

SHEET NO. DESCRIPTION

C-0	COVER SHEET
C-1	GENERAL NOTES
C-2	ENVIRONMENTAL PROTECTION NOTES
C-3	LISTED SPECIES STANDARD CONDITIONS
C-4	DREDGING NOTES AND CONSTRUCTION SEQUENCING NOTES
C-5	SPOIL MANAGEMENT NOTES
C-6	POLLUTION PREVENTION NOTES
C-7	SEDIMENT AND EROSION CONTROL NOTES
C-8	POLLUTION PREVENTION DETAILS
C-9	AERIAL SITE PLAN
C-10	POLLUTION PREVENTION PLAN AND PROJECT SEQUENCING PLAN
C-11	WEST PLAN
C-12	EAST PLAN
C-13	PIPE CROSSING
C-14	DREDGE CROSS SECTIONS
C-15	CHANNEL CROSS SECTION
C-16	HORSESHOE CRAB DETERRENT WALL TERMINATION
C-17	RIP RAP DETAILS
C-18	SPOIL MANAGEMENT AREA 1
C-19	SPOIL MANAGEMENT AREA 2
S-1	MANATEE HEATING AREA STRUCTURAL PLAN
S-2	MANATEE HEATING AREA SHEETPILE AND WALLER
S-3	MANATEE HEATING AREA MANATEE ENTRANCE GATE
S-4	MANATEE HEATING AREA SHEETPILE DETAILS
S-5	MANATEE HEATING AREA PIPE PENETRATION
S-6	MANATEE HEATING AREA MAINTENANCE DOCK DETAILS
S-7	MANATEE HEATING AREA MAINTENANCE GATE
S-8	MANATEE HEATING AREA MAINTENANCE GATE AND DOCK DETAILS
S-9	MANATEE HEATING AREA TEMPERATURE SENSOR MOUNTING
S-10	HORSESHOE CRAB DETERRENT WALL
M-1	PIPING EXTENSION INSTALLATION
M-2	PUMP INTAKE CAGE
M-3	TYPICAL PIPE MOORING

ATTACHMENTS

AVIROM INTAKE CANAL TOPOGRAPHIC SURVEY (4 SHEETS)
 AVIROM BOUNDARY AND WETLAND DELINEATION SURVEY (6 SHEETS)
 AVIROM PENINSULA TOPOGRAPHIC SURVEY (1 SHEET)
 BUOY AND SIGNAGE SPECIFICATION (2 PAGES)
 FDOT INDEX 106 SOIL TRACKING PREVENTION DEVICE TYPE A (1 SHEET)

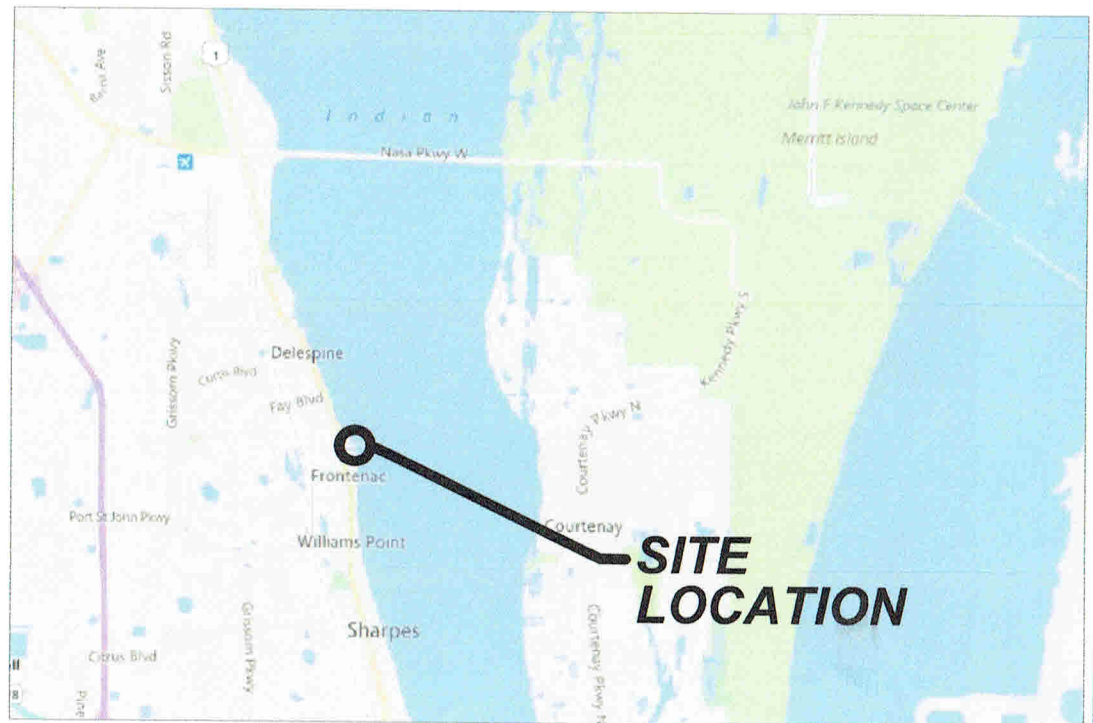
DRAWINGS INTENDED FOR
 VIEWING AT 8.5" X 11" SIZE

FLORIDA POWER & LIGHT
 CAPE CANAVERAL ENERGY CENTER
 6000 US HWY 1
 COCOA, FL 32907

MANATEE HEATING AREA AND
 HORSESHOE CRAB
 DETERRENT WALL

FEDERAL PERMIT DRAWINGS**FEDERAL PERMIT DRAWINGS**

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
3. INTENDED JURISDICTION AND USE OF THE DRAWINGS IS FEDERAL REVIEW UNDER THE CLEAN WATER ACT, RIVERS AND HARBORS ACT OF 1899, AND ENDANGERED SPECIES ACT OF 1973.

**SITE LOCATION MAP**

SOURCE: BING MAPS



NOT TO SCALE

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

C-0

**ENERCON**

LOCATION MAP AND DRAWING INDEX

GENERAL NOTES

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. CONSTRUCTION OR FABRICATIONS MUST NOT BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY APPLICABLE PERMITTING AUTHORITIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND THE CODES, REGULATIONS, AND STANDARDS OF ALL APPLICABLE GOVERNING AUTHORITIES.
3. UPON COMPLETION OF THE WORK, CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY FOR REVIEW AND APPROVAL.
4. CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL (811) AND/OR LOCATER SERVICE A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
5. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), DEPARTMENT OF LABOR AND OWNER RULES AND REGULATIONS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE SAFETY OF THEIR WORKER DURING THE ENTIRE COURSE OF CONSTRUCTION.

PROJECT INFORMATION

1. PROJECT TYPE: DREDGING, SHEETPILE WALL, PIPING AND DOCK
2. LAND USE: UPLAND FILL, CHANNELIZED SANDY WATERWAY
3. VEGETATION: BARREN TO SPARSE
4. THE PROJECT UPON COMPLETION AND APPROPRIATE CERTIFICATION AND AS-BUILT SUBMITTAL WILL BE OPERATED AND MAINTAINED BY: FLORIDA POWER AND LIGHT.

ACRONYM LIST

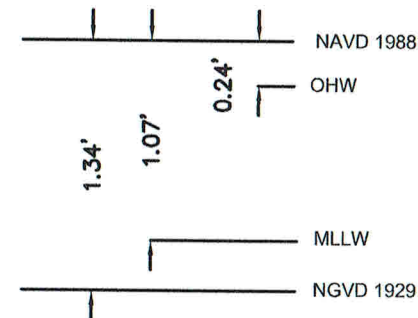
ACOE	ARMY CORPS OF ENGINEERS
CC	CAPE CANAVERAL
CCEC	CAPE CANAVERAL ENERGY CENTER
FAC	FLORIDA ADMINISTRATIVE CODE
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FLU	FUTURE LAND USE
FT	FEET
FWC	FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
HCDW	HORSESHOE CRAB DETERRENT WALL
HDPE	HIGH DENSITY POLYETHYLENE
LB	POUND
MLLW	MEAN LOW LOWER WATER
NAVD	NORTH AMERICAN VERTICAL DATUM
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NTU	NEPHELOMETRIC TURBIDITY UNIT
OHW	ORDINARY HIGH WATER
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
STD	STANDARD
TYP	TYPICAL
USGS	UNITED STATES GEOLOGICAL SURVEY

PRE DEVELOPMENT SITE INFORMATION

1. TOTAL SITE ACREAGE: 13.26 ACRES
2. LAND USE: UPLAND FILL, CHANNELIZED SANDY WATERWAY
3. VEGETATION: BARREN TO SPARSE
4. SOIL TYPES: CLAYEY FINE SAND, FINE SAND, SILTY SHELL HASH
5. ORDINARY HIGH WATER = (-) 0.24 FT NAVD88 MEAN LOW LOWER WATER = (-) 1.07 FT NAVD88
6. APPROXIMATE MAXIMUM WATER VELOCITY IN CANAL DURING INTAKE OPERATION = 2 FT/S
7. WATER VELOCITY IN CANAL WITHOUT INTAKE OPERATION IS EXPECTED TO BE SIGNIFICANTLY LESS THAN DURING INTAKE OPERATION.

SURVEY NOTES:

1. VERTICAL ELEVATIONS IN DATUM NAVD 1988
2. NAVD 1988 ELEVATIONS = NGVD 29 ELEVATIONS - 1.3 FT
3. OHW ELEVATION = -0.24 FT
4. BEARINGS AND COORDINATES REFERENCED TO GRID NORTH, BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE (feet)
5. MLLW ELEVATION = -1.07 FT, FDEP TIDAL STATION 872-1994



RELATIONSHIP BETWEEN NAVD 1988, NGVD 1929, ORDINARY HIGH WATER, MEAN LOW LOWER WATER TIDAL DATUM (1983-2001 EPOCH). LABINS TIDE STATION "MICCO, FLORIDA - INDIAN RIVER" NUMBER 872-1994



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-1



GENERAL NOTES

PROJECT NO: FPLCORP005

DRAWN: H. CARTER

DATE: 4/13/16

CHECK: J. SCHMITZ

DATE: 4/13/16

GENERAL ENVIRONMENTAL NOTES

1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACTING MANGROVES.

MAINTENANCE DOCK ENVIRONMENTAL NOTES

1. THE PROPOSED MAINTENANCE DOCK IS LOCATED IMMEDIATELY ADJACENT TO THE WEST END OF THE SEA GRASS SURVEY WHICH DID NOT IDENTIFY SEAGRASSES IN THE AREA. SEAGRASSES ARE NOT EXPECTED TO BE PRESENT BENEATH THE DOCK.
2. OWNER SHALL VERIFY EXPECTED ABSENCE OF SEAGRASSES PRIOR TO MAINTENANCE DOCK CONSTRUCTION.
3. IF SEAGRASSES ARE PRESENT BENEATH THE MAINTENANCE DOCK, DOCK CONSTRUCTION SHALL CONFORM TO *CONSTRUCTION GUIDELINES IN FLORIDA FOR MINOR PILING-SUPPORTED STRUCTURES CONSTRUCTED IN OR OVER SUBMERGED AQUATIC VEGETATION, MARSH, OR MANGROVE HABITAT, AUGUST 2001*
4. ALL MAINTENANCE DOCK PILINGS SHALL BE INSTALLED USING A VIBRATORY HAMMER. IMPACT HAMMER SHALL NOT BE USED.
5. MAINTENANCE DOCK CONSTRUCTION SHALL TAKE PLACE FROM UPLANDS OR FLOATING EQUIPMENT (E.G. BARGE).

LISTED WILDLIFE NOTES

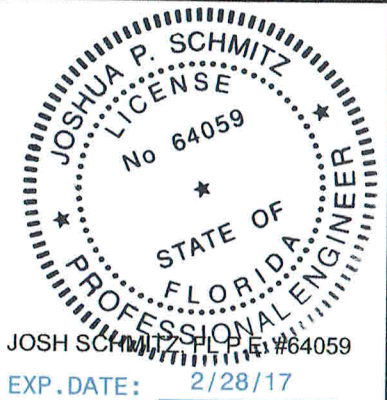
1. THE FPL CAPE CANAVERAL POWER PLANT IS IDENTIFIED BY THE ARMY CORPS OF ENGINEERS AS A WARM WATER AGGREGATION AREA (WWAA). BY THIS DESIGNATION, DEDICATED MANATEE OBSERVERS, WHO'S SOLE RESPONSIBILITY IS TO WATCH FOR MANATEES, MUST BE POSITIONED ON EACH VESSEL TO WATCH FOR MANATEES. THE OBSERVER MUST BE EXPERIENCED IN MANATEE OBSERVATION TECHNIQUES AND ASSIST CONSTRUCTION PERSONNEL WITH COMPLYING WITH STANDARD MANATEE CONDITIONS.
2. IF CONDITIONS (WEATHER, HEAVY CURRENTS, ETC.) ARE SUCH THAT MANATEES CANNOT BE SEEN WITHIN 50 TO 100 FEET, IN-WATER ACTIVITY SHALL NOT BE CONDUCTED.
3. IN-WATER ACTIVITIES MAY NOT BE CONDUCTED AT NIGHT.
4. PERMITTEE WILL INSTRUCT ALL PERSONNEL ASSOCIATED WITH THE PROJECT ABOUT MANATEES, SEA TURTLES, AND SMALLTOOTH SAWFISH. THIS INCLUDES THE NEED TO PROTECT, AND PENALTIES ASSOCIATED WITH HARMING MANATEES.
5. SIGNAGE MUST BE POSTED CONCERNING MANATEES WHICH CONFORMS TO STANDARD MANATEE CONDITIONS FOR IN-WATER WORK, 2011.
6. PROPERLY DESIGN, INSTALL, AND MONITOR TURBIDITY BARRIERS SO AS TO PREVENT ENTANGLEMENT BY MANATEES, SEA TURTLES OR SMALLTOOTH SAWFISH.
7. INJURY TO MANATEES, SEA TURTLES OR SMALLTOOTH SAWFISH MUST BE REPORTED TO PERMITTEE AND PROPER AUTHORITIES IMMEDIATELY. AUTHORITY CONTACT INFORMATION LISTED IN STANDARD MANATEE CONDITIONS FOR IN-WATER WORK, 2011 AND SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS (2006).
8. APPROPRIATE PRECAUTIONS MUST BE TAKEN IF LISTED SPECIES ARE OBSERVED WITH 100 YARDS OF CONSTRUCTION OPERATION.
9. ALL IN-WATER WORK MUST CEASE IF A LISTED SPECIES IS OBSERVED WITHIN 50 FEET OF CONSTRUCTION OPERATION.
10. ALL WORK SHALL CONFORM TO STANDARD MANATEE CONDITIONS FOR IN WATER WORK, 2011 REVISION.
11. ALL WORK SHALL CONFORM TO STANDARD SEA TURTLE AND SMALLTOOTH SAWFISH CONDITIONS FOR IN WATER WORK, 2006 REVISION.
12. MOVEMENT OF A WORK BARGE, OTHER ASSOCIATED VESSELS, OR ANY IN-WATER WORK SHALL NOT BE PERFORMED AFTER SUNSET, WHEN THE POSSIBILITY OF SPOTTING MANATEES IS NEGLIGIBLE.
13. AT LEAST ONE PERSON SHALL BE DESIGNATED AS A MANATEE OBSERVER WHEN IN-WATER WORK IS BEING PERFORMED. THAT PERSON SHALL HAVE EXPERIENCE IN MANATEE OBSERVATION, BE APPROVED BY THE FWC TWO WEEKS BEFORE THE BEGINNING OF CONSTRUCTION, AND BE EQUIPPED WITH POLARIZED SUNGLASSES TO AID IN OBSERVATION. THE MANATEE OBSERVER MUST BE ON SITE DURING ALL IN-WATER CONSTRUCTION ACTIVITIES AND WILL ADVISE PERSONNEL TO CEASE OPERATION UPON SIGHTING A MANATEE WITHIN 50 FEET OF ANY IN-WATER CONSTRUCTION ACTIVITY.

RESOURCE PROTECTION NOTES:

1. UNLESS IN A MIXING ZONE, TURBIDITY MORE THAN 29 NTU'S OVER BACKGROUND EXCEEDS STATE WATER QUALITY STANDARDS AND SHALL NOT BE ALLOWED.
2. ALL SHEET PILE AND DOCK PILINGS WILL BE INSTALLED USING A VIBRATORY HAMMER.
3. PROPERLY DESIGN, INSTALL, AND MONITOR TURBIDITY BARRIERS SO AS TO PREVENT ENTANGLEMENT BY MANATEES, SEA TURTLES, OR SMALLTOOTH SAWFISH.
4. IN-WATER WORK SHALL NOT BE PERFORMED FROM NOVEMBER 15 - MARCH 31.

BIOLOGICAL OBSERVATION:

NO CONSTRUCTION WORK SHALL BE PERFORMED WITHOUT A BIOLOGICAL OBSERVER PRESENT. CEASE WORK IMMEDIATELY IF A MANATEE, SEA TURTLE, OR SMALLTOOTH SAWFISH ENTERS THE PROJECT AREA. DO NOT RESUME WORK UNTIL THE LISTED SPECIES HAS DEPARTED THE AREA. FOLLOW BIOLOGICAL OBSERVER INSTRUCTIONS AT ALL TIMES. LISTED SPECIES INJURY MUST BE REPORTED TO OWNER IMMEDIATELY.



**MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL**

FEDERAL PERMIT DRAWINGS

**FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER**
6000 US HWY 1
COCOA, FL 32907

C-2



ENVIRONMENTAL PROTECTION NOTES

PROJECT NO: FPLCORP005

DRAWN: H. CARTER

DATE: 4/1/16

CHECK: J. SCHMITZ

DATE: 4/1/16

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK (2011)

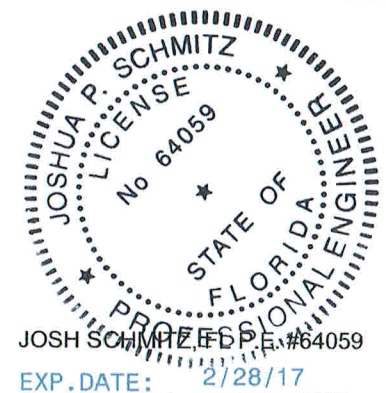
The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 1/2" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to the email address listed above.

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS (2006)

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-3

ENERCON

LISTED SPECIES STANDARD CONDITIONS

PROJECT NO: FPLCORP005

DRAWN: H. CARTER

DATE: 4/1/16

CHECK: J. SCHMITZ

DATE: 4/1/16

CONSTRUCTION SEQUENCING NOTES

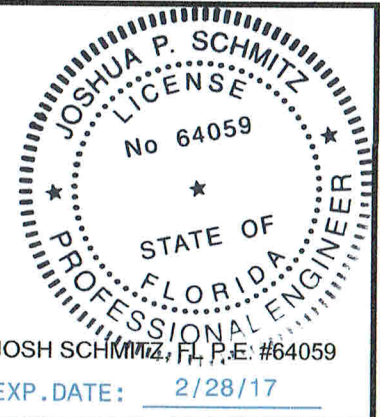
- ① REVIEW INTAKE OPERATING SCHEDULE AND POTENTIAL FOR TURBIDITY ENTRAINMENT IN THE INTAKE. PORTIONS OF THE WORK, SUCH AS THE HORSESHOE CRAB DETERRENT WALL AND REMOVAL OF EXISTING SHEET PILE DIVIDER, MAY NEED TO BE CONDUCTED DURING OUTAGE TO AVOID TURBIDITY ENTRAINMENT IN THE INTAKE.
- ② INITIATE BIOLOGICAL OBSERVATION AND MAINTAIN IT FOR THE PROJECT DURATION.
- ③ INSTALL BUOYS WITH SIGNAGE.
- ④ INSTALL SILT FENCING AND TURBIDITY CURTAINS. DESIGN TURBIDITY CURTAIN INSTALLATIONS TO BE STABLE IN THE CURRENT.
- ⑤ DREDGE SOUTH SIDE OF EXISTING SHEET PILE DIVIDER. USE MIXING ZONE FOR WATER DISCHARGE AS NEEDED.
- ⑥ REMOVE EXISTING SHEET PILE DIVIDER IF TURBIDITY CURTAIN WILL BE SUFFICIENT. ALTERNATIVELY, LEAVE EXISTING SHEET PILE DIVIDER IN PLACE FOR MIXING ZONE.
- ⑦ INSTALL PROPOSED SHEET PILE, WORKING FROM WEST TO EAST. LEAVE ACCESS OPENING FOR DREDGING VESSEL AT THE NORTHEAST END.
- ⑧ DREDGE WORKING FROM WEST TO EAST, USING ENCLOSURE TO CONTROL TURBIDITY. USE MIXING ZONE FOR WATER DISCHARGE AS NEEDED.
- ⑨ INSTALL PIPING AND DOCK.
- ⑩ INSTALL HORSESHOE CRAB DETERRENT WALL.

GENERAL DREDGING NOTES

1. LIMITED SEDIMENT CHARACTERIZATION DATA FOR THIS PROJECT (BORINGS B-1 AND B-2) INDICATES THE PRESENCE OF CLAYEY FINE SAND, SHELL AND MUCK WITH 15.3% BY WEIGHT PASSING THE 200 SIEVE (BORING B-1). CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SEDIMENT CONDITIONS AS REQUIRED TO COMPLETE HIS WORK.
2. A MARINE DEBRIS SURVEY HAS NOT BEEN CONDUCTED FOR THE DREDGING AREA. CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY IN THE EVENT MARINE DEBRIS IS ENCOUNTERED DURING DREDGING.
3. CONTRACTOR SHALL DREDGE EVENLY TO THE LINES AND GRADE SHOWN ON THE DRAWINGS TAKING CARE TO AVOID THE CREATION OF WINDROWS OR UNEVEN BOTTOM CONDITIONS. CONTRACTOR SHALL CONSIDER SPILLAGE AND FALLBACK IN HIS DREDGING OPERATION TO ENSURE THE LINES AND GRADES SHOWN ARE MET.
4. CONTRACTOR SHALL TAKE GREAT CARE TO PREVENT TURBIDITY ENTRAINMENT IN THE PLANT INTAKE.
5. HOPPER DREDGING IS NOT PERMITTED.

EXCAVATION/DREDGING NOTES

1. NO EXCAVATION SHALL EXTEND BELOW THE PERMITTED DESIGN/DEPTHS ELEVATIONS SHOWN ON THE DRAWINGS, UNLESS ADDITIONAL TESTING SUPPORTS OTHERWISE; AND NO LOWER SEMI-CONFINING UNIT CLAYS SHALL BE EXCAVATED, REGARDLESS IF THESE MATERIALS ARE ENCOUNTERED ABOVE THE PERMITTED DEPTHS/ELEVATIONS. IF ANY LOWER SEMI-CONFINING UNIT CLAYS ARE ENCOUNTERED ABOVE THE PERMITTED DEPTHS/ELEVATIONS, THEN EXCAVATION OPERATIONS SHALL CEASE IN THE GENERAL AREA AND THE OWNER SHALL BE NOTIFIED IMMEDIATELY.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-4

 **ENERCON**

DREDGING NOTES AND
CONSTRUCTION SEQUENCING NOTES

PROJECT NO: FPLCORP005

DRAWN: H. CARTER

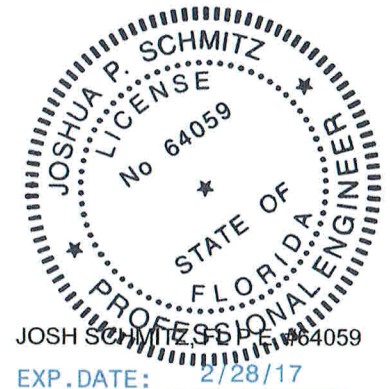
DATE: 4/1/16

CHECK: J. SCHMITZ

DATE: 4/1/16

TEMPORARY SPOIL AREA NOTES

1. UNLESS APPROVED BY OWNER TO REMAIN ONSITE, ALL DREDGED SEDIMENT SHALL BE DISPOSED IN AN OWNER APPROVED LANDFILL.
2. CONTRACTOR SHALL DESIGN AND SUPPLY A TEMPORARY DREDGE SPOIL HANDLING AND MANAGEMENT SYSTEM TO ADDRESS SEDIMENT REMOVED DURING DREDGING OPERATIONS.
3. THE TEMPORARY DREDGE SPOIL HANDLING AND MANAGEMENT SYSTEM SHALL UTILIZE BARGES, UPLAND STAGING AREAS, AND/OR MECHANICAL PROCESSING SYSTEMS FOR TEMPORARY DREDGE SPOIL HANDLING AND MANAGEMENT. THE TEMPORARY DREDGE SPOIL HANDLING AND MANAGEMENT SYSTEM SHALL NOT UTILIZE WETLANDS OR AQUATIC AREAS FOR DREDGE SPOIL MANAGEMENT.
4. AS PART OF THE TEMPORARY DREDGE SPOIL HANDLING AND MANAGEMENT SYSTEM, CONTRACTOR SHALL DEWATER SEDIMENT AS REQUIRED FOR EFFICIENT SEDIMENT HANDLING AND MANAGEMENT.
5. CONTRACTOR MAY UTILIZE TEMPORARY SPOIL AREAS FOR SPOIL MATERIAL AND EQUIPMENT STAGING. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF TEMPORARY SPOIL AREAS BASED ON THE SPOIL MATERIAL TO BE ADDRESSED.
6. CONTRACTOR SHALL DESIGN THE SPOIL HANDLING AND MANAGEMENT SYSTEM TO CONTROL TURBIDITY DURING ALL SEDIMENT DEWATERING OPERATIONS. CONTRACTOR SHALL UTILIZE FDEP APPROVED POLYMERS/FLOCCULANTS AS REQUIRED TO CONTROL TURBID DISCHARGE FROM DEWATERING.
7. CONTRACTOR SHALL PROVIDE AND MAINTAIN STABILIZED DEWATERING DISCHARGE THAT DOES NOT CAUSE OR CONTRIBUTE TO EROSION. USE MIXING ZONES FOR DEWATERING DISCHARGE.
8. CONTRACTOR SHALL CONTROL SEDIMENT RELEASE AND TURBIDITY RELATED TO LOADING/UNLOADING AND MATERIAL TRANSFER.
9. CONTRACTOR SHALL COORDINATE ONSITE AND/OR OFFSITE HAULING WITH OWNER, INCLUDING IDENTIFICATION OF HAUL ROUTE AND ROADWAY PROTECTION.
10. CONTRACTOR WILL BE RESPONSIBLE FOR IDENTIFYING AND OBTAINING LOCAL GOVERNMENT APPROVALS FOR HAULING, AS MAY BE REQUIRED.
11. SUBSURFACE UTILITIES ARE PRESENT IN THE WORK AREA AND HAVE NOT BEEN LOCATED. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL SUBSURFACE UTILITIES IN THE WORK AREA, WHETHER IDENTIFIED ON THE DRAWINGS OR NOT.
12. RESTORE ALL AREAS DISTURBED BY CONSTRUCTION. CONTRACTOR ACKNOWLEDGES MARINE SALTWATERS MAY DAMAGE SOD AND LANDSCAPING. DAMAGED SOD AND LANDSCAPING SHALL BE RESTORED.
13. UNLESS IN A MIXING ZONE, TURBIDITY MORE THAN 29 NTU'S OVER BACKGROUND EXCEEDS STATE WATER QUALITY STANDARDS AND SHALL NOT BE ALLOWED.
14. ACCESS THROUGH THE WETLAND IS PROHIBITED.
15. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACTING MANGROVES.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-5

 **ENERCON**

SPOIL MANAGEMENT NOTES

PROJECT NO: FPLCORP005

DRAWN: H. CARTER

DATE: 4/1/16

CHECK: J. SCHMITZ

DATE: 4/1/16

WATER QUALITY MONITORING NOTES (AS NEEDED):

1. MONITORING FOR TURBIDITY AS MEASURED IN NEPHELOMETRIC TURBIDITY UNITS (NTU) SHALL BE CONDUCTED FOR THE DURATION OF THE PROJECT AS FOLLOWS:

COLLECT DUPLICATE DAILY WATER QUALITY SAMPLES AS INDICATED BELOW, ANALYZE THE FIELD COLLECTED SAMPLES INDIVIDUALLY AND REPORT EACH OF THE DUPLICATE SAMPLES INDIVIDUALLY FOR THE FOLLOWING PARAMETERS. ALL MEASUREMENTS AND ANALYSES FOR EACH PARAMETER SHALL BE MADE USING APPROVED METHODS PROVIDING A PQL (PRACTICAL QUANTIFICATION LIMIT) BELOW THE WATER QUALITY STANDARD FOR THE PARAMETER LISTED IN RULE 62-302, F.A.C.:

<u>PARAMETER</u>	<u>DEPTH</u>	<u>LOCATION</u>
TURBIDITY	MID-DEPTH	MONITORING POINTS LOCATED ON PLAN

SAMPLING SHALL COMMENCE 12 TO 24 HOURS PRIOR TO THE INITIATION OF CONSTRUCTION ACTIVITY.

2. IF MEASURED MIXING ZONE BOUNDARY SAMPLES ARE IN EXCESS OF STATE STANDARDS (AMBIENT LEVELS AT DREDGING SITE/29 NTU'S ABOVE BACKGROUND AT MONITORING LOCATIONS) ALL DREDGING/FILLING/DISCHARGE ACTIVITIES SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL TURBIDITY LEVELS HAVE DROPPED TO MEET STATE STANDARDS, THE EXCEEDANCE SHALL BE IMMEDIATELY REPORTED TO OWNER. THE EXCEEDANCE REPORT SHALL INCLUDE THE DESCRIPTION OF THE CORRECTIVE ACTIONS BEING TAKEN OR PROPOSED TO BE TAKEN. IF EXCEEDANCES ARE NOTED AFTER NORMAL BUSINESS HOURS, ON HOLIDAYS, OR ON WEEKENDS, THE REPORT SHALL BE MADE TO OWNER AS SOON AS NORMAL BUSINESS HOURS RESUME. A COPY OF ALL MONITORING DATA SHEETS WHICH INDICATE EXCEEDANCES, SHALL BE FORWARDED IMMEDIATELY TO OWNER.

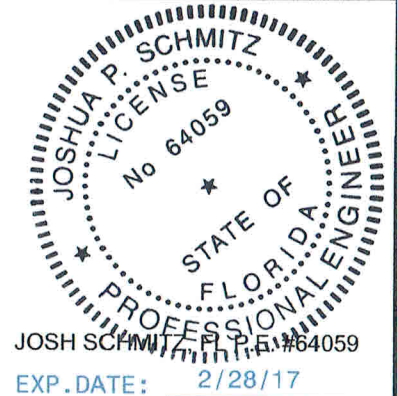
FAILURE TO REPORT EXCEEDANCES OR TO FOLLOW CORRECT PROCEDURES BEFORE RESUMING WORK WILL CONSTITUTE GROUNDS FOR REVOCATION OF THE PERMIT AND MAY ALSO RENDER THE PERMITTEE SUBJECT TO ENFORCEMENT ACTION.

POLLUTION PREVENTION NOTES

1. THE POTENTIAL SOURCES OF POLLUTION FROM THE PROJECT ARE LAND DISTURBANCE AND DREDGING.
2. ALL FUEL STORAGE AREAS OR OTHER HAZARDOUS STORAGE AREAS SHALL CONFORM TO ACCEPTED STATE OR FEDERAL CRITERIA FOR SUCH CONTAINMENT AREAS.
3. TEMPORARY DREDGE SPOIL MANAGEMENT LOCATIONS ARE TO BE LOCATED UPLAND OF ALL STORMWATER PONDS, WETLANDS AND AQUATIC RESOURCES.
4. TEMPORARY DREDGE SPOIL MANAGEMENT LOCATIONS MUST BE SELF CONTAINED, IN THAT SEDIMENT CONTROL MEASURES SUCH AS BARGES OR GEOTUBES MUST BE PROPERLY INSTALLED, MAINTAINED AND OPERATED TO PREVENT DISCHARGE OF MOBILIZED SEDIMENT.
5. CONSTRUCTION EQUIPMENT SHALL BE OPERATED AND MAINTAINED IN SUCH A MANNER AS TO PREVENT SPILLS OR LEAKS FROM REACHING WATER.
6. HYDRAULIC LINES USED IN EQUIPMENT SHALL CONTAIN VEGETABLE OIL ONLY. ALL FITTINGS SHALL BE WRAPPED IN OIL ABSORBING MATERIAL AND CLEAR VISQUEEN MATERIAL.
7. CONTRACTOR SHALL SUBMIT A FUEL SPILL RESPONSE PLAN FOR OWNER REVIEW AND APPROVAL. THE FUEL SPILL RESPONSE PLAN SHALL ADDRESS FUEL STORAGE, HANDLING AND LOADING/UNLOADING, AND SPILL CLEANUP PROCEDURES TO THE EXTENT NECESSARY TO MINIMIZE THE POTENTIAL FOR IMPACT TO LAND OR WATER FROM A FUEL SPILL.

GROUNDWATER DEWATERING NOTES

1. COFFERDAM DEWATERING IS NOT ANTICIPATED FOR THIS PROJECT. IF COFFERDAM DEWATERING IS NEEDED, PERMITS WILL BE NEEDED TO ACCOMMODATE SAID DEWATERING.
2. TO DEWATER PIPE TRENCHES OR ANY TEMPORARY SPOIL EXCAVATION TO EXISTING SURFACE WATER, OBTAIN FDEP PERMIT FOR DISCHARGE OF PRODUCED GROUNDWATER FROM NON-CONTAMINATED SITES.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-6

ENERCON

POLLUTION PREVENTION NOTES

PROJECT NO: FPLCORP005

DRAWN: H. CARTER

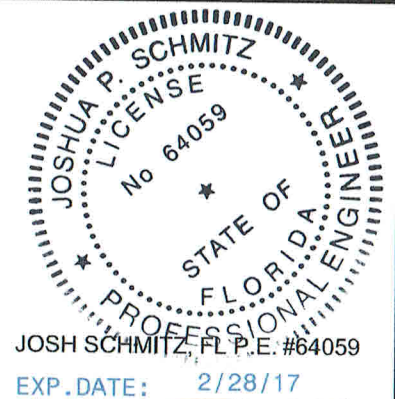
DATE: 4/1/16

CHECK: J. SCHMITZ

DATE: 4/1/16

SEDIMENT AND EROSION CONTROL NOTES

1. SEDIMENT SHALL NOT BE ALLOWED TO WASH INTO THE CHANNEL OR STORM DRAINS. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR CLEANUP OF ANY AND ALL DAMAGES RESULTING FROM SEDIMENT MOBILIZATION FROM CONSTRUCTION ACTIVITY.
2. TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBANCE AND ARE TO BE MAINTAINED IN PLACE THROUGHOUT THE ENTIRE COURSE OF CONSTRUCTION.
3. THE TYPE OF SEDIMENT BARRIER USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND THE SEDIMENT THAT WILL BE MOBILIZED. SILTY AND CLAYEY MATERIAL MAY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER MOVEMENT, WHILE SANDY MATERIAL MAY NEED ONLY SCREENS OR DIVERSIONS. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF MEASURES IF CONDITIONS WARRANT.
4. WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED TO REDUCE TURBIDITY PRIOR TO DISCHARGE TO WATERWAYS. TREATMENT MEASURES MAY INCLUDE SEDIMENT TRAPS, FILTER SYSTEMS, BERMS, AND OTHER FEATURES DESIGNED TO LIMIT TURBIDITY TO STATE WATER QUALITY STANDARDS.
5. CONTRACTOR SHALL SCHEDULE HIS OPERATIONS TO MINIMIZE THE POTENTIAL FOR TURBID DISCHARGE. THE DURATION OF DISTURBANCE AND UNCOMPLETED CONSTRUCTION EXPOSED TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. EXPOSED SOILS SHALL BE STABILIZED AS SOON AS POSSIBLE, ESPECIALLY SLOPES. GRADING AND EARTHWORK OPERATIONS SHALL BE STABILIZED WITHIN 7 DAYS OF COMPLETION.
6. STABILIZATION METHODS INCLUDE SOD, SEEDING AND MULCHING OR HYDROMULCHING TO PROVIDE A TEMPORARY OR PERMANENT GRASS COVER. GEOTEXTILE FABRICS CAN BE EMPLOYED TO HELP SUPPORT VEGETATION ESTABLISHMENT.
7. SEDIMENT, EROSION AND TURBIDITY CONTROL MEASURES SHOWN ON THE DRAWINGS ARE CONSIDERED MINIMUM. CONTRACTOR IS RESPONSIBLE FOR PROVIDING CONTROL AS NECESSARY TO PREVENT TURBIDITY. ADDITIONAL TURBIDITY CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION.
8. INSTALLATION OF SEDIMENT AND EROSION AND TURBIDITY CONTROLS SHALL BE COORDINATED WITH THE CONSTRUCTION OF PERMANENT FEATURES TO THE EXTENT NECESSARY TO ASSURE EFFECTIVE AND CONTINUOUS TURBIDITY CONTROL THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
9. CONTRACTOR SHALL PREVENT SEDIMENT TRACKING FROM EQUIPMENT TO ADJACENT ROADWAYS OR WATERWAYS. CONTRACTOR SHALL INSTALL SOIL TRACKING DEVICE, ENSURE BARGES DO NOT LEAK, ETC., AS NEEDED. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT TRACKED FROM THE PROJECT SITE ONTO ADJACENT ROADWAYS.
10. CONTRACTOR SHALL INSPECT TURBIDITY CONTROL DEVICES ON A DAILY BASIS FOR PROPER INSTALLATION AND PERFORMANCE



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-7

 **ENERCON**

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NO: FPLCORP005

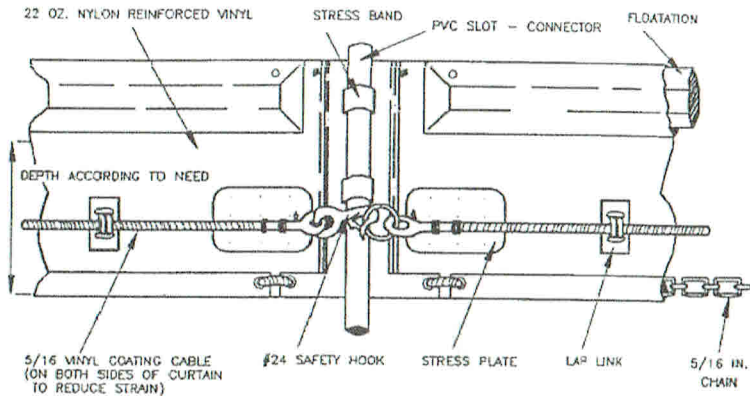
DRAWN: H. CARTER

DATE: 4/1/16

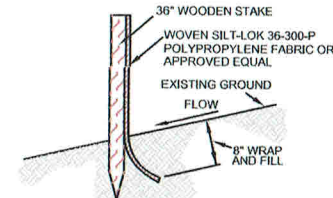
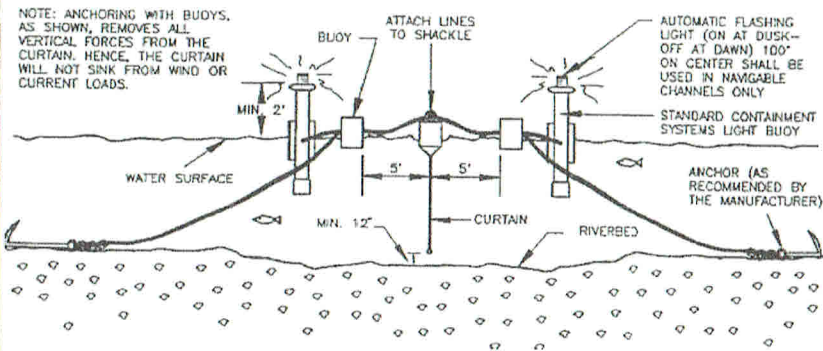
CHECK: J. SCHMITZ

DATE: 4/1/16

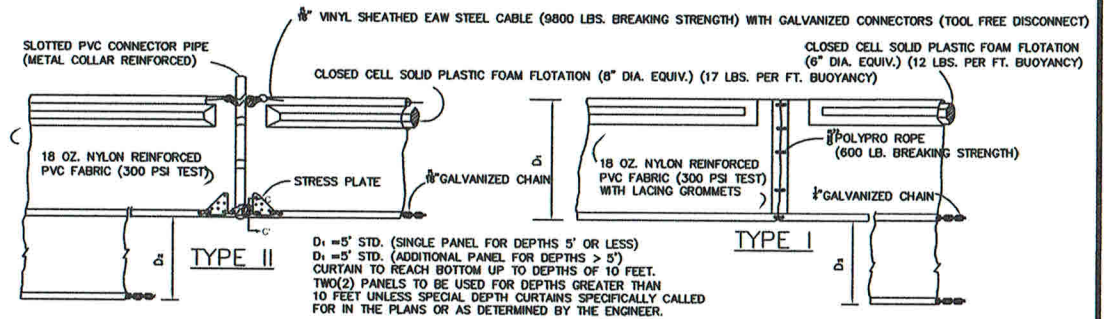
Type III



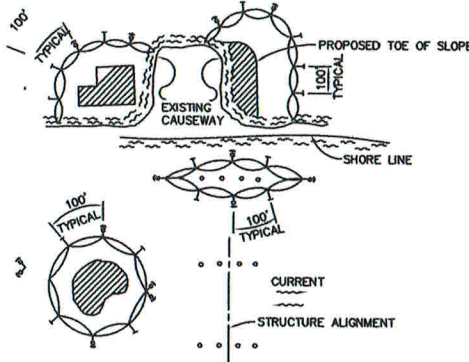
Orientation When Installed
(Tidal Situation - Type III)



STAKED SILT FENCE

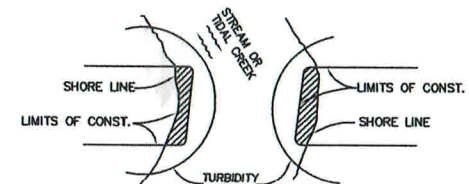


NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

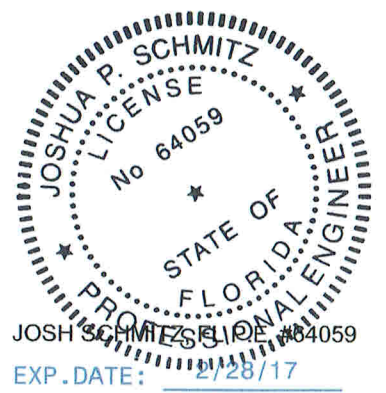


- LEGEND
- PILE LOCATIONS
 - ▨ DREDGE OR FILL AREA
 - ⊕ MOORING BUOY W/ANCHOR
 - ANCHOR
 - BARRIER MOVEMENT DUE TO CURRENT ACTION

NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIER AND/OR STAKED TURBIDITY BARRIER. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



TURBIDITY BARRIER DETAIL (FDOT INDEX 103)



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS

C-8

ENERCON

POLLUTION PREVENTION DETAILS

PROJECT NO: FPLCORP005

DRAWN: H. CARTER	DATE: 4/1/16
CHECK: J. SCHMITZ	DATE: 4/1/16

SUMMARY JURISDICTIONAL QUANTITIES (TOTAL PROJECT)

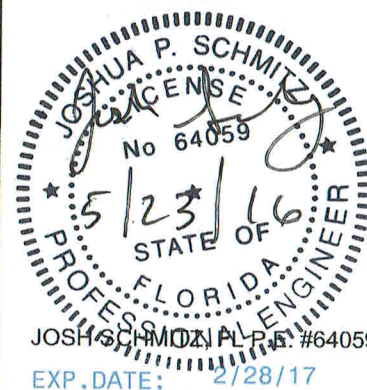
DREDGE	6,663	CY	FILL	677	CY
	1.08	AC		0.06	AC
	47,045	SF		2,614	SF
VINYL SHEETPILE REMOVED	720	LF	VINYL SHEETPILE INSTALLED	692	LF (12")
				340	LF (10")
DETERRENT FENCE REMOVED	250	LF	8" WOOD PILINGS INSTALLED	41	SHEETPILE
				18	DOCK
10" BRIDGE PILINGS REMOVED/REPLACED	24			59	TOTAL
			WOOD DOCK INSTALLED	208	SF

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

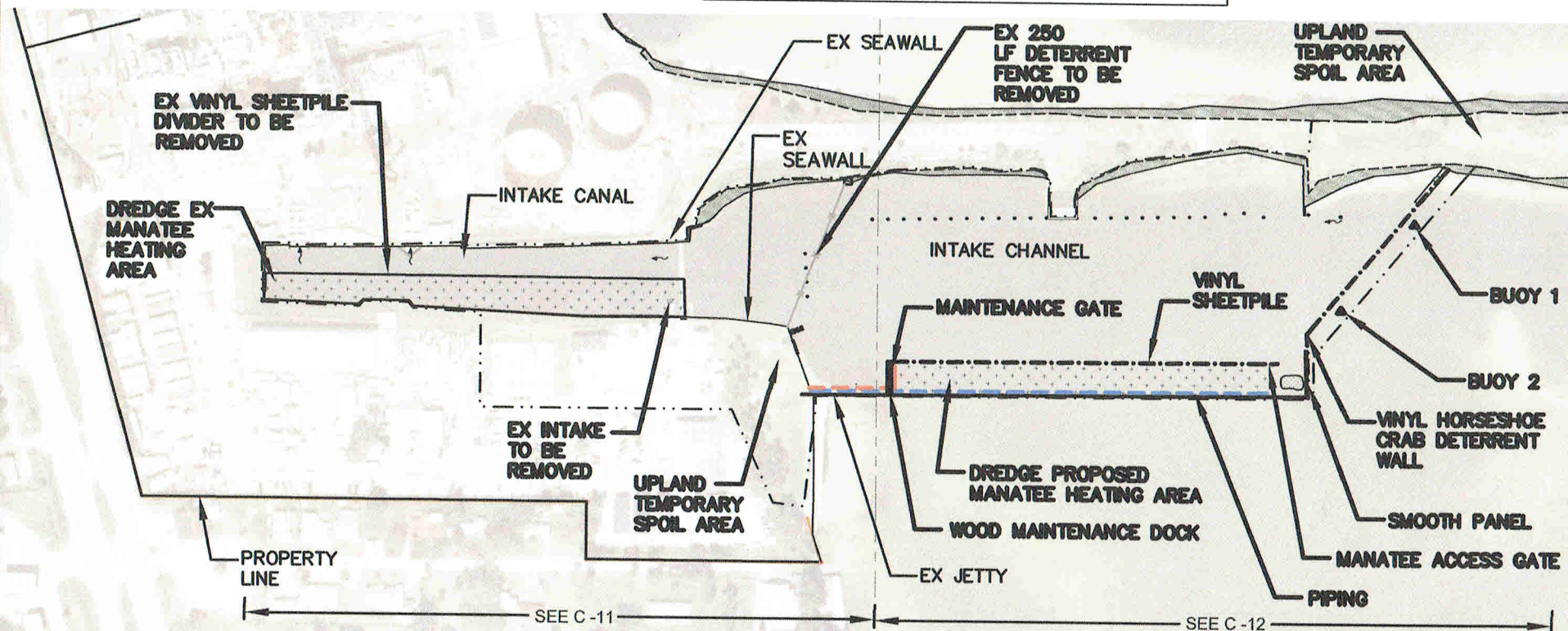
LEGEND:

-  SEAGRASS
-  WETLANDS
-  DREDGE AREA
-  WETLAND LINE
-  ORDINARY HIGH WATER LINE (OHW)
-  PROPOSED SHEETPILE
-  COOL WATER INTAKE PIPING
-  WARM WATER SUPPLY PIPING
-  PROJECT BOUNDARY
-  BUOY
-  CURRENT DIRECTION



1 AC = 43,560 SF

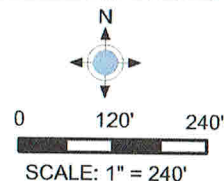
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS



1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-9				
AERIAL SITE PLAN				

N.A.V.D. 1988
ELEVATIONS

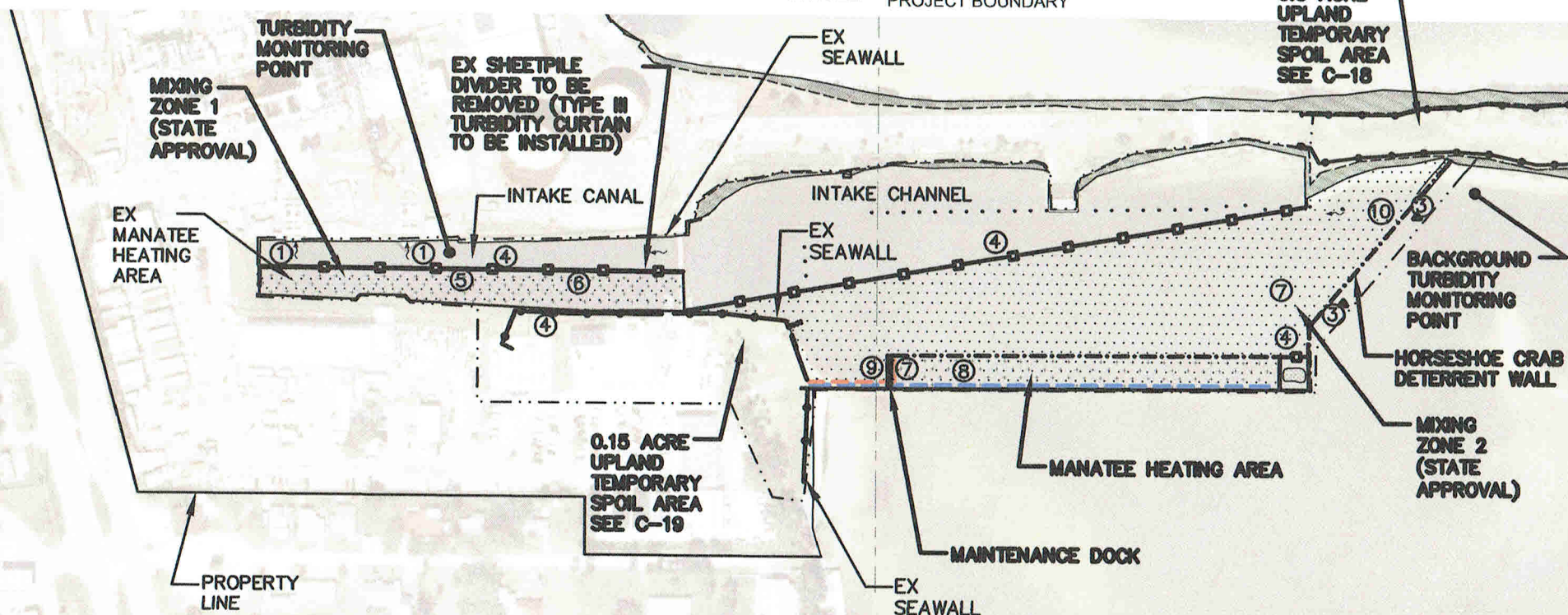
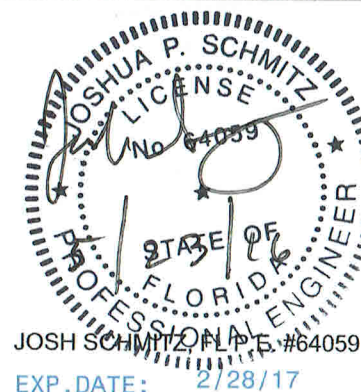
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
3. REFER TO NOTES C-2 THROUGH C-7.

LEGEND:

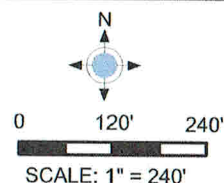
- CURRENT DIRECTION
- BUOY
- SEAGRASS
- WETLANDS
- MIXING ZONE
- DREDGE AREA
- CONSTRUCTION SEQUENCE (SEE C-4)
- TURBIDITY CURTAIN
- SILT FENCE
- WETLAND LINE
- ORDINARY HIGH WATER LINE (OHW)
- PROPOSED SHEETPILE
- PROPOSED PIPING (TO HEATERS)
- PROPOSED PIPING (FROM HEATERS)
- PROJECT BOUNDARY



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS



1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-10				
POLLUTION PREVENTION PLAN AND PROJECT SEQUENCING PLAN				

JURISDICTIONAL QUANTITIES (THIS SHEET)

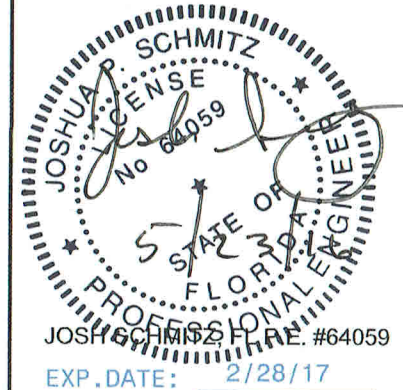
DREDGE AREA	0.43	AC
TOTAL CUT	353	CY
VINYL SHEETPILE REMOVED	720	LF
16" HDPE PIPING INSTALLED	106	LF
20" HDPE PIPE INSTALLED	102	LF
EXISTING INTAKE REMOVED	461	SF
10" WOOD BRIDGE PILINGS REMOVE/REPLACE	24	

NOTES

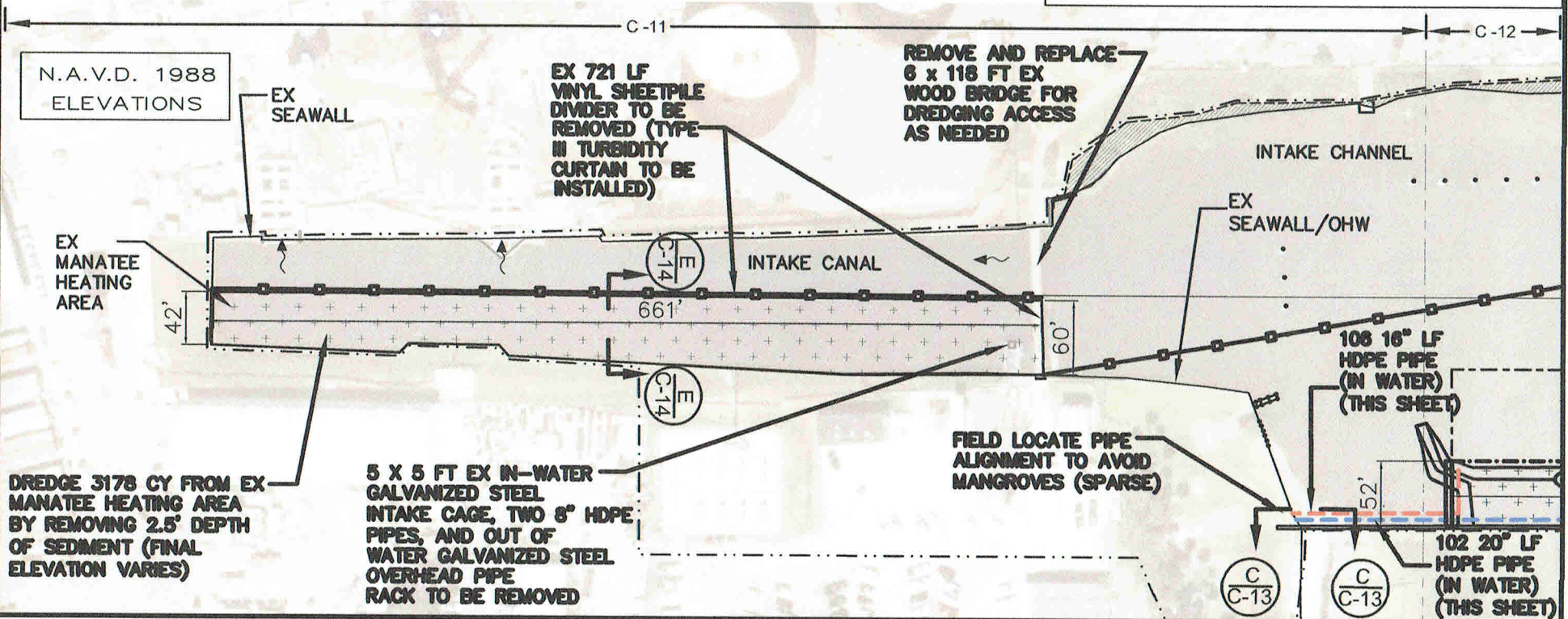
1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
3. REFER TO MECHANICAL DRAWINGS FOR PIPING.
4. REFER TO STRUCTURAL DRAWINGS FOR SHEETPILE.

LEGEND:

	SEAGRASS
	WETLANDS
	MIXING ZONE
	DREDGE AREA
	TURBIDITY CURTAIN
	WETLAND LINE
	ORDINARY HIGH WATER LINE (OHW)
	SEAGRASS SURVEY AREA
	PROPOSED SHEETPILE
	COOL WATER INTAKE PIPING
	WARM WATER SUPPLY PIPING
	PROJECT BOUNDARY
	BUOY



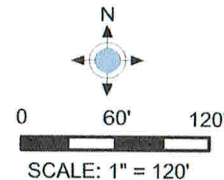
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS



1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

C-11

ENERCON

WEST PLAN

JURISDICTIONAL QUANTITIES (THIS SHEET)	
DREDGE AREA	0.65 AC
TOTAL CUT	3,485 CY
10" VINYL SHEETPILE INSTALLED	340 LF
12" VINYL SHEETPILE INSTALLED	692 LF
1/4" HDPE SMOOTH PANEL INSTALLED	101 LF
8" WOOD PILINGS INSTALLED (SHEETPILE)	41
8" WOOD PILINGS INSTALLED (DOCK)	18
16" HDPE PIPING INSTALLED	62 LF
20" HDPE PIPING INSTALLED	617 LF
NAVIGATION BUOYS	2
DOLPHINS REPAIR/REPLACED	2

NOTES

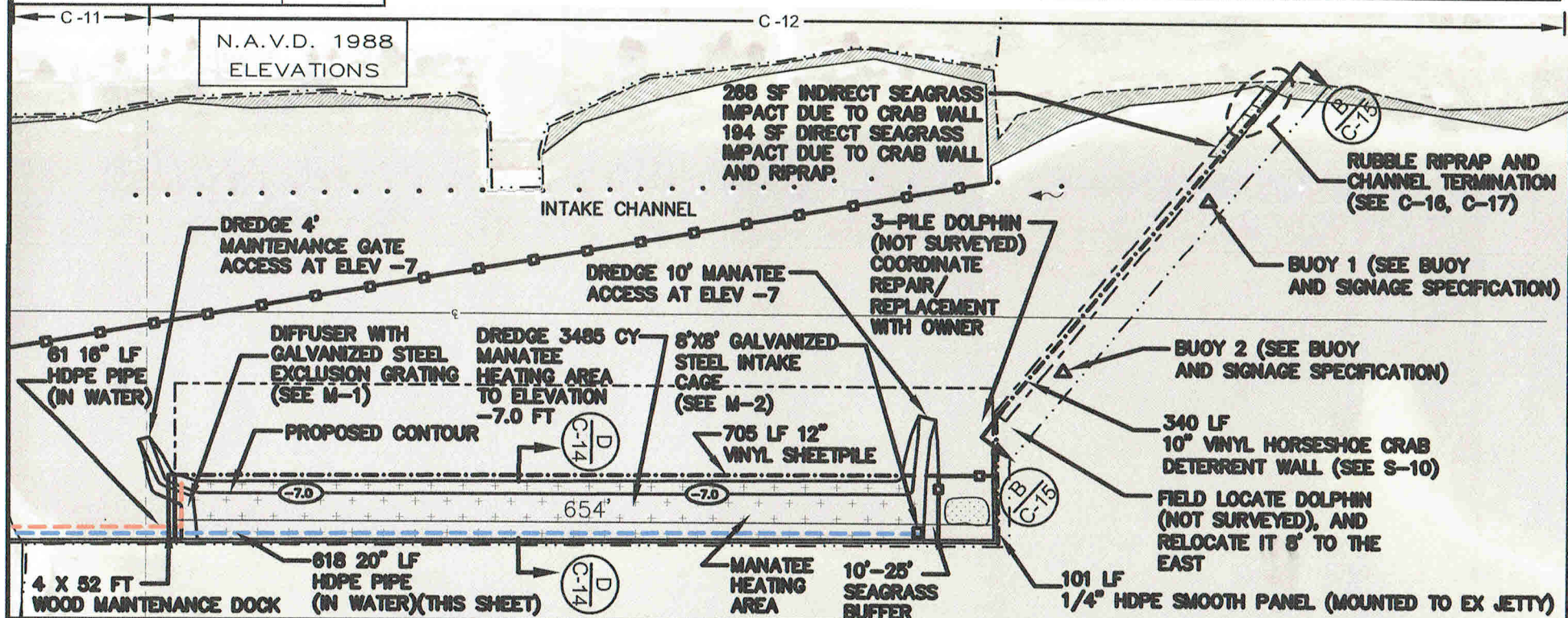
1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
3. REFER TO MECHANICAL DRAWINGS FOR PIPING.
4. REFER TO STRUCTURAL DRAWINGS FOR SHEETPILE.

LEGEND:

-
-  SEAGRASS
 WETLANDS
 MIXING ZONE
 DREDGE AREA
 TURBIDITY CURTAIN
 ORDINARY HIGH WATER LINE (OHW)
 SEAGRASS SURVEY AREA
 PROPOSED SHEETPILE
 COOL WATER INTAKE PIPING
 WARM WATER SUPPLY PIPING
 PROJECT BOUNDARY
 BUOY
 WETLAND LINE
 ORDINARY HIGH WATER LINE



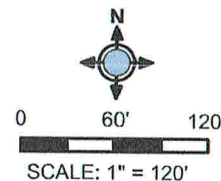
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS



1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

C-12

ENERCON

EAST PLAN

NOTES

1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
2. SEE M-3 FOR PIPE ANCHORS. SEE M-1 FOR ISOMETRIC PIPING ALIGNMENT.
3. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
4. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

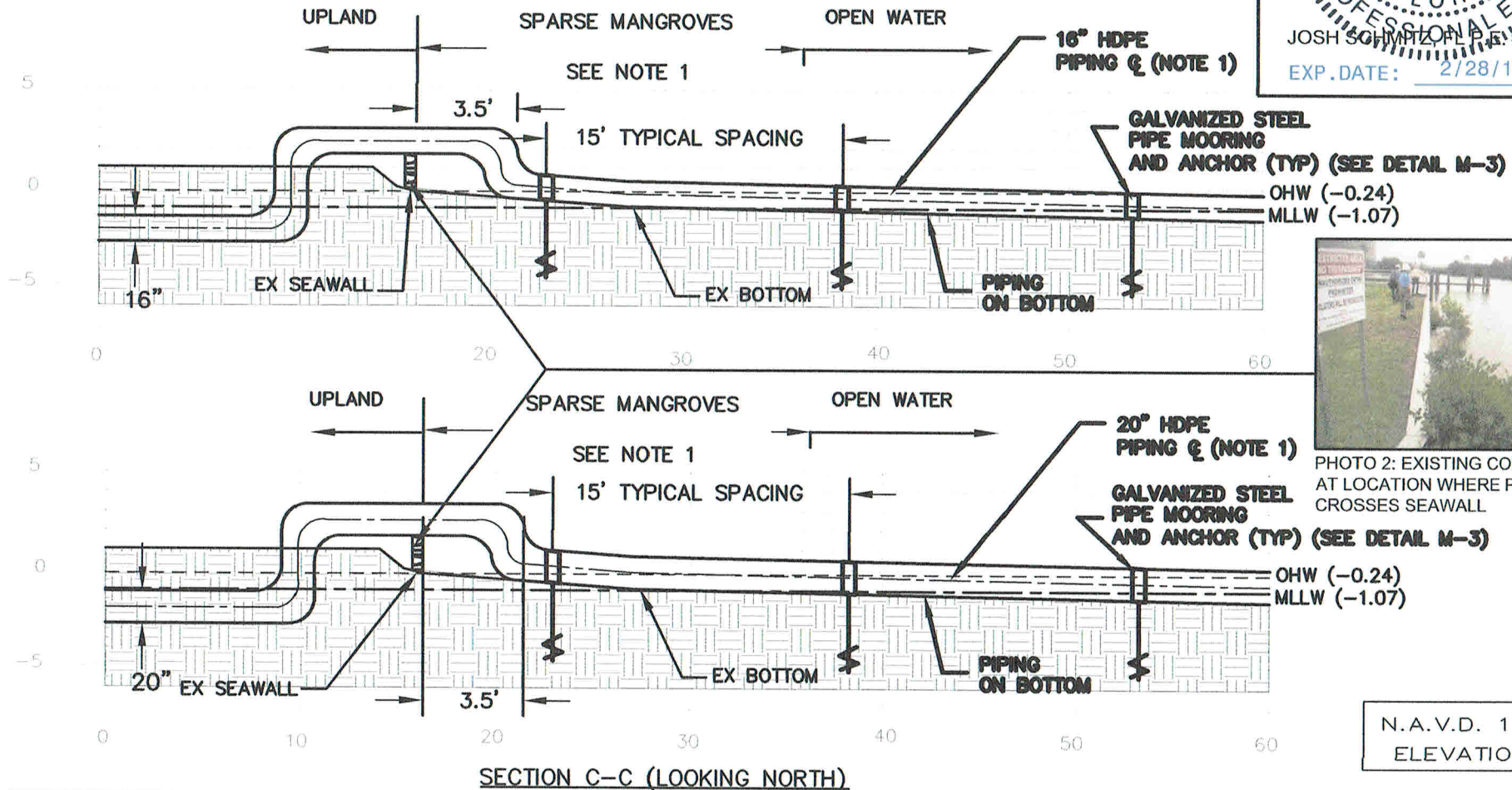
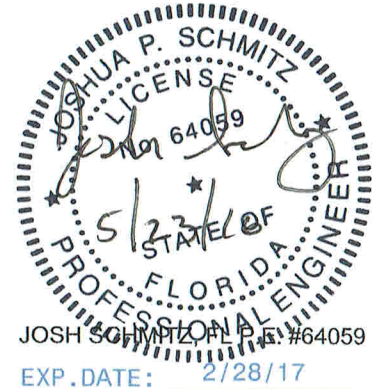


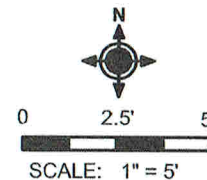
PHOTO 2: EXISTING CONDITIONS AT LOCATION WHERE PIPING CROSSES SEAWALL

N.A.V.D. 1988
ELEVATIONS

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

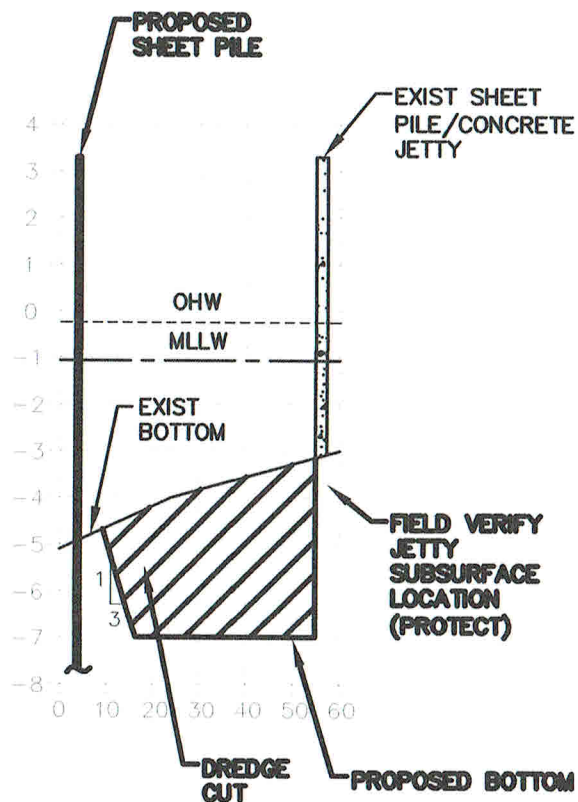
FEDERAL PERMIT DRAWINGS



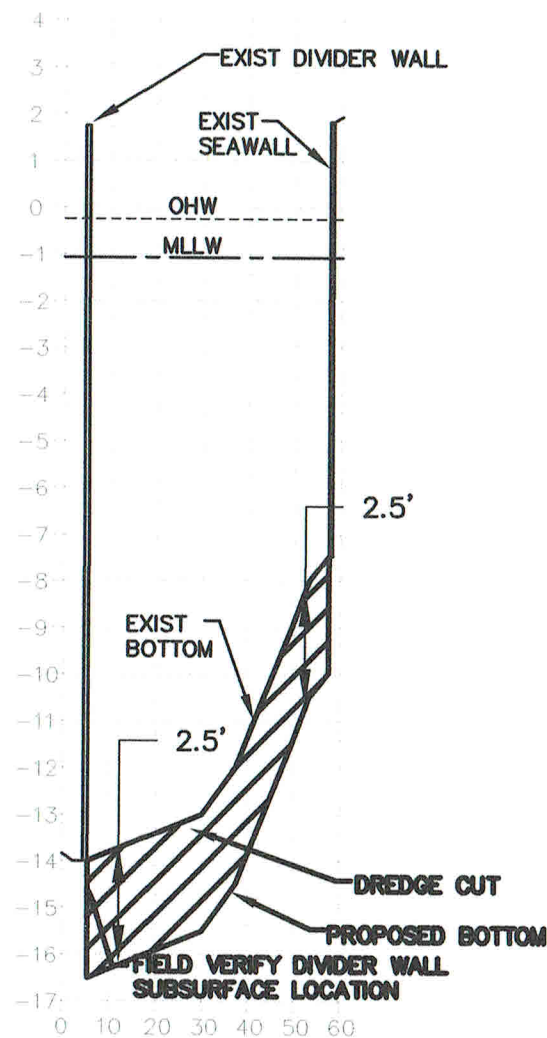
1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-13				
ENERCON				
PIPE CROSSING				

N.A.V.D. 1988
ELEVATIONS

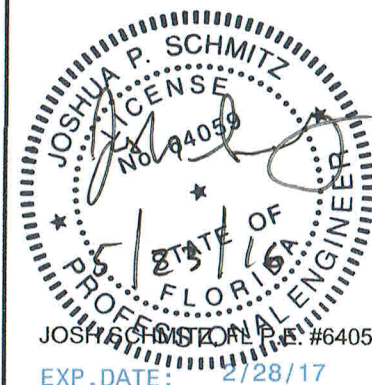
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



SECTION D-D (LOOKING EAST)
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



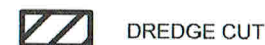
SECTION E-E (LOOKING EAST)
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

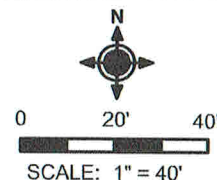
LEGEND:



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS



1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

C-14



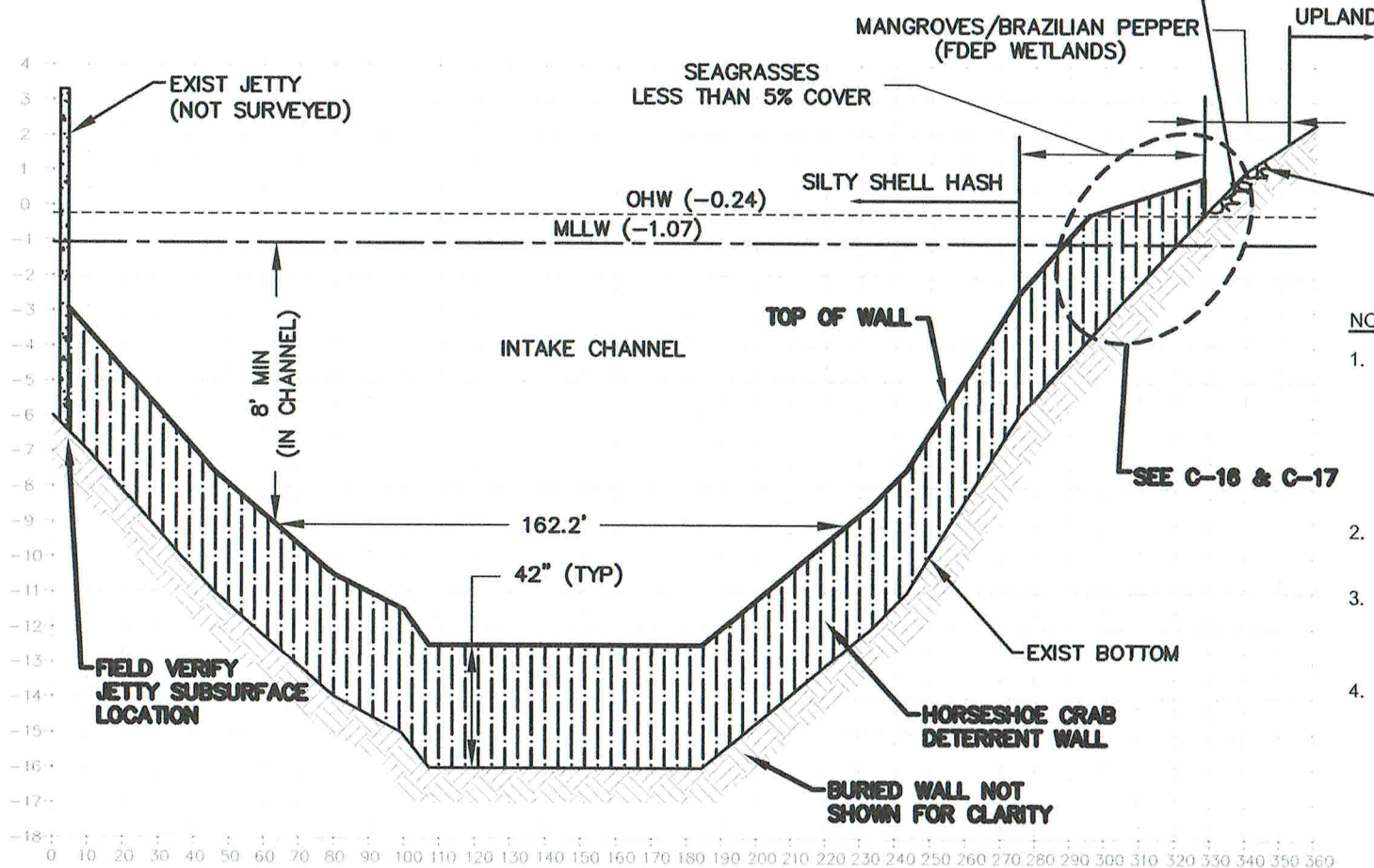
DREDGE CROSS SECTIONS

N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



PHOTO 1: EXISTING
CONDITIONS
AT LOCATION
WHERE DETERRENT
WALL ABUTS
SHORELINE



NOTES

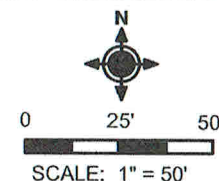
1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
2. SEE HORSESHOE CRAB DETERRENT WALL DESIGN ON S-10.
3. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
4. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

SECTION B-B
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS



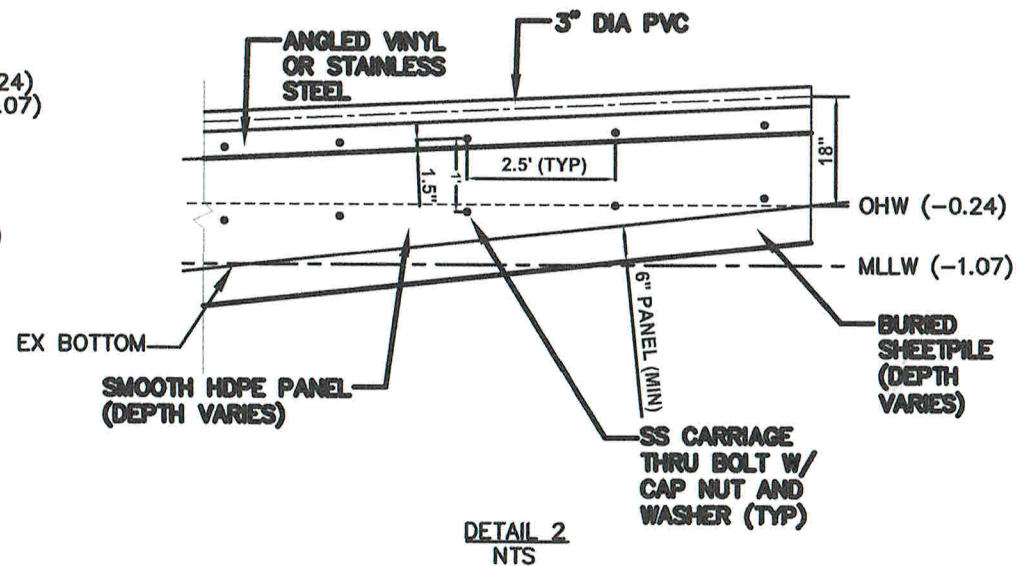
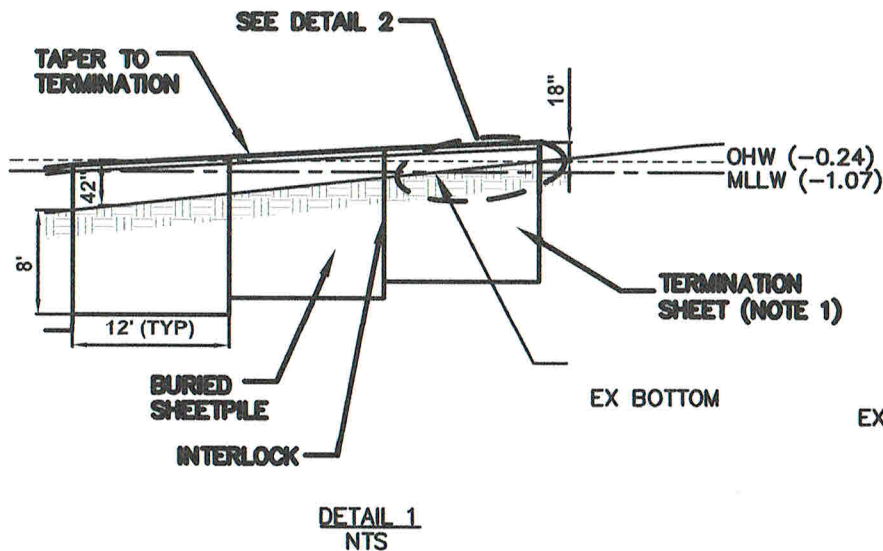
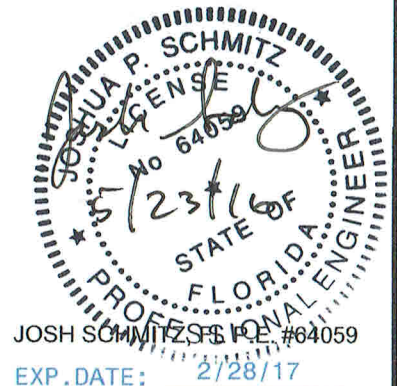
1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-15				
ENERCON				
CHANNEL CROSS SECTIONS				

N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOTES

1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
2. SEE HORSESHOE CRAB DETERRENT WALL DESIGN ON S-10.
3. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
4. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL
FEDERAL PERMIT DRAWINGS



NOT TO SCALE

C-16

ENERCON

HORSESHOE CRAB DETERRENT WALL
TERMINATION

Project No: FPLCORP005

DRAWN: H. CARTER

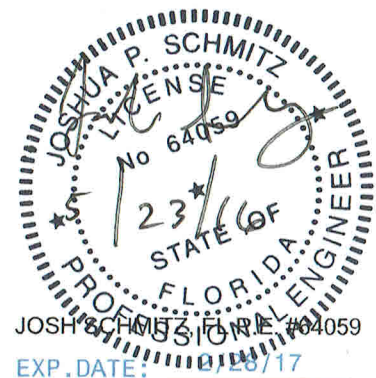
DATE: 4/1/16

CHECK: J. SCHMITZ

DATE: 4/1/16

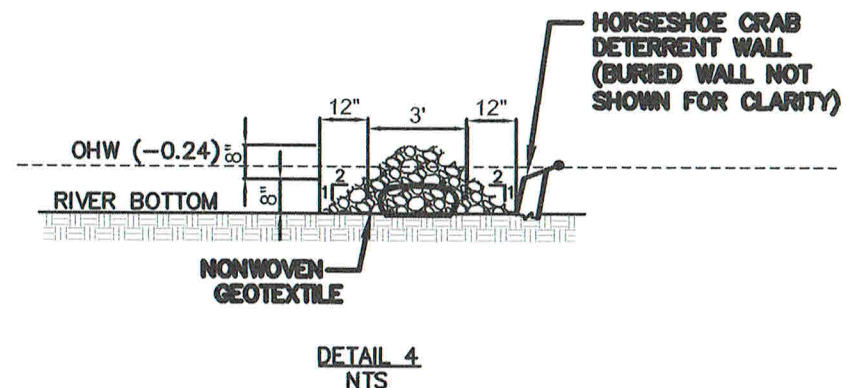
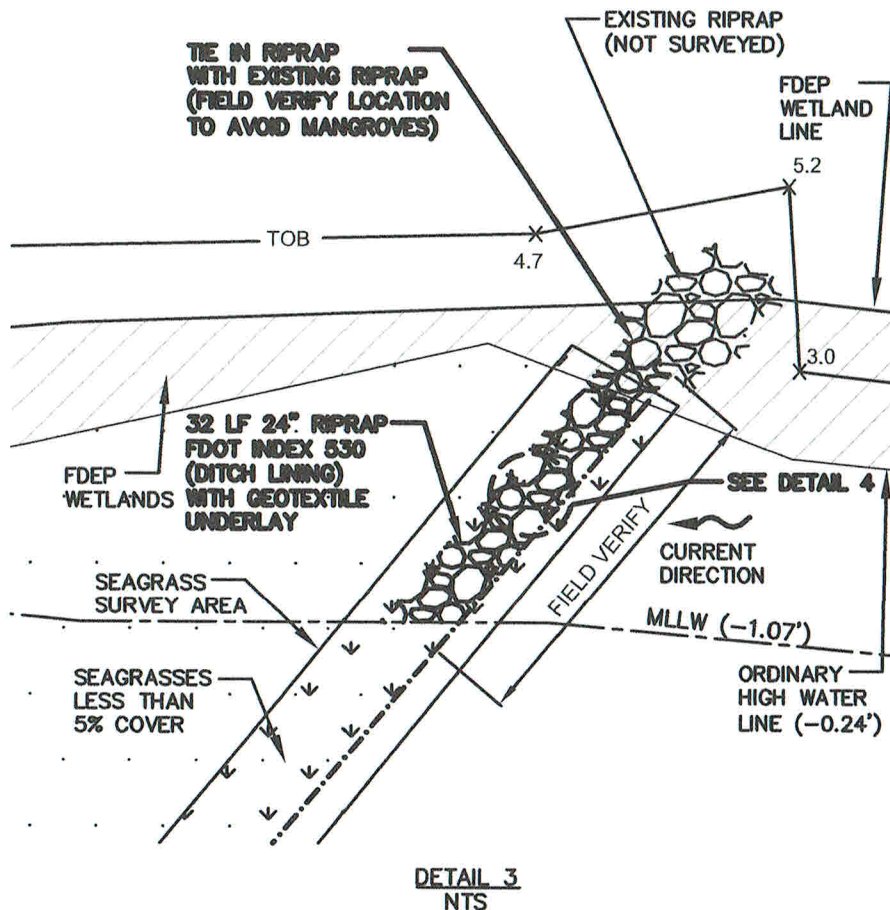
N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



NOTES

1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
2. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
3. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL FEDERAL PERMIT DRAWINGS



NOT TO SCALE

1	COMMENTS ADDRESSED	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-17		 ENERCON		
RIP RAP DETAILS				

NOTES

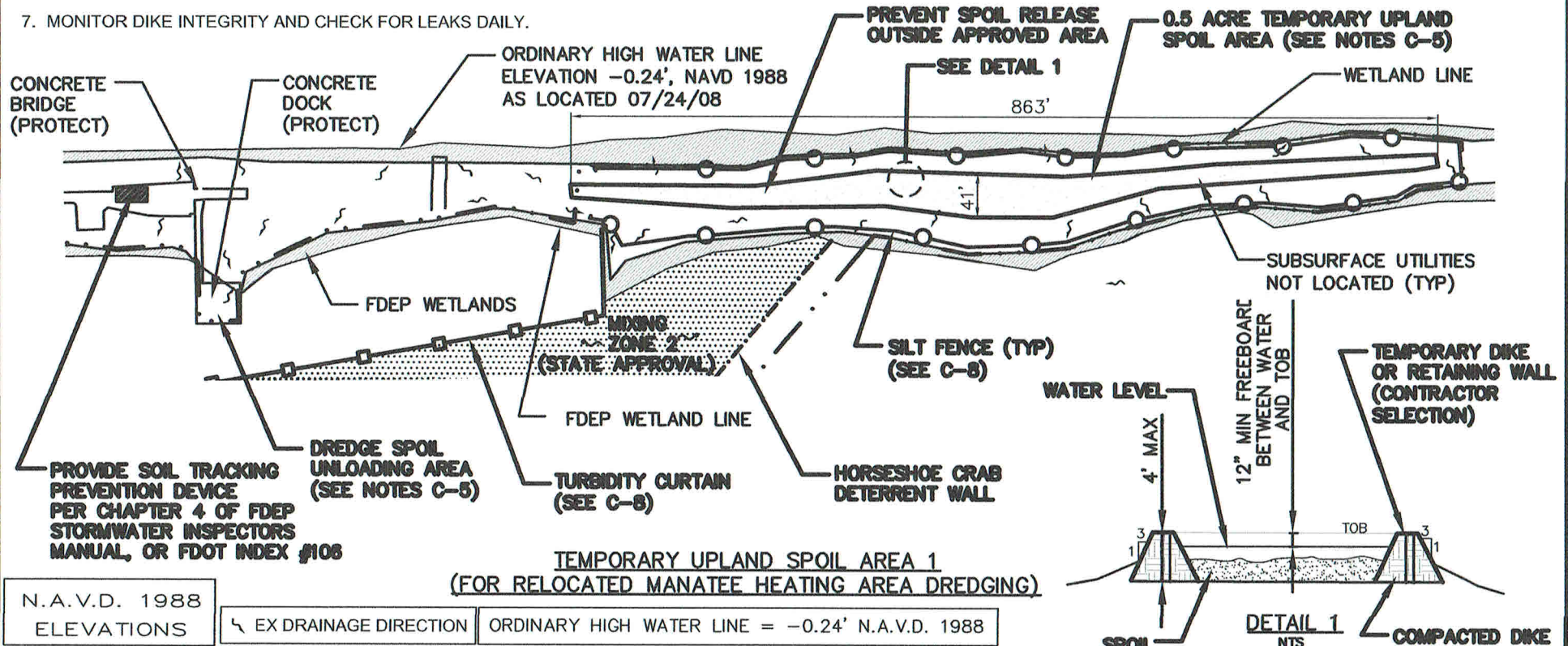
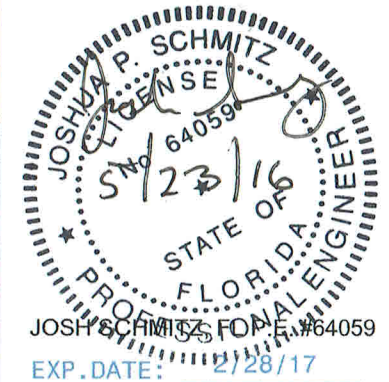
1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
2. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
3. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
4. UNLESS APPROVED BY OWNER TO REMAIN ONSITE, ALL DREDGED SEDIMENT SHALL BE DISPOSED IN AN OWNER APPROVED LANDFILL.
5. HAUL ROUTE BY CONTRACTOR AS REQUIRED (COORDINATE WITH OWNER) FOR LANDFILL DISPOSAL.
6. DREDGE SPOIL MAY NOT BE USED FOR DIKE CONSTRUCTION.
7. MONITOR DIKE INTEGRITY AND CHECK FOR LEAKS DAILY.

DREDGE SPOIL AREA 1			
ACREAGE	HEIGHT	VOLUME (AC-FT)	VOLUME (CY)
0.5	4	1.46	2348

RELOCATED MANATEE HEATING AREA DREDGE QUANTITY	
	VOLUME (CY)
GROSS VOLUME RELOCATED HEATING AREA	3485
10% HANDLING EXPANSION	349
TOTAL VOLUME REQUIRED	3834

ESTIMATE OF OFFSITE HAULING	
DREDGE DURATION (DAYS)	OFFSITE REMOVAL VOLUME (CY)
90	1486

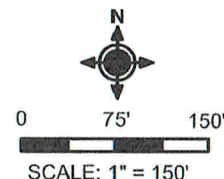
ESTIMATE OF OFFSITE REMOVAL DOES NOT ACCOUNT FOR SETTLING AND CONSOLIDATION OF SPOIL MATERIAL.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

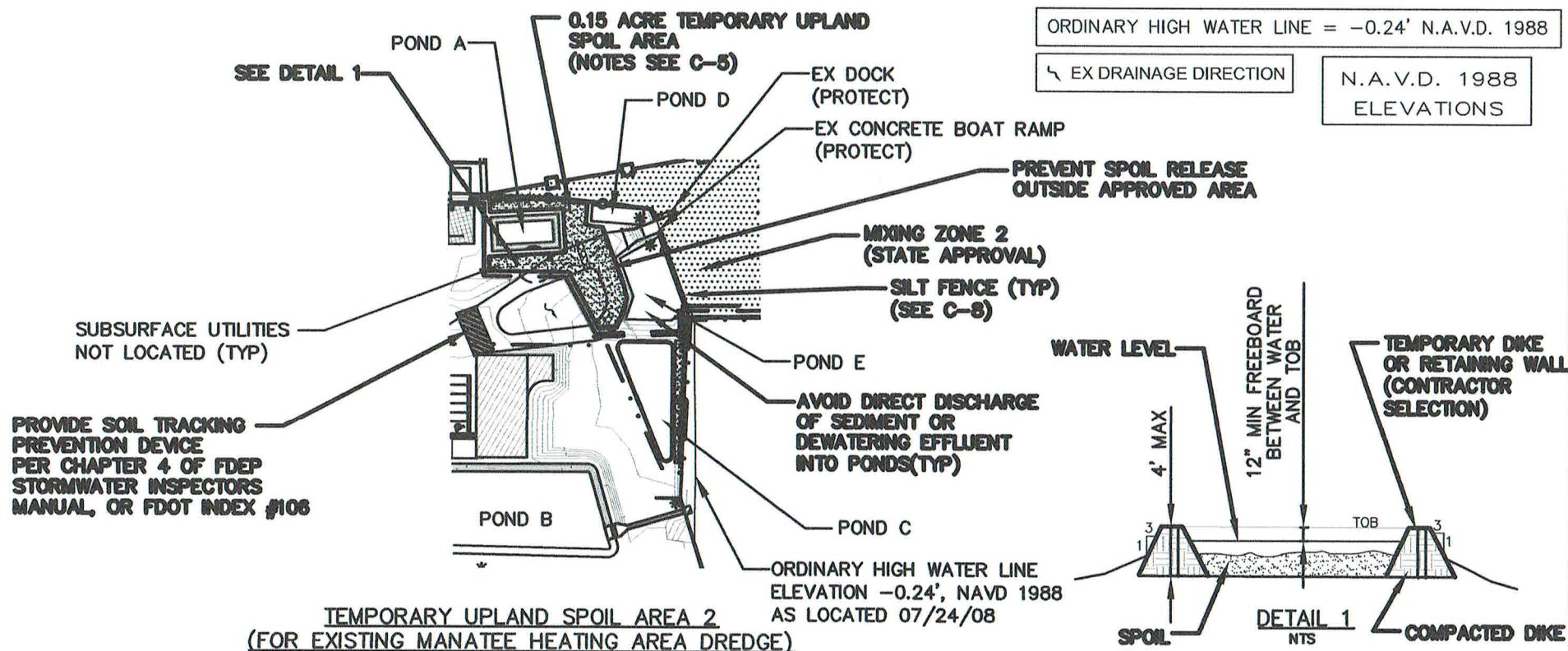
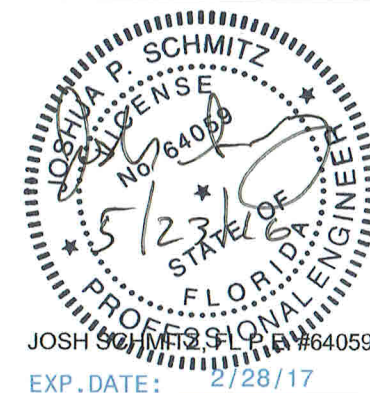
FEDERAL PERMIT DRAWINGS



1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-18				
SPOIL MANAGEMENT AREA 1				

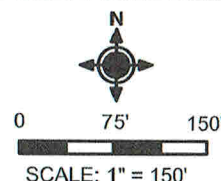
NOTES

1. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
2. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
3. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
4. UNLESS APPROVED BY OWNER TO REMAIN ONSITE, ALL DREDGED SEDIMENT SHALL BE DISPOSED IN AN OWNER APPROVED LANDFILL.
5. HAUL ROUTE BY CONTRACTOR AS REQUIRED (COORDINATE WITH OWNER) FOR LANDFILL DISPOSAL.
6. DREDGE SPOIL MAY NOT BE USED FOR DIKE CONSTRUCTION.
7. MONITOR DIKE INTEGRITY AND CHECK FOR LEAKS DAILY.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL FEDERAL PERMIT DRAWINGS



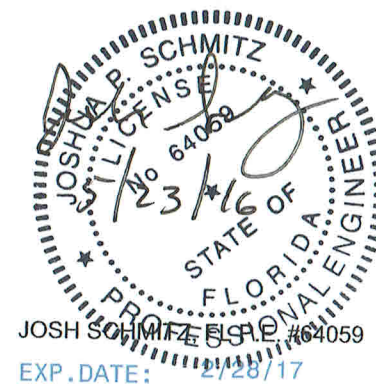
1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
C-19				
ENERCON				
SPOIL MANAGEMENT AREA 2				

N.A.V.D. 1988
ELEVATIONS

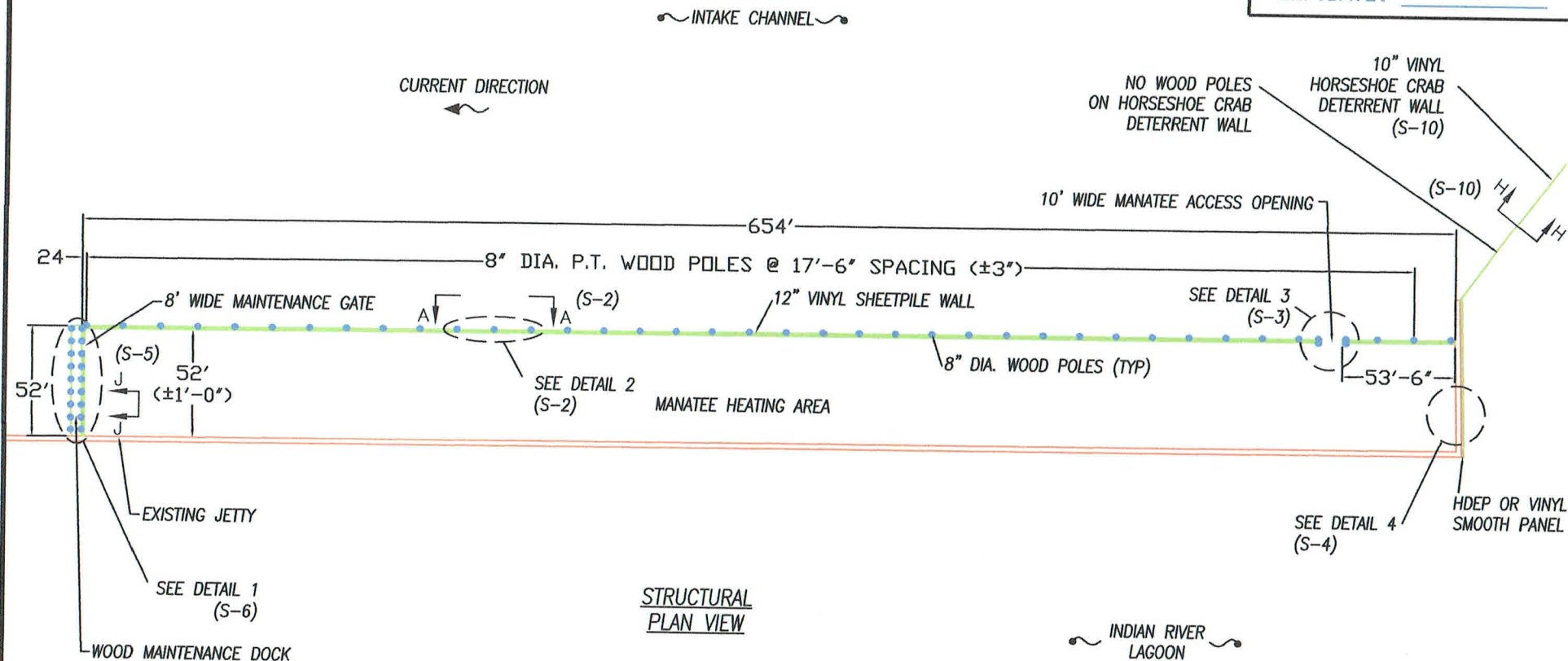
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



N
↑
NOT TO SCALE



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS



NOT TO SCALE

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

S-1

ENERCON

MANATEE HEATING AREA
STRUCTURAL PLAN

N.A.V.D. 1988
ELEVATIONS

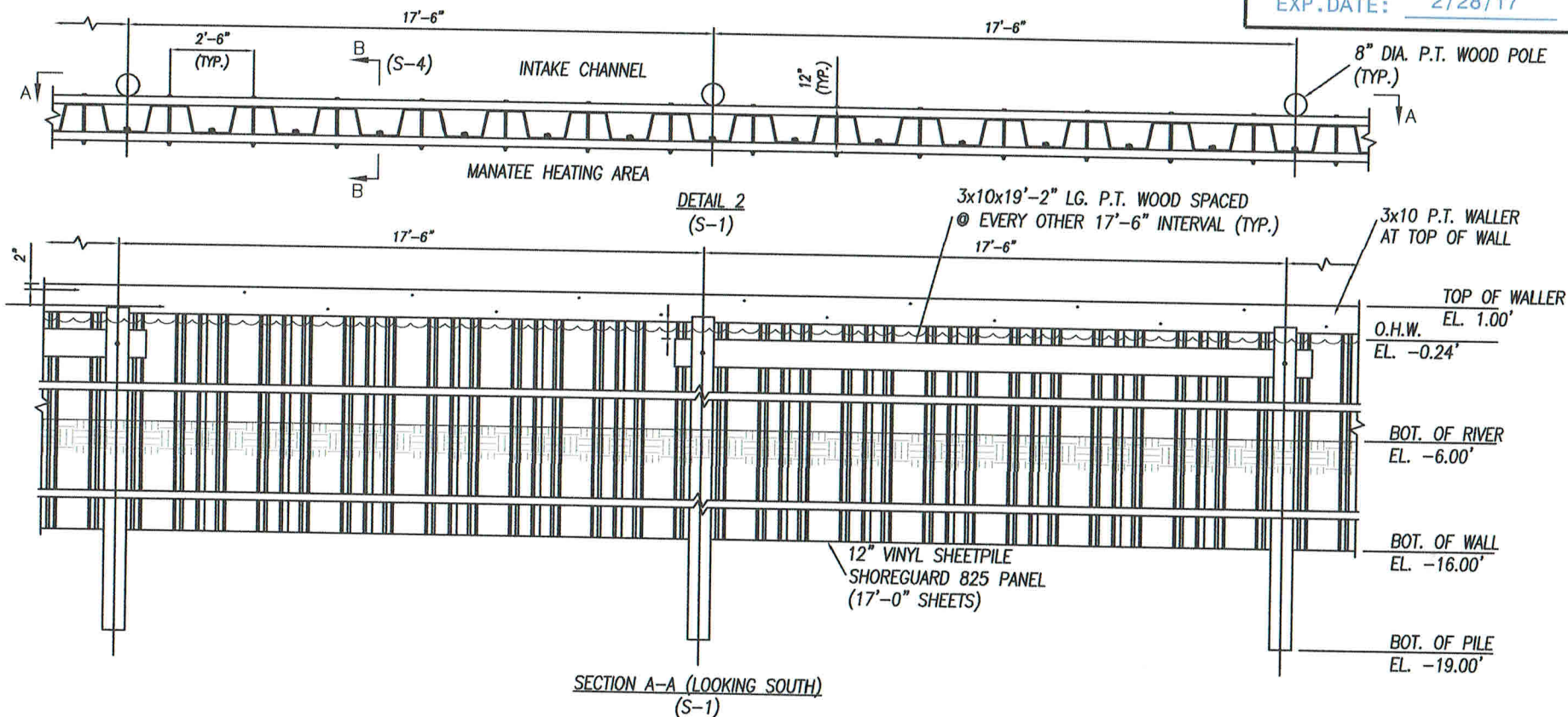
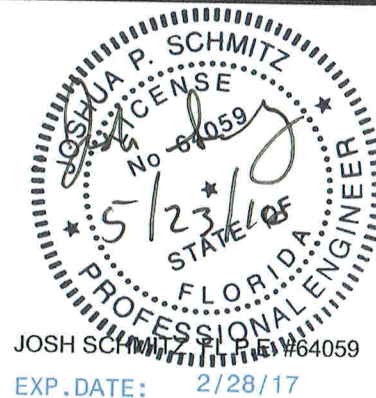
ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

N
↑

NOT TO SCALE

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

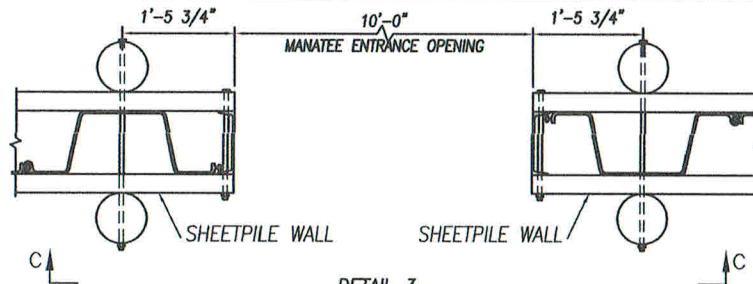
1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

S-2

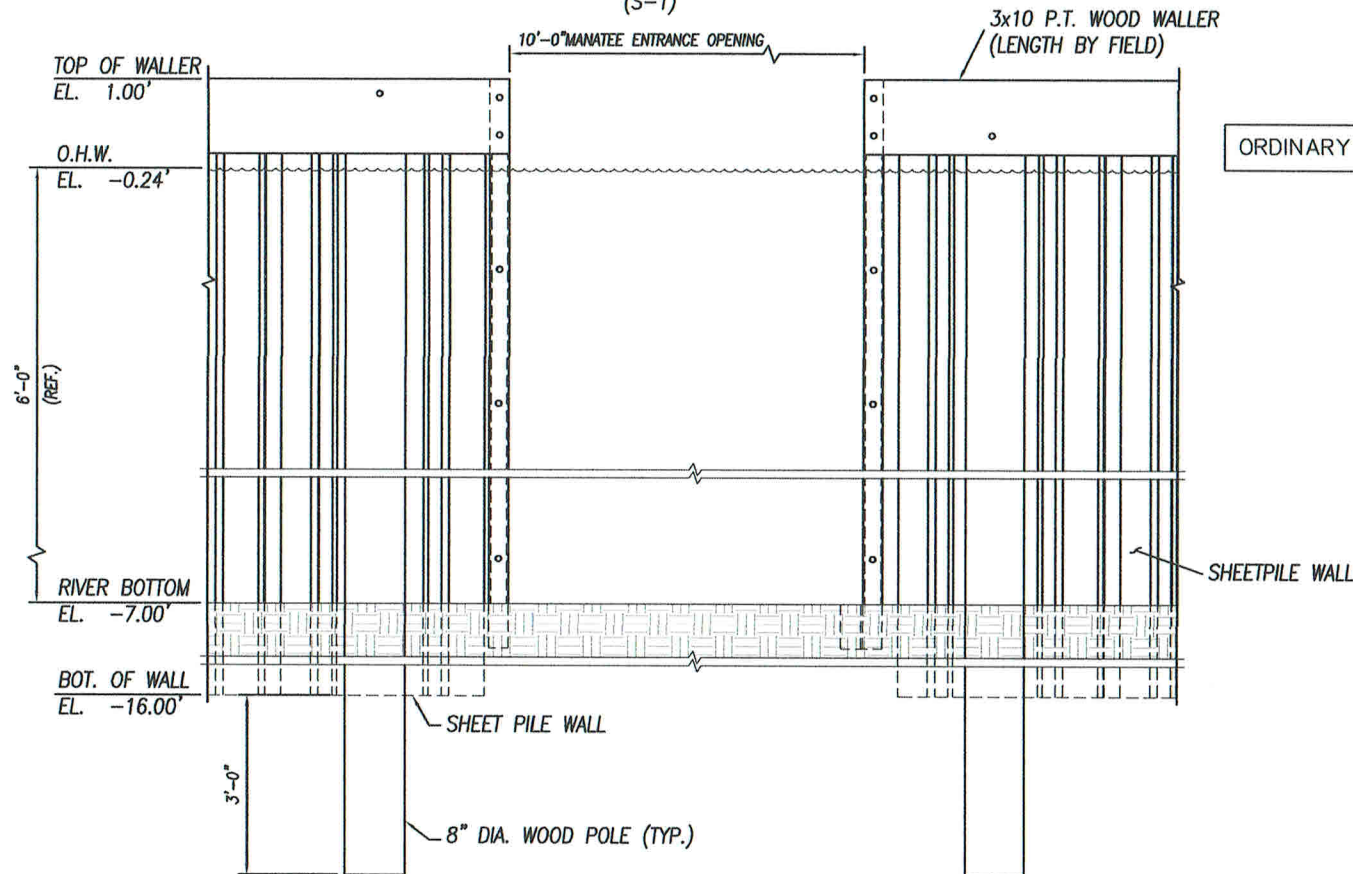
ENERCON

MANATEE HEATING AREA
SHEETPILE AND WALLER

N
↑
NOT TO SCALE

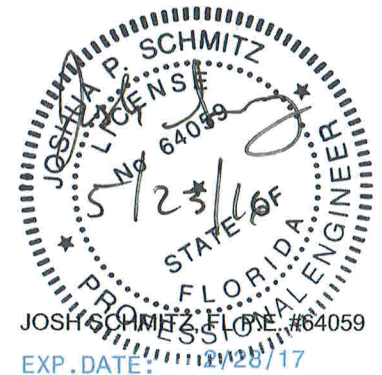


DETAIL 3
(S-1)



SECTION C-C (LOOKING NORTH)

N.A.V.D. 1988
ELEVATIONS



ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
S-3				
 ENERCON				
MANATEE HEATING AREA MANATEE ENTRANCE OPENING				

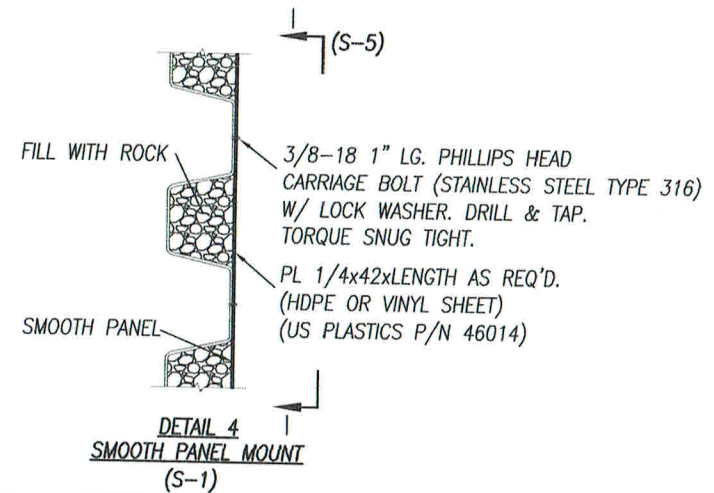
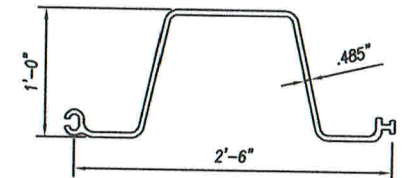
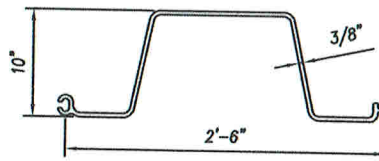
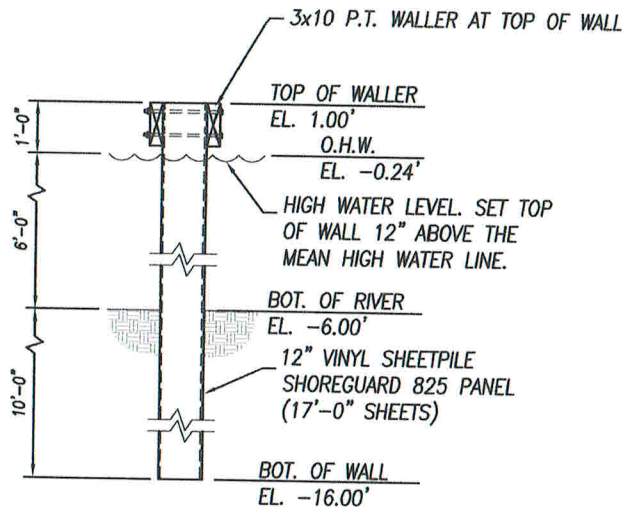
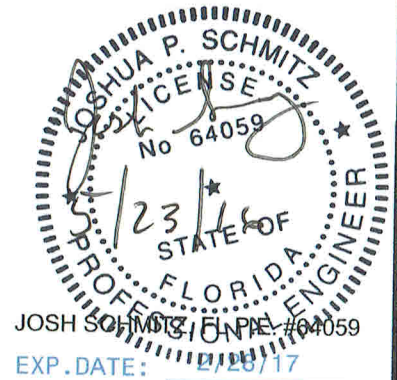
N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOT TO SCALE

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

S-4



ENERCON

MANATEE HEATING AREA
SHEETPILE DETAILS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL

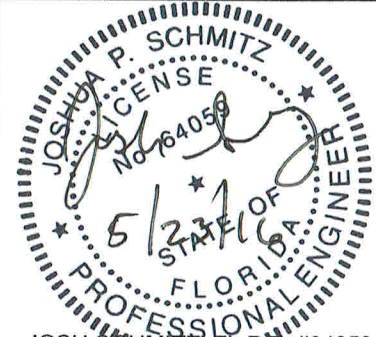
FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
S-5		 ENERCON		
MANATEE HEATING AREA PIPE PENETRATION				

N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

N
↑
NOT TO SCALE

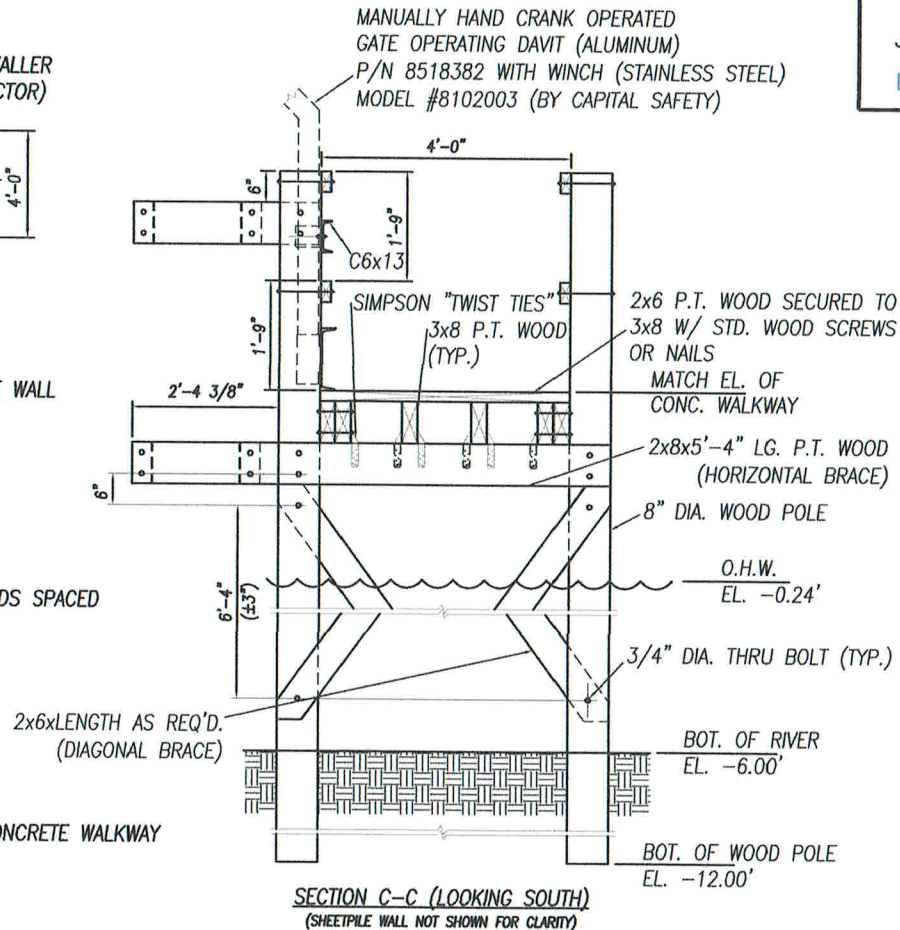
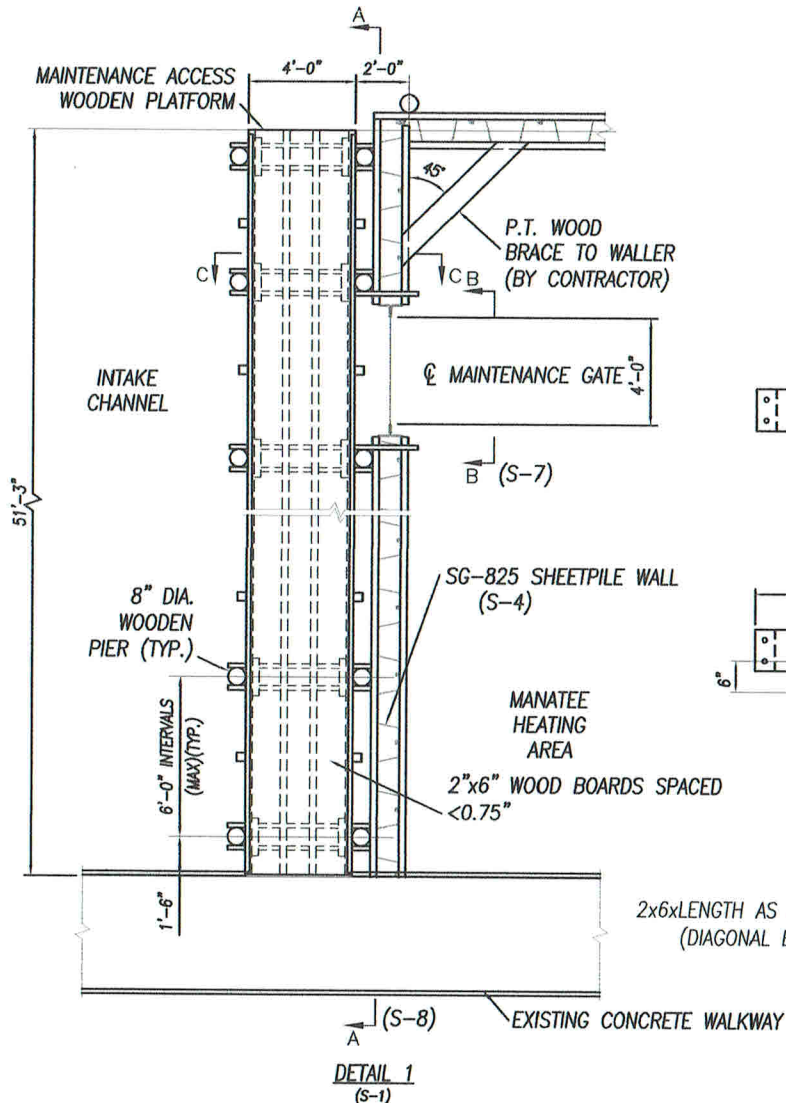


JOSH SCHMITZ, P.E. #64059

EXP. DATE: 2/28/17

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

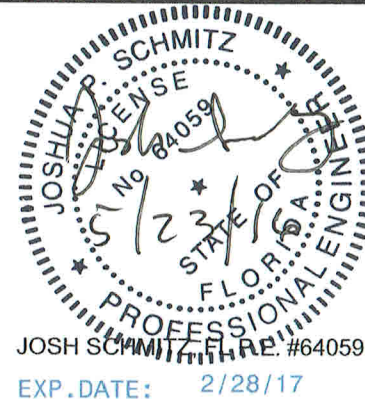
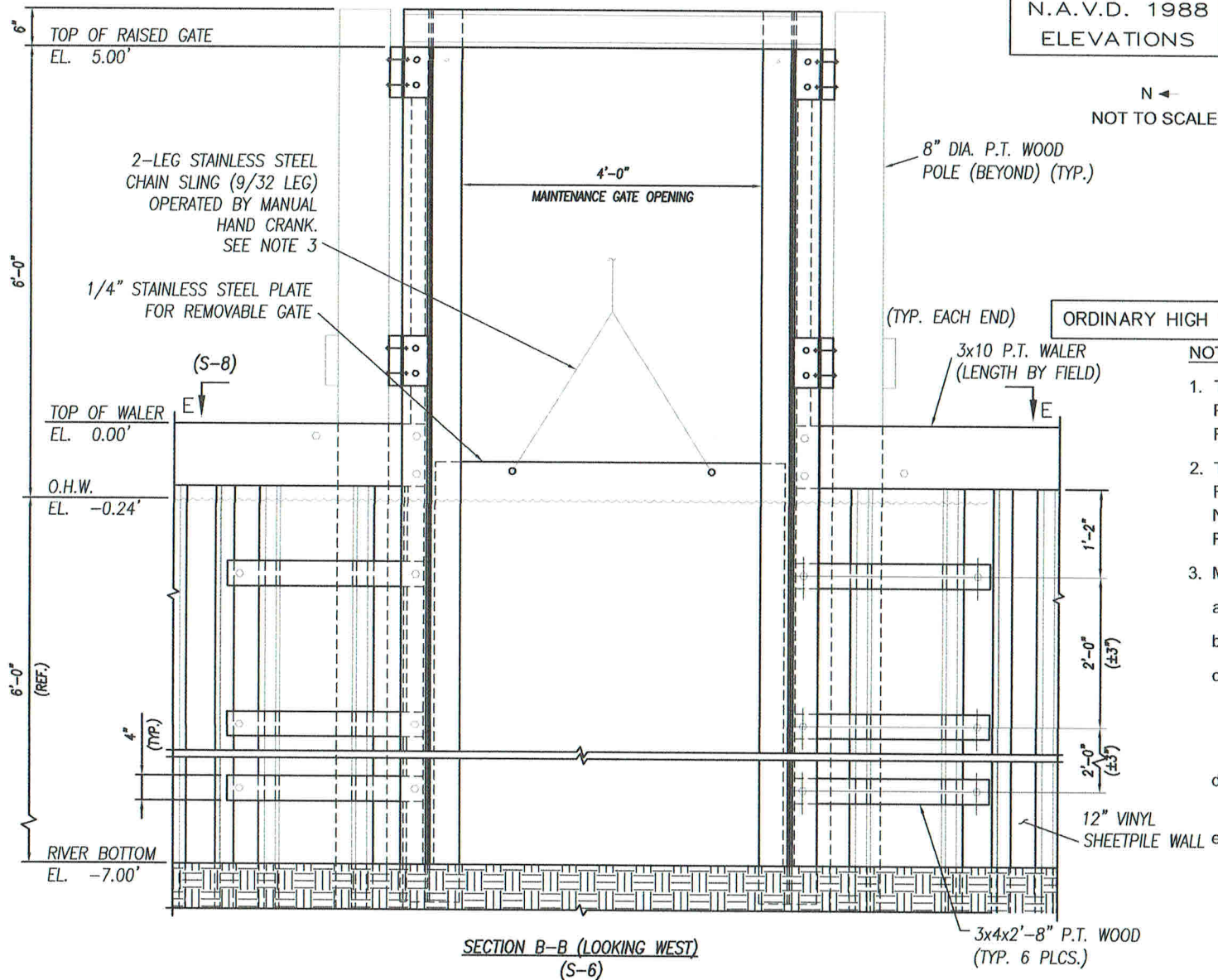


FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
S-6	 ENERCON			
MANATEE HEATING AREA MAINTENANCE DOCK DETAILS				



ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
3. MAINTENANCE GATE OPERATION:
 - a. MANUAL HAND CRANK OPERATION ONLY.
 - b. GATE WILL NOT BE OPERATED AT NIGHT.
 - c. IF CONDITIONS (WEATHER, HEAVY CURRENTS, ETC) ARE SUCH THAT MANATEES CAN NOT BE SEEN WITHIN 50 FEET, GATE SHALL NOT BE OPERATED.
 - d. GATE SHALL NOT BE OPERATED FROM NOVEMBER 15 - MARCH 31.
 - e. AT LEAST ONE PERSON SHALL BE DESIGNATED AS A MANATEE OBSERVER WHEN GATE IS BEING OPERATED. THE MANATEE OBSERVER WILL ADVISE PERSONNEL TO AVOID OPERATING THE GATE UPON SIGHTING A MANATEE WITHIN 50 FEET.

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

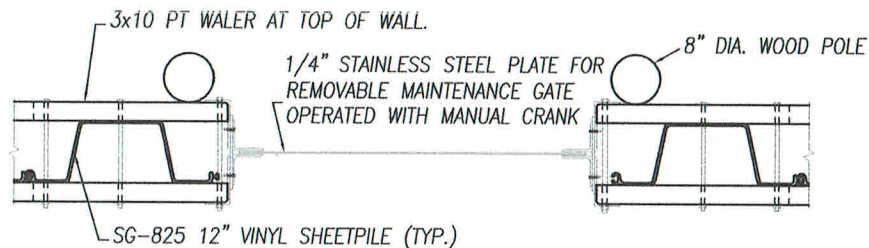
FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

S-7



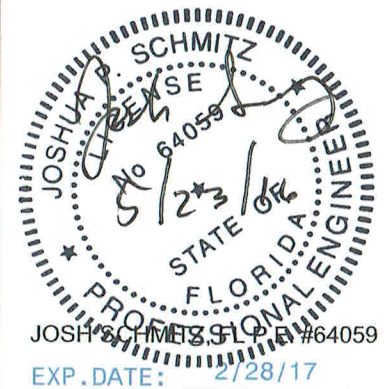
MANATEE HEATING AREA
MAINTENANCE GATE



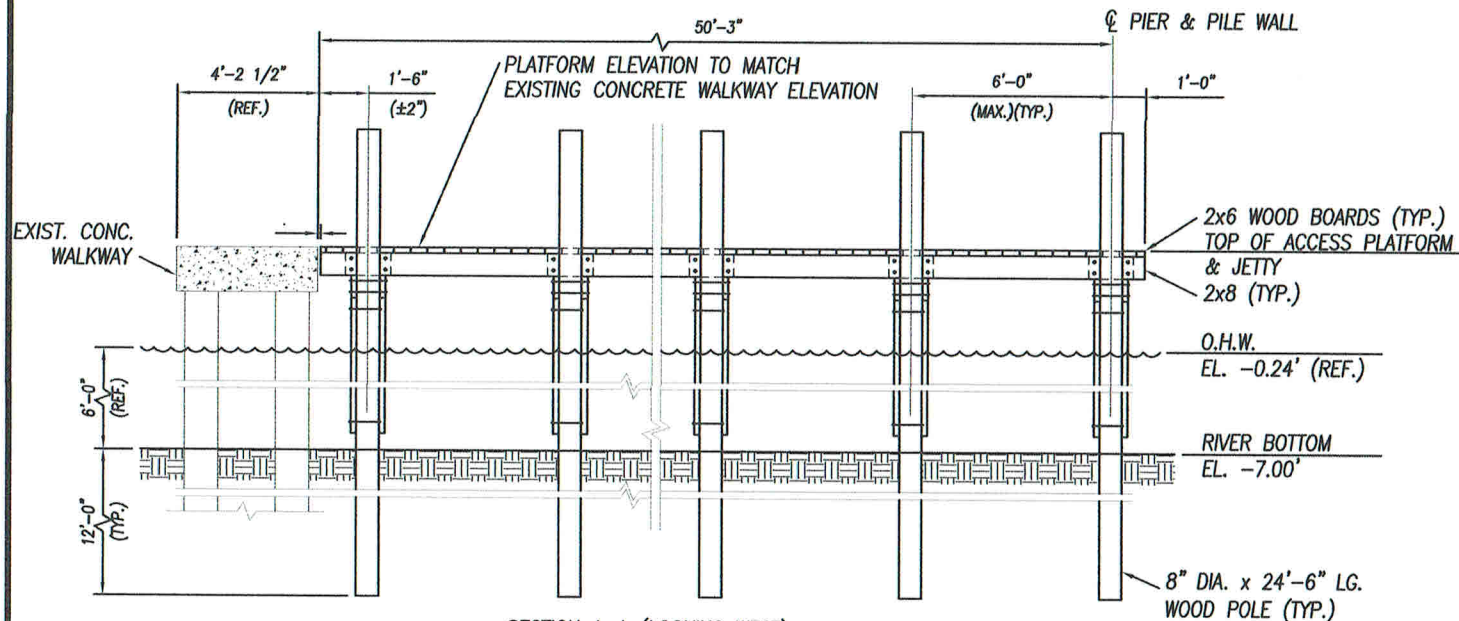
SECTION E-E
(S-7)

N.A.V.D. 1988
ELEVATIONS

N ←
NOT TO SCALE



ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988



SECTION A-A (LOOKING WEST)
(S-6)
(SHEETPILE WALL NOT SHOWN FOR CLARITY)

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND
HORSESHOE CRAB
DETERRENT WALL
FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
S-8				
MANATEE HEATING AREA MAINTENANCE GATE AND DOCK DETAILS				

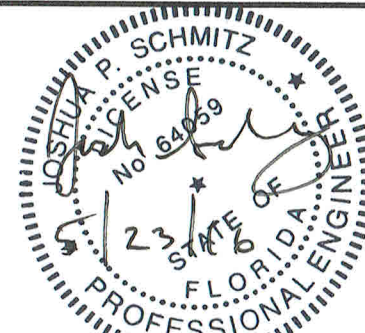
N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

NOT TO SCALE

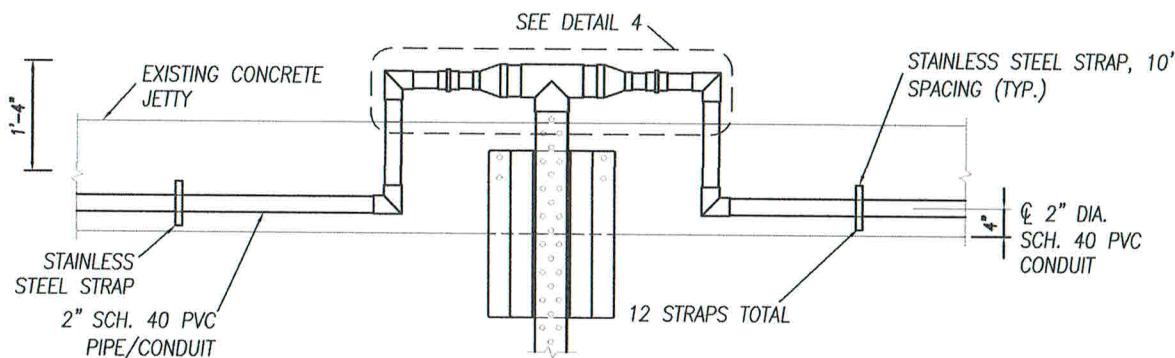
NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.

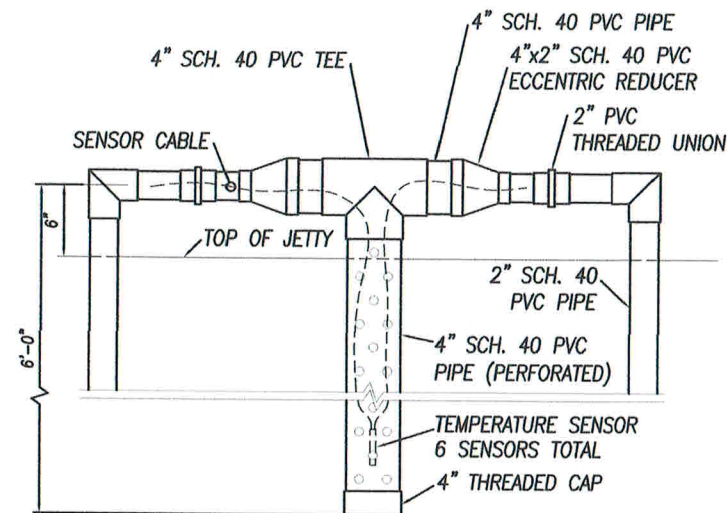


JOSH SCHMITZ, FLORIDA #64059

EXP. DATE: 2/28/17



DETAIL
(TEMPERATURE SENSOR MOUNTING)



DETAIL 4
(SPACE EVERY 85 FEET)

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

S-9



ENERCON

MANATEE HEATING AREA
TEMPERATURE SENSOR MOUNTING

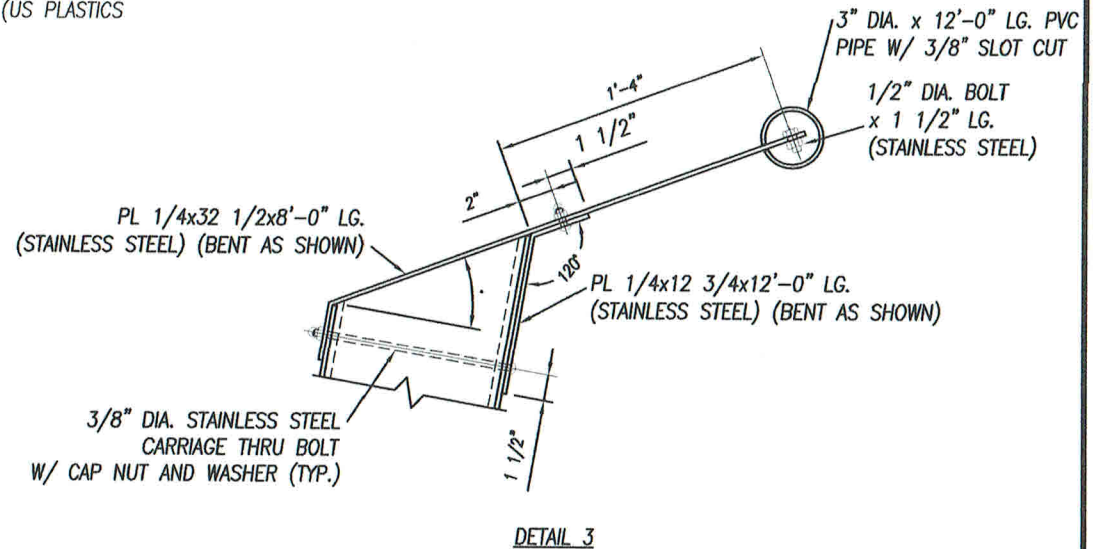
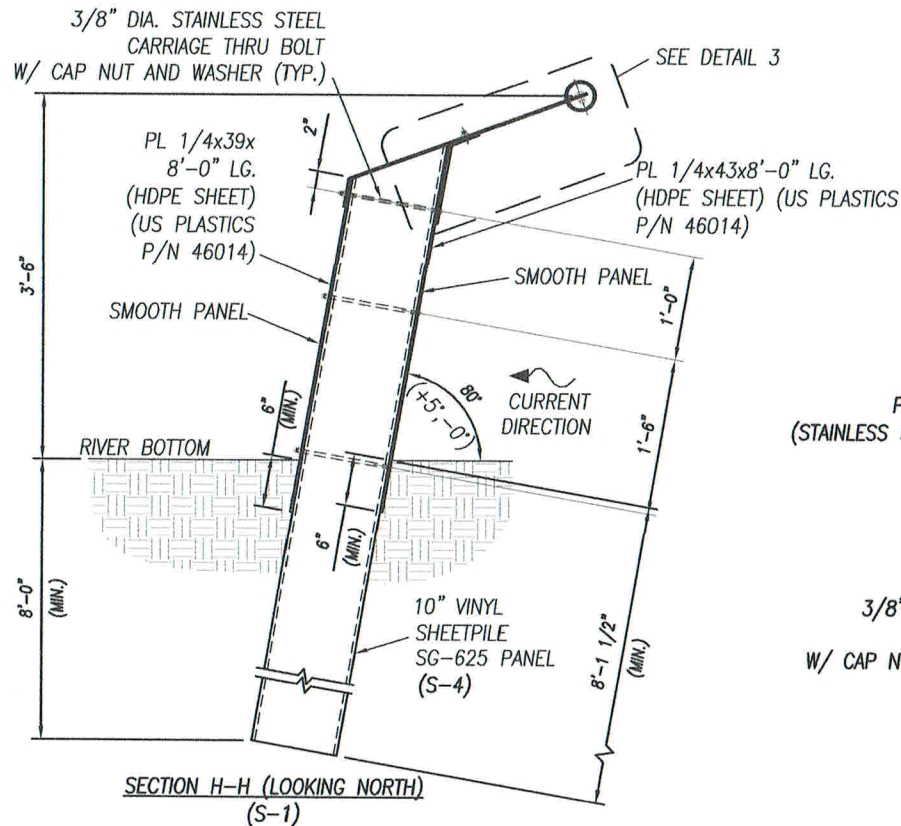
N.A.V.D. 1988
ELEVATIONS

ORDINARY HIGH WATER LINE = -0.24' N.A.V.D. 1988

N
↑
NOT TO SCALE

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

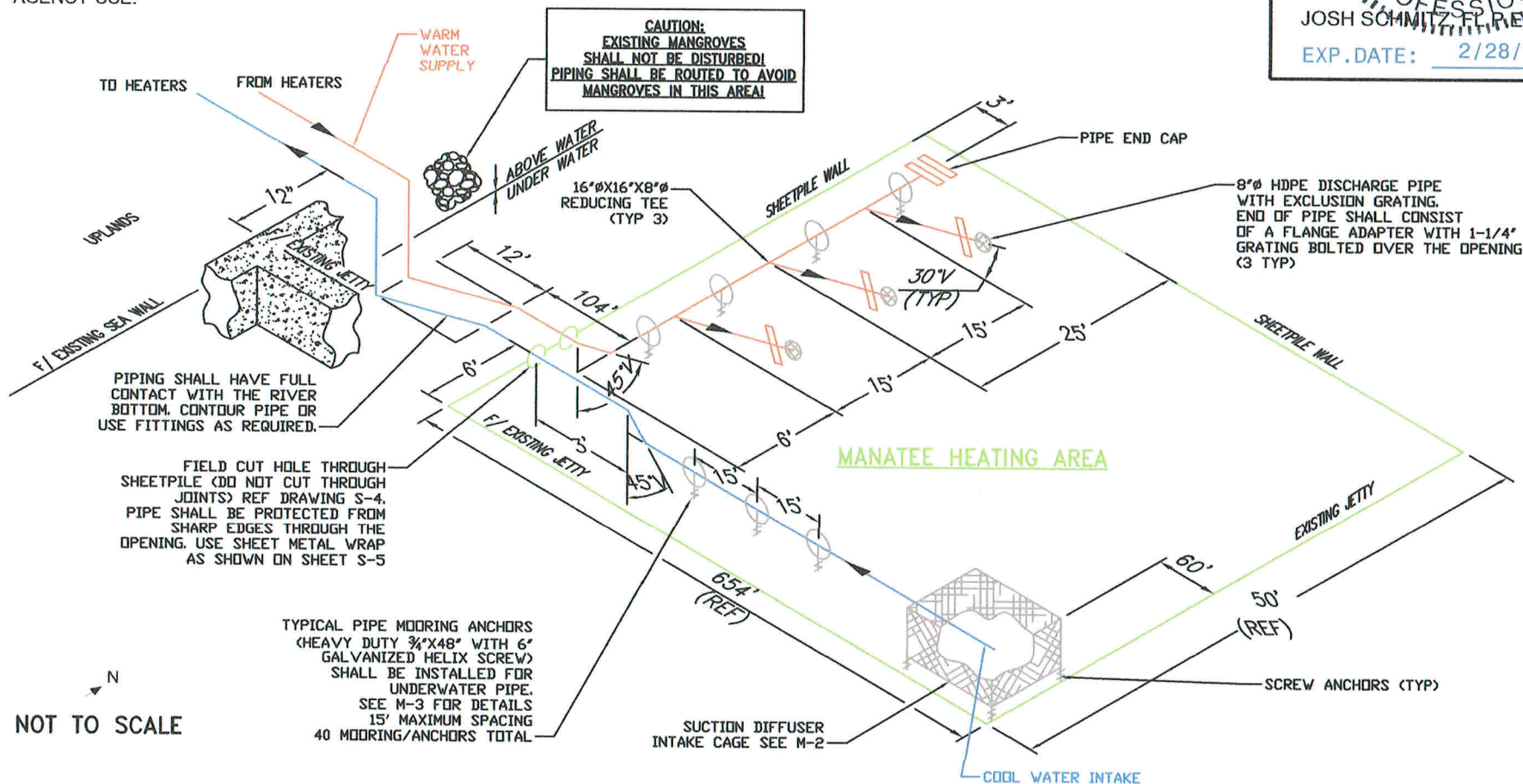
MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE
	S-10			
HORSESHOE CRAB DETERRENT WALL				

NOTES

1. ALTERNATE PIPING ROUTE MAY BE UTILIZED AT CLIENT/CONSTRUCTOR PREFERENCE. ALTERNATE ROUTE RUNS THROUGH POND E. PIPING MUST BE BURIED BELOW POND E, AND POND E RESTORED TO ORIGINAL GRADE.
2. CONTRACTOR TO ROUTE PIPING TO AVOID DAMAGE TO EXISTING TREES IN THIS AREA.
3. MANGROVE IMPACTS ARE NOT APPROVED FOR THIS PROJECT. IF MANGROVES MUST BE IMPACTED, REPORT TO OWNER IMMEDIATELY FOR PERMIT MODIFICATION AND APPROVAL PRIOR TO IMPACT TO MANGROVES.
4. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
5. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

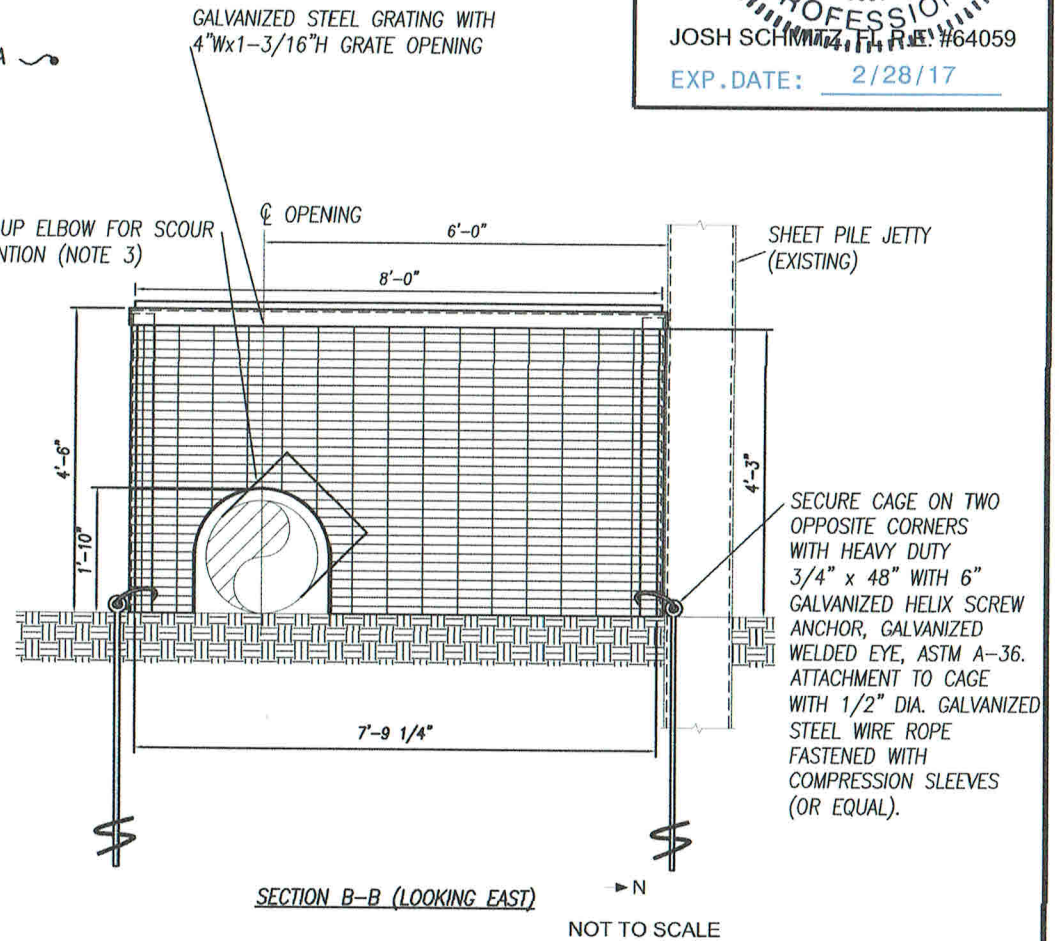
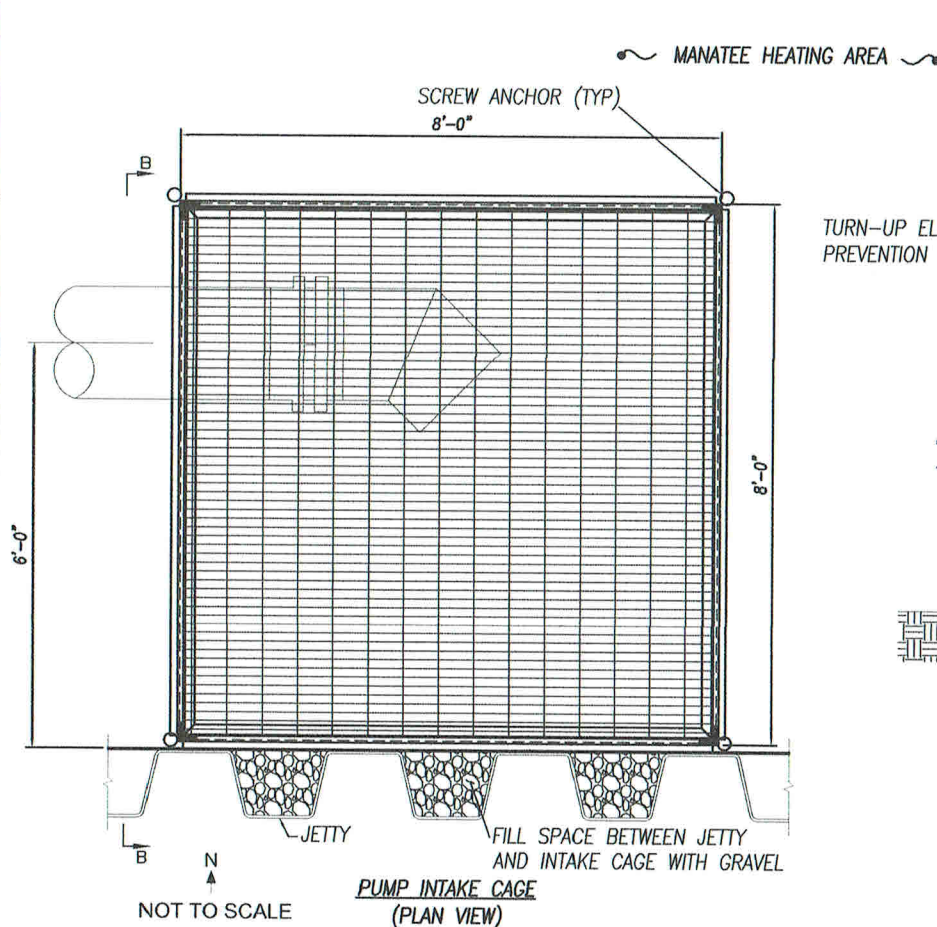
M-1



PIPING EXTENSION INSTALLATION

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.
3. INTAKE VELOCITY AT CAGE LESS THAN 0.2 FT/S



FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

M-2

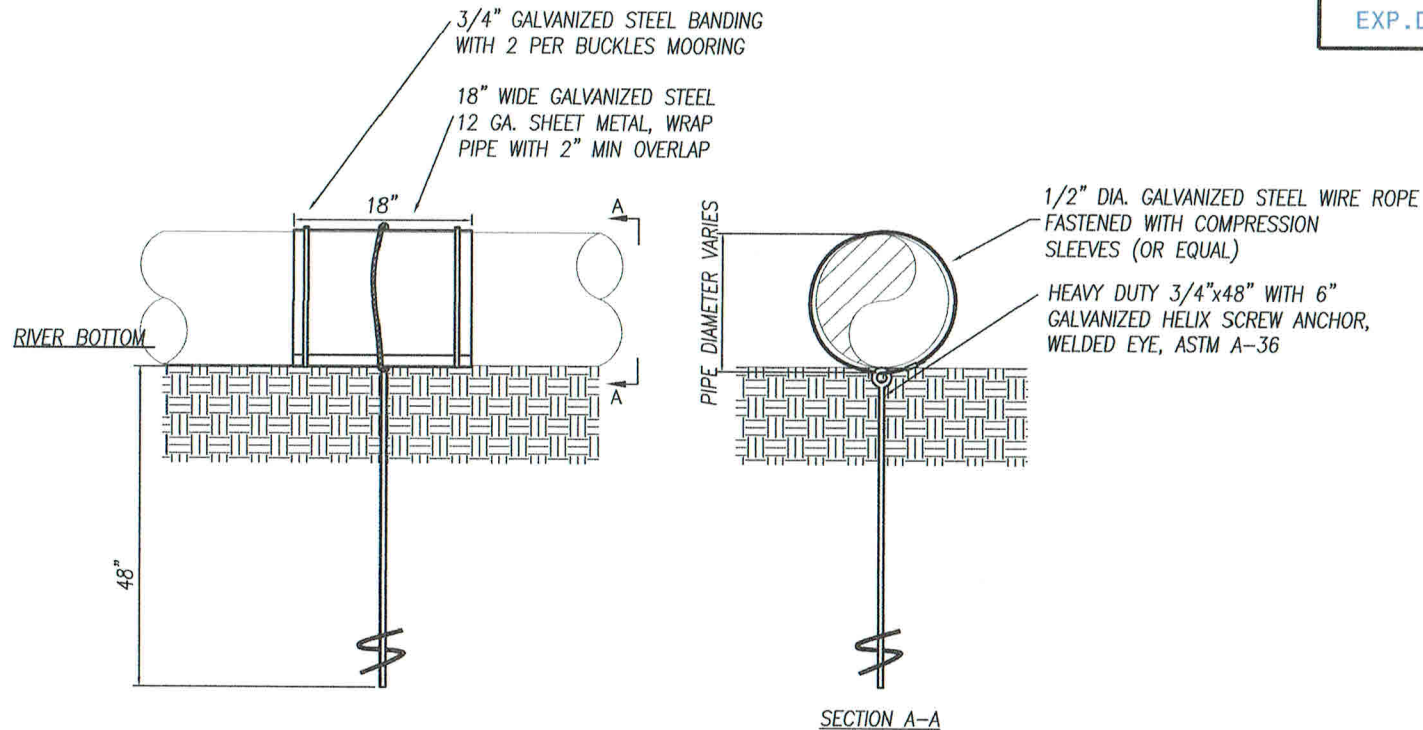


ENERCON

PUMP INTAKE CAGE

NOTES

1. THESE DRAWINGS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION USE.
2. THESE DRAWINGS ARE INTENDED ONLY FOR FEDERAL AGENCY REVIEW AND ARE NOT INTENDED FOR STATE OR LOCAL REGULATORY AGENCY USE.



TYPICAL PIPE MOORING
(15' MAX SPACING)
NOT TO SCALE

FLORIDA POWER & LIGHT
CAPE CANAVERAL ENERGY CENTER
6000 US HWY 1
COCOA, FL 32907

MANATEE HEATING AREA AND HORSESHOE CRAB DETERRENT WALL

FEDERAL PERMIT DRAWINGS

1	ACOE COMMENTS	HC	JS	5/20/16
0	INITIAL ISSUE PERMIT DRAWINGS	HC	JS	4/14/16
REV.	DESCRIPTION	DRN	CHK	DATE

M-3



ENERCON

TYPICAL PIPE MOORING