Jay Chesser
Station Manager
Hines Energy Complex

April 3, 2025

Mr. Nate Senn
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 5500
Tallahassee, FL 32399-2400

Subject: Duke Energy Florida, LLC
Hines Energy Complex
Conditions of Certification PA 92-33K
Submittal of Petition for Modification-Cooling Pond Water Treatment Evaporative Spray Ponds

Dear Mr. Senn,

Pursuant to Condition XXXIV.C of the above-referenced Conditions of Certification (COC) dated January 9, 2025, Duke Energy Florida (DEF) is petitioning for a modification of the COC to authorize the construction of lined Evaporative Spray Ponds as part of the Hines Cooling Pond Clarification Program. Enclosed please find the application package in the following attachments:

- Attachment I: Evaporative Spray Ponds Project Description and Conceptual Design
- Attachment II: Environmental Resource Permitting (ERP) Application for the lined Evaporative Spray Ponds.

A wire transfer in the amount of $10,000 for the modification application fee will be submitted to the Department upon receipt of this modification request and as instructed by the Department.

Should you have any questions regarding this submittal, please contact Ms. Ilia Balcom at (813) 362-5123 or ilia.balcom@duke-energy.com. Please copy Ms. Balcom on all correspondence related to this submittal.

Sincerely,

Jay Chesser
Station Manager
Hines Energy Complex

Enclosures

Attachment I

LINED EVAPORATIVE SPRAY PONDS DESCRIPTION AND CONCEPTUAL DESIGN

PROJECT DESCRIPTION

FACILITY BACKGROUND

Duke Energy Florida (DEF) owns and operates the Hines Energy Complex (HEC) located in Bartow, Florida in Polk County. HEC is located on Couty Road 555 south of State Road 640 as seen in Figure 1. It is approximately 7.5 miles to the southwest of the City of Bartow. The HEC is located within the Southwestern Water Use Caution Area (SWUCA) of the Southwest Florida Water Management District (SWFWMD).

The HEC is an 8,200-acre site that was built on previously mined land within the Bone Valley Phosphate Mining District. This area includes over 900 acres for power generation and ancillary facilities, a 1,200-acre cooling pond reservoir, and 2,000 acres of buffer areas along the east and southeast portions of the site. A detailed map of the HEC is presented in Figure 2.

Commercial operation of the first natural gas-fueled, combined-cycle power block unit (PB-1) began in 1999 and is capable of producing 482 megawatts. Additional power block units, PB-2, PB-3, and PB-4, were constructed in 2003, 2005, and 2007, and are capable of producing 516, 500, and 530 megawatts, respectively.

PROJECT DESCRIPTION

Rising Total Dissolved Solids (TDS) in the cooling pond reservoir have impacted groundwater quality and unit performance at the station. To reduce dissolved solids and counteract cycling in the Cooling Pond, DEF is permitted for and is in the beginning stages of constructing a Cooling Pond Water Treatment Facility (CPWTF). It will consist of a 2-stage Reverse Osmosis (RO) system, with a Recovery RO Stage 1 system providing primary treatment of the filtered water. The reject from the first state RO shall be sent to RO Stage 2 system for additional treatment and recovery. The CPWTF is also designed to reduce total hardness and alkalinity, thereby reducing TDS entering the groundwater and improving system performance by reducing scaling potential.

Recovery RO Stage 1 shall be designed to receive 1,000 gallons per minute (gpm) of feed flow and shall operate with a net recovery of at least 75%. Reject from Recovery RO Stage 1 will be stored in the Recovery RO Stage 2 Feed Tank. Recovery RO State 2 shall be designed to receive 250 gpm of Recovery RO Stage 1 Reject and shall operate with a net recovery of no less than 50%. The two RO systems shall be designed such that required feed, and recovery shall meet design requirements assuming a 15% reduction in performance as indicated by decreased permeate flow, increased differential pressure, or decreased

permeate quality. Recovery RO Stage 2 reject will be directed to the Brine Storage Tank for further treatment.

The CPWTF has been permitted through Modification K to Hines' Conditions of Certification. The final order was issued on January 9, 2025. The final CPWTF design and Wastewater Application Form 2CG completed with final design information will be submitted as a post-certification submittal.

The Brine Handling system shall consist of the Brine Storage Tank and Brine Forwarding Pumps. The Evaporative Pond consists of two, 11-acre, lined ponds with forced evaporators to be constructed in the area just south of the Hines main plant area, in a parcel that used to act as a parking area. The lined ponds will be cleaned out periodically, about every 7 years on average per pond, and the dried salts will be disposed of at an authorized off-site landfill. Although the initial design is for 1,000 gpm, the infrastructure will be designed and constructed for a total of 4,000 gpm capacity to allow for future expansion as needed. This will increase the frequency of pond cleaning depending on the flow of the expanded RO system.

The evaporative spray ponds will be laid out lengthwise east to west, with a middle berm between the ponds. This berm will house the forced evaporators and will be the point where piping from the RO system will meet the evaporative spray ponds. The berm will be covered with (asphalt/concrete) to allow for maintenance and the equipment that will accompany the forced evaporators, such as the electrical cabinets, weather station, and additional equipment. There will not be a building for employees on the berm or around the ponds, as the forced evaporators will be controlled remotely and by the weather station.

The preliminary design footprint of the dams and ponds around the external toe road is about 33.5 acres. The ponds will have an area of 11 acres each at the water line. The ponds will have 5 feet of freeboard. The freeboard is designed to contain a 25-year/24-hour storm event. The side slopes will be 3H/1V. The crest road is 20 feet around the exterior with a 50 feet wide central dividing dam for the evaporator systems.

The ponds will be lined. The proposed liner system will consist of a "lower" liner of 60 mils. HDPE with an "upper" liner/layer of soil-cement. This liner system is a preliminary design and may change based on subject matter expert recommendation. If it does change, it will be to implement a more elaborate liner system. A final liner design will be included in a post-certification submittal.

At this point in the design, preliminary dam height is about 14.5 feet high from outside grade to the crest of the dam. However, we may have to stretch the dams to the east to accommodate a slight increase in dam height to accommodate the thickness of the proposed liner system with its cover pavement. This change may slightly increase the total area of the construction.

Figure 1 indicates the general layout of the lined evaporative spray ponds with forced evaporators. Since this is a conceptual design, the final design information for Evaporative Spray Pond design will be included in the Wastewater Application Form 2CG to be submitted for both phases of the project as a post-certification submittal. Following the submittal of this COC Modification request, DEF will work with the Department's Air Resource Management Division on the permitting of the forced evaporators, after engineering of the forced evaporators is far enough along to support that.

With the addition of the two lined evaporative spray ponds, DEF will submit a revised Ground Water Monitoring Plan (GWMP) with the addition of one groundwater well to monitor potential impacts from the lined ponds. On March 14, 2025, a notification was submitted to the Department of the installation of two piezometers to determine the location of the new groundwater well. Figure 2 shows the proposed locations of the two piezometers. The Department approved the installation of the piezometers on March 26, 2025. DEF will submit a revised GWMP proposal as a post-certification submittal once it is determined which piezometer will become the final permanent groundwater monitoring well for the lined ponds.

DEF is also requesting to mine 174,000 cubic yards of the sand tailings from a portion of the Hines property referred to as N11-C. This area is shown in Figure 3. This area was part of the mining reclamation project but has been released from the program. The proposed plan is for DEF to mine the top five feet of sand from the higher elevation part of this area for fill. 174,000 cubic yards of sand are needed for use as fill for the RO construction area and the dams of the evaporative spray ponds. This sand will also be used in the making of soil cement for the "upper" layer of the liner system for the evaporative spray ponds.

NOTES:

1. SITE PLAN TAKEN FROM GOOGLE EARTH AND IS CONCEPTUAL FOR ESTIMATING AND FEASIBILITY ONLY. DO NOT USE FOR CONSTRUCTION.

N

SITE PLAN

SCALE: 1" = 500'-0"

500 250 0 500 1000 1500

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
3	02/17/2025	REVISED EVAP POND LOCATIONS	J_B	JH	DD	
2	06/05/2024	REVISED BRINE POND LOCATIONS	J_B	AWS		
1	10/13/2023	ISSUED FOR BID	J_B	DCS	CRG	AWS
0	04/10/2023	ISSUED FOR BID	J_B	DCS	CRG	AWS

PRELIMINARY
NOT FOR CONSTRUCTION

DUKE ENERGY®

FIGURE 1
HINES ENERGY STATION WATER TREATMENT SITE PLAN
OVERALL

FILENAME: C1001.dwg
SCALE: 1"=500'
SHEET: **C1001**

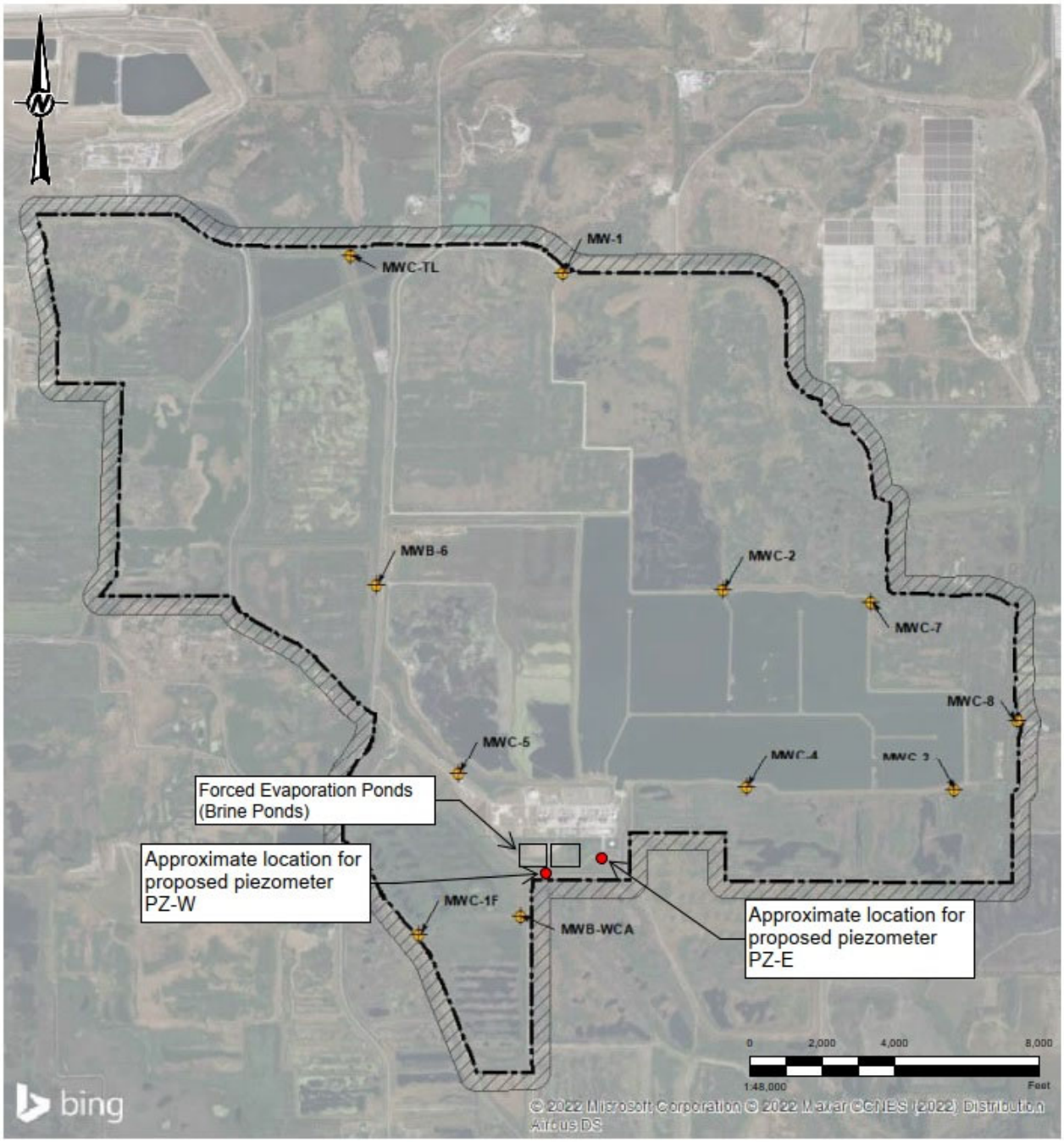
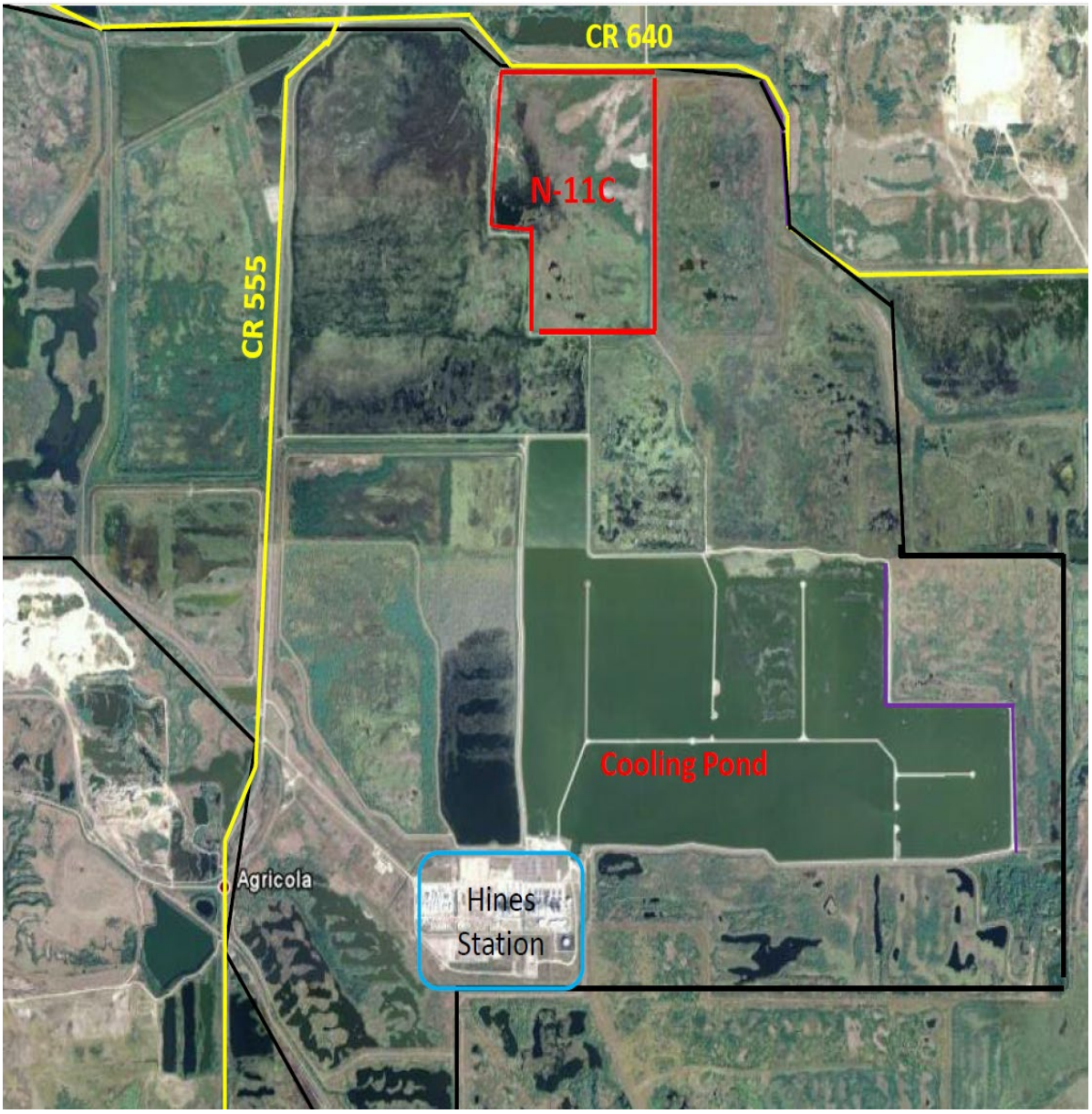


Figure 2: Existing Monitoring Well Network and Proposed Piezometers

FIGURE 3- N-11C LOCATION



ATTACHMENT II

ENVIRONMENTAL RESOURCE PERMITTING APPLICATION PACAKGE

PROJECT DESCRIPTION

Duke Energy is planning on the following addition to the Hines Energy Complex (HEC), located at 7700 County Road 555, Bartow, FL with Parcel ID 233114000000011010, Parcel ID 243036000000012010, and Parcel ID 243113000000031010:

- Gravel laydown area and gravel access road
- Brine ponds and piping associated (to be designed by others, and to be permitted under industrial wastewater permit by others)
- Sand borrow area

The proposed gravel laydown area and access road will have 1.57 acres of semi-impervious area, they are located in the Plant Island area of the HEC. The ponds and associated piping are not part of the stormwater permitting, they are to be designed and permitted separately by others under an industrial wastewater permit. A set of stormwater engineering plans are submitted herewith for review.

The proposed improvement in the Plant Island area will follow the existing drainage pattern, it will drain to existing pond SA-12 via on site ditch that is just north of the proposed project location. The existing pond SA-12 is then pumped to cooling pond N-16. The existing pond SA-12 has a top of bank elevation of 160 ft NGVD per original Siting Certification Application.

The stormwater system of HEC was designed to be a closed, zero surface water discharge system. Per the Conditions of Certification (COC), Section (B)(II)(A)(h), for the purposes of reducing groundwater consumption, "*the licensee shall…increasing the amount of impervious surface at the Plant Island portion of Hines Energy Complex to increase surface water runoff flows into the cooling pond*"

In compliance with the General Conditions of the COC Section (A)(XXIX)(A)(1)(a) and (b), an environmental Resources Permit (ERP) Application will be submitted to Southwest Florida Water Management District (SWFWMD) for review, along with this letter and its attachments. The amount of runoff produced in association with the added impervious area is 1.24 ac-ft, with a peak discharge rate of 4.71 cfs, the discharge rate and volume is relatively insignificant relative to the existing pond SA-12 and the existing cooling pond N-16 in the HCE closed/zero surface discharge design.

The proposed brine ponds themselves will be permitted under industrial wastewater permit by others. The wetland impacts as a result of the proposed brine ponds will be submitted for permitting as part of the ERP application. The proposed brine ponds will result in impacts to a 0.39-acre isolated disturbed wetland. The proposed brine pond site is located on land that was previously mined as part of the phosphate mining operations for the region. The isolated wetland that is proposed to be impacted is a remnant depression that has remained from the topographical changes during the mine reclamation process. Since the restoration of the site, the project area has been invaded with dense stands of Brazilian pepper, cogon grass and other nuisance and invasive plant species. Additional information is provided in the attached Environmental Narrative. No impact will be made to the 0.25 acres of wetlands in center of the sand borrow area and the wetland adjacent to it , and a 25-foot buffer will be maintained.

Mitigation is not being proposed for the wetland impacts since mitigation is not required for activities located in isolated wetlands less than one-half acres in size based on the criteria identified in Section 10.2.2.1 of the SWFWMD Applicant's Handbook.

The following documents are being included in support of this request:

-Engineering Plans
-Flow from Additional Permeant Impervious Area Calculations
-Post-Development Drainage Basin Map
-Environmental Narrative (including ERP Application Forms A and C)

N

SITE LOCATION

NTS

STORMWATER PERMIT DRAWINGS FOR

DUKE ENERGY HINES ENERGY COMPLEX SOUTH PARKING LOT

COUNTY ROAD 555, BARTOW, FL 33830

DUKE ENERGY PROJECT NO.
10393550

BARTOW, FL 33830
MARCH 2025

INDEX OF DRAWINGS

CIVIL

C-000	COVER SHEET
C-001	GENERAL NOTES
C-002	EXISTING CONDITIONS
C-003	OVERALL SITE KEY PLAN
C-010	OVERALL DEMOLITION PLAN
C-020	OVERALL EROSION CONTROL PLAN
C-021	AREA 1 - EROSION CONTROL PLAN
C-022	AREA 2 - EROSION CONTROL PLAN
C-023	AREA 3 - EROSION CONTROL PLAN
C-100	OVERALL SITE PLAN
C-101	AREA 1 - SITE PLAN
C-102	AREA 2 - SITE PLAN
C-103	AREA 3 - SITE PLAN
C-200	OVERALL GRADING AND DRAINAGE PLAN
C-201	AREA 1 GRADING AND DRAINAGE PLAN
C-202	AREA 2 GRADING AND DRAINAGE PLAN
C-203	AREA 3 GRADING AND DRAINAGE PLAN
C-400	DETAILS

811
Know what's below.
Call before you dig.

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

COVER SHEET

FILENAME	COVER SHEET	SHEET	C-000
SCALE	N/A		

EROSION CONTROL NOTES:

1. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATION BEGINS AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
2. THE FOLLOWING RECORDS SHALL BE MAINTAINED ON OR NEAR SITE: THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR; THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; THE DATES WHEN STABILIZATION MEASURES ARE INITIATED; INSPECTION RECORDS AND RAINFALL RECORDS.
3. THE CONTRACTOR SHALL MAINTAIN A RAIN GAUGE AND DAILY RAINFALL RECORDS AT THE SITE OR USE A REFERENCE SITE FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION.
4. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 10 DAYS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA IS SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED.
5. CONSTRUCTION MUST BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED AREAS.
6. SEDIMENT SHOULD BE REMOVED FROM SEDIMENT TRAPS, SILT FENCES, SEDIMENTATION PONDS AND OTHER SEDIMENT CONTROLS AS NECESSARY AND MUST BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50% OR AS DIRECTED BY OWNER.
7. THE CONTRACTOR SHALL REMOVE SEDIMENT FROM ALL DRAINAGE STRUCTURES BEFORE ACCEPTANCE BY THE OWNER.
8. THE CONTRACTOR SHALL REMOVE THE TEMPORARY EROSION AND WATER POLLUTION CONTROL DEVICES ONLY AFTER A SOLID STAND OF GRASS HAS BEEN ESTABLISHED ON GRADED AREAS AND WHEN IN THE OPINION OF THE OWNER, THEY ARE NO LONGER NEEDED.

DEMOLITION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL CHARTED AND UNCHARTED UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
2. THE CONTRACTOR SHALL VERIFY THE LIMITS OF DEMOLITION WITH THE OWNER PRIOR TO COMMENCEMENT OF WORK.
3. IN AREAS WHERE EXISTING PAVEMENT, WALKS, OR CURBS ARE TO BE REMOVED, SAW CUT TO PROVIDE A CLEAN EDGE. COORDINATE EXTENT OF PAVEMENT DEMOLITION WITH THE LIMIT OF NEW IMPROVEMENTS ON THE SITE LAYOUT PLAN & UTILITY INSTALLATION.
4. CONTRACTOR SHALL COORDINATE PHASING OF THE DEMOLITION WITH OWNER PRIOR TO BEGINNING WORK. DISRUPTION OF EXISTING UTILITY SERVICES AND TRAFFIC PATTERNS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND INITIATED ONLY AFTER APPROVAL BY THE OWNER AND THE UTILITY COMPANIES.
5. CAVITIES LEFT BY STRUCTURE REMOVAL SHALL BE SUITABLY BACKFILLED AND COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
6. THE CONTRACTOR SHALL USE WATER SPRINKLING AND OTHER SUITABLE METHODS AS NECESSARY TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION WORK.
7. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND REMOVAL NECESSARY TO ACCOMPLISH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.
8. THE CONTRACTOR SHALL PRESERVE AND PROTECT SURVEY CONTROL POINTS AND SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DISTURBED CONTROL POINTS.
9. EXISTING LIGHT FIXTURES BEING REMOVED SHALL BE FIRST OFFERED TO THE OWNER PRIOR TO DISPOSING OF THEM. COORDINATE LIGHTING DEMOLITION AND LAYOUT WITH THE ELECTRICAL DRAWINGS.
10. EXISTING TREES TO BE PRESERVED ARE TO BE PROTECTED BEFORE BEGINNING CONSTRUCTION IN ACCORDANCE WITH THE TREE PROTECTION NOTES ON THIS PLAN AND NOTES/DETAILS ON THE LANDSCAPE PLAN.
11. NO EXISTING STORM SEWER LINES SHALL BE DEMOLISHED UNTIL THE NEW LINES HAVE BEEN INSTALLED AND ARE PLACED INTO OPERATION.
12. WHERE WATER LINE AND SEWER LINE ABANDONMENT IS PLANNED, THE CONTRACTOR MAY ABANDON WATER LINES AND SEWER LINES IN PLACE WHERE THEY OCCUR AT LEAST 24" (TO TOP OF PIPE) BELOW FINAL SUBGRADE ELEVATIONS AND OUTSIDE THE BUILDING FOOTPRINT. ALL UTILITY LINES BEING ABANDONED IN PLACE SHALL HAVE ALL ENDS PERMANENTLY CLOSED USING A CONCRETE PLUG.
13. WHERE EXISTING IRRIGATION LINES LIE WITHIN THE AREA AFFECTED BY THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL REWORK THE EXISTING IRRIGATION SYSTEMS IN ACCORDANCE WITH DIRECTIVES NOTED ON THE LANDSCAPE PLAN. SERVICE SHALL BE MAINTAINED DURING CONSTRUCTION TO THE LANDSCAPED AREAS CURRENTLY IRRIGATED.

GENERAL NOTES

1. THE PROJECT SITE IS SHOWN ON POLK COUNTY JURISDICTION, AS PARCEL 24-31-14-000000-011010 AND PARCEL 24-31-13-000000-031010.
2. BASE INFORMATION WAS TAKEN FROM A CADD FILE NAMED "2400137_PLANTOPO" PROVIDED BY DUKE ENERGY DATED 2025-01-29. THIS MAP WAS PRODUCED BY PHOTOGRAMMERTRIC METHODS FROM LIDAR DATA AND AERIAL PHOTOGRAPHY. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED. HDR AND ANY OF THEIR CONSULTANTS SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY AND/OR COMPLETENESS OF THAT INFORMATION SHOWN HEREON OR ANY ERRORS OR OMISSIONS RESULTING FROM SUCH.
3. THE SITE LAYOUT IS BASED ON REFERENCE POINTS AS NOTED.
4. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
5. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CALL NATIONAL ONE CALL (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
6. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.
7. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED IN ACCORDANCE WITH LOCAL STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT. COORDINATE PAVEMENT TRENCHING LOCATIONS WITH SITE CIVIL, PLUMBING AND ELECTRICAL PLANS.
8. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY.
9. DIMENSIONS ARE TO FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
10. CONCRETE FOR CURBS AND SIDEWALKS SHALL BE 3500 PSI CONCRETE.
11. ANY WORK UNACCEPTABLE TO THE OWNER SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
12. ACCESSIBLE RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12. GRADES WITHIN ACCESSIBLE SPACES SHALL BE MAXIMUM 2% IN ALL DIRECTIONS.
13. THE PROPOSED BUILDING SHALL BE LAID OUT UTILIZING THE EXISTING STRUCTURE AS A CONTROL POINT AND THE ARCHITECTURAL DRAWINGS. DIMENSIONS SHOWN TO THE PROPOSED BUILDING ARE CALCULATED TO THE FACE OF EXTERIOR WALL. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
14. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.
15. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
16. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.
17. THE CONTRACTOR SHALL COLD PLANE IN THE DIRECTION OF TRAFFIC.
18. THE CONTRACTOR WILL BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
19. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF POLK COUNTY.
20. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO POLK COUNTY.
21. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.

SITE GRADING NOTES

1. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 1.57 ACRES.
2. THE SUBJECT PROPERTY DOES LIE WITHIN A SPECIAL FLOOD HAZARD ZONE (ZONE A) ACCORDING TO COMMUNITY PANEL NO. 12105C0675G AND NO. 12105C0700G OF THE F.E.M.A. FLOOD INSURANCE RATE MAPS FOR POLK COUNTY, FL, WITH AN EFFECTIVE DATE OF 12/22/2016.
3. CONSTRUCT SILT BARRIERS BEFORE COMMENCING ANY GRADING OPERATIONS REFER TO EROSION CONTROL SHEETS.
4. MULCH AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETED, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
5. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
6. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
7. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF THE STORM DRAIN CONNECTIONS AT THE BUILDING WITH THE PLUMBING PLANS.
8. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
9. THE CONTRACTOR SHALL ADJUST THE CASTINGS OF ALL NEW AND EXISTING STRUCTURES TO MATCH PROPOSED FINISH GRADES.
10. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
11. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
12. ALL CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL TO 1 VERTICAL OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.
13. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.
14. MINIMUM GRADE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0%. THE MAXIMUM GRADES WITHIN ACCESSIBLE SPACES SHALL BE 2% IN ANY DIRECTION.
15. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.
16. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL, SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR HIS/HER REPRESENTATIVE.
17. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE EXPOSED DURING CONSTRUCTION PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED, AND SHALL BE APPROVED BY THE ENGINEER.
18. THIS GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL SOILS REPORT HAS BEEN PREPARED AND IS AVAILABLE FROM THE OWNER. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
19. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
20. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.
21. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
22. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL SUPPLY ADDITIONAL TOP SOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE.

SITE GRADING NOTES (CONT.)

23. TOP OF GRATE ELEVATIONS AND LOCATION OF COORDINATES FOR DRAINAGE STRUCTURES SHALL BE AS SHOWN ON THE DETAIL, UNLESS NOTED OTHERWISE. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADES.
24. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF POLK COUNTY.
25. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. GROUNDWATER INFILTRATION INTO EXCAVATIONS SHOULD BE EXPECTED, AND THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.
26. REINFORCED CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III, WALL "B". HDPE SHALL BE CORRUGATED, SMOOTH WALL N-12 PIPE WITH SOIL TIGHT JOINTS.
27. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.
28. THE CONTRACTOR SHALL PROVIDE AN ASBUILT SURVEY STAMPED BY A LICENSED SURVEYOR IN THE STATE OF FLORIDA OF ALL PUBLIC STORM SYSTEMS, ONSITE DETENTION PONDS, AND WATER QUALITY MEASURES VERIFYING COMPLIANCE WITH DESIGN DOCUMENTS.
29. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY DEVICES.
30. FILL IN GREATER QUANTITIES OF 500 CY NEEDS TO HAVE CURRENT CONTAMINTATION TESTING. ALL FILL MUST COME FROM AN FDOT APPROVED BURROW PIT.
31. ANY DISTURBED SOIL IN THE CUT OR FILL AREAS WILL NEED TO BE COMPACTED IN 1 FOOT LIFTS AND MEET A MINIMUM DENSITY OF 98% AS REQUIRED BY AASHTO T-180.

C:\pwworking\east01\d4312842\10393550-00C-001.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

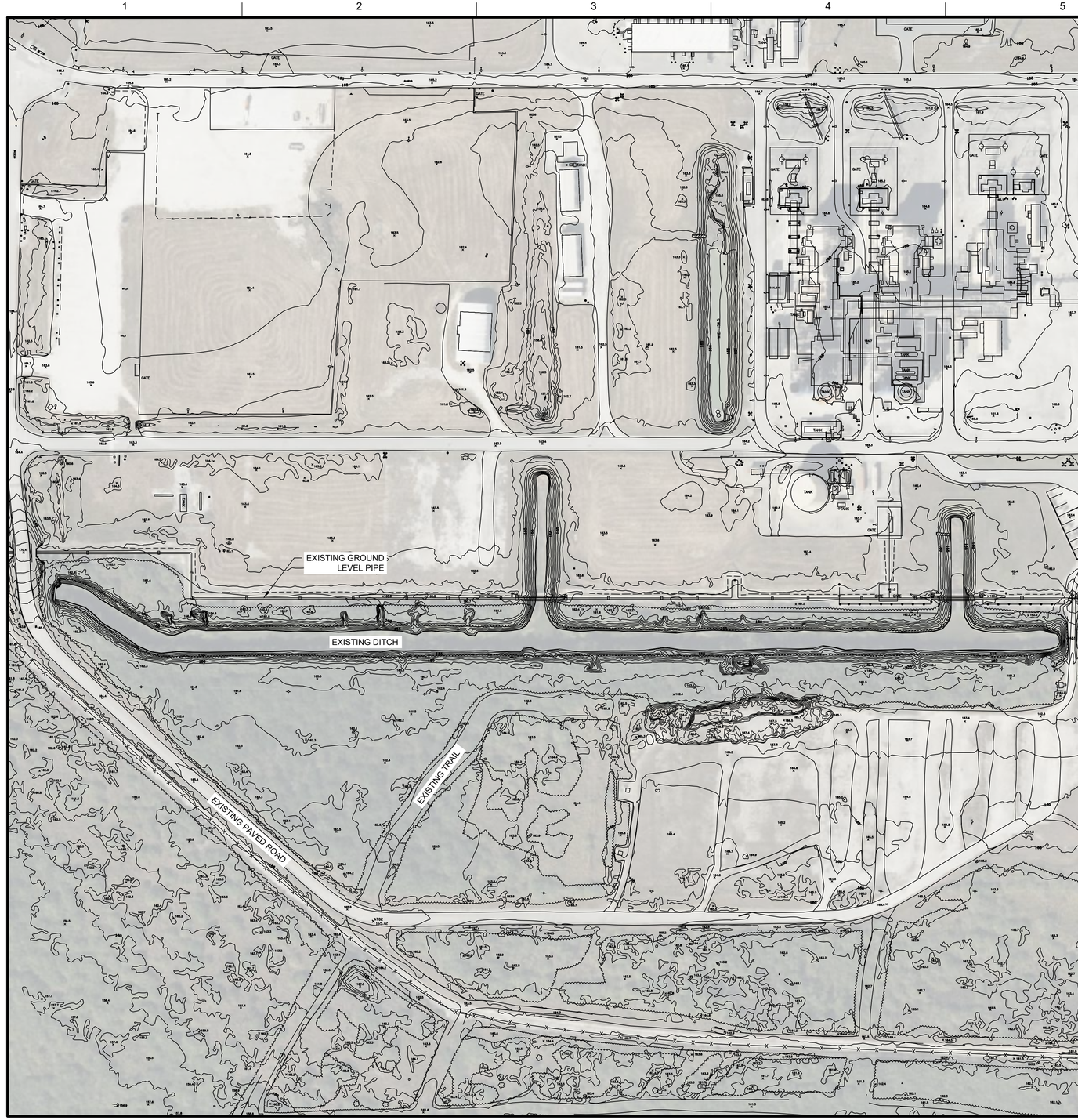
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

GENERAL NOTES

FILENAME: GENERAL NOTES
SCALE: N/A
SHEET: C-001



LEGEND

- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- 163.5 EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. AREA 3 NOT SURVEYED, SHOWN FOR CLARITY.

SURVEYORS NOTES

1. THIS MAPPING PRODUCT WAS REQUESTED BY THE CLIENT TO BE PREPARED WITH AN EQUIVALENT LEGACY MAPPING SCALE OF 1:600 MAPPING SCALE WHICH IS EQUIVALENT TO A HORIZONTAL ACCURACY OF 1.22 FEET AT THE 95% CONFIDENCE INTERVAL.
2. THIS MAP WAS PRODUCED BY PHOTOGRAMMETRIC METHODS FROM LIDAR DATA AND AERIAL PHOTOGRAPHY.
3. COMPILED VECTOR FEATURES HAVE BEEN PRODUCED TO MEET A HORIZONTAL ACCURACY OF 1.22 FEET AT THE 95% CONFIDENCE INTERVAL IN CLEAR UNOBSCURED AREAS. PLANIMETRIC FEATURES THAT LIE IN AREAS DELINEATED AS "VISUALLY OBSCURED" MAY NOT ADHERE TO THIS ACCURACY.
4. THE GROUND SURFACE WAS PRODUCED TO MEET A 0.30 FOOT VERTICAL ACCURACY CLASS, IN CLEAR UNOBSCURED AREAS, TO SUPPORT THE GENERATION OF 1-FOOT CONTOUR INTERVALS.
5. THE DELIVERED ELEVATION SURFACE IS THE SOURCE FOR ANY DELIVERED DERIVATIVE PRODUCTS (E.G. CONTOURS). THE PROJECT'S ELEVATION SURFACE, AS DELIVERED TO THE CLIENT, SHOULD BE UTILIZED AS THE SOURCE FOR THE CREATION OF FURTHER DERIVATIVE ELEVATION PRODUCTS OR SUBSEQUENT COMPUTATIONS.
6. LIDAR DATA WAS COLLECTED NOMINALLY AT ~38 POINTS PER SQUARE METER (PPM), RESULTING IN AN EQUIVALENT 6.9 CM NOMINAL POINT SPACING, TO SUPPORT THE PRODUCTS DELIVERED.
7. IMAGERY WAS COLLECTED TO SUPPORT THE ORTHORECTIFICATION OF 2.7 INCH GROUND SAMPLE DISTANCE (GSD) IMAGERY.
8. DATE OF AERIAL IMAGERY CAPTURE: SEPTEMBER 17TH, 2024.
9. DATE OF LIDAR CAPTURE: SEPTEMBER 17TH, 2024.

0 100 200
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\10431294\21\03935550-00V-101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

EXISTING CONDITIONS

FILENAME	EXISTING CONDITIONS	SHEET	C-002
SCALE	1" = 100'		

0 1000 2000
GRAPHIC SCALE (IN FEET)

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

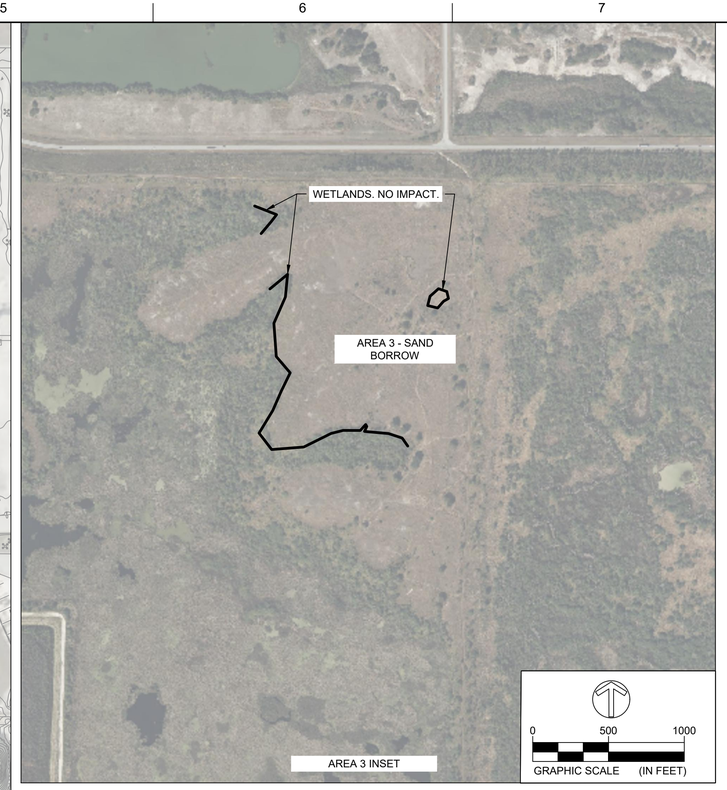
ISSUED FOR PERMITTING

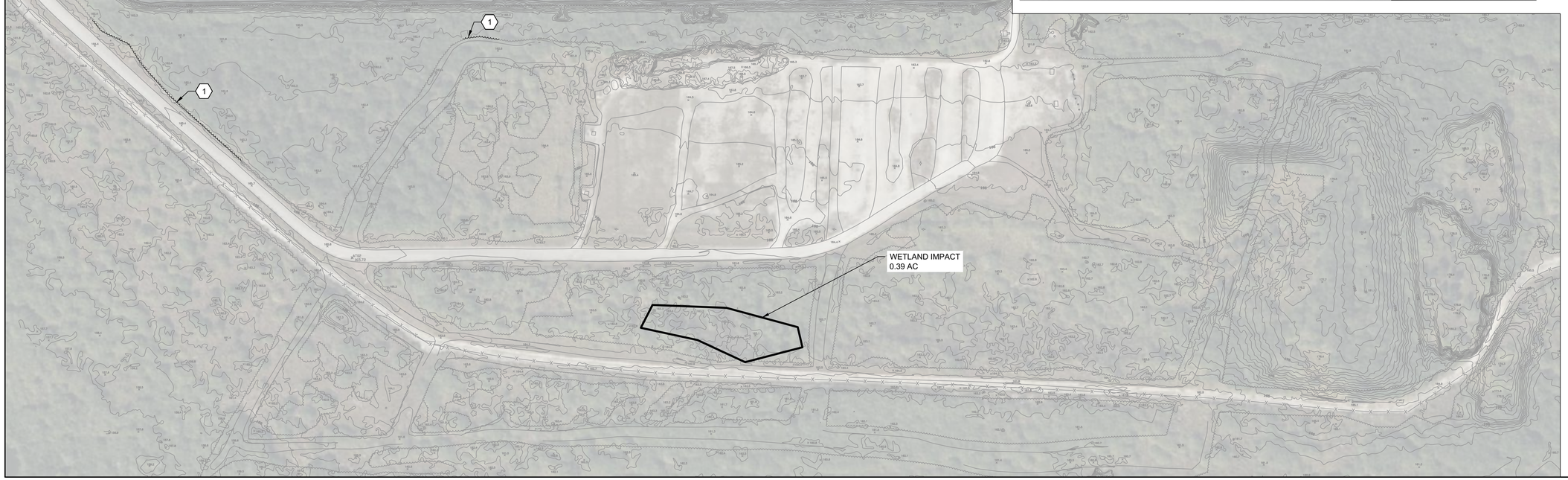
DUKE ENERGY®

OVERALL SITE KEY PLAN

FILENAME	OVERALL SITE KEY PLAN	SHEET	C-003
SCALE	1" = 1000'		

C:\pwworking\east01\d0437284\21\03935504-01CS201.dwg





LEGEND

- EXISTING TREELINE
- REMOVE EXISTING TREELINE
- 160 — EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- 163.5 × — EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. AREA 3 NOT SURVEYED, SHOWN FOR CLARITY. NO DEMOLITION IN THIS AREA.

KEYNOTES

1. REMOVE VEGETATION.

C:\pwworking\east01\d4312842\1039350-000\X101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

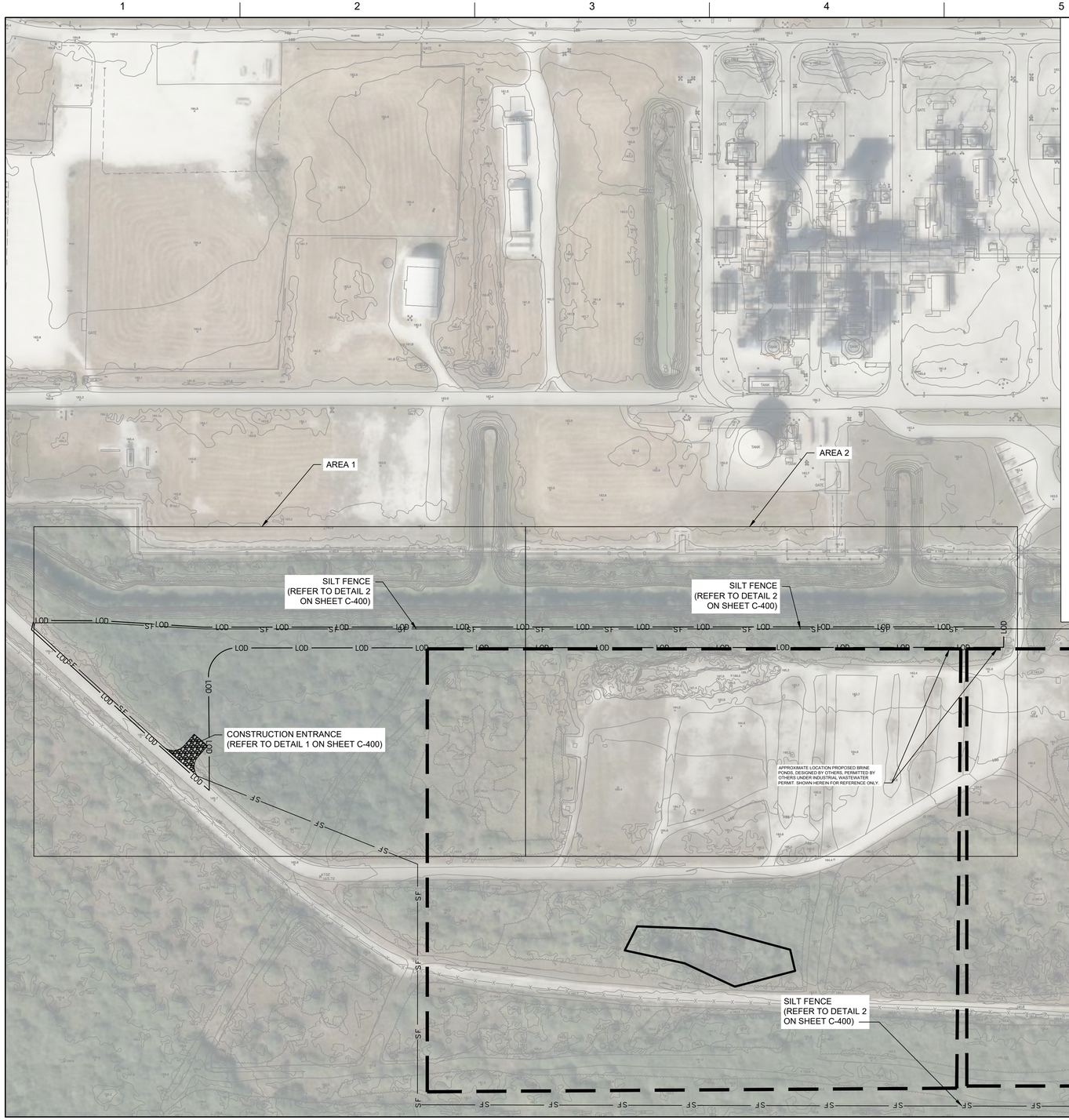
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

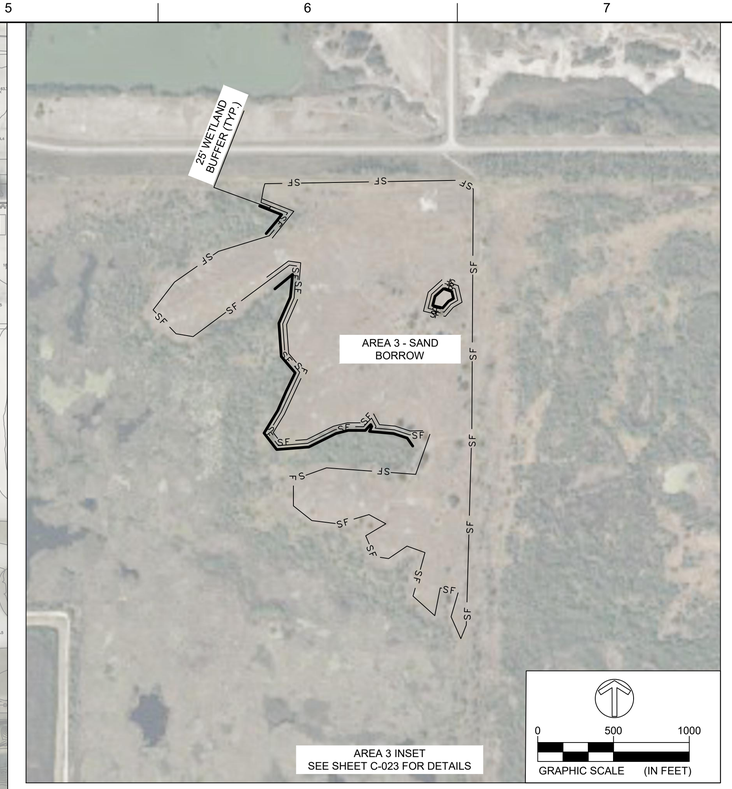
ISSUED FOR PERMITTING

DUKE ENERGY®

OVERALL DEMOLITION PLAN

FILENAME	DEMOLITION PLAN	SHEET	C-010
SCALE	1" = 100'		





LEGEND

- SILT FENCE
- CONSTRUCTION ENTRANCE
- WETLAND LIMITS
- PROPOSED BRINE PONDS
- LIMIT OF DISTURBANCE
- EXISTING TREELINE
- EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 100 200
GRAPHIC SCALE (IN FEET)

C:\pwworking\eas01\d4312842\10393550-01CG101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

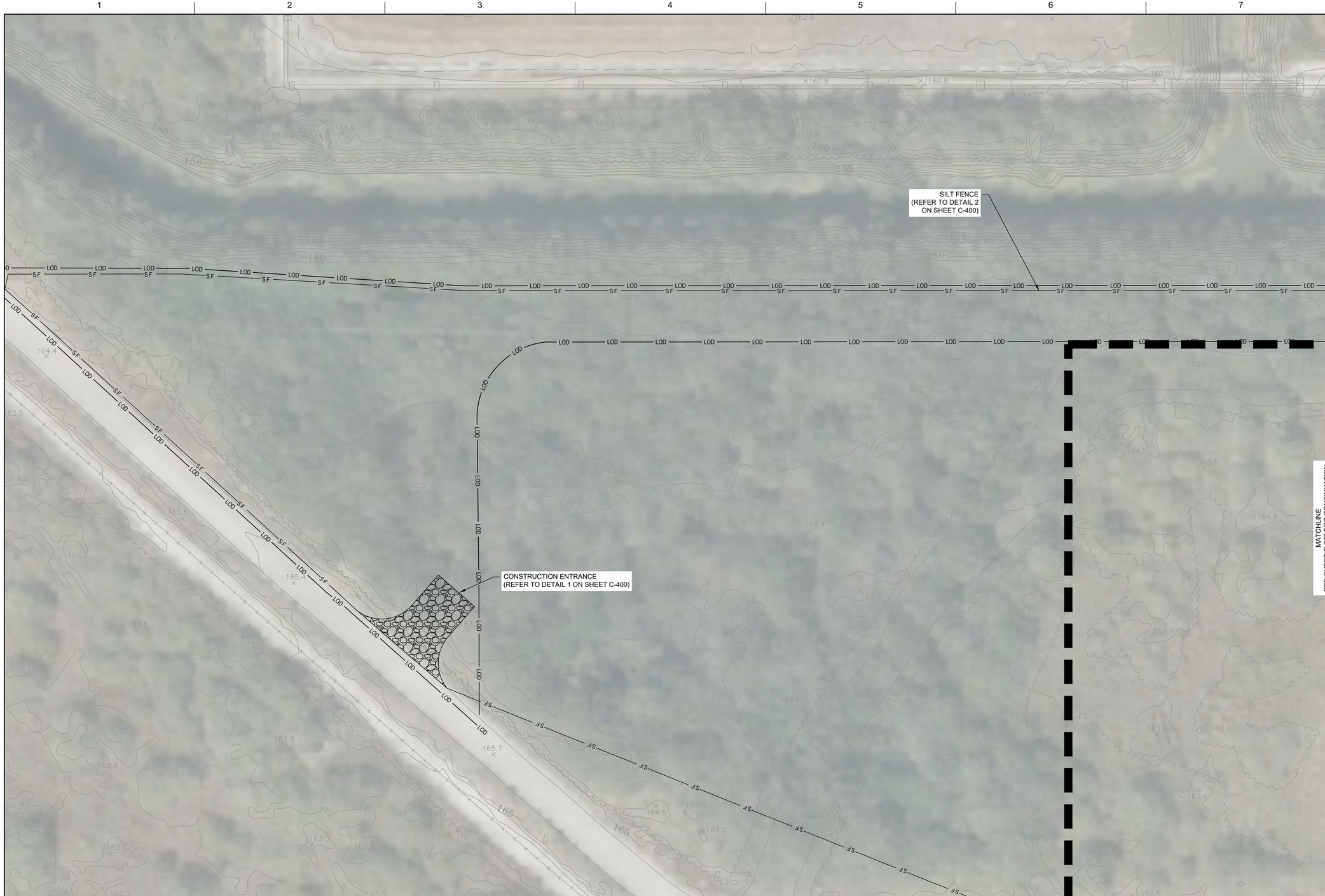
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

OVERALL EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN	SHEET	C-020
SCALE	1" = 80'		



LEGEND

- SILT FENCE
- CONSTRUCTION ENTRANCE
- WETLAND LIMITS
- PROPOSED BRINE PONDS
- LIMIT OF DISTURBANCE
- EXISTING TREELINE
- EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 30 60
GRAPHIC SCALE (IN FEET)

C:\pwworking\eas01\d4312842\10393559-01CG101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

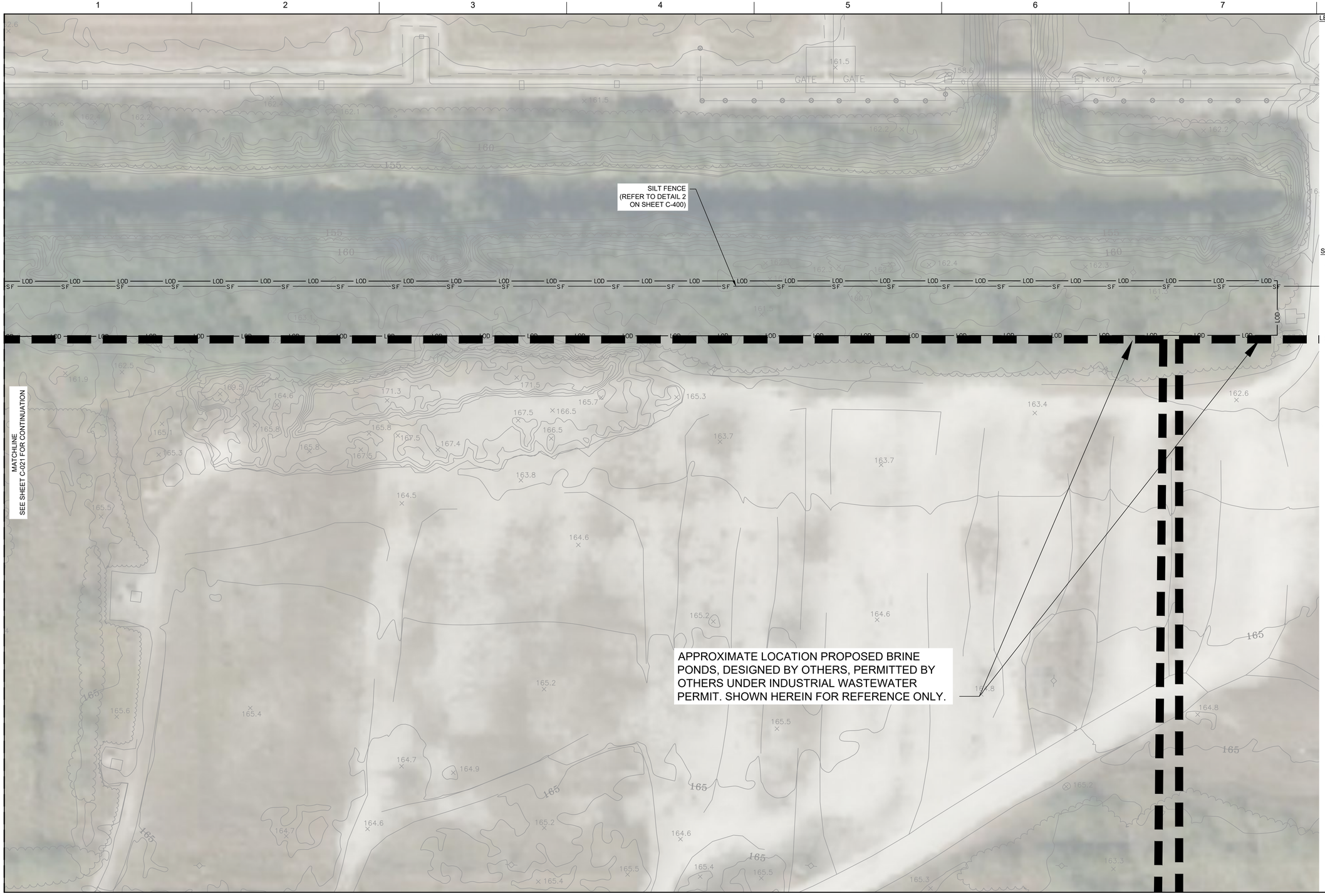
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 1 - EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN	SHEET	C-021
SCALE	1" = 30'		



LEGEND

- SF — SILT FENCE
- CONSTRUCTION ENTRANCE
- WETLAND LIMITS
- PROPOSED BRINE PONDS
- LOD — LIMIT OF DISTURBANCE
- EXISTING TREELINE
- 160 — EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- 163.5 — EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 30 60
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\d4312842\10393550-01CG101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 2 - EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN	SHEET	C-022
SCALE	1" = 30'		

LEGEND

- SF — SILT FENCE
- CONSTRUCTION ENTRANCE
- WETLAND LIMITS
- LOD — LIMIT OF DISTURBANCE
- EXISTING TREELINE
- 160 — EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- 163.5 — EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. AREA 3 NOT SURVEYED. SILT FENCE SHOWN BASED ON AERIAL, CONTRACTOR TO ALTER SILT FENCE BASED ON FIELD CONDITIONS AS NEEDED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 200 400
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\d4312842\10393550-01CG101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 3 - EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN	SHEET	C-023
SCALE	1" = 200'		

LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- PROPOSED BRINE PONDS
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED BRINE PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

C:\pwworking\east01\d4312842\10995550-01CS101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

OVERALL SITE PLAN

FILENAME	SITE PLAN	SHEET	C-100
SCALE	1" = 100'		

LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED BRINE PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

KEYNOTES

1. EXISTING EDGE OF PAVEMENT
2. STOP SIGN
3. (2) 40' SEA CAN OFFICES, (4) PORT-O-LET AND HANDWASH STATION
4. PROPOSED ACCESS ROAD
5. LAYDOWN AREA
6. MAINTENANCE LAYDOWN AREA WITH GEOTEXTILE FABRIC AND CRUSHED ROCK

0 30 60
GRAPHIC SCALE (IN FEET)

C:\pwworking\eset01\d4312842\10393550-01CS101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 1 - SITE PLAN

FILENAME: SITE PLAN
SCALE: 1" = 30'
SHEET: C-101

LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED BRINE PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

KEYNOTES

1. EXISTING EDGE OF PAVEMENT
2. STOP SIGN
3. (2) 40' SEA CAN OFFICES, (4) PORT-O-LET AND HANDWASH STATION
4. PROPOSED ACCESS ROAD
5. LAYDOWN AREA
6. MAINTENANCE LAYDOWN AREA WITH GEOTEXTILE FABRIC AND CRUSHED ROCK

0 30 60
GRAPHIC SCALE (IN FEET)

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 2 - SITE PLAN

FILENAME: SITE PLAN
SCALE: 1" = 30'
SHEET: C-102

C:\pwworking\east01\d4312842\10393550-01CS101.dwg

LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. AREA 3 NOT SURVEYED, SHOWN FOR CLARITY. NO SITE WORK IN THIS AREA.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 200 400
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\d0431284\2\10393550-01\CS101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

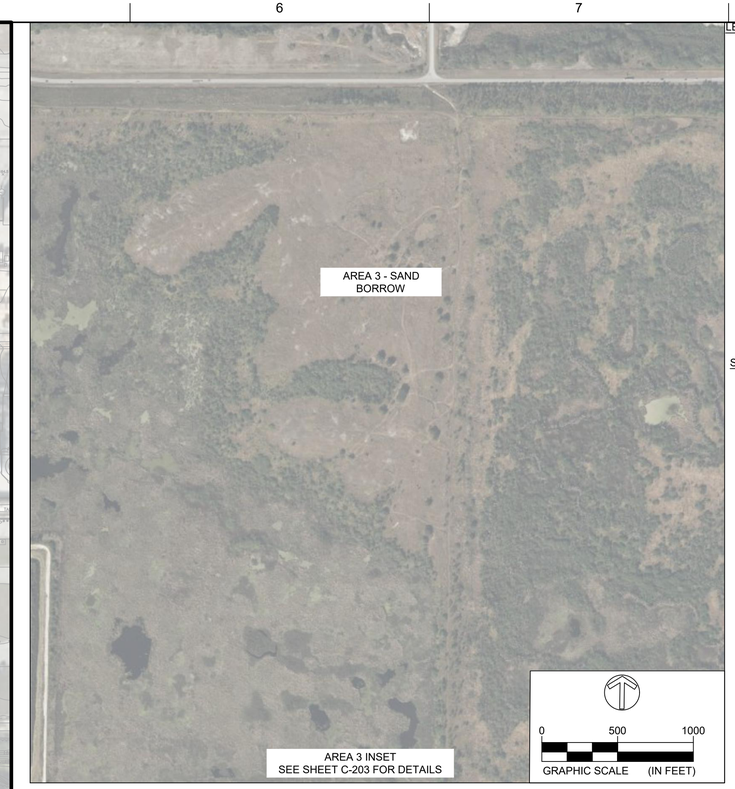
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 3 - SITE PLAN

FILENAME: SITE PLAN
SCALE: 1" = 200'
SHEET: C-103



LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- FLOW ARROW
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED BRINE PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

0 100 200
GRAPHIC SCALE (IN FEET)

C:\pwworking\eas01\d4312842\10393550-01CG111.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

OVERALL GRADING AND DRAINAGE PLAN

FILENAME	GRADING AND DRAINAGE PLAN	SHEET	C-200
SCALE	1" = 100'		

LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- FLOW ARROW
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED BRINE PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

0 30 60
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\d4312842\10393530-01CG111.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

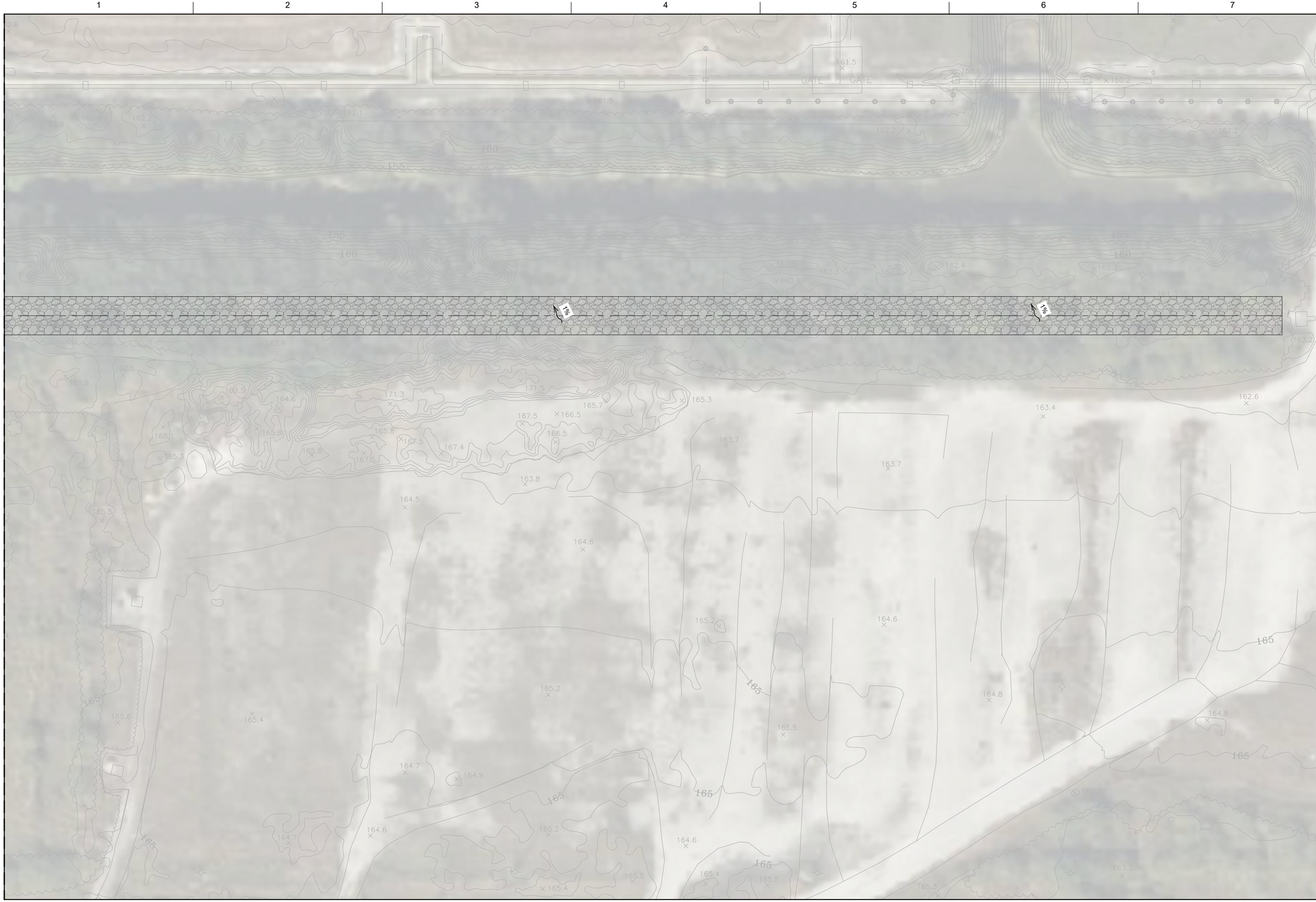
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 1 GRADING AND DRAINAGE PLAN

FILENAME	GRADING AND DRAINAGE PLAN	SHEET	C-201
SCALE	1" = 30'		



LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- 160 EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- FLOW ARROW
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.
3. PROPOSED BRINE PONDS SHOWN HEREIN ARE FOR REFERENCE ONLY; TO BE DESIGNED BY CONTRACTOR.

0 30 60
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\d4312842\10393550-01CG111.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 2 GRADING AND DRAINAGE PLAN

FILENAME	GRADING AND DRAINAGE PLAN	SHEET	C-202
SCALE	1" = 30'		

LEGEND

- ROADWAY CENTERLINE
- PROPOSED GRAVEL
- EXISTING TREELINE
- EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING POWER POLE
- 163.5 EXISTING SPOT ELEVATIONS
- FLOW ARROW
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. AREA 3 NOT SURVEYED, SHOWN FOR CLARITY. NO PROPOSED GRADING IN THIS AREA.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 200 400
GRAPHIC SCALE (IN FEET)

C:\pwworking\east01\d4312842\10993550-01CG111.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

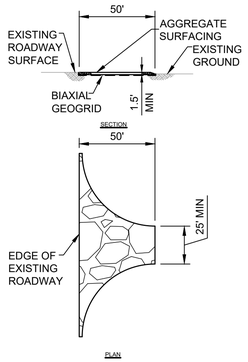
ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

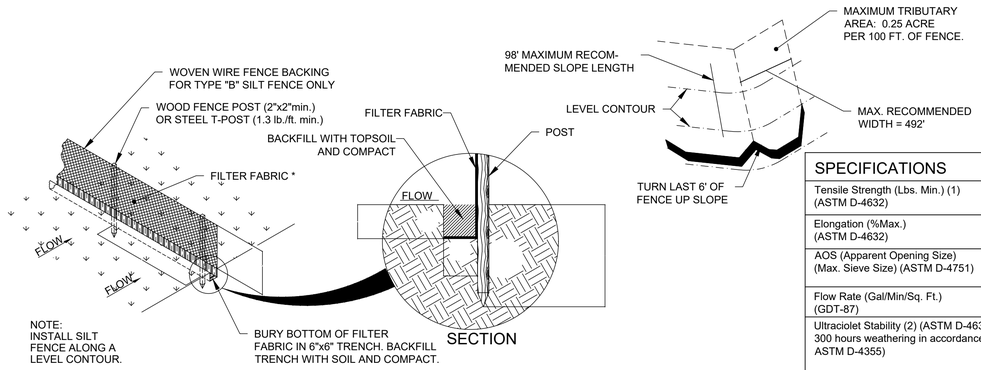
DUKE ENERGY®

AREA 3 GRADING AND DRAINAGE PLAN

FILENAME	GRADING AND DRAINAGE PLAN	SHEET	C-203
SCALE	1" = 200'		



STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.
1
C-400



SILT FENCE - TYPES A AND B
N.T.S.
2
C-400

SPECIFICATIONS

Tensile Strength (Lbs. Min.) (1) (ASTM D-4632)	Warp-120 Fill -100	Warp-120 Fill -100
Elongation (%Max.) (ASTM D-4632)	40	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30	#30
Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	25	25
Ultraciolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphram Bursting Strength Tester)	175	175
Minimum Fabric Width (Inches)	36	22

C:\pwworking\east01\d431284\2\0393550-01\CG501.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

DETAILS

FILENAME	DETAILS	SHEET	C-400
SCALE	N/A		

PROJECT: DUKE ENERGY HINES ENERGY COMPLEX SOUTH LAYDOWN AREA
TITLE: FLOW FROM ADDITIONAL PERMENANT IMPERVIOUS AREA
DATE: 2025-02-20

ADDITIONAL IMPERVIOUS AREA (AC)
1.57

PEAK DISCHARGE USING RATIONAL METHOD

Q=CiA

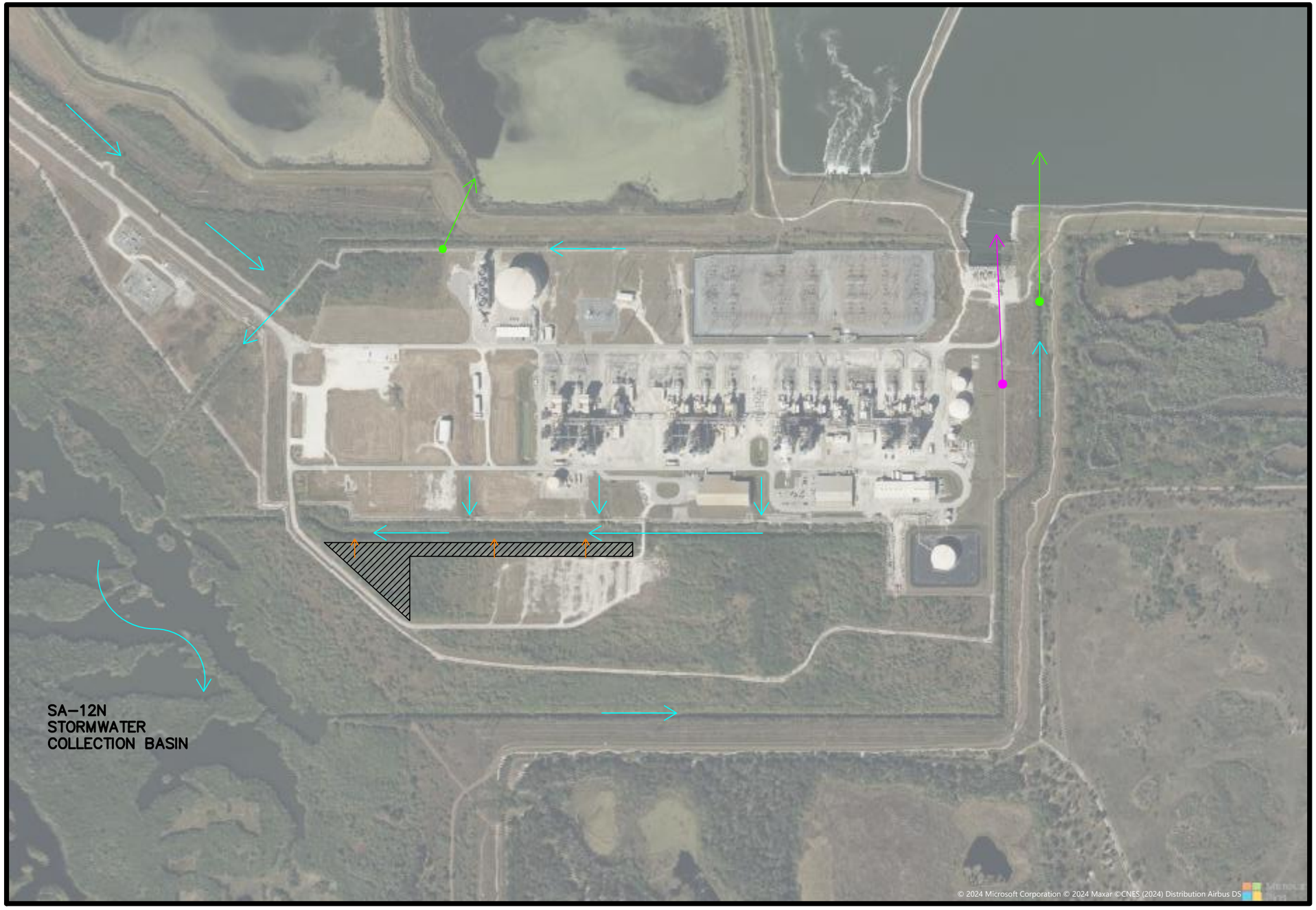
Q	=	C	i (inch/hour)	A (ac)
	=	0.9	10	1.57
	=	14.13	cfs	

NOTES:
1. C, RUNOFF COEFFICIENT USED IS 0.9 FOR IMPERVIOUS AREA.
2. I, RAINFALL INTENTSITY USED IS FROM FDOT DRAINAGE MANUAL APPENDIX B IDF CURVE FOR ZONE 8 (POLK COUNTY IS IN ZONE 8), 100 YEAR-10 MINUTES DURATION

RUNOFF VOLUME FROM IMPERVIOUS AREA

	IMPERVIOUS AREA (AC)	X	RAINFALL (IN)	X	FT/IN
=	1.57	X	9.5	x	0.083
=	**1.24**	AC-FT			

NOTES:
1. RAINFALL AMOUNT OBTAINED FROM SWFWMD, APPLICANT HANDBOOK VOL II, APPENDIX A, FIG D-7 24-HOUR 100 YEAR RETURN PERIOD RAINFALL MAP.



LEGEND

EXISTING FLOW DIRECTION

EXISTING WATER CROP PUMPS

EXISTING GW PRODUCTION WELLS

PROPOSED PROJECT SITE

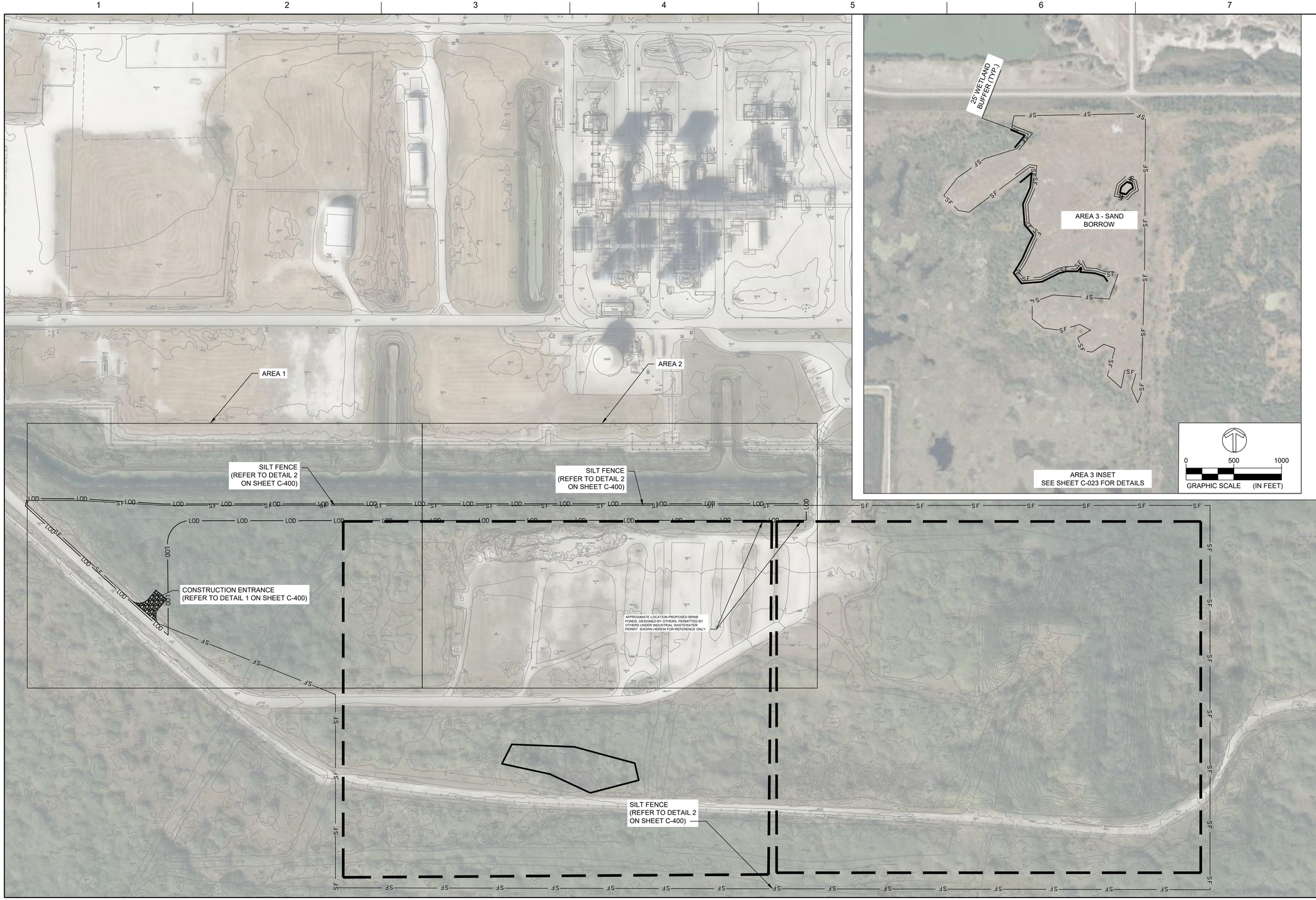
FLOW FROM PROPOSED PROJECT

N.T.S.

HINES ENERGY COMPLEX – PLANT ISLAND
POST-DEVELOPMENT DRAINAGE BASIN MAP

DATE 2025-02-20

FIGURE



LEGEND

- SF — SILT FENCE
- CONSTRUCTION ENTRANCE
- WETLAND LIMITS
- PROPOSED BRINE PONDS
- LOD — LIMIT OF DISTURBANCE
- EXISTING TREELINE
- 160 — EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- 163.5 — EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

C:\pwworking\eas01\d4312842\10393550-01CG101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

OVERALL EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN	SHEET	C-020
SCALE	1" = 80'		

LEGEND

- SILT FENCE
- CONSTRUCTION ENTRANCE
- WETLAND LIMITS
- PROPOSED BRINE PONDS
- LIMIT OF DISTURBANCE
- EXISTING TREELINE
- EXISTING CONTOURS
- EXISTING EDGE OF PAVEMENT (ASPHALT)
- EXISTING BURIED ELECTRICAL
- EXISTING SPOT ELEVATIONS
- EXISTING POWER POLE
- EXISTING TREE

SHEET NOTES

1. EXISTING CONDITIONS WERE OBTAINED FROM CADD FILE NAMED "2400137_PLANTOPO.DWG" PROVIDED BY DUKE ENERGY ON 2025-01-29. VERTICAL DATUM NOT PROVIDED; IT IS ASSUMED TO BE NAVD 88. CONTRACTOR TO OBTAIN A RECENT SIGNED AND SEALED SURVEY FROM A FLORIDA LICENSED SURVEYOR, WHICH SHALL INCLUDE THE DATUM USED.
2. EXISTING CONDITIONS SHOWN ARE LIMITED. IT IS NOT INCLUSIVE OF ALL EXISTING FEATURES WITHIN THE PROJECT SITE. THE DATA IS PROVIDED FOR REFERENCE ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS.

0 30 60
GRAPHIC SCALE (IN FEET)

C:\pwworking\eas01\d431284z\10393550-01\CG101.dwg

HDR Engineering, Inc.
315 E Robinson Street Suite 400
Orlando, Florida 32801
Phone: (407) 420-4200
Certificate of Authorization #: 4213

ISSUE	DATE	DESCRIPTION	DRAWN	ENGINEER	CHECKED	APPROVED
A	02/28/2025	FOR REVIEW	LMF	KSL	DBD	

ISSUED FOR PERMITTING

DUKE ENERGY®

AREA 1 - EROSION CONTROL PLAN

FILENAME	EROSION CONTROL PLAN	SHEET	C-021
SCALE	1" = 30'		

ATTACHMENT 4

Environmental Narrative
Including ERP Application Forms A and C

Application for Environmental Resource Permit

for

DUKE ENERGY FLORIDA HINES ENERGY COMPLEX

in
Polk County, Florida

Prepared By:

HDR Engineering, Inc.
315 East Robinson Street
Orlando, Florida 32801

March 2025

TABLE OF CONTENTS

PART 1: ERP APPLICATION FORMS A & C

PART 2: ENVIRONMENTAL NARRATIVE AND ATTACHMENTS

NARRATIVE SECTION

1.0 INTRODUCTION 1

2.0 PROJECT LOCATION 1

3.0 PROJECT PURPOSE AND NEED 1

4.0 PROJECT DESCRIPTION 1

5.0 WETLANDS AND SURFACE WATERS 1

5.1 SURFACE WATER DESCRIPTIONS 1
5.2 PROJECT WETLANDS 1

6.0 LAND USE AND LAND COVER 3

7.0 SOILS 7

8.0 PROTECTED SPECIES 7

8.1 FEDERAL LISTED SPECIES 7
8.2 STATE LISTED SPECIES 11
8.3 OTHER PROTECTED SPECIES 13

9.0 CULTURAL RESOURCES 13

10.0 IMPACT AVOIDANCE AND MINIMIZATION 13

11.0 PUBLIC INTEREST TEST 14

12.0 EROSION AND SEDIMENTATION CONTROL/CONSTRUCTION METHODOLOGY 15

Figure 1. Aerial View of Duke Energy Hines 1
Figure 2. Duke Energy Brine Pond Location Map 1
Figure 3. Proposed 11-Acre Brine Ponds 1
Figure 4. Project Wetland 1
Figure 5. 1994 Project Aerial 1
Figure 6. 1999 Project Aerial 2
Figure 7. Typical View of Wetland 1 3
Figure 8. N11 Location Map 4
Figure 9. N11 Wetland Map 5

TABLES

Table 1 Federally Listed Species Potentially Occurring within the Project Area 7
Table 2 State Listed Species Potentially Occurring within the Project Area 11

ATTACHMENTS

ATTACHMENT 1 .....PROJECT DRAWINGS
ATTACHMENT 2 .....IPAC REPORT
ATTACHMENT 3 .....WOOD STORK SOUTH FLORIDA PROGRAMMATC KEY
ATTACHMENT 4 .....EASTERN INDIGO SNAKE PROGRAMMATIC KEY
ATTACHMENT 5 .....FNAI REPORT

Part I

FORMS A and C

Part II

ENVIRONMENTAL NARRATIVE AND ATTACHMENTS

1.0 INTRODUCTION

The Duke Energy Hines Energy Complex (Hines Facility) is a combined cycle facility with four power blocks located in Bartow, Florida. The Hines Facility was built on reclaimed lands that were part of a previous phosphate mining operation. The mine cuts and open water associated with the previous mining operation were evident in aerial photographs in 1994. A review of 1999 aerial imagery shows that the land reclamation had been completed. The Hines Facility was constructed between 1994 and 1999. There is a water treatment facility on the site along with cooling ponds for the power generation facility (**Figure 1: Aerial View of Duke Energy Hines Facility**). The entire water system including cooling ponds and stormwater treatment ponds are part of a closed system authorized in the Conditions of Certification under the Florida Electric Power Plant Siting Act (PPSA).

2.0 PROJECT LOCATION

The Hines Facility is in Sections 13 and 14, Township 31S, and Range 24E in Fort Meade, Florida. The approximate central coordinates are 27° 47' 12.54" north latitude and - 81° 52' 29.30" west longitude. Refer to **Figure 2: Project Location Map**.

3.0 PROJECT PURPOSE AND NEED

The Hines Facility was designed with a 1,200-acre cooling pond to receive circulating water from the power blocks. Over the past 10 years, gradual increases in conductivity and Total Dissolved Solids (TDS) level in the groundwater monitoring wells have been reported. As such, a treatment system to reduce the environmental risk profile of the facility is being designed. As part of this improved water treatment system, two 11-acre brine ponds are proposed in the southern portion of the Hines Facility (**Figure 3: Proposed 11-Acre Brine Ponds**). Duke Energy is also applying for a wastewater permit from FDEP as part of the modifications for the revised water treatment system under the Conditions of Certification.

4.0 PROJECT DESCRIPTION

The proposed water treatment improvements for the Hines Facility include the construction of two brine ponds requiring impact to 0.39 acres of disturbed isolated wetlands (**Attachment 1**: Project Drawings). The wetland impacted by construction is described in Section 6.

Figure 1. Aerial View of Duke Energy Hines Facility

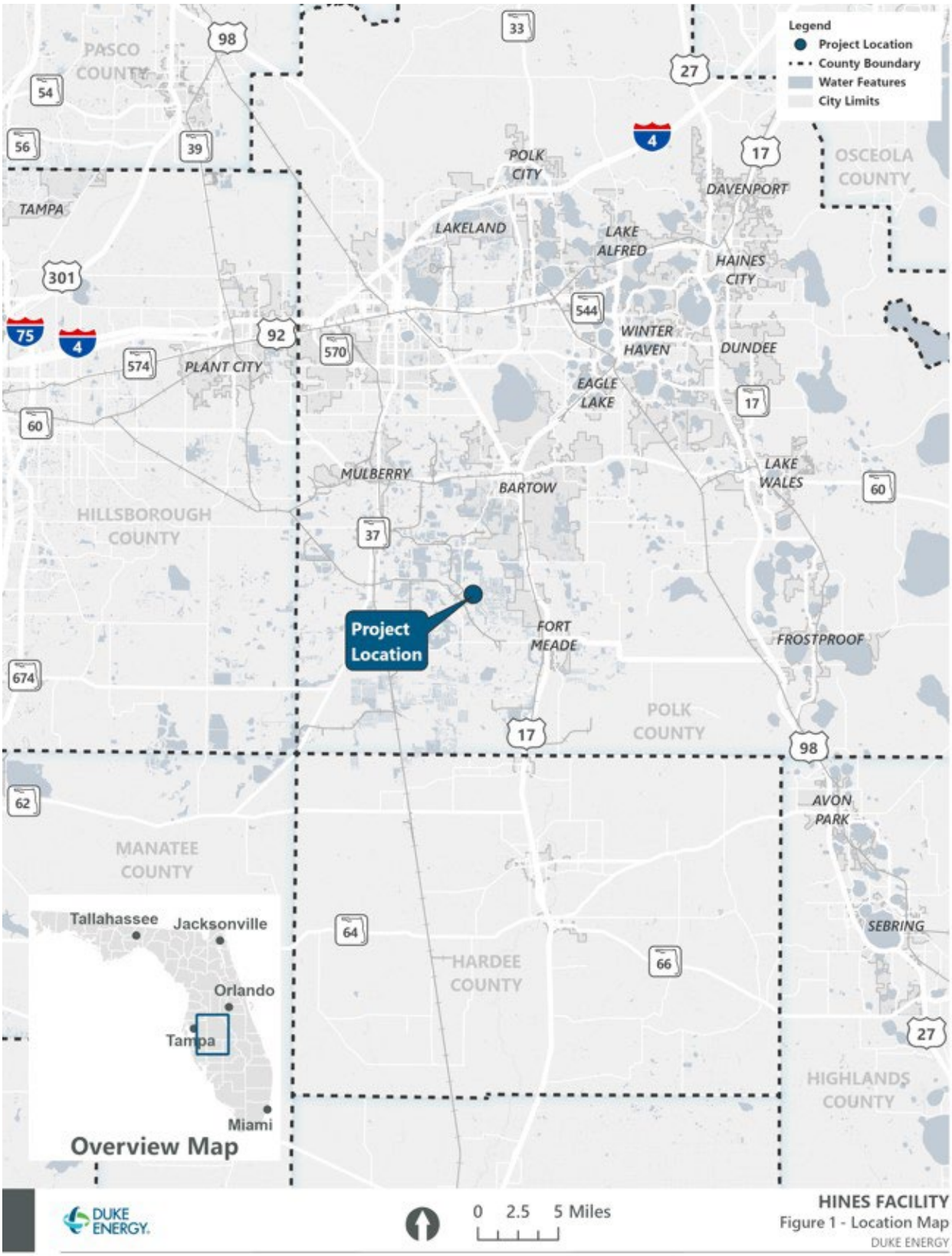


Figure 2. Duke Energy Brine Pond Location Map

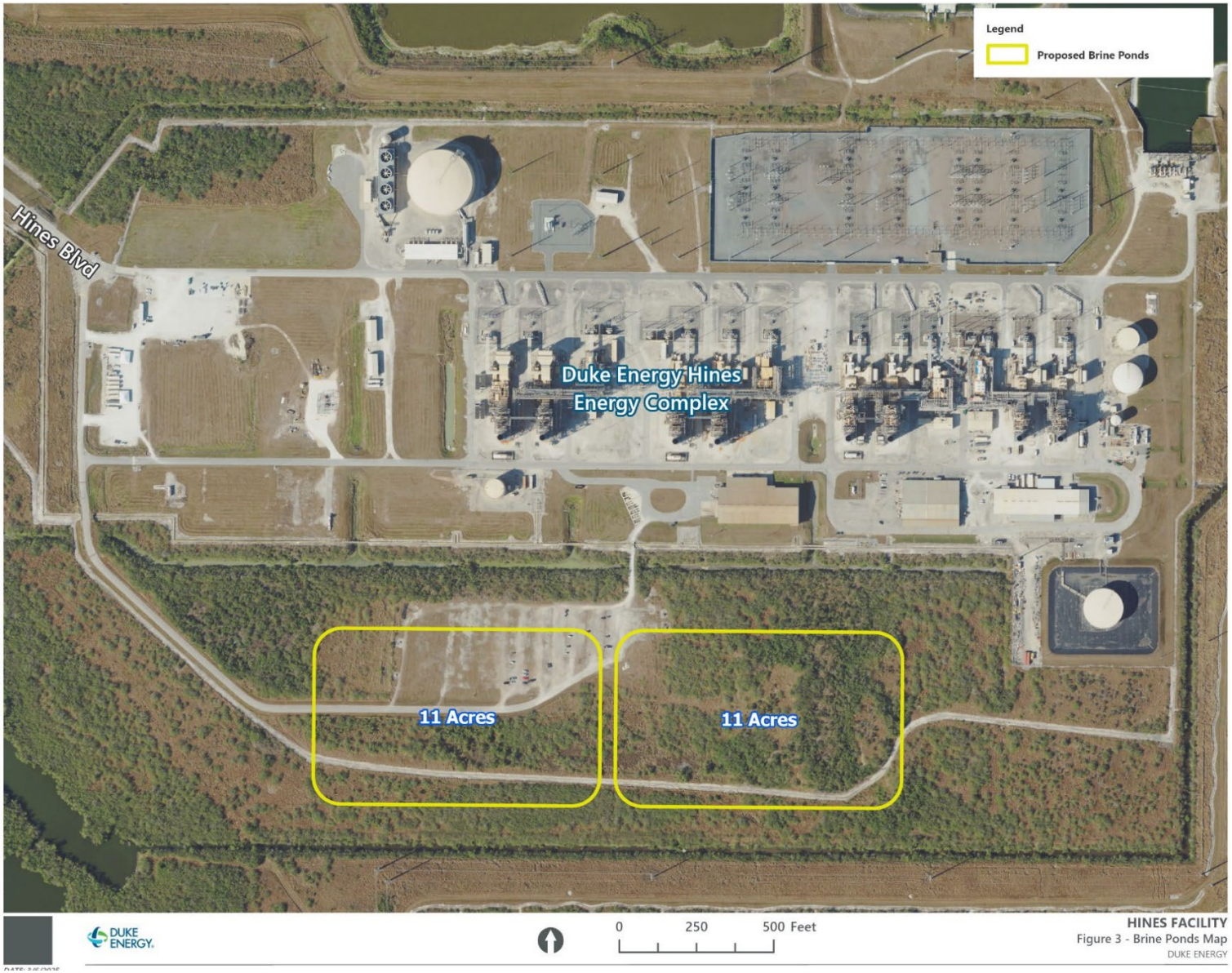


Figure 3. Proposed 11-Acre Brine Ponds

5.0 WETLANDS AND SURFACE WATERS

Field reviews were conducted by HDR Engineering to establish the jurisdictional limits of wetlands and surface waters within the project limits in accordance with the State of Florida Wetland Delineation Manual (Chapter 62-340, FAC) and the Regional Supplement to the USACE Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (USACE 2010).

5.1 Surface Water Descriptions

No surface waters were identified within the project limits. There was one ditch (Conveyance Ditch 1) located north of the project limits that was part of the stormwater management system that flows to the west into the stormwater treatment pond. There were two access roads to the brine pond location that cross this ditch. No modifications to the ditch are required for this project. There was also a ditch (Conveyance Ditch 2) located south of the project limits that serves as the outflow from the stormwater pond that flows east and then north into the cooling pond. No modifications to this ditch are required for this project. The connection of conveyance ditch 2 to the cooling pond is regulated by a pump. Both ditches, as well as the stormwater pond and the cooling ponds, are part of the closed system for the Hines Facility. There is no discharge to waters of the state. Both conveyance ditches are shown on **Figure 4: Project Wetland and Waters**).

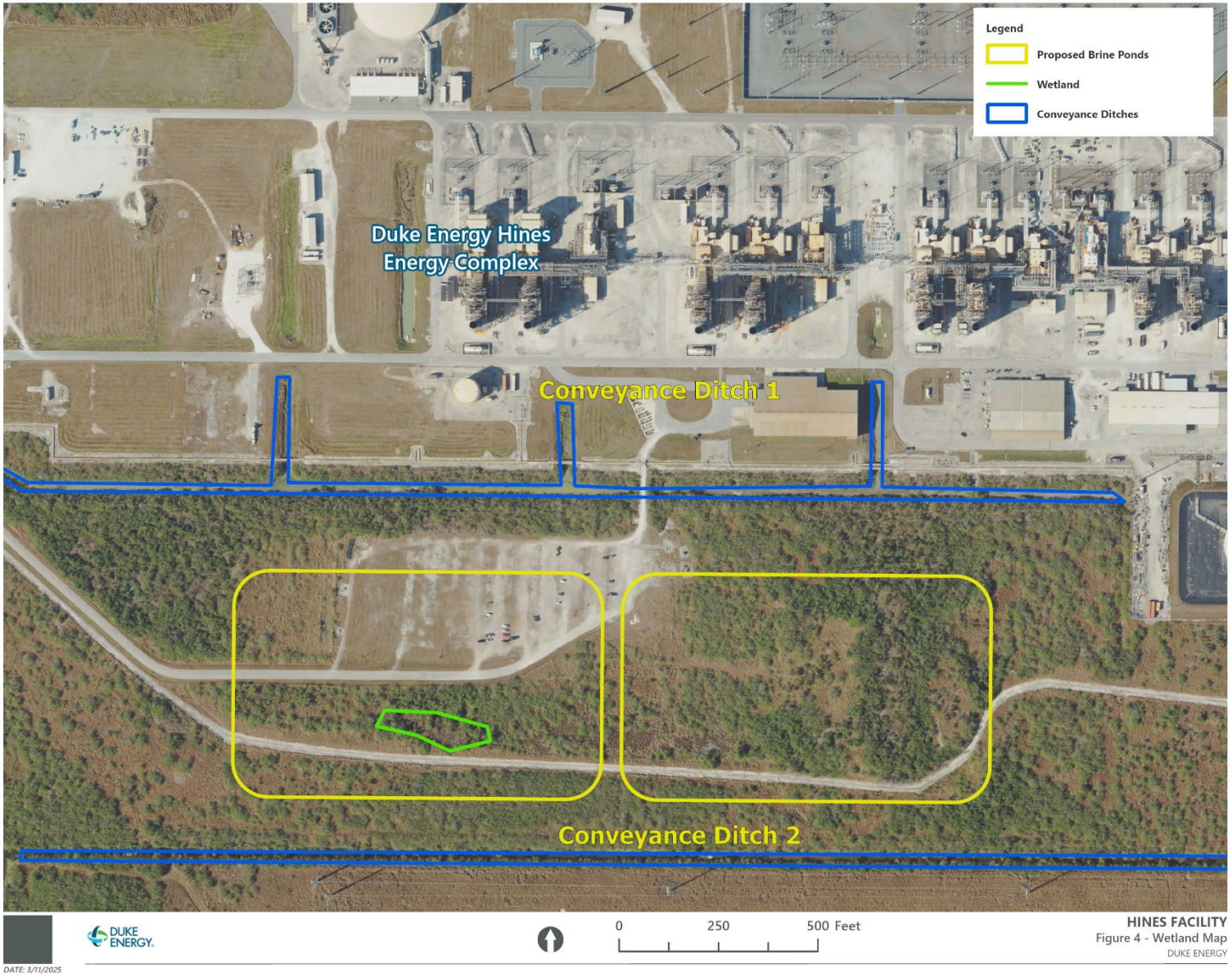


Figure 4. Project Wetland and Waters

5.2 Project Wetlands

Review of historical aerial photography indicates that the project area was previously mined as part of the phosphate mining operations. Mine cuts were visible on aerial photography from 1994 as shown in **Figure 5: 1994 Project Aerial Photograph**.

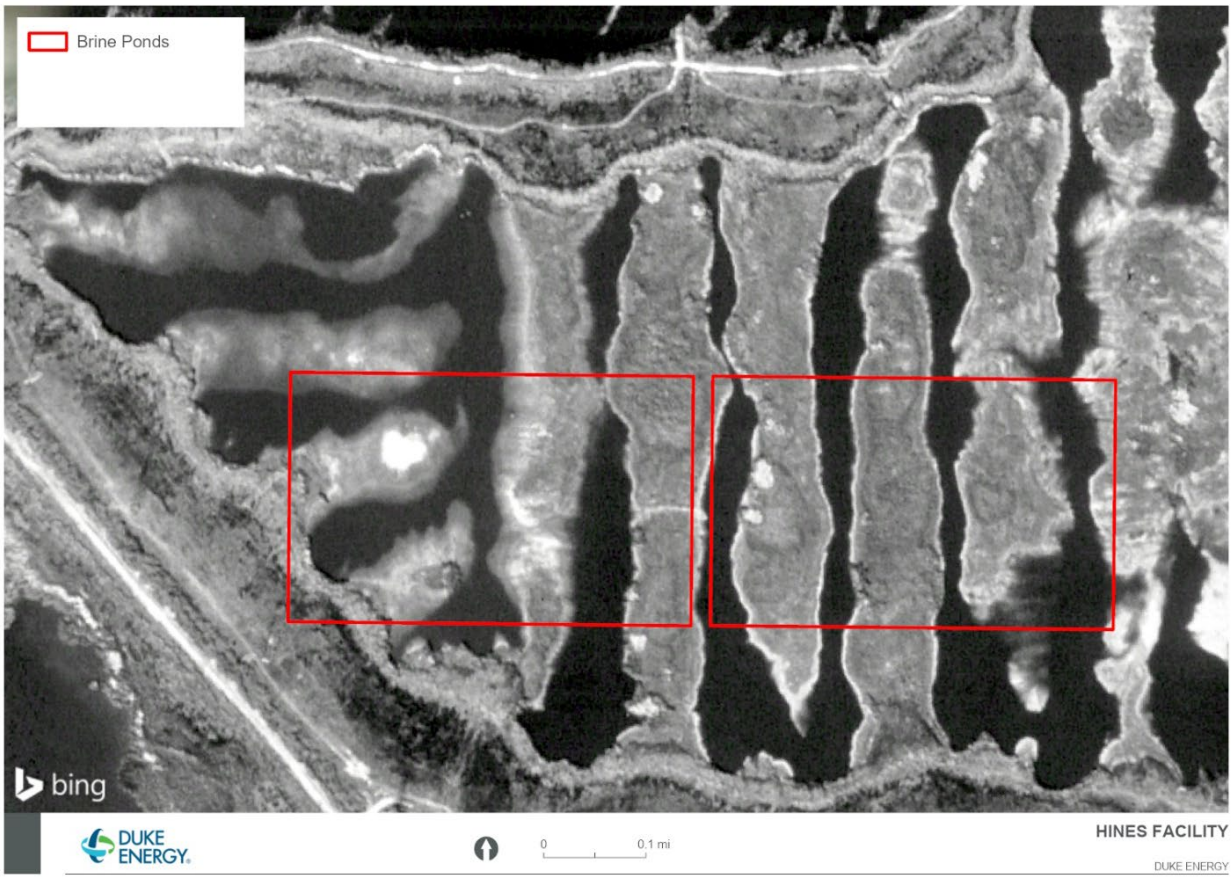


Figure 5. 1994 Project Aerial Photograph

Aerial photography from 1999 indicates that the mine cuts were reclaimed and the lands were restored to uplands in the vicinity of the proposed brine ponds **Figure 6: 1999 Project Aerial Photography**.

Figure 6. 1999 Project Aerial Photograph

Based on the site inspection conducted on December 6, 2024, one depressional area was observed coincident with the wetland (W1) present (see **Figure 4**). This isolated wetland is a depression from the topographical variations during the reclamation process. The soils also have a high clay content that resulted in poor drainage within the depression. Vegetation in Wetland 1 was dominated by cattail (*Typha sp.*), sedges (*Carex spp.*), flat sedge (*Cyperus sp.*), beak sedge (*Rhynchospora sp.*) and primrose willow (*Ludwigia peruviana*). There were Carolina willow trees (*Salix caroliniana*) scattered throughout the wetland. The isolated wetland has no outflow and covers 0.39 acres (**Figure 7:** Typical View of Wetland 1).

Figure 7. Typical View of Wetland 1

The source of fill to be used for the construction of the brine ponds is located on the Hines Facility N11 Site approximately 2.8 miles to the north of the brine pond location (see **Figure 8: N11 Location Map**). The soils at the site consist of sand tailings that were pumped onto the site during reclamation. Sand will be transported by trucks to the brine pond locations for construction.

An assessment was performed at the N11 site to determine if any jurisdictional wetlands were present. The results are shown in **Figure 9: N11 Wetland Map**. The western and southern limits of the borrow site were bordered by nuisance-dominated wetlands. Vegetation included cattail (*Typha* sp.), Carolina willow (*Salix caroliniana*), Brazilian pepper (*Schinus terebinthifolia*), wax myrtle (*Morella cerifera*), cogon grass (*Imperata cylindrica*), swamp fern (*Telmatoblechnum serrulatum*), spadeleaf (*Centella asiatica*), and pennywort (*Hydrocotyle* sp.). There was a small, isolated wetland located in the central portion of N11 which was dominated by barnyard grass (*Echinichloa* sp.) with some soft rush (*Juncus effusus* ssp. *solutus*).

Sand will be removed from N11 in the uplands. Prior to excavation, silt fencing will be installed around the edges of the adjacent wetlands and the small isolated wetland.

Figure 8. N11 Location Map

Figure 9. N11 Wetland Map

6.0 LAND USE AND LAND COVER

The project areas and their surrounding land use was assessed in accordance with the Florida Land Cover Classification System (FLCCS) developed by the Fish and Wildlife Conservation Commission (FWC). The entire project site was classified as Land Use Code 1875 (Reclaimed Lands).

7.0 SOILS

The entire project area has been mined as part of the historic phosphate mining operations. All the original soils were removed during the mining process. The current soils on the property have been brought to the site as part of the mine reclamation process and are typical of the mine reclamation process. Therefore, a soils map is not being provided.

8.0 PROTECTED SPECIES

The potential occurrence of federal- and state-listed species and habitat was evaluated to comply with the Endangered Species Act of 1972, as amended, and the Florida Endangered and Threatened Species Act, Section 379.2291, Florida Statutes.

8.1 Federal Listed Species

Agency database searches, literature reviews, and desktop analysis using Geographic Information System-based (GIS) data searches were conducted in conjunction with a site visit on December 6, 2024. The desktop analysis used the most recent databases to identify state- and federal-protected species that could potentially occur within the project area.

Information sources and databases used for the analyses included the following:

- Audubon Florida's EagleWatch Program Nest Locator
- Florida Land Use, Cover and Forms Classification System (FLUCFCS) Handbook (1999)
- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix Query (March 2025)
- Soil Survey of Polk County, Florida, USDA, NRCS (1990)
- U.S. Fish and Wildlife Service Wood Stork Core Foraging Areas (2025)
- U.S. Fish and Wildlife Service, Information for Planning and Consultation (March 2025)

To assess for potential impacts to federally listed species, the USFWS Information for Planning and Consultation website was used to generate an IPaC Report (**See Attachment 2). Table 1** provides a list of federal species protected under the Endangered Species Act (ESA) that were identified as having the potential to occur within the vicinity of the project area and their effect determinations because of the project.

Table 1. Federally Listed Species Potentially Occurring within the Project Area

Common Name	Scientific Name	Status	Effect Determination
Mammals			
Florida panther	*Felis concolor coryi*	Endangered	May affect, but not likely to adversely affect
Birds			
Crested caracara	*Caracara plancus*	Threatened	May affect, but not likely to adversely affect
Eastern black rail	*Laterallus jamaicensis jamaicensis*	Threatened	May affect, but not likely to adversely affect

Common Name	Scientific Name	Status	Effect Determination
Everglades snail kite	*Rostrhamus sociabilis plumbeus*	Endangered	May affect, but not likely to adversely affect
Whooping crane	*Grus americana*	Experimental Population	No effect
Wood stork	*Mycteria americana*	Threatened	Not likely to adversely affect
Reptiles			
Eastern indigo snake	*Drymarchon corais couperi*	Threatened	Not likely to adversely affect
Insects			
Monarch butterfly	*Danaus plexippus*	Candidate	NA*
Plants			
Avon Park Harebells	*Crotalaria avonensis*	Endangered	No effect
Britton's Beargrass	*Nolina brittoniana*	Endangered	No effect
Carter's Mustard	*Warea carteri*	Endangered	No effect
Florida Ziziphus	*Ziziphus celata*	Endangered	No effect
Highlands Scrub Hypericum	*Hypericum cumulicola*	Endangered	No effect
Lewton's Polygala	*Polygala lewtonii*	Endangered	No effect
Papery Willow-Wort	*Paronychia chartacea*	Threatened	No effect
Pigeon Wings	*Clitoria fragrans*	Threatened	No effect
Pygmy fringetree	*Chionanthus pygmaeus*	Endangered	No effect
Sandlace	*Polygonella myriophylla*	Endangered	No effect
Scrub Blazingstar	*Liatris ohlingerae*	Endangered	No effect
Scrub mint	*Dicerandra frutescens*	Endangered	No effect
Short-leaved Rosemary	*Conradina brevifolia*	Endangered	No effect
Wireweed	*Polygonum basiramia*	Endangered	No effect

* Effect determinations cannot be made for candidate species.

Discussions on the assessment of each species and their project effect determinations follow.

Mammals

Florida panther (*Felis concolor coryi*)

The Florida panther is federally endangered. The panther utilizes wetland and upland habitats, including forested wetlands, freshwater marsh, and pine flatwoods. The Duke Energy Hines Facility is not located within the focus area or a dispersal area for the Florida panther. Since the proposed project is located within an existing industrial facility, the water treatment facility expansion is not expected to significantly increase traffic, which could conflict with panthers. The project is not anticipated to adversely affect the Florida panther.

Birds

Crested caracara (*Caracara plancus*)

The crested caracara is a medium-sized falcon. The federal status for the crested caracara is threatened. The proposed project is within the consultation area of the crested caracara. They inhabit open country, including pastures, scrub, and savannas in southern and central Florida. They generally nest in solitary cabbage palm trees. The project involves impacts to a previously disturbed mined site that has revegetated primarily with Brazilian pepper (*Schinus terebinthifolia*) with no cabbage palm trees. Because

the site does not provide suitable nesting habitat for this species, the project is not anticipated to adversely affect the caracara.

Eastern black rail (*Laterallus jamaicensis jamaicensis*)

The Eastern black rail is a secretive bird that inhabits marshes, particularly along the coast. The federal status for the Eastern black rail is threatened. It is a small, cryptic bird that can reach 15 centimeters in length. Males and females are generally pale to blackish gray with bright red eyes. They require dense overhead cover and prefer herbaceous, emergent wetland vegetation. Nests are well hidden in these dense clumps of vegetation and are typically constructed over moist soil or shallow water. The wetland to be impacted as part of this project is a small, isolated wetland with a Carolina willow overstory and an understory consisting of young Carolina willow and primrose willow. Since the project does not contain suitable marsh habitat, the project is not anticipated to impact the Eastern black rail.

Everglade snail kite (*Rostrhamus sociabilis plumbeus*)

The federal status for the Everglade snail kite is endangered. The proposed project is within the consultation area of the Everglades snail kite. The Everglade snail kite is a medium-sized raptor and adults are dark gray to black with a white patch at the base of the tail and red legs. It prefers large, open freshwater marshes less than 4 feet in depth where it feeds exclusively on apple snails. The Everglades snail kite inhabits and forages in freshwater marshes and grassy shorelines of lakes. However critical habitat is not located on or adjacent to the project and the site does not provide suitable nesting or foraging habitat for this species. Therefore, the project is not anticipated to adversely affect the Everglades snail kite.

Whooping crane (*Grus americana*)

The whooping crane is listed as an experimental population. Adult whooping cranes have mostly white feathers with a red crown, black legs, and an “S” shaped neck. The whooping crane breeds, migrates, winters, and forages in a variety of habitats, including coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows and rivers, and agricultural fields. They eat mostly aquatic invertebrates, mollusks, small vertebrates, roots, acorns, and berries. Beginning in 1993, an experimental population was begun to establish a migrating colony in Florida. In 2008, FWC stopped releasing new cranes due to limited success. The proposed brine pond project does not contain suitable foraging or nesting habitat for the whooping crane. Per the USFWS IPaC report (2024), the whooping crane is a non-essential experimental population on non-federal lands and treated as a proposed species for listing that does not require consultation. There have been no observations of the whooping crane in the study area.

Wood Stork (*Mycteria americana*)

The wood stork is federal-listed as threatened. They are typically found in marshes, cypress swamps, and mangrove swamps, but they are common in artificial ponds, seasonally flooded roadside or agricultural ditches, and managed impoundments. Wood storks use freshwater and estuarine habitats for nesting, foraging, and roosting. They are typically colonial nesters and construct their nests in medium to tall trees located within wetlands or on islands. The same colony site may be used over many years, provided the site remains undisturbed and sufficient foraging habitat is available. Wood storks are known to nest with other wading bird species, including white ibis, tricolored herons, snowy egrets, and great blue herons.

The USFWS has defined an area in South Florida with a radius of 18.6 miles from nesting wood stork colonies as the Core Foraging Area (CFA) for those colonies. The project falls within the CFA of multiple active nesting wood stork colonies. As defined by the USFWS, suitable wood stork foraging habitat includes wetlands and surface waters with relatively calm water, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depths between 2 and 15 inches. No suitable foraging areas were observed on the project site and no nesting habitat is present. Based on the use of the South

Florida Wood Stork Effect Determination Key (May 2010), it is anticipated that the project "**Not Likely to Adversely Affect"** (NLAA) the wood stork (**See Attachment 3**). Further consultation is not required for this species.

Reptiles

American Alligator (*Alligator mississippiensis*)

The American alligator is listed as federally threatened due to similarity in appearance to the endangered American crocodile (*Crocodylus acutus*). The alligator is known to utilize ditches, wetlands, and creeks. Since the project involves impacts to shallow wetlands in a portion of the state where crocodiles are not likely to inhabit, the project is not anticipated to adversely affect the American alligator.

Blue-tailed Mole Skink (*Eumeces egregies lividus*)

The blue-tailed mole skink is federally threatened. It occurs in high, sandy ridges associated with the ancient dunes of central Florida in xeric natural communities. Habitats include rosemary scrubs, scrubby flatwoods, sand pine and oak scrubs, turkey oak ridge, and sometimes the edges of citrus groves built on former habitat. This species does not leave sand tracks like the sand skink, but sand skink tracks can be used as an indicator of suitable blue-tailed mole skink habitat where the two species' ranges overlap.

The proposed project area is located within the consultation area of the blue-tailed mole skink. The project site was historically a phosphate-mine that was reclaimed. The base material used for reclamation contains a high level of clay and the surrounding vegetation is dense Brazilian pepper with cogon grass (*Imperata cylindrica)*, which is not suitable to the blue tailed mole skink. The blue-tailed mole skink requires loose sand and areas with sparse or no groundcover. Therefore, the proposed project is not anticipated to adversely affect the blue-tailed mole skink.

Eastern indigo snake (*Drymarchon couperi*)

The Eastern indigo snake is a large non-venomous snake native to the southeastern United States that occurs in a wide variety of terrestrial habitats throughout Florida and Georgia. The applicant has agreed to implement the USFWS *Standard Protection Measures for the Eastern Indigo Snake* (2021). Use of the Eastern Indigo Snake Effect Determination Key led to a determination of "**Not likely to adversely affect" (NLAA)** for the Eastern Indigo Snake. (**See Attachment 4**).

Sand Skink (*Neoseps reynoldsi*)

The sand skink is federally threatened. It occurs in high, sandy ridges associated with the ancient dunes of central Florida in xeric natural communities. Habitats include rosemary scrubs, scrubby flatwoods, sand pine and oak scrubs, turkey oak ridge, and sometimes the edges of citrus groves built on former habitat. The sand skink requires loose sand and areas with sparse or no groundcover. The species is fossorial and leaves distinctive "sine-wave" tracks in the sand as it "swims" just below the surface.

The proposed project is located within the consultation area of the sand skink. The project area was historically a phosphate-mine that was reclaimed. The base material used for reclamation contains a high level of clay and the surround vegetation is dense Brazilian pepper with cogon grass, which is not suitable to the sand skink. Therefore, the proposed project is not anticipated to adversely affect the sand skink.

Insects

Monarch butterfly (*Danaus plexippus*)

The monarch butterfly is a candidate species under the Endangered Species Act. It is a readily recognized orange and black butterfly that is known for its long migration to Mexico for breeding. The monarch

butterfly occurs across many habitat types, so long as milkweed is present, including short and tall grass prairies, livestock pastures, agricultural margins, roadsides, wetland areas, sandy areas, and gardens. The proposed project has been historically phosphate-mined and reclaimed. The base material used for reclamation contains a high level of clay, which is not suitable to the habitat for the monarch butterfly. Therefore, the proposed project is not anticipated to adversely affect the monarch butterfly.

Federally Listed Plants

Fourteen (14) species of plants were listed on the IPaC Report as having the potential to be present in the project site. The entire site was previously mined and reclaimed/restored approximately twenty-five years ago with sand and clay mine-tailings. Since the restoration of the site, the project area has established dense stands of Brazilian pepper. All plant species were eliminated from consideration for presence onsite due to the previous disturbance and lack of suitable habitat for the species to re-establish.

8.2 State Listed Species

To assist in the assessment for potential impacts to state listed species, a report was obtained from the Florida Natural Areas Inventory (FNAI) (**See Attachment 5).** Table 2 provides the state-listed species, protected under Chapters 5B-40 and 68A-27, F.A.C., that were identified as having the potential to occur within the vicinity of the project area and their effect determinations. Discussions on the assessment of each species and their project effect determinations follow.

Table 2. State Listed Species Potentially Occurring within the Project Area

Common Name	Scientific Name	Status	Effect Determination
Birds			
Florida sandhill crane	*Antigone canadensis pratensis*	Threatened	No Effect Anticipated
Reptiles			
Gopher tortoise	*Gopherus polyphemus*	Threatened	No Effect Anticipated
Plants			
Many-flowered grass-pink	*Calopogon multiflorus*	Threatened	No Effect Anticipated
Sand butterfly pea	*Centrosema arenicola*	Endangered	No Effect Anticipated
Scrub buckwheat	*Eriogonum longifolium*	Endangered	No Effect Anticipated
Nodding pinweed	*Lechea cernua*	Threatened	No Effect Anticipated
Celestial lily	*Nemastylis floridana*	Endangered	No Effect Anticipated
Giant orchid	*Pteroglossaspis ecristata*	Threatened	No Effect Anticipated
Carter's warea	*Warea carteri*	Endangered	No Effect Anticipated

Birds

Florida sandhill crane

Florida sandhill cranes are listed as threatened by the state of Florida. The sandhill crane is a large wading bird that is found from southern Georgia to the Everglades. Another subspecies, the migratory greater sandhill crane (*Antigone canadensis tabida*), occurs in Florida in winter, arriving in October and November and leaving for breeding grounds in the northern U.S. and Canada from late January to early March. Therefore, it can be assumed that sandhill cranes observed in peninsular Florida from April to September are the resident Florida subspecies as greater sandhill cranes cannot be reliably distinguished from Florida sandhill cranes by sight.

Florida sandhill cranes forage in a variety of open habitats, including shallow herbaceous wetlands, improved pastures, prairies, open pine forests, croplands, golf courses, airports, and sod farms. Preferred sandhill crane foraging habitat contains short vegetation, typically below 20 inches, and sandhill cranes generally avoid areas with taller vegetation or dense forest canopies. Sandhill cranes in Florida have been observed most often in pasture, freshwater marsh, pasture–marsh transition, and pasture–forest transition. The site does not provide suitable nesting habitat for this species. Therefore, there is **no effect anticipated** for the Florida sandhill crane.

Reptiles

Gopher Tortoise

The gopher tortoise is state-listed as threatened due to habitat loss and degradation and a declining number of individuals. Gopher tortoises require well-drained, loose sandy soils for burrowing, and low-growing herbs and grasses for food. These conditions can be found in a variety of habitats including dry prairies, pine flatwoods, and disturbed or maintained sites, typically with a low groundwater table. No suitable habitat for the gopher tortoise was present within the project area and the species and its burrows were not observed during the field reviews. A 15% gopher tortoise burrow survey was conducted during the site inspection on February 23, 2024, and no burrows were observed.

Current FWC regulations require a permit for any ground disturbance activity occurring within 25 feet of a potentially occupied gopher tortoise burrow. Based on these regulations, any gopher tortoises located within 25 feet of the project must be relocated to a permitted recipient site. The project area will be surveyed for gopher tortoise utilization prior to construction. If gopher tortoises or potentially occupied burrows are found within the project area, coordination will be completed with the FWC to secure all permits needed to relocate the tortoises and, if necessary, any additional listed species found to be utilizing the burrows. Therefore, there is **no effect anticipated** for the gopher tortoise.

Plants

Seven (7) species of state-listed plants were listed as having the potential to be present in the project site. The entire site was previously mined and reclaimed/restored approximately twenty-five years ago with sand and clay mine-tailings. Since the restoration of the site, the project area has been invaded with dense stands of Brazilian pepper and cogon grass. All state listed plant species were eliminated from consideration due to the previous disturbance and lack of suitable habitat for the species to re-establish.

8.3 Other Protected Species

Bald Eagle (*Haliaeetus leucocephalus*)

Bald eagles are protected under the Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and FWC's bald eagle rule (F.A.C. 68A-16.002). Potential nesting habitat for bald eagles (e.g. tall pine trees) occurs within the vicinity of the project area and the site has proximity to bodies of water that provide prey. Eagles usually nest in tall trees that provide clear views of the surrounding area.

Audubon Florida's EagleWatch Nest Locator records indicated that the nearest bald eagle nest (PO115) was located approximately 1.8 miles southwest of the project area. No unrecorded bald eagle nests were observed onsite. Because the distance from the nearest nest was greater than the 660' protection buffer, coordination and development of a management plan with the USFWS or FWC is not expected.

Osprey (*Pandion haliaetus*)

The osprey is federally protected by the MBTA and removal of active nests is restricted. Removal of inactive nests is authorized by FWC Migratory Bird Nest Removal Permits and based on the FWC's Osprey Nest Removal Guidelines. One osprey nest was observed on a light pole just north of the project area and another osprey landed on one of the water treatment buildings east of the project area during a previous site visit. Based on these observations, ospreys have become accustomed to normal activities associated with the water treatment plant. Temporary construction activities will not differ much from the normal operation and nest will not be disturbed. Therefore, there is **no effect anticipated** for the osprey.

9.0 CULTURAL RESOURCES

The project area is within the bounds of the Duke Energy Hines Energy complex, which has been historically phosphate-mined and reclaimed. With the disruption of land during the mining process, it is expected that the proposed project will have no adverse effect on cultural and historic resources.

10.0 IMPACT AVOIDANCE AND MINIMIZATION

The entire Duke Energy Hines Facility was previously mined and reclaimed/restored with sand and clay mine-tailings. Since the restoration of the site, the project area has established dense stands of Brazilian pepper and cogon grass. The only impact to wetlands results from the need to excavate approximately 0.39 acres of previously disturbed, isolated Brazilian pepper-dominated wetlands.

Based on the criteria identified in Section 10.2.2.1 of the SWFWMD Applicant's Handbook, mitigation will not be required for activities located in isolated wetlands less than 0.5 acres that do not support listed species. Best Management Practices (BMPs) such as the use of silt fences will be installed surrounding the project site during construction of the brine ponds. This will prevent sediments and debris from being transported into adjacent surface waters during construction thereby maintaining water quality standards.

11.0 PUBLIC INTEREST TEST

The Duke Energy Hines Facility is a gas-powered power plant providing electricity for central Florida.

Public Health, Safety, or Welfare of the Property of Others (Sec. 3.2.3.1)

The proposed project will not adversely affect public health or safety. The Hines Facility provides a source of power for customers in central Florida. Since the proposed brine ponds are associated with water treatment improvements for the power facility, the proposed project should benefit public health and safety.

Fish and Wildlife and Their Habitats (Sec. 3.2.3.2)

The proposed project will not adversely affect the conservation of fish and wildlife, including endangered or threatened species or their habitats. The Hines Energy Facility is located on previously mined lands that have been reclaimed, however, there is no native habitat that has established on the site. The proposed brine ponds are proposed on restored land that has established a cover of Brazilian pepper and other invasive plant species that provide minimal fish and wildlife habitat. In addition, there are several specific requirements in the Conditions of Certification related to wetland and wildlife protection that that will be adhered to including a conservation easement over a section of remnant wetlands.

Navigation, Water Flow, Erosion and Shoaling (Sec. 3.2.3.3)

The proposed project will not adversely affect navigation, the flow of water, or cause erosion or shoaling. The surface waters on the Hines Facility are part of a closed water system designed to retain and recirculate water for the cooling ponds. The proposed project area does not include any navigable waters or flowing systems (creeks, rivers, etc.). The contractor will be required to follow the Stormwater Pollution Prevention plan and utilize Best Management Practices, including the use of silt fence and turbidity curtains to control erosion and sedimentation during construction activities to comply with water quality standards.

Fisheries, Recreation, and Marine Productivity (Sec. 3.2.3.4)

The proposed project will not adversely affect fisheries, recreation or marine productivity. The proposed project only impacts isolated remnant freshwater systems on an industrial facility that does not provide fishing opportunities or marine productivity.

Temporary or Permanent Nature (Sec. 3.2.3.5)

The proposed project will result in permanent impacts to wetlands as illustrated in the attached construction plans (**Attachment 1**) and impact sketches.

Historical and Archaeological Resources (Sec. 3.2.3.6)

Since the proposed project is located on lands that have been previously mined, the project will not adversely affect historical or archaeological resources under the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended, 36 CFR Part 800: Protection of Historic Properties, and Chapter 267, Florida Statutes.

Current Condition and Relative Value of Functions (Sec. 3.2.3.7)

The relative condition and value of surface waters within the project corridor have been described in detail in this narrative. The wetland communities are restricted to disturbed isolated remnant freshwater wetlands located on reclaimed mined lands. Since the wetland impacts are limited to the excavation of 0.39 acres of isolated wetlands, mitigation will not be required for activities located in isolated wetlands less than 0.5 acres based on the criteria identified in Section 10.2.2.1 of the SWFWMD Applicant's Handbook.

12.0 EROSION AND SEDIMENTATION CONTROL/CONSTRUCTION METHODOLOGY

The contractor for this project will incorporate erosion and sedimentation controls as appropriate for the project design and conditions onsite. Best Management Practices (BMPs) such as the use of silt fences will be installed along the edges of filling and excavation activities associated with the construction of the brine ponds. Placement of sedimentation barriers is specified in the Stormwater Pollution Prevention Plan.

ATTACHMENTS

ATTACHMENT 1

PROJECT DRAWINGS
(Attached to Cover Letter)

ATTACHMENT 2

IPAC REPORT

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Polk County, Florida

Local office

Florida Ecological Services Field Office

(352) 448-9151
(772) 562-4288
fw4flesregs@fws.gov

777 37th St
Suite D-101
Vero Beach, FL 32960-3559

https://www.fws.gov/office/florida-ecological-services

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Florida Panther Puma (=Felis) concolor coryi Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1763	Endangered
Puma (=mountain Lion) Puma (=Felis) concolor (all subsp. except coryi) No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6049	SAT

Birds

NAME	STATUS
Crested Caracara (audubon''''s) [fl Dps] Caracara plancus audubonii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8250	Threatened
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10477	Threatened
Everglade Snail Kite Rostrhamus sociabilis plumbeus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7713	Endangered
Whooping Crane Grus americana No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758	EXPN

NOT FOR CONSULTATION

Wood Stork Mycteria americana — Threatened

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8477

Reptiles

NAME	STATUS
American Alligator Alligator mississippiensis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/776	SAT
Blue-tailed Mole Skink Eumeces egregius lividus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2203	Threatened
Eastern Indigo Snake Drymarchon couperi Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/646	Threatened
Sand Skink Neoseps reynoldsi Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4094	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Flowering Plants

NAME	STATUS
Avon Park Harebells Crotalaria avonensis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7093	Endangered

NOT FOR CONSULTATION

Britton's Beargrass Nolina brittoniana Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4460

Carter's Mustard Warea carteri Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5583

Florida Ziziphus Ziziphus celata Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2950

Highlands Scrub Hypericum Hypericum cumulicola Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2940

Lewton's Polygala Polygala lewtonii Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6688

Papery Whitlow-wort Paronychia chartacea Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1465

Pigeon Wings Clitoria fragrans Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/991

Pygmy Fringe-tree Chionanthus pygmaeus Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/1084

Sandlace Polygonella myriophylla Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/5745

Scrub Blazingstar Liatris ohlingerae Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/864

NOT FOR CONSULTATION

Scrub Mint *Dicerandra frutescens* No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/799	Endangered
Short-leaved Rosemary *Conradina brevifolia* No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2929	Endangered
Wireweed *Polygonella basiramia* No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1718	Endangered

Lichens

NAME	STATUS
Florida Perforate Cladonia *Cladonia perforata* No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7516	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

NOT FOR CONSULTATION

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to Bald Eagle Nesting and Sensitivity to Human Activity

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

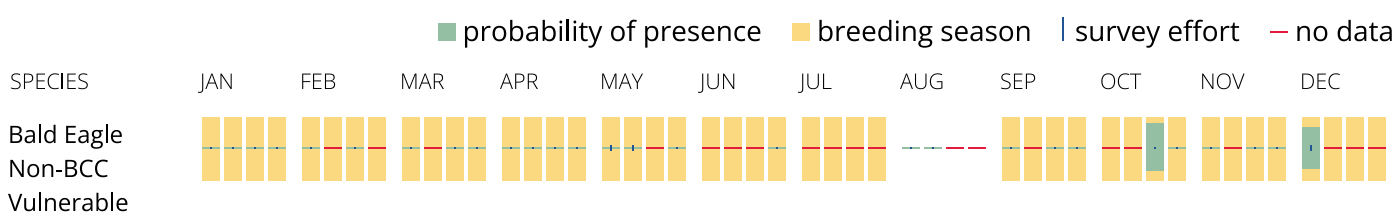
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

NOT FOR CONSULTATION

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NOT FOR CONSULTATION

NAME	BREEDING SEASON
American Kestrel Falco sparverius paulus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15

Great Blue Heron Ardea herodias occidentalis This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Jan 1 to Dec 31
Gull-billed Tern Gelochelidon nilotica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9501	Breeds May 1 to Jul 31
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Magnificent Frigatebird Fregata magnificens This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Oct 1 to Apr 30
Prairie Warbler Setophaga discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Swallow-tailed Kite Elanoides forficatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort – no data

NOT FOR CONSULTATION

NOT FOR CONSULTATION

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

NOT FOR CONSULTATION

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

LAKE

- L1UBHx

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

NOT FOR CONSULTATION

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

ATTACHMENT 3

WOOD STORK SOUTH FLORIDA PROGRAMMATIC KEY

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

May 18, 2010

Donnie Kinard
Chief, Regulatory Division
Jacksonville District Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2007-FA-1494
Service Consultation Code: 41420-2007-I-0964
Subject: South Florida Programmatic Concurrence
Species: Wood Stork

Dear Mr. Kinard:

This letter addresses minor errors identified in our January 25, 2010, wood stork key and as such, supplants the previous key. The key criteria and wood stork biomass foraging assessment methodology have not been affected by these minor revisions.

The Fish and Wildlife Service's (Service) South Florida Ecological Services Office (SFESO) and the U.S. Army Corps of Engineers Jacksonville District (Corps) have been working together to streamline the consultation process for federally listed species associated with the Corps' wetland permitting program. The Service provided letters to the Corps dated March 23, 2007, and October 18, 2007, in response to a request for a multi-county programmatic concurrence with a criteria-based determination of "may affect, not likely to adversely affect" (NLAA) for the threatened eastern indigo snake (*Drymarchon corais couperi*) and the endangered wood stork (*Mycteria americana*) for projects involving freshwater wetland impacts within specified Florida counties. In our letters, we provided effect determination keys for these two federally listed species, with specific criteria for the Service to concur with a determination of NLAA.

The Service has revisited these keys recently and believes new information provides cause to revise these keys. Specifically, the new information relates to foraging efficiencies and prey base assessments for the wood stork and permitting requirements for the eastern indigo snake. This letter addresses the wood stork key and is submitted in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). The eastern indigo snake key will be provided in a separate letter.

Wood stork

Habitat

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically construct their nests in medium to tall

TAKE PRIDE® IN AMERICA

trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

Successful nesting generally involves combinations of average or above-average rainfall during the summer rainy season and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes, which maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry-down (though usually retaining some surface water throughout the dry season).

Wood storks occur in a wide variety of wetland habitats. Typical foraging sites for the wood stork include freshwater marshes and stock ponds, shallow, seasonally flooded roadside and agricultural ditches, narrow tidal creeks and shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Through tactolocation, or grope feeding, wood storks in south Florida feed almost exclusively on fish between 2 and 25 centimeters [cm] (1 and 10 inches) in length (Ogden et al. 1976). Good foraging conditions are characterized by water that is relatively calm, uncluttered by dense thickets of aquatic vegetation, and having a water depth between 5 and 38 cm (5 and 15 inches) deep, although wood storks may forage in other wetlands. Ideally, preferred foraging wetlands would include a mosaic of emergent and shallow open-water areas. The emergent component provides nursery habitat for small fish, frogs, and other aquatic prey and the shallow, open-water areas provide sites for concentration of the prey during seasonal dry-down of the wetland.

Conservation Measures

The Service routinely concurs with the Corps' "may affect, not likely to adversely affect" determination for individual project effects to the wood stork when project effects are insignificant due to scope or location, or if assurances are given that wetland impacts have been avoided, minimized, and adequately compensated such that there is no net loss in foraging potential. We utilize our *Habitat Management Guidelines for the Wood Stork in the Southeast Region* (Service 1990) (Enclosure 1) (HMG) in project evaluation. The HMG is currently under review and once final will replace the enclosed HMG. There is no designated critical habitat for the wood stork.

The SFESO recognizes a 29.9 kilometer [km] (18.6-mile) core foraging area (CFA) around all known wood stork colonies in south Florida. Enclosure 2 (to be updated as necessary) provides locations of colonies and their CFAs in south Florida that have been documented as active within the last 10 years. The Service believes loss of suitable wetlands within these CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, we recommend compensation be provided for impacts to foraging habitat. The compensation should consider wetland type, location, function, and value (hydrology, vegetation, prey utilization) to ensure that wetland functions lost due to the project are adequately offset. Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected wood stork colonies. The Service may accept, under special circumstances, wetland compensation located outside the CFAs of the affected wood stork nesting colonies. On occasion, wetland credits purchased from a "Service Approved" mitigation bank located outside the CFAs could be acceptable to the Service, depending on location of impacted wetlands relative to the permitted service area of the bank, and whether or not the bank has wetlands having the same hydroperiod as the impacted wetland.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. If the use of this key results in a Corps determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination[1]. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

A. Project within 0.76 km (0.47 mile)[2] of an active colony site[3] ..... "*may affect*[4]"

Project impacts Suitable Foraging Habitat (SFH)[5] at a location greater than 0.76 km (0.47 mile) from a colony site..... ..... "*go to* B"

---

[1] With an outcome of "no effect" or "NLAA" as outlined in this key, and the project has less than 20.2 hectares (50 acres) of wetland impacts, the requirements of section 7 of the Act are fulfilled for the wood stork and no further action is required. For projects with greater than 20.2 hectares (50 acres) of wetland impacts, written concurrence of NLAA from the Service is necessary.

[2] Within the secondary zone (the average distance from the border of a colony to the limits of the secondary zone is 0.76 km (2,500 feet, or 0.47 mi).

[3] An active colony is defined as a colony that is currently being used for nesting by wood storks or has historically over the last 10 years been used for nesting by wood storks.

[4] Consultation may be concluded informally or formally depending on project impacts.

[5] Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

Project does not affect SFH……..…..*"no effect*[1]*"*.

B. Project impact to SFH is less than 0.20 hectare (one-half acre)[6]……..……*NLAA*[1]*"*

Project impact to SFH is greater in scope than 0.20 hectare (one-half acre)....……*go to* C

C. Project impacts to SFH not within the CFA (29.9 km, 18.6 miles) of a colony site ……..…….…….….……*go to* D

Project impacts to SFH within the CFA of a colony site …….….…...…….*go to* E

D. Project impacts to SFH have been avoided and minimized to the extent practicable; compensation (Service approved mitigation bank or as provided in accordance with Mitigation Rule 33 CFR Part 332) for unavoidable impacts is proposed in accordance with the CWA section 404(b)(1) guidelines; and habitat compensation replaces the foraging value matching the hydroperiod[7] of the wetlands affected and provides foraging value similar to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]…….. *NLAA*[1]*"*

Project not as above.……... *"may affect*[4]*"*

E. Project provides SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the HMG; habitat compensation is within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydroperiod[7] of the wetlands affected, and provides foraging value similar

---

[6] On an individual basis, SFH impacts to wetlands less than 0.20 hectare (one-half acre) generally will not have a measurable effect on wood storks, although we request that the Corps require mitigation for these losses when appropriate. Wood storks are a wide ranging species, and individually, habitat change from impacts to SFH less than one-half acre are not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

[7] Several researchers (Flemming et al. 1994; Ceilley and Bortone 2000) believe that the short hydroperiod wetlands provide a more important pre-nesting foraging food source and a greater early nestling survivor value for wood storks than the foraging base (grams of fish per square meter) than long hydroperiod wetlands provide. Although the short hydroperiod wetlands may provide less fish, these prey bases historically were more extensive and met the foraging needs of the pre-nesting storks and the early-age nestlings. Nest productivity may suffer as a result of the loss of short hydroperiod wetlands. We believe that most wetland fill and excavation impacts permitted in south Florida are in short hydroperiod wetlands. Therefore, we believe that it is especially important that impacts to these short hydroperiod wetlands within CFAs are avoided, minimized, and compensated for by enhancement/restoration of short hydroperiod wetlands.

[8] For this Key, the Service requires an analysis of foraging prey base losses and enhancements from the proposed action as shown in the examples in Enclosure 3 for projects with greater than 2.02 hectares (5 acres) of wetland impacts. For projects with less than 2.02 hectares (5 acres) of wetland impacts, an individual foraging prey base analysis is not necessary although type for type wetland compensation is still a requirement of the Key.

to, or higher than, that of impacted wetlands. See Enclosure 3 for a detailed discussion of the hydroperiod foraging values, an example, and further guidance[8]..... *"NLAA[1]"*

Project does not satisfy these elements .....*"may affect[4]"*

This Key does not apply to Comprehensive Everglades Restoration Plan projects, as they will require project-specific consultations with the Service.

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued where the effect determination was: "may affect, not likely to adversely affect." We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

Thank you for your cooperation and effort in protecting federally listed species. If you have any questions, please contact Allen Webb at extension 246.

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

Enclosures

cc: w/enclosures (electronic only)
Corps, Jacksonville, Florida (Stu Santos)
EPA, West Palm Beach, Florida (Richard Harvey)
FWC, Vero Beach, Florida (Joe Walsh)
Service, Jacksonville, Florida (Billy Brooks)

LITERATURE CITED

Ceilley, D.W. and S.A. Bortone. 2000. A survey of freshwater fishes in the hydric flatwoods of flint pen strand, Lee County, Florida. Proceedings of the 27th Annual Conference on Ecosystems Restoration and Creation, 70-91. Hillsborough Community College; Hillsborough County, Florida.

Flemming, D.M., W.F. Wolff, and D.L. DeAngelis. 1994. Importance of landscape heterogeneity to wood storks. Florida Everglades Management 18: 743-757.

Kahl, M.P., Jr. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. Ecological Monographs 34:97-117.

Ogden, J.C. 1991. Nesting by wood storks in natural, altered, and artificial wetlands in central and northern Florida. Colonial Waterbirds 14:39-45.

Ogden, J.C., J.A. Kushlan, and J.T. Tilmant. 1976. Prey selectivity by the wood stork. Condor 78(3):324-330.

Ogden, J.C. 1996. Wood Stork *in* J.A. Rodgers, H. Kale II, and H.T. Smith, eds. Rare and endangered biota of Florida. University Press of Florida; Gainesville, Florida.

Rodgers, J.A. Jr., A.S. Wenner, and S.T. Schwikert. 1987. Population dynamics of wood storks in northern and central Florida, USA. Colonial Waterbirds 10:151-156.

Rodgers, J.A., Jr., S.T. Schwikert, and A. Shapiro-Wenner. 1996. Nesting habitat of wood storks in north and central Florida, USA. Colonial Waterbirds 19:1-21.

U.S. Fish and Wildlife Service. 1990. Habitat management guidelines for the wood stork in the southeast region. Prepared by John C. Ogden for the Southeast Region U.S. Fish and Wildlife Service; Atlanta, Georgia.

U.S. Fish and Wildlife Service. 1999. South Florida multi-species recovery plan. Fish and Wildlife Service; Atlanta, Georgia. Available from: http://verobeach.fws.gov/Programs/Recovery/vbms5.html.

ATTACHMENT 4

EASTERN INDIGO SNAKE PROGRAMMATIC EFFECT DETERMINATION KEY

United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

August 13, 2013

Colonel Alan M. Dodd, District Engineer
Department of the Army
Jacksonville District Corps of Engineers
P.O Box 4970
Jacksonville, Florida 32232-0019
(Attn: Mr. David S. Hobbie)

RE: Update Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers Regarding Use of the Attached Eastern Indigo Snake Programmatic Effect Determination Key

Dear Colonel Dodd:

This letter is to amend the January 25, 2010, letter to the U.S. Army Corps of Engineers regarding the use of the attached eastern indigo snake programmatic effect determination key (key). It supersedes the update addendum issued January 5, 2012.

We have evaluated the original programmatic concurrence and find it suitable and appropriate to extend its use to the remainder of Florida covered by the Panama City Ecological Services Office.

On Page 2

The following replaces the last paragraph above the signatures:

"Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to Annie Dziergowski (North Florida ESO) at 904-731-3089, Harold Mitchell (Panama City ESO) at 850-769-0552, or Victoria Foster (South Florida ESO) at 772-469-4269."

On Page 3

The following replaces both paragraphs under "Scope of the key":

"This key should be used only in the review of permit applications for effects determinations for the eastern indigo snake within the State of Florida, and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH)."

On Page 4

The following replaces the first paragraph under Conservation Measures:

"The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that

our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) located at: http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes.htm will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake."

On Page 4 and Page 5 (Couplet D)

The following replaces D. under Conservation Measures:

D. The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows……*go to* E

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2]…… *"may affect"*

On Page 5

The following replaces footnote #3:

"[3]If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a FWC Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at http://myfwc.com/gophertortoise ."

Thank you for making these amendments concerning the Eastern Indigo Snake Key. If you have any questions, please contact Jodie Smithem of my staff at the address on the letterhead, by email at jodie_smithem@fws.gov, or by calling (904)731-3134.

Sincerely,

Dawn Jennings
Acting Field Supervisor

cc:
Panama City Ecological Services Field Office, Panama City, FL
South Florida Ecological Services Field Office, Vero Beach, FL

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

January 25, 2010

David S. Hobbie
Chief, Regulatory Division
U.S. Army Corps of Engineers
Post Office Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2009-FA-0642
Service Consultation Code: 41420-2009-I-0467
41910-2010-I-0045
Subject: North and South Florida Ecological Services Field Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service's (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (*Drymarchon corais couperi*), (indigo snake), and now provide one key for both FO's. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office's responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*).

Footnote number 3 in the original keys indicated "A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC)." We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC's revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects

TAKE PRIDE® IN AMERICA

located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps' determination of "may affect, not likely to adversely affect" (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

David L. Hankla
Field Supervisor
North Florida Ecological Services Office

Enclosure

cc: electronic only
FWC, Tallahassee, Florida (Dr. Elsa Haubold)
Service, Jacksonville, Florida (Jay Herrington)
Service, Vero Beach, Florida (Sandra Sneckenberger)

Eastern Indigo Snake Programmatic Effect Determination Key

Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the **North** Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the **South** Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise *(Gopherus polyphemus),* the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical

hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

Conservation Measures

The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps' determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary[1]. This key is subject to revisitation as the Corps and Service deem necessary.

A. Project is not located in open water or salt marsh.....*go to* B

   Project is located solely in open water or salt marsh.....*"no effect"*

B. Permit will be conditioned for use of the Service's *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.....*go to* C

   Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested[2] .....*"may affect"*

C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....*go to* D

   There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....*"NLAA"*

D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.....*go to* E

The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2]..... *"may affect"*

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow[3]. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work..... *"NLAA"*

Permit will not be conditioned as outlined above and consultation with the Service is requested[2] ..... *"may affect"*

---

[1]With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

[2]Consultation may be concluded informally or formally depending on project impacts.

[3] If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission's revised April 2009 Gopher Tortoise Permitting Guidelines located at **http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise**. A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.

ATTACHMENT 5

FNAI REPORT

1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
850-681-9364 fax
www.fnai.org

Florida Natural Areas Inventory

Biodiversity Matrix Query Results

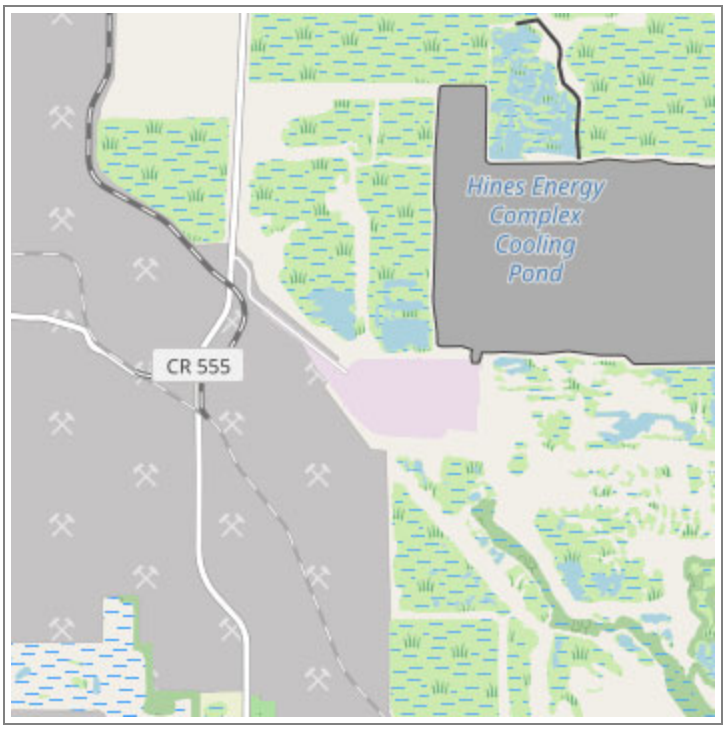
UNOFFICIAL REPORT

Created 12/13/2024

(Contact the FNAI Data Services Coordinator at 850.224.8207 or kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 1 Matrix Unit: 36338



Descriptions

DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.

DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.

LIKELY - The species or community is *known* to occur in this vicinity, and is considered likely within this Matrix Unit because:

1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; *or*
2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit.

POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.

Matrix Unit ID: 36338

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

1 **Likely** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mycteria americana Wood Stork	G4	S2	T	FT

Matrix Unit ID: 36338

16 **Potential** Elements for Matrix Unit 36338

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing

Antigone canadensis pratensis Florida Sandhill Crane	G5T2	S2	N	ST
Calopogon multiflorus many-flowered grass-pink	G2G3	S2S3	N	T
Centrosema arenicola sand butterfly pea	G2Q	S2	N	E
Drymarchon couperi Eastern Indigo Snake	G3	S2?	T	FT
Eriogonum longifolium var. gnaphalifolium scrub buckwheat	G4T3	S3	T	E
Gopherus polyphemus Gopher Tortoise	G3	S3	C	ST
Gymnopogon chapmanianus Chapman's skeletongrass	G3	S3	N	N
Lechea cernua nodding pinweed	G3	S3	N	T
Mustela frenata peninsulae Florida Long-tailed Weasel	G5T3?	S3?	N	N
Nemastylis floridana celestial lily	G2	S2	N	E
Neofiber alleni Round-tailed Muskrat	G2	S2	N	N
Peucaea aestivalis Bachman's Sparrow	G3	S3	N	N
Pteroglossaspis ecristata giant orchid	G2G3	S2	N	T
Rostrhamus sociabilis Snail Kite	G4G5	S2	E	FE
Ursus americanus floridanus Florida Black Bear	G5T4	S4	N	N
Warea carteri Carter's warea	G1	S1	E	E

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a Standard Data Request option for those needing certifiable data.

Section C: Supplemental Information for Works or Other Activities In, On, or Over Wetlands and/or Other Surface Waters

Instructions: **This section is for applications that do not involve activities associated with an individual single-family residence, duplex, triplex, or quadruplex. For those activities, please use Section B.** This form is to be completed if the proposed work or activity will occur in, on, over, or within 25 feet of a wetland or other surface water. The supplemental information required by this section is in addition to the information required by Section A of the application.

Part 1: Wetland or Other Surface Water Impact Summary

1. Describe the basic purpose of the project or activity: **Two 11-acre brine ponds are proposed to be constructed as part of the improvements to the water treatment system for the Hines Facility,**

2. Total area of work (dredging, filling, construction, alteration, or removal) in, on, or over wetlands or other surface waters: sq. ft.; **0.39** ac.

3. Total volume of material to be dredged or filled in wetlands or other surface waters:
   a. to be dredged: 1,520cubic yards,
   b. to be filled: cubic yards.

4. Identify the seasonal high water level (SHWL) and wetland normal pool elevations for each wetland or surface water within the project site. For tidal wetlands and/or surface waters provide the elevation of mean high and mean low water. Include an aerial photograph showing the location of each sampling location, dates, datum, and methods used to determine these elevations.

5. Name of waterbody(ies) (if applicable & if known) in which work will occur? **Not applicable (impacts are to unnamed wetlands).**

6. Is the activity proposed in an Outstanding Florida Water or Aquatic Preserve?
   ☐ yes, name: ☒ no ☐ I don't know

7. Has there ever been a formal or informal wetland determination for the project site? If yes, provide the identifying number and/or a copy of the jurisdictional map. **No**

8. Provide a map(s) of the project area and vicinity delineating USDA/NRCS soil types. **The entire project area has been mined as part of the historic phosphate mining operations. All of the original soils on the project site were removed during the mining process. The current soils on the property have been brought to the site as part of the mine reclamation process. Therefore, a soils map is not being provided.**

9. Provide recent aerials legible for photointerpretation (no photocopies) with a scale of 1" = 400 ft, or more detailed, with project boundaries and wetland boundaries delineated on the aerial. **Please see Figure 3 on Page 4 in the attached Environmental Narrative.**

10. Provide maps accurately portraying the existing and proposed natural vegetative community types and land cover classifications using recognized classification schemes. Suggested sources include: the Florida Natural Areas Inventory Guide to the Natural Communities of Florida (2010) available at http://www.fnai.org/naturalcommguide.cfm, or the Florida Land Use and Cover Classification System (FLUCCS) (FDOT 1999, available at http://www.dot.state.fl.us/surveyingandmapping/documentsandpubs/fluccmanual1999.pdf). For vegetated areas dominated by exotic vegetation, use the descriptors representative of the native community type that was present prior to exotic infestation. **The entire project area has been mined as part of the historic phosphate mining operations. The project site is classified as Land Use Code 1875 (Reclaimed Lands).**

11. Impact Summary Tables (located at the end of this section):
    a. For all projects, complete Table 1, 2 and 3 as applicable. **See completed Table 1.**
    b. For shoreline stabilization projects, provide the information requested in Table 4.

12. If the activity is located on state owned submerged lands and requires a lease or easement, provide a list of names and addresses from the latest county tax assessment roll of all property owners located within a 500 ft. radius of the proposed lease or easement boundary in mailing label format, or you may elect to send notice to those persons by certified mail, with the return-receipt card addressed to the DEP or water management district, as applicable, in accordance with subsection 18-21.005(3), F.A.C., and Section 253.115, F.S. Attach additional sheets if necessary.
    1. Name:
       Mailing Address:
       City, State, Zip Code:

    2. Name:
       Mailing Address:
       City, State, Zip Code:

    3. Name:
       Mailing Address:
       City, State, Zip Code:

    4. Name:
       Mailing Address:
       City, State, Zip Code:

    5. Name:
       Mailing Address:
       City, State, Zip Code:

    6. Name:
       Mailing Address:
       City, State, Zip Code:

Part 2: Environmental Considerations

Note: for many questions, a state statute/Applicant's Handbook Volume I (AH I)/State 404 Program Applicant's Handbook section is cited to assist the applicant in addressing these questions.

1. Elimination or Reduction of Impacts (Avoidance and Minimization). Describe measures taken to eliminate or reduce impacts to wetlands and other surface waters (*Refer to AH I Section 10.2.1*).

   The entire Duke Energy Hines Facility was previously mined and reclaimed/restored with sand and clay mine tailings. Since the restoration of the site, the project area has been invaded with dense stands of Brazilian pepper and cogon grass. The only impact to wetlands for the brine pond project results from the need to excavate approximately 0.39 acres of previously disturbed, isolated Brazilian pepper dominated wetlands.
   Based on the criteria identified in Section 10.2.2.1 of the SWFWMD Applicant's Handbook, mitigation will not be required for activities located in isolated wetlands less than one-half acres in size. Best Management Practices (BMPs) such as the use of silt fences will be installed surrounding the project site during construction of the brine ponds. This will prevent sediments and debris from being transported into adjacent surface waters during construction thereby maintaining water quality standards.

2. Fish, Wildlife, Listed Species, and their Habitats. Provide results of any wildlife assessments that have been conducted on the project site and provide any comments, biological opinions, formal or informal consultation decisions, or recommended actions you have received pertaining to the project from the Florida Fish and Wildlife Conservation Commission, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. (*Refer to AH I Section 10.2.2*). **Please see Section 5 of the attached Environmental Narrative.**

3. Water quantity impacts to wetlands and other surface waters (*Refer to AH I Section 10.2.2.4 and AH II*).

   a. Does the activity include a proposed surface water management system with a control elevation different than the wetland normal pool elevation(s) of existing or proposed created wetlands or other surface waters? **No**

   b. If yes to (a), provide documentation (e.g. drawdown assessment or other methods) that shows the proposed surface water management system will not change the hydroperiod of the existing or created wetland or other surface water.

4. Public Interest Test. Please describe how the proposed activity will ***not be contrary*** to the public interest, OR if such an activity significantly degrades or is located within an Outstanding Florida Water (OFW), that the regulated activity will be ***clearly in*** the public interest (*Refer to AH I Section 10.2.3*).

   a. Please describe how the project will be designed to avoid adverse effects to public health, safety, or the welfare or the property of others.

      The proposed project will not adversely affect public health or safety. The Hines Facility provides a source of power for customers in central Florida. Since the proposed brine ponds are associated with water treatment improvements for the power facility, the proposed project should benefit public health and safety.

b. Please describe how the project will be designed to avoid adverse effects to the conservation of fish and wildlife, including endangered or threatened species, or their habitats.
The proposed project will not adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats. Since the Hines Energy Facility is located on previously mined lands that have been reclaimed, there is no native habitat remaining on the site. The specific location of the proposed brine ponds includes restored land that has been invaded by Brazilian pepper and other invasive plant species that provide minimal fish and wildlife habitat. In addition, there are a number of specific requirements in the Conditions of Certification related to wetland and wildlife protection that Duke Energy is required to adhere to including a conservation easement over a section of remnant wetlands.

c. Please describe how the project will be designed to avoid adverse effects to navigation or the flow of water or cause harmful erosion or shoaling.
The proposed project will not adversely affect navigation, the flow of water, or cause erosion or shoaling. The surface waters on the Hines Facility are all part of a closed water system designed primarily to retain and recirculate water for the cooling ponds. The proposed project area does not include any navigable waters or flowing systems (creeks, rivers, etc.). The contractor will be required to follow the Stormwater Pollution Prevention plan and utilize Best Management Practices including the use of silt fence and turbidity curtains to control erosion and sedimentation during construction activities to comply with water quality standards.

d. Please describe how the project will be designed to avoid adverse effects to the fishing or recreational values or marine productivity in the vicinity of the activity.
The proposed project will not adversely affect fisheries, recreation or marine productivity. The proposed project includes only impacts to isolated remnant freshwater systems on an industrial facility that does not provide fishing opportunities or marine productivity.

e. Will the project be of a temporary or permanent nature? **Permanent**

f. Please describe how the project will be designed to avoid adverse impacts to significant historical and archaeological resources, under the provisions of section 267.061, F.S.
Since the proposed project is located on lands that have been previously mined, the project will not adversely affect historical or archaeological resources under the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended, 36 CFR Part 800: Protection of Historic Properties, and Chapter 267, Florida Statutes.

g. Please describe how the project will be designed to avoid adverse effects to the current condition and relative value of functions being performed by areas affected by the proposed regulated activity.
The relative condition and value of surface waters within the project corridor have been described in detail in the descriptions presented in this narrative. The wetland communities are restricted to disturbed isolated remnant freshwater wetlands located on previously mined lands. Since the wetland impacts are limited to the excavation of 0.39 acres of isolated wetlands, mitigation will not be required for activities located in isolated wetlands less than one-half acres in size based on the criteria identified in Section 10.2.2.1 of the SWFWMD Applicant's Handbook.

5. Water Quality.
   Provide a description of how water quality will be maintained in wetlands and other surface waters that will be preserved or will remain undisturbed, both on and offsite. Please address both short-term (such as during construction) and long-term water quality considerations (*Refer to AH I Section 10.2.4*).
   The contractor for this project will incorporate erosion and sedimentation controls as appropriate for the project design and conditions onsite. Best Management Practices (BMPs) such as the use of silt fences will be installed along the edges of filling and excavation activities associated with the construction of the brine ponds. Placement of sedimentation barriers is specified in the Stormwater Pollution Prevention Plan. BMP's will also be implemented in the N11 site where sand is to be excavated and trucked to the brine pond site. Prior to excavation at the N11 site, silt fencing will be installed around the edges of the outer wetlands and the boundary of the small, isolated wetland.

6. Class II Waters; Waters approved for shellfish harvesting *(Refer to AH I Section 10.2.5)*.

   a. Will the project occur in Class II that are NOT approved for shellfish harvesting? If yes, please provide a plan or procedure detailing the measures to be taken to meet the requirements of *AH I Section 10.2.5(a)*. **No**

   b. Is the project located adjacent to or in close proximity to Class II waters? If yes, please provide a plan or procedure detailing the measures to be taken to meet the requirements of *AH I Section 10.2.5(b)*. **No**

   c. Is the project located in Class II or Class III waters that are classified as "approved", "restricted", "conditionally approved", or "conditionally restricted"? If yes, demonstrate that the project meets the requirements of *AH I Section 10.2.5(c)*. **No**

7. Vertical seawalls. Are vertical seawalls proposed in an estuary or lagoon as part of the project? If yes, please describe how the project meets the requirements of *AH I Section 10.2.6*. **No**

8. Secondary Impacts (*AH I Section 10.2.7*).

   a. Will an upland buffer, with a minimum width of 15' and an average width of 25', be provided between the proposed activities and existing wetlands or wetlands to be preserved, enhanced, restored, or created? Provide the location and dimension of all buffers on the plans. **There will be no remaining wetlands on the brine pond project site after the ponds are constructed. There will be a 25-foot buffer around the remaining wetland in the N11 excavation area.** If not, demonstrate that secondary impacts will not occur or describe how they will be offset.

   b. If listed species are present or may be present, then coordination with wildlife agencies is needed. Have you coordinated with the FFWCC and/or USFWS? If so, please provide correspondence from the wildlife agencies indicating concurrence with the species management plan(s). **Not yet. It is assumed that coordination with the FWC will occur as a result of the ERP Application process. Please see Section 5 of the attached Environmental Narrative for a further discussion of listed species.**

   c. What measures will be taken to avoid impacts to wetland-dependent wildlife and/or listed species that use uplands for nesting or denning? **The uplands adjacent to the brine ponds are also part of the overall area that was previously mined. Since the reclaimed lands are dominated by dense stands of Brazilian pepper and other nuisance and invasive plant species, minimal**

wildlife habitat is present. In addition, there are a number of specific requirements in the Conditions of Certification related to wetland and wildlife protection that Duke Energy is required to adhere to on the Hines facility including a conservation easement over a section of remnant wetlands in another section of the facility. The excavation area within N11 will remain available to wildlife use after excavation is completed.

d. Describe whether there are any other relevant activities that are very closely linked and causally related to any proposed dredging or filling in wetlands or other surface waters that have the potential to cause impacts to significant historical and archaeological resources.

Since the proposed project is located on lands that have been previously mined, the project will not adversely affect historical or archaeological resources under the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended, 36 CFR Part 800: Protection of Historic Properties, and Chapter 267, Florida Statutes.

e. Are there additional future phases or extensions of the proposed activities that are not shown? If yes, please describe. **No**

9. Cumulative Impacts. Is the proposed mitigation located within the same drainage basin (*Refer to AH I Figures 10.2.8.1 – 10.2.8.5)* as the proposed wetland impacts? **Mitigation is not being proposed since mitigation is not required for activities located in isolated wetlands less than one-half acres in size based on the criteria identified in Section 10.2.2.1 of the SWFWMD Applicant's Handbook.** If not, please submit a Cumulative Impact Evaluation in accordance with *AH I Section 10.2.8*.

10. Mitigation Plan (*Refer to AH I Section 10.3*). **Not Applicable**

a. If a mitigation bank is proposed to offset wetland/other surface water impacts, provide:

i. the name of the bank: . A letter of reservation from the banker will be required once the application has been evaluated.
ii. If the mitigation bank was assessed using UMAM, provide UMAM worksheets for impact area(s). If the bank was assessed using a method other than UMAM, then prepare the impact assessment using the same method.

b. If mitigation is proposed to offset wetland/other surface water impacts, please provide a mitigation plan that includes, at a minimum, the following:

i. ☐ Proposed mitigation narrative:
(1) ☐ Describe the current and proposed condition for each type of mitigation component (restoration, enhancement, creation, preservation), including:
(a) ☐ Describe current and proposed vegetation
(b) ☐ Describe current and proposed hydrologic conditions for the proposed mitigation.
(c) ☐ Describe the soil types from NRCS maps and confirm if actual soil conditions appear to match.
(2) ☐ Provide details of the proposed construction/mitigation activities including phasing and timing, as appropriate.
(3) ☐ Identify measures that will be implemented during and after construction to avoid adverse impacts related to the proposed activities.

(4) ☐ A mitigation implementation and monitoring schedule with dates.
(5) ☐ Identify the success criteria.
(6) ☐ Describe the anticipated site conditions in and around the mitigation area after the mitigation plan is successfully implemented.
(7) ☐ Provide a comparison of current fish and wildlife habitat to expected habitat after the mitigation plan is successfully implemented.

ii. ☐ Provide a Management Plan that includes, as appropriate, aspects of operation and maintenance, including water management practices, vegetation establishment, exotic and nuisance species control, fire management, and control of access.

iii. ☐ Maps:
(1) ☐ Soil map (include soil names/codes, hydrologic soil groups and hydric soil types).
(2) ☐ Topographic map of the mitigation area and adjacent contributing and receiving areas.
(3) ☐ Hydrologic features map of the mitigation area and adjacent contributing and receiving areas.
(4) ☐ Vegetative communities map (using FLUCCS or other appropriate classification system).
(5) ☐ For all maps, identify source.

iv. Provide the necessary supporting information for the application of sections 62-345.400 - .600 (Uniform Mitigation Assessment Method (UMAM)). To meet this requirement, submittal of UMAM worksheets is acceptable for impact and mitigation areas.

v. If onsite and/or offsite applicant-responsible mitigation is proposed, submit a draft Conservation Easement document or other form of restrictive covenant that provides for protection of the mitigation area in perpetuity. Standard forms, as described in subsection 62-330.301(6), F.A.C., are available from the Agency or on its website.

vi. If onsite and/or offsite applicant-responsible mitigation is proposed, submit a cost estimate for completing the mitigation, including monitoring and maintenance.

vii. If onsite and/or offsite applicant-responsible mitigation is proposed and the proposed mitigation exceeds $25,000, please provide a draft financial assurance document. Standard forms, as described in subsection 62-330.301(5), F.A.C., are available from the agency or on its website.

viii. Identify the entity responsible for monitoring, maintenance, and long-term stewardship of the mitigation area (i.e. the landowner or homeowner association, not the consultant or contractor that will do the work).

Note: If your project is in retained waters, it is highly recommended that you coordinate the design of any mitigation plan that also may be required for the Corps permit to meet the requirements of both permits. Pre-application meetings with both the applicable Agency and the Corps can help you to choose a mitigation option that is acceptable to both the applicable Agency and the Corps.

Part 3: Plans

Plans: The information listed in the checklist below represents the typical information required on the submitted project plans. The Plans checklists in each application section are cumulative unless otherwise noted. Separate plans for each application section are not required.

1. ☒ Include the following on the construction plans and cross sections:

   a. ☒ An Existing Conditions sheet showing the entire project and wetland/other surface water boundaries. Include the following: Acreage and type (herbaceous, forested or other surface water) of each wetland/other surface water.
   b. ☒ A Proposed Conditions sheet showing the entire project and wetland/other surface water boundaries with construction plan overlay.
   c. ☐ A Proposed Wetland Impact sheet that includes the following:
      i. ☐ Acreage and type (herbaceous, forested, or other surface water) of each wetland/other surface water to be impacted.
      ii. ☐ Proposed upland buffers with dimensions.
      iii. ☐ Identify the seasonal high water and wetland normal pool elevations on the plans.
   d. ☐ Include wetland boundaries on all construction plan sheets.

2. ☐ If onsite and/or offsite applicant-responsible mitigation is proposed, submit mitigation plans and cross sections including, at a minimum: **Not Applicable**

   a. ☐ existing conditions plan sheet identifying upland and wetland communities and acreage of each, topography, drainage patterns, and location of cross-section detail.
   b. ☐ proposed conditions plan sheet identifying proposed improvements by type (restoration, enhancement, creation, preservation), acreage of each, topography, drainage patterns, and location of cross-section detail.
   c. ☐ monitoring plan sheet including proposed improvements, monitoring transects, photostations, and mitigation signage (if applicable).
   d. ☐ cross-section and/or profile detail(s) sheet(s) including representative section of each type of mitigation component. Include existing and proposed conditions and representative elevations.
   e. ☐ planting schedule, plant species including common and scientific names divided into three sections (canopy, shrub, herbaceous) by mitigation component, quantity, spacing, size, and elevation range.

Table 1 - Project Wetland (Wl) And Other Surface Water (SW) And Impact Summary

WL & SW ID	UMAM ASSESSMENT AREA NAME(S)	WL & SW TYPE	WL & SW SIZE (acres)	WL & SW NOT IMPACTED (acres)	TEMPORARY WL &SW IMPACT SIZE (acres)	TEMPORARY WL & SW IMPACT TYPE	PERMANENT WL &SW IMPACT SIZE (acres)	PERMANENT WL & SW IMPACT TYPE	MITIGATION ID
W1		PFO/EMC	0.39	0.00	0.00	N/A	0.39	D	N/A
N11		PEMC	0.25	0.25	0.00	N/A	0.00	N/A	N/A
PROJECT TOTALS:			0.64	0.25	0.00		0.39		

Comments:

Codes (multiple entries per cell not allowed):

- Wetland & Surface Water ID: Include ID on submitted wetland and surface water impact maps
- Wetland Type: from an established wetland classification system
- Impact Type: D=dredge; F=fill; H=change hydrology; S=shading; C=clearing; O=other

Table 2 - Project On-Site Mitigation Summary

MITIGATION ID	UMAM ASSESSMENT AREA NAME(S)	TARGET TYPE	CREATION AREA (acres)	RESTORATION AREA (acres)	ENHANCEMENT AREA (acres)	WETLANDS PRESERVE AREA (acres)	UPLAND PRESERVE AREA (acres)	OTHER AREA (acres)
PROJECT TOTALS:								

COMMENTS:

Codes (multiple entries per cell not allowed):

- Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

Table 3 - Project Off-Site Mitigation Summary

MITIGATION ID	UMAM ASSESSMENT AREA NAME(S)	TARGET TYPE	CREATION AREA (acres)	RESTORATION AREA (acres)	ENHANCEMENT AREA (acres)	WETLANDS PRESERVE AREA (acres)	UPLAND PRESERVE AREA (acres)	OTHER AREA (acres)
PROJECT TOTALS:								

COMMENTS:

Codes (multiple entries per cell not allowed):

- Target Type or Type=target or existing habitat type from an established wetland classification system or land use classification for non-wetland mitigation

Table 4 - Shoreline Stabilization

Stabilization	Linear Ft. New	Linear Ft. Replaced	Linear Ft. Repaired	Linear Ft. Removed	Slope H: V:	Toe Width (Ft.)
Natural Vegetation (living shoreline)					**N/A**	**N/A**
Rip Rap + Vegetation						
Rip Rap						
Seawall + Rip Rap						
Vertical Seawall						
Other Shoreline Stabilization Type						

Size of Rip Rap

Type of Rip Rap

Application for Individual and Conceptual Approval Environmental Resource Permit, State 404 Program Permit, and Authorization to Use State-Owned Submerged Lands

Florida Department of Environmental Protection/

Water Management Districts

Effective December 22, 2020

Instructions for Use of This Form:

This form is designed to assist you in submitting a complete application. All applications must include Section A-General Information for All Activities. Sections B through H list typical information that is needed based on the proposed activities and are only required as applicable. Part 1-C of Section A will guide you to the correct sections needed based on your proposed activities. Applicants are advised to consult Chapter 62-330, F.A.C., and the Environmental Resource Permit Applicant's Handbook Volumes I and II for information regarding the ERP permitting process and requirements while preparing their application. Internet addresses for Chapter 62-330, F.A.C., and the Applicant's Handbook, Agency contact information, and additional instructions for this form can be found in Attachment 1.

What Sections of the Application Must I Fill Out?

Type of Activity	Section A	Section B	Section C	Section D	Section E	Section F	Section G	Section H	Section I
Fill in wetlands or waters for a single family residence?	Y	Y	N	N	N	N	N	N	Y, if in assumed waters
Docks, shoreline stabilization, seawalls associated with a single family residence?	Y	Y	N	N	N	Y, as needed	N	N	Y, if in assumed waters
Wetland impacts (other than association with an individual residence)?	Y	N	Y	N	N	N	N	N	Y, if in assumed waters
Boating facilities, a marina, jetty, reef, or dredging?	Y	N	Y	Y	N	Y, as needed	N	N	Y, if in assumed waters
Any work on state owned submerged land?	Y	N	Y	N	N	Y	N	N	Y, if in assumed waters
Construction of a stormwater management system?	Y	N	Y, as needed	N	Y	N	N	N	N
Constructing a mitigation bank?	Y	N	Y	N	Y, as needed	N	Y	N	Y, if in assumed waters
Creating a mine?	Y	N	Y, as needed	N	N	N	N	Y	Y, if in assumed waters

If you have any questions, or would like assistance completing this form, please contact the staff of the nearest office of either the Florida Department of Environmental Protection (DEP) or a Water Management District (WMD) (see Attachment 2).

Section A:
General Information for All Activities

Part 1: Name, Application Type, Location, and Description of Activity

A. Name of project, including phase if applicable: Duke Energy Hines Energy Complex Water Treatment Facility

B. This is for (check all that apply):

☐ Construction and operation of **new** works, activities, and/ or a stormwater management system

☐ **Conceptual Approval** of proposed works, activities and/ or a stormwater management system

☒ Modification or alteration of **existing** works, activities, and/or a stormwater management system. Provide the existing DEP or WMD permit #, if known: Note: Minor modifications do not require completion of this form, and may instead be requested by letter in accordance with section 6.2 of Applicant's Handbook Volume I.

☐ **Maintenance or repair** of works, activities, and/ or a stormwater management system previously permitted by the DEP or WMD. Provide existing permit #, if known:

☐ Abandonment or removal of works, activities, and/ or a stormwater management system.

Provide existing DEP or WMD permit #, if known:

☐ Operation of an **existing unpermitted** work, activity, and/or stormwater management system.

☒ Construction of additional phases of a permitted work, activity, or system.

Provide the existing DEP or WMD permit #, if known: **Duke Energy Hines Florida Hines Energy Complex (Siting Act)**

☐ A State 404 Program authorization:

☐ Exemption ☐ General Permit ☐ Individual Permit

If requesting an Exemption or General Permit provide Rule #, if known:

☐ **By checking this box**, I hereby voluntarily waive, in accordance with Rule 62-330.090(8), F.A.C., the agency action deadlines in section 5.5.3 of Volume I in the event my project also requires a State 404 Program authorization (other than an exemption) under Chapter 62-331, F.A.C., and request that the agency actions for the ERP and State 404 Program authorizations be issued at the same time. (This is strongly recommended to ensure consistency, and to reduce the potential need for project modifications to resolve inconsistencies that may occur when the agency actions are issued at different times.) If this box is checked and the

Agency(ies) determines that no State 404 Program authorization is required, the Agency will continue to abide by section 5.5.3 of Volume I.

C. **List the type of activities proposed. Check all that apply**, **and provide the supplemental information requested in each of the referenced application sections.** Please also reference Applicant's Handbook Volumes I and II for the type of information that may be needed.

☐ Activities associated with one single-family residence, duplex, triplex, or quadruplex that do not qualify for an exemption or a General Permit: **Provide the information requested in Section B. Do not complete Section C.**

☒ Activities within wetlands or surface waters, or within 25 feet of a wetland or surface water, (not including the activities associated with an individual single-family residence). Examples include dredging, filling, outfall structures, docks, piers, over-water structures, shoreline stabilization, mitigation, reclamation, and restoration/enhancement. **Provide the information requested in Section C.**

☐ Activities within navigable or flowing surface waters such as a multi-slip dock or marina, dry storage facility, dredging, bridge, breakwaters, reefs, or other offshore structures: **In addition to Section C, also provide the information requested in Section D.**

☐ Activities that are (or may be) located within, on, or over state-owned submerged lands (See Chapter 18-21, F.A.C. https://www.flrules.org/gateway/ChapterHome.asp?Chapter=18-21): **In addition to Section B or C, also provide the information requested in Section F.**

☐ Construction or alteration of a stormwater management system serving residential, commercial, transportation, industrial, agricultural, or other land uses, or a solid waste facility (excluding mines that are regulated by DEP). **Provide the information requested in Section E.**

☐ Creation or modification of a Mitigation Bank (refer to Chapter 62-342, F.A.C. https://www.flrules.org/gateway/ChapterHome.asp?Chapter=62-342): **Provide the information requested in Section G.**

☐ Mines (as defined in Section 2.0 of Applicant's Handbook Volume I) that are regulated by the DEP: **Provide the information requested in Section H.**

☒ Other, describe: Minor Modification (see letter) Please contact the Agency to determine which additional sections of the application are needed. See Attachment 2 for Agency contacts.

D. Describe in general terms the proposed project, system, works, or other activities. For permit modifications, please briefly describe the changes requested to the permit: **Construction of a gravel road and laydown area. Filling of 0.39 acres of wetlands for future construction of brine ponds designed and permitted by others under an industrial wastewater permit. Erosion control measures for 70.2-acre sand borrow.**

E. Project/Activity Street/Road Address or other location (if applicable): **7700 Highway 555**

City: **Bartow** County(ies): **Polk** Zip: **33830**

Note: For utility, road, or ditch/canal activities, provide a starting and ending point using street names and nearest house numbers or provide length of project in miles along named streets or highways.

F. Project location map and Section, Township, and Range information (use additional sheets if needed):

Please attach a location map showing the location and boundaries of the proposed activity in relation to major intersections or other landmarks. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.

Section(s): **13, 14** Township: **31S** Range: **24E** Land Grant name, if applicable:
Section(s): Township: Range:

1. Section(s): Township: Range:

G. Latitude (DMS) 27° **47' 12.54"** Longitude (DMS) **81° 52' 29.30"** (Taken from central location of the activity). Explain source for obtaining latitude and longitude (i.e. U.S.G.S. Quadrangle Map, GPS, online resource): Google Earth Pro

H. Tax Parcel Identification Number(s): **Parcels 243114000000011010, 243036000000012010, and 243113000000031010**

[Number may be obtained from property tax bill or from the county property appraiser's office; if on multiple parcels, provide multiple Tax Parcel Identification Numbers]

I. Directions to Site (from major roads; include distances and landmarks as applicable): **From Tampa: Take I-4 east towards Lakeland to Exit 27 (SR 570). Take SR 570 south to US 98. Take US 98 south to SR 60. Take SR 60 west to CR 555. Take CR 555 approximately 7 miles south to the entrance to the Duke Energy Hines Facility.**

J. Project area or phase area: **72.16** acres

K. Name of waterbody(ies) (if known) in which activities will occur or into which the system will discharge:

The following questions (M-O) are not applicable to activities related to an individual single-family residence, including a dock, pier, and/or seawall associated with that residence.

L. Is it part of a larger plan of development or sale? ☒ yes ☐ no

M. Impervious or semi-impervious area excluding wetlands and other surface waters (if applicable): **the proposed brine ponds that are an expansion of the wastewater treatment facility.**

1.57 acres or square feet

N. Volume of water the system is capable of impounding (if applicable):

Normal Pool: acre-feet. Depth ft.
Maximum Pool: acre-feet. Depth ft.

Part 2: Supplemental Information, and Permit History

A. Is this an application to modify an existing Environmental Resource Permit or to construct or implement part of a multi-phase project, such as a project with a Conceptual Approval permit? ☒ Yes ☐ No (If you answered "yes", please provide permit numbers below*):*

Agency	Date	Permit/Application No.	Project Name
FDEP	**1992**	**Conditions of Certification PA92-33**	**Duke Energy Florida Hines Energy Complex**

B. Indicate if there have been any **pre-application meeting(s)** with the DEP, WMD, or delegated local government, or other discussions, meetings, or coordination with other stakeholders or agencies about the proposed project, system or activity. If so, please provide the date(s), location(s) of the meeting, and the name(s) of Agency staff that attended the meeting(s):

Agency	Date	Location	Meeting Attendees
N/A			

C. **Attach a depiction (plan and section views), which clearly shows the works or other activities proposed to be constructed.** Use multiple sheets, if necessary, a scale sufficient to show the location and type of works, and include a north arrow and a key to any symbols used. **Specific information to be included in the plans is based on the activities proposed and is further described in Sections B-H**. However, supplemental information may be required based on the specific circumstances or location of the proposed works or other activies.

D. Processing Fee: **Please submit the application processing fee along with this application form and supplemental information.** Processing fees vary based on the size of the activity, the type of permit applied for, and the reviewing Agency. Please reference Appendix D of Applicant's Handbook Volume I to determine the appropriate fee.

Part 3: Applicant and Associated Parties Information

Instructions: Please complete the following sections. For corporations, list a person who is a registered agent or officer of the corporation who has the legal authority to bind the corporation.

A. Applicant (Entity Must Have Sufficient Real Property Interest)

☐ **This is a Contact Person for Additional Information**

Last Name: **Chesser** First Name: **Jay** Middle Initial:
Title: **Station Manager** Company: **Duke Energy**
Address: 7700 County Road 555
City: **Bartow** State: **FL** Zip: **33830**
Home Telephone: Work Telephone: (863) 519-6100
Cell Phone: E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

B. Land Owner(S) (If Different or in Addition to Applicant)

☐ **Check here if land owner is also a co-applicant**

Last Name: First Name: Middle Initial:
Title: Company:
Address:
City: State: Zip:
Home Telephone: Work Telephone:
Cell Phone: E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

C. Operation and Maintenance Entity(see Applicant's Handbook I, Section 12.3)

Last Name: First Name: Middle Initial:
Title: Company:
Address:
City: State: Zip:
Home Telephone: Work Telephone:
Cell Phone: E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

D. Co-Applicant (If Different or In Addition to Applicant and Owner)

Last Name: First Name: Middle Initial:
Title: Company:
Address:
City: State: Zip:
Home Telephone: Work Telephone:
Cell Phone:
E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

E. Registered Professional Consultant
☒**This is a contact person for additional information**

Last Name: Leissing
First Name: Karin
Middle Initial:
Title: Site Civil Section Manager
Company: HDR Inc.
Address: 315 East Robinson Street, Suite 400
City: Orlando
State: FL
Zip: 32801
Home Telephone:
Work Telephone: 407-420-4198
Cell Phone:
E-mail Address: karin.leissing@hdrinc.com

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

F. Environmental Consultant
☒**This is a contact person for additional information**

Last Name: **Huntington**
First Name: **Ken**
Middle Initial:
Title: **Senior Environmental Scientist**
Company: **HDR Inc.**
Address: **315 East Robinson Street Suite 400**
City: **Orlando**
State: **FL**
Zip: **32801**
Home Telephone:
Work Telephone: **(407) 420-4180**
Cell Phone: **(689) 710-1109**
E-mail Address: Ken.Huntington@hdrinc.com

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

G. Agent Authorized to Secure Permit (If Different from Consultant)

Last Name:
First Name:
Middle Initial:
Title:
Company:
Address:
City:
State:
Zip:
Home Telephone:
Work Telephone:
Cell Phone:
E-mail Address:

Correspondence will be sent via email, unless you check here to receive it via US Mail: ☐

If necessary, please add additional pages for other contacts and property owners related to this project.

H. Real Property Interest

a. Permits are only issued to entities having sufficient real property interest as described in Section 4.2.3(d) of Applicant's Handbook Volume I**. Please attach evidence of the applicant's real property interest over the land upon which the activities subject to the application will be conducted, including mitigation areas (if applicable).** Refer to Sections 4.2.3(d)-(e) for sufficient real property interest documentation.

b. For activities that require a recorded notice in accordance with rule 62-330.090(7), F.A.C., please provide either the complete legal description of the property or a copy of the pages of the document recorded in the public records that contains the complete legal description. If the land upon which the proposed activities are to occur is not owned by the applicant, the applicant must also provide copies of any right-of-way, leases, easements, or other legal agreement which authorizes the applicant to perform the activities on those lands.

Part 4: Signatures and Authorization to Access Property

Instructions: For multiple applicants please provide a separate Part 4 for each applicant. For corporations, the application must be signed by a person authorized to bind the corporation. A person who has sufficient real property interest (see Section 4.2.3(d) of Applicant's Handbook Volume I) is required in (B) to authorize access to the property, except when the applicant has the power of eminent domain.

A. By signing this application form, I am applying for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto does not relieve me of any obligation for obtaining any other required federal, state, water management district, or local permit prior to commencement of construction. I agree to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a different responsible operation and maintenance entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Jay Chesser
Typed/Printed Name of Applicant or Applicant's Authorized Agent

Signature of Applicant or Applicant's Authorized Agent

Date 4/3/2025

Station Manager
(Corporate Title if applicable)

B. Certification of Sufficient Real Property Interest And Authorization For Staff To Access The Property:

I certify that:

☒ **I possess sufficient real property interest in or control, as defined in Section 4.2.3 (d) of Applicant's Handbook Volume I,** over the land upon which the activities described in this application are proposed and I have legal authority to grant permission to access those lands. I hereby grant permission, evidenced by my signature below, for staff of the Agency to access, inspect, and sample the lands and waters of the property as necessary for the review of the proposed works and other activities specified in this application, upon advance notice. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review, inspection, and/ or sampling. Further, if a permit is granted, upon advance notice, I agree to provide entry to the project site for such agents or personnel with proper identification to determine compliance with permit conditions and permitted plans and specifications.

OR

☐ I represent an entity having **the power of eminent domain and condemnation authority**, and I/we shall make appropriate arrangements to enable staff of the Agency to legally access, inspect, and sample the property as described above.

Jay Chesser
Typed/Printed Name

Signature

Date 4/3/2025

Station Manager
(Corporate Title if applicable)

C. Designation of Authorized Agent (If Applicable):

I hereby designate and authorize William R. Linton to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirements which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S., and 18 U.S.C. Section 1001.

Jay Chesser
Typed/Printed Name of Applicant

Signature of Applicant

4/3/2025
Date

Station Manager
(Corporate Title if applicable)