



October 24, 2024

U.S. Army Corps of Engineers, Regulatory Division
Fort Myers Permits Section
1520 Royal Palm Square Blvd.
Fort Myers, FL 33919
Michelle Gilbert, Chief

Via EMAIL: SF.NEW.APPLICATIONS@usace.army.mil

Re: New USACE Section 404 Application (Lee County, Florida)
Lee County Solid Waste Department
SR82 Recovered Materials Processing Facility
Latitude 26.606842° & Longitude -81.770170°
Section 36, Township 44S, Range 25E

Dear Michelle,

Please find attached a signed U.S. Army Corps of Engineers (USACE) ENG 4345 Form and Section 404 permit application package for a proposed new Recovered Materials Processing Facility in Lee County, Florida. The project site totals 50.00± acres and is located south of Colonial Boulevard and west of State Road 82. Construction of the project is anticipated to result in direct and secondary impacts to wetlands (7.80± ac, 1.27± ac, respectively) and surface waters (0.36± ac). Total wetland functional loss requiring mitigation totals 2.90 units (credits). As compensatory mitigation for the proposed wetland impacts, offsite mitigation is proposed using credits from the Lee County Section 33 Regional Mitigation Site.

The applicant seeks authorization of this project through a Standard permit. Attached are the following items to assist your review of the application:

1. Completed/signed ENG 4345 Application Form
2. Environmental Supplement Report w/ UMAM
3. Environmental Permit Drawings
4. Protected Species Survey Report
5. Historic Aerials
6. Wetland Data Forms

Thank you for your assistance with the project and should you have questions or require additional information, please feel free to contact me.

Sincerely,

JOHNSON ENGINEERING, INC.

A handwritten signature in black ink, appearing to read 'G. Thomas', written over the company name.

Greg Thomas
Ecologist

Cc: Erik Howard, P.E., P.S.M.
File 20236121-000

U.S. Army Corps of Engineers (USACE)
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

For use of this form, see 33 CFR 325. The proponent agency is CECW-COR.

*Form Approved -
OMB No. 0710-0003
Expires: 2027-03-31*

The public reporting burden for this collection of information, OMB Control Number 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR APPLICATION TO THE ABOVE EMAIL.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned. System of Record Notice (SORN). The information received is entered into our permit tracking database and a SORN has been completed (SORN #A1145b) and may be accessed at the following website: <http://dpold.defense.gov/Privacy/SORNsIndex/DOD-wide-SORN-Article-View/Article/570115/a1145b-ce.aspx>

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME First - Douglass Middle - Last - Whitehead Company - Lee County Solid Waste Department E-mail Address - dwhitehead@leegov.com	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First - Gregory Middle - Last - Thomas Company - Johnson Engineering LLC E-mail Address - gthomas@johnsoneng.com
6. APPLICANT'S ADDRESS: Address- 10500 Buckingham Rd City - Fort Myers State - FL Zip - 33905 Country - US	9. AGENT'S ADDRESS: Address- 2122 Johnson St City - Fort Myers State - FL Zip - 33901 Country - US
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 239-533-8917	10. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 239-461-2405

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Johnson Engineering LLC to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.


SIGNATURE OF APPLICANT

4 OCT '24
DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
SR82 Recovered Materials Processing Facility

13. NAME OF WATERBODY, IF KNOWN (if applicable)
Unnamed excavated reservoir and ditches

14. PROJECT STREET ADDRESS (if applicable)

Address Adjacent to 11990 FL-82

15. LOCATION OF PROJECT

Latitude: °N 26.606842 Longitude: °W -81.770170

City - Fort Myers

State- FL

Zip- 33913

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID 36-44-25-L1-U2318.4319

Municipality Lee County

Section - 36

Township - 44S

Range - 25E

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See Attachment

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-


City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

 400'24
SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody

25. a. Owner – Gulf Disposal Inc
- Parcel ID (STRAP #) – 36-44-25-L2-00000.1700
- Address – Access Undetermined
- City – FORT MYERS
- State – FL
- Zip – 33913
- b. Owner – PRAETORIAN OF FT MYERS LLC
- Parcel ID (STRAP #) – 36-44-25-00-00001.6000
- Address – 11950 STATE ROAD 82, FORT MYERS
- City – FORT MYERS
- State – FL
- Zip – 33913

SR82 RECOVERED MATERIALS PROCESSING FACILITY ENVIRONMENTAL SUPPLEMENT REPORT

October 2024

Prepared for:

**Lee County Board of County Commissioners
1500 Monroe Street
Fort Myers, FL 33901**

Prepared by:

JOHNSON
ENGINEERING

— **An Apex Company** —
**2122 Johnson Street
Fort Myers, Florida 33902**

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1.0 INTRODUCTION

The Lee County Board of County Commissioners proposes to construct a new recovered materials processing facility along State Road 82 (SR82), south of Colonial Boulevard and adjacent to the existing landfill. The project design includes building(s), parking areas, a stormwater management system, and associated infrastructure. The parcel of land is approximately 50.00± acres and is located in Section 36, Township 44 South, Range 25 East in Lee County.

2.0 EXISTING CONDITIONS

The habitat types were classified based on the nomenclature of the Florida Land Use, Cover and Forms Classification System, Levels III and IV (FLUCFCS) (Florida Department of Transportation [FDOT], 1999). On-site habitats include 23.89 acres of general industrial (FLUCFCS Code 150), 4.81 acres of hydric pasture (FLUCFCS Code 211H), 0.41 acres of Brazilian pepper (FLUCFCS Code 422), 0.36 acres of ditch (FLUCFCS Code 514), and 20.53 acres of wetland forested mixed (76-100% exotics; FLUCFCS Code 630E4), totaling 50.00 acres. The FLUCFCS Code 150 area on site is consistent with mapping from Lee County Development Order #LDO2007-00354, with an approval date of July 20, 2010.

2.1 Wetlands

The project boundary contains 25.34 acres of wetlands, subject to agency verification. Wetlands onsite have been hydrologically altered from historic agricultural, and more recent industrial uses of the property, and adjacent residential developments. The wetlands contain dense levels of invasive vegetation, which degrade environmental conditions onsite. The hydric pasture habitat is dominated by torpedograss (*Panicum repens*), and the wetland forested mixed habitat is dominated by melaleuca (*Melaleuca quinquenervia*) and Brazilian pepper (*Schinus terebinthifolia*).

2.2 Surface Waters

The project area contains a total of 0.36 acres of surface waters (FLUCFCS Code 514). No functional loss of SWs is expected with the proposed project, as two pond sites, totaling 4.28 acres, will be constructed concurrently with the facility.

2.3 Listed Species

A protected species survey (PSS) was conducted on August 23, 2024, by Johnson Engineering ecologists. Pedestrian transects were utilized to cover a minimum of 80% of each suitable habitat within the project area in accordance with Lee County Land Development Code, Chapter 10, Article 3, Division 8 (Protection of Habitat) and methodologies outlined by the Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (USFWS). A copy of the PSS report, which provides detailed survey findings, species effect determinations, and management plan (if applicable) is provided as a separate attachment. Further coordination with wildlife agencies will occur throughout the permitting process.

3.0 AVOIDANCE AND MINIMIZATION

During the project design, efforts were made to avoid and minimize impacts to wetlands and listed species habitat to the extent practicable. Based on the project size and site plan, total avoidance of wetland impacts is not practicable.

Appropriate best management practices (BMPs) will be implemented to minimize impacts to water quality. Erosion control devices, such as hay bales, silt fencing, turbidity barriers, etc. will be utilized to reduce soil erosion and turbidity. These devices will remain in place until soils onsite are stabilized, as determined by the project engineer. Construction equipment will consist of bulldozers, backhoes, graders, and other commonly used machinery. Contractors will be required to properly maintain all equipment such that releases of fuels, lubricants and other pollutants will be minimized to the greatest extent possible.

4.0 PROPOSED CONDITIONS

4.1 Direct Wetland Impacts

Proposed direct wetland impacts total 7.80 acres, including 6.50 acres of wetland fill (31,460± cubic yards [CY]) and 1.30 acres (18,876± CY) of wetland excavation. Mitigation is summarized in section 6.0 below.

4.2 Secondary Wetland Impacts

Secondary impacts were added 25-feet beyond the direct wetland impacts associated with W-1 and W-2 and total 1.27 acres. Mitigation is summarized in section 6.0 below.

4.3 Surface Water (SW) Impacts

SW impacts for the proposed project total 0.36 acres (1,742± CY of fill) of the excavated reservoir and ditches onsite. Please refer to the environmental drawings for SW impact locations. Two individual stormwater detention pond sites will be constructed and total 4.28 acres. The proposed ponds will also offset the SW impacts and provide continued foraging habitat for wildlife. No mitigation is proposed for the SW impacts.

5.0 UMAM ASSESSMENT

The Uniform Mitigation Assessment Method (UMAM) was utilized to assess any direct and/or secondary wetland impacts expected from the project. In accordance with the UMAM methodology, existing site conditions were evaluated for location/landscape, water environment, and vegetation structure to determine the functional value of the wetland impacts.

Current Condition Overview

Location and Landscape Support – The location and landscape support for the wetlands proposed for impact within the project area were given a score of “4” for their current conditions. These scores are based on their proximity to major roadways and residential land uses that eliminate their connectivity to offsite habitats, and their high levels of exotic vegetation that degrade their connectivity to onsite habitats and further reduces their ecological function to fish and wildlife. Secondary wetland impacts were assessed a score of “-1” for this category due to the absence of an upland buffer adjacent to the direct wetland impact areas.

Water Environment – The water environment for the wetlands proposed for impact within the project area have been scored between “3” and “4” for their current conditions. The surface water management system associated with the Colonial Boulevard corridor and the adjacent agricultural and residential land uses (Pelican Preserve) combine to alter the hydrology on site by diverting stormwater during rain events. Degradation of a natural hydroperiod for all onsite wetlands reduces their value as these areas are completely dry for extended periods throughout

the year. No alterations to hydrology within wetland areas to-remain (W-1, W-2) are proposed, therefore secondary wetland impact scores were unchanged for this category.

Community Structure – The community structure scores for the proposed onsite wetland impacts vary from “3” to “4” for their current conditions. These scores were determined based on degree of exotic coverage, land management practices, and appropriateness of plant composition. These factors reduce regeneration and recruitment of native species and limit refugia used by native species. Secondary impacts were unchanged for this category due to the planned removal of exotic vegetation in the proposed wetland areas to-remain (W-1, W-2).

The UMAM analysis conducted for the project identified a loss of 2.90 functional units from the proposed direct and secondary wetland impacts.

6.0 MITIGATION PLAN

The proposed 2.90 units of functional loss from the direct and secondary wetland impacts will be offset through offsite mitigation from the Lee County Section 33 Regional Mitigation Site. Wetland areas to-remain on site will be cleared of exotic vegetation as per the Lee County Development Order (DO), but no functional gain is proposed. No Panther Habitat Units (PHU) are required for compensation based on the attached FWS worksheet (**Attachment 2**) due to removal of exotic vegetation within the wetland areas to-remain, per the DO.

ATTACHMENT 1

UMAM Analysis

October 2024

SR82 Recovered Materials Processing Facility - UMAM Analysis

IMPACTS

						PRE - UMAM Sub-Score Category			POST - UMAM Sub-Score Category				
Direct Assessment Area	FLUCFCS	(A) Impact Acreage	(E-D) Lost Functional Units	D=(A X B) Pre - Functional Units	(B) Pre - UMAM Composite Score	Location and Landscape Support	Water Environment	Community Structure	Location and Landscape Support	Water Environment	Community Structure	(C) Post UMAM Composite Score	E=(A X C) Post Functional Units
W-1	630E4	3.07	-1.126	1.13	0.37	4.0	4.0	3.0	0.0	0.0	0.0	0.00	0.00
SI-1*	630E4	1.06	-0.035	0.39	0.37	4.0	4.0	3.0	3.0	4.0	3.0	0.33	0.35
W-2	211H	0.42	-0.154	0.15	0.37	4.0	3.0	4.0	0.0	0.0	0.0	0.00	0.00
SI-2*	211H	0.21	-0.007	0.08	0.37	4.0	3.0	4.0	3.0	3.0	4.0	0.33	0.07
W-3	630E4	4.31	-1.580	1.58	0.37	4.0	4.0	3.0	0.0	0.0	0.0	0.00	0.00
		9.07	-2.902										

¹ Wetland UMAM composite score = sub-score category sum divided by 30

* Shown as "W-1 Sec" and "W-2 Sec" on Impact Map

Functional loss (wetland credits) required as mitigation: -2.90

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

Site/Project Name SR82 Recovered Materials Processing Facility		Application Number		Assessment Area Name or Number W-2	
FLUCFCS code 211H		Further classification (optional) Hydric Pasture		Impact or Mitigation Site? Impact	
				Assessment Area Size 0.42	
Basin/Watershed Name/Number Estero Bay		Affected Waterbody (Class) Class III		Special Classification (i.e., OFW, AP, other local/state/federal designation of importance) N/A	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Isolated and fragmented by Colonial Blvd, SR-82, and adjacent residential land uses.					
Assessment area description AA's are hydric pasture habitats that are disturbed, hydrologically impacted, and fragmented from similar habitats as a result of adjacent roadways and residential land uses. The AAs exhibit exotic vegetation coverage, primarily torpedo grass.					
Significant nearby features Historic landfill, Colonial Boulevard, State Road 82, Pelican Preserve			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Storage of rainfall and storm water runoff; habitat for marsh birds, wading birds, small mammals, reptiles, amphibians, and aquatic fauna seasonally.			Mitigation for previous permit/other historic use No		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, small mammals, reptiles, amphibians, and fish may utilize the AA seasonally based on hydrology.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Everglade snail kite and listed wading birds seasonally		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Everglade Snail Kite, little blue heron, roseate spoonbill, tricolored heron.					
Additional relevant factors: Adjacent rural residential development to the west; existing landfill to the south, Colonial Boulevard to the north; State Road 82 to the east					
Assessment conducted by: GFT			Assessment date(s): 9/11/2024		

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

Site/Project Name SR82 Recovered Materials Processing Facility	Application Number	Assessment Area Name or Number W-2
Impact or Mitigation Impact	Assessment conducted by: GFT	Assessment date: 9/11/2024

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

.500(6)(a) Location and Landscape Support w/o pres or current: <input type="text" value="4"/> with: <input type="text" value="0"/>	Present (w/o): Assessment area is fragmented by Colonial Blvd, SR-82 and residential land uses including Gateway and Pelican Preserve. Wildlife access limited by fragmentation. With: Impacted.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current: <input type="text" value="3"/> with: <input type="text" value="0"/>	Present (w/o): Hydrology is altered by elevation compared to the rest of the site, adjacent roadways, agricultural ditches and berms, and surrounding residential land uses. With: Impacted.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current: <input type="text" value="4"/> with: <input type="text" value="0"/>	AA's are pasture habitats that are inundated during the wet season. These areas are fragmented from offsite habitats as a result of adjacent roadways and residential land uses. The AAs exhibit exotic vegetation coverage, primarily torpedo grass. With: Impacted.

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
0.37	0

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

For impact assessment areas
FL = delta x acres
-0.154

Delta = [with-current]
-0.37

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

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

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

Site/Project Name SR82 Recovered Materials Processing Facility		Application Number		Assessment Area Name or Number SI-2	
FLUCFCS code 211H		Further classification (optional) Hydric Pasture		Impact or Mitigation Site? Impact	
				Assessment Area Size 0.21	
Basin/Watershed Name/Number Estero Bay		Affected Waterbody (Class) Class III		Special Classification (i.e., OFW, AP, other local/state/federal designation of importance) N/A	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Isolated and fragmented by Colonial Blvd, SR-82, and adjacent residential land uses.					
Assessment area description AA's are hydric pasture habitats that are disturbed, hydrologically impacted, and fragmented from similar habitats as a result of adjacent roadways and residential land uses. The AAs exhibit exotic vegetation coverage, primarily torpedo grass.					
Significant nearby features Historic landfill, Colonial Boulevard, State Road 82, Pelican Preserve			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Storage of rainfall and storm water runoff; habitat for marsh birds, wading birds, small mammals, reptiles, amphibians, and aquatic fauna seasonally.			Mitigation for previous permit/other historic use No		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, small mammals, reptiles, amphibians, and fish may utilize the AA seasonally based on hydrology.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Everglade snail kite and listed wading birds seasonally		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Everglade Snail Kite, little blue heron, roseate spoonbill, tricolored heron.					
Additional relevant factors: Adjacent rural residential development to the west; existing landfill to the south, Colonial Boulevard to the north; State Road 82 to the east					
Assessment conducted by: GFT			Assessment date(s): 9/11/2024		

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

Site/Project Name SR82 Recovered Materials Processing Facility	Application Number	Assessment Area Name or Number SI-2
Impact or Mitigation Impact	Assessment conducted by: GFT	Assessment date: 9/11/2024

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

.500(6)(a) Location and Landscape Support w/o pres or current with <div>4</div> <div>3</div>	Present (w/o): Assessment area is fragmented by Colonial Blvd, SR-82 and residential land uses including Gateway and Pelican Preserve. Wildlife access limited by fragmentation. With: Possible fringe effects from adjacent direct impacts area(s).
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with <div>3</div> <div>3</div>	Present (w/o): Hydrology is altered by elevation compared to the rest of the site, adjacent roadways, agricultural ditches and berms, and surrounding residential land uses. With: No determinable impacts to hydrology.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>4</div> <div>4</div>	AA's are pasture habitats that are inundated during the wet season. These areas are fragmented from offsite habitats as a result of adjacent roadways and residential land uses. The AAs exhibit exotic vegetation coverage, primarily torpedo grass. With: Exotic vegetation to be removed per the Lee County Development Order.

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
<div>0.37</div>	<div>0.33</div>

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

For impact assessment areas
FL = delta x acres
-0.007

Delta = [with-current]
-0.03

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

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

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

Site/Project Name SR82 Recovered Materials Processing Facility		Application Number		Assessment Area Name or Number W-1, W-3	
FLUCFCS code 630E4		Further classification (optional) Wetland Forested Mixed (>75% Exotics)		Impact or Mitigation Site? Impact	
				Assessment Area Size 7.38	
Basin/Watershed Name/Number Estero Bay		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) N/A	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Isolated and fragmented by Colonial Blvd, SR-82, and adjacent residential land uses.					
Assessment area description This wetland system is within a historically agricultural area with ditches and berms and consists of disturbed, forested vegetation with >75% exotic coverage, including melaleuca, Brazilian pepper, and earleaf acacia. Native species include laurel oak, cabbage palm, and slash pine.					
Significant nearby features Historic landfill, Colonial Boulevard, State Road 82, Pelican Preserve			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Storage of rainfall and storm water runoff; habitat for small mammals, reptiles, amphibians, and aquatic fauna seasonally.			Mitigation for previous permit/other historic use No		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, small mammals, reptiles, amphibians, and fish may utilize the AA seasonally based on hydrology.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Listed wading birds (T) seasonally.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Red-bellied woodpecker, gray squirrel.					
Additional relevant factors: Adjacent rural residential development to the west; existing landfill to the south, Colonial Boulevard to the north; State Road 82 to the east					
Assessment conducted by: GFT			Assessment date(s): 9/11/2024		

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

Site/Project Name SR82 Recovered Materials Processing Facility	Application Number	Assessment Area Name or Number W-1, W-3
Impact or Mitigation Impact	Assessment conducted by: GFT	Assessment date: 9/11/2024

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

.500(6)(a) Location and Landscape Support w/o pres or current <div>4</div> with <div>0</div>	Present (w/o): Assessment area is fragmented by Colonial Blvd, SR-82 and residential land uses including Gateway and Pelican Preserve. Wildlife access limited by fragmentation. With: Impacted.
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current <div>4</div> with <div>0</div>	Present (w/o): Hydrology is altered by adjacent roadways, agricultral ditches and berms, and surrounding residential land uses. With: Impacted.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current <div>3</div> with <div>0</div>	This wetland system is within a historically agricultural area with ditches and berms and consists of disturbed, forested vegetation with >75% exotic coverage, including melaleuca, Brazilian pepper, and earleaf acacia. Native species include laurel oak, cabbage palm, and slash pine. With: Impacted.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres
<div>0.37</div>
with <div>0</div>

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

For impact assessment areas
FL = delta x acres
-2.706

Delta = [with-current]
-0.37

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

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

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

Site/Project Name SR82 Recovered Materials Processing Facility		Application Number		Assessment Area Name or Number SI-1	
FLUCFCS code 630E4		Further classification (optional) Wetland Forested Mixed (>75% Exotics)		Impact or Mitigation Site? Impact	
				Assessment Area Size 1.06	
Basin/Watershed Name/Number Estero Bay		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) N/A	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Isolated and fragmented by Colonial Blvd, SR-82, and adjacent residential land uses.					
Assessment area description This wetland system is within a historically agricultural area with ditches and berms and consists of disturbed, forested vegetation with >75% exotic coverage, including melaleuca, Brazilian pepper, and earleaf acacia. Native species include laurel oak, cabbage palm, and slash pine.					
Significant nearby features Historic landfill, Colonial Boulevard, State Road 82, Pelican Preserve			Uniqueness (considering the relative rarity in relation to the regional landscape.) Not unique		
Functions Storage of rainfall and storm water runoff; habitat for small mammals, reptiles, amphibians, and aquatic fauna seasonally.			Mitigation for previous permit/other historic use No		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) Wading birds, small mammals, reptiles, amphibians, and fish may utilize the AA seasonally based on hydrology.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Listed wading birds (T) seasonally.		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Red-bellied woodpecker, gray squirrel.					
Additional relevant factors: Adjacent rural residential development to the west; existing landfill to the south, Colonial Boulevard to the north; State Road 82 to the east					
Assessment conducted by: GFT			Assessment date(s): 9/11/2024		

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

Site/Project Name SR82 Recovered Materials Processing Facility	Application Number	Assessment Area Name or Number SI-1
Impact or Mitigation Impact	Assessment conducted by: GFT	Assessment date: 9/11/2024

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

.500(6)(a) Location and Landscape Support w/o pres or current with <div>4</div> <div>3</div>	Present (w/o): Assessment area is fragmented by Colonial Blvd, SR-82 and residential land uses including Gateway and Pelican Preserve. Wildlife access limited by fragmentation. With: Possible fringe effects from adjacent direct impact area(s).
.500(6)(b)Water Environment (n/a for uplands) w/o pres or current with <div>4</div> <div>4</div>	Present (w/o): Hydrology is altered by adjacent roadways, agricultral ditches and berms, and surrounding residential land uses. With: No determinable impacts to hydrology.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community w/o pres or current with <div>3</div> <div>3</div>	This wetland system is within a historically agricultural area with ditches and berms and consists of disturbed, forested vegetation with >75% exotic coverage, including melaleuca, Brazilian pepper, and earleaf acacia. Native species include laurel oak, cabbage palm, and slash pine. With: Exotic vegetation to be removed per the Lee County Development Order.

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.37	0.33

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

For impact assessment areas
FL = delta x acres
-0.035

Delta = [with-current]
-0.03

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

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

Attachment 2
PHU Calculations

PROJECT WORKSHEET

<i>Habitat Type</i>	<i>Assigned value</i>
Pine forest	9.5
Hardwood-Pine	9.3
Cypress swamp	9.2
Hardwood swamp	9.2
Hardwood Forest	9
Dry prairie	6.3
Unimproved pasture	5.7
Shrub swamp/brush	5.5
Improved pasture	5.2
Cropland	4.8
Orchards/groves	4.7
Marsh/ wet prairie	4.7
Xeric scrub	4.5
Exotic/Nuisance plants	3
Coastal wetlands	3
Barren/Disturbed lands	3
Water	0
Urban	0
Reservoirs*	
STA*	

TOTAL

Habitat types of land to be developed			
Primary/d Zone	Secondary Zone	Other Zone	Primary Equivalent Habitat Units
			0
			0
			0
	2.67		17
			0
			0
			0
			0
			0
	4.81		16
			0
	18.27		38
			0
			0
	0.36		0
	23.89		0
			0
			0
0.00	50.00	0.00	70.37

Habitat types of land after development			
Primary/d Zone	Secondary Zone	Other Zone	Primary Equivalent Habitat Units
			0
			0
			0
	13.16		84
			0
			0
			0
			0
			0
	4.39		14
			0
			0
			0
	32.45		0
			0
			0
0.00	50.00	0.00	97.78

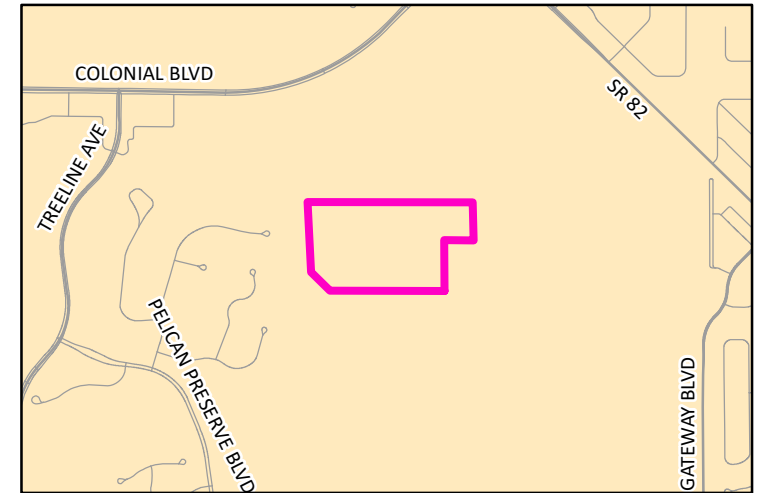
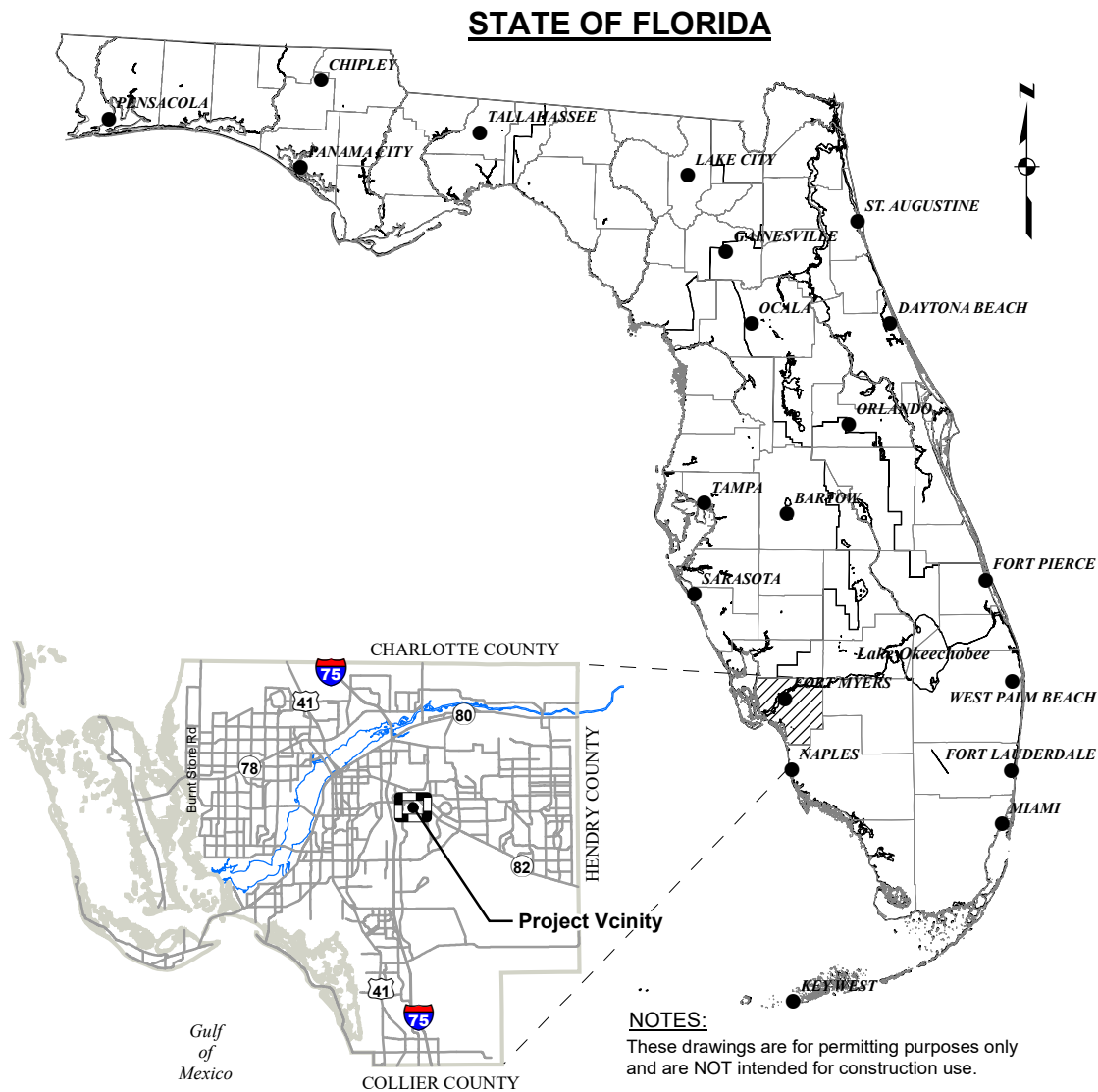
CONTINUE

CLEAR SHEET

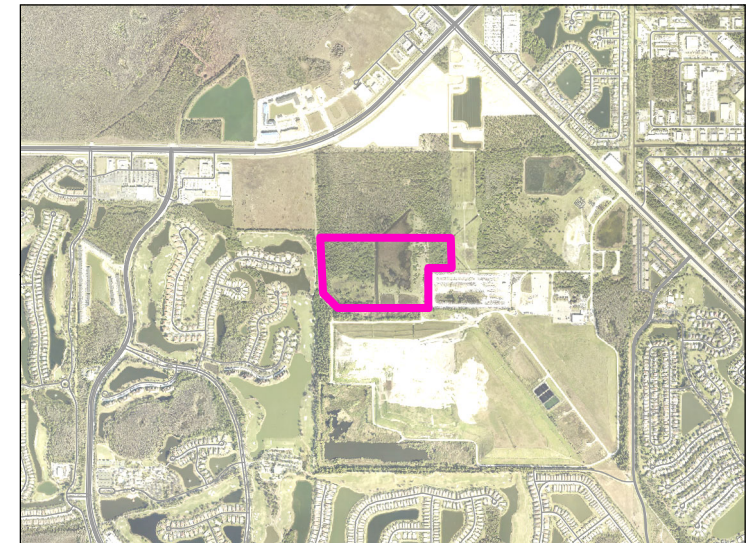
COMPENSATION
TO OFF-SET
-54
Habitat Units

***NOTE: The assigned value for Reservoirs and STAs varies by size, proposed future management, and their position in the landscape. See the associated methodology document for guidance on starting values and considerations.**

Q:\2023\20236121-000\Environmental\Exhibits\LocMap.mxd



STREET MAP
N.T.S.



VICINITY AERIAL
N.T.S.

Notes: Aerial
Photo 2024

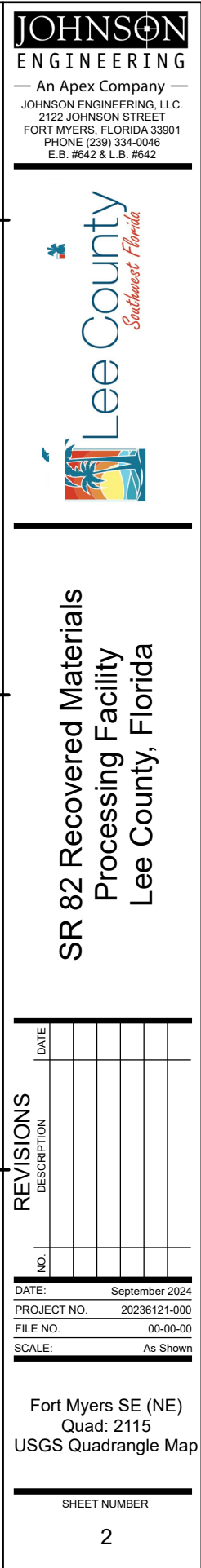
SR 82 Recovered Materials
Processing Facility
Lee County, Florida

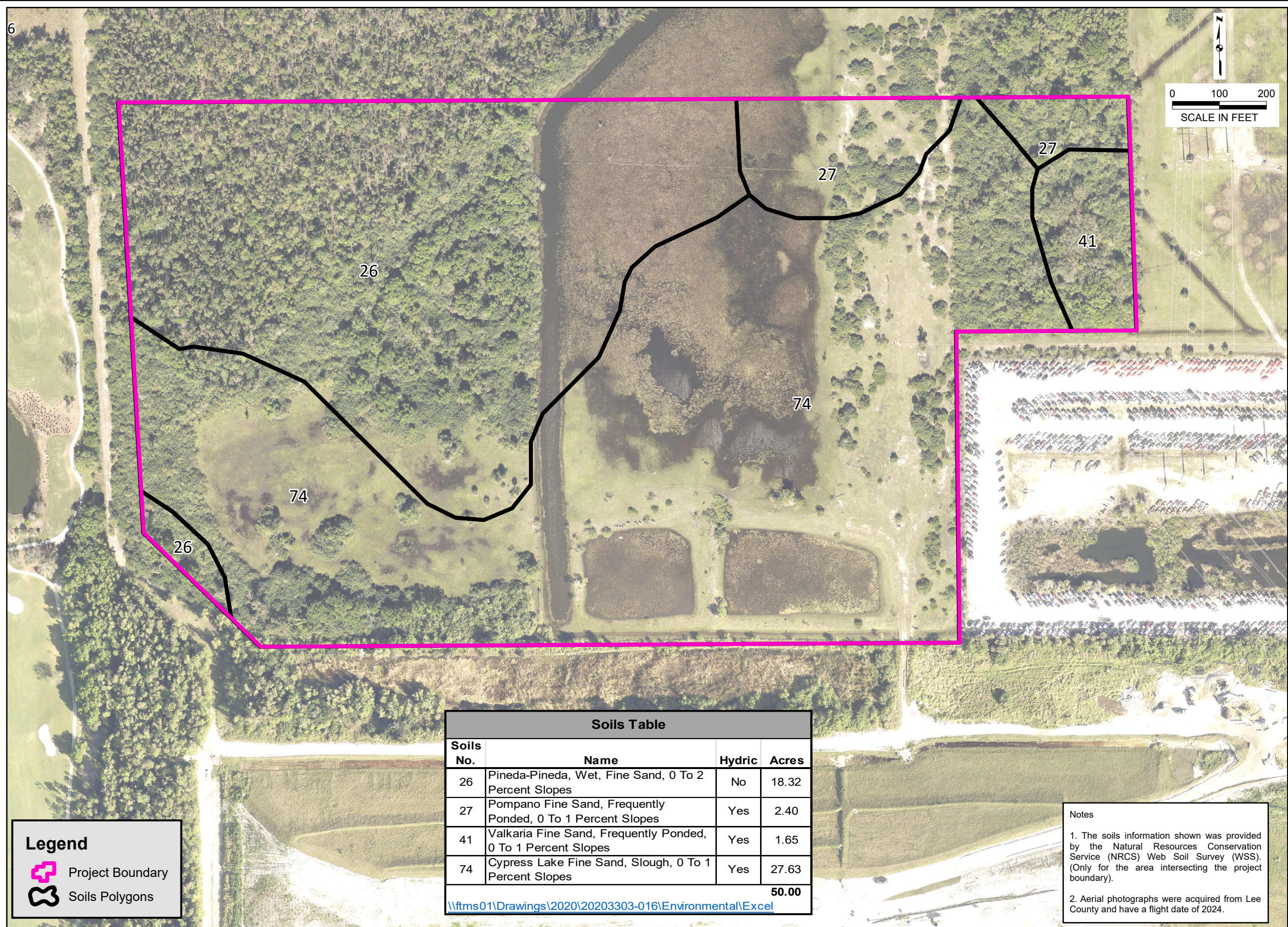
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JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 334-0046
E.B. #642 & L.B. #642

Location Map

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Sept. 2024	20236121-000		Not to Scale	1





Soils Table			
Soils No.	Name	Hydric	Acres
26	Pineda-Pineda, Wet, Fine Sand, 0 To 2 Percent Slopes	No	18.32
27	Pompano Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes	Yes	2.40
41	Valkaria Fine Sand, Frequently Ponded, 0 To 1 Percent Slopes	Yes	1.65
74	Cypress Lake Fine Sand, Slough, 0 To 1 Percent Slopes	Yes	27.63
			50.00

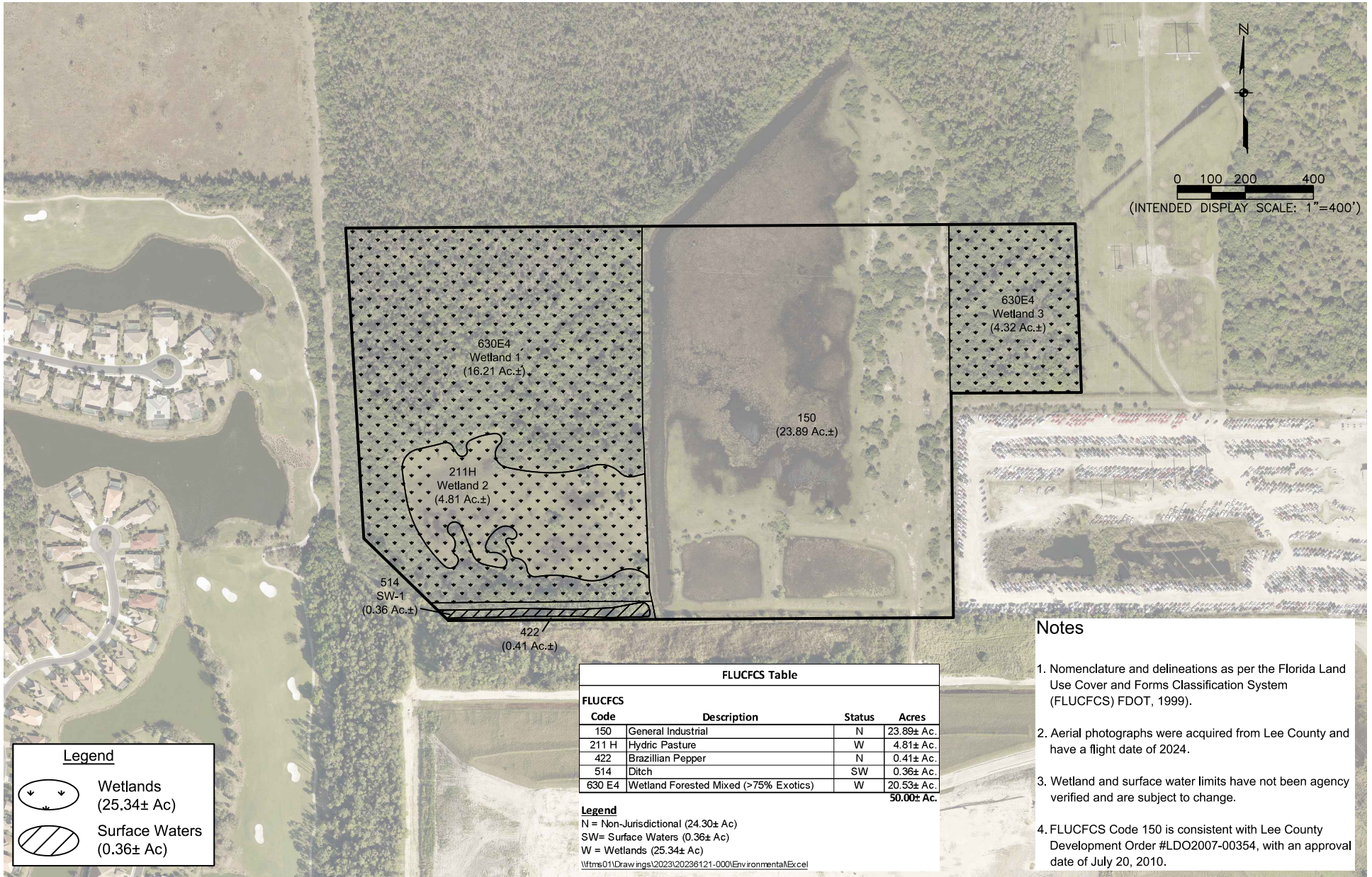
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Notes

1. The soils information shown was provided by the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS). (Only for the area intersecting the project boundary).

2. Aerial photographs were acquired from Lee County and have a flight date of 2024.

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SR 82 Recovered Materials
Processing Facility
Lee County, Florida




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E.B. #642 & L.B. #642

FLUCFCS MAP

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Oct. 2024	20236121-000	36-44-25	As Shown	5

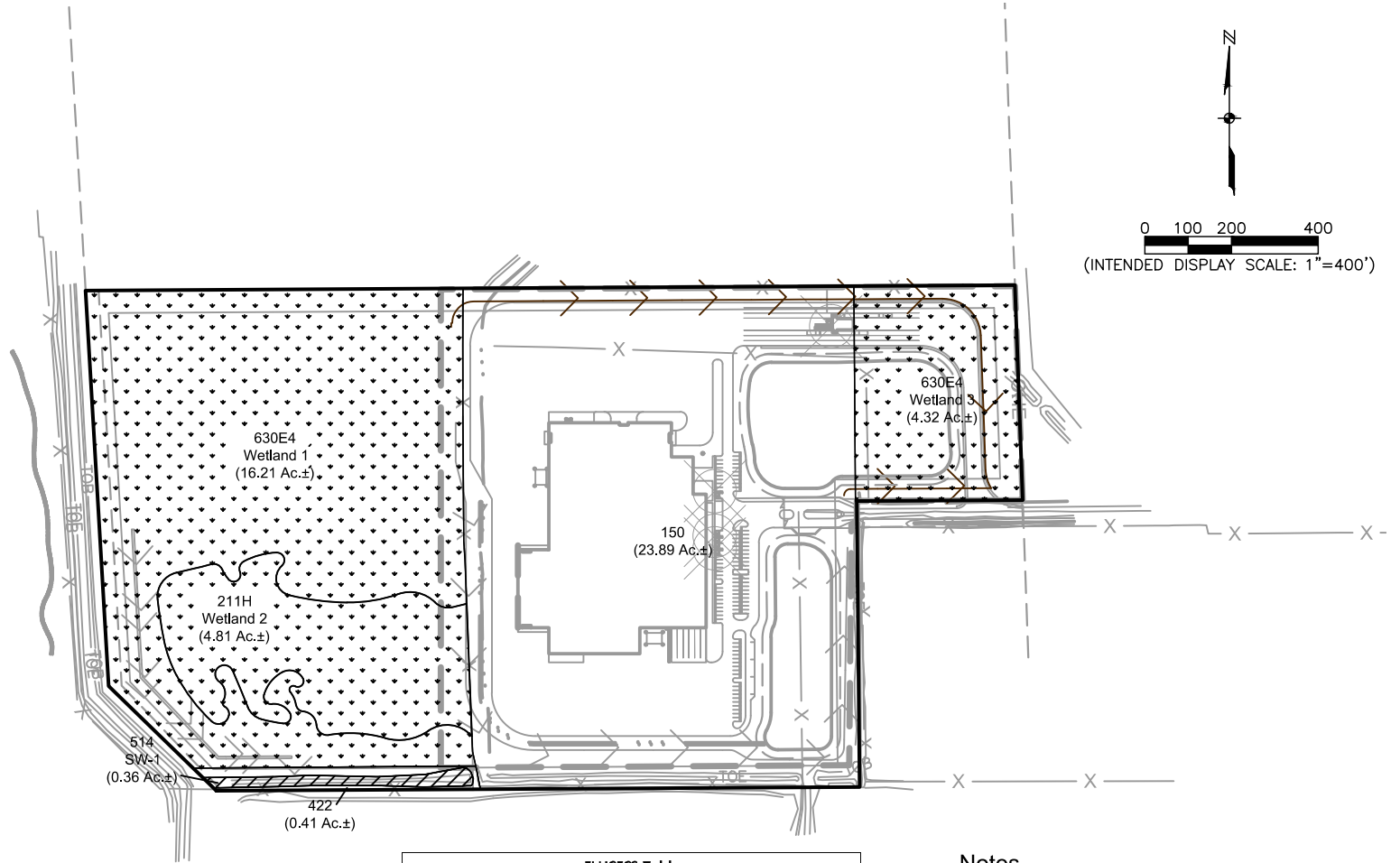
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Wetlands
(25.34± Ac)

Surface Waters
(0.36± Ac)

Berm



FLUCFCS Table				
FLUCFCS				
Code	Description	Status	Acres	
150	General Industrial	N	23.89± Ac.	
211 H	Hydric Pasture	W	4.81± Ac.	
422	Brazilian Pepper	N	0.41± Ac.	
514	Ditch	SW	0.36± Ac.	
630 E4	Wetland Forested Mixed (>75% Exotics)	W	20.53± Ac.	
			50.00± Ac.	

Legend
N = Non-Jurisdictional (24.30± Ac)
SW= Surface Waters (0.36± Ac)
W = Wetlands (25.34± Ac)
\\ftms01\Drawings\2023\20236121-000\Environmental\Excel

- Notes**
- 1. Nomenclature and delineations as per the Florida Land Use Cover and Forms Classification System (FLUCFCS) FDOT, 1999).
 - 2. Wetland and surface water limits have not been agency verified and are subject to change.
 - 3. FLUCFCS Code 150 is consistent with Lee County Development Order #LDO2007-00354, with an approval date of July 20, 2010.

SR 82 Recovered Materials
Processing Facility
Lee County, Florida

JOHNSON

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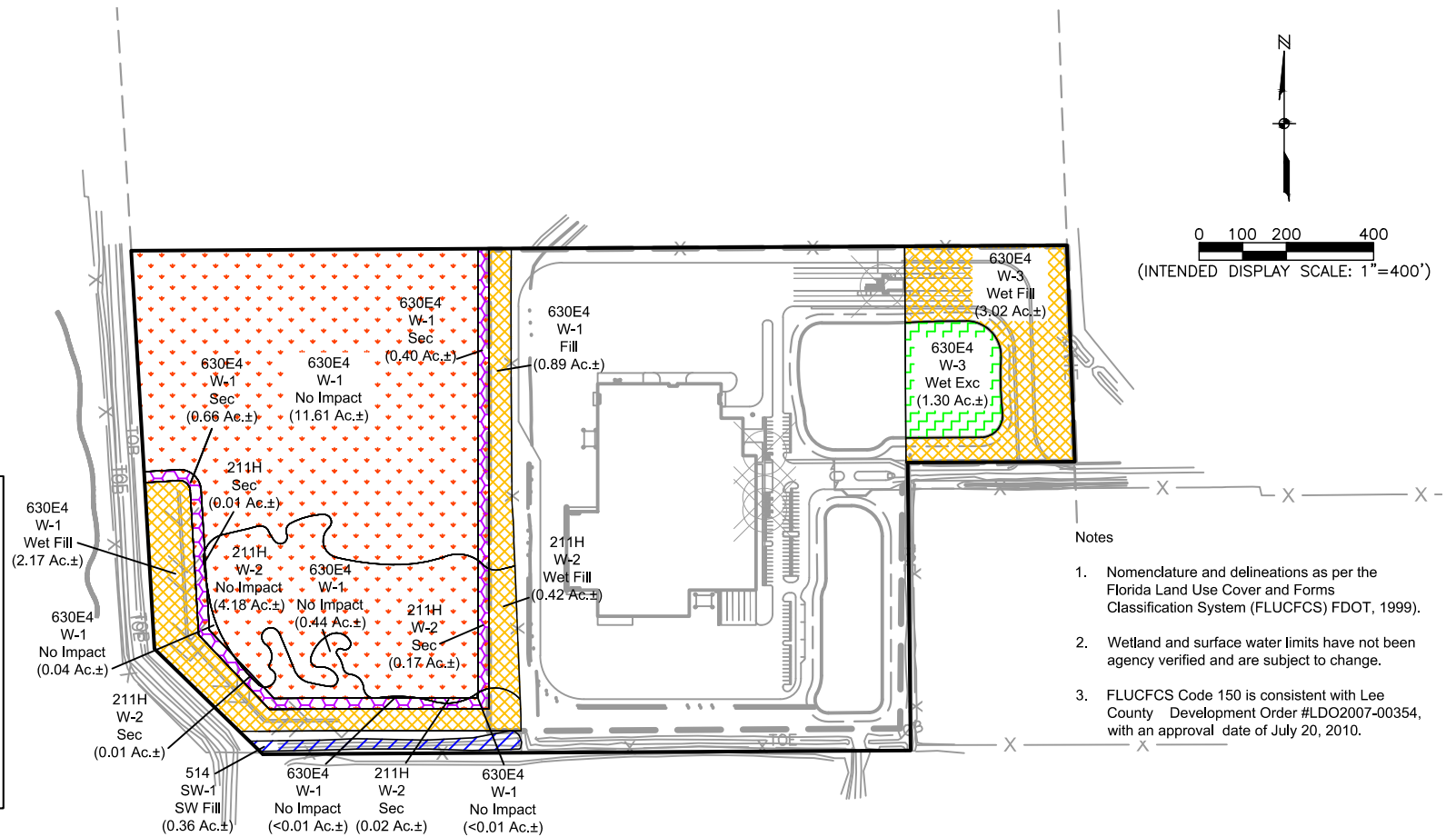
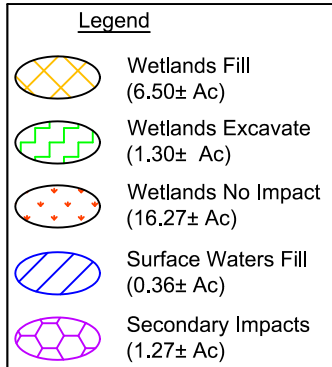
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FLUCFCS MAP WITH SITE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Oct. 2024	20236121-000	36-44-25	As Shown	6

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Impact Table							
FLUCFCS Code	Description	Status	Wetland Fill	Wetland Excavate	Wetland No Impact	SW Fill	Secondary Impacts
211 H	Hydric Pasture	W	0.42± Ac.	-	4.18± Ac.	-	0.21± Ac.
514	Ditch	SW	-	-	-	0.36± Ac.	-
630 E4	Wetland Forested Mixed (>75% Exotics)	W	6.08± Ac.	1.30± Ac.	12.09± Ac.	-	1.06± Ac.
			6.50± Ac.	1.30± Ac.	16.27± Ac.	0.36± Ac.	1.27± Ac.
			25.70± Ac.				

SW= Surface Waters (0.36± Ac)
W = Wetlands (25.34± Ac)

Wetlands Fill 6.50± Ac (31,460± cy)
Wetlands Excavate 1.30± Ac (18,876± cy)
Surface Waters Fill 0.36± Ac (1,742± cy)

Wetland Direct Impacts					
Wetland No.	No Impact (Ac)	Wetland Fill (Ac)	Wetland Excavate (Ac)	Fill Cubic Yards (cy)	Excavated Cubic Yards (cy)
1	12.09	3.06	-	14,810	-
2	4.18	0.42	-	2,033	-
3	-	3.02	1.30	14,617	18,876
16.27		6.50	1.30	31,460	18,876

Surface Waters Direct Impacts		
Surface Water No.	Surface Water Fill (Ac)	Fill Cubic Yards (cy)
1	0.36	1,742
0.36		1,742

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Processing Facility
Lee County, Florida

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IMPACT MAP

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Oct. 2024	20236121-000	36-44-25	As Shown	7

**SR82 RECOVERED MATERIALS PROCESSING FACILITY
PROTECTED SPECIES SURVEY**

October 2024

Prepared for:

**Lee County Board of County Commissioners
1500 Monroe Street
Fort Myers, FL 33901**

Prepared by:



**2122 Johnson Street
Fort Myers, Florida 33902**

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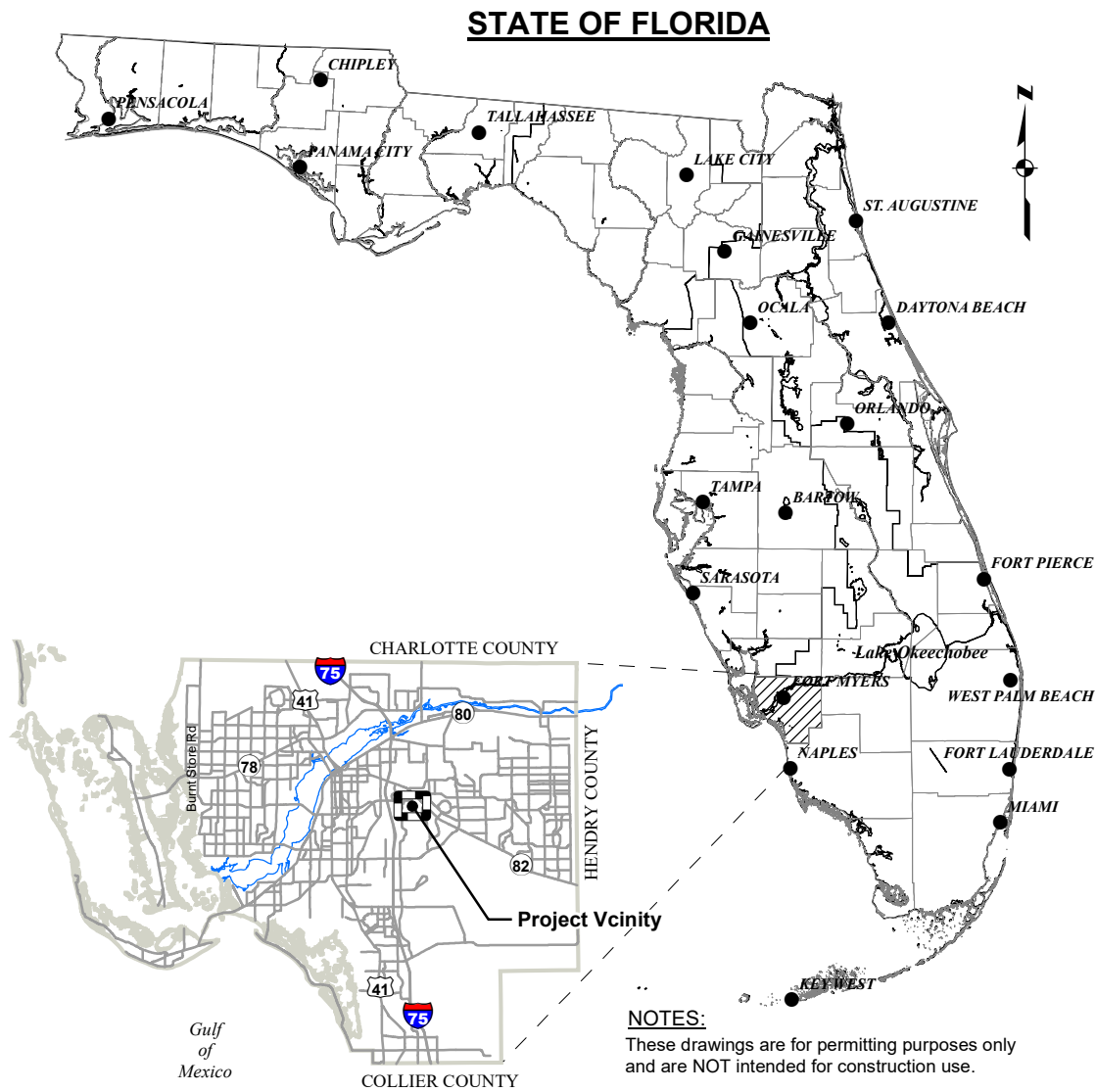
Attachment 1 FLUCFCS and Protected Species Survey Map

1.0 INTRODUCTION

The Lee County Board of County Commissioners propose to construct a new recovered materials processing facility along State Road 82 (SR82), south of Colonial Boulevard and adjacent to the existing landfill. The project design includes building(s), parking areas, a stormwater management system, and associated infrastructure. The parcel of land is approximately 50.00± acres and is located in Section 36, Township 44 South, Range 25 East in Lee County.

Johnson Engineering ecologists conducted a protected species survey (PSS) in the project boundary on August 23, 2024. Pedestrian belt transects were established to cover a minimum of 80% of each suitable habitat. This report represents the results of the PSS prepared in accordance with methodologies outlined by the Florida Fish and Wildlife Conservation Commission (FWC), U.S. Fish and Wildlife Service (FWS) and Lee County Land Development Code, Chapter 10, Article 3, Division 8 (Protection of Habitat). For a Location Map, please see **Figure 1-1**.

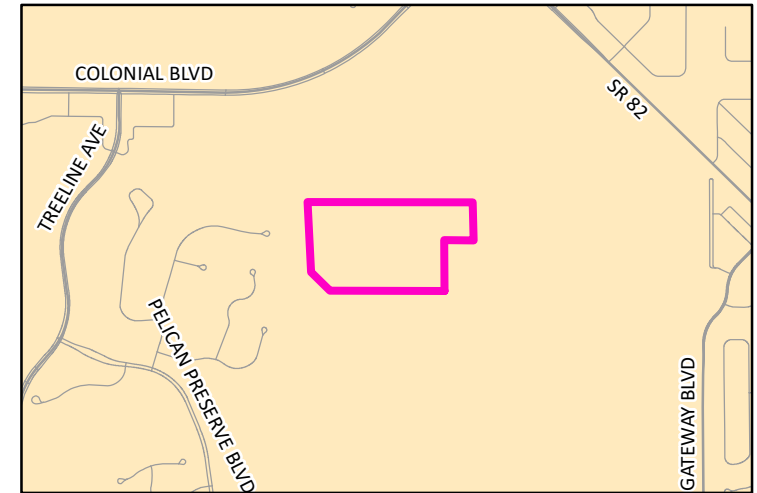
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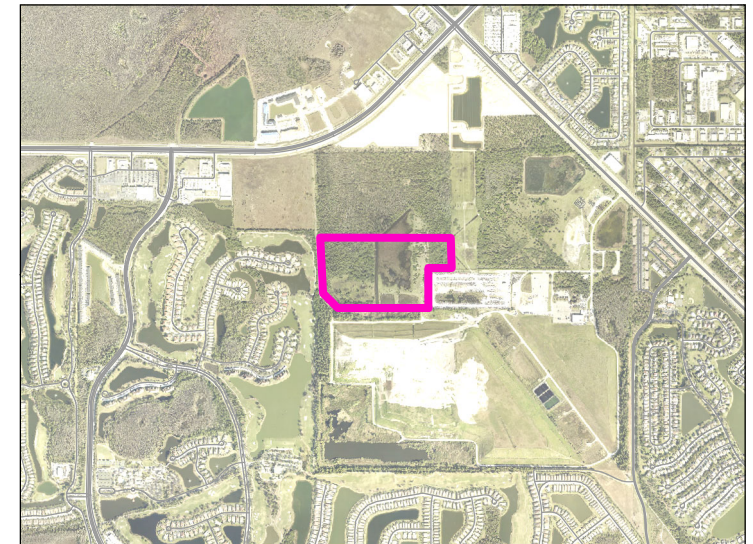
LEE COUNTY
N.T.S.

NOTES:
These drawings are for permitting purposes only
and are NOT intended for construction use.

Section 36, Township 44 South, Range 25 East
Latitude: 26.606842°, Longitude: -81.770170°



STREET MAP
N.T.S.



VICINITY AERIAL
N.T.S.

Notes: Aerial
Photo 2024

SR 82 Recovered Materials
Processing Facility
Lee County, Florida

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JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 334-0046
E.B. #642 & L.B. #642

Location Map

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Oct. 2024	20236121-000		Not to Scale	Figure 1-1

2.0 VEGETATION ASSOCIATIONS

Through mapping and classifying the various soil substrates and vegetative habitats occurring onsite, qualified determinations can be made with regard to the presence of protected species. A soil map depicting the types of substrates within the parcel is shown in **Figure 2-1**. The vegetation assemblages were classified according to Levels III and IV of the Florida Land Use, Cover and Forms Classification System (FLUCFCS) (Florida Department of Transportation, 1999). The approximate acreages for the various FLUCFCS Codes can be found in **Table 2-1**. The wetland lines and acreages have not been agency verified and are subject to change. Brief descriptions of each FLUCFCS code are given below.

FLUCFCS Code 150: General industrial (23.89 acres)

This land use includes the large, inner portion of the project site. FLUCFCS Code 150 as shown in the Environmental Drawings is consistent with mapping for the Lee County Development Order #LDO2007-00354, with an approval date of July 20, 2010.

FLUCFCS Code 211H: Hydric pasture (4.81 acres)

This land use occurs within the western portion of the project boundary. Active cattle operations are ongoing across the project site. Representative vegetation includes Brazilian pepper and cabbage palm (*Sabal palmetto*) in the canopy, and smartweed (*Persicaria* sp.), bulltongue arrowhead (*Sagittaria lancifolia* subsp. *lancifolia*), and marsh gentian (*Eustoma exaltatum*) in the herbaceous stratum.

FLUCFCS Code 422: Brazilian pepper (0.41 acres)

This land use occurs along the southern portion of the project boundary and is dominated by Brazilian pepper.

FLUCFCS Code 514: Ditch (0.36 acres)

This land use occurs along the southern property line. Representative vegetation includes Peruvian primrosewillow (*Ludwigia peruviana*) and Brazilian pepper.



Table 2–1 Vegetation Associations and Acreages

FLUCFCS Code	Description	Approx. Acreage	Status
150	General industrial	23.89	U
211H	Hydric pasture	4.81	W
422	Brazilian pepper	0.41	U
514	Ditch	0.51	SW
630E4	Wetland forested mixed (76-100% exotics)	20.53	W
	Total Upland =	24.30	
	Total Wetland =	25.34	
	Total Surface Water =	0.36	
	Total =	50.00	

*W=wetland, SW=surface water, U=upland

FLUCFCS Code 630E4: Wetland forested mixed, 76-100% exotics (20.53 acres)

This land use surrounds the western and northern perimeters of the project limits. Representative vegetation includes melaleuca (*Melaleuca quinquenervia*), Brazilian pepper, laurel oak (*Quercus laurifolia*), and cabbage palm.

3.0 SURVEY METHODOLOGY

The PSS was conducted in accordance with the Lee County Land Development Code, Chapter 10, Article 3, Division 8 (Protection of Habitat) as well as methods outlined in the Gopher Tortoise Permitting Guidelines (FWC 2023) and is valid for Lee County for five years. The PSS included field surveys and a literature review. Field surveys were conducted utilizing pedestrian belt transects. Transects were performed in all vegetation associations (FLUCFCS) listed by the Lee County Protected Species Ordinance, which may be inhabited by listed flora or fauna. The FLUCFCS and Protected Species Survey Map in **Appendix A** depicts the approximate survey transect locations and protected species observations onsite. The distances between the transects were established to cover a minimum of 80% of each habitat within the project area. **Table 3-1** lists the times and weather conditions during the field surveys.

Literature review sources included Florida’s Endangered and Threatened Species (FWC 2022), Florida Natural Areas Inventory (FNAI), FWS Environmental Conservation Online System (ECOS), as well as the species list referenced in the Lee County Protected Species Ordinance. Based on the literature review, a compilation of federal and state protected species was developed. **Table 3-2** lists the species referenced in the Lee County Protected Species Ordinance. A summary of visibility, number and total length of transects performed, and percent of each habitat covered is provided in **Table 3-3**.

Table 3–1 Dates, Times, Weather Conditions, and Purpose of Field Surveys

<u>Date</u>	<u>Time</u>	<u>Weather Conditions</u>	<u>Purpose</u>	<u>Ecologist</u>
August 23, 2024	8:00 A.M. – 12:00 P.M.	Sunny; Temperature 90s° F; Winds variable	Protected species survey	GFT, KRP, RDI

GFT = Greg Thomas, KRP = Kyle Philpot, RDI = David Isley

Table 3–2 Lee County Protected Species List

FLUCFCS	FLUCFCS Description	Potential Protected Species
150	General industrial	Gopher tortoise ²
211H	Hydric pasture	Crested caracara ¹ Everglade snail kite ¹ Florida panther Florida sandhill crane
514	Ditch	American alligator Eastern indigo snake ² Everglades mink Limpkin ³ Little blue heron Reddish egret Roseate spoonbill Snowy egret ³ Tricolored heron
630E4	Wetland forested mixed, 76-100% exotics	Eastern indigo snake ² Florida bonneted bat ¹ Florida panther Little blue heron Reddish egret Snowy egret ³ Tricolored heron Wood stork

Table 3-2 Notes:

1. Not referenced by Lee County Protected Species Ordinance but listed by FWS.
2. Based on presence of suitable habitat, although not referenced in Lee County Protected Species Ordinance.
3. Delisted by FWC but remains referenced in Lee County Protected Species Ordinance.

Table 3-3 Summary of Habitat Survey Coverage

FLUCFCS Code	Total Area (Acres)	Number of Transects	Approx. Transect Length (Feet)	Average Visibility (Feet)	Percent Covered
150	23.89	40	28,800	30	83
211H	4.81	16	5,700	30	82
422	0.41	3	950	15	80
514*	0.36	N/a	N/a	15	80
630E4	20.53	45	36,200	20	81

*Surveyed from bank

4.0 RESULTS/DISCUSSION

Table 4-1 summarizes the findings of the PSS. An Everglade snail kite, wood storks, and several listed wading bird species were observed either flying overhead or foraging onsite during the survey or during the 2024 crested caracara survey events. No evidence of protected flora was observed during the survey. Results of the completed 2023-24 Audubon's crested caracara nesting season survey are summarized below. No other direct observations of listed fauna were recorded onsite during the protected species survey. **Table 4-2** summarizes the non-listed species observed within the project boundary incidentally during the PSS.

Table 4-1 Lee County Protected Species Summary

Protected Species	FLUCFCS Area	Present	Absent	Density
<u>Birds</u>				
Crested caracara	211H		X	
Eastern black rail	514**		X	
Everglade snail kite	150*	X		
Florida sandhill crane	211H		X	
Limpkin	150*	X		
Little blue heron	514	X		

Reddish egret	150		X	
Roseate spoonbill	150*	X		
Snowy egret	150*	X		
Tricolored heron	150*	X		
Wood stork	630E4	X		
<u>Mammals</u>				
Everglades mink	514		X	
Florida panther	211H, 630E4		X	
<u>Reptiles</u>				
American alligator	514		X	
Eastern indigo snake	514, 630E4		X	
Gopher tortoise	150**		X	

*Specific habitat with listed species presence, although not referenced in Lee County Protected Species Ordinance;

**Based on presence of suitable habitat

Table 4-2 Non-listed Species Observations

Species Common Name	Species Common Name	Species Common Name
American coot	Cattle egret	Northern harrier
American crow	Common gallinule	Northern mockingbird
Anhinga	Double-crested cormorant	Osprey
Black-bellied whistling duck	Downy woodpecker	Palm warbler
Belted kingfisher	Great blue heron	Pied-billed grebe
Blue-gray gnatcatcher	Glossy ibis	Pileated woodpecker
Blue jay	Great egret	Red-shouldered hawk
Black vulture	Greater yellowlegs	Red-winged blackbird
Black-necked stilt	Killdeer	Snipe
Boat-tailed grackle	Mourning dove	Swallow-tailed kite
Blue-winged teal	Mottled duck	White ibis

American Alligator (*Alligator mississippiensis*)

Alligators are listed as federally threatened by FWS due to similarity of appearance (FT [S/A]) to the American crocodile. No critical habitat has been designated for this species.

No American alligators were observed on the project site. No adverse impacts are anticipated to the American alligator.

Crested Caracara (*Caracara plancus*)

The crested caracara is listed as federally threatened and the project location is within the FWS consultation area for this species. This species is known to utilize rural, dry-prairie, wet prairie, and pastureland habitats throughout south central Florida. No critical habitat has been designated for this species.

Crested caracara surveys were conducted during the 2023-24 breeding season and no individuals were observed in the vicinity of the project area. No adverse impacts to this species are anticipated based on the proposed project.

Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle was removed from the federal list of threatened and endangered species in 2007, though it is still afforded protection through the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The FWS has established a standard 660' protection zone around a bald eagle nest for this region [FWS 2007]. According to the Audubon EagleWatch GIS database, the nearest nest (LE-031) is approximately 2,800 feet southwest of the project boundary. Based on the distance of the project from the 660' protection zone of this nest, no adverse impacts to the bald eagle are anticipated.

Eastern Black Rail (*Laterallus jamaicensis* ssp. *jamaicensis*)

The eastern black rail is listed as federally threatened by the FWS. No critical habitat has been designated for this species. No eastern black rails were encountered during the protected species survey. This species requires areas of dense, hydrophytic herbaceous species up to 1-meter tall. Wetland areas on site are either forested, or hydric pasture (large, open areas). Thus, no adverse impact to this species is anticipated from the project.

Eastern Indigo Snake (*Drymarchon couperi*)

The eastern indigo snake is listed as federally threatened by the FWS and inhabits a wide variety of native and disturbed habitats throughout Florida. No eastern indigo snakes

were encountered during the protected species survey. No critical habitat has been designated for this species. The project will adhere to the FWS Standard Protection Measures for this species. For this reason, no adverse impacts to the eastern indigo snake are anticipated as a result of the project.

Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*)

The project area is located within the FWS consultation area of the federally endangered Everglade snail kite and 45± miles southwest of federally designated critical habitat near Lake Okeechobee. Snail kite habitat consists of freshwater marshes and the shallow vegetated edges of lakes (natural and man-made) where apple snails can be found. The nesting season for snail kites is primarily January through July, although nesting may occur year-round. One Everglade snail kite was observed flying above the General Industrial (FLUCFCS 150) land use (middle portion of project) during the 2024 caracara surveys. No evidence of snail kite nesting was identified.

The project proposes to create 4.28± acres of storm water management ponds onsite, which will provide continued foraging opportunities for this species. Further, the purchase of 2.90 herbaceous wetland mitigation credits will support enhancement and preservation of offsite, regionally significant habitat for this species. Based on the continued foraging opportunities onsite and purchase of wetland mitigation credits that will support enhancement of regionally significant habitat offsite, the project is not likely to adversely affect this species.

Florida Bonneted Bat (*Eumops floridanus*)

In 2013, FWS listed the Florida bonneted bat (*Eumops floridanus*; FBB) as endangered under the ESA. On April 8, 2024, FWS designated 1,160,625 acres of critical habitat for the FBB in 13 Florida counties. In August 2024, FWS released revised FBB Consultation Guidelines (2024 Guidelines) that include a revised Consultation Key and Consultation Area, and updated survey methods and Best Management Practices (BMPs). These 2024 Guidelines replace the previous 2019 FWS Guidelines. Project planning and permitting for this project was underway prior to the release of the 2024 Guidelines. Therefore, FWS consultation will occur to assess whether adherence to the 2019 Guidelines is sufficient to

ensure that the project does not result in adverse effects to the FBB or if additional BMPs will be required.

Florida Panther (*Puma concolor coryi*)

The Florida panther, listed as endangered by the FWS, generally requires expansive remote tracts of land with adequate prey, cover, and minimal amounts of disturbance. Preferred panther habitats include hardwood forest, pine forest, and cypress swamp, but non-preferred habitats, and riparian areas (both natural and man-made) can serve as travel corridors. On February 19, 2007, the FWS established a revised Florida Panther Focus Area map and “Panther Key and Rationale” (FWS 2007).

Portions of the project area fall within the secondary zone of the Florida Panther Focus Area. According to the February 2007 FWS Florida Panther Effect Determination Key (Panther Key), projects within the Focus Area that are greater than one acre in size “may affect” the species and consultation with the FWS is requested in accordance with Section 7 of the ESA. This consultation will occur during the federal permitting process for this project. Utilization of the project site by panthers is expected to be limited due to the lack of connectivity to adjacent habitats and the proximity to busy roadways and adjacent residential land uses. Compensation for impacts to panther habitat in the secondary zone will be offset using available credits at Lee County’s Section 33 regional mitigation site.

Wading Birds

Listed wading birds, such as the little blue heron, roseate spoonbill, snowy egret, and tri-colored heron may utilize the site for foraging based on presence of suitable habitat. No evidence of wading bird nests was observed onsite. Wetland and surface water impacts will be offset by offsite mitigation at the Section 33 regional mitigation site, and the construction of 4.28 acres of storm water management ponds with littoral areas suitable for foraging. Based on the above, the proposed project is not likely to adversely affect listed wading birds.

Wood stork (*Mycteria americana*)

The wood stork is listed as threatened by FWS. Typical foraging sites include freshwater marshes, ponds, hardwood and cypress swamps, narrow tidal creeks or shallow tidal pools, and artificial wetlands such as shallow, seasonally flooded roadside or agricultural ditches. No critical habitat has been designated for this species. No evidence of wood stork usage was observed during the survey. However, suitable habitat exists onsite for foraging when water levels are appropriate. Potential impacts to wood stork foraging habitat will be offset by the proposed construction of 4.28 acres of storm water management ponds which will include littoral areas suitable for wood stork foraging, as well as the proposed offsite mitigation credits from the Section 33 regional mitigation site.

5.0 REFERENCES

Florida Department of Transportation, State Topographic Bureau, Thematic Mapping Section, 1999. Florida Land Use Cover and Forms Classification System. Procedure No. 550-010-001-a.

Florida Fish and Wildlife Conservation Commission. 2022. Florida's Endangered and Threatened Species. <http://myfwc.com/media/1515251/threatened_endangered_species.pdf>

Lee County Land Development Code, Chapter 10, Article 3, Division 8 (Protection of Habitat). <http://www.municode.com/Resources/gateway.asp?pid=12625&sid=9>. (Site accessed September 10, 2024.)

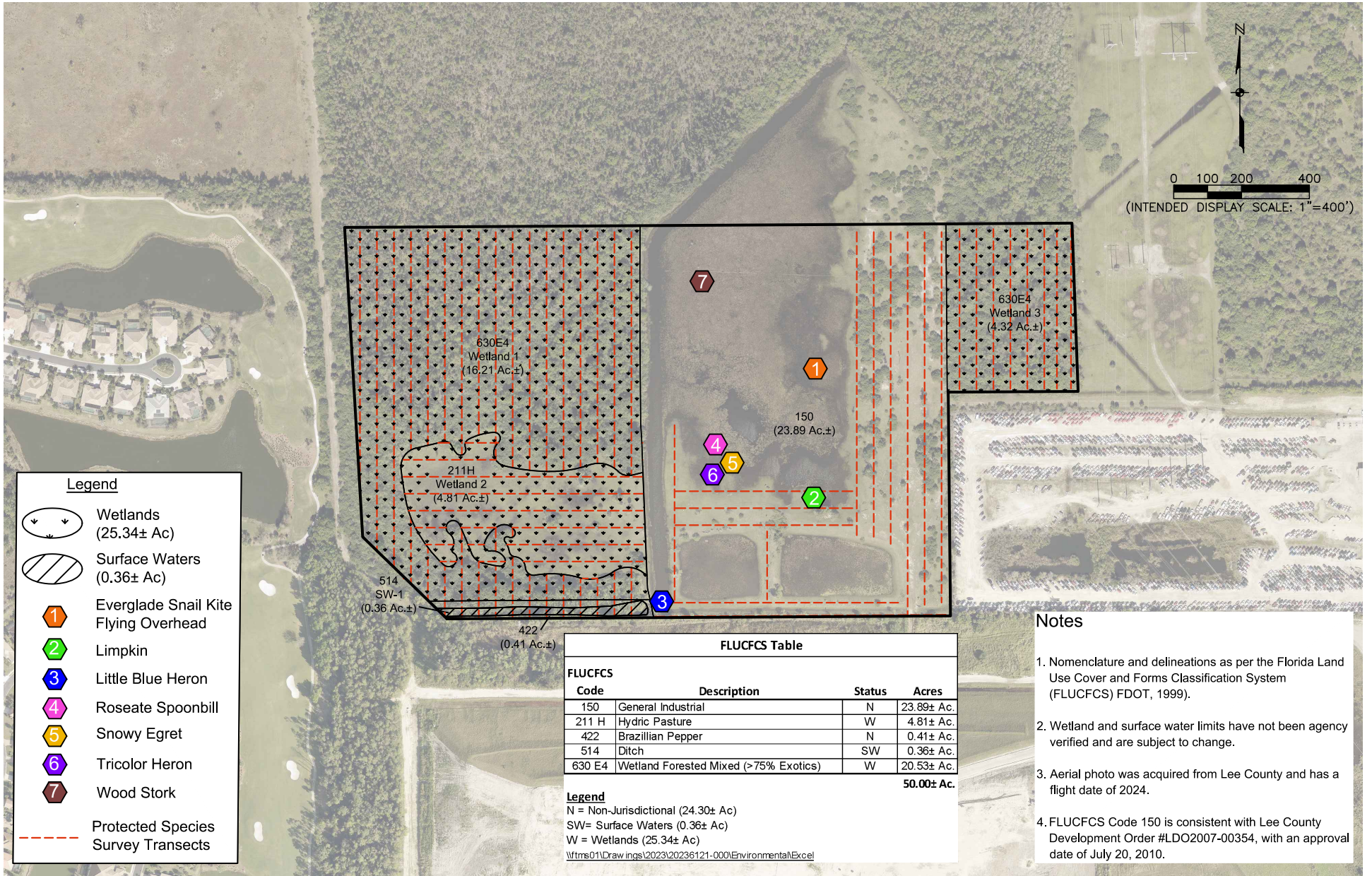
Natural Resources Conservation Service. Soil Survey of Lee County, Florida. U.S. Department of Agriculture, Washington, D.C.

U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. 23 pp.

Attachment 1

FLUCFCS and Protected Species Survey Map

\\ftrms01\Drawings\2023\20236121-000\Environmental\Exhibits\AOE Env Permit.dwg (PSS) bkm Oct 24, 2024 - 1:15pm



SR 82 Recovered Materials
Processing Facility
Lee County, Florida

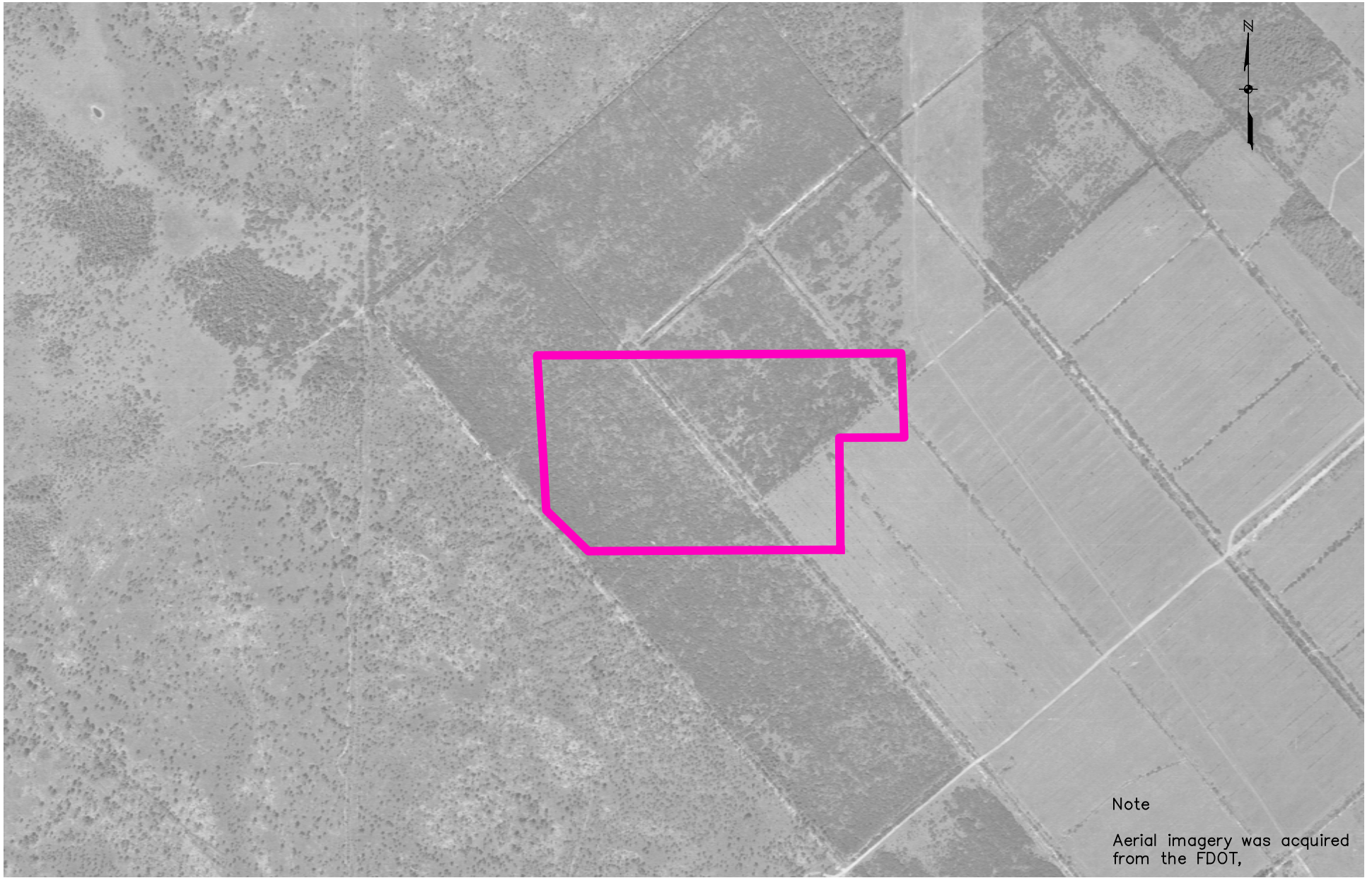
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ENGINEERING
— An Apex Company —

JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 334-0046
E.B. #642 & L.B. #642

PROTECTED SPECIES SURVEY MAP

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Oct. 2024	20236121-000	36-44-25	As Shown	10

\\\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (1968) bkm Aug 06, 2024 - 6:51am



Lee County MRF
Property Acquisition
Lee County, Florida

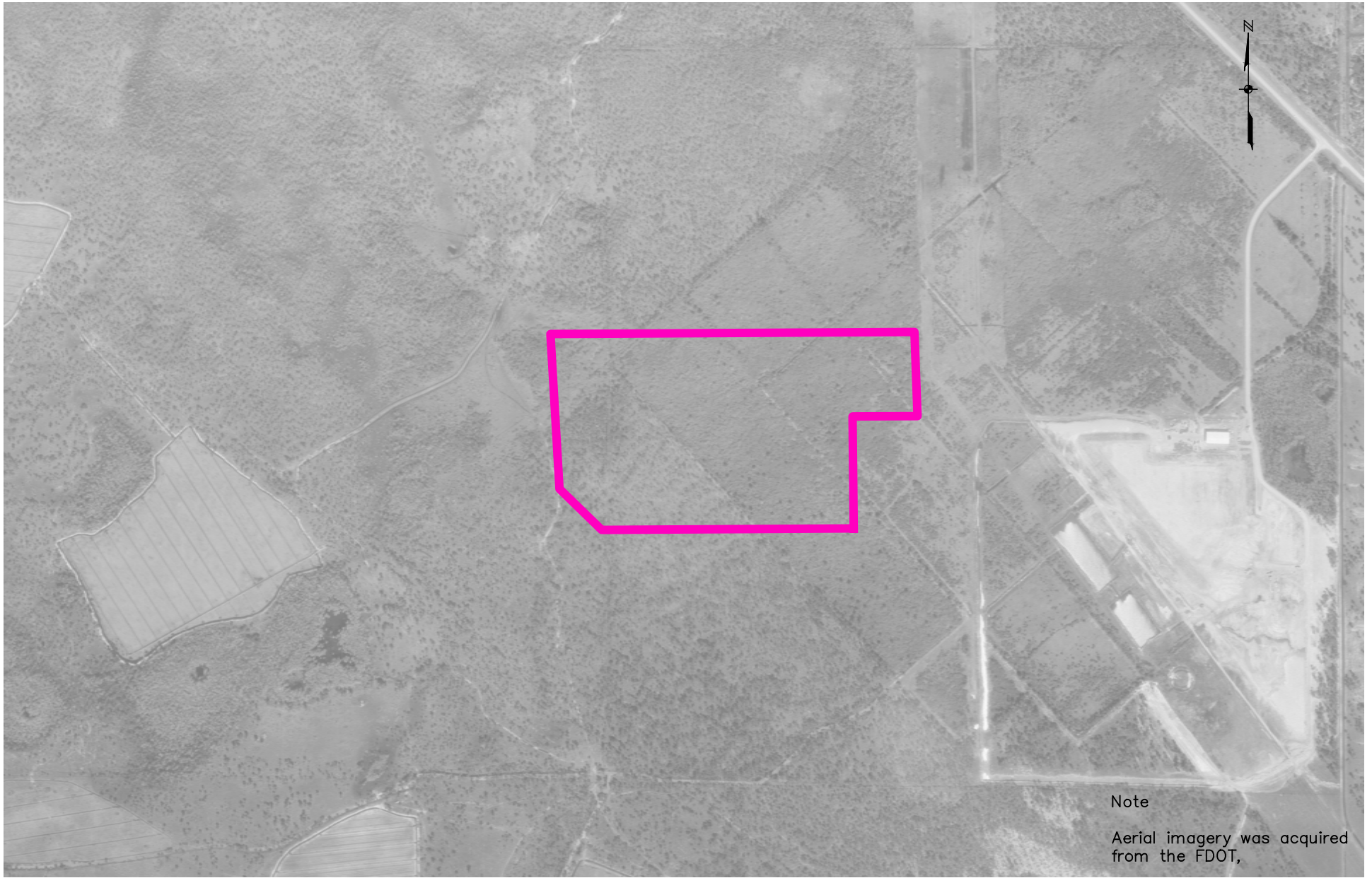
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ENGINEERING

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FORT MYERS, FLORIDA 33901
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1968 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	1

\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (1979) bkm Aug 06, 2024 - 6:42am



Note

Aerial imagery was acquired
from the FDOT,

Lee County MRF
Property Acquisition
Lee County, Florida

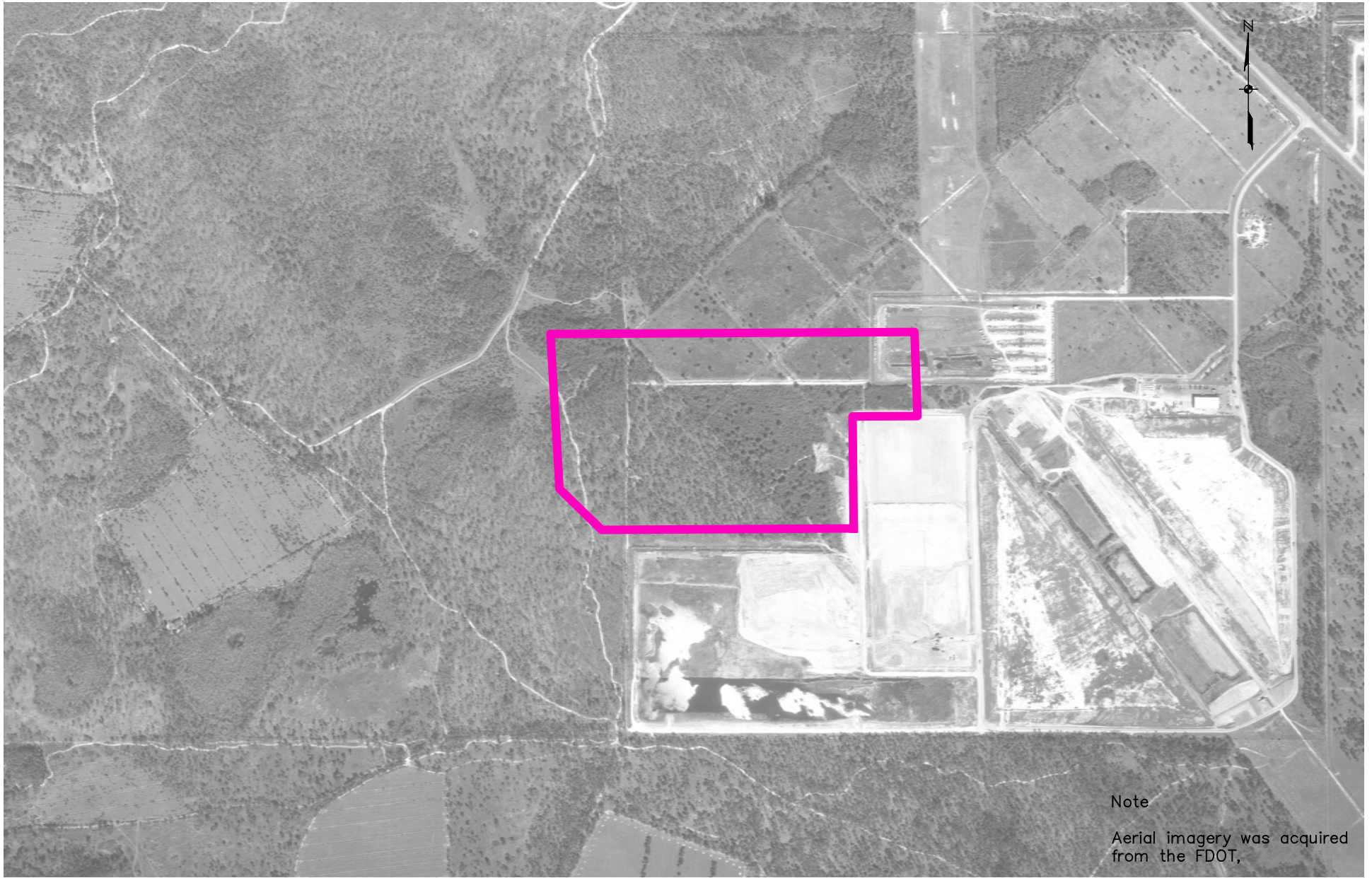
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FORT MYERS, FLORIDA 33901
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1979 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	2

\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (1989) bkm Aug 06, 2024 - 6:42am



Note

Aerial imagery was acquired
from the FDOT,

Lee County MRF
Property Acquisition
Lee County, Florida

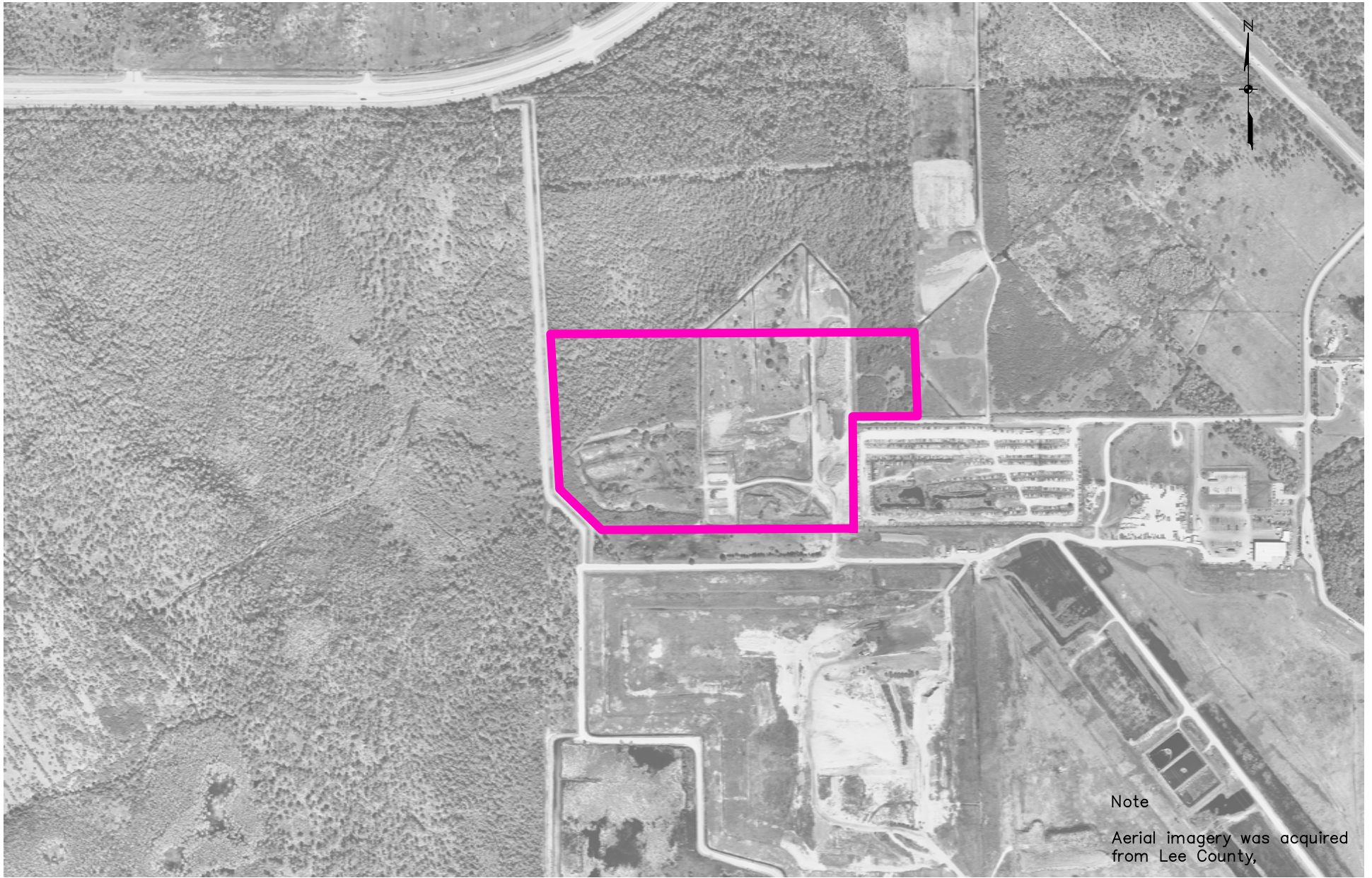
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FORT MYERS, FLORIDA 33901
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1989 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	3

\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (1999) bkm Aug 06, 2024 - 6:42am



Note
Aerial imagery was acquired
from Lee County,

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1999 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	4

\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (2008) bkm Aug 06, 2024 - 6:40am



Note

Aerial imagery was acquired
from Lee County,

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Lee County, Florida

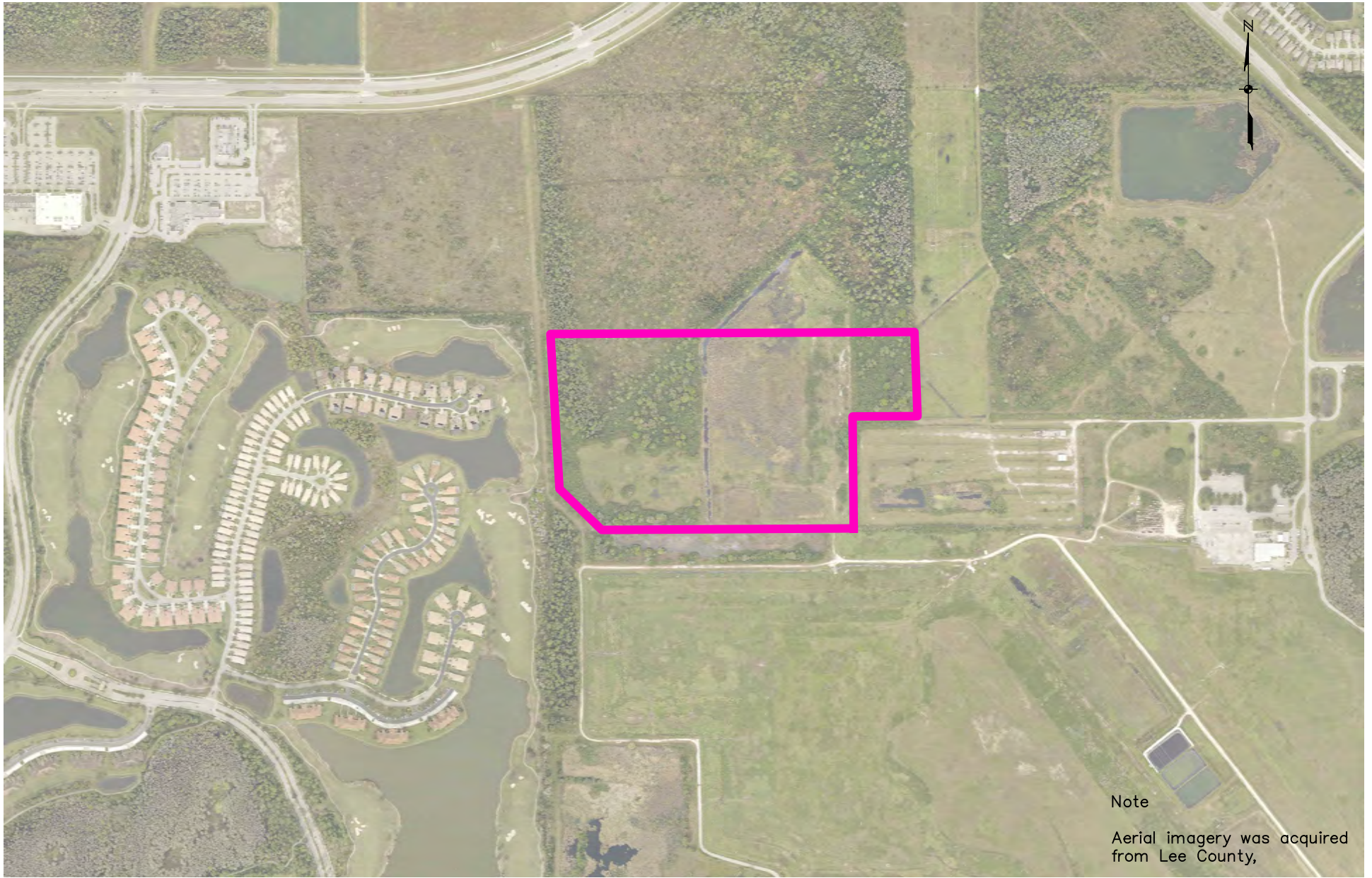
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2008 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	5

\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (2016) bkm Aug 06, 2024 - 6:41am



Note

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2016 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	6

\\ftms01\Drawings\2023\20236121-000\Environmental\Exhibits\Historic Aerials.dwg (2024) bkm Aug 06, 2024 - 6:41am



Note

Aerial imagery was acquired
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Lee County MRF
Property Acquisition
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2024 AERIAL IMAGE

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
August 2024	20236121-000	36-44-25	As Shown	7

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR82 Recovered Materials Processing Facility City/County: Fort Myers/Lee County Sampling Date: 10/23/2024
Applicant/Owner: Lee County State: FL Sampling Point: WDP-1
Investigator(s): Greg Thomas Section, Township, Range: S36, T44S, R25E
Landform (hillslope, terrace, etc.): Wetland Forested Mixed (FLUCFCS 630E4) Local relief (concave, convex, none): _____ Slope (%): 0-1
Subregion (LRR or MLRA): _____ Lat: 26.607686 Long: -81.769021 Datum: _____
Soil Map Unit Name: Cypress lake fine sand, slough, 0-1% slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>1</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
No other recorded data available.			
Remarks:			

VEGETATION – Use scientific names of plants.

Sampling Point: WDP-1

Tree Stratum (Plot size: <u>10 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling Stratum (Plot size: <u>10 ft</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Shrub Stratum (Plot size: <u>10 ft</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>10 ft</u>)				Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.
1. <u>Bacopa monnieri</u>	<u>65</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Eleocharis interstincta</u>	<u>15</u>	<u>N</u>	<u>OBL</u>	
3. <u>Nymphaea odorata</u>	<u>4</u>	<u>N</u>	<u>OBL</u>	
4. <u>Commelina diffusa var. diffusa</u>	<u>3</u>	<u>N</u>	<u>FACW</u>	
5. <u>Ammannia latifolia</u>	<u>2</u>	<u>N</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
<u>89</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>10 ft</u>)				
1. <u>None</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/1	100					Fine sand	
3-9	10YR 6/1	95					Fine sand	5% 10YR 3/1 streaks; clear, wavy boundary
9-12	10YR 7/2	95					Fine sand	5% 10YR 3/1 streaks; abrupt, smooth boundary

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators:**

- ☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Organic Bodies (A6) (LRR P, T, U)
☐ 5 cm Mucky Mineral (A7) (LRR P, T, U)
☐ Muck Presence (A8) (LRR U)
☐ 1 cm Muck (A9) (LRR P, T)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Coast Prairie Redox (A16) (MLRA 150A)
☐ Sandy Mucky Mineral (S1) (LRR O, S)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☒ Stripped Matrix (S6)
☐ Dark Surface (S7) (LRR P, S, T, U)

- ☐ Polyvalue Below Surface (S8) (LRR S, T, U)
☐ Thin Dark Surface (S9) (LRR S, T, U)
☐ Loamy Mucky Mineral (F1) (LRR O)
☐ Loamy Gleyed Matrix (F2)
☐ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)
☐ Marl (F10) (LRR U)
☐ Depleted Ochric (F11) (MLRA 151)
☐ Iron-Manganese Masses (F12) (LRR O, P, T)
☐ Umbric Surface (F13) (LRR P, T, U)
☐ Delta Ochric (F17) (MLRA 151)
☐ Reduced Vertic (F18) (MLRA 150A, 150B)
☐ Piedmont Floodplain Soils (F19) (MLRA 149A)
☐ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) (LRR O)
☐ 2 cm Muck (A10) (LRR S)
☐ Reduced Vertic (F18) (outside MLRA 150A,B)
☐ Piedmont Floodplain Soils (F19) (LRR P, S, T)
☐ Anomalous Bright Loamy Soils (F20)
 (MLRA 153B)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12) (LRR T, U)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present?

Yes



No



Remarks:



Wetland Data Point “WDP-1” (Wetland Forested Mixed; FLUCFCS 630E4)
See attached map for data point location.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: SR82 Recovered Materials Processing Facility City/County: Fort Myers/Lee County Sampling Date: 10/23/2024
Applicant/Owner: Lee County State: FL Sampling Point: WDP-2
Investigator(s): Greg Thomas Section, Township, Range: S36, T44S, R25E
Landform (hillslope, terrace, etc.): General Industrial (FLUCFCS 150) Local relief (concave, convex, none): _____ Slope (%): 0-1
Subregion (LRR or MLRA): _____ Lat: 26.607720 Long: -81.769306 Datum: _____
Soil Map Unit Name: Cypress lake fine sand, slough, 0-1% slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? No Are "Normal Circumstances" present? Yes ☒ No ☐
Are Vegetation No, Soil No, or Hydrology No naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	>12
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
No other recorded data available.			
Remarks:			

VEGETATION – Use scientific names of plants.

Sampling Point: WDP-2

Tree Stratum (Plot size: <u>10 ft</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>6</u></td> <td>x 2 = <u>12</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>80</u></td> <td>x 4 = <u>320</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>86</u> (A)</td> <td><u>332</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.86</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>6</u>	x 2 = <u>12</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>80</u>	x 4 = <u>320</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>86</u> (A)	<u>332</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>6</u>	x 2 = <u>12</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>80</u>	x 4 = <u>320</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>86</u> (A)	<u>332</u> (B)																	
_____ = Total Cover																		
Sapling Stratum (Plot size: <u>10 ft</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
0 = Total Cover																		
Herb Stratum (Plot size: <u>10 ft</u>)																		
1. <u>Paspalum notatum var. notatum</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Cynodon dactylon</u>	<u>10</u>	<u>N</u>	<u>FACU</u>															
3. <u>Cyperus brevifolius</u>	<u>6</u>	<u>N</u>	<u>FACW</u>															
4. <u>Spermacoce verticillata</u>	<u>3</u>	<u>N</u>	<u>N/a</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
89 = Total Cover				Definitions of Vegetation Strata: Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH). Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH. Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height. Woody vine – All woody vines, regardless of height.														
Woody Vine Stratum (Plot size: <u>10 ft</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
Remarks: (If observed, list morphological adaptations below).																		

SOIL

Sampling Point: WDP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 4/1	100					Fine sand	
3-9	10YR 6/1	95					Fine sand	5% 10YR 3/1 streaks; clear, wavy boundary
9-12	10YR 7/2	95					Fine sand	5% 10YR 3/1 streaks; abrupt, smooth boundary

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**

- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils³:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20)
- (MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐

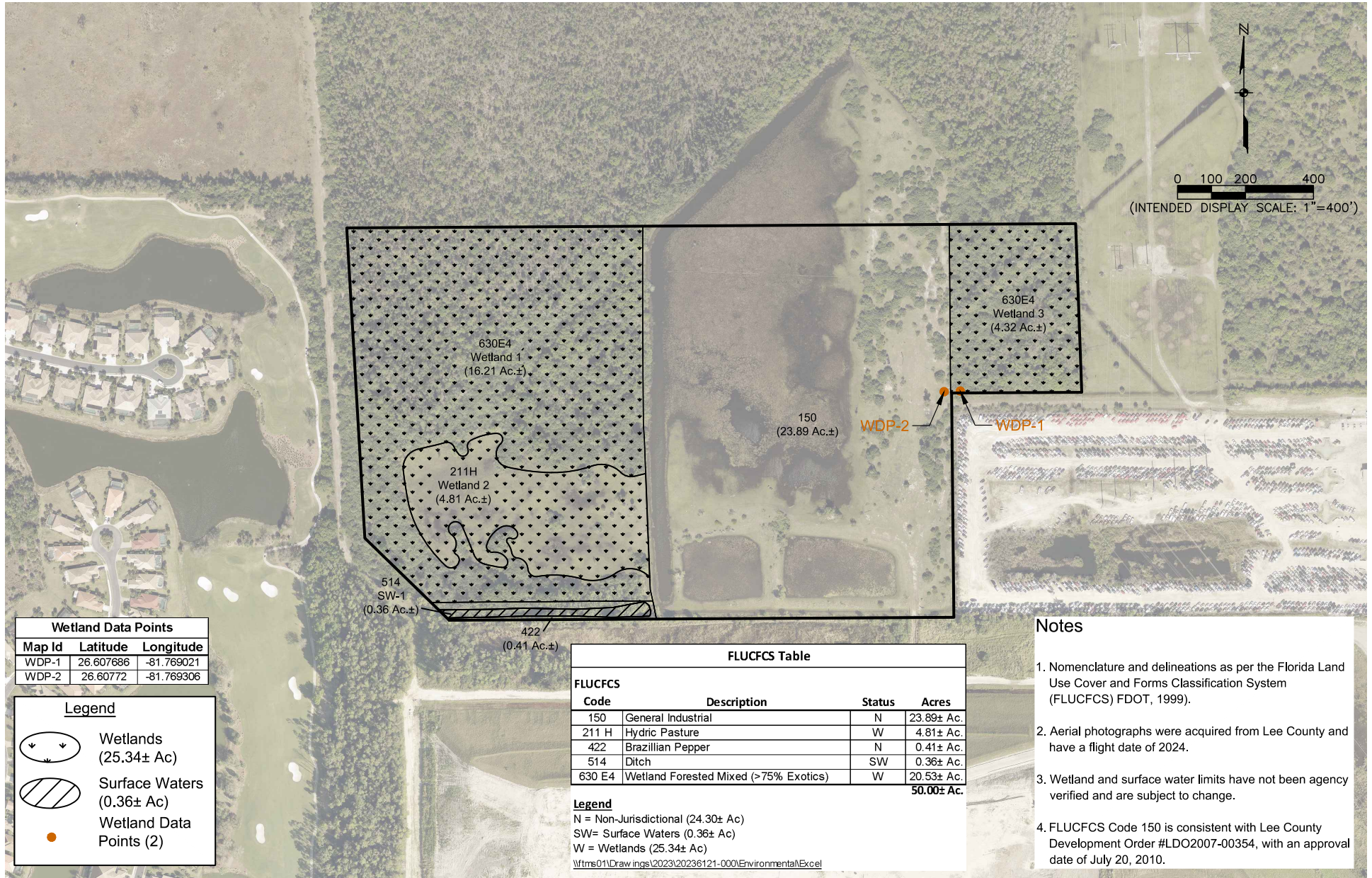
No ☒

Remarks:



Wetland Data Point “WDP-2” (General Industrial; FLUCFCS 150)
See attached map for data point location.

\\fms01\Drawings\2023\20236121-000\Environmental\Exhibits\AOE Env Permit.dwg (WD Point) bkm Oct 24, 2024 - 1:44pm



SR 82 Recovered Materials
Processing Facility
Lee County, Florida

JOHNSON
ENGINEERING
— An Apex Company —

JOHNSON ENGINEERING, LLC.
2122 JOHNSON STREET
FORT MYERS, FLORIDA 33901
PHONE: (239) 334-0046
E.B. #642 & L.B. #642

WETLAND DATA POINT MAP

DATE	PROJECT NO.	FILE NO.	SCALE	SHEET
Oct. 2024	20236121-000	36-44-25	As Shown	9



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Attachment D - Protected Species Survey Report
Attachment E - Historic Aerials
Attachment F - Wetland Data Forms

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Attachment B - Environmental Supplement Report w UMAM.pdf		1.7 MB	4808B7D890A2BBE87E8B49B4E0E7266234AB89217F105C675E9BF774BE9C69F0
Attachment C - Environmental Permit Drawings.pdf		21.3 MB	C444C94B3BC3157939AF71DD15244B5CF6153908A8CA5DF89E98E090C7C31333
Attachment D - Protected Species Survey Report.pdf		9.2 MB	B8366E86876CB6D5FEDB721F67B1B45D01CE6A4859EF9860CFBEF67EBBCD6956
Attachment E - Historic Aerials.pdf		5.5 MB	F57986BFDDCFD67D64ABEBD6B2109EB156F7ABB32D4A859569026E3C29650262
Attachment F - Wetland Data Forms.pdf		3.4 MB	9B24CF73F68557D78067D8094223C55530008B727D7F0A1460078FA8E2E7115

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