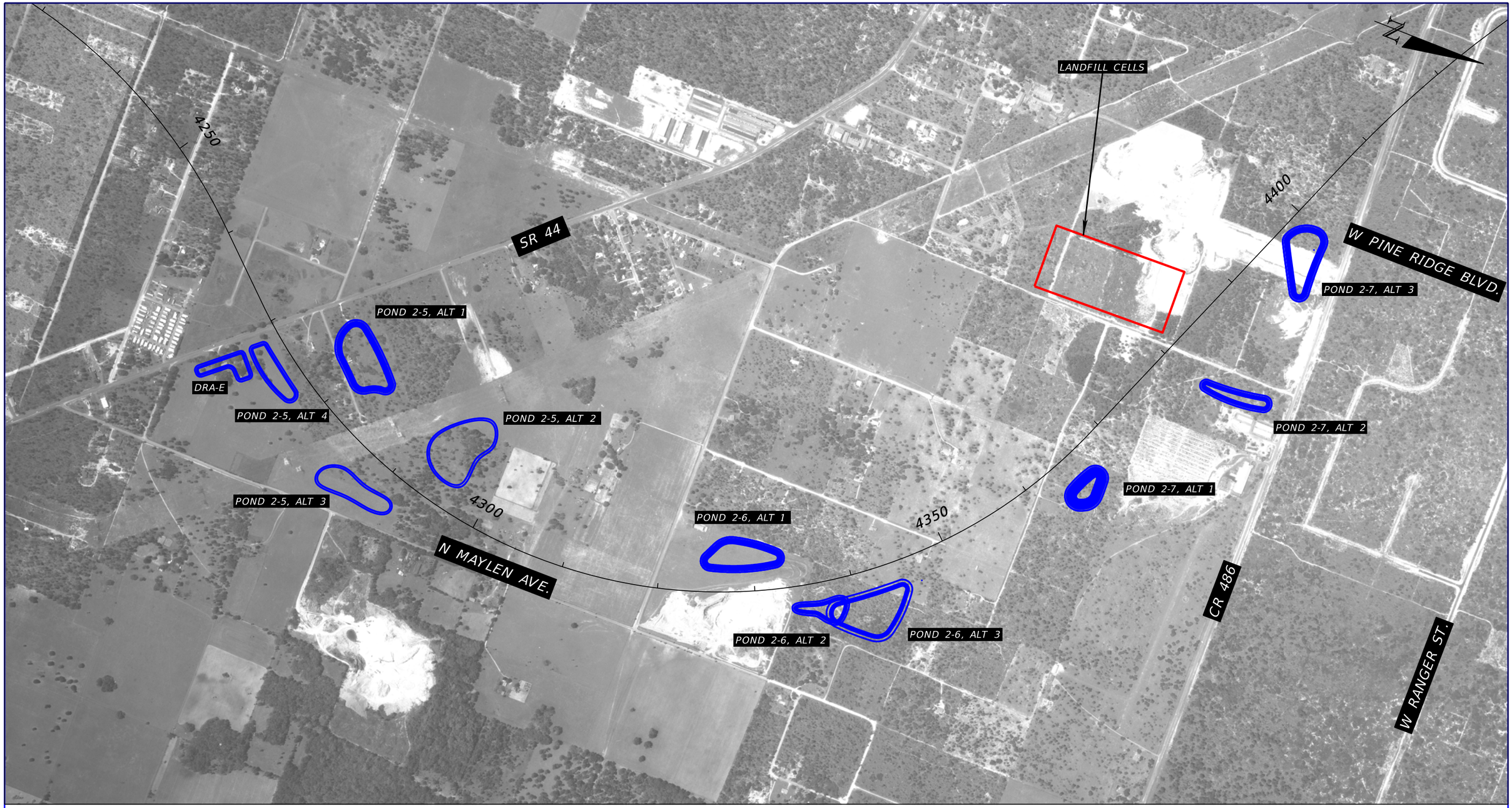

SOURCE: FDOT SURVEY AND MAPPING

1985 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO.
B-5

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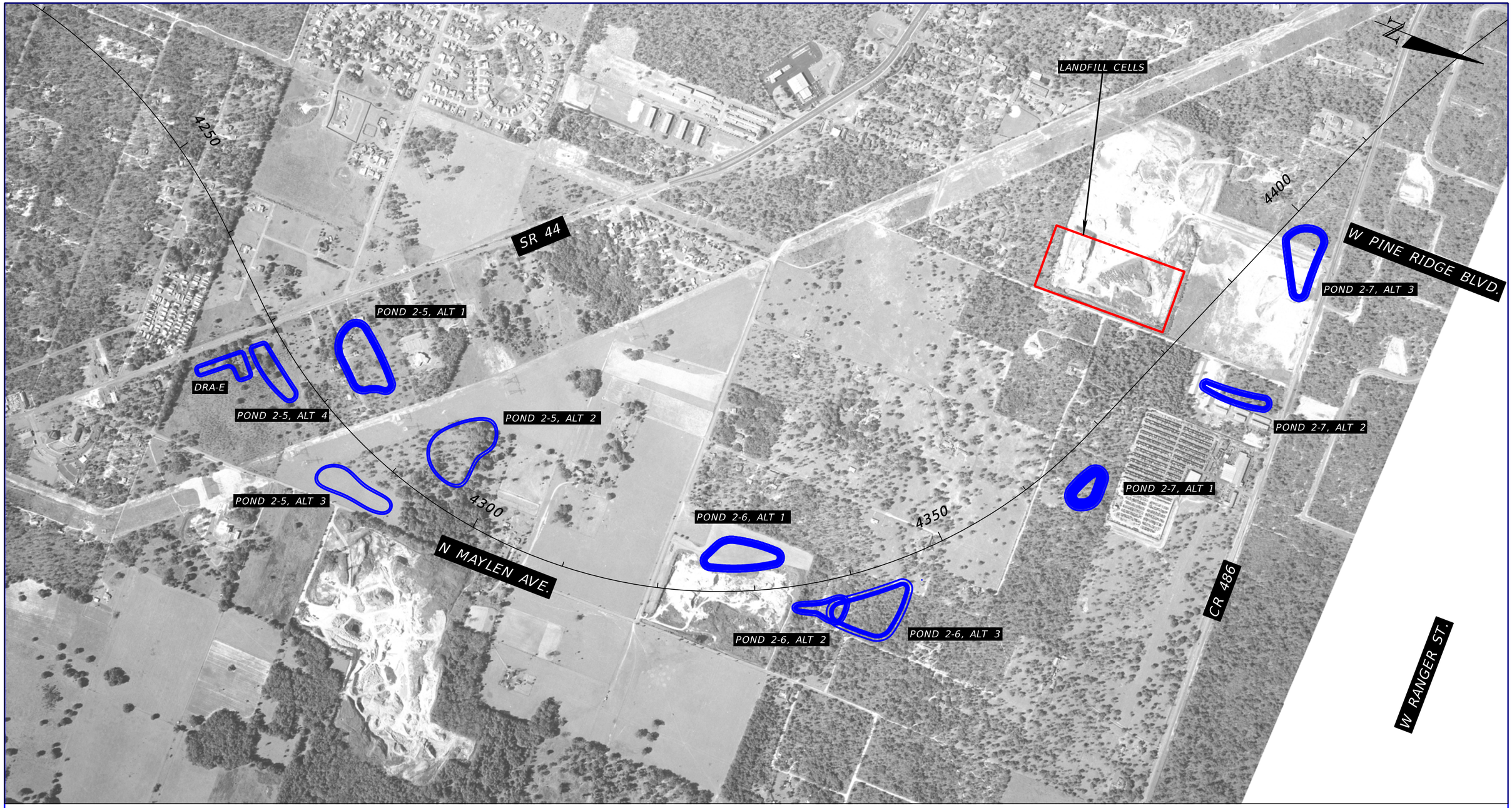


SOURCE: FDOT SURVEY AND MAPPING

1995 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

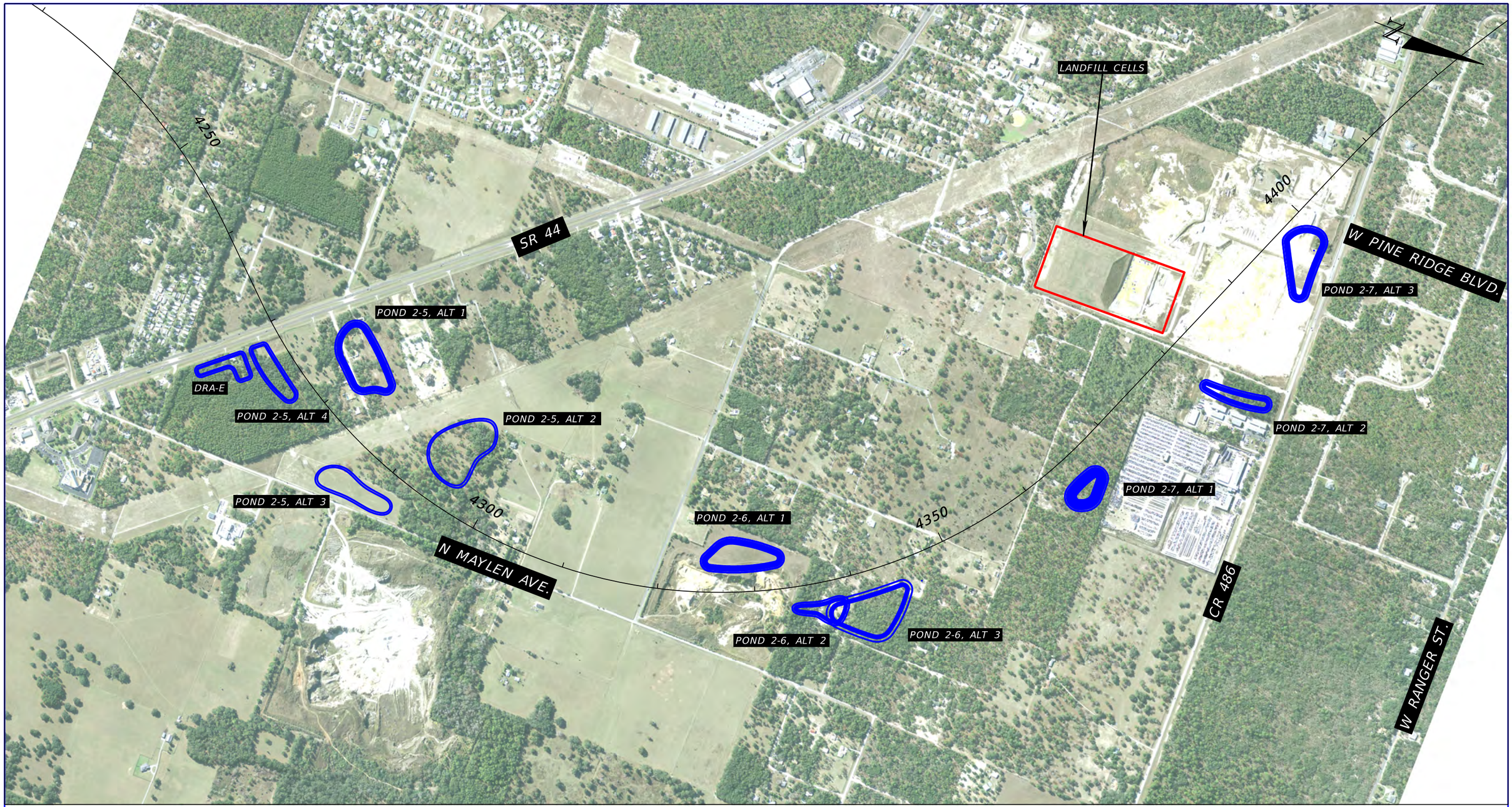
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO.
B-6



SOURCE: FDOT SURVEY AND MAPPING

2009 HISTORICAL AERIAL PHOTOGRAPH

0 200 1000
Feet

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
			TIERRA PROJECT NO.: 6511-18-108E

TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637
CERTIFICATE OF AUTHORIZATION 6486

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 44	CITRUS	442764-1-32-01

SUNCOAST PARKWAY 2 FROM
SR 44 TO CR 486

SHEET NO.
B-7

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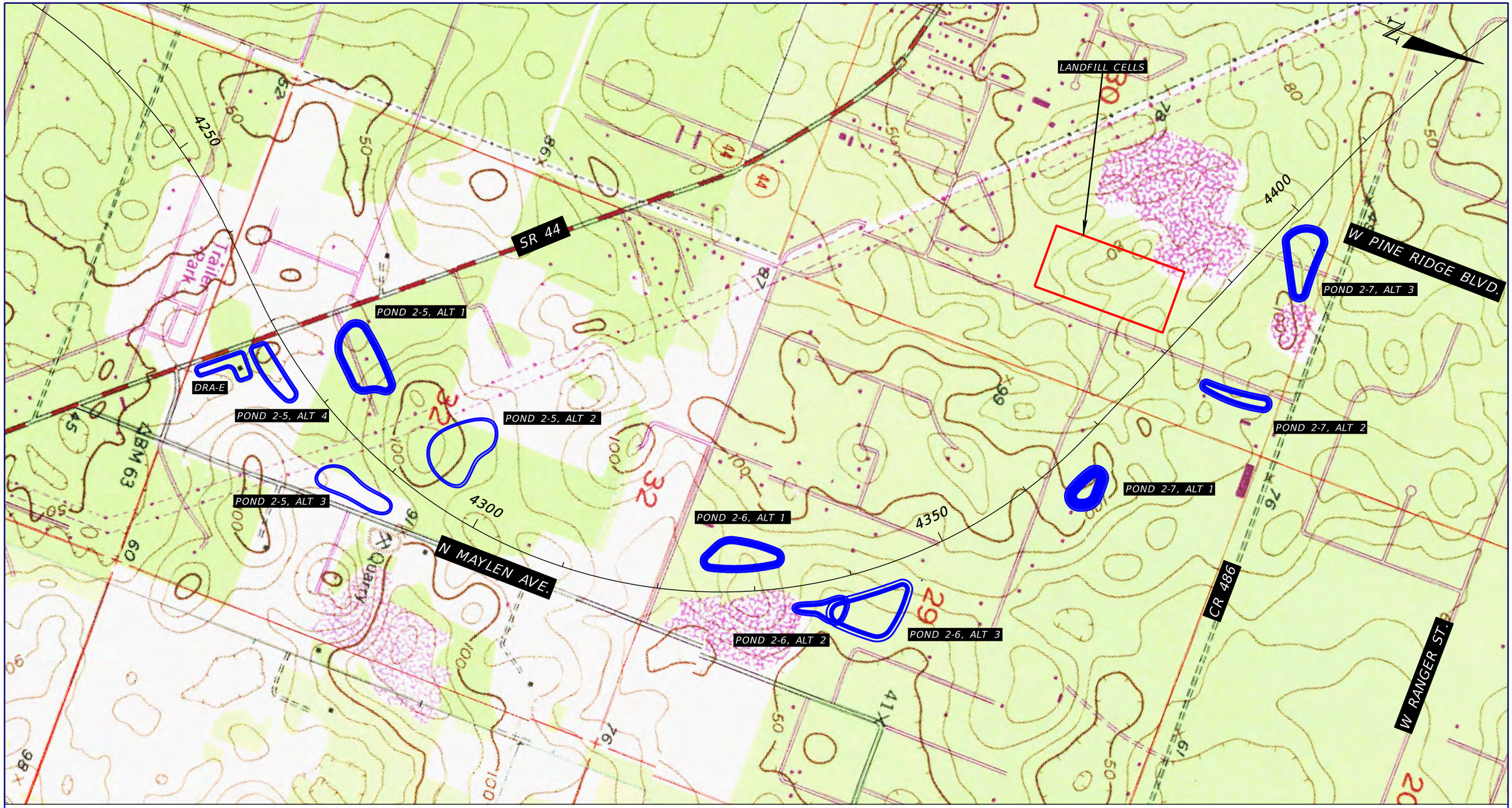
CSER APPENDIX C

USGS Topographic Map



USGS TOPOGRAPHIC MAP

SOURCE: USGS 7.5-MINUTE "CRYSTAL RIVER, FLORIDA" DATED 1954, (PHOTOREVISED 1988)
SOURCE: USGS 7.5-MINUTE "HOMOSASSA, FLORIDA" DATED 1954, (PHOTOREVISED 1988)

0 200 1000
Feet

REVISIONS						
DATE	DESCRIPTION	DATE	DESCRIPTION			
			TIERRA PROJECT NO.: 6511-18-108E	TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637 CERTIFICATE OF AUTHORIZATION 6486	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	SUNCOAST PARKWAY 2 FROM SR 44 TO CR 486

ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SHEET NO.
SR 44	CITRUS	442764-1-32-01	C-1

CSER APPENDIX D

Environmental Database Report

Environmental Data Report

Custom Radius Research

Suncoast Parkway 2
from SR 44 to CR 486
Citrus County, Florida

Prepared For:

Tierra Inc
7351 Temple Terrace Hwy
Tampa, FL 33637

Prepared By:

Environmental Data Management, Inc.
2840 West Bay Drive, Suite 208
Largo, Florida 33770

September 10, 2020

Environmental Data Management, Inc.
2840 West Bay Drive, Suite 208
Largo, Florida 33770
Tel. (727) 586-1700
http://www.edm-net.com

September 10, 2020

Justin Holley
Tierra Inc
7351 Temple Terrace Hwy
Tampa, FL 33637

Subject: **Custom Radius Research - EDM Project #25271**

Dear Mr. Holley

Thank you for choosing Environmental Data Management, Inc. The following report provides the results of our environmental data research that you requested for the following location:

Suncoast Parkway 2
from SR 44 to CR 486
Citrus County, Florida

The following is a summary of the components contained within this report:

- **Executive Summary** –lists the databases that were searched for this report, the search distance criteria and the number of sites identified for each database.
- **Map of Study Area**– street map showing the location of the Subject Property and any regulatory listed sites identified within the search criteria.
- **Site Summary Table** –displays the Map ID number, Permit or Registration number, Name/Address and the Government Database(s) for the identified regulatory listed sites.
- **Detail Reports** – data detail for each database record identified.
- **Proximal Records Table** – a listing of potentially relevant sites identified just beyond the search criteria.
- **Non-Mapped Records Table** - lists those government records that do not contain sufficient address information to plot within our GIS system, but may still exist within your study area.
- **Addl Maps (where applicable)** – includes Recent Aerial Photo, USGS Topographic maps, FEMA Floodplain & NWI Wetland Map, map of statewide American Indian Lands and our Environmental Impact Areas map, showing the location of suspect sites such as NPL/STNPL, Brownfields, FUDS, etc.... Our Florida well data report is also include with the Standard and Comprehensive formats.
- **Agency List Descriptions –** defines the regulatory databases included in this report along with the dates that each database was last updated by the respective agency and EDM.

At EDM we take great pride in our work, and continually strive to provide you with the most accurate and thorough research service available. This report is only intended as a means to assist in identifying locations that may pose an environmental concern relative to the property under evaluation. Its use is not intended to replace the need for a complete environmental assessment or regulatory file review, but rather as a supplement to the overall evaluation.

Thank you again for selecting EDM as your data research provider. Should you have any questions regarding this report or our service, please feel free to contact us. We appreciate the opportunity to be of service to you and look forward to working with you in the future.

ENVIRONMENTAL DATA MANAGEMENT, INC.

Executive Summary

Report Date: 9/10/2020

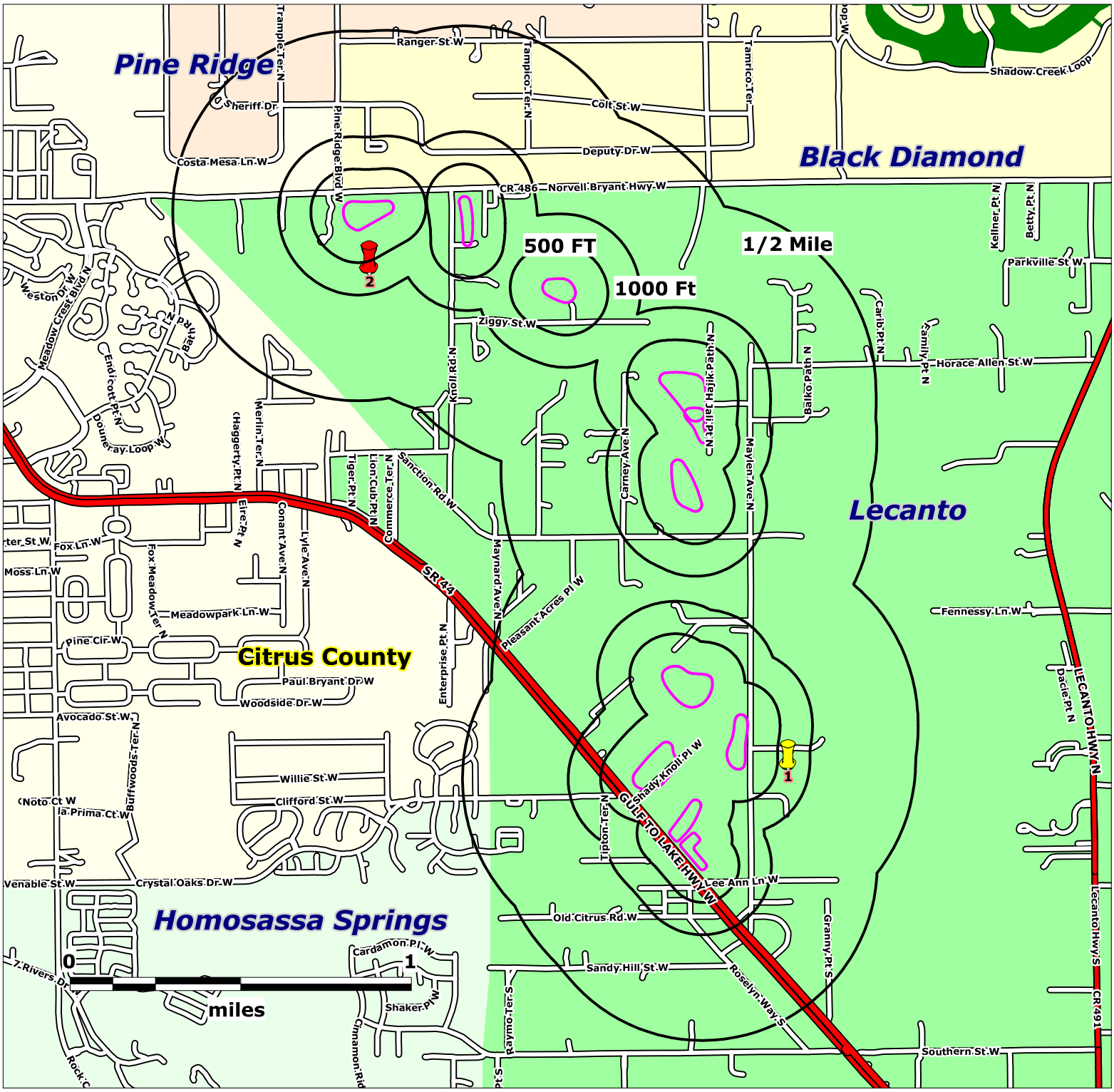
Client Information	Project Information
Tierra Inc 7351 Temple Terrace Hwy Tampa, FL 33637 Client Job No: 6511-18-108E Client P.O. No:	Custom Radius Research Suncoast Parkway 2 from SR 44 to CR 486 Citrus County, Florida EDM Job No# 25271

The following table displays the databases that were included in the research provided and the number of records identified for each database. Site distance values indicated in this report are measured from the boundary of the Subject Property. The absence of records in this table and the Site Summary Tables indicates that our research found no regulated sites within the specified search distances from the Subject Property.

	Max Search Radius (Feet)	Subject Property	From 0 - 500 feet	From 500.01 - 1000 feet	From 1000.01 - 2640 feet	Total # Found
EPA DATABASES						
National Priorities List(NPL)	2640	0	0	0	0	**0**
SEMS Active Site Inventory List(SEMSACTV)	2640	0	0	0	0	**0**
Comp Env Resp, Compensation & Liability Info Sys List(CERCLIS)	2640	0	0	0	0	**0**
SEMS Archived Site Inventory List(SEMSARCH)	2640	0	0	0	0	**0**
Archived Cerclis Sites(NFRAP)	500	0	0	N/A	N/A	**0**
Emergency Response Notification System List(ERNS)	500	0	0	N/A	N/A	**0**
RCRIS Handlers with Corrective Action(CORRACTS)	500	0	0	N/A	N/A	**0**
Tribal Tanks List(TRIBLTANKS)	500	0	0	N/A	N/A	**0**
Tribal Lust List(TRIBLLUST)	500	0	0	N/A	N/A	**0**
Brownfields Management System(USBRWNFLDS)	500	0	0	N/A	N/A	**0**
Institutional and/or Engineering Controls(USINSTENG)	500	0	0	N/A	N/A	**0**
NPL Liens List(NPLLIENS)	500	0	0	N/A	N/A	**0**
RCRA-Treatment, Storage and/or Disposal Sites(TSD)	500	0	0	N/A	N/A	**0**
RCRA-LQG,SQG,CESQG and Transporters(NONTSD)	500	0	0	N/A	N/A	**0**

	Max Search Radius (Feet)	Subject Property	From 0 - 500 feet	From 500.01 - 1000 feet	From 1000.01 - 2640 feet	Total # Found
FDEP DATABASES						
State NPL Equivalent(STNPL)	2640	0	0	0	0	**0**
State CERCLIS/SEMS Equivalent(STCERC)	500	0	0	N/A	N/A	**0**
Solid Waste Facilities List_Landfills(SLDWST_LF)	2640	0	0	2	0	**2**
Solid Waste Facilities List_Non-Landfills(SLDWST_NLF)	1000	0	0	2	N/A	**2**
Leaking Underground Storage Tanks List(LUST)	500	0	0	N/A	N/A	**0**
Underground/Aboveground Storage Tanks(TANKS)	500	0	0	N/A	N/A	**0**
State Designated Brownfields(BRWNFLDS)	500	0	0	N/A	N/A	**0**
Voluntary Cleanup List(VOLCLNUP)	500	0	0	N/A	N/A	**0**
Institutional and/or Engineering Controls(INSTENG)	500	0	0	N/A	N/A	**0**
Dry Cleaners List(DRY)	500	0	0	N/A	N/A	**0**

Custom Radius Research Report
Street Map



Source: US Census Bureau TIGER Files

Map Scale and Property Boundaries are Approximate

Subject Property

Suncoast Parkway 2
from SR 44 to CR 486
Citrus County, Florida
EDM Job No: 25271
September 10, 2020

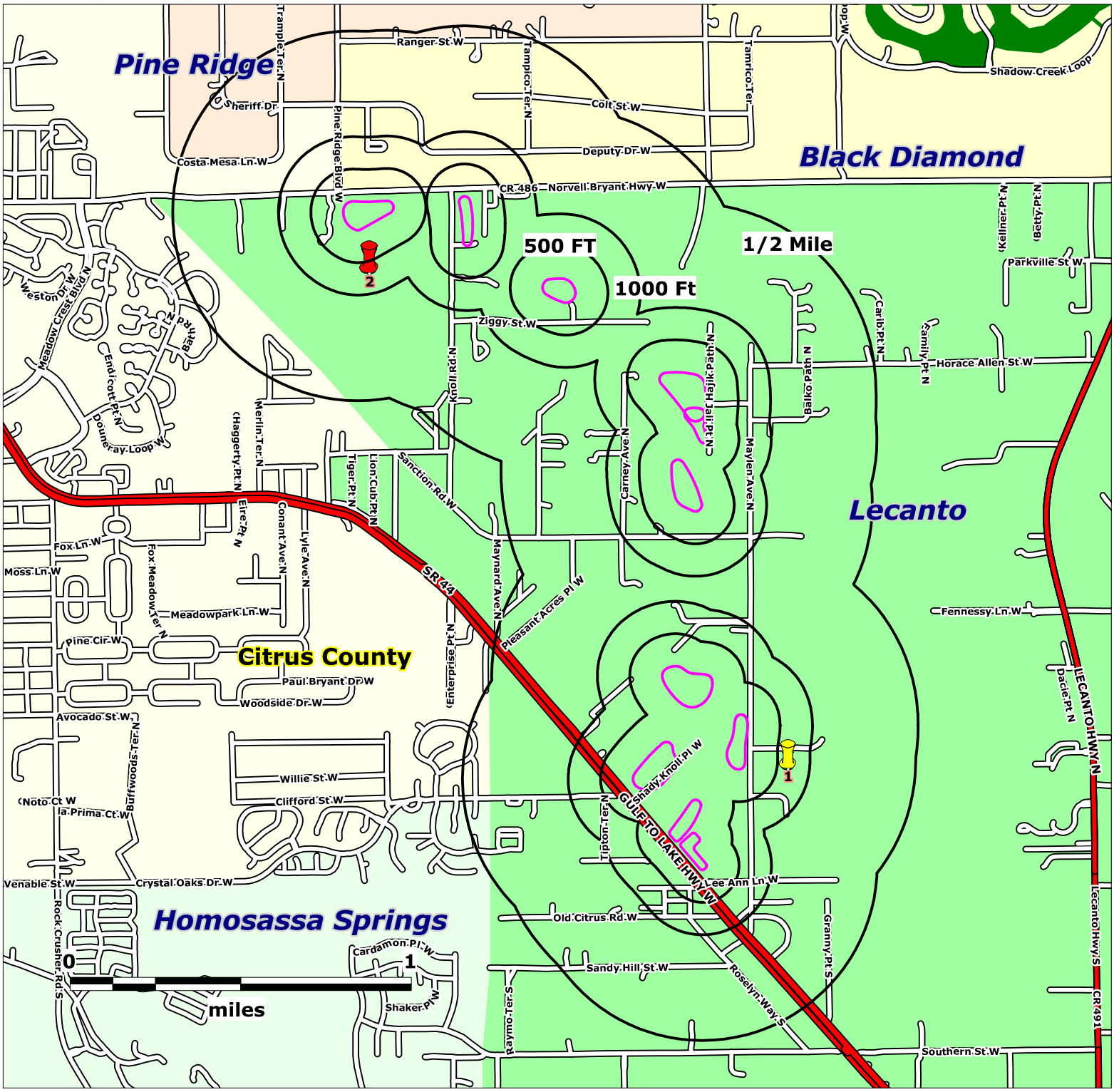
Approximate Site Boundary

NPL, STNPL, CERCLIS, SEMSACTV, SEMSARCH and SLDWST_LF sites - 1/2 Mile

SLDWST_NLF sites - 1000 FT

NPLLIENS. CORRACTS, TSD, NFRAP, STCERC, LUST, BRWNFLDS, NONTSD VOLCLNUP, DRY, ERNS, TANKS & INSTENG sites - 500 Feet

Custom Radius Research Report
Street Map



Source: US Census Bureau TIGER Files

Map Scale and Property Boundaries are Approximate

Subject Property

Suncoast Parkway 2
from SR 44 to CR 486
Citrus County, Florida
EDM Job No: 25271
September 10, 2020

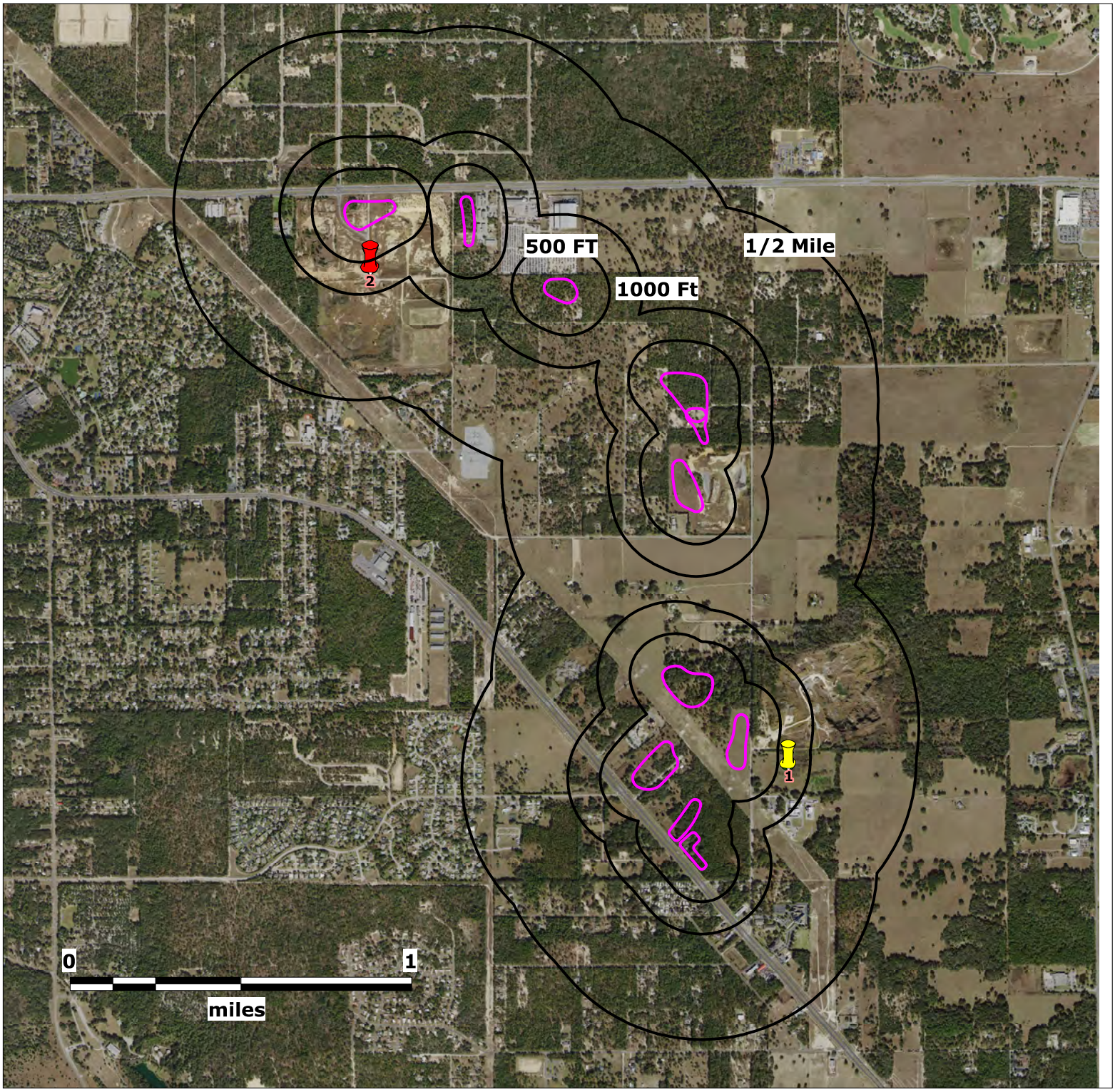
Approximate Site Boundary

NPL, STNPL, CERCLIS, SEMSACTV, SEMSARCH and SLDWST_LF sites - 1/2 Mile

SLDWST_NLF sites - 1000 FT

NPLLIENS. CORRACTS, TSD, NFRAP, STCERC, LUST, BRWNFLDS, NONTSD VOLCLNUP, DRY, ERNS, TANKS & INSTENG sites - 500 Feet

Custom Radius Research Report
2017 Aerial Photo



Source: Florida Department of Transportation

Map Scale and Property Boundaries are Approximate

Subject Property

Suncoast Parkway 2
from SR 44 to CR 486
Citrus County, Florida
EDM Job No: 25271
September 10, 2020

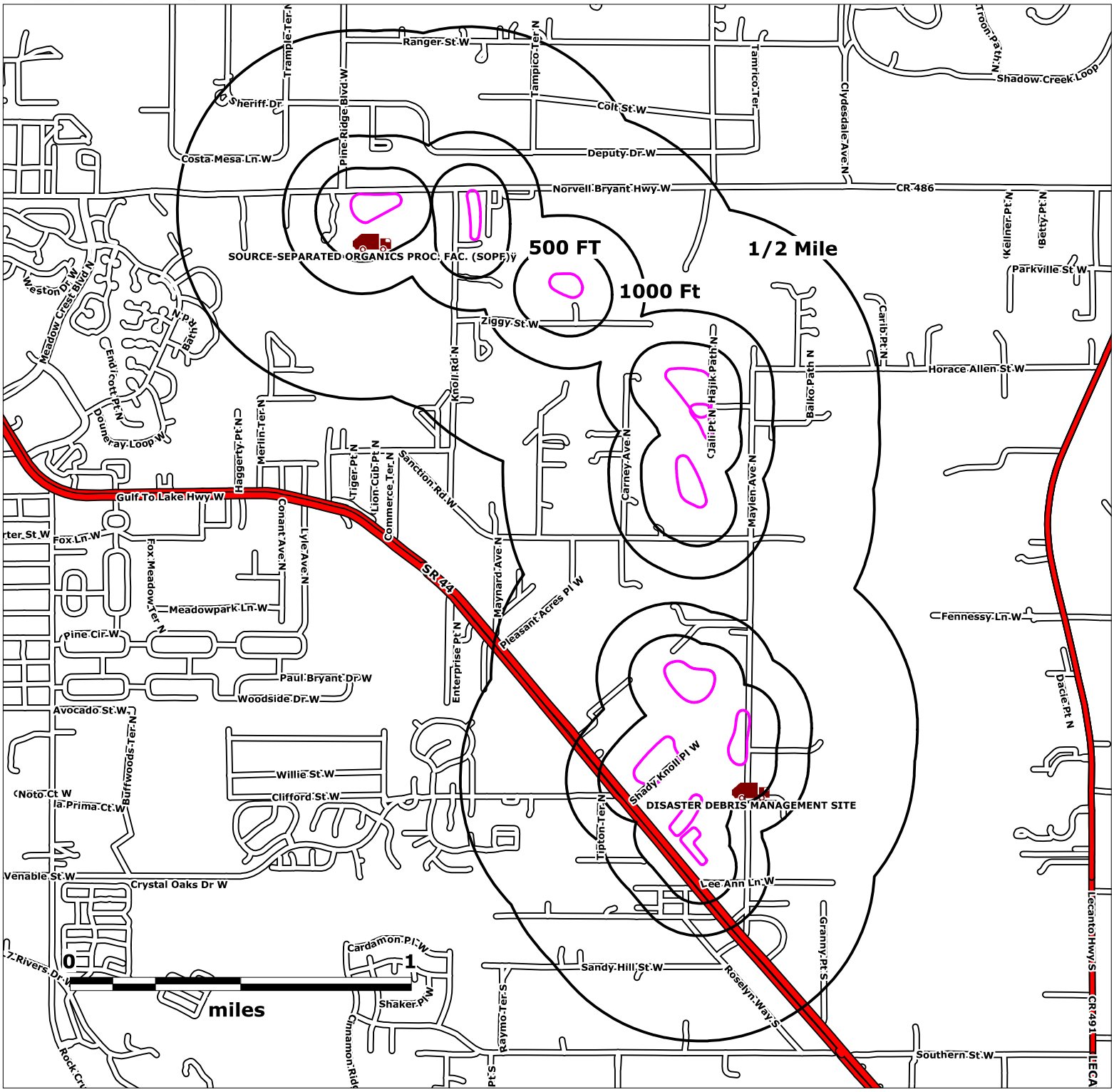
Approximate Site Boundary

NPL, STNPL, CERCLIS, SEMSACTV, SEMSARCH and SLDWST_LF sites - 1/2 Mile

SLDWST_NLF sites - 1000 FT

NPLLIENS. CORRACTS, TSD, NFRAP, STCERC, LUST, BRWNFLDS, NONTSD VOLCLNUP, DRY, ERNS, TANKS & INSTENG sites - 500 Feet

Custom Radius Research Report
Environmental Impact Areas Map



Source: FDEP and USEPA Geodata

Map Scale and Property Boundaries are Approximate

Subject Property

Suncoast Parkway 2
from SR 44 to CR 486
Citrus County, Florida
EDM Job No: 25271
September 10, 2020

- FDEP Brownfield Areas
- FDEP Brownfield Sites
- USEPA NPL & FDEP STNPL Sites
- FDEP Delineated GW Contamination
- Formerly Used Defense Sites FUDS
- FUDS Munitions Response Areas
- FDEP Cattle Dipping Vat
- FDEP Solid Waste Sites
- Approximate Site Boundary
- Institutional Controls

ENVIRONMENTAL DATA MANAGEMENT

Custom Radius Research

Site Summary Table

MapID / Prgm List	Fac ID No	Site Dist (ft)	Site Dir	Site Elev (ft)	Site Name	Site Address
1						
SLDWST_NLF	102676	685		86.10	MAYLEN AVENUE	261 N MAYLEN AVENUE LECANTO, FL 34460
2						
SLDWST_LF	40147	772		73.25	486 SAND PIT INC (C	SR486,1.5MI E SR44 (30-18S-18E) CRYSTAL RIVER, FL 34429
SLDWST_LF	40459	772		73.25	CITRUS SAND & DEBRIS I	1590 N QUARTERBACK TERRACE CRYSTAL RIVER, FL 34429
SLDWST_NLF	40459	772		73.25	CITRUS SAND & DEBRIS I	1590 N QUARTERBACK TERRACE CRYSTAL RIVER, FL 34429

FDEP SOLID WASTE FACILITIES LIST
NON-LANDFILL SITES

(SLDWST_NLF)

FACILITY ID, NAME AND LOCATION:

102676
MAYLEN AVENUE
261 N MAYLEN AVENUE
LECANTO , FL 34460

DISTRICT SWD
COUNTY CITRUS
SEC/TWN/RN //
AGENCY LAT: 28:51:59.7065
AGENCY LON: 82:30:16.5219

MAP ID NUMBER: 1
Dist (FEET): 685
Direction:

SLDWST

RESP AUTHORITY: ,

SITE CONTACT: ,

LAND OWNER: ,

FACILITY CLASS: 910/DISASTER DEBRIS MANAGEMENT SITE
CLASS STATUS: PRE-AUTHORIZED (B)

FDEP INFORMATION PORTAL ON LINE DOCUMENTS **(May Not Be Available For All Records)**

FDEP INFORMATION PORTAL ON LINE REPORTS **(May Not Be Available For All Records)**

FDEP SOLID WASTE FACILITIES LIST
LANDFILL SITES

(SLDWST_LF)

FACILITY ID, NAME AND LOCATION:

40147 **--HISTORICAL ENTRY--**
486 SAND PIT INC (C
SR486,1.5MI E SR44 (30-18S-18E)
CRYSTAL RIVER, FL 34429

DISTRICT
COUNTY CITRUS
SEC/TWN/RN 30-18S-18E
AGENCY LAT:
AGENCY LON:

MAP ID NUMBER: 2
Dist (FEET): 772
Direction:

SLDWST

RESP AUTHORITY:
THE 486 SAND PIT INC
1590 N QUARTERBACK TERRACE
CRYSTAL RIVER, FL 32629

SITE CONTACT:
,

LAND OWNER:
,

FACILITY CLASS: 540/CONSTRUCTION/DEMOLITION DEBRIS
CLASS STATUS: CLOSED, WITH GW MONITORING

FDEP INFORMATION PORTAL ON LINE DOCUMENTS **(May Not Be Available For All Records)**

FDEP INFORMATION PORTAL ON LINE REPORTS **(May Not Be Available For All Records)**

FACILITY ID, NAME AND LOCATION:

40459
CITRUS SAND & DEBRIS I
1590 N QUARTERBACK TERRACE
CRYSTAL RIVER , FL 34429

DISTRICT SWD
COUNTY CITRUS
SEC/TWN/RN 30 /18S /18E
AGENCY LAT: 28:53:11.75
AGENCY LON: 82:31:16.21

MAP ID NUMBER: 2
Dist (FEET): 772
Direction:

SLDWST

RESP AUTHORITY:
CITRUS SAND & DEBRIS, INC
450 PLEASANT GROVE ROAD
INVERNESS , FL 34452
3527467713

SITE CONTACT:
TOM PERCIVAL
,
4072643013

LAND OWNER:
,

FACILITY CLASS: 540/CONSTRUCTION/DEMOLITION DEBRIS DISPOSAL
CLASS STATUS: ACTIVE (A)

FDEP INFORMATION PORTAL ON LINE DOCUMENTS **(May Not Be Available For All Records)**

FDEP INFORMATION PORTAL ON LINE REPORTS **(May Not Be Available For All Records)**

FDEP SOLID WASTE FACILITIES LIST
NON-LANDFILL SITES

(SLDWST_NLF)

FACILITY ID, NAME AND LOCATION:

40459
CITRUS SAND & DEBRIS I
1590 N QUARTERBACK TERRACE
CRYSTAL RIVER , FL 34429

DISTRICT SWD
COUNTY CITRUS
SEC/TWN/RN 30 /18S /18E
AGENCY LAT: 28:53:11.75
AGENCY LON: 82:31:16.21

MAP ID NUMBER: 2
Dist (FEET): 772
Direction:

SLDWST

RESP AUTHORITY:
CITRUS SAND & DEBRIS, INC
450 PLEASANT GROVE ROAD
INVERNESS , FL 34452
3527467713

SITE CONTACT:
TOM PERCIVAL
,
4072643013

LAND OWNER:
,

FACILITY CLASS: 330/SOURCE-SEPARATED ORGANICS PROC. FAC. (SOPF)
CLASS STATUS: CLOSED, NO GW MONITORING (J)

FDEP INFORMATION PORTAL ON LINE DOCUMENTS **(May Not Be Available For All Records)**

FDEP INFORMATION PORTAL ON LINE REPORTS **(May Not Be Available For All Records)**

ENVIRONMENTAL DATA MANAGEMENT

Custom Radius Research

Proximal Site Summary Table

This table includes mapped sites whose plotted coordinates fall just outside of the ASTM or client defined research distance but whose property boundaries may still extend into the search area. These sites are typically large commercial or industrial tracts that may merit inclusion in the evaluation process. Detail data reports on any of these sites may be requested and will be sent as an addendum to this report at no additional cost.

MapID / Prgm List	Fac ID No	Site Dist (ft)	Site Dir	Site Elev (ft)	Site Name	Site Address
1A						
TANKS	8627070	1015		44.74	AUTO PROS	4320 W GULF TO LAKE HWY LECANTO, FL 32661
TANKS	8627070.	1015		44.74	AUTO PROS	43020 W GULF - LAKE HWY LECANTO, FL 32661
2A						
ERNS	452930	1033		99.25	FLORIDA GAS TRANSMISION	245 N MAYLEN AVE LACANTO, FL
ERNS	452954	1033		99.25	FLORIDA GAS TRANSMISION	251 NORTH MAYLEN AVE LECANTO, FL
NONTSD	FL0000935619	1033		99.25	FLORIDA GAS TRANSMISSION C - S 26	245 N MAYLEN AVE LECANTO, FL 344618938
TANKS	9804744	1033		99.25	FL GAS COMPRESSOR STAT #26	245 N MAYLEN AVE LECANTO, FL 34461
3A						
TANKS	9804940	1195		72.52	CRYSTAL RIVER QUARRIES INC-MAYLEN MINE	287 MAYLEN AVE LECANTO, FL 34461
4A						
TANKS	9813391	1403		92.21	SUPERIOR RESIDENCES OF LECANTO	4865 W GULF TO LAKE HWY LECANTO, FL 34461
5A						
TANKS	9300729	772		73.25	CITRUS SAND & DEBRIS INC	1590 N QUARTERBACK TERR CRYSTAL RIVER, FL 34428
6A						
LUST	9600578	777		71.64	DAMRON AUTO SALVAGE	4950 NORVELL BRYANT HWY CRYSTAL RIVER, FL 34429
NONTSD	FLD982105694	777		71.64	LKQ OF CRYSTAL RIVER	4950 W NORVELL BRYANT HWY CRYSTAL RIVER, FL 344295731
TANKS	9600578	777		71.64	DAMRON AUTO SALVAGE	4950 NORVELL BRYANT HWY CRYSTAL RIVER, FL 34429
VOLCLNUP	294824	777		71.64	LKQ -CRYSTAL RIVER	4950 W. NORVELL BRYANT HWY CRYSTAL RIVER, FL 34429

ENVIRONMENTAL DATA MANAGEMENT

Custom Radius Research

Non-Mapped Records Summary Table

This table is a listing of database records that have not been plotted within our mapping system. Detail data reports on any of these sites may be requested and will be sent as an addendum to this report at no additional cost.

Report Date: 9/10/2020

Prgm List / Fac ID No	Site Name	Site Address
ERNS		
64228		HWY 44 BEHIND SUNCOAST SIGNS / 2MI FROM CRYSTAL RIVER , FL
TANKS		
8944441	SUNSHINE JR #440	SR 44 CRYSTAL RIVER, FL

Agency List Descriptions

USEPA and State Databases are updated on a quarterly basis. Supplemental Databases are updated on an annual basis.

Florida Department of Environmental Protection (FDEP)

State Designated Brownfields(BRWNFLDS)

The FDEP Brownfields database contains a listing of State Designated Brownfield Areas and Brownfield Sites. Brownfields are typically defined as abandoned, idled or underused industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination.

Agency File Date: 4/16/2020 **Received by EDM:** 5/26/2020 **EDM Database Updated:** 5/26/2020

Dry Cleaners List(DRY)

The FDEP Dry Cleaning Facilities List is comprised of data from the FDEP Storage Tank and Contamination Monitoring (STCM) database and the Drycleaning Solvent Cleanup Program- Priority Ranking List. It contains a listing of those Dry Cleaning sites (and suspected historical Dry Cleaning sites) who have registered with the FDEP and/or have applied for the Dry Cleaning Solvent Cleanup Program.

Agency File Date: 5/29/2020 **Received by EDM:** 5/29/2020 **EDM Database Updated:** 5/29/2020

Institutional and/or Engineering Controls(INSTENG)

The FDEP Institutional Controls Registry Database (INSTENG) contains sites that have had Institutional and/or Engineering Controls implemented to regulate exposure to environmental hazards

Agency File Date: 5/27/2020 **Received by EDM:** 5/27/2020 **EDM Database Updated:** 5/27/2020

Leaking Underground Storage Tanks List(LUST)

The FDEP LUST list identifies facilities and/or locations that have notified the FDEP of a possible release of contaminants from petroleum storage systems. This Report is generated from the FDEP Storage Tank and Contamination Monitoring Database (STCM).

Agency File Date: 5/29/2020 **Received by EDM:** 5/29/2020 **EDM Database Updated:** 5/29/2020

Solid Waste Facilities List_Landfills(SLDWST_LF)

The SLDWST_LF list identifies locations that have conducted solid waste landfill activities as determined by the applicable FDEP Facility Classifications. Sites listed with "##" after the Facility ID Number are historical locations, obtained from documents on record at local agencies.

Agency File Date: 5/29/2020 **Received by EDM:** 5/29/2020 **EDM Database Updated:** 5/29/2020

Solid Waste Facilities List_Non-Landfills(SLDWST_NLF)

The SLDWST_NLF list identifies locations that have conducted solid waste handling activities other than landfilling, as determined by the applicable FDEP Facility Classifications, such as Transfer Stations, Disaster Debris Staging Areas and sites handling Bio-Hazardous wastes. Sites listed with "##" after the Facility ID Number are historical locations, obtained from documents on record at local agencies.

Agency File Date: 5/29/2020 **Received by EDM:** 5/29/2020 **EDM Database Updated:** 5/29/2020

State CERCLIS/SEMS Equivalent(STCERC)

The STCERC list is compiled from the FDEP Site Investigation Section list, the Florida SITES list(historical) and the FDEP Cleanup Sites list. These sites are being assessed and/or cleaned up as a result of identified or suspected contamination from the release of hazardous substances. The FDEP Cleanup Sites list programs include: Brownfields, Petroleum, EPA Superfund (CERCLA), Drycleaning, Responsible Party Cleanup, State Funded Cleanup, State Owned Lands Cleanup and Hazardous Waste Cleanup.

Agency File Date: 1/11/2020 **Received by EDM:** 4/15/2020 **EDM Database Updated:** 4/15/2020

State NPL Equivalent(STNPL)

The FDEP State Funded Cleanup list contains facilities and/or locations where there are no viable responsible parties; the site poses an imminent hazard; and the site does not qualify for Superfund or is a low priority for EPA. Remedial efforts at these sites are currently being addressed through State funded cleanup action.

Agency File Date: 8/3/2020 **Received by EDM:** 8/3/2020 **EDM Database Updated:** 8/3/2020

Underground/Aboveground Storage Tanks(TANKS)

The FDEP TANKS list contains sites with registered aboveground and underground storage tanks containing regulated petroleum products.

Agency File Date: 7/16/2020 **Received by EDM:** 7/16/2020 **EDM Database Updated:** 7/20/2020

Voluntary Cleanup List(VOLCLNUP)

The VOLCLNUP List is derived from the FDEP Brownfields Site Rehabilitation Agreement (BSRA) database and the FDEP Office of Waste Cleanup Responsible Party Sites database. This list identifies those sites that have signed an agreement to Voluntarily cleanup a site and/or sites where legal responsibility for site rehabilitation exists pursuant to Florida Statutes and is being conducted either voluntarily or pursuant to enforcement activity.

Agency File Date: 6/1/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

United States Environmental Protection Agency (EPA)

Comp Env Resp, Compensation & Liability Info Sys List(CERCLIS)

The US EPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database tracks potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are proposed to be on the NPL, are on the NPL and sites that are in the screening and assessment phase for possible inclusion on the NPL. The CERCLIS database was retired in November of 2013 and has been replaced by the Superfund Enterprise Management System (SEMS).

Agency File Date: 11/12/2013 **Received by EDM:** 2/18/2016 **EDM Database Updated:** 2/18/2016

RCRIS Handlers with Corrective Action(CORRACTS)

The US EPA Corrective Action Sites (CORRACTS) database is a listing of hazardous waste handlers that have undergone RCRA corrective action activity.

Agency File Date: 3/9/2020 **Received by EDM:** 3/10/2020 **EDM Database Updated:** 3/11/2020

Emergency Response Notification System List(ERNS)

The Emergency Response Notification System (ERNS) database stores information on oil discharges and hazardous substance releases. The ERNS program is a cooperative data sharing effort among the EPA, DOT and the National Response Center (NRC), which currently provides access to this data.

Agency File Date: 12/31/2019 **Received by EDM:** 2/21/2020 **EDM Database Updated:** 2/24/2020

Archived Cerclis Sites(NFRAP)

The US EPA NFRAP list contains archived data of CERCLIS records where the EPA has completed assessment activities and determined that no further steps to list the site on the NPL will be taken. NFRAP sites may be reviewed in the future to determine if they should be returned to CERCLIS based upon newly identified contamination problems at the site. The NFRAP database was retired in November of 2013 and has been replaced by the Superfund Enterprise Management System (SEMS) .

Agency File Date: 10/25/2013 **Received by EDM:** 2/18/2016 **EDM Database Updated:** 2/18/2016

RCRA-LQG,SQG,CESQG and Transporters(NONTSD)

The EDM NONTSD list is a subset of the US EPA RCRAInfo System and identifies facilities that generate and transport hazardous wastes. These facilities may be Large Quantity Generators (LQG), Small Quantity Generators (SQG), Conditionally Exempt SQG's (CESQG) as well as" Non-Notifiers" and "Non-Handlers".

Agency File Date: 6/1/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

National Priorities List(NPL)

The US EPA National Priorities List (NPL) contains facilities and/or locations where environmental contamination has been confirmed and prioritized for cleanup activities under the Superfund Program. EDM's NPL Report includes sites that are currently on the NPL as well as sites that have been Proposed, Withdrawn and/or Deleted from the list. Previously, information for the NPL was managed under the CERLIS data management system. In 2014 this system was replaced with the Superfund Enterprise Management System (SEMS). EPA last updated CERCLIS in November of 2013. EDM's NPL Report contains available SEMS data and the archived CERCLIS data relative to NPL sites.

Agency File Date: 4/15/2020 **Received by EDM:** 5/26/2020 **EDM Database Updated:** 5/26/2020

NPL Liens List(NPLLIENS)

The US EPA NPL Liens List identifies those sites where under authority granted by CERCLA, liens have been filed against real property in order to recover expenditures from remedial action or when the property owner receives a notice of potential liability.

Agency File Date: 5/22/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

SEMS Active Site Inventory List(SEMSACTV)

The US EPA Superfund Enterprise Management System (SEMS) tracks potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. The SEMSACTV list contains sites that are on the National Priorities List (NPL) as well as sites that are prosposed for or in the screening and assessment phase for possible inclusion on the NPL. SEMS has replaced the CERCLIS database, which was retired in November of 2013.

Agency File Date: 5/22/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

SEMS Archived Site Inventory List(SEMSARCH)

The US EPA Superfund Enterprise Management System (SEMS), contains archived data of CERCLIS or SEMS records where the EPA has completed assessment activities and determined that no further steps to list the site on the NPL will be taken. These sites may be reviewed in the future to determine if they should be returned to SEMS based upon newly identified contamination problems at the site. SEMS has replaced the CERCLIS database, which was retired in November of 2013. The SEMSARCH database contains these newly archived records under the SEMS database management system.

Agency File Date: 5/22/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

Tribal Lust List(TRIBLLUST)

EDM's Tribal LUST list is derived from the USEPA Region IV Tribal Tanks database by extracting those sites with indicators of past and/or current releases.

Agency File Date: 2/24/2010 **Received by EDM:** 3/9/2010 **EDM Database Updated:** 3/9/2010

Tribal Tanks List(TRIBLTANKS)

The USEPA Region IV Tribal Tanks database lists Active and Closed storage tank facilities on Native American lands.

Agency File Date: 2/24/2010 **Received by EDM:** 3/9/2010 **EDM Database Updated:** 3/9/2010

RCRA-Treatment, Storage and/or Disposal Sites(TSD)

The EDM TSD list is a subset of the US EPA RCRAInfo system and identifies facilities that Treat, Store and/or Dispose of hazardous waste.

Agency File Date: 6/1/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

Brownfields Management System(USBRWNFLDS)

The US EPA Brownfields program provides information on environmentally distressed properties that have received Grants or Targeted funding for cleanup and redevelopment . Tribal Brownfield sites are included in the USBRWNFLDS database.

Agency File Date: 6/1/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/1/2020

Institutional and/or Engineering Controls(USINSTENG)

The USINSTENG list is compiled from data elements contained in the NPL, CORRACTS, USBRWNFLDS and RCRAInfo databases.

Agency File Date: 6/1/2020 **Received by EDM:** 6/1/2020 **EDM Database Updated:** 6/3/2020

Environmental Impact Areas

Brownfield Areas and Sites

The FDEP Brownfields database contains a listing of State Designated Brownfield Areas and Brownfield Sites. Brownfields are typically defined as abandoned, idled or underused industrial and commercial sites where expansion or redevelopment is complicated by real or perceived environmental contamination.

Agency File Date: 4/16/2020 **Received by EDM:** 5/26/2020 **EDM Database Updated:** 5/26/2020

https://floridadep.gov/waste/waste-cleanup/content/brownfields-program

Cattle Dipping Vats

From the 1910's through the 1950's, vats were filled with an arsenic solution for the control and eradication of the cattle fever tick. Other pesticides such as DDT where also widely used. By State law, all cattle, horses, mules, goats, and other susceptible animals were required to be dipped every 14 days. Under certain circumstances, the arsenic and other pesticides remaining at the site may present an environmental or public health hazard.

Some of the sites have been located and are currently under investigation. However, most of the listings are from old records of the State Livestock Board, which listed each vat as it was put into operation. In addition, some privately operated vats may have existed which were not listed by the Livestock Board. EDM's Cattle Dipping Vat sites are retrieved from the Voluntary Cleanup and STCERC datablases. For additional information on Cattle Dipping Vats visit the FDEP and FDOH websites at:

Agency File Date: 10/31/2018 **Received by EDM:** 1/25/2019 **EDM Database Updated:** 1/25/2019

https://floridadep.gov/waste/district-business-support/content/cattle-dipping-vats-cdv

http://www.floridahealth.gov/environmental-health/drinking-water/cattledipvathome.html

Formerly Used Defense Sites

The DoD is responsible for the environmental restoration of properties that were formerly owned by, leased to or otherwise possessed by the United States and operated under the jurisdiction of the Secretary of Defense prior to October 1986. Such properties are known as Formerly Used Defense Sites (FUDS). The Army is the executive agent for the program and the U.S. Army Corps of Engineers manages and directs the program's administration. For more information on the FUDS Program, including maps and data on individual sites, visit the Army Corps of Engineers website at:

Agency File Date: 5/29/2018 **Received by EDM:** 1/25/2019 **EDM Database Updated:** 1/25/2019

http://www.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/

FUDS Munitions Response Sites

The DoD developed the Military Munitions Response Program (MMRP) in 2001 to addresses munitions-related concerns, including explosive safety, environmental, and health hazards from releases of unexploded ordnance (UXO), discarded military munitions (DDM), and munitions constituents (MC) found at locations, other than operational ranges, on active and Base Realignment and Closure (BRAC) installations and Formerly Used Defense Sites (FUDS) properties. The MMRP addresses non-operational range lands with suspected or known hazards from munitions and explosives of concern (MEC) which occurred prior to September 2002, but are not already included with an Installation Response Program (IRP) site cleanup activity. For more information on the FUDS MMRP Program, including maps and data on individual sites, visit the Army Corps of Engineers website at:

Agency File Date: 5/14/2018 **Received by EDM:** 1/25/2019 **EDM Database Updated:** 1/25/2019

http://www.asaie.army.mil/Public/ESOH/mmrp.html

Groundwater Contamination Areas

The Ground Water Contamination Areas GIS layer is a statewide map showing the boundaries of delineated areas of known groundwater contamination pursuant to Chapter 62-524, F.A.C., New Potable Water Well Permitting In Delineated Areas. 38 Florida counties have been delineated primarily for the agricultural pesticide ethylene dibromide (EDB), and to a much lesser extent, volatile organic and petroleum contaminants. This GIS layer represents approximately 427,897 acres in 38 counties in Florida that have been delineated for groundwater contamination. However, it does not represent all known sources of groundwater contamination for the state of Florida.

This information is intended to be used by regulatory agencies issuing potable water well construction permits in areas of ground water contamination to protect public health and the ground water resource. Permitted water wells in these areas must meet specific well construction criteria and water testing prior to well use. This dataset only indicates the presence or absence of specific groundwater contaminants and does not represent all known sources of groundwater contamination in the state of Florida.

Agency File Date: 11/28/2018 **Received by EDM:** 1/24/2019 **EDM Database Updated:** 1/24/2019

https://floridadep.gov/water/source-drinking-water/content/delineated-areas

Institutional Controls

The FDEP Institutional Controls GIS layer is a statewide map showing the approximate boundaries of delineated areas where Institutional Controls are in place.

An institutional control provides for certain restrictions on a property. For example, a site may be cleaned up to satisfy commercial contamination target levels and an institutional control may be placed on that property indicating that it may only be used for commercial activities. If the owner of the property ever wanted to use that property for residential purposes, the owner would have to ensure that any contamination meets residential target levels.

The locational data for this layer is provided by the responsible party and reviewed by FDEP staff. Neither FDEP or EDM assumes respondibility for the accuracy of the boundary data.

Agency File Date: 5/27/2020 **Received by EDM:** 5/27/2020 **EDM Database Updated:** 5/27/2020

https://ca.dep.state.fl.us/mapdirect/?webmap=cff8d21797184421ab4763d3e4a01e48

National Priorities List

The US EPA National Priorities List (NPL) contains facilities and/or locations where environmental contamination has been confirmed and prioritized for cleanup activities under the Superfund Program. EDM's NPL site boundaries data include sites that are currently on the NPL as well as sites that have been Proposed, Withdrawn and/or Deleted from the list.

Agency File Date: 11/14/2018 **Received by EDM:** 12/10/2018 **EDM Database Updated:** 1/22/2019

https://www.epa.gov/superfund/search-superfund-sites-where-you-live

Solid Waste Facilities

The FDEP SLDWST list identifies locations that have been permitted to conduct solid waste handling activities.

Agency File Date: 1/23/2019 **Received by EDM:** 1/24/2019 **EDM Database Updated:** 1/25/2019

https://floridadep.gov/waste

State Funded Cleanup Sites

The FDEP State Funded Cleanup list contains facilities and/or locations where there are no viable responsible parties; the site poses an imminent hazard; and the site does not qualify for Superfund or is a low priority for EPA. Remedial efforts at these sites are currently being addressed through State funded cleanup action.

Agency File Date: 8/10/2019 **Received by EDM:** 8/12/2019 **EDM Database Updated:** 8/12/2019

https://floridadep.gov/waste/waste-cleanup/documents/state-funded-cleanup-program-site-list

CSER APPENDIX E

Site Photographs

Pond Site Photography

Pond 2-5, Alternative 1 – central portion of the pond site looking north

Pond 2-5, Alternative 2 – central portion of the pond site looking south

Pond 2-5, Alternative 3 – southwest area of the pond site looking northeast

Pond 2-5, Alternative 4 – Central area looking south

Pond 2-6, Alternative 1 – north-central area looking south

Pond 2-6, Alternative 2 – northern area looking west

Pond 2-6, Alternative 3 – construction site located in eastern area

Pond 2-6, Alternative 3 – northeast area looking west

Pond 2-7, Alternative 1 – central portion looking west

Pond 2-7, Alternative 1 – two empty 55-gallon drums and metal shelves located in the central area of the pond site

Pond 2-7, Alternative 2 (north portion) – central area looking east

Pond 2-7, Alternative 3 – central area looking west

DRA-E – offsite looking north toward west portion of pond site.

DRA-E – southeastern portion of the pond site looking north

CSER APPENDIX F

Supplemental Information

2009 PD&E Excerpts

TECHNICAL MEMORANDUM
Environmental Screening

Suncoast Parkway 2
Hernando & Citrus Counties, Florida

Florida's Turnpike Enterprise

Financial Project ID Number: 405270-1-32-03
Federal Aid Project Number: N/A

This project consists of new alignment expansion from US 98 in Hernando County to US 19 in Citrus County a distance of approximately 26 miles

Prepared for:
Dyer, Riddle, Mills & Precourt, Inc. (DRMP)

Prepared by:
Tierra, Inc
7805 Professional Place
Tampa, Florida
Tierra, Inc Project Number 6511-07-070A

June 2009

EXECUTIVE SUMMARY

This environmental screening technical memorandum has been prepared as part of the Project Development & Environment (PD&E) re-evaluation document submittals for the proposed roadway extension project. The purpose of this environmental screening report is to evaluate potential impacts from contaminated sites to the project. The environmental screening covers the proposed main-line corridor and an area extending 300 feet beyond the proposed right-of-way (ROW). Stormwater management sites were evaluated as part of the contamination screening process. The results of the stormwater management sites screening for each design section are presented in Appendix I of this report.

In accordance with the FDOT policy and the Federal Highway Administration (FHWA) requirements, a contamination screening technical memorandum has been prepared to evaluate potential impacts from contaminated sites to the project. The report has been prepared pursuant to the FHWA's *Technical Advisory T 6640.8A,* FDOT's *PD&E Manual, Part 2, Chapter 22,* and standard environmental assessment practices including reviewing records of regulatory agencies, site reconnaissance, literature review, and personal interviews of individuals and business owners within the limits of the project.

A total of 29 sites with potential for environmental impact were identified along the proposed corridor. The environmental screening evaluation has resulted in the following risk rankings for potential contamination sites. One (1) "High" risk ranking site, eight (8) "Medium" ranking sites, fifteen (15) "Low" ranking sites, and five (5) sites ranked "No" for potential contamination. The site name, potential risk, and map identification are presented in Table 1 below.

Table 1 – Potential Contamination Sites

MAP / SITE ID	PROPERTY/ BUSINESS NAME	CONTAMINATION CONCERN	RISK RANKING	PREVIOUS RISK RANKING (1)
24	Etna Turpentine Camp	Petroleum distillates - Turpentine, and Resins	MEDIUM	NA
1	Closed Chicken Farm	Petroleum products, Chicken manure sludge	MEDIUM	MEDIUM
25	Illegal dump site	solid waste, waste oils	HIGH	NA
4	C&D Landfill	Leachate	LOW	MEDIUM
26	RIP C&D and Sand Mine	Leachate	LOW	NA
27	Sand Mine	solid waste	NO	NA
28	FPC Sub Station	PCBs	LOW	NA
12	Lecanto Hills Mobile Home Park	Domestic WWTP, fecal Chlorine	LOW	LOW
29	Florida Gas Transmission Line Compressor Station 26	Dimethyldisulfide, lubricating oil, Tert-Butyl-Alcohol, Natural Gas	LOW	NA
30	Crystal River Quarries, Inc.	Petroleum	LOW	NA
31	Maylen Property	solid waste, waste oils	MEDIUM	NA
23	Maylen Avenue Cattle Dip Vat	Cattle Dipping Vat	MEDIUM	HIGH
32	Allen Site RAF	Domestic waste	LOW	NA
33	Former Limerock mine	solid waste	NO	NA
15	Damrons Auto Salvage / LKQ	Petroleum products storage and use	LOW	MEDIUM
17	Citrus Sand & Debris, Inc.	Leachate & Solid Waste	LOW	MEDIUM
19	Pine Ridge Illegal dump site	solid waste, paints, oil, solvents	LOW	MEDIUM
34	Citrus County Charles Black II WTP / a.k.a. Meadow crest WTP	Chlorine - diesel fuel	LOW	NA
35	Citrus County Charles Black II WWTP / a.k.a. Meadow crest WWTP	Domestic WWTP	LOW	NA
36	Pig Farm / Residential facility	solid waste	MEDIUM	NA
37	Citrus County Utilities Crystal Acres MHP WWTP	Domestic WWTP , Fecal, Chlorine	NO	NA
20	Iguana Path illegal dump sites	solid waste,	LOW	MEDIUM
38	CSX Rail corridor	Arsenic, Creosote, Petroleum Products	MEDIUM	NA
39	Progress Energy Sub Station	Sulfuric Acid and P-Nitroaniline	LOW	NA
40	North Bull Townsend Point Illegal Dump Sites	solid waste, paints, oil, solvents	MEDIUM	NA
22	Basswood Avenue Illegal Dump Sites	solid waste, paints, oil, solvents	MEDIUM	MEDIUM
41	Crystal river Precast Plant	SQG	NO	NA
42	Shell former Texaco	Petroleum	NO	NA
21	Crystal River Quarries Inc.	Petroleum	LOW	LOW

Note: Map IDs less than 24 reflect the identification number from the 1998 SEIR

Note: The sites are listed in geographical orientation from south to to north and therefore DO NOT follow numerical order.

Designated for facilities/sites with a "No" risk ranking

Designated for facilities/sites with a "LOW" risk ranking

Designated for facilities/sites with a "MEDIUM or HIGH" risk ranking

(1) Previous risk rankings from the October, 1997 CSER prepared by H.W. Lochner, Inc.
Those sites noted as NA were not previously evaluated

NOTE: Sites 27, 28, and 29 are located outside the corridor mapping and therefore are not depicted on Figure 2

A total of 69 ponds, easements and named floodplain compensation areas are depicted on the Conceptual Design plans dated February 6, 2009, along the proposed corridor. The environmental screening evaluation has resulted in the following risk rankings for potential contamination at these sites. None (0) “High” risk ranking site, five (5) “Medium” ranking sites, twenty-seven (27) “Low” ranking sites, and thirty-seven (37) sites ranked "No" for potential contamination. Copies of the three Pond Screening Reports (PSRs), one report for each design section of this proposed corridor, are included in Appendix I.

Tierra recommends Level II field screening be conducted for all “Medium” and “High” ranked sites identified above in pink. A site-specific Level II scope of work should be prepared and submitted to the Florida’s Turnpike Enterprise (Turnpike) contamination impact coordinator or designated environmental manager for review and approval. Once the Level II scope of work is approved, field services should be completed and the results of the Level II screening included in the Final Environmental Screening Technical Memorandum for this project. Based on the results of the Level II field screening, site rankings may change for the final report.

This executive summary presents a brief overview of the environmental contamination reporting process and site identification information. The reader should utilize the detailed information presented within this report for specific information regarding any particular area of interest.

Table 1 List of Facilities/Sites that have been identified, reviewed, and ranked for environmental risk.

MAP / SITE ID	DISTANCE/ DIRECTION FROM CORRIDOR DIRECTION	PROPERTY/ BUSINESS NAME	PROPERTY ADDRESS	PROPERTY OWNER	FACILITY TYPE	FACILITY ID NUMBER	PHOTOGRAPH NUMBER (s)	CONTAMINATION CONCERN	STORAGE TANKS	RISK DISCUSSION	CURRENT RISK RANKING	**PREVIOUS** RANKING
24	within corridor - Section 1	Etna Turpentine Camp	NA	State Forest	Historical use of Turpentine distillates	NA	1 , 2, 3, 4	Petroleum distillates - Turpentine, and Resins	NO	This facility is identified as a historical Turpintine Camp. The Etna Turpintine Camp was discovered during the installation of the natural gas pipeline which runs parallel to and east of the Progress Energy 500 kV transmission line. An archeological report was submitted for this site and is located at the Citrus County Historical Library in Inverness, Florida. During the site reconnaissance three montitoring wells were identified on the site. The camp repoertedly was used from the early 1900s up to approximately the late 1930's. No additional information was identified regarding the monitoring wells. According to the Material Safety Data Sheet (MSDS) for Turpintine it is harmful to the environment and aquatic organisms. Turpintine is obtained by distilling the gum from various species of pine. It is a mixture of isomeric terpene hydrocarbons. Turpintine is not soluble in water and has a relative density of 0.9 (water = 1). Based on the potential environmetal concerns from Turpintine effecting the soil and water this site is given a risk ranking of MEDIUM for potential contamination. A copy of the MSDS and portions of the Archeological Report are provided in Appendix H.	**MEDIUM**	**NA**
1	Less than 1/8 mile - Section 1	Closed Chicken Farm	Gordon Point Drive	Unknown	Petroleum/ waste water	NA	5 & 6	Petroleum products, Chicken manure sludge	NO	This facility was listed in the 1996 PD&E as having petroleum products in a barn located being the chicken coops and a mobile fuel tank on the back of a pickup truck. A manure sludge pond was identified to be to the north of the chicken coops. A recent site visit did not identify any petroleum equipment or storage tanks on site. However, the sludge lagoon was observed to be to the north of the chicken coops. This area should be further assessed to identify any potential contaminants within the sludge lagoon area. This site is given a risk ranking of MEDIUM for potential contamination.	**MEDIUM**	**MEDIUM**
25	within corridor - Section 1	Illegal dump site	200 ft north of west Whippoorwill St under transmission lines	Progress Energy Corp.	Solid Waste	NA	7 & 8	solid waste, waste oils	NO	Illicit dumping observed with several 5-gal buckets of used oil and other plastic, metal, and furniture debris. Some of the waste oil has spilled onto the soil and staining is apparent. Based on the visual evidence of a minor release of waste oil on the surface soils this site is given a risk ranking of HIGH for potential impact to the project corridor.	**HIGH**	**NA**
4	Approximately 1/4 mile east Section 1	C&D Landfill	3890 West Grover Cleveland Blvd., Homosassa, Fl 34461	Citrus Sand & Debris II	Solid Waste C&D	S102013682	9 & 10	Leachate	NO	This facility is located approximately 600 feet north east from the closest point on the corridor to the landfill southwest property corner. The current active C&D landfill is approximately 2500 feet north east. FDEP conducted a site inspection at this facility on May 15, 2007. No violations were reported. Based on the current regulatory status of this facility and the relative distance from the project corridor this facility is given a risk ranking of LOW for potential contamination.	**LOW**	**MEDIUM**
26	Approximately 1/2 mile west - Section 2	RIP C&D and Sand Mine	5335 Grover Cleveland Blvd., Homosassa, Florida	R.I.P Inc.	Solid Waste	21211-006-SO	11 & 12	Leachate	NO	This facility is located approximately 2800 feet south west from the closest point on the corridor. The R.I.P. facility includes a closed Class I landfill, an open Class II C&D land fill, and an open sand mine. The FDEP conducted a routine inspection on 8-10-07. Several items were checked as "Not OK" on the inspectors checklist. The narrative to this inspection indicated the areas of concern were related to overgrowth on the slopes of the landfill, trees and vegetation growing within the final cover, and stormwater erosion. Based on the regulatory status and the relative distance from the project corridor the landfill is given a risk ranking of LOW for potential contamination.	**LOW**	**NA**
27	Approximately 1/4 mile west - Section 2	Sand Mine	West Hoskins Lane, Homosassa, Florida	Unknown	Mining	NA	13 & 14	solid waste	NO	This facility was identified during the site reconnaissance. Located west of the Progress Energy transmission line a large soil berm prevents any observation of the facility. Once over the berm a large sand mine and vegetation mulching operation was observed. There are no FDEP files available for this facility and no environmental concerns identified during the site visit. Based on the lack of regulatory information and the observations made during the site visit this facility is given a risk ranking of NO for potential contamination.	**NO**	**NA**
28	200 feet west - Section 2	FPC Sub Station	South of West Homosassa Trail (CR 490) and west of the FPC Transmission lines.	Progress Energy	Sub Station	NA	15	PCBs	NO	This facility was identified during the site reconnaissance as having several large electrical transformers. Electrical transformers can contain PCB dielectric fluids. Tierra did observe blue stickers on the transformers indicating non-PCB containing. There were no regulatory reports identifying this facility as having a reported release or Tier II reporting. Based on the lack of regulatory information and the observations made during the site visit this facility is given a risk ranking of LOW for potential contamination.	**LOW**	**NA**
12	Approximately 1/8 mile southeas - Section 2	Lecanto Hills Mobile Home Park	4400 West Gulf to Lake Highway, Lecanto, Florida	Lecanto Hills Mobile Homosassa. Inc.	Domestic Waste	FL01739825	17	Domestic WWTP, fecal Chlorine	NO	This facility is listed as maintaining an industrial waste water treatment facility license for treatment of domestic waste water. The mobile home park (MHP) treatment facility is listed as 0.1 MGD, no violations are noted. Based on the current regulatory status and the relative distance from the project corridor this facility is given a NO for potential contamination.	**LOW**	**LOW**
29	1,500 east of the project corridor - Section 2	Florida Gas Transmission Line Compressor Station 26	245 North Maylen Avenue, Lecanto , Florida 34461	Florida Gas Transmission	Compressor Station Tier 2	S107718406	18	Dimethyldisulfide, lubricating oil, Tert-Butyl-Alcohol, Natural Gas	YES	This facility is listed as a Tier 2 reporting facility with several chemicals used or stored on-site. The compressor facility pressurizes the natural gas in the main transmission line located adjacent to the facility. No violations were noted. Based on the current regulatory status of this facility and the relative distance from the project corridor this facility is given a risk ranking of LOW.	**LOW**	**NA**
30	Approximately 1/8 mile east of the corridor - Section 2	Crystal River Quarries, Inc.	287 Mayler Road, Crystal River, Florida 34461	Frank J. Colitz, Jr.	Mining / AST	A100267425	19 & 20	Petroleum	YES	This facility is listed as maintaining a 10,000 gallon diesel AST on site. The AST is listed as in-service with no violations reported. The AST has overfill/overspill construction and secondary containment. The mining operation appears to be on-going with large drag li observed and several steep rock faces exposed. The mine is situated in an old basin and sits relatively low compared to the project corridor located to the west. Based o the current regulatory status of this facility and the relative down gradient topography and groundwater flow this site is given a risk ranking of LOW for potential impact to the corridor.	**LOW**	**NA**
31	within corridor - Section 2	Maylen Property	North Maylen Avenue	Bill Maylen	Agricultural /Residential	NA	21 & 22	solid waste, waste oils	NO	During the site reconnaissance several types of agricultural equipment and containers were identified on this property. It appears the land has been farmed for personal use for many years. Parts and pieces of equipment are located within the proposed corridor. Based on the potential storage and use of petroleum and herbicides this facility is given a risk ranking of MEDIUM for potential contamination.	**MEDIUM**	**NA**
23	Approximately 300 feet east of corridor - Section 2	Maylen Avenue Cattle Dip Vat	North Maylen Avenue		Pesticides / metals	NA	23 & 24	Cattle Dipping Vat	NO	Remnants of a former Cattle Dipping Vat (CDV) are located on open grazing land approximately 300 feet east of the project corridor. CDVs have been associated with arsenic and other pesticides such as DDT, and DDE in the soil and groundwater. The depth to water in this area is approximately 40 to 60 feet bls. It is not likely that the historical use of this site has impacted the soils within the project corridor. However the groundwater may be impacted and warrants further study. Based on the relative distance from the project corridor this site is given a risk ranking of MEDIUM for potential contamination.	**MEDIUM**	**HIGH**
32	1/4 mile east - Section 2	Allen Site RAF	695 North Maylen Avenue, Lecanto, Florida 34461	not reported	Residual Application Facility (RAF)	S105437532	25	Domestic waste	NO	This facility is listed as maintaining a permit for the application of residual solids (i.e.. sludge). The facility is listed as active site which effluent, reclaimed water or wastewater residuals discharge into the environment and/or monitoring is taking place. No other FDEP records were identified. This property appears to be a calf/cow operation with several large pastures visible to the east of Maylen Avenue. This site is approximately 1/4 mile east of the project corridor. No visual indications of monitoring wells or recent sludge application was observed. Based on the relative distance from the project corridor and the current FDEP records indicating no violations this site is ranked LOW for potential contamination.	**LOW**	**NA**
33	within corridor - Section 2	Former Limerock mine	North of West Sanction Road and west of North Maylen Road	Unknown	Mining	NA	26	solid waste	NO	This facility was identified during the site reconnaissance. Located within the proposed corridor a large excavated area was observed. This limerock mine has been closed for some time with vegetation identified throughout the remaining pit. No solid waste dumping or other environmental impacts were observed, i.e.. shooting areas, illicit dumping, abandoned vehicles. There are no FDEP files available for this facility and no environmental concerns identified during the site visit. Based on the lack of regulatory information and the observations made during the site visit this facility is given a risk ranking of NO for potential contamination.	**NO**	**NA**
15	Approximately 50 feet north east of the eastern edge of the corridor - Section 2	Damrons Auto Salvage / LKQ	4950 West Norvell Bryant Highway	Chuck Class, GM - Jerry Runnels	AST / RCRA	A100162885 / 982105694	28 & 29	Petroleum products storage and use	AST	This automotive salvage yard is listed as maintaining a 500 gallon non-regulated diesel AST. The facility also is listed as a RCRA SQG of hazardouse waste. The materials stored on-site are aoutomotive fluids removed from vehicles. These fluids include, waste oil, transmission fluid, new lube oil, antifreeze, and brake fluids. The facility reportedly has these materials removed as-needed from the facility. No violations are noted. This facility appears to be well maintained and housekeeping appears neat. The project corridor passes within 50 feet of the southwest corner of the salvage yard property. Within the property boundary is a large chain link fence followed by several acres of used vehicles stacked neatly in rows and columns. There are no obvious indications of environmnetal impact near the property boundary closest to the project corridor. Based on the lack of any regulatory violations and the observations made during the site reconnaissance this site is given a risk ranking of LOW for potential impact to the project corridor.	**LOW**	**MEDIUM**
17	Within corridor - Section 2	Citrus Sand & Debris, Inc.	1590 North Quarterback Terrace, Crystal River, Fl.	Citrus Sand & Debris	Mining & Yard waste	4009P30002	30	Leachate & Solid Waste	NO	This facility was identified during the site reconnaissance and on historical aerial photographs. Located south of Norvel Bryant Highway and west of North Knoll Road a large open pit sand mine operation was observed. There are no FDEP files available for this facility and no environmental concerns identified during the site visit. The facility was in operation at the time of the site visit. Several trucks were observed entering the site and loading with mined fill material from the site. The excavation area appears to be vary large, deep, directly aligned with the proposed corridor. Based on the lack of regulatory information and the observations made during the site visit this facility is given a risk ranking of LOW for potential contamination.	**LOW**	**MEDIUM**
19	Approximately 1/4 mile north east of the corridor - Section 2	Pine Ridge Illegal dump site	NA	NA	Solid waste	NA	32	solid waste, paints, oil, solvents	NO	This site was identified in the original PD&E CSER and was also identified during the site reconnaissance. Several areas along a dirt jeep trail were observed to have illicit dumping on-going. Materials identified included household trash, vegetation, tree stumps and cut wood, and white goods. No putrescent, drums, paint cans or containers were identified. This area of dumping is 50 ft from the closest portion of the corridor. Based on the relative distance and the lack of any major environmental impact indicators, i.e.. stains, sheen, pits, tanks, drums, containers, odors etc this site is given a risk ranking of LOW for potential to impact the corridor. This solid waste material may require cleanup at the time of construction but does not appear to have an environmental impact to the project and should be considered de'minimus in nature.	**LOW**	**MEDIUM**
34	Approximately 1/4 mile north east of the corridor - Section 2	Citrus County Charles Black II WTP / a.k.a. Meadow crest WTP	1950 N Water Plant Road, Citrus County	Citrus County Utilities	WTP / AST	S107715628 / A100131631	33	Chlorine - diesel fuel	YES	This facility is listed as a Tier 2 reporting facility. The facility stores a maximum amount of 600 pounds liquid chlorine. There have been no violations reported for this facility. A release of chlorine gas to the atmoshere would not directly impact the soil or groundwater within the project cooridor. The site also maintains a 1000 gallon diesel AST used to fuel an emergency generator. The AST does have secondary containment and no violations are noted. Based on the type of Tier 2 chemical present, liquid chlorine under pressure and gas at ambient pressures, the risk ranking for this site is LOW for potential to impact the project cooridor. Additionally, the AST located on site is listed as in-service with no violations reported. Based on the relative distance and downgradient groundwater flow direction from the project corridor the diesel AST is given a risk ranking of LOW for potential impact to the corridor.	**LOW**	**NA**
35	Approximately 1/8 mile east of the project corridor - Section 2	Citrus County Charles Black II WWTP / a.k.a. Meadow crest WWTP	Pine Ridge Subdivision	Citrus County Utilities	Domestic Waste	S107715628	34 & 35	Domestic WWTP	NO	This facility is listed as maintaining an industrial waste water treatment facility license for treatment of domestic waste water, no violations are noted. Based on the current regulatory status and the relative distance from the project corridor this facility is given a LOW risk ranking for potential contamination.	**LOW**	**NA**
36	within corridor - Section 3	Pig Farm / Residential facility		NA	solid waste	NA	36 & 37	solid waste	YES	This facility was identified during the site reconnaissance and through aerial photographs as having several large ASTs on the property and goats and pigs. There is a runoff area on-site were rinse water drains and pools. There are possible petroleum, pesticide, and fecal contaminants on-site. Additional investigation is warranted. A site risk ranking of MEDIUM was given to this site for potential to impact the corridor.	**MEDIUM**	**NA**
37	Approximately 1/4 mile west of the corridor - Section 3	Citrus County Utilities Crystal Acres MHP WWTP	2850 N Crede Avenue, Crystal River, Florida	Kenneth Cannon	Domestic SWD	S103094107	38	Domestic WWTP , Fecal, Chlorine	NO	This facility is listed as maintaining an industrial waste water treatment facility license for treatment of domestic waste water. The mobile home park (MHP) treatment facility is listed as 0.1 MGD, no violations are noted. Based on the current regulatory status and the relative distance from the project corridor this facility is given a NO for potential contamination.	**NO**	**NA**

Table 1 List of Facilities/Sites that have been identified, reviewed, and ranked for environmental risk.

MAP / SITE ID	DISTANCE/ DIRECTION FROM CORRIDOR DIRECTION	PROPERTY/ BUSINESS NAME	PROPERTY ADDRESS	PROPERTY OWNER	FACILITY TYPE	FACILITY ID NUMBER	PHOTOGRAPH NUMBER (s)	CONTAMINATION CONCERN	STORAGE TANKS	RISK DISCUSSION	CURRENT RISK RANKING	**PREVIOUS** RANKING
20	Within corridor - Section 3	Iguana Path illegal dump sites	NA	NA	Solid waste	NA	39	solid waste,	NO	This site was identified in the original PD&E CSER and was also identified during the site reconnaissance. The site appears to be a former saw mill. Large piles of wood debris, stumps, bark, mulch, are throughout the property. A shed with the saw mill is observed toward the south of the property. No putrescent, drums, paint cans or containers were identified. Based on the lack of any major environmental impact indicators, i.e.. stains, sheen, pits, burn piles, tanks, drums, containers, odors etc this site is given a risk ranking of LOW for potential to impact the corridor. This solid waste material (wood) may require cleanup at the time of construction but does not appear to have an environmental impact to the project and should be considered de'minimus in nature.	**LOW**	**MEDIUM**
38	Within corridor - Section 3	CSX Rail corridor	NA	CSX	Railroad	NA	41	Arsenic, Creosote, Petroleum Products	NO	This railroad crosses the project corridor north of West Power line Road. Railroads have historically been associated with Arsenic and Creosote contamination. Arsenic based herbicides were used for many years to remove vegetation from the railroad right of way. Creosote railroad ties are still used to build the rail. Both of these contaminants can remain in the soils for many years. Based on the historical evidence that railroad corridors can contaminate the soil and groundwater this site is given a risk ranking of MEDIUM for potential impact to the corridor.	**MEDIUM**	**NA**
39	< 1/4 mile west of the project corridor - Section 3	Progress Energy Sub Station	6642 North Marylois Point, Crystal River, Florida 34428	Progress Energy	Tier 2	S107722489	42 & 43	Sulfuric Acid and P-Nitroaniline	YES	This facility is listed as a Tier 2 reporting facility due to the storage of approximatly 2 gallons of sulfuric acid and 1000 pounds of P-Nitroaniline (mineral oil). The acid is stored in lead-acid batteries used for backup power. The P-Nitroaniline is stored in an AST located 250 feet southeast of the main gate. The use of this material is for dielectric fluids in transformers. . Tierra contacted Progress Energy environmental contact Ms. Betty Carter regarding the stockpiled soil at the facility. Ms. Carter indicated this site is used as a staging area for mineral oil impacted soil. The soils are staged until they gather enough material to dispose of off site. Mineral oil is a non-toxic organic oil used in transformers. No violations have been reported at this facility. No RCRA violations were identified for possible PCB contamiantion. Based on the current regulatory staus of this facility the site is ranked as LOW for potential to impact the project cooridor.	**LOW**	**NA**
40	Within corridor - Section 3	North Bull Townsend Point Illegal Dump Sites	NA	NA	Solid waste	NA	44 & 45	solid waste, paints, oil, solvents	NO	This site was identified during the site reconnaissance. An area along a dirt driveway was observed to have illicit dumping on-site. Materials identified included household trash, plastic containers 5 gallon to 30 gallon, and building materials were identified. This area is approximately 100 ft east of the closest portion of the corridor. Based on the relative distance and the observed environmental indicators, i.e.. stains, sheen, pits, burn piles, tanks, drums, containers, odors etc this site is given a risk ranking of MEDIUM for potential to impact the corridor.	**MEDIUM**	**NA**
22	Within corridor - Section 3	Basswood Avenue Illegal Dump Sites	NA	NA	Solid waste	NA	46, 47, & 48	solid waste, paints, oil, solvents	NO	This site was identified in the original PD&E CSER and was also identified during the site reconnaissance. Several areas along a dirt jeep trail were observed to have illicit dumping on-going. Materials identified included household trash, vegetation, tree stumps and cut wood, and white goods. No putrescent or drums were identified. However, a kerosene lantern 1-gallon fuel can was observed to be empty with the cap off. This area is located within the project corridor. Based on the relative distance and the identification of environmental impact indicators, i.e.. stains, sheen, pits, burn piles, tanks, drums, containers, odors etc. this site is given a risk ranking of MEDIUM for potential to impact the corridor.	**MEDIUM**	**MEDIUM**
41	1/4 mile south of the intersection of Suncoast Pkwy 2 and US 19 - Section 3 (OUTSIDE MAPPING LIMITS)	Crystal river Precast Plant	Hwy 19 & Power line Road, Crystal River Florida 33631	Jeff Median, Mgr.	RCRA / FINDS	984178996	49	SQG	NO	This facility is listed as a Small Quantity Generator of Hazardous Waste. The facility is listed as no violations reported. Based on the current regulatory status and the relative distance and cross gradient ground water flow direction this site is ranked as NO for potential impact to the corridor.	**NO**	**NA**
42	2 miles south and 1.25 miles west from the closest portions of the project corridor - Section 3 (OUTSIDE MAPPING LIMITS)	Shell former Texaco	6164 North Suncoast Blvd. Crystal River, Florida 32794	Ken Whit, Mgr.	UST / AST	984180067	50 & 51	Petroleum	YES	This facility is identified in the EDR report as being within the search limits of the project. However, after further review the facility is located 1.5 miles west of the closest portion of the project. Based on the distance and down gradient direction to the closest point on the project corridor this site is ranked as NO for potential to impact the project.	**NO**	**NA**
21	< 1/4 mile south. Site is on the west side of US 19 .- Section 3 (OUTSIDE MAPPING LIMITS)	Crystal River Quarries Inc.	7400 North Suncoast Blvd. Crystal River, Fl. 34428	Frank Colitz, Jr.	UST	9045639	52 & 53	Petroleum	YES	This facility has reported USTs and ASTs in operation since 1959. The facility reports the following tanks: (1) 500 gallon waste oil UST installed in 1981 and removed in 1981; (1) 1,000 gallon leaded gas UST installed in 1960 and removed in 1989; (1) 1,000 gallon unleaded gas UST installed in 1981 and removed in November 1989; (1) 6,000 gallon diesel AST installed 1980 and removed November 1989; (1) 6,000 gallon diesel AST installed 1959 and removed in 1989; (2) 4,000 gallon diesel AST installed 1959 removed 1989; (10,000 gallon diesel ASTs installed 1989 in-service; (1)10,000 gallon unleaded gasoline AST installed 1989 and in-service; (1)15,000 gallon heating oil AST installed 1959 and removed 1989. The facility has two listed FAC ID numbers. FAC ID 8518659 is listed as closed and FAC ID number 9045639 is listed as open. According to the FDEP OCULUS files there facility is listed as cleanup required and remediation on-going. The site is eligible for cleanup under the EDI Pre-Approval program with a site score of 11. The current active site score is 34. A review of available assessment data depict a diesel plume located on-site with an estimated radiusof 100 ft. The groundwater is shown to be toward the the west. Based on the distance and downgradient direction from the closest portion of the project corridor this site is given a risk ranking of LOW.	**LOW**	**LOW**

Note	Map IDs less than 24 refl;ect the identification number from the 1998 SEIR
Note	The sites are listed in geographical orientation from south to to north and therefore DO NOT follow numerical
Light Blue	Designated for facilities/sites with a "No" risk ranking
Light Yellow	Designated for facilities/sites with a "LOW" risk ranking
Rose	Designated for facilities/sites with a "MEDIUM or HIGH" risk ranking
** Previous **	Designated for October, 1997 CS Those site noted as NA were not previously evaluated

FDEP Map Direct Potential Contamination Sites Maps

FDEP Map Direct Potential Contamination Sites

February 14, 2020

DEP Cleanup Sites

- BROWNFIELD SITES
- PETROLEUM
- SUPERFUND
- OTHER WASTE CLEANUP

Petroleum Contamination Monitoring (PCTS) Discharges from STCM

- ELIGIBLE DISCHARGES OPEN
- INELIGIBLE DISCHARGES OPEN

1:9,028

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

FDEP Map Direct Potential Contamination Sites

February 14, 2020

DEP Cleanup Sites

- BROWNFIELD SITES
- PETROLEUM
- SUPERFUND
- OTHER WASTE CLEANUP

Petroleum Contamination Monitoring (PCTS) Discharges from STCM

- ELIGIBLE DISCHARGES OPEN
- INELIGIBLE DISCHARGES OPEN

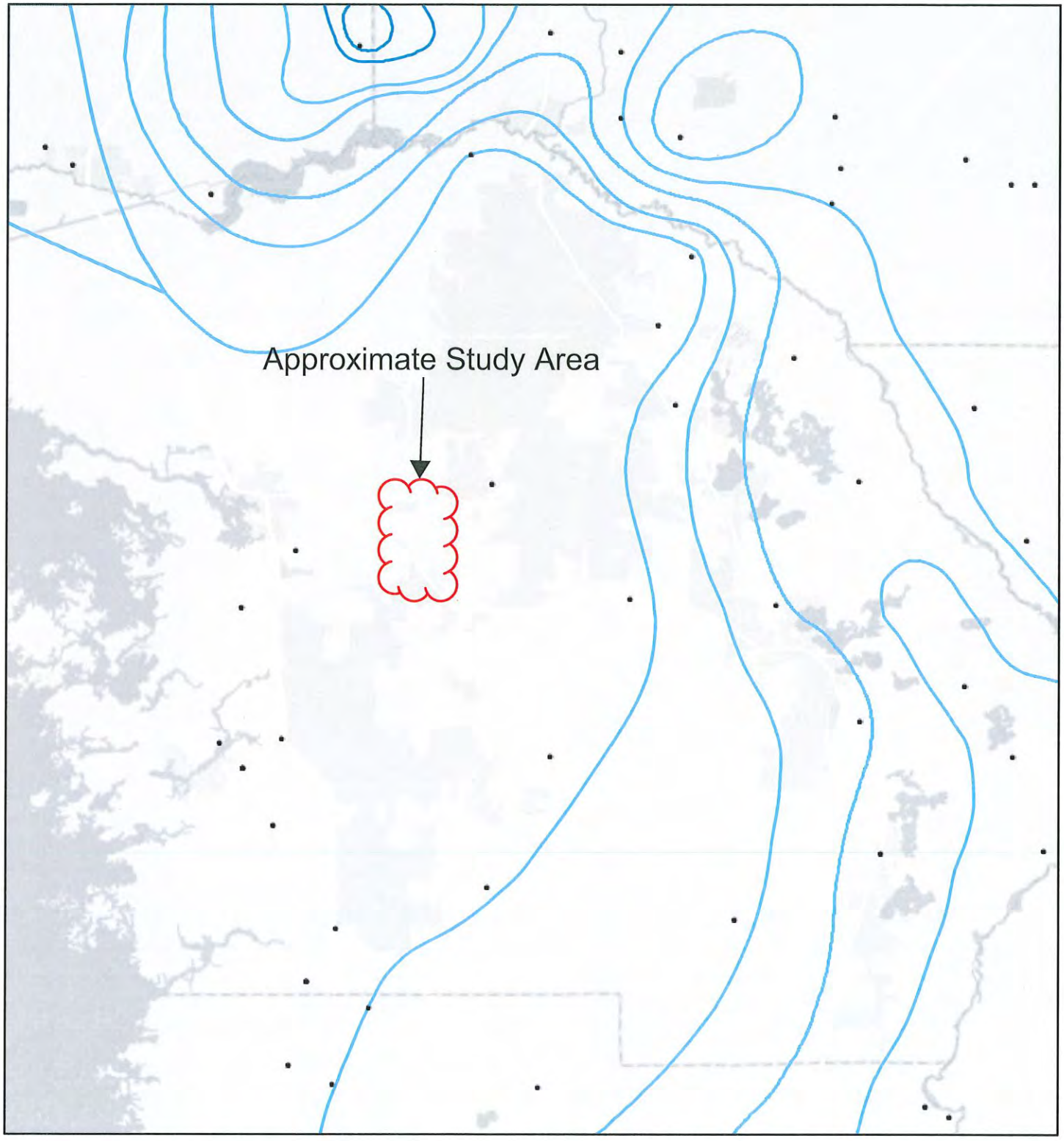
1:9,028

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

Upper Floridan Aquifer Potentiometric Surface Map 2017

Upper Floridan Aquifer Potentiometric Surface



2/12/2020, 4:30:53 PM

1:288,895

0 2 4 8 mi

0 3.5 7 14 km

Wells

September, 2017 Potentiometric Contours (feet)

10 - 50

60 - 100

Web AppBuilder for ArcGIS
Florida Geological Survey

Former Limerock Mine – Carroll's Lecanto Pit

Chris Garth

From: Chris Garth
Sent: Friday, February 14, 2020 8:55 AM
To: 'PublicRecordsRequests_Regulatory@FloridaDEP.gov'
Cc: Justin Holley
Subject: Info Request - Mine Facility - 1150 N. Maylen Ave Lecanto, Citrus County

Sir/Madam,

We are performing a contamination screening evaluation for the Florida Turnpike Enterprise and would like to know if you have any files for the following facility:

Carrolls Lecanto Pit (aka Carroll Contracting – Carroll Lecanto Pit)
1150 N. Maylen Avenue
Lecanto, Citrus County

We found no files on the OCULUS database for this facility. Please call or email if you have questions.
Thanks,

Chris Garth, LEP
Senior Scientist
TIERRA, INC.
7351 Temple Terrace Highway | Tampa, Florida 33637
T 813.989.1354 | F 813.989.1355 | C 813.766.0269
cgarth@tierraeng.com | www.tierraeng.com
geotechnical environmental materials engineering

Carroll Contracting - Carroll Lecanto Pit

Producer in Citrus county in Florida, United States with commodity Limestone, General

Map (https://www.google.com/maps/place/28.87915,-82.50327/@28.87915,-82.50327,12z/data=!3m1!1e3) | XML (/mrds/xml/10306114)
JSON (/mrds/json/10306114) | KML (/mrds/kml/10306114)

Geologic information

Identification information

Deposit ID	10306114 (/mrds/show-mrds.php?dep_id=10306114)
MRDS ID	AG00047
Record type	Site
Current site name	Carroll Contracting - Carroll Lecanto Pit

Geographic coordinates

Geographic coordinates:	-82.50327, 28.87915 (WGS84)
Location accuracy	10000 *(meters)*

Political divisions (FIPS codes)

Citrus (county)
Florida (state)
United States (country)
North America (continent)
Land (continent)

USGS map quadrangles

Crystal River (quadrangle 1:24,000 scale)
Inverness (quadrangle 1:100,000 scale)
Plant City (quadrangle 1:250,000 scale)

Hydrologic units (watersheds)

Crystal-Pithlachascotee (hydrologic unit)
Tampa Bay (hydrologic accounting unit)
Peace-Tampa Bay (hydrologic subregion)
South Atlantic-Gulf (hydrologic region)

Geographic areas

Country	State	County

Country	State	County
United States	Florida	Citrus

Comments on the location information

4 Miles Ene of Crystal River

Commodities

Commodity	Importance
Limestone, General	Primary

Materials information

Materials	Type of material
Limestone	Ore

Nearby scientific data

(1)	Hawthorn Group (/geology/state/sgmc-unit.php?x=-82.50327&y=28.87915)	List (/general/near-point.php?x=-82.50327&y=28.87915&d=0.01&html=html) Map (/mrds/map-us.html?x=-82.50327&y=28

Geologic structures

Type of structure	Regional
Structure description	Limestone

Economic information

Economic information about the deposit and operations

Development status	Producer
Commodity type	Non-metallic
Significant	No

Reference information

Bibliographic references

Deposit

Spencer, S.M., 1993, Industrial Minerals Industry Directory Of Florida, Florida Geological Survey, Information Circular Ic-109, 30 Pp.Spencer, S.M., 1993, Industrial Minerals Industry Directory Of Florida, Florida Geological Survey, Information Circular Ic-109, 30 Pp.

Reporter information

Type	Date	Name	Affiliation	Comment

Type	Date	Name	Affiliation	Comment
Reporter	01-JUL-1997	Hendrickson, J. C. (Spencer, S. M.)	Florida Geological Survey	
Editor	04-NOV-2002	Nicholson, S.W.	U.S. Geological Survey	reformated date column; calculated latitude and longitude in decimal degrees; added Location Precision, Continent, Country, State, Commodity Code, Ore Minerals Code fields; changed Major Commodity field content and Ore Minerals field content to conform to

Lecanto Mine

Past Producer in Citrus county in Florida, United States with commodity Stone, Crushed/Broken

Map (https://www.google.com/maps/place/28.91917,-82.47547/@28.91917,-82.47547,12z/data=!3m1!1e3) | XML (/mrds/xml/10265049)
JSON (/mrds/json/10265049) | KML (/mrds/kml/10265049)

Geologic information

Identification information

Deposit ID	10265049 (/mrds/show-mrds.php?dep_id=10265049)
MAS/MILS ID	0120170028
Record type	Site
Current site name	Lecanto Mine

Geographic coordinates

Point of reference	Town
Geographic coordinates:	-82.47547, 28.91917 (WGS84)
Elevation	32
Location accuracy	500 *(meters)*

Political divisions (FIPS codes)

Citrus (county)
Florida (state)
United States (country)
North America (continent)
Land (continent)

USGS map quadrangles

Holder (quadrangle 1:24,000 scale)
Inverness (quadrangle 1:100,000 scale)
Plant City (quadrangle 1:250,000 scale)

Hydrologic units (watersheds)

Withlacoochee (hydrologic unit)
Tampa Bay (hydrologic accounting unit)
Peace-Tampa Bay (hydrologic subregion)
South Atlantic-Gulf (hydrologic region)

Geographic areas

Country	State	County
United States	Florida	Citrus

Public Land Survey System information

Meridian	Township	Range	Section	Fraction	State
Tallahassee	018 S	018 E	15		Florida

Commodities

Commodity	Importance
Stone, Crushed/Broken	Primary

Nearby scientific data

Town (1)	Hawthorn Group (/geology/state/sgmc-unit.php?x=-82.47547&y=28.91917)	List (/general/near-point.php?x=-82.47547&y=28.91917&d=0.01&format=html) Map (/general/map-us.html?x=-82.47547&y=2

Economic information

Economic information about the deposit and operations

Operation type	Surface
Development status	Past Producer
Commodity type	Non-metallic
Significant	No

Land status

Ownership category	Private

Ownership information

Type	Unknown
Owner	Lecanto Materials Co., Inc.
ID	800912
Year	1979

Reference information

Links to other databases

Agency	Database name	Acronym	Record ID	Notes

Agency	Database name	Acronym	Record ID	Notes
U.S. Bureau of Mines	Minerals Availability System	MAS	0120170028	
Mine Safety and Health Administration	MSHA	MSHA	0800912	

Bibliographic references

Deposit
MSHA MINE LISTING 11-23-79.

Deposit
LOCATION BY MSHA.

Deposit
NOT ON 1980 OR 1981 MSHA LISTS

Deposit
RCF & CMS 10/81

Reporter information

Type	Date	Name	Affiliation	Comment
Reporter	03-NOV-1983	Eastern Field Operations Center (EFOC)	U.S. Bureau of Mines	

CSER APPENDIX G

Supplemental Addendum to the Contamination Technical Memorandum for the Realignment of Knoll Road

SUPPLEMENTAL ADDENDUM TO THE CONTAMINATION TECHNICAL MEMORANDUM FOR THE REALIGNMENT OF KNOLL ROAD

Florida's Turnpike Enterprise

Suncoast Parkway 2 - SR 44 to CR 486

Knoll Road Realignment

Citrus County, Florida

Financial Management Number: 442764-1

Date: November 10, 2020

Memo

To: Eric Krebill, PG
District Contamination Impact Coordinator
Florida's Turnpike Enterprise

November 10, 2020

From: Justin Holley, GIT
Staff Scientist
Tierra

Re: Supplemental Addendum to the Contamination Technical Memorandum for the Realignment of Knoll Road

For: Knoll Road Realignment
Suncoast Parkway 2 from SR 44 to CR 486
Citrus County, Florida
FPID: 442764-1-32-01
Tierra Project No.: 6511-18-108E

This Contamination Technical Memorandum (Tech Memo) was produced to support the Knoll Road realignment and connection to CR 486. The Knoll Road realignment is associated with the Suncoast Parkway 2 project in Citrus County. Due to impacts associated with the construction of the Knoll Road realignment, the existing pond DRA-1 is being relocated to Pond DRA-1A. The methodology for this Contamination Tech Memo generally followed the contamination screening process as described in Part 2, Chapter 20 of the Florida Department of Transportation's Project Development and Environment Manual as modified by the project-specific scope of work. The properties within and adjacent to the proposed Knoll Road realignment, Pond DRA-1A, and existing roadways where improvements (Ziggy Street) are planned were investigated and evaluated for potential contamination impacts to the project. This includes a review of known contamination sites (as identified in previous reports) and a search for new discharges or other potential contamination impacts not reported in previous contamination screenings.

The methodology employed for this contamination screening included the following tasks:

- Review of recent reports related to the project: Level I Contamination Screening Evaluation Report-ponds (Tierra, March 10, 2020) and Contamination Technical Memorandum-mainline (Tierra, March 10, 2020);
- Conduct desktop research using Florida Department of Environmental Protection's MapDirect and OCULUS databases to ascertain updated information for the contamination sites identified in the March 2020 reports;
- Adjust risk ratings, if necessary, based on updated contamination information; and
- Conduct desktop search for any new contamination sites within the Chapter 20-recommended screening distances from the proposed Knoll Road realignment corridor, Pond DRA-1A, and existing roadways where improvements (Ziggy Street) are planned using Florida Department of Environmental Protection's MapDirect and OCULUS databases and provide appropriate risk ratings.

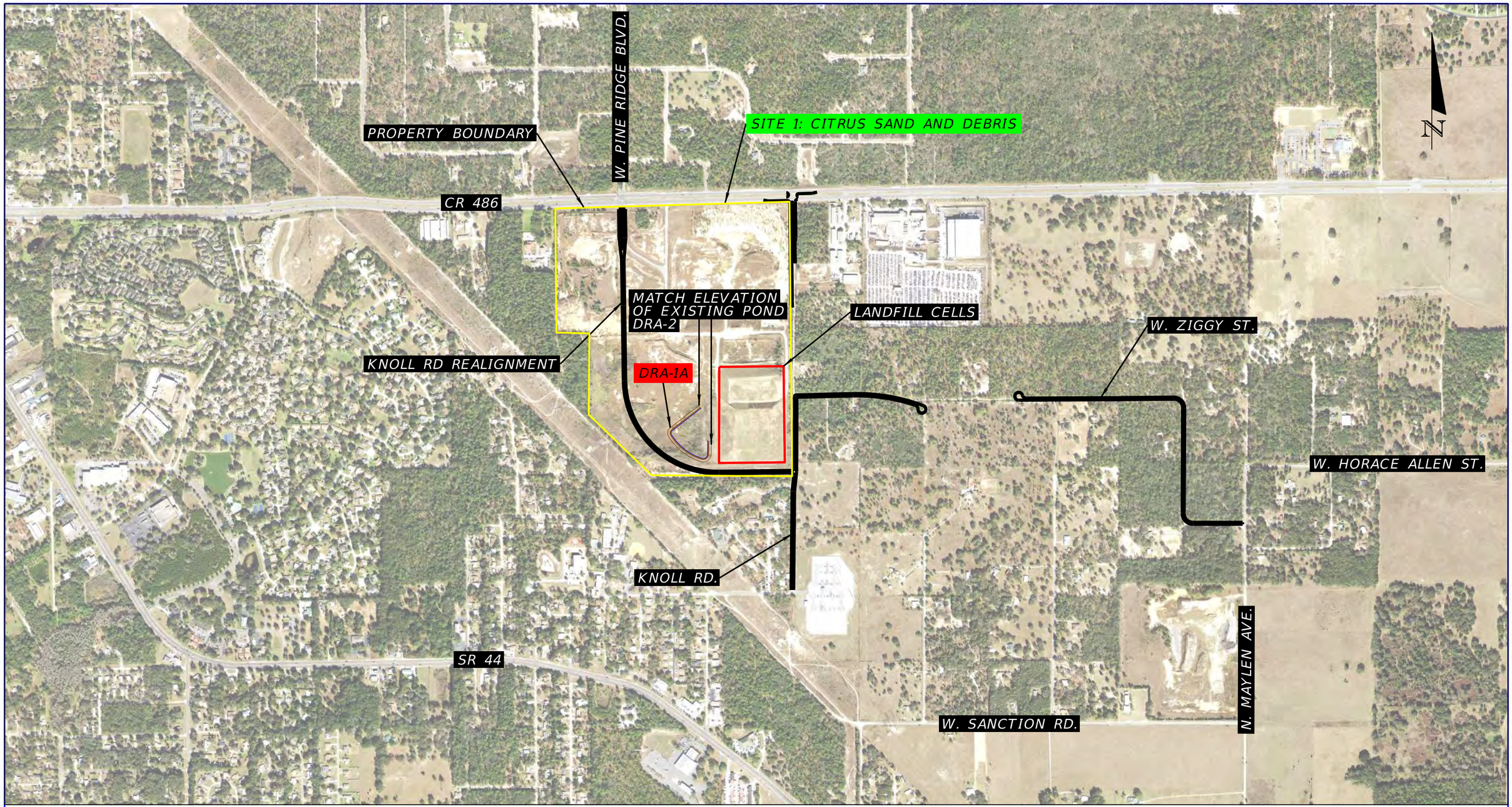
It should be noted that field visits were not conducted. Additionally, other research components such as historical aerials, USGS maps, hydrology, etc. are provided in previous documents.

Potential Contamination Sites & New Pond Site	Risk Rating	Comments
Site 1: Former Citrus Sand & Debris, Inc. 1590 North Quarterback Terrace, Crystal River WACS FAC ID 40459 FAC ID 9300729	Low	This facility was evaluated in the previously submitted Level I Contamination Screening Evaluation Report-pond (Tierra, March 10, 2020) and Contamination Technical Memorandum-mainline (Tierra, March 10, 2020) for the Suncoast Parkway 2 from SR 44 to CR 486 project. The proposed Knoll Road realignment corridor is located within the property boundaries of this site. This facility formerly operated as a Class III Landfill, now owned by the FTE. Three closed landfill cells are located in the southeast portion of the property. The landfill cells were permitted to receive Construction and Demolition (C&D) waste, yard trash, tires, asbestos, carpet, glass, plastic, and furniture. The remainder of the property did not receive waste material. The southern boundary of the closed landfill area is located approximately 90 feet north of the proposed Knoll Road realignment corridor. The most recent analytical data included in the *2nd Semi-Annual 2019 Water Quality Monitoring Report* dated January 14, 2020 (see Supplemental Information) indicates that concentrations of aluminum above the Groundwater Cleanup Target Level (GCTL) were detected in monitoring wells BW-1, MW-3, MW-5R, and MW-7R. Cadmium, chromium, and lead were detected above their respective GCTLs in MW-3. Dissolved iron concentrations were detected above its GCTL in BW-1, MW-3, MW-4R, MW-5R, and MW-7R. Groundwater flow direction was measured to the southwest (toward the east-west section of the proposed Knoll Road realignment and Pond DRA-1A). Depth to water was measured from 31.49 to 84.99 feet below top of casing in December 2019. The nearest contaminated wells are MW-4R and MW-5R. MW-4R is located approximately 90 feet north of the proposed Knoll Road realignment corridor and MW-5R is located approximately 40 feet west of the existing Knoll Road right-of-way. Additionally, two 1,000-gallon diesel fuel aboveground storage tanks were formerly maintained onsite (one removed in 2012, one removed at an unknown date). No tank location information was found and no discharges are reported. It does not appear that construction of the Knoll Road realignment corridor will impact any areas of the site that contain buried debris. Due to the depth to groundwater at this site, it is unlikely that potential contamination-related impacts to construction will occur, since dewatering activities will not be required during the construction of the new roadway. Given these factors, this facility is assigned a risk rating of Low.
Pond DRA-1A	Medium	This pond site was not evaluated in previous submittals. Pond DRA-1A is located in the southern portion of Site 1 referenced above (Sheet 1). Pond DRA-1A is located adjacent west of the closed landfill cells. Buried debris is not known to be associated with the area of Pond DRA-1A. Monitoring wells associated with the landfill were last sampled in December 2019. Laboratory analytical results indicated that aluminum, cadmium, chromium, iron, and lead were detected above their GCTLs in MW-3, located approximately 20 feet north of Pond DRA-1A. The depth to water in MW-3 has been measured from 49.07 to 50.91 feet below top of casing between April 2013 and December 2019. The groundwater flow direction in the area was measured to the southwest (from MW-3 toward Pond DRA-1A). The elevation of the pond bottom has not been determined as of the writing of this report. However, preliminary information received from the project designer indicates that dewatering will not be required during construction due to the extreme depth to groundwater as compared to land surface. The documentation reviewed does not suggest impact from contamination during construction will occur from contact with debris, contaminated soil, or contaminated groundwater. Dewatering support during construction does not appear likely. FTE already owns this parcel and therefore transfer of contamination liability is not relevant. For these reasons, Level II testing is not recommended. However, the pond has not yet received approval of its Environmental Resource Permit (ERP). As part of the ERP, the elevated levels of metals detected through semi-annual groundwater testing at MW-3 will trigger a request from the permitting agency to the permittee to determine if operation of Pond DRA-1A will negatively impact the fate and transport of contamination at MW-3. A mounding analysis or some other form of modeling will likely be required to determine if adjustments will be necessary to avoid impact to the contamination plume at MW-3. Although Level II testing is not recommended, the ERP evaluation has not yet been completed and therefore Pond DRA-1A is assigned a risk rating of Medium.

One site of concern and one pond site were investigated and evaluated in this Contamination Tech Memo. The Former Citrus Sand & Debris, Inc. site is assigned a risk rating of Low and no additional action is recommended. Pond DRA-1A is assigned a risk rating of Medium. Although no Level II testing is recommended, additional evaluation will be performed by others during the process to secure the Environmental Resource Permit. A Potential Contamination Sites and Pond Location Map and supplemental information associated with the Citrus Sand & Debris Landfill is attached.

Respectfully Submitted,

Justin Holley, GIT
Staff Scientist
Tierra
7351 Temple Terrace Highway, Tampa, Florida 33637
Office 813.989.1354 | *Cell* 813.240.3722 | www.tierraeng.com | *jholley@tierraeng.com*



POND

POTENTIAL CONTAMINATION SITES AND POND LOCATION MAP

SOURCE: FDOT SURVEY AND MAPPING DATED 2017

0 200 1000
Feet

NAME GREEN = LOW RISK RATED SITE

NAME RED = MEDIUM RISK RATED POND

REVISIONS				TIERRA, INC. 7351 TEMPLE TERRACE HIGHWAY TAMPA, FLORIDA 33637	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SUNCOAST PARKWAY 2 FROM SR 44 TO CR 486 KNOLL ROAD REALIGNMENT	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
			TIERRA PROJECT NO.: 6511-18-108E		SR 44	CITRUS	442764-1-32-01		1

bgarcia 11/10/2020 9:17:16 AM J:\6511\2018 Files\6511-18-108 Suncoast Pkwy 2\Microstation\rdgeoEnvPotContam_Knoll0

Supplemental Information – Site 1: Former Citrus Sand & Debris Inc.

WATER QUALITY MONITORING REPORT

2nd SEMI-ANNUAL 2019

CITRUS SAND & DEBRIS I C&D DEBRIS DISPOSAL FACILITY

1590 NORTH QUARTERBACK TERRACE
CRYSTAL RIVER, FLORIDA 34423
WACS FACILITY ID # 40459
DEP PERMIT # 21318-008-SF/12

Prepared for:

State of Florida Department of Transportation
Florida's Turnpike Enterprise
Turkey Lake Service Plaza
MP 263, Building 5315
Ocoee, FL 34761
&
Florida Department of Environmental Protection
Southwest District Office
Compliance Assurance Program
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Prepared by:

AECOM
7650 Corporate Center Drive
Suite 400
Miami, Florida 33126
(305) 884-8900

January 14, 2020

1.0 INTRODUCTION

AECOM is pleased to present the 2nd Semi-Annual 2019 Water Quality Monitoring Report for the closed Citrus Sand & Debris I Construction and Demolition (C&D) Disposal Facility. This report presents a summary of the groundwater sampling activities conducted at the site as required by the Florida Department of Environmental Protection (FDEP) **Permit #21318-008-SF/12** issued on January 9, 2019, for continued long-term care of this closed landfill located at 1590 North Quarterback Terrace, Crystal River, Florida in Citrus County and the Water Assurance and Compliance System (WACS) identification number for the site is **40459**. A copy of the FDEP permit is can be found in **Appendix A**. A local area map is presented as **Figure 1** and a site map of the facility is presented as **Figure 2**. The site is managed by the FDEP Southwest District Office.

2.0 QUALITY ASSURANCE

Groundwater sampling was performed in accordance with the FDEP Standard Operating Procedures (DEP-SOP-001/01) and the applicable field sampling data was included on Form #FD 9000-24. All laboratory analyses were performed by Pace Analytical Services, LLC (Pace) with Florida Certification # E83079.

All samples were collected, preserved, documented, and delivered to Pace for analyses of the parameters specified in the permit. The laboratory results were processed by Pace using Florida DEP *Automated Data Processing Tool* (ADaPT) software; this software programs the review of the data for accuracy and consistency. Pace provided AECOM with the required ADaPT Electronic Data Deliverables (EDDs) consisting of a Portable Document Format (PDF) and comma separated text files (.csv format) for both laboratory and field data produced using Microsoft Excel as well. Subsequent to the completion and submittal of this report, the EDDs will be submitted through Florida DEP's Business Portal website: http://www.fldepportal.com/go/.

The **Water Quality Monitoring Certification** Form [62-701.900(31) F.A.C.] is presented in **Appendix B**.

A copy of the laboratory report and chain of custody documentation can be found in **Appendix C**. The groundwater sampling logs are presented in **Appendix D**.

3.0 WATER QUALITY MONITORING

3.1 Groundwater Monitoring Results

The groundwater samples from BW-1, MW-3, MW-4R, MW-5R and MW-7R were preserved and sent to Pace under chain of custody procedures to be analyzed for parameters specified in the permit. Specifically, the samples were analyzed for total ammonia, chlorides, nitrates, sulfates, total dissolved solids (TDS), aluminum, arsenic, cadmium, chromium, iron, lead, mercury, sodium, xylenes, and those

parameters listed in EPA Methods 601 and 602.

The following section briefly summarizes the December 2019 groundwater sampling event results which exceeded the Chapter 62-777, F.A.C Table I Groundwater Cleanup Target Levels (GCTLs) and how they compare to the results of the previous sampling events. Remaining parameters that were analyzed were reported below GCTL or method detection limits (MDL).

- During the December 2019 sampling event, the **Nitrogen Ammonia** concentration in MW-4R (19.4 milligrams per liter [mg/L]) exceeded the GCTL of 2.8 mg/L. No nitrogen ammonia was detected in any of the other monitoring wells sampled except for MW-5R which was reported below the GCTL Level of 2.8 mg/L. As shown in the groundwater quality trend graphs in **Appendix E**, reported nitrogen ammonia levels in MW-4R have historically increased from 2013 to 2018, and have decreased since the June 2018 sampling event. Nitrogen ammonia levels have remained generally consistent and well below the GCTL in all other monitoring wells.

  The FDEP no longer enforces the GCTL for **Nitrogen Ammonia**, as per the FDEP Solid Waste Memorandum #SWM-13.10 dated 12/3/12 (titled *Monitoring and Evaluation of Ammonia in Ground Water at Solid Waste Management Facilities*), unless the ground water discharges into surface water and is likely to cause a violation of the surface water standards for ammonia. The closest down gradient surface water is a storm water retention pond located approximately 4,000 feet west- northwest of the facility; therefore, it is not expected that the surface water quality standard would be violated.

- The December 2019 **Aluminum** concentration in BW-1 (3640 µg/L), MW-3 (35,100 µg/L), MW-5R (292 µg/L), and MW-7R (221 µg/L) exceeded the GCTL of 200 µg/L. As illustrated in the groundwater quality trend graphs in **Appendix E**, reported aluminum levels in BW-1, MW-3, MW-5R and MW-7R do not appear to indicate any downward or upward long-term trend in any of the wells. The exceedances noted in MW-3, MW-5R and MW-7R during this sampling event continue to be localized. Aluminum appears to be a naturally occurring aquifer constituent as is evident in samples collected from background well BW-1 on site, included in Table 1 as a reference, and during previous sampling events.

- The December 2019 **Arsenic** concentration did not exceed the GCTL of 10 µg/L in any of the monitoring wells sampled. It should be noted that the exceedances for Arsenic noted in MW-7R during recent sampling events was not reported during this sampling event.

- The December 2019 **Cadmium** concentration in MW-3 (10.1 µg/L) exceeded the GCTL of 5 µg/L. As illustrated in the groundwater quality analytical summary **Table 1,** reported cadmium levels in MW-3/3R do not appear to indicate any downward or upward long-term trend in any of the wells. The exceedance is very localized in this well. There has been a previous exceedance for Cadmium in December 2018 that was not confirmed in the resampling event.

- The December 2019 **Chromium** concentration in MW-3 (656 µg/L) has exceeded the GCTL of 100 µg/L. As illustrated in the groundwater quality analytical summary **Table 1,** reported Chromium levels

in MW-3/3R do not appear to indicate any downward or upward long-term trend in any of the wells. The exceedance is very localized in this well. There has been one previous exceedance for Chromium in December 2018 that was not confirmed in the resampling event.

- The December 2019 **Iron** concentrations in BW-1 (2320 µg/L), MW-3 (22900 µg/L), MW-4R (11,300 µg/L), MW-5R (5,840 µg/L), and MW-7R (19,700 µg/L) exceeded the GCTL of 300 µg/L. As illustrated in the groundwater quality trend graphs in **Appendix E**, reported iron levels in BW-1, MW-3/3R, MW-4R and MW-5R have generally remained consistent across the landfill iron levels in MW-7R show a slight increase historically.

  Iron appears to be a naturally occurring aquifer constituent as is evident in the historical concentrations reported for samples collected from background well BW-1 on site, included in **Table 1** as a reference. The concentrations reported for wells BW-1, MW-4R, MW-5R and MW-7R increased from the previous sampling event in June 2019, although for wells MW-4R, MW-5R, and MW-7R the concentrations remain above the GCTLs. The Iron concentrations on site will continued to be monitored during the regular semi-annual monitoring events.

- The December 2019 **Lead** concentrations in MW-3 (34.4 µg/L) exceeded the GCTL of 15 µg/L. As illustrated in the groundwater quality analytical summary **Table 1,** reported Lead levels in MW-3/3R do not appear to indicate any downward or upward long-term trend in any of the wells. The exceedance appears to be very localized in this well. There has been one previous exceedance for Lead in December 2018 that was not confirmed in the resampling event.

- The December 2019 **pH** in BW-1 was reported as 9.00 and 5.36 for MW-7R. Both values were above and below the GCTL range of 6.5 to 8.5.

  Since the groundwater does not discharge into any surface water body, it is not likely to cause a violation of the surface water quality standard for pH. The closest down-gradient surface water is a storm water retention pond located approximately 4,000 feet west-northwest of the facility.

As reported in **Table 1,** there were no exceedances of the Total Dissolved Solids in the monitoring wells; however, the laboratory has qualified the sample results since the holding times were exceeded. This was due to an error when the samples were logged in. The results are consistent with historical data.

A summary of current and historical groundwater monitoring well analytical data is included in **Table 1**. The trend graphs of the analyzed parameters are presented in **Appendix E**.

3.2 Water Table Elevation Monitoring

In order to evaluate the groundwater flow direction in the Floridan aquifer and to measure the groundwater gradient in the area of the disposal facility, AECOM personnel measured groundwater levels from onsite monitoring wells on December 10, 2019. The depth to groundwater (DTW) measurements were collected from wells MW-1, MW-2, MW-3, MW-4R, MW-5R, MW-7R, BW-1, P-1, P-3, and P-6 using a water level indicator to measure the depth of the water table from the top of the monitoring well casing. The

groundwater elevation for each monitoring well was calculated by subtracting the DTW measurements from the top of casing (TOC) elevations. The TOC elevations, surveyed by others, were obtained by AECOM from previous monitoring reports. Groundwater elevation hydrographs for each monitoring well are included as **Appendix F.**

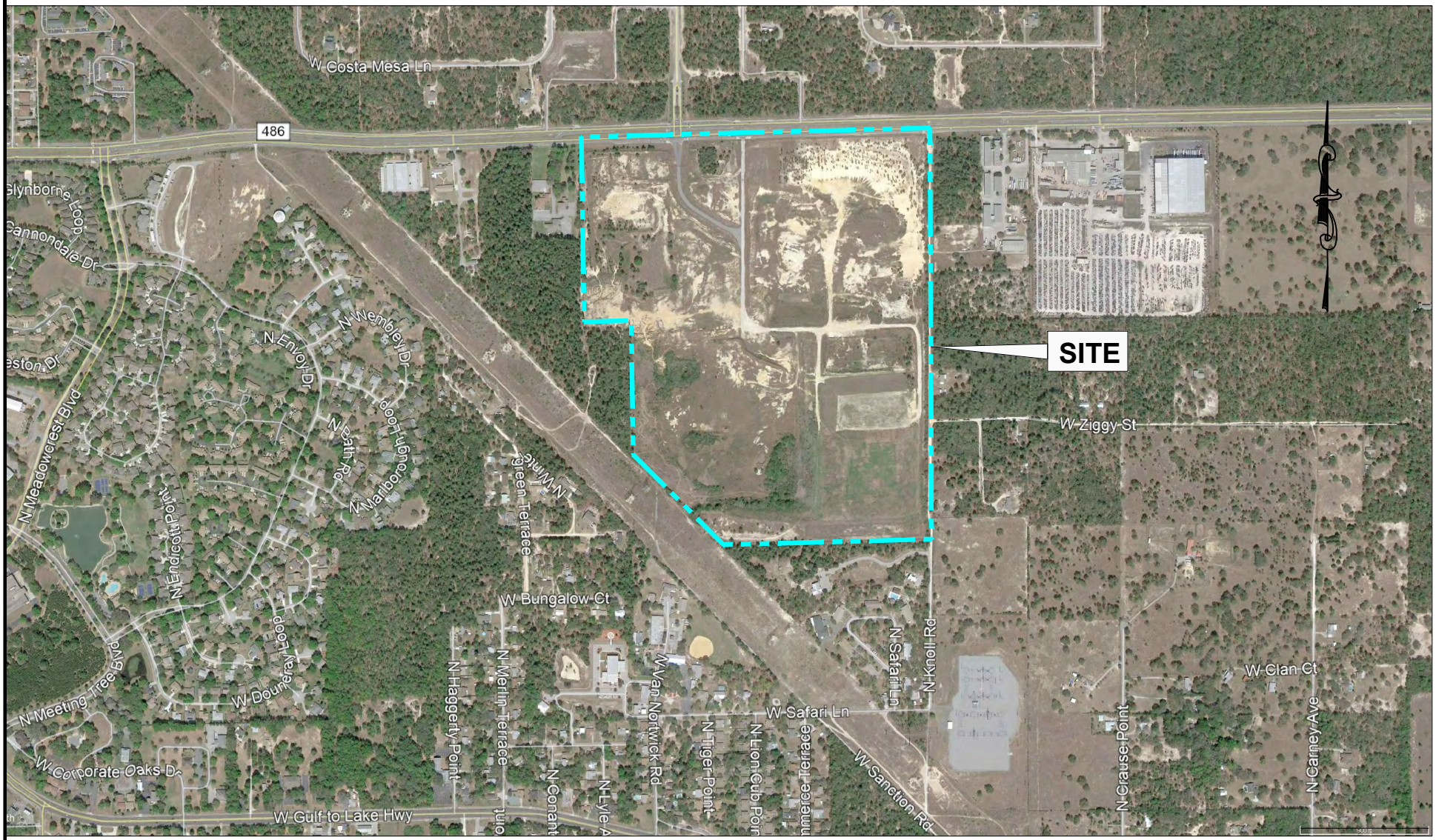
The groundwater elevations were plotted to evaluate the groundwater flow direction in each depth interval of the aquifer and to determine the apparent groundwater flow direction at the site. The DTW measurements were recorded on December 10, 2019 prior to conducting groundwater sampling activities. These measurements were used to generate groundwater elevation contours. A groundwater elevation contour map, constructed from the depth-to-water (DTW) data collected on December 10, 2019, from monitoring wells MW-1, MW-2, BW-1, MW-3, MW-4R, MW-5R, and MW-7R and piezometer wells P-1, P-3, and P-6 (as required by the permit), is presented as **Figure 3**.

The recent groundwater elevation data indicates the groundwater flow direction is *predominantly towards the southwest.* This flow direction is consistent with historical groundwater flow gradients. Current and historical DTW and groundwater elevation data are presented in **Table 2**. The current water level is seasonally 0.5 feet to approximately 1 foot higher than measured in May.

4.0 CONCLUSIONS & RECOMMENDATIONS

Based on this semi-annual monitoring event, the current groundwater data are generally consistent with historical data, except that higher aluminum and iron concentrations were measured in the background well, chromium levels increased at MW-3 and arsenic levels decreased to below GCTL in MW-7. There does not appear to be any increasing or decreasing trends in the groundwater quality.

AECOM recommends continued semi-annual sampling, as per FDEP Permit #21318-008-SF/12 that was renewed on January 9, 2019.



DRAWN BY: RC CHECKED BY: YN DATE: JAN 20	AECOM 1020 HOLLAND DRIVE, SUITE 104 BOCA RATON, FLORIDA 33487	**Citrus Sand and Debris** 1590 N. Quarterback Terr. Crystal River, Florida	**LOCAL AREA MAP**	Figure: 1

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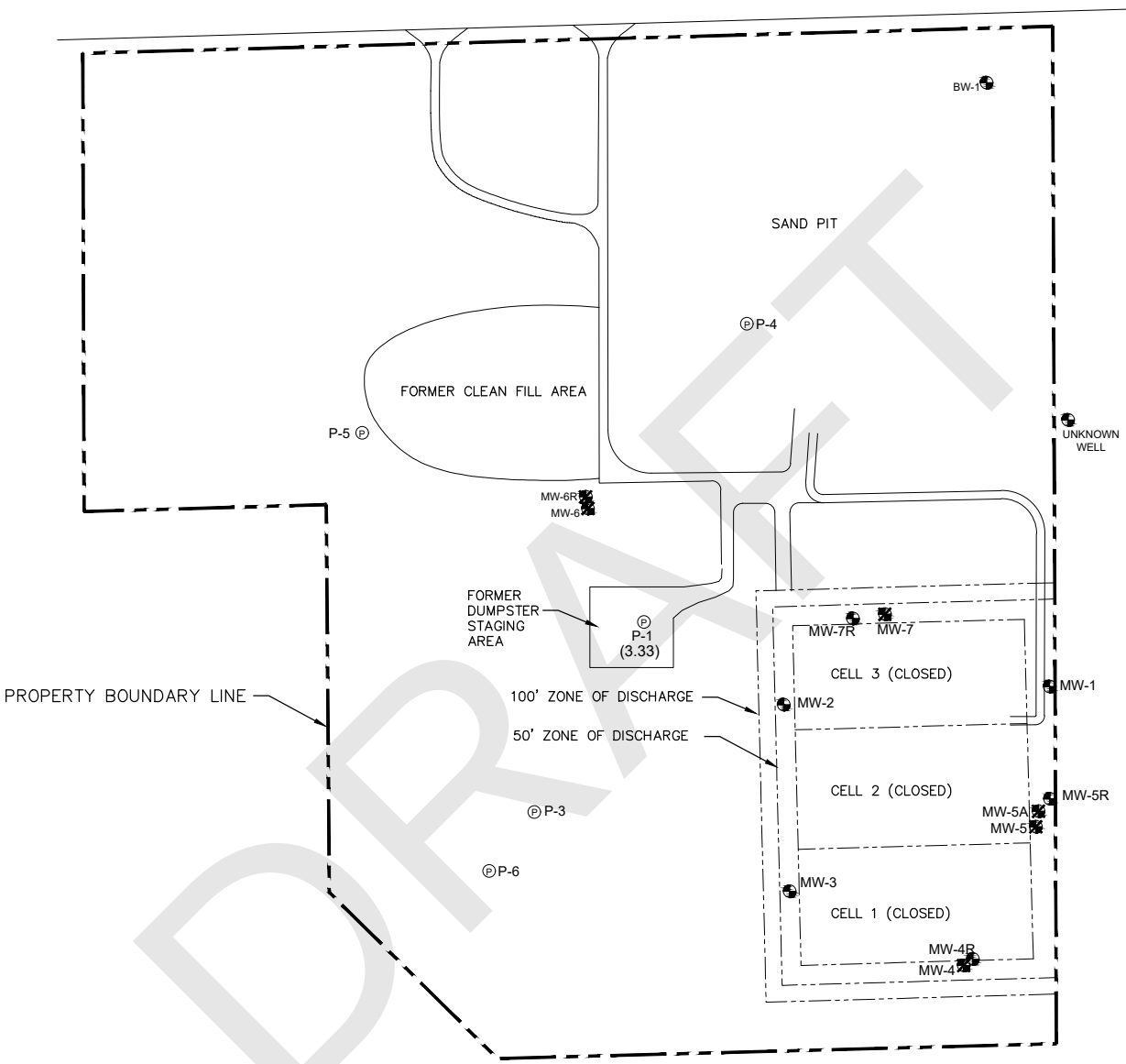


LEGEND
- MONITORING WELL
- ABANDONED MONITORING WELL
- PIEZOMETER

SITE MAP

D:\Aecom\ site2.dwg 01/05/20

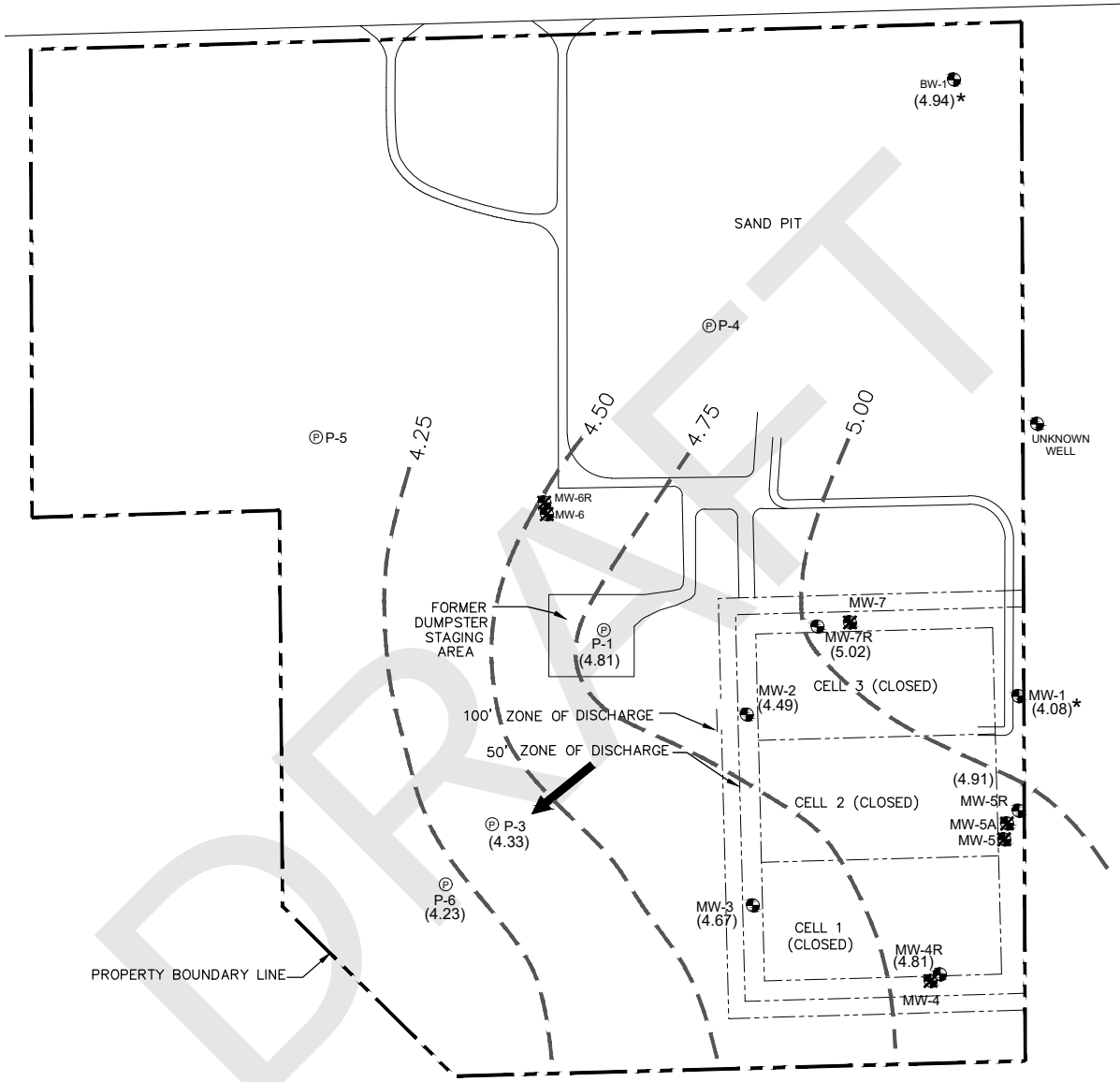
DRAWN BY: RC
CHECKED BY: YN
DATE: Jan 20

AECOM

1020 HOLLAND DRIVE, SUITE 104
BOCA RATON, FLORIDA 33487

Citrus Sand and Debris
1590 N. Quarterback Terr.
Crystal River, Florida

Figure: 2



GROUNDWATER ELEVATION MAP
December 10, 2019

DRAWN BY: RC CHECKED BY: YN DATE: Jan 20	AECOM 1020 HOLLAND DRIVE, SUITE 104 BOCA RATON, FLORIDA 33487	**Citrus Sand and Debris** 1590 N. Quarterback Terr. Crystal River, Florida	Figure: 3

D:\Aecom\ F3 GW ELE 12-19 CS.dwg 01/05/20

TABLE 1
GROUNDWATER MONITORING WELL ANALYTICAL EXCEEDANCES SUMMARY

Facility Name **Citrus Sand & Debris I C&D Disposal Facility**
Address **1590 N. Quarterback Ter.**
City, State **Crystal River, FL**
WACS FAC # **40459**

			Field Paramaters				Leachate Indicator Parameters					Metal Parameters							
Sample						pH	Nitrogen	Chloride	Nitrate	Sulfate*	TDS*	Aluminum*	Arsenic*	Cadmium	Chromium	Iron*	Lead*	Sodium*	Mercury*
Location	Screen	Date	Depth to	Turbidity	Specific	Field	Ammonia												
	Interval		Water		Conduct.														
Units	ft		ft btoc	NTU	umhos/cm	SU	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Table I Target Level			---	20	---	6.5-8.5	2.8	250	10	250	500	200	10	5	100	300	15.00	160000	2
BW-1	60.1 - 85.1	4/23/2013	77.69	8.2	70	**6.0**	0.0073U	1.5 I	0.20 I	1.1 I	36	**265**	6.10U	1.10 U	4.50 U	134	1.60 U	1860	0.0230 U
		12/11/2013	76.42	**582**	65	**9.1**	0.096	70.1	6.68	**1560**	**520**	**1050**	4.00U	4.30	23.8	**354**	4.00 U	1290	0.220 U
		1/17/2014	76.88	**71.6**	52	**9.1**	NA	NA	NA	6.32	80	143	NA	NA	NA	NA	NA	NA	NA
		5/27/2014	76.89	**155**	56	**9.0**	0.044	1.62	0.300 U	13.50	82	**202**	4.00U	1.00 U	4.00 U	77.0	4.00 U	1440	0.220 U
		12/15/2014	76.41	**25.7**	55	**8.9**	0.0140U	2.09	0.300 U	0.989 I	20.0U	**353**	4.00U	1.00 U	4.00 U	183	4.00 U	1260	0.220 U
		5/19/2015	77.07	**423**	56	8.5	0.0140U	2.37	0.300 U	23.9	72.0	**530**	4.00U	1.00 U	4.00 U	**438**	4.00 U	1400	0.220 U
		12/9/2015	76.44	**67.1**	54	**9.0**	0.02 U	1.1 U	0.18 U	5.0 U	27	190 I	1.6U	0.24 U	2.6	61	3.2 U	NS	0.084 U
		6/13/2016	76.64	**36.7**	54	**8.9**	0.02 U	2.6 U	0.18 U	2.0 U	47	140 I	1.6 U	0.26 I	3.7	95 I	3.2 U	1600	0.084 U
		12/29/2016	77.05	**55**	50	8.3	0.020 U	2.7 I	0.079	2.5 U	49.0	**360**	5.0 U	0.50 U	25.0	**602**	5.0 U	1100	0.10 U
		6/14/2017	77.38**	12.7	47	**8.92**	0.020 U	2.8 I	0.11	2.5 U	19.0	102	5.0 U	0.50 U	10.3	136	5.0 U	1400	0.10 U
		12/12/2017	76.51	19.7	45	**8.57**	0.035 U	2.5 I	0.076	2.5 U	31.0	**255**	5.0 U	0.50 U	5.4	**401**	5.0 U	1130	0.10 U
		6/4/2018	76.75	9.28	37	7.14	0.035 U	2.5 U	0.086	2.5 U	24.0	190	5.0 U	0.50 U	2.5 U	115	5.0 U	1600	0.10 U
		12/11/2018	75.98	**30.6**	28	**9.15**	0.035 U	2.5 I	0.079	2.5 U	23.0	**679**	7.1 U	0.33 U	8.1	**419**	4.6 U	1000 I	0.10 U
		5/16/2019	76.91	12.7	47	**8.57**	0.035 U	2.7 I	0.093	2.5 U	44.0	135	7.1 U	0.33 U	2.2 I	98.0	4.6 U	1100 I	0.10 U
		12/10/2019	75.84	118	48	**9.00**	0.035 U	27 I	110	2.5 U	31	**3640**	7.1 U	.034 I	22.6	**2320.0**	4.6 U	1300 I	0.10 U
MW-3	44.1 - 54.1	4/23/2013	50.91	**21.3**	430	6.8	0.026	5.7	0.19 I	5.4	240	**718**	6.10U	1.10 U	4.50 U	**1450**	1.60 U	4420	0.0230 U
		12/11/2013	49.88	**25.5**	396	7.3	0.033	5.99	0.300 U	11.1	223	105	4.00U	1.00 U	4.00 U	**835**	4.00 U	3500	0.220 U
		5/27/2014	50.18	**72.5**	411	6.6	0.11	7.22	0.300 U	8.78	221	**265**	4.00U	1.00 U	4.00 U	**1920**	4.00 U	3760	0.220 U
		12/15/2014	49.71	**26.5**	405	7.4	0.0140U	7.63	0.657	4.17	148	**236**	4.00U	1.00 U	4.00 U	**709**	4.00 U	3710	0.220 U
		5/19/2015	50.32	**491**	375	7.2	0.0140U	10.4	0.300 U	26.30	226	**849**	4.00U	1.00 U	4.00 U	**1310**	4.00 U	3620	0.220 U
		12/9/2015	49.67	**29**	371	7.0	0.02 U	3.7 I	0.32	6.0 I	190	150 I	1.6U	1.0	2.3	300	3.2 U	NS	0.084 U
		6/13/2016	49.78	15.8	372	6.8	0.02 U	6.3	1.2	4.1 I	200	**830**	1.6 U	1.3	3.9	**1100**	3.2 U	4400	0.084 U
		12/29/2016	50.27	**40.4**	387	7.0	0.020 U	6.9	0.17	4.2 I	240	**759**	5.0 U	0.69 I	15.1	**1920**	5.0 U	4400	0.10 U
		6/14/2017	50.55**	18.2	405	**8.80**	0.020 U	6.9	0.25	4.2 I	210	50.0 U	5.0 U	0.50 U	4.1 I	**620**	5.0 U	4500	0.10 U
		12/12/2017	49.77	**22.7**	393	6.54	0.035 U	6.6	0.27	4.1 I	240	**380**	5.0 U	0.76 I	15.8	**1040**	5.0 U	4570	0.10 U
		6/4/2018	49.93	6.92	384	7.13	0.035 U	7	0.23	3.7 I	255	59.8 I	5.0 U	0.50 U	2.5 U	**724**	5.0 U	4100	0.10 U
		12/11/2018	49.2	-	-	-	0.17 U	6.9	0.38	4.4 I	242	**44900**	7.1 U	**16.6**	**259**	**23200**	**40.70**	3700	0.70
		1/21/2019	49.08	1.75	393	**6.17**	0.035 U	6.4	0.3	3.9 I	210	30.7 U	7.1 U	0.56	1.7 U	49.6	4.6 U	4.3	0.10 U
		5/16/2019	49.6	15.8	381	6.86	0.035 U	6.8	0.34	4.3 I	210	193	7.1 U	0.75 I	2.3 I	288	4.6 U	4200	0.10 U
		12/10/2019	49.07	15.1	385	7.3	0.035 U	7.3	0.23	5.8	260	**35100**	7.1 U	**10.1**	**656**	**22900**	**34.40**	4600	0.30 I

TABLE 1
GROUNDWATER MONITORING WELL ANALYTICAL EXCEEDANCES SUMMARY

Facility Name **Citrus Sand & Debris I C&D Disposal Facility**
Address **1590 N. Quarterback Ter.**
City, State **Crystal River, FL**
WACS FAC # **40459**

			Field Paramaters				Leachate Indicator Parameters					Metal Parameters							
Sample						pH	Nitrogen	Chloride	Nitrate	Sulfate*	TDS*	Aluminum*	Arsenic*	Cadmium	Chromium	Iron*	Lead*	Sodium*	Mercury*
Location	Screen	Date	Depth to	Turbidity	Specific	Field	Ammonia												
	Interval		Water		Conduct.														
Units	ft		ft btoc	NTU	umhos/cm	SU	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Table I Target Level			---	20	---	6.5-8.5	2.8	250	10	250	500	200	10	5	100	300	15.00	160000	2
MW-4R	56.3 - 66.3	4/23/2013	60.67	2.2	936	**6.4**	**3.0**	3.2 I	0.052 U	0.39 I	470	68U	6.10U	1.10 U	4.50 U	**13200**	1.60 U	18100	0.0230 U
		12/11/2013	59.78	10.9	910	6.6	1.6	6.1	0.300 U	8.76	**501**	10.0 U	4.00U	1.00 U	4.00 U	**9620**	4.00 U	12000	0.220 U
		5/27/2014	59.96	6.9	922	**6.3**	**6.1**	4.87	0.300 U	10.3	**523**	10.0U	4.00U	1.00 U	4.00 U	**9650**	4.00 U	11400	0.220 U
		12/15/2014	59.44	5.5	960	6.7	**6.38**	7.29	0.300 U	1.18	430	10.0U	**13.5**	1.00 U	4.00 U	**10900**	4.00 U	9510	0.220 U
		5/19/2015	60.03	9.3	923	**6.2**	**10.5**	3.66	0.300 U	1.75	**504**	10.0U	4.00U	1.00 U	4.00 U	**8700**	4.00 U	8430	0.220 U
		12/9/2015	59.35	4.8	981	**6.2**	**14**	1.9 I	0.18 U	5.0 U	450	120 U	5.2 I	0.38 I	0.92 I	**9800**	3.2 U	NS	0.084 U
		6/13/2016	59.63	11.7	956	**6.4**	**15**	3.8 I	0.18 U	2.0 U	460	120 U	1.6 U	0.41 I	**160**	**10000**	3.2 U	9900	0.084 U
		10/5/2016	59.24	7.3	1030	6.5	NA	NA	NA	NA	460	80 U	2.1 U	0.50 U	2.5 U	**8600**	1.1 U	9600	0.084 U
		12/29/2016	60.13	8.3	961	6.5	**27.1**	3.9 I	0.020 U	2.5 U	428	50.0 U	5.0 U	0.50 U	2.5 U	**9380**	5.0 U	9600	0.10 U
		6/14/2017	60.41**	18.2	1000	6.22	**28.6**	3.7 I	0.075 U	2.5 U	418	50.0 U	5.0 U	0.50 U	4.7 I	**9480**	5.0 U	9230	0.10 U
		12/12/2017	59.6	14.2	1035	**6.29**	**37.5**	3.5 I	0	2.5 U	384	50.0 U	5.0 U	0.50 U	2.5 U	**10000**	5.0 U	9780	0.10 U
		6/4/2018	59.8	6.1	937	6.60	**35.4**	2.8 I	0.025 U	2.5 U	462	50.0 U	5.0 U	0.50 U	2.5 U	**10400**	5.0 U	9500	0.10 U
		12/11/2018	59.03	8.7	1016	6.50	**31.0**	3.7 I	0.048 I	2.5 U	466	41.2 I	7.1 U	0.33 U	2.0 I	**10600**	4.6 U	9100	0.10 U
		5/16/2019	59.52	5.1	906	6.52	**20.7**	3.9 I	0.057	2.5 U	427	59.6 I	7.3 I	0.33 U	1.7 U	**10300**	4.6 U	8000	0.10 U
		12/10/2019	58.91	6.7	976	6.60	**19.4**	3.7 I	0.082	2.5 U	436	30.7 U	7.1 U	0.33 U	1.7 U	**11300**	4.6 U	6700	0.10 U
MW-5R	62.1 - 72.1	4/23/2013	66.05	1.0	484	6.7	1.8	3.2 I	1.80	0.33 I	190	68U	6.10U	1.10 U	4.75 I	**1310**	1.60 U	2130	0.0230 U
		12/11/2013	65.14	10.8	464	7.0	0.80	4.90	0.300 U	6.86	239	114	4.00U	1.00 U	4.00 U	**2090**	4.00 U	3360	0.220 U
		5/27/2014	65.35	**20.6**	448	6.7	0.97	4.85	0.300 U	5.66	231	104	4.00U	1.00 U	4.00 U	**2020**	4.00 U	3070	0.220 U
		12/15/2014	64.84	**358**	472	7.2	0.8490	6.44	0.300 U	1.43	226	**506**	4.00U	1.00 U	4.00 U	**2470**	4.00 U	3060	0.220 U
		5/19/2015	65.41	**30**	404	**6.1**	0.3730	4.24	0.300 U	2.83	224	41.8	4.00U	1.00 U	13.2	**1400**	4.00 U	2800	0.220 U
		12/9/2015	64.74	**23.6**	512	6.8	1.3	2.9 I	0.18 U	5.0 U	240	120 I	3.3 I	0.24 U	2.8	**2900**	3.2 U	NS	0.084 U
		6/13/2016	64.94	4.5	434	6.7	0.63	4.8 I	0.18 U	2.0 I	230	120 U	1.6 U	0.24 U	3.2	**1900**	5.2 I	3600	0.084 U
		12/29/2016	65.41	15.4	415	6.9	1.2	5.5	0.020 U	2.5 U	227	165	5.0 U	0.50 U	3.6 I	**2390**	5.0 U	3600	0.10 U
		6/14/2017	65.70**	16.4	395	**10.69**	0.5	5.4	0.025 U	2.8 I	198	50.0 U	5.0 U	0.50 U	2.6 I	**1420**	5.0 U	3090	0.10 U
		12/12/2017	64.91	15.4	482	6.81	0.58	5.3	0.028 I	3.5 I	246	50.0 U	5.0 U	0.50 U	2.5 U	**1910**	5.0 U	3760	0.10 U
		6/4/2018	65.08	7.6	415	7.19	0.31	5.5	0.025 U	2.5 U	230	117	5.0 U	0.50 U	2.5 U	**1580**	5.0 U	3300	0.10 U
		12/11/2018	64.37	8.4	571	6.78	1.30	5.6	0.026 I	2.5 U	311	78.2 I	7.1 U	0.33 U	1.7 U	**4030**	4.6 U	4200	0.10 U
		5/16/2019	64.79	11.2	525	7.28	1.20	5.6	0.028 I	2.5 U	288	103	7.1 U	0.33 U	1.7 U	**3160**	4.6 U	3800	0.10 U
		12/10/2019	64.22	5.0	644	6.80	2.1	5.5	0.092	2.8 I	312	**292**	7.1 U	0.33 U	12.7	**5840**	4.6 U	4700	0.10 U

TABLE 1
GROUNDWATER MONITORING WELL ANALYTICAL EXCEEDANCES SUMMARY

Facility Name **Citrus Sand & Debris I C&D Disposal Facility**
Address **1590 N. Quarterback Ter.**
City, State **Crystal River, FL**
WACS FAC # **40459**

			Field Paramaters				Leachate Indicator Parameters					Metal Parameters							
Sample						pH	Nitrogen	Chloride	Nitrate	Sulfate*	TDS*	Aluminum*	Arsenic*	Cadmium	Chromium	Iron*	Lead*	Sodium*	Mercury*
Location	Screen	Date	Depth to	Turbidity	Specific	Field	Ammonia												
	Interval		Water		Conduct.														
Units	ft		ft btoc	NTU	umhos/cm	SU	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Table I Target Level			---	20	---	6.5-8.5	2.8	250	10	250	500	200	10	5	100	300	15.00	160000	2
MW-7	47.8 - 62.8	4/23/2013	49.41	0.7	645	6.8	0.0073U	6.6	0.63 I	33.0	380	68U	6.10U	1.10 U	10.6	129	1.60 U	9190	0.0230 U
		12/11/2013	Could not be located, assumed destroyed																
		5/27/2014	Could not be located, assumed destroyed																
		12/15/2014	Could not be located, assumed destroyed																
		5/19/2015	Could not be located, assumed destroyed																
		12/9/2015	Could not be located, assumed destroyed																
MW-7R	45 - 60	6/15/2016	53.40	Replacement MW-7R installed on 06/15/2016															
		7/22/2016	50.70	9.2	248	**4.9**	0.31	8.2	0.18 U	28	140	**250 I**	2.0 I	0.93	1.1 I,V	**12000**	3.2 U	7500	0.11
		10/5/2016	50.05	12.6	194	**5.7**	NA	NA	NA	NA	98	**510**	2.1 U	0.50 U	2.5 U	**8200**	1.1 U	7700	0.084 U
		12/29/2016	51.00	4.2	165	**5.0**	0.088	7.4	0.020 U	14.3	117	**258**	5.0 U	0.96 I	2.5 U	**13700**	5.0 U	8300	0.10 U
		6/14/2017	51.35**	6.21	198	**10.01**	0.058	7.2	0.050 U	10.7	42.0	85.9 I	5.0 U	0.57 I	2.5 U	**10100**	5.0 U	8280	0.10 U
		12/12/2017	50.44	8.21	151	**4.92**	0.21	7.4	0.130	3.8 I	85.0	97.9 I	5.0 U	0.50 U	2.5 U	**9830**	5.0 U	8000	0.10 U
		6/4/2018	50.64	8.42	165	**5.1**	0.24	8.4	0.067	4.8 I	70.0	**445**	5.0 U	0.50 U	9.4	**11000**	5.0 U	8000	0.12 I
		12/11/2018	49.94	11.9	213	**5.5**	0.2	8.4	0.066	9.2	106	**1890**	**14.8**	1.4	**115**	**24300**	4.6 U	8100	0.13 I
		1/21/2019	52.02	2.71	188	**4.77**	0.16	7.4	0.10	5.9	103	91.2 I	**12.2**	0.33	1.7 U	**16900**	4.6 U	8.1	0.1
		5/16/2019	50.33	4.29	152.1	**5.14**	0.098	7.9	0.110	6.1	97	113	**15.5**	0.33 U	1.7 U	**15500**	4.6 U	7800	0.10 U
		12/10/2019	49.76	6.29	188	**5.36**	35 U	7.8	0.11	7.3	103	**221**	7.1 U	0.33 U	3.0 I	**19700**	4.6 U	8000	0.10 I

NOTES:

Only laboratory constituents in which exceedances were detected are shown, all other values within Groundwater Cleanup Target Levels (GCTLs)
milligrams per liter (mg/l); micrograms per liter (ug/l); SU = Standard Units; "U" denotes analyte not detected above MDL.
Nephololmetric Technical Units (NTU); micromhos per centimeter (umhos/cm)
Table I refers to Table I, Groundwater and Surface Water Target Levels (Groundwater Criteria) of FDEP Chapter 62-777 F.A.C.
Table V refers to Table V, Natural Attenuation Default Concentrations (Source) of FDEP Chapter 62-777 F.A.C.
Laboratory qualifier "I" denotes analyte was detected below quantitation limits. V = Analyte detected in the associated Method Blank
TDS = Total Dissovled Solids, included as reference
* = as provided in Chapter 62-520, FAC
** = DTW measurements were taken on 5/24/17 from MW-1, MW-2, MW-3, MW-4R, MW-5R, MW-7R, BW-1, P-1, P-3 and P-6.
NA = Not Analyzed
'Drinking Water Standards, Monitoring and Reporting 62-550 Tables
No field parameters reported for MW-3R as samples were collected using a bailer

TABLE 2: GROUNDWATER ELEVATION TABLE

Facility Name: Citrus Sand & Debris I C&D Disposal Facility
Address 1590 N. Quarterback Ter., Crystal River, FL
WACS Facility ID#: 40459

All Measurements = Feet
No Data = Blank

WELL NO.	BW-1			MW-1			MW-2			MW-3			MW-4R			MW-5R			MW-7			MW-7R		
DIAMETER	2"			2"			2"			2"			2"			2"			2"			2"		
TOTAL WELL DEPTH	85.08			93.33			53.25			54.06			66.29			72.10			62.83 BLS			65 BTOC		
SCREEN LENGTH	15			10			10			10			10			10			15			15		
SCREEN INTERVAL	70.08 - 85.08			83.33 - 93.33			43.25 - 53.25			44.06 - 54.06			56.29 - 66.29			62.10 - 72.10			47.83 - 62.83 BLS			50 - 65 BTOC		
TOC ELEVATION	80.78			89.07			52.46			53.74			63.72			69.13			52.59			54.78		
Well Screen Eleva.																								
TOP (ft, NGVD)	8.3			6.3			8.7			8.5			6.5			6.1			2.4			4.8		
BOTTOM (ft, NGVD)	-6.7			-3.7			-1.3			-1.5			-3.5			-3.9			-12.6			-10.2		
DATE	ELEV	DTW	Diff	ELEV	DTW	Diff	ELEV	DTW	Diff	ELEV	DTW	Diff	ELEV	DTW	Diff	ELEV	DTW	Diff	ELEV	DTW	Diff	ELEV	DTW	Diff
4/23/2013	3.09	77.69	0.74	3.19	85.88	0.73	3.61	48.85	0.17	2.83	50.91	0.72	3.05	60.67	0.74	3.08	66.05	0.76	**3.18**	49.41	0.99			
11/20/2013	4.48	76.30	-1.39										4.17	59.55	-1.12				Not Located					
12/11/2013	4.36	76.42	0.12	4.08	84.99	-0.89	Not Located			3.86	49.88	-1.03	3.94	59.78	0.23	3.99	65.14	-0.91	Not Located					
1/17/2014	3.90	76.88	0.46																Not Located					
4/9/2014				4.15	84.92	-0.07	5.65	46.81	-2.04	3.83	49.91	0.03				3.62	65.51	0.37	Not Located					
5/27/2014	3.89	76.89	0.01	3.86	85.21	0.29	5.82	46.64	-0.17	3.56	50.18	0.27	3.76	59.96	0.18	3.78	65.35	-0.16	Not Located					
12/15/2014	4.37	76.41	-0.48	4.36	84.71	-0.50	5.98	46.48	-0.16	4.03	49.71	-0.47	4.28	59.44	-0.52	4.29	64.84	-0.51	Not Located					
5/19/2015	3.71	77.07	0.66	3.80	85.27	0.56	4.86	47.60	1.12	3.42	50.32	0.61	3.69	60.03	0.59	3.72	65.41	0.57	Assumed Destroyed					
12/9/2015	4.34	76.44	-0.63	4.47	84.60	-0.67	5.93	46.53	-1.07	4.07	49.67	-0.65	4.37	59.35	-0.68	4.39	64.74	-0.67						
6/13/2016	4.14	76.64	0.20	3.35	85.72	1.12	3.58	48.88	2.35	3.96	49.78	0.11	4.09	59.63	0.28	4.19	64.94	0.20						
7/22/2016																						4.08	50.70	
10/5/2016													4.48	59.24	-0.39							4.73	50.05	-0.65
12/29/2016	3.73	77.05	0.41	2.87	86.20	0.48	3.12	49.34	0.46	3.47	50.27	0.49	3.59	60.13	0.89	3.72	65.41	0.47				3.78	51.00	0.95
5/24/2017	0.46	80.32	3.27	2.59	86.48	0.28	2.08	50.38	1.04	3.22	50.52	0.25	3.34	60.38	0.25	3.43	65.70	0.29				3.40	51.38	0.38
6/14/2017	3.40	77.38	-2.94							3.19	50.55	0.03	3.31	60.41	0.03	3.43	65.70	0.00				3.43	51.35	-0.03
12/12/2017	4.27	76.51	-0.87	3.41	85.66	-0.54	3.69	48.77	0.46	3.97	49.77	-0.75	4.12	59.60	-0.78	4.22	64.91	-0.79				4.34	50.44	-0.94
6/4/2018	4.03	76.75	0.24	3.19	85.88	0.22	2.86	49.60	0.83	3.81	49.93	0.16	3.92	59.80	0.20	4.05	65.08	0.17				4.14	50.64	0.20
12/10/2018	4.80	75.98	-0.77	3.94	85.13	-0.75	4.11	48.35	-1.25	4.54	49.20	-0.73	4.69	59.03	-0.77	4.76	64.37	-0.71				4.84	49.94	-0.70
1/21/2019										4.66	49.08	-0.85										2.76	52.02	1.38
5/16/2019	3.87	76.91	0.93	3.48	85.59	0.46	3.49	48.97	0.62	4.14	49.60	0.40	4.20	59.52	0.49	4.34	64.79	0.42				4.45	50.33	0.39
12/10/2019	4.94	75.84	-1.07	4.08	84.99	-0.60	4.49	47.97	-1.00	4.67	49.07	-0.53	4.81	58.91	-0.61	4.91	64.22	-0.57				5.02	49.76	-0.57

Notes: ELEV = Groundwater elevation (TOC Elevation minus DTW) DTW = Depth to Water Diff = DTW change between screening events

BTOC = Below Top Of Casing

Notes 1 to 3 based on 05/07/13 NOVA Env. Serv., Inc Report

1. Boldface type = ground water above the monitoring well top of screen.
2. Monitoring well screen intervals were revised 12/2/08 to reflect data by others as shown in solid waste permit issued 7/3/08.
3. The casing on Monitoring Well MW-3 was raised and re-surveyed in January 2009.
4. Replacement MW-7R installed on 06/15/2016
5. Groundwater samples were collected on 6/14/17 (Jun-17)

TABLE 2: GROUNDWATER ELEVATION TABLE

Facility Name: Citrus Sand & Debris I C&D Disposal Facility
Address 1590 N. Quarterback Ter., Crystal River, FL
WACS Facility ID#: 40459

All Measurements = Feet
No Data = Blank

WELL NO.	P-1			P-3			P-4			P-5			P-6		
DIAMETER	2"			1"			2"			2"			2"		
TOTAL WELL DEPTH	60.01			44.48			46.57			56.16			37.62		
SCREEN LENGTH	10			10			10			10			10		
SCREEN INTERVAL	50.01 - 60.01			34.48 - 44.48			36.57 - 46.57			46.16 - 56.16			27.62 - 37.62		
TOC ELEVATION	46.01			36.78			41.17			53.76			35.72		
Well Screen Eleva.															
TOP (ft, NGVD)	-4.0			2.3			4.6			7.6			8.1		
BOTTOM (ft, NGVD)	-14.0			-7.7			-5.4			-2.4			-1.9		
DATE	**ELEV**	**DTW**	**Diff**	**ELEV**	**DTW**	**Diff**	**ELEV**	**DTW**	**Diff**	**ELEV**	**DTW**	**Diff**	**ELEV**	**DTW**	**Diff**
4/23/2013	**3.00**	**43.01**	0.74	**2.33**	**34.45**	0.75	2.17	39.00	0.73	2.11	51.65	0.85	2.28	33.44	0.80
11/20/2013															
12/11/2013	**3.94**	**42.07**	-0.94	**3.43**	**33.35**	-1.10	Not Located			Not Located			3.32	32.40	-1.04
1/17/2014															
4/9/2014															
5/27/2014	**3.78**	42.23	0.16	**3.34**	33.44	0.09	Not Located			Not Located			3.17	32.55	0.15
12/15/2014	**4.18**	41.83	-0.40		Broken		Not Located			Not Located			3.57	32.15	-0.40
5/19/2015	**3.59**	42.42	0.59	**3.08**	33.70	0.26	Not Located			Not Located			3.01	32.71	0.56
12/9/2015	**4.30**	41.71	-0.71	-4.44	41.22	7.52	Not Located			Not Located			3.70	32.02	-0.69
6/13/2016	**4.15**	41.86	0.15	-4.47	41.25	0.03	Not Located			Not Located			-0.45	36.17	4.15
10/5/2016				**4.25**	32.53	-8.72							3.91	31.81	-4.36
12/29/2016	**3.69**	42.32	0.46	**3.21**	33.57	1.04							3.10	32.62	0.81
5/24/2017	3.33	42.68	0.36	2.81	33.97	0.40							2.79	32.93	0.31
12/12/2017	4.10	41.91	0.46	3.71	33.07	9.76							3.52	32.20	5.17
6/4/2018	3.90	42.11	0.20	3.55	33.23	0.16							3.35	32.37	0.17
12/10/2018	4.68	41.33	-0.78	4.10	32.68	-0.55							4.08	31.64	-0.73
1/21/2019															
5/16/2019	4.23	41.78	0.45	3.73	33.05	0.37							3.64	32.08	0.44
12/10/2019	4.81	41.20	-0.58	4.33	32.45	-0.60							4.23	31.49	-0.59

Notes:

ELEV = Groundwater elevation (TOC Elevation minus DTW)
DTW = Depth to Water
Notes 1 to 3 based on 05/07/13 NOVA Env. Serv., Inc Report
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