



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
4400 PGA BOULEVARD, SUITE 500
PALM BEACH GARDENS, FLORIDA 33410

REPLY TO
ATTENTION OF

July 2, 2019

Regulatory Division
South Permits Branch
Palm Beach Gardens Permits Section

PUBLIC NOTICE

Permit Application Number SAJ-2009-03390 (SP-KAE)

TO WHOM IT MAY CONCERN: The Jacksonville District of the U.S. Army Corps of Engineers (Corps) has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. §1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403) as described below:

APPLICANT: Palm Beach County BCC
c/o Fernando DelDago
2633 Vista parkway
West Palm Beach, FL 33411

WATERWAY AND LOCATION: The project would affect waters of the United States associated with Intracoastal Waterway. The project site is located at 6990 N Ocean Boulevard, in Sections 16 & 22, Township 45 South, Range 43 East, in Ocean Ridge, within Palm Beach County, Florida.

Directions to the site are as follows: Take I-95 to Boynton Beach Boulevard. Head east on Boynton Beach Boulevard to N Federal Highway (US 1) approximately 0.9 miles. Head south on N Federal Highway to E Ocean Avenue - approximately 0.1 miles. Head east on E Ocean Avenue, crossing the bridge over the Intracoastal Water Way, to North Ocean Boulevard (A1A) - approximately 0.6 miles. Head north on N Ocean Boulevard approximately 1.3 miles to the entrance to Ocean Inlet Park. The marina is on the right-hand side at the end of the entrance driveway

APPROXIMATE CENTRAL COORDINATES: Latitude 26.544584
Longitude -80.044526

PROJECT PURPOSE:

Basic: The basic project purpose for shoreline stabilization.

Overall: The overall project purpose is to stabilize the shoreline at an existing park in Palm Beach County, Florida.

EXISTING CONDITIONS: The existing site takes place at Ocean Inlet Park in Ocean Ridge, within the Intracoastal Waterway. The site currently consists of a bulkheaded shoreline with a 28 slip marina. The marina structures are in dilapidated conditions with

significant spalling and cracking of the bulkhead. The upland access ramp to the docking structures has been closed due to a collapse of the concrete bulkhead. The uplands host a building utilized by emergency personnel and a recreational park with attenuating structures. A 0.001 acre (44 square foot) portion of the southeast shoreline hosts black mangroves that have been impacted and are currently laying on their sides.

PROPOSED WORK: The applicant seeks authorization to 1) remove the existing fixed and floating docks consisting of a 8-foot by 290-foot (2,320 square foot) marginal dock and a 10-foot by 290-foot (2,900 square foot) pier; 2) replace 588-linear feet of bulkhead within 3-feet of the existing bulkhead (wetface to wetface); 3) replace a 214.41-linear foot bulkhead within 3-feet from the existing bulkhead (wetface to wetface); 4) install a 12-foot by 380-foot (4,560 square foot) floating wave attenuator with fifteen 20-inch concrete piles; 5) install a 12-foot by 119.25-foot (1,431 square foot) marginal docking structure with two 5-foot by 20-foot (100 square foot) finger piers and three boatlifts; 6) install a 12-foot by 290-foot (3,480 square foot) floating concrete pier with a 8-foot by 70-foot (560 square foot) access gangway, eight 5-foot by 50-foot (250 square foot) finger piers, three 5-foot by 35-foot (175 square foot) finger piers, and install twenty-three (23) 18-inch concrete piles; 7) install a 12-foot by 80-foot (960 square foot) concrete floating pier with two 5-foot by 35-foot (175 square foot) finger piers, a 6-foot by 50-foot (300 square foot) access gangway, and five 18-inch concrete dock piles; 8) install twenty three (23) mooring piles; 9) fill 0.0001 acres of wetlands for the shoreline stabilization measures and 10) plant six one gallon black mangroves along the shoreline on 3 foot centers. The proposed project will decrease the slip count from 28 to 27.

AVOIDANCE AND MINIMIZATION INFORMATION – The applicant has provided the following information in support of efforts to avoid and/or minimize impacts to the aquatic environment:

A benthic resources survey was performed in July 19, 2018, which found that three seagrass species (shoal grass (*Halodule wrightii*), paddle grass (*Halophila decipiens*), and Johnson's seagrass (*Halophila johnsonii*)) were within the assessment area. The proposed project was designed to avoid impacts to submerged aquatic resources. "While other site plan configurations were considered, including lengthening of the main docking structure, the current proposed plan was designed to avoid impacts to seagrass areas that were identified during the submerged resource survey. The seagrass areas will be protected through the implementation of best management practices during construction activities. Additionally, the applicant will implement Standard Manatee Conditions for In-Water Work during construction activities." The proposed project will impact two small black mangroves that were previously damaged during storm events adjacent to the proposed southwest seawall and replace them with six one gallon size black mangroves to be located along the shoreline.

COMPENSATORY MITIGATION – The applicant has provided the following explanation why compensatory mitigation should not be required:

The applicant is proposing to remove two small sized mangroves (0.001 acres) that have been damaged by previous storm events and are laying horizontal to the water's edge. As compensation for any loss of the functional value of the mangroves the applicant shall install six (6) one gallon sized black mangroves along the shoreline. The area located north of the proposed seawall replacement activities is ideal for an enhanced shoreline area as it is an unconsolidated shoreline and mangroves have naturally recruited into this area and can only benefit from additional enhancement activities. The location is within the same watershed and will restore an existing resource to maintain and improve the quality and quantity of mangroves within the watershed in an effort to ensure the project would have no net loss of any wetland function or value.

CULTURAL RESOURCES:

The Corps is not aware of any known historic properties within the permit area. By copy of this public notice, the Corps is providing information for review. Our final determination relative to historic resource impacts is subject to review by and coordination with the State Historic Preservation Officer and those federally recognized tribes with concerns in Florida and the Permit Area.

ENDANGERED SPECIES:

The Corps has determined the proposed project may affect, but is not likely to adversely affect the West Indian manatee (*Trichechus manatus*) or its designated critical habitat; wood stork (*Mycteria americana*); Eastern Indigo Snake (*Drymarchon couperi*); swimming sea turtles: (green sea turtle (*Chelonia mydas*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), and Loggerhead sea turtle (*Caretta caretta*)); smalltooth sawfish (*Pristis pectinata*). The Corps will request U.S. Fish and Wildlife/National Marine Fisheries Service concurrence with this determination pursuant to Section 7 of the Endangered Species Act.

The Corps has determined the proposal would have no effect on Johnson's seagrass (*Halophila johnsonii*) since a benthic resource survey was conducted on 19 July 2018, which showed that while seagrasses are located adjacent to the project area, the proposed project was designed to avoid all impacts to submerged aquatic resources. Best management practices. Best management practices in the form of turbidity curtains will be utilized during construction activities, it is anticipated that there will be no secondary impacts to Johnson's seagrass since the curtains will be located a minimum of 50 feet from the existing resource.

The Corps has determined the proposal would have no effect on any other listed threatened or endangered species or designated critical habitat.

ESSENTIAL FISH HABITAT (EFH): This notice initiates consultation with the National Marine Fisheries Service on EFH as required by the Magnuson-Stevens Fishery Conservation and Management Act 1996. The proposal would impact approximately 0.001 acres of black mangroves (two individual trees) and 12,616 square feet of barren bottom (mud, silt and sand) by shading for the proposed wave attenuator and docking

structures and 913 square feet of barren bottom (mud, silt and sand) for the installation of a seawall and back filling utilized by various life stages of penaeid shrimp complex, reef fish, stone crab, spiny lobster, migratory/pelagic fish, and snapper/grouper complex and water column EFH. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or Federally managed fisheries in the South Atlantic Region. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

NOTE: This public notice is being issued based on information furnished by the applicant. This information has not been verified or evaluated to ensure compliance with laws and regulation governing the regulatory program. The jurisdictional line has not been verified by Corps personnel.

AUTHORIZATION FROM OTHER AGENCIES: Water Quality Certification may be required from the Florida Department of Environmental Protection and/or one of the state Water Management Districts.

COMMENTS regarding the potential authorization of the work proposed should be submitted in writing to the attention of the District Engineer through the Palm Beach Gardens Permits Section, 4400 PGA Boulevard, Ste 500, Palm Beach Gardens, FL 33410 within 21 days from the date of this notice.

The decision whether to issue or deny this permit application will be based on the information received from this public notice and the evaluation of the probable impact to the associated wetlands. This is based on an analysis of the applicant's avoidance and minimization efforts for the project, as well as the compensatory mitigation proposed.

QUESTIONS concerning this application should be directed to the project manager, Kelly Egan, in writing at the Palm Beach Gardens Permits Section, 4400 PGA Boulevard, Ste 500, Palm Beach Gardens, FL 33410; by electronic mail at Kelly.Egan@usace.army.mil; or, by telephone at (561) 472-3514.

IMPACT ON NATURAL RESOURCES: Coordination with U.S. Fish and Wildlife Service, Environmental Protection Agency (EPA), the National Marine Fisheries Services, and other Federal, State, and local agencies, environmental groups, and concerned citizens generally yields pertinent environmental information that is instrumental in determining the impact the proposed action will have on the natural resources of the area.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including cumulative impacts thereof; among these are conservation, economics, esthetics, general

environmental concerns, wetlands, historical properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food, and fiber production, mineral needs, considerations of property ownership, and in general, the needs and welfare of the people. Evaluation of the impact of the activity on the public interest will also include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act or the criteria established under authority of Section 102(a) of the Marine Protection Research and Sanctuaries Act of 1972. A permit will be granted unless its issuance is found to be contrary to the public interest.


The US Army Corps of Engineers (Corps) is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other Interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this determination, comments are used to assess impacts to endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

COASTAL ZONE MANAGEMENT CONSISTENCY: In Florida, the State approval constitutes compliance with the approved Coastal Zone Management Plan. In Puerto Rico, a Coastal Zone Management Consistency Concurrence is required from the Puerto Rico Planning Board. In the Virgin Islands, the Department of Planning and Natural Resources permit constitutes compliance with the Coastal Zone Management Plan.

REQUEST FOR PUBLIC HEARING: Any person may request a public hearing. The request must be submitted in writing to the District Engineer within the designated comment period of the notice and must state the specific reasons for requesting the public hearing.

PROJECT NO. 13367

C1 COVER
C2 GENERAL NOTES
C3 SITE PLAN
C4 ENGINEERING MASTER PLAN AND KEY SHEET
C5 MARINA BULKHEAD WALL PLAN
C6 SOUTHWEST BULKHEAD WALL PLAN
C7 BULKHEAD WALL SECTIONS
C8 BULKHEAD WALL DETAILS
C9 MARINA PLAN
C10 FLOATING DOCK PLAN, DETAILS AND SECTIONS
C11 FLOATING DOCK DETAILS
C12 FLOATING FINGER DOCK DETAILS
C13 FLOATING WAVE ATTENUATOR DETAILS
C14 GANGWAY DETAILS
C15 UPLAND CIVIL PLAN
C16 POLLUTION PREVENTION PLAN

The seal of Palm Beach County, Florida, is a circular emblem. It features a palm tree in the center, with a smaller palm tree to its left. The words "PALM BEACH COUNTY" are written in a circle around the top, and "FLORIDA" is written at the bottom. There are small dots separating the top and bottom text on the left and right sides.

MACK BERNARD
MAYOR
DISTRICT 7



NORTH

THESE PLANS WERE PREPARED BASED ON NAVD 88,
WHICH IS THE DATUM TO BE USED FOR THIS PROJECT.

LOCATION MAP
SEC. 16&22, TWP. 45S, RNG. 43E
N.T.S.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND
SEALED BY: Digitally signed by Simon A
Coleman
Date: 2019.03.11 21:58:24 -04'00'
PRINTED COPIES OF THIS DOCUMENT ARE NOT
CONSIDERED SIGNED AND SEALED. THE
SIGNATURE MUST BE VERIFIED ON THE
ELECTRONIC DOCUMENT.

PALM BEACH COUNTY
PROJECT No. 13367

Simon A. Coleman, P.E. License No. 68929

1. THE GOVERNING CODE FOR THIS PROJECT IS THE FLORIDA BUILDING CODE, 2017, CODE.
2. TO THE BEST OF OUR KNOWLEDGE, THE STRUCTURAL DRAWINGS COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING BUILDING CODE.
3. CONSTRUCTION IS TO COMPLY WITH THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.
4. SPECIAL CARE SHALL BE TAKEN TO PROVIDE ADEQUATE VERTICAL AND HORIZONTAL SHORING TO SUPPORT ALL CONSTRUCTION LOADS.
5. SOURCE OF UPLAND TOPOGRAPHIC SURVEY: PALM BEACH COUNTY ENGINEERING.
6. SOURCE OF BATHYMETRIC SURVEY: HSD GROUP.
7. THE WALL DEPENDENCIES IN THESE PLANS IS BASED ON INFORMATION CONTAINED IN THE GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS, INC.
8. REMOVE EXISTING BURIED WALL AS DIRECTED IN THE PLANS. ALL MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF-SITE.
9. SELECT EXISTING BUILT-UP WALL TO BE BACKFILL BEHIND NEW BURIED WALL AS DIRECTED IN THE PLANS. FILL SHALL BE PLACED TO AN ELEVATION OF 1' ABOVE WATER ELEVATION IN LOW TIDE CONDITIONS AND THEN COMPACTED IN 12" LIFTS UP TO FINAL GRADE. COMPACT SHALL BE PERFORMED BY USE OF VIBRATING PLATE COMPACTOR. MECHANICAL ROLLERS SHALL NOT BE USED. ADJACENT TO THE WALL SHALL BE REINFORCED AFTER SEASONING AND ANCHOR RODS ARE IN PLACE AND BEFORE CAST IS CAST.
10. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH CHAPTER 556, FLORIDA STATUTES AND FLORIDA STATUTE 563.651 FOR THE PROTECTION OF UNDERGROUND PIPELINES.
11. NO CONSTRUCTION SHALL BE COMMENCED UNTIL ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN SECURED AND THE CONTRACTOR IS ISSUED A "NOTICE TO PROCEED".
12. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITY CABLES, SANITARY LINES, AND WATER LINES, AND SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING UTILITIES CAUSED BY HIS OPERATIONS.
13. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION.
14. ALL CONSTRUCTION TAKE-OUT IS THE RESPONSIBILITY OF THE CONTRACTOR AND ALL ASSOCIATED COSTS ARE TO BE CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE PROJECT.
15. THE LOCATION OF THE EXISTING UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FACILITIES SHOWN NOR FOR ANY FACILITY NOT SHOWN. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF OTHER UTILITIES NOT SHOWN ON THE PLAN EXIST WITHIN THE AREA OF CONSTRUCTION. SHOULD THERE BE UTILITY CONFLICTS, THE CONTRACTOR SHALL INFORM THE ENGINEER OF THE LOCATION OF THE UTILITY CONFLICTS AND MAKE ANY NECESSARY ADJUSTMENTS AS REQUIRED.
16. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH CONSTRUCTION AS NECESSARY TO PROTECT EXISTING UTILITIES FROM DAMAGE OR DISRUPTION OF SERVICE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL OTHER UTILITY FACILITIES.
18. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE ENGINEER OF RECORD.
19. UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL ACCEPTANCE OF THE WORK, A FINAL INSPECTION SHALL VERIFY PROPER CONSTRUCTION OF ALL UTILITIES AND THE PROTECTION OF EXISTING UTILITIES.
20. AS-BUILT DRAWINGS SHALL BE PREPARED BY A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF FLORIDA, AND SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD.
21. CONTRACTOR SHALL NOTIFY SUNSHINE STATE ONE (1-800-432-4370) 48 HOURS IN ADVANCE OF CONSTRUCTION.
22. ALL VEGETATION, DEBRIS, CONCRETE OR OTHER UNSUITABLE MATERIAL SHALL BE LEGALLY DISPOSED OF OFF-SITE IN AN AREA AT THE CONTRACTOR'S EXPENSE.
23. CONTRACTOR SHALL FOLLOW CONSTRUCTION METHODS AND DEVICES, SUCH AS TURBIDITY SCREENS, CURTAINS AND FLOATING SLIT BARRIERS WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE AND LOCAL WATER QUALITY STANDARDS.
24. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE STRICTLY OBSERVED.
25. ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE R/W WHERE THE PROJECT IS CONSTRUCTED.
26. CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING BUILDINGS AT ALL TIMES (INCLUDING THE PUBLIC BATHROOMS).
27. SAW CUT PAVEMENT AND CONCRETE WHERE IT IS TO BE REMOVED.
28. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAY SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
29. CONTRACTOR SHALL MONITOR AND REPORT THE DETRIMENT OF FRESHLY PLACED CONCRETE SURFACES. ANY CRACKS SURFACES DEFACED SHALL BE REPAIRED TO NO ADDITIONAL COST TO OWNER.
30. CLEANING AND GRUBBING SHALL INCLUDE REMOVAL OF ALL VEGETATION WITHIN SITE AS REQUIRED TO CONSTRUCT THE REQUIRED IMPROVEMENTS.
31. PROJECT SITE SAFETY:
 - A. THE ENGINEER/OWNER OR THEIR EMPLOYEES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER THE CONTRACTOR, ANY SUB-CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY JOBSITE HEALTH AND SAFETY PRECAUTIONS.
 - B. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOBSITE SAFETY, AND WARRANTIES THAT THIS INTENT IS MADE EVIDENT BY THE AGREEMENT BETWEEN THE CONTRACTOR AND THE OWNER.
 - C. ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS OR ENCOUNTERED THROUGH THE PROGRESSION OF WORK AT THIS PROJECT SITE ARE ASSUMED TO BE LIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS WHEN WORKING AROUND EXISTING OVERHEAD OR UNDERGROUND UTILITIES.
32. TRENCHES SHALL BE WASH WHEN PILES ARE INSTALLED.
33. SOD SHALL BE PLACED BELOW THE EDGES OF PAVEMENT TO ALLOW WATER TO DRAIN.
34. IN THE EVENT DE-PAVEMENT IS REQUIRED, THE CONTRACTOR IS TO OBTAIN THE PERMIT FROM THE REQUIRED AGENCIES.
35. CONTRACTOR TO RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION TO EXISTING CONDITION. ANY REPLACEMENT SOD SHALL BE OF THE SAME TYPE AS THAT REMOVED DURING CONSTRUCTION.
36. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INADEQUACIES.
37. NO OPENINGS OR PENETRATIONS, OTHER THAN THOSE SHOWN ON THE PLANS, SHALL BE MADE WITHOUT THE ENGINEER'S APPROVAL.
38. THE BURIED WALLS HAVE BEEN DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE WALL IS COMPLETE. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE VARIOUS WALLS AND THEIR COMPONENTS DURING ERECTION.
39. [REDACTED] TYPICAL DETAIL DRAWING SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILLED. THE APPLICABILITY OF THE DETAIL TO ITS LOCATION ON THE PLANS CAN BE DETERMINED BY THE TITLE OF DETAIL. SUCH DETAILS SHALL APPLY WHETHER OR NOT THE SAME KEYWORD IS AT EACH LOCATION. QUESTIONS REGARDING THE APPLICABILITY OF THE DETAIL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
40. PRIOR TO SHOW DRAIN PREPARATION, THE GENERAL CONTRACTOR IS TO INVESTIGATE AND VERIFY ACTUAL FIELD CONDITIONS, EXPOSED OR CONCEALED AND TAKE INTO ACCOUNT ANY POSSIBLE CONSTRUCTION INTERFERENCES AND RELOCATIONS OF, BUT NOT LIMITED TO STRUCTURES,

1. THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE SIXTH EDITION (2017).
2. LOADS USED IN THE ANALYSIS OF THE BULKHEAD WALLS:
 - a. SATURATED SOIL UNIT WEIGHT: ____ LBS./CU. FT.
 - b. SUBMERGED SOIL UNIT WEIGHT: ____ LBS./CU. FT.
 - c. SOIL ACTIVE PRESSURE COEFFICIENT: K_a = ____
 - d. SOIL PASSIVE PRESSURE COEFFICIENT: K_p = ____
 - e. LIVE LOAD SURCHARGE ADJACENT TO WALL: 100 LBS./SQ. FT.
 - f. LIVE LOAD ON CAP OF WALLS : 100 LBS./SQ. FT.
 - g. CONCRETE UNIT WEIGHT : 150 LBS./CU. FT.
3. WIND DESIGN IS BASED ON THE FLORIDA BUILDING CODE (SIXTH EDITION) AND ASCE 7-10 DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
4. WIND DESIGN CRITERIA:
 - A. BASE WIND SPEED: V_{611} = 150 MPH (V_{600} = 116.2 MPH)
 - B. EXPOSURE: D
 - C. RISK CATEGORY: I
 - D. ENCLOSURE CLASSIFICATION: N/A
 - E. VELOCITY PRESSURE: 50.4 PSF
5. ULTIMATE (FACTORED) VERTICAL PILE LOADS:
 - 14" PILES—REPLACEMENT WALL NORTH OF BOAT RAMP: ____ TONS.
 - 18" PILES—PROPOSED WALL SOUTH OF BOAT RAMP: ____ TONS.

- THE CONTRACTOR SHALL SUBMIT FOR THE REVIEW OF THE STRUCTURAL ENGINEER A MIX DESIGN FOR EACH CLASS OF CONCRETE. EACH MIX DESIGN SHALL INCLUDE THE MIX DESIGN NUMBER OR UNIQUE IDENTIFICATION. THE CONTRACTOR SHALL NOT VARY FROM THE MIX DESIGNS NOR ANY CONCRETE OTHER THAN THE APPROVED MIX DESIGNS WITHOUT THE APPROVAL OF THE ENGINEER. MIX DESIGN SUBMITTALS SHALL INCLUDE THE FOLLOWING INFORMATION:
 1. MIX DESIGN NUMBER OR UNIQUE IDENTIFICATION AND INTENDED LOCATION OF PLACEMENT.
 2. CEMENT TYPE, PROPORTION AND NUMBER OF MANUFACTURER.
 3. ALTERNATE CEMENTITIOUS MATERIALS PROPORTION (WHEN USED), LABORATORY ANALYSIS CERTIFICATION, AND NAME AND LOCATION OF SUPPLIER.
 4. FLY ASH AND/OR SLAG PROPORTION (WHEN USED), LABORATORY ANALYSIS CERTIFICATION, AND NAME AND LOCATION OF SUPPLIER.
 5. COARSE AGGREGATE PROPORTION, GRADATION REPORT, NAME AND LOCATION OF SUPPLIER.
 6. FINE AGGREGATE PROPORTION, GRADATION REPORT, NAME AND LOCATION OF SUPPLIER.
 7. MIXING WATER PROPORTION AND SOURCE.
 8. ADMIXTURE DOSAGES, PRODUCT NAME(S) AND MANUFACTURER NAME(S).
 9. DESIGN 28-DAY COMPRESSIVE STRENGTH (1").
 10. DESIGN SLUMP RANGE.
 11. DESIGN AIR-ENTRAINED (FOR CONCRETE REQUIRING ENTRAINED AIR).
 12. STATISTICAL ANALYSIS OF LABORATORY STRENGTH TEST DATA IN ACCORDANCE WITH STANDARD DEVIATION DETERMINATION OUTLINED IN AC 318.
 13. ALL CONCRETE TICKETS SHOULD CLEARLY STATE THE ALLOWABLE JOB SITE WATER THAT MAY BE ADDED WITHOUT INVALIDATING THE MIX. THIS REQUIREMENT SHOULD BE CLEARLY COMMUNICATED TO THE CONCRETE SUPPLIER.

1. CONTRACTOR SHALL BE IN ACCORDANCE WITH THE FOLLOWING PARAMETERS: THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE SERVICES OF A QUALIFIED TESTING LABORATORY APPROVED BY THE OWNER AND THE ENGINEER.
2. CONCRETE MIXES WHICH HAVE WATER ADDED AT THE SITE SHALL BE TESTED AS INDICATED IN THE CONCRETE SPECIFICATIONS.
3. FORWARD COPIES OF TEST RESULTS TO THE ENGINEER, CONCRETE SUPPLIER AND CONTRACTOR WITHIN 24 HOURS AFTER TESTING.
4. AN INDEPENDENT TEST LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:
 - a. ASTM C134 "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE"; MINIMUM SLUMP SHALL BE AS INDICATED IN THE CONCRETE MIX SPECIFICATIONS.
 - b. ASTM C139 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS". A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER QUANTITIES AND TEST AGE AS FOLLOWS:
 1. AT 3 DAYS
 2. AT 7 DAYS
 3. AT 28 DAYS
5. CONTRACTOR TO PROVIDE ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDERS MAY BE DISPOSED.

1. SHOW DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. HOWEVER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.
2. SHOW DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR'S FIELD ENGINEER PRIOR TO SUBMITTAL TO THE ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED. ALLOW TEN BUSINESS DAYS FOR REVIEW TIME OF SHOW DRAWING SUBMITTALS.
3. SHOW DRAWING SUBMITTALS SHALL BE MADE AS ELECTRONIC FILES (PDF FORMAT). THE ENGINEER'S REVIEW STAMP WILL BE PROVIDED TO CONTRACTOR AND SHALL BE ATTACHED TO SUBMITTALS TO BE RETURNED TO SUBMITTAL TO THE ENGINEER.
4. THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOW DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.
5. CHANGES AND ADDITIONS MADE ON THE RE-SUBMITTALS SHALL BE CLEARLY FLAGGED AND NOTED. THE PURPOSE OF THE RE-SUBMITTALS SHALL BE CLEARLY NOTED ON THE LETTER TRANSMITTAL. THE ENGINEER'S REVIEW WILL BE LIMITED TO THOSE ITEMS CAUSING THE RE-SUBMITTAL.
6. SHOW DRAWING SUBMITTALS ARE REQUIRED FOR THE FOLLOWING ITEMS: KING PILES, SHEET PILES (INCLUDING DETAILS FOR LIFTING), THE BACK OF EACH SHEET PILE, SHIELDING AND ANCHORING AND FIXED ROCK DOCK REINFORCING, IN ADDITION, PORTLAND CEMENT SUBMITTAL SHALL BE MADE FOR ALL PRODUCTS IDENTIFIED ON THE PLANS.

1. THE FOLLOWING SYSTEMS AND COMPONENTS AS A MINIMUM REQUIRE FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER. (SEE SEPARATE WRITTEN SPECIFICATIONS FOR FULL DETAILS)
- A. ALL CANWAY COMPONENTS
- B. ALL FLOATING DOCK AND WAVE ATTENUATOR COMPONENTS
2. SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA AND SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCTS/UTILIZED GENERIC PRODUCTS WILL NOT BE ACCEPTED.
3. SHOP DRAWING AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER.
4. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE SEAL, DATE AND SIGNATURE OF THE DELEGATED ENGINEER REGISTERED IN THE STATE OF CALIFORNIA. THE DELEGATED ENGINEER SHALL BE RESPONSIBLE FOR PROVIDING THE APPROPRIATE INFORMATION TO THE CONTRACTOR. SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL INCLUDE THE SEAL AND SIGNATURE OF THE DELEGATED ENGINEER. AN INDICATION HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. THE STRUCTURAL ENGINEER WILL RETURN THE SEALED SUBMITTALS TO THE CONTRACTOR.
5. DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL, SHOP DRAWINGS OR CATALOG INFORMATION ON STANDARD PRODUCTS) DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
6. STRUCTURAL INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.
7. REVIEW BY THE ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:
 - A. THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.
 - B. THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.
 - C. THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA (NO DETAILED CHECK FOR CALCULATIONS WILL BE MADE).
 - D. THAT THE NONCONFORMANCE IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS (NO DETAILED CHECK FOR CALCULATIONS WILL BE MADE).
8. SUBMITTALS NOT MEETING THE ABOVE CRITERIA WILL NOT BE REVIEWED.

1. DETAILED WRITTEN SPECIFICATIONS FOR THIS PROJECT ARE INCLUDED AS A SEPARATE DOCUMENT.

Alan Gerwig & Associates, Inc.

12708 W. Forest Hill Blvd., Suite 201
Wellington, FL 33414
CA #7069

Ph.: (561) 792-9000
Fax: (561) 792-9901

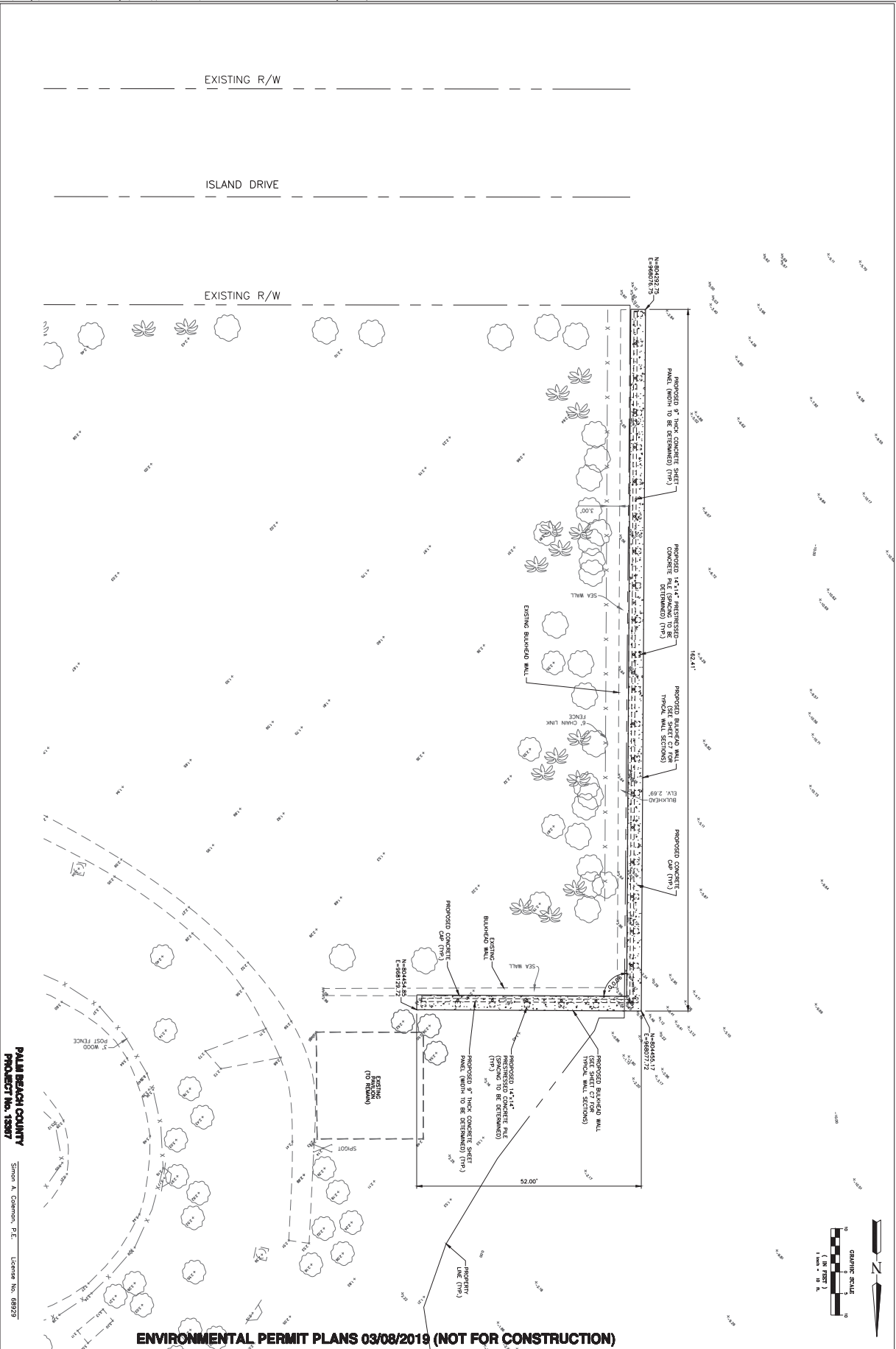
Civil and Structural Engineers

| | |
|--|-----------------------------|
| <p>OCEAN INLET PARK MARINA REPLACEMENT</p> <p>PALM BEACH COUNTY, FLORIDA</p> | <p>GENERAL NOTES</p> |
|--|-----------------------------|

GENERAL NOTES

| R E V I S I O N S | | | | | | | |
|-------------------|------------------|-------|-------|--|--|--|--|
| No. | Date | Dr. | Ch. | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Appr. | SAC | Scale | NOTED | | | | |
| Dr. | MRC | Chw. | ALG | | | | |
| Date | 12-13-18 | | | | | | |
| Proj. No. | 18-020 | | | | | | |
| Sheet | C2 of C16 | | | | | | |

099 A Alan Gerwig & Assoc., Civil & Structural Engineers
This document has been prepared specifically for the project. This document is NOT suitable for use in other projects or in other locations without the approval and participation of ALAN GERWIG & ASSOC., CIVIL & STRUCTURAL ENGINEERS, CA. Proper reproduction and/or reuse is prohibited.



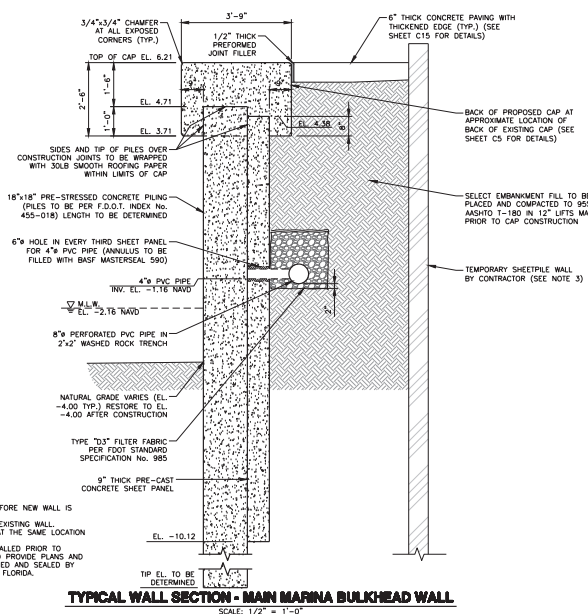
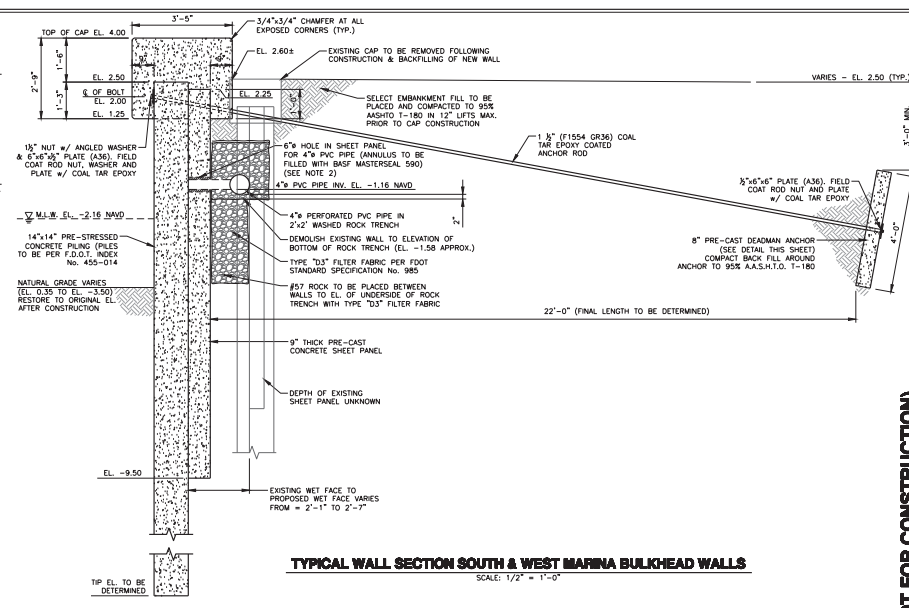
PALM BEACH COUNTY
PROJECT No. 1587
Simon A. Cannon, P.E. License No. 05923

ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

| REVISIONS | | | |
|-----------|----------|-------------------|----|
| No. | DATE | DESCRIPTION | BY |
| 1 | 12-13-18 | ISSUED FOR PERMIT | MD |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA
SOUTHWEST BULKHEAD WALL PLAN

Alan Gerwig & Associates, Inc.
12788 W. Forest Hill Blvd., Suite 201
Wellington, FL 33414
CA 87969
Ph: (561) 792-9000
Fax: (561) 792-9901
Civil and Structural Engineers



NOTES:

1. STEEL REINFORCING IN PROPOSED CONCRETE WALL COMPONENTS NOT SHOWN ON THIS SHEET
2. HOLE NOT REQUIRED IN SHEET PANEL WHERE ELEVATION OF HOLE IS BELOW EXISTING GRADE.

PALM BEACH COUNTY
PROJECT No. 13367

Simon A. Coleman, P.E. License No. 68929

ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

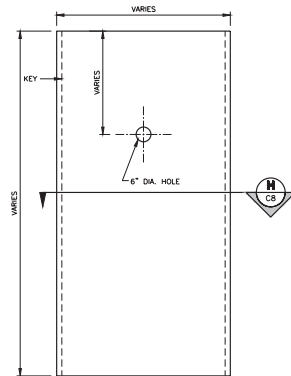
OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA
BULKHEAD WALL SECTIONS

Alan Gerwig & Associates, Inc.

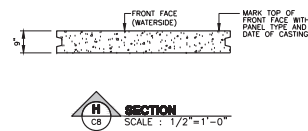
12798 W. Forest Hill Blvd., Suite 201
Wellington, FL 33414
•A #7969
Ph.: (561) 792-9000
Fax.: (561) 792-9901
Civil and Structural Engineers

Civil and Structural Engineers

[illegible]

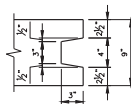


TYPICAL PRECAST SHEET PANEL ELEVATION
SCALE : 1/2"=1'-0"

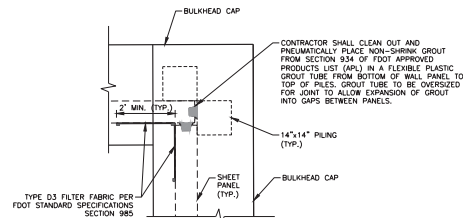


NOTES:

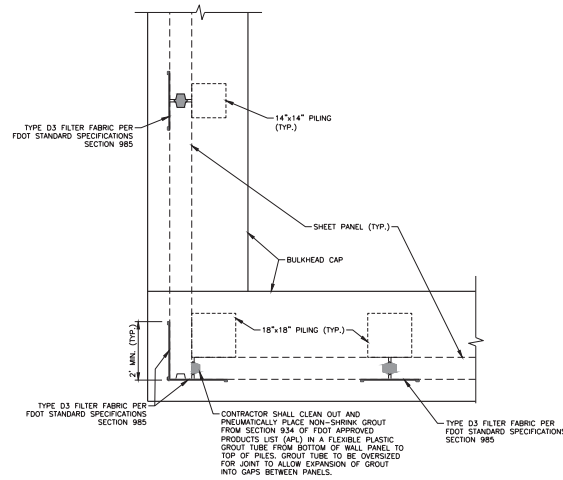
1. PICK UP BARS TO BE PLACED BY CONTRACTOR AS NEEDED.
2. SHEET PANELS TO BE CAST ON A STABLE LEVEL SURFACE.
3. THE FRONT FACE OF EACH SHEET PANEL SHALL BE MARKED WITH THE TYPE AND DATE OF CASTING AT TOP CORNER.
4. STEEL REINFORCING NOT SHOWN.



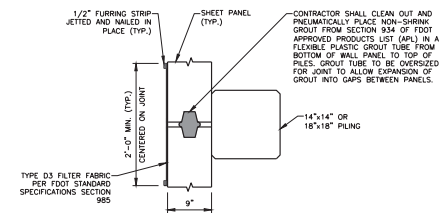
KEYWAY DETAIL
SCALE : N.T.S.



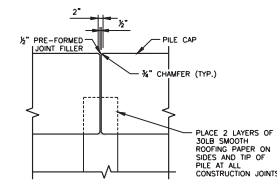
TYPICAL JOINT DETAIL AT BULKHEAD WALL CORNERS
SCALE : 1/2"=1'-0"



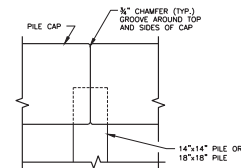
JOINT DETAIL AT SOUTHEAST CORNER OF MARINA
SCALE : 1/2"=1'-0"



TYPICAL JOINT BETWEEN SHEET PANELS
SCALE : 1/2"=1'-0"



TYPICAL CONSTRUCTION JOINT DETAIL
SCALE : 1/2"=1'-0"



TYPICAL CONTROL JOINT DETAIL
SCALE : 1/2"=1'-0"

PALM BEACH COUNTY
PROJECT No. 13357

Simon A. Coleman, P.E. License No. 68929

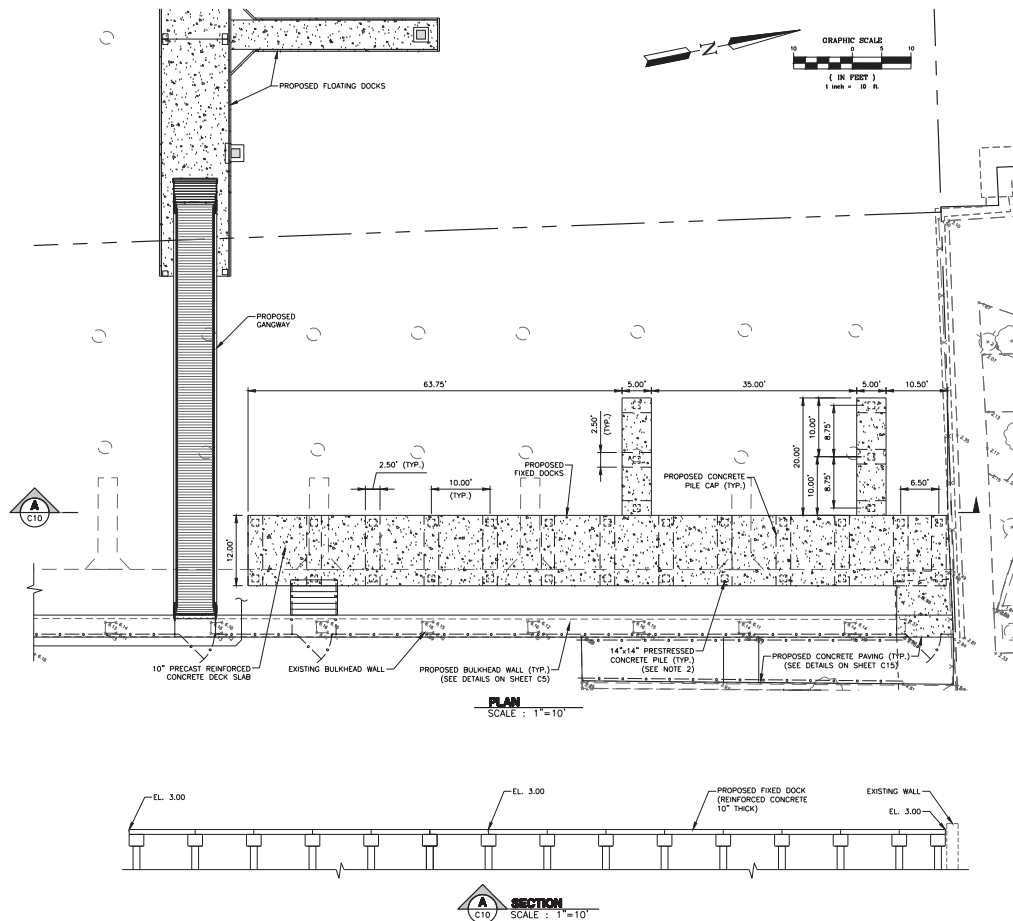


Alan Gerwig & Associates, Inc.

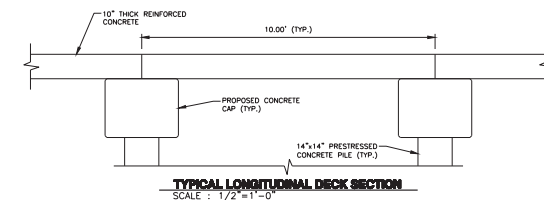
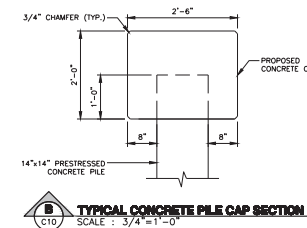
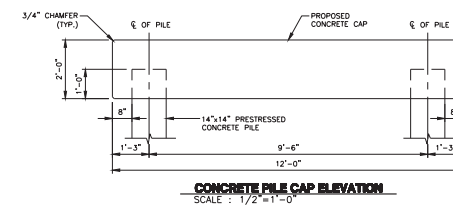
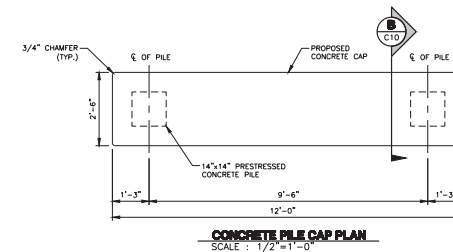
12798 W. Forest Hill Blvd., Suite 201
Wellington, FL 33414
CA #7969

| |
|-------------------------------------|
| OCEAN INLET PARK MARINA REPLACEMENT |
| PALM BEACH COUNTY, FLORIDA |
| BULKHEAD WALL DETAILS |

[illegible]



NOTES:
1. STEEL REINFORCING NOT SHOWN IN THESE VIEWS.
2. PILE TIP ELEVATIONS TO BE DETERMINED.



PALM BEACH COUNTY
PROJECT No. 13367

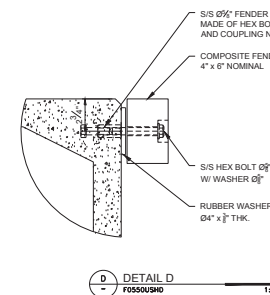
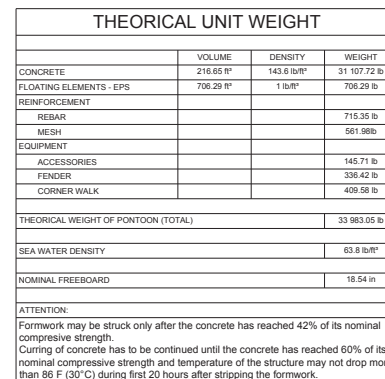
Simon A. Coleman, P.E. License No. 68929

ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

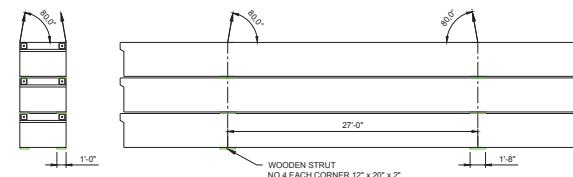
OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA

FIXED DOCK PLAN, DETAILS AND SECTIONS

[illegible]



MAXIMUM 3 HIGH



PALM BEACH COUNTY
PROJECT No. 13367

Simon A. Coleman, P.E. License No. 68929

ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

**OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA**

FLOATING FINGER DOCK DETAILS

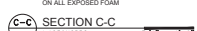
| REVISIONS | | | |
|-----------|------|-----|---|
| No. | Date | Dr. | C |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---------------|-----|-------|-------|
| Appr. | SAC | Scale | NOTED |
| Dr. | MRO | Chn. | ALG |
| Date 12-13-18 | | | |

Proj.
No. **18-020**

Sheet **C12** of **C16**

Sheet C12 of C16



1. THE DETAILS ON THIS SHEET ARE REPRESENTATIVE TYPICAL DETAILS AND ARE FOR INFORMATIONAL PURPOSES ONLY. FINAL DETAILS WILL DEPEND ON THE SELECTED DOCK SYSTEM.
2. SEE DOCK SPECIFICATIONS FOR FURTHER DETAILS.

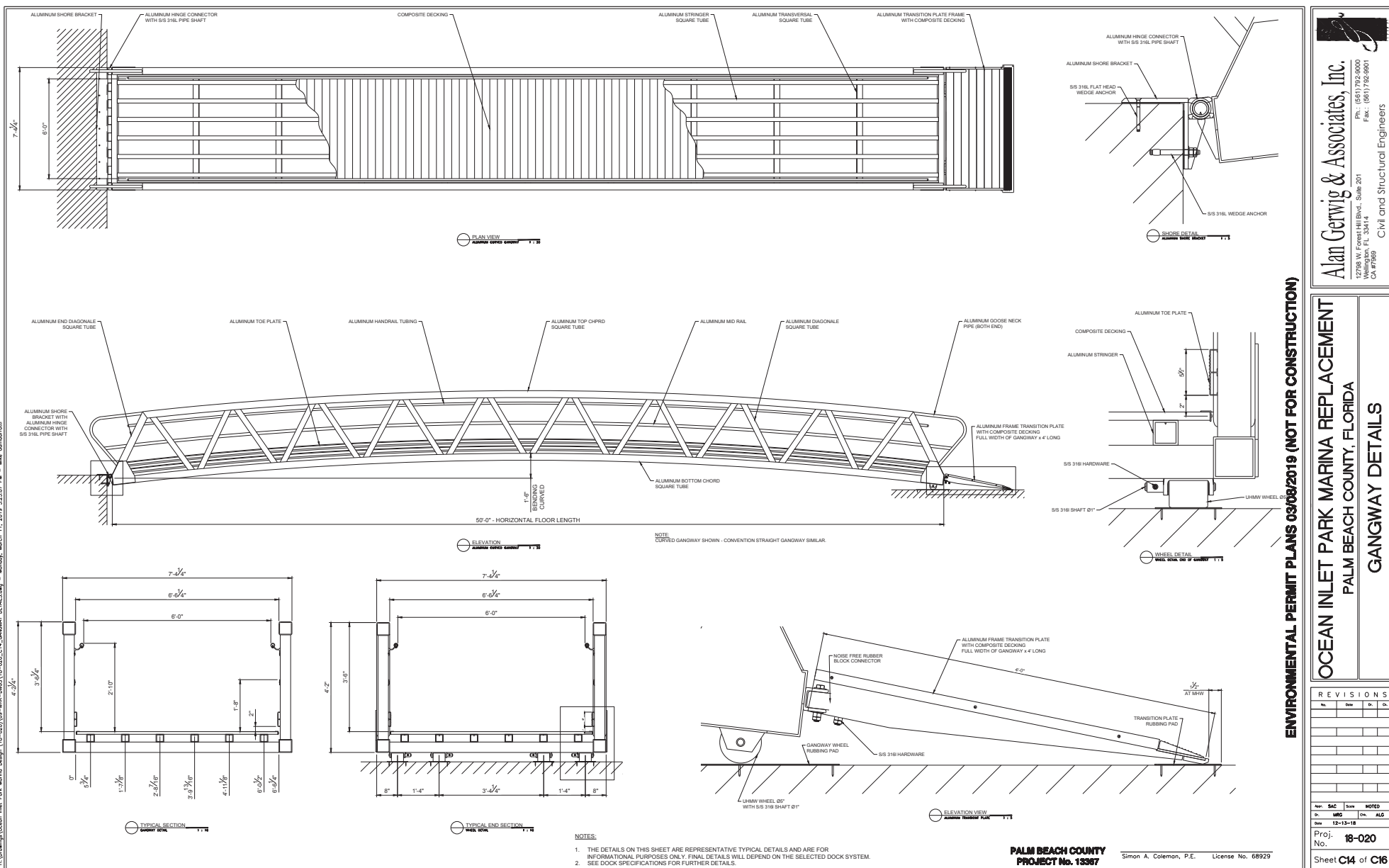
PALM BEACH COUNTY
PROJECT No. 13367

ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA

FLOATING WAVE ATTENUATOR DETAILS

[illegible]



ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA

GANGWAY DETAILS

| REVISIONS | | | |
|-----------|------|-----|---|
| No. | Date | Dr. | C |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

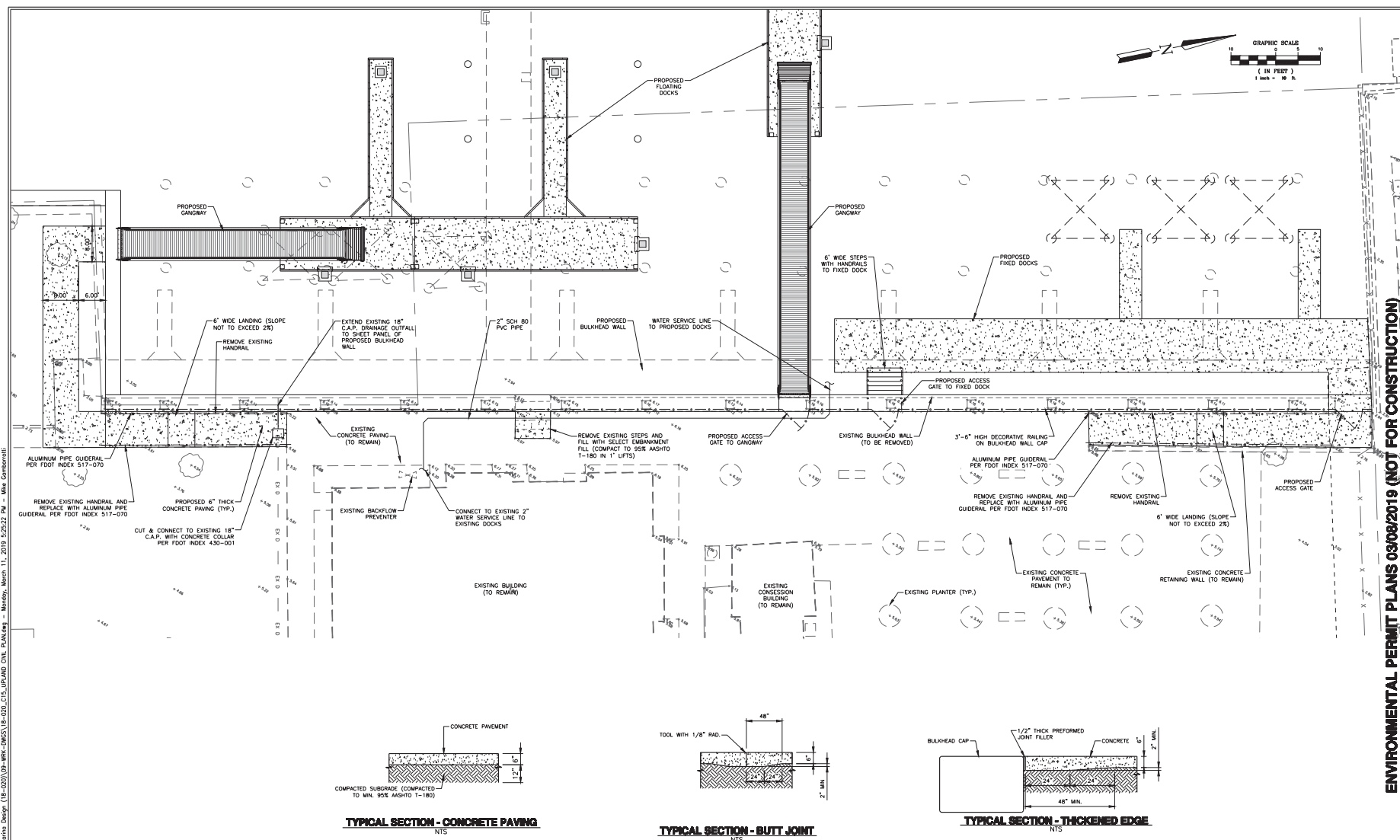
| | | | |
|-------|-----|-------|-------|
| Appr. | SAC | Score | NOTED |
| Dr. | MRO | Chn. | ALC |

Date 12-13-18

Proj.
No. **18-020**

Sheet **C14** of **C16**

Sheet C14 of C16



© 2019 Alan Gerwig & Assoc. Civil & Structural Engineers
This document has been prepared specifically for this Project. This document is NOT suitable for use on other projects or in other locations without the approval and participation of ALAN GERWIG & ASSOC., CIVIL & STRUCTURAL ENGINEERS CA #7969. Reproduction and/or reuse is prohibited.

Simon A. Coleman, P.E. License No. 68929

ENVIRONMENTAL PERMIT PLANS 03/08/2019 (NOT FOR CONSTRUCTION)

**OCEAN INLET PARK MARINA REPLACEMENT
PALM BEACH COUNTY, FLORIDA**

UPLAND CIVIL PLAN

Alan Gerwig & Associates, Inc.

12708 W. Forest Hill Blvd., Suite 201
Wellington, FL 33414
CA #7969

Ph.: (561) 792-9000
Fax.: (561) 792-9901

Civil and Structural Engineers

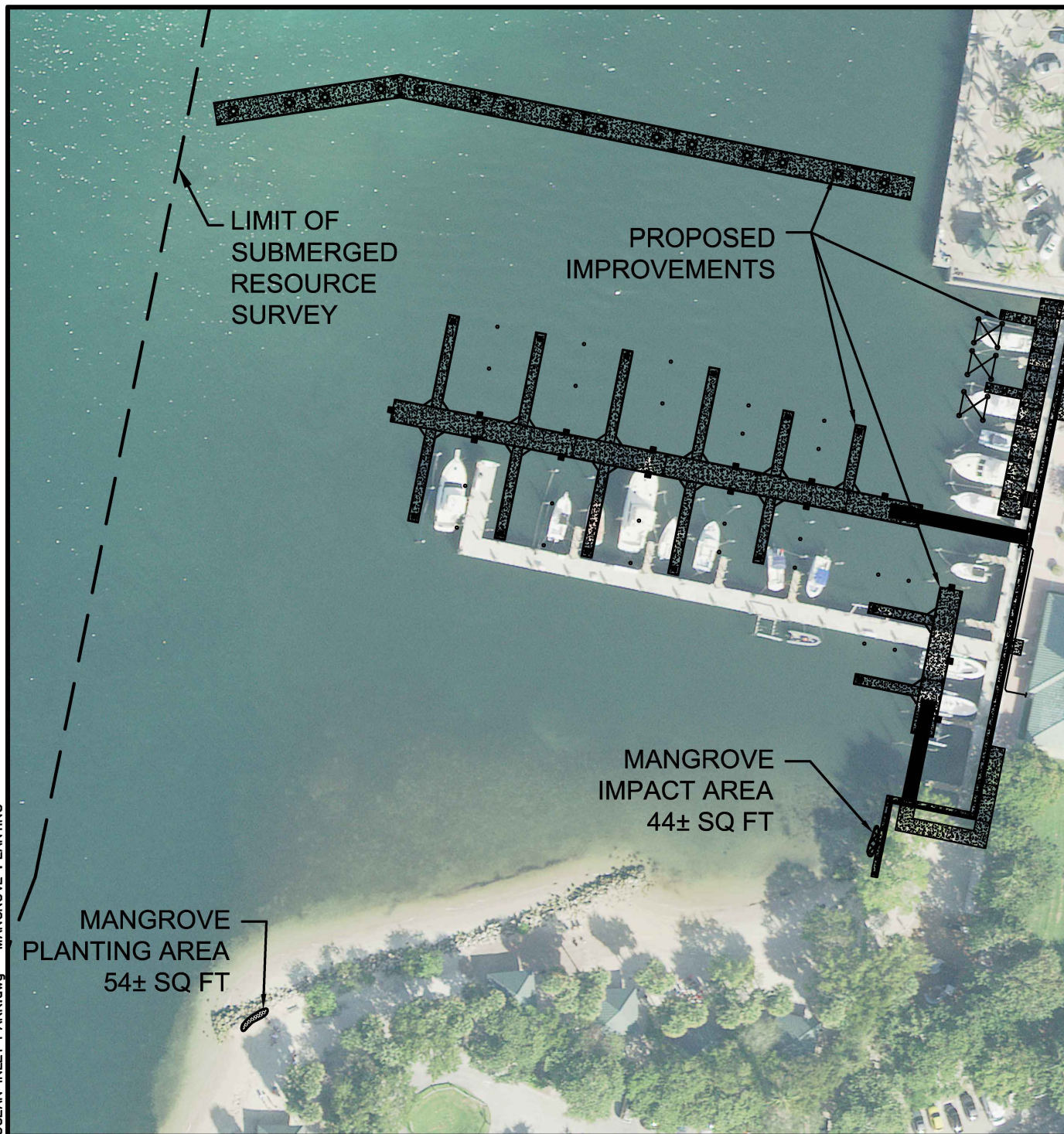
Civil and Structural Engineers

| REVISIONS | | | | | |
|-----------|------|-----|---|--|--|
| No. | Date | Dr. | C | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

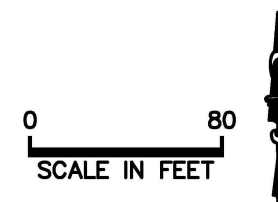
| | | | |
|---------------|-----|-------|-------|
| Appr. | SAC | Scale | NOTED |
| Dr. | MRO | Chn. | ALG |
| Date 12-13-18 | | | |

Proj.
No. **18-020**

Sheet **C15** of **C16**



MANGROVE PLANTING
 (6) BLACK MANGROVE
 (*Avicennia germinans*)
 1 GAL. SIZE, PLANTED 3' O.C.



PALM BEACH COUNTY AERIAL DATED 2017

OCEAN INLET PARK MANGROVE IMPACT & PLANTING AREA



EW CONSULTANTS, INC.
 2581 METROCENTRE BLVD., SUITE 1
 WEST PALM BEACH, FL 33407
 561-291-7950 PHONE 561-530-4908 FAX
 WWW.EWCONSULTANTS.COM

JUNE 2019
FIGURE
5