



DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

TECHNICAL SPECIFICATIONS ISSUED FOR BID

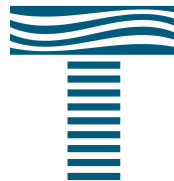
JPA CONTRACT NO. C-1806
JPA PROJECT NO. D2022-01

PREPARED FOR

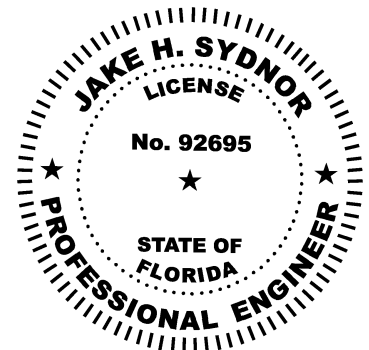
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SECTION 01 01 10

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SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Description

This project generally entails the removal of existing on-site debris such as concrete pilings, slabs, and beams; the excavation, dewatering, and placement of fill material; and the installation of geotextile, bedding stone, and armor stone. The resulting stone structure will serve to provide shoreline stabilization and protection along the Dames Point Marine Terminal Shoreline.

1. The major categories of work include, but are not limited to the following:
 - a. Demolition, removal, and disposal of existing on-site debris, including but not limited to concrete pilings, slabs, beams, rubble, riprap, poly-foam, remnants of timber and/or steel debris, etc.
 - b. Excavation, stockpiling, dewatering, placement, and grading of on-site cut and fill material.
 - c. Installation of geotextile, bedding stone, and armor stone.
 - d. Grassing
 - e. Removal of existing security fencing and installation of temporary and permanent security fencing.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

--End of Section--

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SECTION 01 29 00

MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes requirements to be used for the basis of measurement and payment. The Contractor shall receive and accept the compensation provided in the Bid Form as full payment for furnishing all materials, labor, tools and equipment for performing all operations necessary to complete the Work under the Contract. Payment for all loss or damages arising from the nature of the Work, or from the action of the elements or any unforeseen difficulties encountered during the Work until final acceptance by the Owner shall also be included in the total compensation as provided in the accepted Bid Form.
- B. Bid prices for the various work items are to establish a total price for completing the project in its entirety. The Contractor shall include in the Bid, any item for which a separate pay item has not been established in the Bid Form, to reflect the total price for completing the project in its entirety, as depicted on the Construction Drawings and specified herein. Unless there is a specific line item for administrative costs, such as Project Management, Quality Control and Safety, etc., allocate such costs proportionally across all line items. The Contractor must include all costs for this project to complete all work, in total, designated in the Construction Drawings, Specifications, and Bid Form.

1.2 PRECONSTRUCTION SUBMITTALS

- A. Submittals shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES and SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION. Bring the following administrative submittal items to the Preconstruction Meeting:
 - B. Schedule of Values
 - 1. The Contractor will submit a printed schedule on Contractor's standard form in electronic printout for review and approval prior to the first Payment Application by the Engineer. List payment items sequentially in the same order as they appear in the Bid Form.
 - 2. Lump sum items are to have adequate breakdown of components to facilitate evaluating completeness for payment. Breakdown components shall appear directly under the payment item heading to which they apply.
 - 3. Schedule of values breakdown must include clear summary of expected material purchases subject to Tax Saving Purchase Order requirements required in the agreement.
 - 4. The Contractor will revise the schedule to list approved Change Orders, with each Application for Payment. The Contractor will submit revised Schedule of Values in accordance with this Specification.
- C. Construction Schedule:
 - 1. Prepare draft Construction Schedule for Preconstruction Meeting. Within 10 days after effective date of contract, Contractor will prepare and submit to the Engineer for approval a construction schedule in the form of a Gantt chart. The Contractor shall indicate on the chart the bid items contained in the Contract; the activities required to accomplish each bid

item; the sequences, dependencies, and time allocated for each activity; and the total cumulative time for the project.

1.3 CONSTRUCTION SUBMITTALS

- A. Contractor will submit submittals in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES and SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION.
- B. Revised Construction Schedule
 - 1. Submit copies of the updated construction schedule to the Engineer for each Payment Application. Changes that have occurred since the last update shall be clearly marked.

1.4 MEASUREMENT

- A. Measurement for Payment for this Project is based upon completion of the Work in accordance with Construction Drawings and Specifications for each of the items. Field measurements will determine the percent complete of work components. For unit quantity items, measurements will be made using linear, area, volumetric, or weight units; or by units quantity counts, as listed on the Bid Form. For lump sum items, the Engineer's shall have sole discretion regarding percentage of work completion.
- B. The Contractor will take all measurements and compute quantities. The Engineer will verify measurements and quantities as appropriate.
- C. The Contractor will assist the Owner by providing necessary equipment, workers, and survey personnel as required to evaluate completion of work.
- D. Measurement Devices:
 - 1. Weigh Scales: Inspected, tested, and certified by the applicable State Weights and Measures department within the past year.
 - 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
 - 3. Metering Devices: Inspected, tested, and certified by the applicable State department within the past year.
- E. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord, in feet and hundredths of a foot or as calculated from digital survey.
- F. Measurement by Area: Measured by square dimension using mean length and width or radius, in feet and hundredths of a foot or as calculated from digital survey.
- G. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness, in feet and hundredths of a foot or as calculated from digital survey.
- H. Measurement by Weight: Measured in weight units noted on the bid form and measured using certified scales.
- I. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.5 CONTRACT PRICE

- A. Unless clearly indicated on the Contract Documents, all work indicated on the Construction Drawings and specified in the Bid Documents and Contract shall be included in the Contract Sum indicated on the Bid Form.
- B. Prices stated in the Bid Form shall include all costs and expenses for taxes, labor, equipment, materials, commissions, transportation charges and expenses, patent fees and royalties, labor for handling materials during inspection, together with any and all other costs and expenses for performing and completing the Work as depicted on the Construction Drawings and specified herein. The basis of payment for an item in the amount shown in the Bid Form shall be in accordance with the description of that item provided in this Section.
- C. The Contractor's attention is again called to the fact that the quotations for the various items of work are intended to establish a total price for completing the Work in its entirety. Should the Contractor feel that the cost for any item of work has not been established by the Bid Form or Payment Items, the Contractor shall include the cost for that work in another applicable bid item, in order that the Proposal for the project reflects the total price to be paid by the Owner for completing the Work in its entirety.
- D. Changes in the Contract Price and Contract Time require prior authorization in writing from the Owner and the Engineer, in the form of a Change Order. The Contractor is responsible for verification of all bid quantities and to report to the Engineer any discrepancies found prior to ordering materials and/or equipment for construction. Refer to the Contract Documents.

1.6 BASIS FOR PAYMENTS

- A. The various major items of Work will be paid for either by 1) the quantity of the actual Work complete by the Contractor and accepted by the Engineer multiplied by the unit price or 2) the lump sum amount indicated for each Bid Form Item multiplied by the estimated percentage of work completed. The Work shall include all miscellaneous and ancillary items necessary to construct a complete and functional Project.

1.7 SCHEDULE OF VALUES

- A. The below descriptions generally outline the scope of work required for those elements of the Work to be paid for under each item listed on the Bid Form. The Contractor shall submit a Schedule of Values in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

1.8 PAYMENT ITEMS

- A. Basis of Payment for Unit Price Items
 - 1. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Engineer determine payment.
 - 2. If the actual Work requires more or fewer quantities than those quantities indicated, the Contractor will provide the required quantities at the unit prices contracted.
 - 3. If the actual Work requires a fifty percent (50%) or greater change in quantity than those quantities indicated, the Owner or Contractor may claim for a Contract Price adjustment for that item.

B. Basis of Payment for Lump Sum Items

1. Payment for lump sum items for this Project will be made at the lump sum price named in the Contract multiplied by the percentage of work completed as approved by the Engineer. The contract price shall constitute full compensation for each item, including all required labor, products, tools, equipment, plant, transportation, services and incidentals, erection, application or installation of an item of the Work, overhead and profit as required to complete the item as indicated in the Construction Drawings and Specifications. The lump sum price will remain unchanged regardless of actual quantities placed.

C. Progress Payments

1. One progress payment will be made upon completion of mobilization to the site as further described below.
2. Subsequent progress payments will be made as outlined in the Contract Documents.
3. No payment, partial or complete, will be made for defective or rejected Work.
4. No separate payment will be made for additional labor and materials required for accomplishing the Project in its entirety. All labor, materials, and incidental costs shall be included for payment for the items listed in the Bid Form.

1.9 DESCRIPTION OF WORK ITEMS AND SCHEDULE OF VALUES

- A. The following Work items are described in order to assist the Contractor in the preparation of the Bid and to assist the Engineer in the evaluation of Bids and evaluation of progress payments during construction. The Contractor shall submit a Schedule of Values containing the work components of each Bid Item of the Bid for approval prior to the first Payment Application for Payment for work in progress.
- B. No separate payment will be made for any testing and/or surveying performed to complete the Work unless specifically listed on the Bid Form; costs for testing and/or surveying (as applicable), are included in the cost to complete the work item.
- C. Submittals are considered part of the Contractor's administrative and overhead costs. The Contractor will not be compensated separately for submittals required by these Specifications or those listed on the Construction Drawings.
- D. Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bid Form.
- E. For the purpose of the work items listed below, complete installation will mean the inclusion of demolition work, site restoration to existing or better conditions, and testing, all included in the cost to complete the work item (as applicable).
- F. All work shall be completed in accordance with all applicable permits and Owner requirements.
- G. In general, partial payments for lump sum bid items will be paid based on the percentage of work complete as estimated by the Contractor and approved by the Engineer and will include all cost associated with and incidental to the Work.
- H. Payment for unit price items will be paid based on the measured quantity of work complete as approved by the Engineer and will include all cost associated with and incidental to the work. Where it is not practical to measure or survey quantities, the quantity shall be estimated by the

Contractor in a manner approved by the Engineer. All submitted partial payment quantities shall be verified and approved by the Engineer.

- I. All quantities determined by the Contractor or Contractor's subcontractors including surveyors are subject to review and approval by the Engineer. The Contractor will submit information on how partial payment or final payment quantities are determined. This information shall be detailed sufficiently that the Engineer can, if need be, check and verify the quantity estimate in detail.
- J. Shown below is a list of work items included on the bid form:
 1. Lump Sum Items
 - i. Mobilization and Demobilization – Payment for this item will be made as a lump sum (LS) for costs associated with or incidental to mobilization, demobilization, and establishment of initial project management and coordination. Sixty percent (60%) of the lump sum payment will be payable to the Contractor upon completion of the mobilization at the work site with the remaining forty percent (40%) payable upon the completion of demobilization.
 - ii. General Requirements – Payment for all general and administrative requirements will be on a lump sum (LS) basis for full compensation for all general and administrative cost including but not limited to project management, general administrative costs, submittals, surveys, material testing etc. Payment will occur in equal sums for each pay application calculated based on the proposed contract duration.
 - iii. Environmental Protection, Erosion Control, and Dust Control – Payment for this item will be as a lump sum (LS) for full compensation for furnishing and installing all materials, labor, and equipment required for compliance with all permits and Specifications related to environmental protection, erosion control, and dust control. Forty percent (40%) of the lump sum payment will be payable to the Contractor upon installation of the erosion/sedimentation/turbidity control measures at the work site with the remaining sixty percent (60%) payable in equal sums for each remaining payment application.
 - iv. Demolition – Payment will be as a lump sum (LS) for all necessary demolition, disposal, and associated restoration as required by Drawings and Specifications including but not limited to removal of existing debris, concrete pilings, slabs, riprap, etc.
 - v. Earthwork – Payment for this item will be as a lump sum (LS) and includes all necessary clearing and grubbing as well as excavation, stockpile, transportation, dewatering, handling, placement, compaction, and grading of cut and fill materials in accordance with the Drawings and Specifications.
 - vi. Grassing - Payment will be made as a lump sum (LS) for the costs associated with and incidental to the grassing. Payment will be full compensation for all labor, material, and other work required to establish the grass. The Owner will pay seventy percent (70%) of the total compensation due for grassing upon approval of the completed work after the preliminary inspection. The remaining thirty percent (30%) will be paid at the conclusion of the Grassing Establishment Period described in the Specifications.
 - vii. Temporary Security Fencing – Payment will be made as a lump sum (LS) for all costs associated with installation of temporary security fencing along the project access route and contractor staging area as show on the Drawings. The Owner will pay eighty percent (80%) of the total compensation due for temporary fencing upon approved installation of the fence. The remaining twenty percent (20%) will be paid upon removal of the fence inclusive of necessary site restoration required on the Drawings and Specifications.

- viii. Permanent Security Fencing - Payment will be made as a lump sum (LS) for all costs associated with removal and subsequent installation of new permanent security fencing as shown on the Drawings. No payment will be made at removal; payment for the full lump sum will occur with approved installation of the new fence in accordance with the Drawings and Specifications.

2. Unit Price Items

- i. Armor Stone – Payment will be made on a unit price basis for each ton of armor stone placed in accordance with the Drawings and Specifications. Tonnage for each pay application will be based on the estimated tonnage determined in accordance with “Progress Profile Surveys” as outlined in SECTION 35 31 17 STONE REVETMENT, which will be reconciled for final payment based on submitted weight tickets for final verification of placed quantities.
- ii. Bedding Stone – Payment will be made on a unit price basis for each ton of bedding stone placed in accordance with the Drawings and Specifications. Payment for this item includes installation of geotextile fabric in accordance with the Drawings and Specifications. Tonnage for each pay application will be based on the estimated tonnage determined in accordance with “Progress Profile Surveys” as outlined in SECTION 35 31 17 STONE REVETMENT, which will be reconciled for final payment based on submitted weight tickets for final verification of placed quantities.
- iii. Import Fill Material (If required) – This item represents an allowance for work that may or may not become necessary based on site conditions. Import of earthwork fill meeting requirements of the Drawings and Specifications (if required) will be paid at a unit rate based on quantity (CY) of fill trucked to the site for application in the construction. Quantities will be estimated and verified based on truck tickets noting the volume of material delivered to the site.
- iv. Off-site Disposal of Cut Material – This item represents an allowance for work that may or may not become necessary based on site conditions. Off-site disposal of earthwork materials (if required) will be paid at a unit rate based on quantity (CY) of fill trucked from the site and properly disposed of in accordance with the Drawings and Specifications. Quantities will be estimated and verified based on truck tickets noting the volume of removed from the site.

1.10 DEFECTIVE WORK

- A. The Contractor shall replace the Work, or portions of the Work, not conforming to specified requirements as directed by the Engineer.
- B. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Engineer will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit or lump sum price for the item will be adjusted to a new price. The adjustment will be performed at the sole discretion of the Engineer, whose determination will be final.
 - 2. The defective Work will be partially repaired to the instructions of the Engineer, and the unit or lump sum price will be adjusted to a new price at the sole discretion of the Engineer, whose determination will be final.
 - 3. The individual Specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.

4. The authority of the Engineer to assess the defect and identify payment adjustment is final.
- C. Payment will not be made for any of the following:
1. Products wasted or disposed of in a manner that is not acceptable.
 2. Products determined as unacceptable before or after placement.
 3. Products damaged in transit, during handling, or due to improper storage.
 4. Products not completely unloaded from the transporting vehicle.
 5. Products placed beyond the lines and levels of the required Work.
 6. Products remaining on hand after completion of the Work.
 7. Removing, demolishing, and disposing of rejected Work.
 8. Loading, hauling, and disposing of rejected Products.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 PAYMENT PROCEDURES

- A. Requesting Progress Payment
1. Provide hard copies of supporting invoices and documentation and quantity measurements to support all requested earnings. Ensure that specific line-item and sum of proposed payment activities do not exceed contract award funding amounts.
- B. Options and Modification
1. When additional work is added by modification, existing funding amounts must be updated, or new line items for modification will be created. If Contract has option line item not yet awarded, option line item will appear as zero dollars until option is awarded by modification. No payment may be requested for Options or Modification until contract modification has been funded and signed.

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SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. The Contractor shall manage the project and coordinate all activities of own employees, subcontractors, suppliers and off-site fabricators. The Contractor shall use computers, email, and internet resources for administrative work and notify Engineer of important meetings, schedule events, and activities. The Contractor shall furnish labor, materials, and equipment required to plan and execute project management functions.
- B. The Contractor shall coordinate activities and manage resources to construct the project conforming to the contract, on time, and within budget.

1.2 SUBMITTALS

The following submittals shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES. Bring the following administrative submittal items to Preconstruction Meeting:

- A. List of Subcontractors
 - 1. Submit a list of proposed subcontractors with company name, person to contact, street address, mail address, email address, phone number, type of specialty and estimated subcontract value.
- B. Signature of Authority
 - 1. Furnish a power of attorney or a notarized letter of authority from Contractor identifying local representatives authorized to sign contract documents.

1.3 PROJECT COORDINATION

- A. Coordinate scheduling, submittals, and Work to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Coordinate completion and cleanup of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's partial occupancy.
- C. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents while minimizing disruption of Owner's activities.
- D. Work by Others
 - 1. During construction period, others may access the site to manage cargo, or perform construction or maintenance work within construction limits. The Contractor shall coordinate work by others with Engineer and Owner and schedule activities to avoid conflicts with other Owner-require work at no additional cost.

1.4 PROJECT MEETINGS

- A. The Engineer and Owner require the following types of project meetings, as described below:
1. Preconstruction Meeting
 2. Construction Progress Meetings
- B. Preconstruction Meeting
1. The Engineer will conduct a Preconstruction Meeting for this project. The Preconstruction Meeting will be after Notice of Award (NOA) but prior to Notice to Proceed (NTP). (Refer to subparagraph "Preconstruction Meeting Submittals" below.) The Engineer will notify Contractor of time, place, and agenda. Contractor shall notify key subcontractors and suppliers to attend. The Engineer will discuss contract "ground rules" and general issues including:
 - a. Lines of Engineer authority
 - b. Lines of Contractor authority
 - c. Contract Administration
 - d. Progress Payment
 - e. Correspondence Procedures
 - f. Project Schedule
 - g. Submittal Register
 - h. General Site Safety
 2. Preconstruction Meeting Attendees
 - a. Owner Engineer
 - b. Owner Representatives
 - c. Contractor Representatives
 3. Preconstruction Meeting Minutes
 4. The Contractor will take detailed minutes of Preconstruction Meeting. Copies of typed minutes will be provided to the Engineer to review within three working days after the meeting.
 5. Preconstruction Meeting Submittals
 - a. The timing of submission of submittals and completion of the Preconstruction Meeting is intended to allow the Contractor, Engineer, and Owner adequate time to prepare for commencement of work. However, should the Contractor fail to submit required items within the times stated, Owner may issue NTP prior to receipt of submittals and prior to the Preconstruction Meeting. If the NTP is issued prior to the Contractor's compliance with submittal requirements and/or prior to the Preconstruction Meeting, the Contractor will not be permitted to commence work until submittal requirements have been satisfied. Any delays attributable to the Contractor's failure to comply with these pre-work requirements shall be at the Contractor's expense and may be cause for remedial action by the Owner.
 6. Contractor will submit the following additional Division 01 Submittals either prior to or at Preconstruction Meeting:
 - a. Contractor Safety Plan – Submit Contractor's safety plan if and as required by Owner's Contract Agreement.
 - b. Construction Schedule - See SECTION 01 29 00 MEASUREMENT AND PAYMENT

- c. List of Subcontractors - See SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION
 - d. Signature of Authority – See SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION
 - e. Submittal Register - See SECTION 01 33 00 SUBMITTAL PROCEDURES
 - f. Environmental Protection Plan – See SECTION 01 35 43 ENVIRONMENTAL PROTECTION
 - g. Contractor Quality Control Plan - See SECTION 01 40 00 CONTRACTOR QUALITY CONTROL (must be submitted before Preconstruction Meeting)
7. Divisions 02 through 34 Submittals
- a. In addition to the above, to the preconstruction meeting, bring submittal items for materials, workmanship, plans, or events required early in project schedule that are ready for transmittal to Engineer. Prepare transmittal of submittal items in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.
8. Notice To Proceed (NTP)
- a. NTP will be issued according to the Contract Documents. If the Contractor has failed to submit specified plans, including, but not limited to, Safety Plan, Environmental Protection Plan, and Quality Control Plan or has not yet received the Engineer's conditional approval to work under an interim plan, the Contractor shall not proceed with the work and shall consider the work to be suspended in accordance with the contract. While the Contractor is working under a conditionally accepted interim plan, funds may be retained from progress payments in accordance with the contract until the Contractor submits an acceptable plan. If the Contractor does not submit an acceptable plan within a reasonable time, as determined by the Engineer, the Engineer may order the Contractor to suspend work. Any suspension order issued for the Contractor's failure to submit an acceptable plan will not constitute unreasonable delay under the contract, and the Contractor will not be entitled to an equitable adjustment of either performance period or contract price.

C. Construction Progress Meetings

1. Construction progress meetings will occur on-site or another location as directed by Owner. The Engineer will schedule the day of the week and time of the meetings. Meetings will generally occur once every two weeks. As project activities increase ("ramp up"), more frequent meetings may become necessary. The Engineer will notify the Contractor when and if construction progress meetings will convene more frequently. The Contractor will attend additional meetings as required, or when requested by Engineer.
2. The Contractor will preside over construction progress meetings and will notify any persons who need to be present to discuss agenda issues. Engineer may direct attendance by key Contractor suppliers, or fabricators as needed. A sample meeting agenda is provided in paragraph "GENERAL MEETING REQUIREMENTS" below.
3. The Contractor will take detailed minutes of each Construction Project Meeting. Copies of typed minutes will be provided to the Engineer to review within three working days of each meeting.
4. Progress Meeting Participants typically include:
 - a. Owner's Engineer
 - b. Owner's Representatives
 - c. Contractor's Site Superintendent
 - d. Contractor's Quality Control Manager

- e. Contractor's Safety Coordinator
- f. Subcontractors, as appropriate to the agenda
- g. Suppliers, as appropriate to the agenda
- h. Others as appropriate to the agenda

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 GENERAL MEETING REQUIREMENTS

A. Contractor is responsible for phase and construction progress meetings to include:

1. Meeting notification to participants
2. Prepare agenda for meetings
3. Physical arrangements for meetings
4. Preside at meetings
5. Record minutes documenting proceedings and decisions
6. Copy and send minutes to:
 - a. Meeting participants
 - b. Project parties affected by decisions
 - c. Engineer (No later than 3 working days after the meeting)

B. PRECONSTRUCTION MEETING AGENDA

Contractor shall be prepared to discuss the following at a minimum:

1. Required schedule.
2. Status of bonds and insurance.
3. Sequence of work and critical path items.
4. Project changes or modifications.
5. Site access, site security, job trailer location, storage and laydown areas, and other temporary facilities.
6. Product delivery and lead times.
7. Contractor's safety plan.
8. Environmental permit requirements.

C. PROGRESS MEETING AGENDA

Contractor shall be prepared to discuss the following at a minimum:

1. Review key issues from previous progress meetings
2. Review work progress since previous meeting
3. Review current definable features of work:
 - a. Identify phases of current features of work
 - b. Identify pending phase changes
 - c. Identify features for discussion in next scheduled meeting
4. Discuss problem prevention:
 - a. Field observations
 - b. Deficiencies and tracking

- c. Procedures working well
 - d. Problems, conflicts
 - e. Methods to improve
5. Review construction schedule:
- a. Identify delays
 - b. Discuss proposed corrective actions to regain schedule
6. Submittals and Requests for Information (design interpretation):
- a. Review submittal register
 - b. Identify submittals to expedite as required
 - c. Discuss pending requests for information
7. Review off-site activities:
- a. Fabrications
 - b. Material and equipment delivery schedule
8. Review Testing:
- a. Type, Schedule
 - b. Received Results
9. Review changes to construction schedule:
- a. Planned progress during succeeding work period
 - b. Coordination of various schedules
 - c. Effect of changes on construction and completion date
10. Review site safety
11. Discuss maintaining contract quality for materials and workmanship
12. Discuss pending modifications, changes and substitutions
13. Discuss other business, as appropriate

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes requirements and procedures for submittals, including shop drawings, product data, samples, or other submittals relating to products, and as specified in individual sections.
- B. The Contractor shall submit all items listed in this and other Sections of these Specifications. The Engineer may request submittals in addition to those listed when deemed necessary to adequately describe the Work covered in the respective sections. Units of weights and measures used on all submittals shall be the same used in the Construction Drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with Contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor's Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. Proposed deviations from the Contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; operation and maintenance manuals including parts list; certifications; warranties and other such required submittals. Submittals requiring Engineer approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby.

1.2 DEFINITIONS

- A. Manufacturer's Instructions: Instructions, stipulations, directions, and recommendations issued in printed form by the manufacturer of a product addressing handling, installation, erection, and application of the product. Manufacturer's Instructions are not prepared especially for the Work.
- B. Shop Drawings: Custom prepared data of all types including drawings, diagrams, performance curves, material schedules, templates, instructions, and similar information not in standard printed form applicable to other projects. Shop drawings should provide the appropriate level of detail for the Contractor's field or fabrication shop personnel to use as the sole reference in building the referenced piece of the Work.
- C. Product Data: Standard printed information on materials, products and systems; illustrations; standard schedules; performance charts; brochures; diagrams; and other information to illustrate materials or equipment for some portion of the Work.
- D. Samples: Physical examples, which illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged. Samples include both fabricated and unfabricated physical examples as complete units or as smaller portions of units available for either limited visual inspection or (where indicated) for more detailed testing and analysis.
- E. Special Samples: Physical examples that illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged and that will be incorporated in the Work.
- F. Miscellaneous Submittals: Technical reports, administrative submittals, certificates, and guarantees not defined as shop drawings, product data, or samples.

1. Technical reports include laboratory reports, tests, technical procedures, technical records, Contractor's design analysis, and Contractor's survey field notes for construction staking, and pre- and post-construction survey products and reports.
2. Administrative Submittals are those nontechnical submittals required by the Contract Documents or deemed necessary for administrative records. These Submittals include statements of applicability, copies of industry standards, as-constructed data, security/protection/safety data, and similar type Submittals.
3. Certificates and guarantees are those Submittals regarding equipment, materials or service where a written certificate or guarantee from the manufacturer, supplier or supplier is called for in the Specifications to verify and ensure that specific criteria or results are attained.
4. Reports as required by Contractor describing Contractor's means and methods for items such as dewatering, earth and water retaining, erosion control, and safety plans.

1.3 SUBMITTALS

A. Final Submittal Register

1. Submit final submittal register in accordance with this Specification for Engineer approval (See Appendix E).

1.4 PROCEDURES

- A. Before commencing work, the Contractor will review the Draft Submittal Register attached to this Specification as an APPENDIX E. The Contractor will review the Submittal Register and note any discrepancies or required additions. The reviewed Submittal Register will serve only as guidance document for submission as the project proceeds. Optional submittals or other submittal requirements not listed on the Submittal Register but described in the Specifications may be required, and the Contractor shall provide these upon request of the Engineer.
- B. Unless specifically required to deliver hard copies, Contractor shall deliver all submittals to the Engineer in electronic format through the Owner's preferred portal (e-Builder) or by email when authorized by the Owner and Engineer.
- C. For submittal files too large to send via email, the Contractor will use the Owner's preferred portal (e-Builder), or if necessary, the Engineer will provide the Contractor with a File Transfer Protocol (FTP) site to upload the electronic submittal.
- D. For submittals that require the seal of a Professional Engineer or Professional Surveyor, the seal and signature shall be clearly visible.
- E. When immediate contact is required herein, the Contractor shall contact the Engineer by both email and telephone, unless otherwise instructed.
- F. Submit submittals in ample time for review and response.
- G. Submit submittals specified or reasonably required for construction, operation, and maintenance of the Work.
- H. Deliver submittals under acceptable transmittal form which identifies:
 1. Submittal date.

2. Project and Contractor.
3. Subcontractor and major supplier, when appropriate.
4. Reference submittal to Contract Documents by Drawing, detail, and/or Specification section numbers, as appropriate.
5. Variations from Contract Documents when variations are included in submittal.
6. Whether submittal requires approval or is for information only.

1.5 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. Submit Shop Drawings, Product Data, Samples, and other pertinent information in sufficient detail to show compliance with specified requirements.
- B. Check, verify, and revise submittals as necessary to bring them into conformance with Contract Documents and actual field conditions.
 1. Determine and verify quantities, dimensions, specified design and performance criteria, materials, catalog numbers, and similar data.
 2. Coordinate submittal with other submittals and with the requirements of the Contract Documents.
- C. After completion of checking, verification, and revising, sign and date submittals indicating review and approval. Submit to Engineer.
 1. Signature indicates Contractor has satisfied shop drawing review responsibilities and constitutes Contractor's written approval of shop drawing.
 2. Shop drawings without Contractor's written approval will be returned for resubmission.
- D. Shop Drawings: Engineer will return one (1) electronic copy with reviewer's comments and stamp.
- E. Product Data and Manufacturer's Instructions: Excise or cross out non-applicable information and clearly mark applicable information with citations to and terminology consistent with Contract Documents. Engineer will return one (1) electronic copy with reviewer's comments and stamp.
- F. Samples: Submit one (1) physical sample (unless otherwise directed) labeled with reference to applicable Contract Documents. Samples will not be returned unless return is requested in writing and an additional sample is submitted.
- G. Special Samples: Submit one (1) sample labeled with reference to applicable Contract Documents. Sample will be returned for installation in the Work.
- H. The Contractor shall assume all risks of additional expenses and delays when proceeding with work related to required submittals that have not been reviewed and approved.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. Submit manufacturer's instructions whenever available and when installation, erection, or application in accordance with manufacturer's instructions is required by the Specifications.
- B. Submit manufacturer's instructions prior to installation, erection, or application of equipment and other project components. Submit manufacturer's instructions in accordance with requirements for Product Data.

1.7 ENGINEER'S REVIEW

- A. Engineer's review of submittals shall not release Contractor from Contractor's responsibility for performance of requirements of Contract Documents. Neither shall Engineer's review release the Contractor from fulfilling purpose of installation nor from Contractor's liability to replace defective work.
- B. Do not consider submittals as Contract Documents. The purpose of submittals is to demonstrate how Contractor intends to conform to the design concepts.
- C. Engineer's review of shop drawings, samples, or test procedures will be only for conformance with design concepts and for compliance with information given in Contract Documents.
 - 1. Engineer's review does not extend to:
 - a. Accuracy of dimensions, quantities, or performance of equipment and systems designed by Contractor.
 - b. Contractor's means, methods, techniques, sequences, or procedures except when specified, indicated on the Drawings, or required by Contract Documents.
 - c. Safety precautions or programs related to safety, which shall remain the sole responsibility of the Contractor.
- D. Except as may be provided in these specifications, a submittal will be returned within 10 business days. When a submittal cannot be returned within that period, Engineer will, within a reasonable time after receipt of the submittal, give notice of the date by which that submittal will be returned.
- E. For submittals returned Approved – No further action is required by the Contractor for this submittal; Contractor shall proceed with the Work described by this submittal.
- F. For submittals returned Rejected – See All Comments, Contractor shall develop a new submittal package with materials, equipment, methods, etc. that meet the requirements of the Contract Documents.
- G. For submittals returned Revise and Resubmit – Make Corrections Noted / See All Comments, Contractor shall incorporate the review comments into a complete revised package and resubmit it for review.
- H. For submittals returned Approved as Noted – No further action is required by the Contractor for this submittal; however, Contractor shall incorporate comments into the Work described by this submittal.
- I. For submittals returned Submittal Not Required – Returned without Review, File for Record, no further action is required by the Contractor for this submittal.
- J. For submittals returned Submittal Received, for Information Only – File for Record, no further action is required by the Contractor for this submittal.
- K. For submittals returned Submit Specified Item – Contractor shall develop a new submittal package with the specified item.
- L. Engineer will be entitled to rely upon the accuracy or completeness of designs, calculations, or certifications made by licensed professionals accompanying a particular submittal whether or not a stamp or seal is required by Contract Documents or Laws and Regulations.

- M. For submittals returned Rejected or Revise and Resubmit, the Contractor shall submit the subsequent submittal in its entirety so as to ultimately create one accepted submittal document. Submitting partial submittal data as a response to specific questions/comments will not be acceptable, and the Engineer reserves the right to reject such partial submittals.
- N. Subsequent submittals shall contain the same submittal number as the original submittal; however, the Contractor shall append a suffix number or letter to the subsequent submittal number to identify it as subsequent to the original submittal.
- O. Costs incurred by Owner as a result of additional reviews of a particular submittal after the fourth time it has been reviewed shall be borne by Contractor at a rate of \$500.00 per subsequent submittal review or the Engineer's actual time spent reviewing the submittal, whichever is greater. Reimbursement to Owner will be made by deducting such costs from Contractor's subsequent partial payments.

1.8 MINOR OR INCIDENTAL PRODUCTS AND EQUIPMENT SCHEDULES

- A. Shop Drawings of minor or incidental fabricated products will not be required, unless requested.
- B. If requested by the Engineer, submit tabulated lists of minor or incidental products showing the names of the manufacturers and catalog numbers, with Product Data and Samples as required to determine acceptability.

1.9 SCHEDULING

- A. Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent submittals shall be scheduled for simultaneous submittal. Adequate time, a minimum of ten (10) business days, shall be allowed on the Submittal Register for review and approval. No delays, damages, or time extensions will be allowed for time lost to late submittals or by re-submittal requirements resulting from Engineer review.

1.10 DEVIATIONS

- A. The Contractor shall set forth in writing the reason for any deviations from the Construction Drawings and Specifications and annotate such deviations on the submittal. The Engineer reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 SUBMITTAL REGISTER

- A. A draft submittal register has been provided (APPENDIX E) listing each item of material or equipment for which submittals are required by the Specifications. The list may not be all-inclusive and additional submittals may be required. The Contractor shall complete and return an electronic copy of the Submittal Register to the Engineer for approval within ten (10) business days after the Notice to Proceed has been issued. The approved Submittal Register will become the scheduling document and will be used to control submittals throughout the life

of the Contract. The register and the progress schedules shall be coordinated. After initial approval of the Contractors' Submittal Register, the Contractor shall submit an electronic copy of the revised and/or updated Submittal Register, as part of the monthly payment application to the Engineer. The appended Submittal Register is an Excel-based spreadsheet. The Engineer will provide an electronic version of this document to the Contractor upon request.

3.2 SUBMITTALS KNOWN TO BE UNACCEPTABLE

- A. The Contractor shall contact the Engineer immediately regarding submittals that do not meet requirements of the Drawings and Specifications or construction-testing submittals that have failed tests criteria or are otherwise unacceptable.

-- End of Section --

SECTION 01 35 43

ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers prevention of environmental pollution and damage as the result of construction operations under this contract and for those measures set forth in other technical requirements of these Specifications. For the purpose of this Specification, environmental pollution and damage are defined as the presence of chemical, physical, or biological elements or agents, which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.
- B. Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations, and ordinances and corrective action taken.
- C. Contractor shall comply with all requirements under terms and conditions set forth in the following environmental permits and authorizations for this project:

- **FDEP Environmental Resource Permit No. 16-0186420-007-EI**
- **USACE Department Of The Army Permit No. SAJ-1994-03114 (SP-BJC)**

Copies of these environmental permits are appended to these Contract Documents (Appendix D). The Contractor shall familiarize itself and its personnel with these and any other permits required for this project and shall comply with all requirements under the terms and conditions set forth therein. The Contractor shall be responsible for any fines resulting from violations of construction conditions set forth in the environmental permits. The Contractor shall include all costs for preparation and submittal of permit-required reporting within each relative bid item.

It is the Contractor's responsibility to obtain all other relevant permits (e.g., NPDES permit, dewatering permits, building permits, utility crossing permits, etc.) at no cost to the Owner. The Contractor shall be responsible for any delays and costs resulting from failure to comply with these and all federal, state, and local environmental protection laws and regulations.

1.2 SUBMITTALS

The following submittals shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

- A. Environmental Protection Plan

Within ten (10) calendar days after Notice to Proceed, the Contractor shall submit in writing an Environmental Protection Plan. The Engineer may, at its discretion, consider an interim plan for the first 30 days of operations. However, the Contractor shall furnish an acceptable final plan no later than 30 calendar days after receipt of Notice to Proceed. Acceptance of the Contractor's plan shall not relieve the Contractor of its responsibility for adequate and

continuing control of pollutants and other environmental protection measures. Acceptance of the plan is conditional and predicated on satisfactory performance during construction. The Engineer reserves the right to require the Contractor to make changes to the Environmental Protection Plan or operations if the Engineer determines that environmental protection requirements are not being met. No physical work at the site shall begin prior to acceptance of the Contractor's Plan or an interim plan covering the work to be performed. The Environmental Protection Plan shall include but not be limited to the following:

1. Methods for protection of features and resources to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., landscape features, surface and groundwater quality, air quality, historical, archeological, and cultural resources.
2. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accidents, natural causes, or failure to follow the procedure set out in accordance with the environmental protection plan.
3. Methods for protection during construction activities.
4. Requirements, methods, and plan for complying with any water quality, listed species, or other environmental requirements as outlined in the permit.
5. Spill Prevention Plan. The Contractor shall specify all potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction of such materials into the air, ground, water, wetlands, or drainage areas. The plan shall specify the Contractor's provisions and actions to meet Federal, State, and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.
6. A statement identifying the Contractor's personnel who shall be responsible for implementation of the Environmental Protection Plan.

B. Erosion and Sediment Control Plan

1. The Contractor shall submit an erosion control plan a minimum of ten (10) days prior to start of construction.
2. The Erosion control plan and installed erosion control measures shall be in accordance with all permit conditions and requirements.
3. If it has been determined that any environmental resources have been damaged due to the lack of erosions control measures or improperly installed erosion control measures, the Contractor shall repair any damage and pay any fines at no additional cost to the Owner.

C. Copy of Project Permits and Inspection Logs

1. Submit a copy of each of the permits sought and received by the Contractor.
2. Submit copies of any required inspection logs (e.g., NPDES inspection logs) to the Engineer throughout the Work.

1.3 SUBCONTRACTORS

- A. Assurance of compliance by subcontractors will be the responsibility of the prime Contractor.

1.4 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

- A. Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of federal, state, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by Contractor. Quality Control personnel will be identified in the Quality Control Plan submitted in accordance with SECTION 01 45 00 Contractor Quality Control.

1.5 NOTIFICATION

- A. The Engineer will notify the Contractor in writing of any observed noncompliance with the aforementioned federal, state, or local laws or regulations, permits and other elements of the Contractor's Environmental Protection Plan. The Contractor shall, after receipt of such notice, inform the Engineer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.
- B. The Contractor shall notify the Engineer, in writing, of the occurrence of environmental incidents.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All erosion/turbidity control devices shall be installed pursuant to Chapter 6 of The Florida Land Development Manual, A Guide to Sound Land and Water Management, prior to the commencement of the construction activities. The devices shall remain functional at all times.

2.2 SILTATION FENCES

- A. The siltation fences shall be geotechnical woven or non-woven fabric conforming to the applicable application requirement of Section 985 of the Florida Department of Transportation "Standards Specifications for Road and Bridge Construction." The type and size of posts and wire mesh reinforcement will be at the option of the Contractor as applicable to the installation conditions.

2.3 EROSION CONTROL MATTING

- A. Erosion control matting shall be woven, biodegradable geotechnical fabric. It shall be used to temporarily stabilize channels or steep slopes until vegetation is established. The type selected shall be comparable to the vegetation cover applied for the particular installation. The material shall be stapled in place at 18 inches on center with a minimum matting lap of 4 inches.

2.4 HAY OR STRAW BALES

- A. Hay or straw bales shall be individual bales each entrenched 4 inches into the soil. The bales shall be clean, fresh hay or straw. Bales shall be replaced when they become clogged with silt, deteriorate, or after a period of 3 weeks, whichever occurs first. The particular application may require that bales be staked into the ground with rebar.

PART 3 - EXECUTION

3.1 LISTED SPECIES REQUIREMENTS

- A. Contractor shall comply with all permit conditions and requirements for any listed species addressed in the permit conditions, such as the West Indian Manatee, Eastern Indigo Snake, Gopher Tortoise, Easter Black Rail, Red Knot, Wood Stork, etc. See permit conditions for all listed species identified for this project and for all permit conditions and requirements.
- B. The Contractor's Environmental Protection Plan submittal to the Engineer must include a work plan for complying with any listed species requirements as outlined in the permit conditions

3.2 PROTECTION OF ENVIRONMENTAL RESOURCES

- A. General
 - 1. The Contractor shall comply with all applicable federal, state, and local laws and regulations. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. Contractor shall confine his activities to areas defined by the Construction Drawings and Specifications. Environmental protection shall be as stated in the following paragraphs, within the permits, or as required by law. Failure to meet the requirements of these Specifications for environmental protection may result in Work stoppages or termination for default. No part of the time lost due to any such Work stoppages shall be made the subject of claims for extensions of time or for excess costs or damages by Contractor. If Contractor fails or refuses to promptly repair any damage caused by violation of provisions of these Specifications, the Owner may have the necessary Work performed and charge the cost thereof to Contractor.
- B. Protection of Land Resources
 - 1. Before beginning any construction, Contractor shall identify all land resources to be preserved within Contractor's work area. Contractor shall not remove, cut, deface, injure, or destroy land resources, including trees, shrubs, vines, grasses, topsoil, and landforms without special permission from Engineer. Contractor shall engage a qualified tree surgeon to perform all tree surgery and shall repair injuries to bark, trunk, branches, and roots of protected trees by dressing, cutting, and painting as specified for Class I Fine Pruning, of the National Arborist Association Pruning Standards for Shade Tree or as per State's Agricultural Extension Agency Guidelines, immediately as occurrences arise. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized where such special emergency use is permitted. Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.
 - 2. Work Area Limits

- a. The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas approved by the Engineer. Temporary movement or relocation of the Contractor facilities shall be made only upon approval by the Engineer.
 - b. Prior to any construction, the Contractor shall mark the limits of construction, protected areas, and areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area that are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.
- 3. Protection of Landscape
 - a. Trees and their roots, shrubs, vines, grasses, landforms, and other landscape features indicated, defined, and delineated on the Construction Drawings to be preserved, such as wetlands, shall be clearly identified and protected by fencing or any other approved techniques. Place tree protection fencing before excavation or grading is begun and maintain in place until construction is complete.
- 4. Disturbed Areas
 - a. The Contractor shall effectively prevent erosion and control sedimentation through approved methods including, but not limited to, the following:
 - 1) Retardation and Control of Runoff: Runoff from the construction site or from storms shall be controlled, retarded, and diverted to protected drainage courses by means of silt fence, hay bales, diversion ditches, benches, and by any other erosion control measures necessary.
 - 2) The Contractor shall select, implement, and maintain erosion and sediment control measures as required by local, state, and federal laws and regulations.
- 5. Collection and Disposal of Sanitary Waste
 - a. The Contractor shall supply approved sanitary facilities adequate for the number of work personnel and shall maintain these facilities during the duration of the project. The Contractor shall maintain sanitary facilities and dispose of sanitary waste in accordance with all federal, state, and local laws and ordinances.
- 6. Disposal of Solid Wastes
 - a. Solid wastes (excluding clearing debris) shall be placed in containers that are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. The Contractor shall transport all solid waste off the properties within the project limits and dispose of it in compliance with federal, state, and local requirements for solid waste disposal. Discarded materials other than those that can be handled in the solid waste category will be handled as directed by the Engineer.
- 7. Dispensing of Fuel

Fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bib. Edges of the pans shall be 8-inch minimum in depth to prevent contamination of the ground. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spillage of fuel occur, the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area.

8. Disposal of Chemical Waste

- a. Chemical waste shall be stored in corrosion-resistant containers, removed from the work area and disposed of in accordance with Federal, State, and local regulations.

9. Disposal of Discarded Materials

- a. Discarded materials other than those that can be included in the solid waste category shall be handled as directed.

C. Protection of Water Resources

1. General

- a. The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters. The Contractor shall conduct his operations in a manner to minimize erosion and shall conform to all water quality standards as prescribed by Chapter 63-302 of the Florida Administrative Code. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities that are included in this contract.

2. Washing and Curing Water

- a. Wastewaters directly derived from construction activities shall not be allowed to enter surface water areas. These wastewaters shall be collected and placed in retention ponds where suspended materials can be settled out or the water evaporates so that pollutants are separated from the water.

3. Intertidal Areas and Crossings

- a. Intertidal areas and crossings shall be controlled and protected from turbidity runoff during construction. Crossings, to allow for upstream discharge, shall provide movement of water without violating water pollution control standards of the Federal, State, and local government.

4. Monitoring of Water Areas

- a. Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. The Contractor shall monitor all water areas affected by construction activities.

5. Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

- a. Prevent oil/fuel or other hazardous substances from entering the ground, drainage, or local bodies of water. Provide containment, diversionary structures, or equipment to prevent discharged oil/fuel from reaching a watercourse. Take immediate action to contain and clean up any spill of oily

substances, petroleum products, and hazardous substances. Immediately report such spills to the Engineer. Provide one or more of the following preventive systems at each oil/fuel storage site. The provision of such preventive systems shall be approved by the Engineer prior to tank installation and use.

- 1) Dikes, berms, retaining walls, culverting, curbing, guttering, or other similar structures shall be capable of containing the contents of the largest single tank.
 - 2) Spill diversion ponds shall be capable of containing the contents of the largest single tank.
 - 3) Absorbent materials shall be capable of absorbing the contents of the largest single tank.
- b. Oil/Fuel Storage Tank Installation: All storage tank installation shall be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank. Dikes and other structures shall be positioned or located so as to provide a secondary containment identical to that required for non-mobile storage tanks. Storage tanks shall be located where they will not be subject to flooding or washout. When it is determined that the installation of containment structures or equipment to prevent discharged oil/fuel from reaching a watercourse is not practicable, a clear demonstration of such impracticability shall be submitted to the Engineer for approval prior to installation or use of the storage tank. The following shall also be provided to the Engineer for approval prior to installation use of the storage tank.
- 1) An oil spill contingency plan.
 - 2) A written certification of commitment of manpower, equipment, and materials required to expeditiously control and remove the discharge oil.
- c. Liabilities: Contractor shall be liable for the damage caused by oil/fuels spills. The penalty for failure to report the discharge of oil shall be in accordance with state and federal laws.

6. Wetlands Protection

- a. The Contractor shall determine the location of wetlands within the project area and adjacent to the project areas from the information contained in the contract documents. The Contractor shall instruct all personnel associated with the project of the presence of wetlands within 1,000 feet of staging areas, access roads or any other areas used during construction activities.
- b. All construction personnel shall be advised that there are civil and criminal penalties for harming or destroying wetlands beyond actions specifically identified, anticipated, and authorized in these Specifications and associated Construction Drawings and environmental permits. The Contractor shall erect suitable erosion control barriers at least 25 feet upland and along the entire length of all wetland delineation lines adjacent to the work site and staging areas, prohibit all access into the wetland, and ensure compliance with the paragraph "Protection of Water Resources" above.
- c. The Contractor shall not anchor, place pipelines, or stage equipment in a manner that will cause any damage to wetlands beyond those specifically

identified, anticipated, authorized in these Specifications and associated Construction Drawings and environmental permits. Anchoring, placing pipeline, or staging equipment shall be avoided in wetland areas. If such activities cannot be done without affecting sensitive areas outside the construction area identified in the contract documents, the activities shall cease, and the Engineer shall be immediately notified. Any actual incident involving damage to, or disturbance of, wetlands shall be reported immediately to the Engineer.

- d. The Contractor shall provide turbidity curtains, siltation fences, hay bales, and other means and materials to prevent the pollution of any off-site streams, intertidal areas and crossings, lakes, ditches, rivers, and other water improvements, including on-site retention areas or stormwater system from siltation from erosion, runoff, concrete truck wash, mortar mixer cleanout, and other construction activities. Under no circumstances will material delivery trucks be cleaned out or washed out onsite. The Contractor is responsible for arranging for proper clean out facilities.

D. Protection of Wildlife Resources

1. Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of wildlife. Species that require specific attention, along with measures for their protection, will be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operation.
2. In the event that a threatened or endangered species is harmed because of construction activities, the Contractor shall cease all work and notify the Engineer. The Engineer will provide emergency contact information at the Pre-Construction Meeting.

E. Protection of Air Resources

1. The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of Florida (Florida Statue, Chapter 403 and others) and all Federal emission and performance laws and standards.
2. Particulates, such as dust, shall always be controlled, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and work areas within or outside the project boundaries free from particulates that would cause air pollution standards to be exceeded or that would cause a hazard or nuisance, or cause fouling or dusting of adjacent terminal operation or cargo. The Contractor shall have the necessary equipment and approved methods to control particulates as the work proceeds and before a problem develops.

F. Preservation and Recovery of Historic, Archeological, and Cultural Resources

1. Inadvertent Discoveries
 - a. If, during construction activities, Contractor observes items that may have historic or archeological value, such observations shall be reported immediately to Engineer so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special

disposition of the finds should be made. Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from trespassing on, removing, or otherwise damaging such resources.

2. Claims for Downtime due to Inadvertent Discoveries

- a. Upon discovery and subsequent reporting of a possible inadvertent discovery of cultural resources, the Contractor shall seek to continue work well away from, or otherwise protectively avoiding, the area of interest, or in some other manner that strives to continue productive activities in keeping with the contract. Should an inadvertent discovery be of the nature that substantial impact(s) to the work schedule are evident; such delays shall be coordinated with the Engineer. Contract adjustments resulting from compliance with this paragraph shall be determined in accordance with the General Conditions.

G. Protection from Sound Intrusions

1. The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise and to comply with all federal, state, and local noise ordinances. The use of horns, bells or the use of whistle signals shall be held to a minimum necessary in order to ensure as safe and as quiet an operation as possible.

3.3 EROSION AND SEDIMENT CONTROL

A. General

1. The Contractor shall install and maintain, for the full period of the construction, silt fence and straw bales at the locations shown on Construction Drawings or identified in permit documents. These features shall be coordinated with all applicable construction features to assure the continuous and effective control of erosion and protection of surface water quality, stormwater systems, and wetlands on and adjoining the site. In the event of unforeseen conditions, the Engineer may require the use of control features or methods other than those indicated or proposed by the Contractor. The Contractor will manage erosion and sedimentation controls to prevent fouling or sedimentation of adjacent terminal operation or cargo.
2. The Contractor shall remove all silt fence and erosion control measures at the end of the project.
3. Any adjacent/off-site wetland areas around the perimeter of the project site shall be protected from construction activities and construction-related runoff using siltation screening and straw bales. The erosion protection devices shall be placed before the initiation of any ground-disturbing activities and shall remain in place until all ground-disturbing activities within the project have concluded, and the site has stabilized, at which time the screening or hay bales shall be removed completely from the site.

B. Maintenance of Erosion Control Features

1. The Contractor shall, at his expense, provide routine maintenance of permanent and temporary erosion control features until the project is completed and accepted. If such erosion control features must be reconstructed due to weather, the Contractor's negligence or carelessness, or in the case of temporary erosion control features, failure by the Contractor to install permanent erosion control features as scheduled, such replacement shall be on the Contractor's expense.

2. If the Contractor, through any construction activity, degrades, destroys, or impacts the ground cover on any adjoining property, including rights-of-way, effected area shall be fully repaired and re-vegetated at the Contractor's expense.

3.4 POST CONSTRUCTION CLEANUP

- A. The Contractor shall clean up any area(s) used for construction.

3.5 DELAYS IN WORK

- A. Delays in work due to the fault or negligence of the Contractor or the Contractor's failure to comply with this Specification and project permits shall not be compensable.

-- End of Section --

SECTION 01 45 00

CONTRACTOR QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. This section covers the establishment and operation of the Contractor's Quality Control (CQC) system as specified herein and within the Contract Documents.

1.2 REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to within the text by the basic designation only. All publications are "Latest Edition" unless specified otherwise.

- A. American Society For Testing and Materials (ASTM)

ASTM D 3740	Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
ASTM E 329	Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.3 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

- A. Quality Control Plan

1. Within twenty (20) calendar days of Notice of Award, the Contractor shall submit the Contractor Quality Control (CQC) Plan for review and acceptance by the Engineer prior to the preconstruction meeting. The Owner will consider an interim plan for the first twenty (20) days of operation. However, the Contractor shall furnish, no later than twenty (20) calendar days after receipt of the Notice to Proceed, an acceptable final CQC Plan. The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in accordance with these Specifications. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which

complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Engineer and/or Owner for noncompliance with quality requirements specified in the contract. The project superintendent in this context shall mean the individual with the responsibility for the overall management of the project including quality and production.

3.2 QUALITY CONTROL PLAN

A. Content of the Construction Quality Control (CQC) Plan

The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

1. A description of the quality control organization. The staff shall include a CQC System Manager who shall perform his duties in tandem with those of the Project Superintendent and with direct reporting responsibility to an officer of the prime Contractor and/or an individual not directly responsible for production. The Project Manager/Superintendent may have dual roles as CQC System Manager or Safety Officer, but may not fulfill all three duties. Additionally, a qualified Florida Licensed Professional Land Surveyor is required for all surveys. Other professionally licensed individuals may be required where noted within these Specifications.
2. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
3. Description of what quality control actions or tests will occur, where the actions or tests will occur, when (and at what frequency) the action or test will occur, what the expected outcome or required test result will be, and how the action result or test data will be recorded and provided to the Engineer for verification.
4. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
5. A sample of the proposed Quality Control Log.

B. Acceptance of CQC Plan

1. Acceptance of the Contractor's CQC plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. Engineer reserves the right to require the Contractor to make changes to his CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

C. Failure to Submit Acceptable CQC Plan

1. If the Contractor fails to submit an acceptable CQC plan within the time prescribed, construction SHALL NOT start unless an acceptable interim plan is submitted. If an acceptable final plan is not submitted within a reasonable time, as determined by the Engineer, the Engineer may order the Contractor to stop work until such time as an acceptable plan has been submitted. Any such stop-work order shall not be considered a suspension of work for an unreasonable period of time as stated in the General Conditions and the Contractor shall not be entitled to pay adjustments as a result of the stop-work order.

2. Failure to comply with the above requirements within the time prescribed will be considered a condition endangering the performance of the Contract and may be considered grounds for termination of the Contract.

D. Notification of Changes

1. After acceptance of the CQC Plan, the Contractor shall notify the Engineer in writing a minimum of seven (7) calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Engineer.

3.3 COORDINATION MEETING

- A. After award of the Contract, but before physical work starts and before the acceptance by the Engineer of the CQC Plan, the Contractor shall meet with the Engineer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with Owner's Quality Assurance. There may also be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

A. General

1. The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor shall provide a CQC organization which shall be at the site at all times during progress of the work and with complete authority to take any action necessary to ensure compliance with the Contract. All CQC staff members shall be subject to acceptance by the Engineer.

B. CQC System Manager

1. The Contractor shall identify as CQC System Manager as an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a construction person with a minimum of eight (8) years of experience in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have duties as project superintendent in addition to quality control. An alternate for the CQC System Manager, having a minimum of three (3) years of experience, shall be identified in the plan to serve in the event of the System Manager's absence.

C. CQC Personnel

1. A staff shall be maintained under the direction of the CQC System Manager to perform all CQC activities. The staff must be of sufficient size to ensure adequate CQC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties but must be fully qualified by experience and technical training to perform their assigned CQC responsibilities and must be allowed sufficient time to carry

out these responsibilities. The CQC plan will clearly state the duties and responsibilities of each staff member.

D. Professional Land Surveyor

1. A licensed Professional Land Surveyor registered in the State of Florida shall perform all layouts of the work and quantity surveys required to carry out the project work. The Professional Land Surveyor shall certify all as-built drawings, computations, and all other records relating to surveys or layouts of the work.

E. Professional Engineer(s)

1. Licensed Professional Engineer(s) registered in the State of Florida will provide any services where called for elsewhere in these Technical Specifications or whenever the Contractor's work would require consultation with an engineer.

F. Organizational Changes

1. The Contractor shall maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Engineer for acceptance.

3.5 CONTROL

A. The Contractor's Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract. At least three phases of control shall be conducted by the CQC System Manager for each definable feature of work as follows:

1. Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase shall include:

- a. A review of each paragraph of applicable Specifications.
- b. A review of the Construction Drawings
- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or other submittals, and are properly stored.
- g. Reviews of the appropriate activity hazard analysis to assure safety requirements are met.

- h. Discussion of procedures for controlling quality of the work, including elimination of repetitive deficiencies. Document and review construction tolerances and workmanship standards for the feature of work.
- i. Review requirements under permits, environmental protection, and protection of environmental species.
- j. Discussion of the Initial Phase control (workmanship).
- k. This phase shall include a meeting conducted by the CQC System Manager and attended by superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract Specifications.

2. Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

- a. A check of work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of monitoring and survey controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish a level of workmanship and verify that it meets minimum acceptable workmanship standards and review allowable tolerances. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3. Follow-up Phase

- a. Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

4. Additional Preparatory and Initial Phases

- a. Additional preparatory and initial phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable; there are changes in the applicable CQC staff, onsite production supervision, or work crew; work on the definable feature is resumed after a substantial period of inactivity; or when other problems develop.

3.6 TESTS

A. Testing Procedure

1. The Contractor shall perform specified tests to verify that control measures are adequate to provide an end product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Engineer duplicate samples of test specimens for possible testing by the Owner. Testing includes operations and/or acceptance tests when specified. The Contractor shall procure the services of an Engineer-approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

- B. Verify that testing standards or procedures comply with contract requirements.
- C. Verify that facilities and testing equipment are available and comply with testing standards.
- D. Check test instrument calibration data against certified standards.
- E. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- F. Results of tests and monitoring instruments, both passing and failing, shall be recorded for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by Engineer, actual test reports may be submitted later with a reference to the test number and date taken. An informational copy of test performed by an offsite or commercial test facility shall be provided directly to the Engineer. Failure to submit timely test reports as stated or maintain adequate monitoring testing may result in nonpayment for related work performed and disapproval of the test facility for this Contract.

3.7 TESTING LABORATORIES

A. Capability Check

1. The Owner reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract Specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, stone, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329 or shall be FDOT certified.

B. Capability Recheck

1. If the selected laboratory fails the capability check, the Contractor will be assessed a charge to reimburse the Owner for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

C. Onsite Laboratory

1. The Owner reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check Contractor's testing procedures, techniques, and test results at no additional cost to the Owner.

D. Furnishing or Transportation of Samples for Testing

1. Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Owner shall be delivered to Engineer-approved laboratory. Coordination for each specific test, exact delivery location, and dates will be made with the Engineer.

3.8 DOCUMENTATION AND REPORTS

- A. The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the following information:
 1. Contractor or subcontractor or testing agency performing quality control work.
 2. Description of quality control test or work performed that day.
 3. If lab testing is required submit documentation that lab tests results are forthcoming. Once lab tests are available, append lab results to that day's quality control work.
 4. List deficiencies noted along with corrective action.
 5. Instructions given/received and any conflicts in Construction Drawings and/or Specifications.
 6. Contractor's verification statement.
- B. Submit weekly (or daily if requested by Engineer) a continuous running log (in Excel Spreadsheet format) of quality control testing and quality control actions taken by Contractor and the results of those tests or actions. Quality control log should document subsequent corrective actions taken for failing tests.

3.9 NOTIFICATION OF NONCOMPLIANCE

- A. The Engineer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

--End of Section--

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SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. In addition to temporary construction facilities, this section covers temporary field offices, utilities, vehicular access and parking, and project identification. The Contractor is responsible for adherence to and reporting requirements for all applicable permit conditions.

1. Construction facilities include, but are not limited to, the following:

- a. Contractor's Field Offices
- b. Information Bulletin Board
- c. Material and Equipment Storage Area
- d. Fueling Area
- e. Secured Storage Area
- f. Employee Parking Area
- g. Debris Container (Dumpster)
- h. Construction Signage to include Project Sign; Safety Sign; and Construction Warning Signs

2. Temporary utilities include, but are not limited to, the following:

- a. Water
- b. Electric
- c. Sewage
- d. Communications
- e. Lighting

1.2 REFERENCES

The publications listed below form a part of this Specification to extent referenced. The publications are referred to in text by basic designation only. All publications are "Latest Edition" unless specified otherwise.

A. American National Standards Institute (ANSI)

ANSI C2 National Electrical Safety Code

B. National Fire Protection Association (NFPA)

NFPA 70 National Electrical Code

C. U.S. Army Corps of Engineers (USACE)

USACE CESAJR 385-1-1 Safety and Occupational Health Program

USACE EM 385-1-1 U.S. Army Corps of Engineers Safety and Health Requirements Manual

1.3 SUBMITTALS

The following submittals shall be submitted in accordance with submittal procedures:

A. Mobilization/Demobilization Plan

1. Prior to construction, the Contractor shall submit a Mobilization/Demobilization Plan. This plan shall be submitted within 10 calendar days of Notice to Proceed. The Mobilization/Demobilization Plan shall include, but not be limited to, the following:
 - a. Mobilization Requirements:
 - 1) Methods, equipment and materials;
 - 2) Connection of utilities;
 - 3) Placement of site facilities and temporary controls; and
 - 4) Construction of facilities
 - b. Demobilization Requirements (methods, equipment, and materials required to clean up and restore site at project conclusion):
 - 1) Collection, recycle and disposal of solid waste
 - 2) Contract-generated material
 - 3) Utility disconnection
 - 4) Removal of Contractor facilities
 - 5) Repair and restoration of site (i.e., fences, roads, or permanent facilities)

B. Hurricane and Severe Storm Plan

1. The Contractor shall prepare a Hurricane and Severe Storm Plan for the Engineer describing the following:
 - a. A description of the Contractor's chain of command for implementing the Hurricane and Severe Storm Plan
 - b. Methods for securing construction equipment, temporary facilities, construction materials, and constructed items
 - c. A description of the Contractor's insurance coverage for damage due to severe weather

C. Temporary Facility Drawings

1. Within 10 calendar days after date of receipt of Notice to Proceed, the Contractor shall submit a general layout sketch of the Contractor's temporary site facilities to include, but not be limited to, the following:
 - a. Traffic control plan
 - b. Equipment and vehicle parking areas
 - c. Material storage
 - d. Equipment lay down area
 - e. Fuel areas
 - f. Supplemental or other staging areas
 - g. Temporary well, water supply
 - h. Septic field or holding tanks, port-a-lets
 - i. Fences -- location and dimensions, entrance and exit points, and details of installation

1.4 UTILITIES

- A. The Contractor is responsible for furnishing all necessary utilities at the project site.

PART 2 - PRODUCTS

2.1 STORAGE CONTAINERS

- A. Welded steel construction, locking, shipping containers or equal.
- B. Fuel sled - ensure double containment for fuel tank, with electrical grounding, and provide fire extinguisher station.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Field Office
 - 1. A field office is not required for this project, but the Contractor may install a mobile field office if approved as part of the Temporary Facilities Drawings submittal noted herein.
- B. Identification of Employees
 - 1. Contractor and Subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.
- C. Employee Parking
 - 1. Park employee's vehicles in areas designated by the Owner away from traffic. Maintain area free of ruts, mud holes, and puddles. Place gravel where required by deteriorated conditions.
 - 2. Contractor should protect unattended equipment as it may be subject to vandalism.
 - 3. Storage trailers with the Owner's material should be locking type.
- D. Onsite Information
 - 1. Keep copy of Construction Drawings, Specifications, and other contract documents at Contractor's Field Office, available for use at all times.

3.2 AVAILABILITY AND USE OF UTILITY SERVICES

- A. Install temporary facilities and utilities in accordance with ANSI C2, USACE CESAJR 385-1-1, USACE EM 385-1-1, and NFPA 70. Obtain necessary construction, building, zoning, or soil erosion and sediment control approvals required by local authorities and utility companies. Equip trailer(s) with wind tie downs in accordance with local wind and building code requirements.
- B. Fire Extinguisher

1. Refer to USACE EM 385-1-1. Provide non-toxic, dry chemical, fire extinguisher meeting Underwriters Laboratories, Inc., approval for Class A, Class B, and Class C fires with a minimum rating of 2A, 10B, and 10C.

C. Utility Lines

1. Install, connect, and modify temporary lines as coordinated with the Owner. Conform to requirements in accordance with ANSI C2 and NFPA 70 for Temporary Electric Lines. Remove temporary line at completion of project.

3.3 PROJECT SIGN

A. Project Signs

1. If required by the Owner, a project sign approved by the Owner shall be erected within 15 days after receipt of the Notice to Proceed. Upon completion of the project, the sign shall be removed from the site.

3.4 PROTECTION AND MAINTENANCE OF TRAFFIC

A. During construction, the Contractor shall provide offsite parking and access areas. The Contractor shall maintain and protect traffic on all affected roads during the construction period. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic shall interfere as little as possible with adjacent landowners. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

B. Barricades

1. The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

3.5 CONTRACTOR'S TEMPORARY FACILITIES

A. Waste Storage

1. Provide dumpsters or suitable debris containers. Prevent windblown trash; cover as needed. Dispose of offsite when needed.

B. Fuel Storage and Fueling Operations

1. Refer to section on Environmental Protection.

3.6 SECURITY PERSONNEL

- A. When no on-site construction activities are taking place, Contractor shall provide locked gates across all access roads leading onto the property.
- B. When on-site construction activities are taking place, Contractor shall:
 - 1. Limit vehicular access to authorized vehicles and personnel only.
 - 2. Check fenced areas, equipment, trailers on a daily basis. If damage is observed or vandalism is found report to the Engineer.
 - 3. Not allow visitors without knowledge of Contractor and permission of the Owner. Direct visitors to report upon arrival to Contractor for site safety and accident prevention briefing. Provide visitors appropriate protective equipment (i.e., earplugs, safety glasses, etc.).

3.7 CLEANUP

- A. Construction debris, waste materials, packaging material, and the like shall be removed from the work site daily. Any dirt or mud that is tracked onto paved or surfaced roadways shall be cleaned away. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored. Refer to section on Environmental Protection for solid waste and post-construction cleanup.

3.8 RESTORATION OF STAGING AREA

- A. Upon completion of the project and after removal of trailers, materials, and equipment from the site, all areas used by the Contractor for the storage of equipment or material, or other uses, shall be landscaped in accordance with the section on Grassing. Gravel used to traverse vegetated or earthen areas shall be removed and the area restored to its original condition, including topsoil and grassing as necessary.

-End of Section-

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SECTION 01 77 00
PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 SUBMITTALS

The following submittals shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES:

- A. Record Drawings
 - 1. Submit digital scan of record drawings prior to requesting inspection for Substantial Completion.
- B. As-Built Drawings
 - 1. Submit PDF of digitally signed and sealed as-built drawings.
 - 2. Submit two (2) CDs containing the electronic AutoCAD drawing files and a PDF printout of the As-Built Drawings.
- C. Request for Inspection
 - 1. The Contractor shall notify the Engineer in writing when ready for the substantial completion inspection and the final acceptance inspection. The Owner and Engineer will then set up an appropriate time for inspection.

1.2 PROJECT RECORD DOCUMENTS

- A. Record Drawings:
 - 1. Throughout the project, maintain at least one clean, undamaged full-size hard copy set of Construction Drawings for submittal as Record Drawings for Engineer review. Do not use Record Drawings for construction purposes.
 - 2. Mark the set to show the actual installation where the installation varies from the Work as originally shown. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
 - 3. Where Shop Drawings are used, record a cross-reference of the Shop Drawings submittal number at the corresponding location on the Record Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - 4. Mark new information that is important to the Engineer and Owner but was not shown on the Construction Drawings or Shop Drawings.
 - 5. Note related Change-Order numbers where applicable.
 - 6. All changes due to Request for Information (RFI) process, shop drawings reflecting modified data due to submittal and approval process, and contract field and design modifications shall be incorporated in the Record Drawings.

7. Record Drawings shall be kept current on a weekly basis and at least one set shall be available on the jobsite at all times. Changes from the contract Drawings that are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes.
 8. The Engineer and the Contractor will jointly review the Record Drawings for accuracy and completeness prior to submission of each monthly pay estimate.
- B. As-Built Drawings:
1. Before requesting inspection for Certification of Substantial Completion, the Contractor shall complete an as-built survey and submit an As-Built Drawing of the project. The as-built survey shall show plan location and elevation of all constructed features. Approval and acceptance of final As-Built Drawings shall be accomplished before final payment is made to the Contractor.
 2. As-built surveys shall be performed by a Professional Land Surveyor licensed in the state of Florida and experienced in topographic and bathymetric survey work. The survey drawing shall be referenced to State Plan Florida North, NAD 1983 (Horizontal) and North American Vertical Datum (NAVD) 1988 (Vertical).
 3. The surveyor will collect transect data at a maximum spacing of 50 feet along the centerline axis of the constructed revetment. The surveys shall extend a minimum of 10 ft beyond the farthest edge of graded construction areas on all sides of the revetment (seaward, landward and alongshore). Point elevations along each transect line shall be collected at spacings no greater than 10 ft. The Contractor shall provide the certified as-built survey drawing and field notes to the Engineer within fourteen (14) calendar days of conducting the field survey.
 4. The As-Built Drawing set shall display the constructed cross sections superimposed on the Construction Drawing sheets displaying the planned cross sections. Linework for the constructed features should be bold and easily distinguishable from linework for the designed features. Linework for the designed features shown in the Construction Drawings shall be made to plot faded and in the background of the constructed features.
 5. On a separate drawing sheet, the Contractor shall overlay the as-built survey over the original drawings plan view showing the location of the revetment, and other features so that the actual constructed location can be compared with the proposed location shown on the Drawings. The Engineer will provide electronic copies of the Construction Drawings in AutoCAD.
 6. Each sheet of the As-Built Drawing set shall be clearly marked "As-Built Drawings" and shall be signed and sealed by a licensed Land Surveyor Registered in the State of Florida.
 7. As-built survey drawings shall be in AutoCAD 2015 or later format. Survey data shall be in the same horizontal coordinate system and vertical datum used in the Construction Drawings.
 8. For unit price bid items determined by survey, the As-Built Survey Drawing set shall show a table with the final construction quantities of each unit price item using the same unit as indicated on the Bid Schedule.
 9. The Owner and Engineer reserve the right to reject any drawing files it deems incompatible with the Engineer's AutoCAD system. Paper prints, drawing files and storage media submitted will become the property of the Owner upon final approval.

Failure to submit final As-Built Drawing files and marked prints as specified shall be cause for withholding any payment due the Contractor under this contract.

C. Request for Inspection

1. Submit request for inspection to the Engineer.

1.3 SUBSTANTIAL COMPLETION

A. The Owner will consider the project substantially complete upon completion and acceptance of all major construction items and initial placement and growth of the grass. Substantial completion does not need to coincide with the end of the Grassing Establishment Period.

B. Before requesting inspection for Certification of Substantial Completion, complete the following (list exceptions in the request):

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, the Contractor shall demonstrate 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation required for completion as indicated in these Specifications and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown (besides grassing establishment), include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
2. Submit partial release of lien for all work performed to date.
3. Submit specific warranties, maintenance agreements, final certifications, and similar documents.
4. Submit Record Drawings, As-built Drawings, and similar final record information.

C. Inspection Procedures

1. On receipt of a written request for inspection from the Contractor, the Engineer will schedule the inspection within 14 days or advise the Contractor that the work is not substantially complete. Upon inspection, if the Engineer is of the opinion that any items are not complete, the Engineer will advise the Contractor of construction items that must be completed or corrected before the certificate of substantial completion will be issued. If in the opinion of the Engineer, all the major items are complete, the Engineer will issue the notice of substantial completion accompanied by a preliminary punch list of minor items that need completion before final acceptance.
2. If necessary, the Engineer will repeat inspection when requested and assured that the Work is substantially complete.

1.4 FINAL ACCEPTANCE

A. The Owner will consider the project complete upon completion of all work items, including site cleanup and final acceptance of grassing (after the end of the grass establishment period).

B. Before requesting inspection for Certification of Final Acceptance, complete the following:

1. Submit all outstanding submittals.
 2. Submit final pay application reflecting all changes in the contract price.
 3. Submit final release of liens.
- C. Inspection Procedures
1. On receipt of a written request for inspection from the Contractor, the Engineer will proceed with inspection within 14 days. After inspection, the Engineer will prepare a punch list of any remaining items that require completion. When the Contractor has completed all items on the punch list to the satisfaction of the Engineer, the Engineer will issue the Certificate of Final Acceptance.

PART 2 - PRODUCTS

2.1 AUTOCAD DRAWINGS

- A. The Contractor will be furnished AutoCAD design files. The Contractor shall use the electronic design files provided by the Engineer to prepare changes and additions to the electronic As-Built Drawings.

PART 3 - EXECUTION

3.1 FINAL SITE CLEANUP

- A. Perform cleanup to keep the work, the site, and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from Construction work.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris, and rubbish from the site and dispose of at legal disposal areas away from the site.
- D. Remove all temporary erosion control measures such as silt fence, hay bales, etc.
- E. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of the site, and all work areas, to verify that the entire work area is clean.
- F. Removal of Temporary Facilities: Remove temporary facilities installed during construction.
- G. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
- H. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Store or dispose of these materials as directed by the Owner.

SECTION 31 10 00

SITE CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work in this section includes furnishing all labor, materials, and equipment necessary to complete any clearing and grubbing of vegetation and debris removal within the construction boundary and as indicated in the Construction Drawings. All work shall be done in accordance with all local, State, and Federal regulations and requirements.

1.2 DEFINITIONS

- A. Clearing - the felling, trimming, and cutting of trees and brush into sections and the satisfactory disposal of the trees, brush, down timber, grass, and other vegetation occurring in the area within the clearing limits shown on the Construction Drawings.
- B. Grubbing - the excavation, removal, and disposal of stumps, roots, and buried debris occurring in the area of the within the clearing limits shown on the Construction Drawings.
- C. Debris Removal - Debris removal shall consist of the removal and disposal of all on-site rubbish, including miscellaneous metallic and plastic objects, containers, tires, and all other materials, which are not covered by other Bid Items.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 PROTECTION

- A. Entrance and Access Roads
 - 1. Keep the site access roads free of cut timber and debris at all times.
- B. Trees, Shrubs, and Existing Facilities
 - 1. Trees, vegetation to be left standing, and on-site facilities shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

3.2 CLEARING

- A. **The Contractor shall clear all areas within the clearing limits of trees, brush, and grass with the exception of some locations at the western limit of revetment construction,**

upland of the armor stone crest. At these locations, where the Engineer deems the existing grass cover is adequate, the Contractor need not clear these areas of existing grass or apply new grassing, unless these areas are disturbed during construction.

- B. Trees, brush, grass and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface.

3.3 GRUBBING

- A. All stumps, roots, snags, and other buried organic or non-organic debris not suitable for foundation purposes shall be excavated and removed. Grubbing shall remove all roots, stumps, limbs and organic or non-organic debris to a depth of not less than 18 inches below the original ground surface. In general, organic stumps or limbs greater than 6 inches in dimension in any direction shall be removed. Roots longer than 12 inches and greater than 1 inch in diameter shall be removed. Depressions made by grubbing shall be filled with suitable material and compacted with passes of a tracked or wheeled vehicle as needed to make the surface conform to the surface of adjacent ground. The resulting ground should be smooth, free of ruts, holes, roots, limbs, stumps or debris that would interfere with subsequent grassing, mowing and maintenance operations.

3.4 DISPOSAL OF MATERIALS

- A. Vegetative and Woody Materials
 - 1. Logs, stumps, roots, brush, fallen trees and other clearing debris from clearing and grubbing operations shall be chipped or shredded and disposed of offsite.
- B. Burning
 - 1. Burning of any material will not be permitted.
- C. Rubbish, Metals, and Other Non-wood Debris
 - 1. All rubbish, metals, and other non-wood debris shall be removed from the site and disposed of in an approved disposal site. The material shall be separated from soils by shaking or vibration so that excessive soil is removed. The material should include no more than 10% soil by weight when weighed at the disposal site. This material shall become the property of the Contractor, and shall be disposed in accordance with all local, State, and Federal laws and regulations. No burning of material described in this section will be allowed onsite.

3.5 SITE CLEANUP

- A. The Contractor shall remove all trash, debris, tools, and equipment from the site after completion of the work.

-- End of Section --

SECTION 31 23 00

EARTHWORK CONSTRUCTION

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work covered by this section includes furnishing all labor, equipment, and materials required to perform all necessary excavation, filling, and grading to construct the project and any other earthwork described herein and in the Construction Drawings.

1.2 REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to within the text by the basic designation only. All publications are "Latest Edition" unless specified otherwise.

A. American Society of Testing Materials (ASTM)

ASTM D1140	Standard Test Methods for Amount of Material in Soils Finer than the No. 200 Sieve
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes
ASTM D2488	Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)
ASTM D3740	Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as used in Engineering Design and Construction
ASTM D6913	Standard Test Methods for Particle-Size Distribution (Gradation) of Soils Using Sieve Analysis
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

B. Florida Department of Transportation (FDOT)

FDOT Standard Specifications for Road and Bridge Construction

1.3 PHYSICAL DATA

- A. Physical Conditions: The indications of physical conditions on the Construction Drawings and in the Specifications are the result of site investigations by the referenced surveys dated 12/17/2021 (APPENDIX A). The site is subject to tidal currents, wave action, boat wake and winds. The physical conditions at the site are dynamic and may vary from the physical conditions shown in the Construction Drawings. The Contractor shall perform a site visit to review existing site conditions prior to project bidding and construction. The conditions at the time of the bid and construction commencement may differ.

1.4 DEFINITIONS

- A. FDOT Specifications: Latest edition of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.
- B. Fine Material: Fine material shall be defined as the amount of material by dry weight passing the U.S. standard No. 200 sieve (ASTM D1140 or ASTM D6913).
- C. Maximum Density: Maximum density shall be defined as the maximum dry density obtained from modified proctor compaction curves (ASTM D1557) and approved by the Engineer.

1.5 SUBMITTALS

The following submittals shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

A. Geotechnical Engineer and Testing Laboratory Credentials

- 1. The Contractor shall submit the name and credentials of the geotechnical engineering consultant and personnel who will be performing the quality control tests for soil compaction, moisture content, soil sieve analysis, classification, etc. The company and personnel shall show experience in this type of work, and the work shall be overseen by a Florida licensed professional engineer.
- 2. The Contractor shall submit the name and credentials of the testing laboratory which will be performing the material testing for Engineer's approval.

B. Dewatering Plan

- 1. Submit a written dewatering plan describing the equipment and means and methods required to dewater temporary stockpiles of excavated material for reuse as fill. Provide sketches as necessary.
- 2. Submit a copy of any necessary dewatering permits.

C. Earthwork Quality Control Tests and Measurements

The Contractor shall submit quality control tests to the Engineer for approval. These include:

- 1. Modified Proctor Test
- 2. Soil density and moisture tests
- 3. Soil gradation and classification tests

D. Surplus Material Placement Plan

- 1. If necessary, excess suitable material may be placed atop armor stone at the toe. Submit to the engineer a placement plan including total quantity of fill to be placed for review and approval. Placement of excess fill material shall be placed only after approval of the plan and submittal and acceptance of surveys of completed revetment sections.

E. Surveys

1. Pre-Construction Survey: Upon completion of demolition, removal, and disposal of on-site debris and prior to earthwork, the Contractor shall submit a pre-construction survey to establish pre-construction grades and verify earthwork quantities. For bid purposes, the Contractor shall assume that no more than 200 CY of import fill material or 200 CY of disposal of excess cut and/or unsuitable material to/from an off-site location will be required. Actual quantities and appropriate payment for import or disposal of fill will be based on the Contractor completed work as compared to the submitted and approved pre-construction survey with documentation for trucked fill volumes for import and export quantities.
2. Upon completion of earthwork and prior to placement of geotextile, the Contractor shall perform Progress Profile Surveys of the finished grades in accordance with Specification section 35 31 17 STONE REVETMENT.

1.6 GEOTECHNICAL ENGINEERING CONSULTANT AND TESTING LAB QUALIFICATIONS

- A. Geotechnical Engineer Consultant Testing and Inspection Services: Contractor shall retain a qualified independent geotechnical engineering/testing consultant to provide quality control testing services during earthwork operations. All work shall be done under the supervision of a licensed professional engineer. If requested, submitted testing results shall be signed and sealed.
- B. Testing Laboratory Qualifications: The geotechnical testing laboratory shall demonstrate to the Engineer's satisfaction, based on evaluation of laboratory-submitted criteria conforming to ASTM D3740, that it has the experience and capability to conduct required field and laboratory geotechnical testing without delaying the progress of the work. AASHTO or FDOT certification may be substituted as approved by the Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS FOR REVETMENT

- A. General
 1. Materials for the revetment fill shall be acquired from on-site excavation as shown on the Construction Drawings. The intention is to use the most suitable material obtainable. Materials containing brush, roots, sod, or other perishable materials, and stones larger than one (1) inch will not be considered suitable.
 2. The suitability of the materials shall be subject to quality control tests. The Contractor shall not excavate below the grades and elevations shown on the Construction Drawings unless approved by Engineer. Any soils excavated from below the mean high-water line (MHWL) will require temporary stockpiling and dewatering if intended for use as compacted fill above the MHWL. No dewatering will be required for suitable fill material placed underwater.
 3. The Contractor shall examine the Geotechnical data(s) (APPENDIX B and APPENDIX C) before bidding to review the revetment fill material available at the project site and to be thoroughly familiar with on-site geotechnical conditions.
- B. Suitable Material

1. Material considered suitable for earthwork revetment fill construction shall consist of an inorganic, granular soil containing between 0 and 12 percent fine material passing the No. 200 sieve (sand having a Unified Soil Classification of SP, SP-SM, or SP-SC.)

C. Unsuitable Material

1. Materials which do not comply with the requirements for "Suitable Material" are unsuitable for revetment fill construction. Additionally, materials unsuitable for use as revetment fill construction are defined as follows:
 - a. Material containing more than 4% organic matter (by dry weight)
 - b. Materials classified by the Unified Soil Classification System as PT, OH, OL, CH, SC, MH, SM, GM, GC, GW, and GP.
 - c. Materials containing roots greater than one (1) inch in diameter, logs, scrap lumber, metal objects, plastic and fiberglass objects, concrete construction refuse, and other objectionable debris.
 - d. Materials containing brush, sod, grass, organic, and other perishable materials.
 - e. Material containing rocks greater than one (1) inch in diameter.

D. Topsoil Material

1. Materials suitable for topsoil shall be taken from on-site clearing and grubbing areas within footprint of revetment construction. Unless otherwise approved by the Engineer, suitable topsoil shall be dark-colored soils discolored by the organic content of the soil and having at least 1.0 percent organic content by dry weight per ASTM F1647 and having a fine material content passing the 200 sieve between 12 and 40 percent per ASTM D6913.

PART 3 - EXECUTION

3.1 STOCKPILING AND DEWATERING

- A. Any soils excavated from below the mean high-water line (MHWL) will require temporary stockpiling and dewatering if intended to be used as compacted fill above the MHWL. No dewatering will be required for suitable fill material placed underwater. If the Contractor encounters material other than clean sand that may be unsuitable material as defined herein, the Contractor shall stockpile this material for soil testing to determine whether the material meets Specifications. The Contractor shall test the soil material to determine if the material is suitable or unsuitable and shall stockpile suitable material separately from unsuitable. The Contractor must work material to achieve appropriate moisture content prior to placement of fill for revetment construction. The Contractor shall not discharge dewatered effluent to any location onsite or offsite except for within the project area unless approved by the Engineer.
- B. The Contractor will contain dewatering effluent within Contractor staging area, segregate sediment from the effluent, and direct the clarified effluent to the stormwater treatment outfalls as identified on the Construction Drawings unless otherwise approved by the Engineer. Stormwater treatment outfalls are located in the adjacent facility, the Contractor shall install silt fence barriers, hay bales, and/or other turbidity control measures, to the satisfaction of the Engineer, to ensure any effluent discharged from the project site is clean from dirt and debris and meets state water quality standards. The Contractor shall monitor any discharge as

necessary to ensure that the discharged water does not violate state water quality standard. **The Contractor shall be responsible for implementing effective dewatering and sedimentation control measures. If the Engineer believes that dewatering effluent discharge or sedimentation is impacting adjacent facilities or cargo, the Contractor will be ordered to stop work until effective measures are instituted**

- C. Protect stockpiles from loss by exposure to rain, wind-driven dust, and other environmental circumstances. Stockpiles shall be covered to prevent dust, dirt, and debris from damaging adjacent facilities and cargo. **The Contractor shall be responsible for implementing effective dust control measures. If the Engineer believes that dust is impacting adjacent facilities or cargo, the Contractor will be ordered to stop work until effective measures are instituted.**

3.2 FILL PLACEMENT AND COMPACTION

A. General

- 1. No fill shall be placed on any part of the proposed revetment or project area until the Engineer has inspected, reviewed, and approved all stockpiled fill material, graded areas, and required soil tests.

B. Revetment

- 1. The Contractor shall place material within the revetment so that the gradation and distribution of material throughout the compacted earth fill section of the revetment is uniform.
- 2. Fill shall be placed at a moisture content within plus or minus 2% of the soils optimum moisture content as determined by ASTM D1557. Place fill in lifts 12 inches or less and compact using a vibratory compactor or other approved methods as approved by the Engineer. Material placed above the MHWL shall be compacted to a minimum of 90% of the maximum density determined by the Modified Proctor Test (ASTM D1557). If the overlapping tracks of a bulldozer or lightweight vibratory compaction equipment are utilized as the only compaction means, then the fill loose lift thickness shall be reduced to six (6) inches. Construct the revetment earthwork to the lines, grades, and cross sections indicated on the Construction Drawings.
- 3. All fill material placed below water or below the MHWL need not be compacted to any specified density requirement. As practical, the Contractor shall attempt to semi-compact any material placed below water by utilizing the excavator bucket or other means to tamp down or compress any soil material placed below water.
- 4. Where the prepared foundation grade is too steep or too uneven, material shall be placed by benching.
- 5. The Contractor shall record field density tests as soon as practically possible after compacting the revetment fill.

3.3 TOPSOIL PLACEMENT, TESTING AND STOCKPILING

- A. Approximately 3 to 6 inches of topsoil shall be applied to all areas slated for grassing before the application of grass or grass seeding.
- B. Vegetation shall be removed from the topsoil shall and be managed as indicated in SECTION 31 10 00 SITE CLEARING AND GRUBBING.

- C. The Contractor shall temporarily stockpile topsoil onsite at a location approved by the Engineer.

3.4 EARTHWORK WORK SEQUENCE

- A. The expected general work sequence for earthwork is as follows:
 1. Install erosion and turbidity measures as required by all local, state, and federal permits and as indicated on the Construction Drawings.
 2. Demolish, remove, and dispose of all on-site debris as indicated on the Construction Drawings.
 3. Clear and Grubb where applicable
 4. Perform pre-construction surveys
 5. Excavate existing revetment material where applicable and as indicated on the Construction Drawings.
 6. Stockpile soils excavated from below the mean high-water line (MHWL) that are intended to be used as compacted fill above the MHWL. No dewatering will be required for suitable fill material placed underwater
 7. Perform soil sieve analyses and classification of the stockpiled excavated material to determine adequacy as fill material. Material must satisfy soil testing requirements and be inspected and approved by the Engineer prior to placement.
 8. Dewater excavated material that is intended to be used as compacted suitable fill above the MHWL
 9. Place suitable fill material to the lines, grades, and tolerances outlined here-in and as indicated on the Construction Drawings. Add water (or dewater) as necessary to reach optimum moisture content specified by proctor test.
 10. During earthwork placement and compaction, perform soil density and moisture tests as required here-in.
 11. Perform progress surveys of completed grading in accordance with specification section 35 31 17 STONE REVETMENT.
- B. The Engineer may approve other work sequences proposed by the Contractor with consideration given for environmental impacts, site access, soil erosion, groundwater control, settlement, etc.

3.5 REVETMENT SOIL QUALITY CONTROL TESTING

- A. Determination of Maximum Density
 1. Prior to construction of the earth revetment, the Contractor shall collect samples and perform a minimum of one (1) Modified Proctor test (ASTM D1557) to characterize maximum density. Based on a review of proctor tests, the Engineer will provide the target maximum density required for field compaction of soil material.
- B. Quality-Control Testing: Earthwork
 1. In-Place Density (Compaction) Testing: The Contractor's geotechnical engineering consultant shall perform a minimum of one soil density and moisture test for every 250 cubic yards of fill placed and compacted. Soil density and moisture testing shall conform to ASTM D6938. The tests shall be distributed over the revetment as determined by the geotechnical consultant unless otherwise directed by the Engineer. The consultant shall record the elevation, station, and approximate offset location of each test.
 2. Soil Particle-Size (Gradation) Testing and Soil Classification: The Contractor's geotechnical engineering consultant shall perform a minimum of one soil gradation test (ASTM D6913) and one soil classification test (ASTM D2488) for every 250 cubic yards of

material placed, but not less than once every 2 weeks during construction. The Contractor shall test for organic content as a percent per dry weight every 500 cubic yards of material placed, but not less than once every 2 weeks during construction. Sampling for gradation testing should occur at locations determined by the geotechnical consultant unless otherwise directed by the Engineer. The consultant shall record the elevation, station, and approximate offset of the sample location.

3. The Contractor shall obtain test results in a timely manner and take corrective action to repair any part of the project not meeting the requirements of the Specifications.

3.6 EARTHWORK GRADE TOLERANCES

- A. All earthwork grades shall be within plus 6 inches of the specified elevations on the Construction Drawings to ensure compliance with all environmental permits. By no means shall the Contractor excavate below or construct fill templates below the lines and grades shown on the Construction Drawings. If progress surveys identify grades below the design grades shown on the Construction Drawings, the Engineer may request the Contractor, at no additional cost to the Owner, to promptly fill and regrade as needed to meet design grades and elevations.

3.7 EARTHWORK FINAL GRADING

- A. Bring the revetment to the required grade and cross section at all points in accordance with SECTION 35 31 17. Redress the revetment surface and adjacent grades as necessary to remove ruts and irregularities to the satisfaction of the Engineer.

3.8 GRASSING

- A. Apply grassing in accordance with SECTION 32 92 19 GRASSING ESTABLISHMENT.

3.9 PROTECTION AND MAINTENANCE

- A. Repair and reestablish grades to the specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact. Where settling occurs before project completion, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.
- B. After completion of the earthwork portion of the revetment, maintain and repair the soil surface as necessary to eliminate any ruts or depressions caused by settlement or by the operation of vehicles or equipment for the remainder of the contract period. Leave the crest surfaces in such condition that they drain freely at all points. The Contractor shall take special care to protect the completed earthwork grading and adjoining areas affected by his operations from erosion with the use of erosion fencing, hay bales, temporary swales, or whatever other means necessary. If erosion occurs, make the necessary repairs immediately.

3.10 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. The Contractor shall remove and dispose of all on-site trash and debris, including but not limited to, concrete pilings, beams, slabs, rubble, riprap, timber and steel debris, poly-foam and any miscellaneous metallic objects, plastic objects, tires, etc. and legally dispose of it offsite.
- B. Excess suitable material may be placed atop armor stone at the toe. Submit to the engineer a placement plan including total quantity of fill to be placed for review and approval. Placement of excess fill material shall be placed only after approval of the plan and submittal and acceptance of surveys of completed revetment sections. Contractor shall be responsible for controlling turbidity and meeting all local, state, and federal water quality standards.
- C. If unsuitable material is encountered, at the direction of the Engineer, this material shall be spread over the final grade surface for use as topsoil or shall be disposed of offsite in accordance with all state and local laws and regulations. For bidding purposes, the Contractor shall assume that no more than 100 cubic yards of unsuitable material will need to be disposed of offsite.

-- End of Section

SECTION 32 92 19

GRASSING ESTABLISHMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This section consists of requirements for all labor, equipment, and materials required where grassing or sodding is required. **Grassing shall be installed and established at all locations identified on the Construction Drawings and at all previously vegetated areas disturbed during construction, including laydown areas, access roads, temporary roads, etc.** Areas and/or acreage for grassing identified on the Drawings are an estimate. The Contractor shall determine any additional areas that may be disturbed due to requirements for material storage, work areas, parking, or access to the project area and include the cost in the bid price.
- B. The bid price for grassing shall include installation, materials, watering and maintenance as necessary to provide a satisfactory stand of grass as defined in this Specification.
- C. This section covers materials and execution for hydroseeding and sodding. However, except for where sodding is specifically required in the specifications or Construction Drawings, the Contractor shall select the appropriate means and method of hydroseeding or sodding for establishing grass to meet the Satisfactory Stand of Grass as described in this Specification. The Contractor may select multiple means methods of meeting these requirements at different grassing areas if desired.
- D. Grass seed and seed mixture listed described herein is intended for general guidelines for bidding purposes for hydroseeding. The Contractor shall submit their site-specific proposed mixture based on grassing season, and local experience for Engineer Approval before ordering grassing materials.

1.2 DEFINITIONS

- A. Temporary Grass Plant: Rye, millet, or other grass that is considered by the Engineer to be an annual plant and not likely to survive year to year on its own.
- B. Permanent Grass Plant: Bahia, Bermuda, or other grass approved by the Engineer in the final seed mixture that is expected to take root and survive on its own from year to year with minimal or no maintenance.

1.3 REFERENCES

The publications listed below form a part of this Specification to the extent referenced. The publications are referred to within the test by the basic designation only.

- A. U.S. Department of Agriculture (USDA)

AMS Seed Act Federal Seed Act

1.4 SUBMITTALS

The following shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

A. Grassing Establishment Plan

Prior to grassing, the Contractor shall submit a Grass Establishment Plan including the following information:

1. An outline explaining general procedure, listing of equipment to be used, order of application, and method of application to be used.
2. Submit the seed mixture, tackifiers, mulch, soil amendments, fertilizer, weed control, insect/pest control, and times and rates of application of each.
3. The name and location of the source, and pH and chloride content, of the water used for grass watering for the Engineer's approval. If a municipal or deep well potable water source is used, pH and chloride testing are not required.

B. Grassing Material Certificates

1. Prior the delivery of materials, certificates of compliance demonstrating that the proposed materials meet the specified requirements.

PART 2 - PRODUCTS

2.1 SEED

- A. Provide State-Certified seed of the latest season's crop delivered in original sealed packages, bearing producer's guaranteed analysis for percentages of mixtures, purity, germination, hard seed, weed seed content, and inert material. Label in conformance with AMS Seed Act and applicable state seed laws. Damaged seed will be rejected.
- B. Temporary seeding species shall be selected based on season. Seed species and mixtures shall be proportioned by weight as follows:

Seed	Minimum Pure Seed Content	Minimum Active Germination	Total Germination	Additional Requirements
Pensacola Bahia	95%	40%	80% including firm seed	N/A
Bermuda	95%	N/A	85%	Shall be the common variety
Annual Rye Grass	95%	N/A	90%	N/A
Millet	90%	N/A	85%	Shall be of the brown top variety

- C. Weed seed shall be a maximum 1 percent by weight of the total mixture.
- D. The mixing of seed may be done by the seed supplier prior to delivery, or on site as directed.

2.2 SOD

- A. Sod shall be Pensacola Bahia. Sod shall be relatively free of thatch, diseases, nematodes, soil-borne insects, weeds or undesirable plants, stones larger than 1 inch in diameter, woody plant roots, and other materials detrimental to a healthy stand of grass plants. Broadleaf weeds and patches of foreign grasses shall be a maximum of 2 percent of the sod section.
- B. Sod shall be machine cut to a minimum 1 - 3/8 inch thickness. Measurement for thickness shall exclude top growth and thatch.
- C. Sod shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted.

2.3 FERTILIZER

- A. Fertilizers shall comply with the State fertilizer laws. The numerical designations for fertilizer indicate the minimum percentages (respectively) of (1) total nitrogen, (2) available phosphoric acid, and (3) water-soluble potash, contained in the fertilizer.
- B. The chemical composition of the fertilizer for each application shall be chosen by the Contractor.

2.4 MULCH

- A. Mulch shall be free from weeds, mold, and other deleterious materials. Mulch materials shall be native to the region. The following provides types of mulch that the Contractor may use:
 - 1. Seeded Areas: Straw
 - a. Stalks from oats, wheat, rye, barley, or rice. Furnish in air-dry condition and of proper consistency for placing with commercial mulch-blowing equipment. Straw shall contain no fertile seed.
 - 2. Seeded Areas: Hay
 - a. Native hay, sudan-grass hay, broomsedge hay, or other herbaceous mowings, furnished in an air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Hay shall be sterile, containing no fertile seed.
 - 3. Hydroseeded Areas: Wood Cellulose Fiber
 - a. Processed to contain no growth or germination-inhibiting factors and dyed an appropriate color to facilitate placement during application. Composition on air-dry weight basis: 9 to 15 percent moisture, pH range from 4.5 to 6.0. Use with hydraulic application of grass seed and fertilizer.
 - 4. Hydroseeded Areas: Paper Fiber
 - a. Paper fiber mulch shall be recycled news print that is shredded for the purpose of mulching seed.

2.5 TOPSOIL

- A. Material suitable for topsoil shall meet requirements specified in SECTION 31 23 00 EARTHWORK CONSTRUCTION.

2.6 WATER

- A. Water shall be the responsibility of the Contractor, unless otherwise noted. The water used in the described grassing operations may be obtained from any approved spring, pond, lake, stream, well, or municipal water system. The water shall be free of excess and harmful chemicals, acids, alkalis, or any other substance that might be harmful to plant growth. Saltwater or brackish water shall not be used.
- B. The Contractor shall include the cost of and bear the responsibility for verifying suitability of the water for grassing as well as all labor and equipment in the bid price.

2.7 SURFACE EROSION CONTROL MATERIAL

- A. The Contractor is advised that additional erosion control measures may be beneficial for the grassing areas. If necessary, the Contractor should submit any proposed additional erosion control measures under the Grassing Establishment Plan for Engineer approval.

PART 3 - EXECUTION

3.1 GENERAL

- A. The intent is to provide a permanent stand of grass over all newly constructed or disturbed areas as identified in the Construction Drawings.
- B. The Contractor shall be responsible for observing and documenting that the seed, mulch, fertilizer, tackifiers, and other materials are applied according to the Specifications. The Contractor shall personally observe that all material was delivered to the site unopened and shall collect all bags and containers used to hold these products; the Contractor shall make samples of these bags available to the Engineer for inspection.
- C. Perform grassing operations only during periods when beneficial results can be obtained. When drought, excessive moisture, excessive wind, or other unsatisfactory conditions prevail, the grassing work shall stop until conditions again become favorable.

3.2 TOPSOIL

- A. Apply topsoil to all areas slated for grassing before grassing operations begin.
- B. Topsoil identification,, mixing, stockpiling, and placement shall conform to SECTION 31 23 00 EARTHWORK CONSTRUCTION.

3.3 SITE PREPARATION

- A. Prepared Surface

1. The prepared surface shall be a maximum of 1 inch below the adjoining grade of any surface area. New surfaces shall be blended to existing areas. The prepared surface shall be completed with a light raking to remove debris. Debris and stones over 1-inch diameter measured in any dimension shall be removed from the surface. Areas with the prepared surface shall be protected from compaction, damage by vehicular and pedestrian traffic, and surface erosion.

3.4 WATERING

- A. Do not water newly seeded areas to force the seed germination. Water these areas only to sustain grass growth.
- B. Once seed germination begins, water every day at a rate required to keep the grassed areas moist throughout the day. Apply water at a rate that will not cause erosion of the soil, seed, or mulch. If natural rainfall of $\frac{1}{4}$ in or greater occurs, water 3 days after the rainfall event if no further rainfall of sufficient quantity occurs. Continue this watering schedule for 30 days from germination.
- C. After this initial 30-day period, water as described above every 7 days for the remainder of the Grassing Establishment Period. The above watering schedule is the required minimum. If the emerging grass appears stressed, or the soil conditions appear excessively dry, the Contractor shall apply additional amounts of water as necessary to establish a satisfactory stand of grass.

3.5 SURFACE EROSION CONTROL

- A. Where indicated or as directed, surface erosion control material shall be installed in accordance with manufacturer's instructions. Placement of the material shall be accomplished without damage to installed material or without deviation to finished grade.

3.6 RESTORATION AND CLEAN UP

- A. Restore to original condition existing turf areas, pavements, and facilities which have been damaged during seeding operations at the Contractor's expense. Remove excess and waste material and dispose of offsite.

3.7 GRASS ESTABLISHMENT PERIOD

- A. The grass establishment period to obtain a healthy stand of permanent grass plants will begin on the last day of seeding work required under this contract, shall continue through the remaining life of the contract, and end when a satisfactory stand of permanent grass plants is obtained, or 90 days after completion of seeding work whichever comes first.
- B. If the Engineer or Owner deems the grass unsatisfactory at the conclusion of the establishment period, the Owner may either:
 1. Extend the Grassing Establishment Period by a mutually agreed upon time period and require/allow the Contractor to remedy the grassing deficiencies.
 2. Terminate the Contract and withhold sufficient funds to remedy the grassing deficiencies through other means.

- C. Because initial grassing operations would likely begin near the end of the project, the Contractor should understand that this work will likely continue beyond the date of Substantial Completion.
- D. Maintenance of the seeded areas and initial grassing shall include eradicating weeds, insects and diseases; protecting embankments and ditches from surface erosion; maintaining erosion control materials and mulch; protecting installed areas from damage due to traffic; mowing; watering; and post-fertilization.
- E. The Contractor shall mow as frequently as necessary to control the growth of weeds. Weeds shall not be allowed to seed.
- F. Unsatisfactory stand of grass plants and mulch shall be repaired or reapplied, and eroded areas shall be repaired.

3.8 SATISFACTORY STAND OF GRASS

- A. Permanent grass plants shall be evaluated for species and health at the end of the grass establishment period. A satisfactory stand of permanent grass plants from the seeding operation shall be a minimum of 10 grass plants per square foot having a minimum height of 1 inch with at least 50% of the grass plants consisting of permanent grass such as Bahia or Bermuda. Bare spots shall be a maximum of 9 inches square. The total bare spots shall not exceed 2 percent of the total seeded area.

– End of Section –

SECTION 35 31 17
STONE REVETMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. The Work covered by this section consists of furnishing all labor, materials, and equipment for construction and installation of the stone revetment, including but not limited to the geotextile, bedding stone, and armor stone as described herein and in the Construction Drawings.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only. All publications are "Latest Edition" unless specified otherwise.

- A. American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T104 Standard Method of Test for Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate

- B. American Society for Testing and Materials

ASTM C127 Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate

ASTM C535 Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

1.3 SITE CONDITIONS

- A. Site Conditions: The indications of site conditions on the drawings and in the specifications are the result of site investigations by the referenced surveys dated 12/17/2021 (APPENDIX A). The site is subject to tidal currents, wave action, boat wake and winds. The physical conditions at the site are dynamic and may vary from the physical conditions shown in the construction drawings. The Contractor shall perform a site visit to observe and verify existing site conditions prior to project bidding and construction. The conditions at the time of the bid and construction commencement may differ.

1.4 PERMITS

- A. The Owner has furnished the regulatory authorizations as issued by the Florida Department of Environmental Protection and U.S. Army Corps of Engineers for the proposed work (APPENDIX D). The Contractor shall be responsible for obtaining any other necessary permits required to complete the work. The Contractor shall be responsible for ensuring that all work necessary for construction of the revetments and associated appurtenances complies with the conditions set forth in the permit documents. The Contractor will obtain and comply with any and all other permits for this project. In the case of conflict with these specifications, the permits shall govern. If the Contractor violates any condition of the permits and work is stopped and/or fines are levied by the

state of Florida or other public entity, then any additional costs incurred shall be paid by the Contractor and not charged to the Owner.

1.5 SUBMITTALS

- A. The following submittals shall be submitted in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.
- B. Independent Testing Laboratory Qualifications: The Contractor shall obtain the services of an independent testing laboratory to perform any required tests. The Contractor shall submit the qualifications of the independent testing laboratory to the Engineer for acceptance.
- C. Geotextile Product Data: Submit certified reports attesting that the proposed geotextile meets all requirements of the Specifications as outlined herein.
- D. Bedding Stone: Submit test reports demonstrating that the stone is of satisfactory quality and meets all criteria as required of the Specifications.
- E. Armor Stone: Submit test reports demonstrating that the stone is of satisfactory quality and meets all criteria as required of the Specifications.
- F. Work Plan: The Contractor shall submit a written Work Plan. The plan shall identify staging areas where materials and stone will be offloaded, staged, and stored; transportation methodology; and scheduling. The plan shall describe the measures and controls to properly install the geotextile and stone; measures to protect the secondary layers from damage during armor stone placement operations; method(s) and sequence of stone placement; and equipment to be used during each phase of placement. The plan shall also describe the work sequence, expected progression of work, and quality control measures including progress surveys.
- G. Progress Surveys:
 - 1. Graded Revetment Slope: Submit progress surveys of graded revetment slope as outlined herein to the Engineer for approval.
 - 2. Bedding Stone Placement: Submit progress surveys of placed bedding stone for approval by the Engineer.
 - 3. Armor Stone Placement: Submit progress surveys of placed armor stone for approval by the Engineer.
- H. As-Built Survey: Submit completed as-built survey to the Engineer for approval. As-built survey shall conform to the requirements outlined in Specification section 01 77 00 PROJECT CLOSE OUT.

PART 2 - PRODUCTS

2.1 GEOTEXTILE

- A. Geotextile shall consist of Mirafi FW404 or Engineer approved equivalent.
- B. The Contractor shall submit manufacturer's information and certification that the proposed geotextile meets these specifications prior to ordering. Contractor's submittal shall also include a minimum 6" x 6" physical sample of the fabric material.

2.2 STONE GENERAL REQUIREMENTS

- A. All stone shall be natural stone and be closed-grained, angular, hard, sound, clean, and durable such that it will not disintegrate from the actions of the atmosphere, sea water, or handling and placing. Stone shall be of a suitable quality to ensure permanence in the revetment structure and in the climate in which it is to be used. It shall be free from cracks, blast fractures, bedding, drilling holes, seams and other defects that would tend to increase its deterioration from natural cases. If, by visual examination, it is determined that 10 percent or more of the stone contains detrimental hairline cracks, the Engineer reserves the right to reject the stone produced. The stone shall be clean and reasonably free from soil, dust, quarry fines, and shall contain no refuse. **Concrete rubble, riprap, or any other forms of concrete materials, will not be accepted.**
- B. The Engineer reserves the right to refuse payment for stone delivered to the site that does not meet these specifications. The Contractor shall remove any unacceptable stone from the work site at no additional cost to the Owner. Unacceptable stone shall not be used for construction unless specifically authorized by the Engineer.
- C. The Engineer may require the Contractor to perform additional testing for stone delivered to the site that does not appear to meet these specifications. Additional testing may include physical properties testing, weight testing, drop testing, or any other tests deemed necessary by the Engineer to ensure compliance with these specifications.
- D. The Contractor shall submit certification letters and lab reports demonstrating that the various stone materials meet specifications. Submitted information shall include gradation and all laboratory tests including tests for unit weight, bulk specific gravity, absorption, Los Angeles Abrasion and Soundness. **Laboratory test results shall be less than one year old.**
- E. The Contractor may not use more than one quarry or stone source without prior acceptance of the Engineer. The Engineer will require additional tests, at no cost to the Owner, if additional quarries or stone sources are requested.

2.3 BEDDING STONE

- A. All bedding stone, shall be granite or durable quality limestone and meet or exceed the following physical characteristics:
 - 1. Unit Weight (ASTM C127) = 145 lb/cf (minimum)
 - 2. Absorption (FM 1 – T85) = Maximum 5%
 - 3. Los Angeles Abrasion (ASTM C535) = Maximum Loss 45%
 - 4. Soundness (AASHTO T104) = Maximum Loss 12%
- B. The Contractor shall provide bedding stone as shown in the project drawings and having the weight and gradations described in the following:

% FINER	DIAMTER (IN.)	WEIGHT (LBS)
15	1	0.08
50	3 (D ₅₀)	2.25 (W ₅₀)
85	6	19
100	10	84

2.4 ARMOR STONE

- A. All armor stone shall be granite and meet or exceed the following physical characteristics:
1. Unit Weight (ASTM C127) = 165 lb/cf (Minimum)
 2. Absorption (ASTMC127) = Maximum 2%
 3. Los Angeles Abrasion (ASTM C535) = Maximum Loss 45%
 4. Soundness (AASHTO T104) = Maximum Loss 12%
- B. The Contractor shall provide armor stone as shown in the project drawings and having the weight and gradations described in the following:

% FINER	DIAMTER (FT.)	WEIGHT (LBS)
15	1.13	240
50	1.50 (D ₅₀)	560 (W ₅₀)
85	1.98	1290
100	2.17	1680

- a. The stones shall be closely graded and at least 50% of the stones delivered for a given segment of revetment shall have weights equal to or greater than the "W50" value provided above. No more than 15% of the stones delivered for a given segment shall have weight less than the "W15" value provided. No more than 15% of the stones delivered for a given segment shall have a weight more than the "W85" value provided.
- b. The delivered armor stone shall contain no more than 50% of the stone with a length to thickness (l/d) ratio greater than 2, and no armor stones with a length to thickness (l/d) ratio greater than 3 shall be permitted. Flat stones will not be accepted.

PART 3 - EXECUTION

3.1 MATERIAL DELIVERY AND INSPECTION

- A. The Contractor shall inspect the stone materials and geotextiles upon delivery to verify that the proper material has been received and the material meets the requirements of these specifications. The Contractor shall also inspect these materials to ensure they are free of flaws or damage that may have occurred during manufacturing, shipping, or handling.

3.2 MATERIAL HANDLING AND STORAGE

- A. Stone shall be transported and handled in a manner that minimizes stone breakdown and contamination with dirt, organic matter, or other objectionable material and debris.
- B. The geotextile filter fabric shall be stored in a clean, dry area where it will not be damaged. Fabric rolls shall remain in their original packaging until needed. Rolled materials may be laid flat or stood on end. The Contractor shall prevent excessive mud, wet concrete, epoxy, or other deleterious materials from coming in contact with and affixing to the geotextile.

- C. The Contractor shall stockpile and store all materials onsite at an approved location in a manner that does not damage any property or utilities at the storage site, and does not constitute a safety hazard. **If stone is stored on a hard surface such as asphalt or concrete pavement, the use of protective mats shall be used to prevent fracturing stone and damaging the pavement.** If stone is stored on site or at an off-site staging area for extended periods, it shall be kept clean and free from debris.
- D. The Contractor shall be responsible for all costs associated with handling and stockpiling of materials.
- E. Storage of stone material seaward of the MHW line before permanent placement is not permitted.

3.3 SITE GRADING AND REVETMENT FOUNDATION PREPARATION

- 1. Prior to placement of geotextile and stone, the revetment foundation shall be graded in accordance with the Construction Drawings and specification section 31 23 00 EARTHWORK CONSTRUCTION.

3.4 GEOTEXTILE & BEDDING STONE

- A. General
- B. Geotextile and Bedding Stone
 - 1. Geotextile
 - a. Geotextile shall be installed as noted on the Construction Drawings.
 - b. Geotextile shall be placed as soon as practical after the revetment slope has been graded.
 - c. Contractor shall propose the geotextile Installation methods in the Contractor's Work Plan. Proposed installation methods must conform to the project Specifications and Construction Drawings and requires acceptance by the Engineer.
 - d. The Contractor's installation plan may include pinning the geotextile in accordance with the manufacture's recommendations.
 - e. Installation shall be such that the attached geotextile underlays the bedding stone.
 - f. The geotextile filter fabric must be installed with an overlap greater than or equal to 2 feet on all sides where the roll segment ends meet, or as directed by the Engineer.
 - g. The geotextile filter fabric shall be wrapped around the exterior (seaward edge) of the bedding stone and returned towards the revetment such that a minimum of 3 ft of the material is covered by armor stone as depicted on the Construction Drawings. The material shall be wrapped around the landward edge of the bedding stone and returned such that a minimum of 3 ft of material is covered by bedding stone and armor stone as depicted on the Construction Drawings.
 - h. Removal of existing stone, debris, concrete, piles, riprap, sand, or marine substrates will be at the Contractor's expense.
 - i. Contractor shall not stretch or tear the geotextile.

2. Bedding Stone

- a. Bedding Stone shall be installed to the lines and grades as noted on the construction drawings. Bedding stone shall be placed as soon as practical after installation of the geotextile filter fabric.
- b. Contractor shall propose the bedding Stone installation methods in the Contractor's Work Plan. Proposed installation methods must conform to the project specifications and drawings and requires acceptance by the Engineer. Any deviation from the Work Plan submittal shall require additional review and acceptance by the Engineer.
- c. Bedding stone shall be placed in a manner to assure accurate placement within the revetment footprint.
- d. Grading and placement of the bedding stone shall be conducted in a manner that does not damage or move the geotextile.
- e. Contractor shall recover and re-install to final grade stones that roll or otherwise move outside the toe of the revetment. Note that the approved FDEP permit does not allow for revetment construction outside of the lines and elevations shown on the Construction Drawings.

3.5 ARMOR STONE

- A. Contractor shall propose the armor stone placement methods in the Contractor's Work Plan. Proposed installation methods must conform to the project Specifications and Drawings and requires acceptance by the Engineer.
- B. Armor stone shall be placed as soon as practical after installation of bedding stone.
- C. Contractor shall make reasonable effort to limit stone freefall and disturbance of the marine environment. Installation should be performed so that bedding stone and filter fabric are undamaged. Stone shall be placed to match the proposed grade profiles shown in the Construction Drawings. Stones that roll outside the toe of the final grade or are misplaced shall be recovered and re-installed to final grade.
- D. Stone shall be handled in a manner that minimizes the introduction of dirt, organic matter, or other objectionable materials into the coastal area and minimizes the creation of turbidity in the surrounding waters.
- E. Stone shall only be placed once the required grades have been reached and the geotextile is installed. The geotextile, bedding stone, and armor stone shall be placed as quickly as practical following completion of earthwork and grading.
- F. The Contractor shall place the armor stone in numbers and layers as necessary to meet the design template depicted on the Construction Drawings. **In no locations shall the revetment consist of less than two layers of armor stone (2 x D₅₀) with a minimum total thickness of 3 feet (for W50 armor stones).** The internal and external (face) slopes of the stone shall not be steeper than indicated on these Drawings and at no time shall be steeper than 1V:2H on the seaward face unless noted otherwise.
- G. The ends of the revetment shall be tapered as shown in the Construction Drawings and provide all required structure slopes, toe protection stones, neat lines, armor thicknesses, etc.
- H. The Contractor shall place all stones by methods submitted in the Work Plan and accepted by the Engineer. The stones shall be placed in such a manner that they will properly interlock with the

underlying or adjacent stones to resist displacement by wave or current action. Stones shall be carefully placed to leave no large interstitial voids. The Contractor shall place the stones one layer at a time, built-up evenly. Stones shall be placed in accordance with the construction sequence unless otherwise accepted by the Engineer. All stone will be placed in a way that produces a mass of unsegregated stone with maximum interlocking and rock-to-rock contact and a minimum of voids.

- I. The equipment used in placing the armor stone shall be suitable for handling material of the size required, including the ability to place the stone over its final position before release and, if necessary, pick up and reposition the stone. Placement shall begin at the bottom of the slope and progress upward. Moving stone by drifting and manipulating down the slope will not be permitted. Stone shall not be dropped from a height greater than three (3) feet. All stones should be placed in a random fashion as to size and orientation to achieve maximum interlocking and minimum voids.
- J. In areas of suspected voids, the Contractor shall backfill or “chink” all void spaces with smaller diameter armor stone, excess bedding stone and/or repurposed/excavated rock materials to increase tightness of the structure as shown in the Construction Drawings.
- K. Stone placement during periods of wave energy sufficient to cause material displacement shall be at the Contractor’s risk. All material lost or displaced during construction as a result of wave displacement shall be replaced at the Contractor’s expense.
- L. If the Contractor anticipates that construction will be interrupted for more than four (4) continuous days, including weekend and holidays, the Contractor will be required to complete placement of the bedding and armor stone of that portion of the work under construction in order to stabilize the structure prior to the work interruption.

3.6 QUALITY CONTROL

- A. The Contractor shall check the geotextile, upon delivery to verify the material meets specifications and is free of flaws or damage that may have occurred during manufacturing, shipping, or handling.
- B. The Contractor shall be responsible for verifying the quality and suitability of all stone materials and construction methods used to construct the revetment. At the delivery site, visual inspections shall be made of all stone material for size, gradations, fractures, and any other defects that may compromise the quality of the revetment, and to assure that handling during loading, transporting, and unloading does not cause damage to the materials. Any material broken, cracked, not in conformance with the gradation and/or weight limitation, or exhibiting signs of defects, shall be removed from the site and replaced with new stones at no additional expense to the Owner. Final acceptance of the material will be made by the Engineer at the project site following final placement within the completed revetment.
- C. See section on Progress Surveys.

3.7 DAMAGE AND REPAIR

- A. Any geotextile fabric damaged during fabrication, filling, installation, or stone placement shall be repaired in a manner accepted by the Manufacturer and Engineer or shall be replaced by the Contractor. Any such measures required shall be at no additional cost to the Owner.
- B. Any stone damaged during the loading, transport, handling, or stone placement operations shall be replaced by the Contractor at no additional cost to the Owner. Damaged stone shall not be utilized within the revetment unless accepted by the Engineer.
- C. Any existing pavement, utilities, fences, or other structures damaged during stone placement or other related operations shall be replaced by the Contractor at no additional cost to the Owner.

3.8 MAINTENANCE

- A. The Contractor shall be responsible for care and maintenance of all rock slopes and materials until final acceptance by the Owner and Engineer. Damage to an incomplete section due to any cause before acceptance shall be repaired by the Contractor at no additional cost to the Owner.
- B. In the event of sliding, settlement or failure of any completed section of the revetment during construction, but before its acceptance, the Contractor shall, upon written order of the Owner and Engineer, remove the failed section and rebuild that portion of the revetment. The Contractor may reuse the material if deemed appropriate by the Engineer. The Engineer shall determine the nature of the slide or failure. If, in the opinion of the Engineer, the slide is caused through a fault of the Contractor, the resulting reconstruction shall be performed without cost to the Owner. If the slide or failure is due to no fault of the Contractor, the work will be paid for as negotiated with the Owner.

3.9 TOLERANCES

- A. The finished surface and stone layer thickness shall not deviate from the lines and grades shown on the drawings by more than the tolerances listed below.

Stone Thickness Tolerances

Material	Thickness	Finished Grade Elevation
Armor Stone	Plus 6 inches or minus 3 inches	Plus or minus 6 inches
Bedding Stone	Plus or minus 3 inches	Plus or minus 6 inches

1. Horizontal tolerances for the constructed revetment are +/- 1 feet from the plan view layout.
2. Finished earthwork or soil foundation grade tolerances for elevation is 6 inches. By no means shall the Contractor excavate below or construct fill templates below the lines and grades shown on the Construction Drawings.
3. Placed material that is beyond the maximum tolerances stated herein is ineligible for payment unless specifically accepted by the Engineer and Owner.
4. The intention is that the work will be built generally to the required elevations, slope, and grade and that the outer surfaces shall be even and present a neat appearance. Placed material not meeting these limits shall be removed or reworked. Excess-placed material will not be paid for, and the cost of replacing and/or removing this stone will be deducted from the amounts due to the Contractor.

3.10 WORK SEQUENCE AND PROGRESSION OF THE WORK

- A. The Contractor shall submit a Work Plan to the Engineer for approval.
- B. The Contractor shall place geotextile, bedding, and armor stone atop finished grades as outlined in the approved Work Plan. The Contractor shall perform progress profile surveys of the completed graded revetment slope, bedding, and armor layers at 50-foot transects as identified in section 3.11.
- C. **Progress profile surveys shall be submitted, as soon as feasible, upon completion of each 50-foot section. Unless otherwise instructed by the Engineer, the Contractor may proceed with grading, placement of geotextile, and placement of bedding stone for a given section**

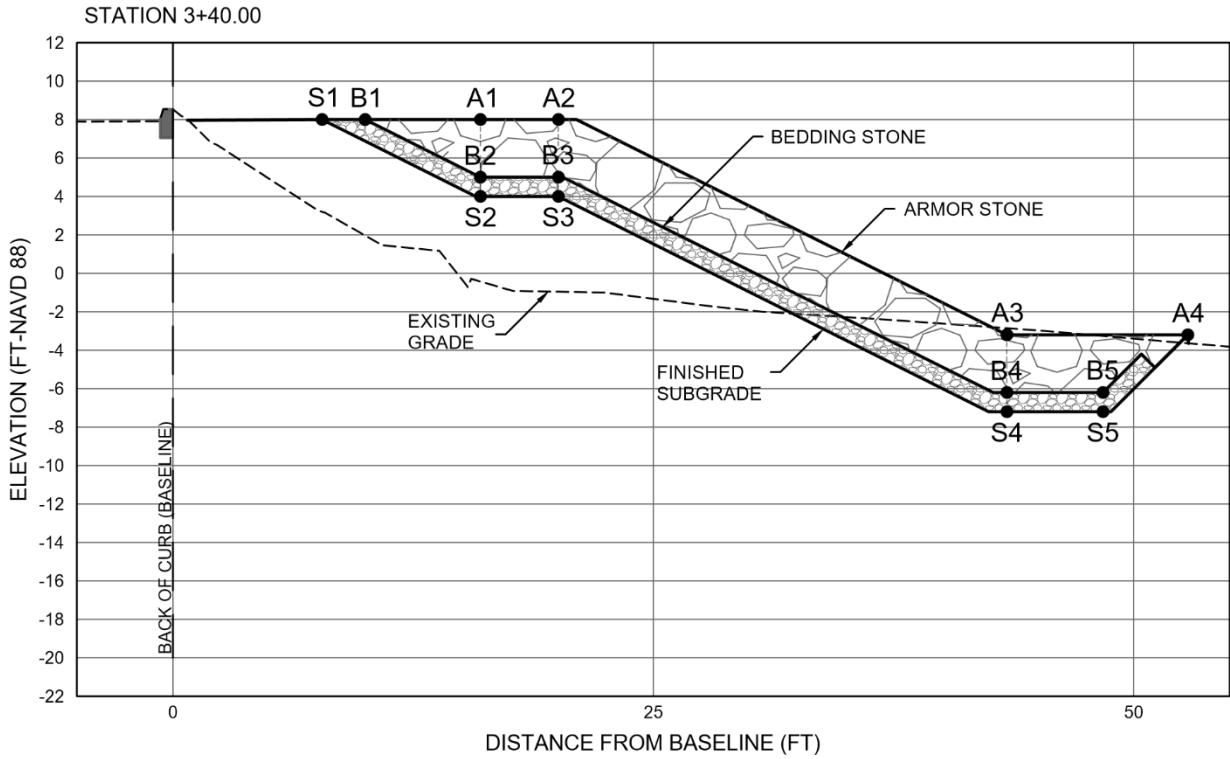
prior to approval of the progress survey; however, the Contractor shall not place additional armor stone until the previous progress profile survey is approved by the Engineer.

- D. Upon completion of the revetment, the Contractor shall submit an As-Built survey as outlined in section 01 77 00 PROJECT CLOSEOUT.**
- E. The Engineer will consider different work sequences as submitted by the Contractor in their Work Plan. Acceptance of alternate work sequences will depend on the Contractor's experience and expected speed of construction (how long a partially completed section will be exposed to wave and current action).

3.11 PROGRESS PROFILE SURVEYS

- A. During construction of sections of the revetment, the Contractor shall perform topographic progress profiles after completion of:
 - 1. Earthwork and foundation grading of revetment slope.
 - 2. Placement of bedding stone.
 - 3. Placement of armor stone.
- B. Progress profiles shall be suitable to verify that the slope and elevation of the prepared soil, the stone layer thicknesses of bedding and armor stone, and the general constructed elevations and grades of the revetment are in accordance with the Construction Drawings and Specifications.
- C. The Contractor shall coordinate with the Engineer to submit timely progress surveys during construction of the revetment to ensure that grading and stone placement meet specifications.
- D. The progress profiles will consist of surveyed elevation points taken at 50-foot transects. For example, a surveyed cross section identifying the top of earthwork, bedding stone, and armor stone shall be taken at stations 0+50, 01+00, 01+50 and so forth through the end of the work limits. Elevation points for each progress survey shall be taken at 5 ft. intervals extending from the toe to the crest of the revetment and at least 5 ft beyond. Contractor shall submit progress profile data as depicted in the attached example. Upon request, the Engineer will provide a native file in excel for tabulation of point data.
- E. At each progress survey, the Contractor shall estimate the tonnage of stone placed and submit the calculated quantity with the progress survey.**
- F. The Contractor shall assume a maximum review period of up to one week for each progress survey and shall schedule accordingly to avoid schedule delays or periods of no work. Acceptance of progress surveys will not constitute final acceptance of the work.

**PROGRESS PROFILE SURVEY
EXAMPLE**



SURVEY DATA POINTS FOR STATION 3+40.00			
LAYER	SURVEY POINT	DISTANCE FROM BASELINE *	ELEVATION (FT-NAVD 88) *
ARMOR STONE	A1	16.0'	8.0'
ARMOR STONE	A2	20.1'	8.0'
ARMOR STONE	A3	43.4'	-3.2'
ARMOR STONE	A4	52.8'	-3.2'
BEDDING STONE	B1	10.0'	8.0'
BEDDING STONE	B2	16.0'	5.0'
BEDDING STONE	B3	20.1'	5.0'
BEDDING STONE	B4	43.4'	-6.2'
BEDDING STONE	B5	48.4'	-6.2'
SUBGRADE	S1	7.8'	8.0'
SUBGRADE	S2	16.0'	4.0'
SUBGRADE	S3	20.1'	4.0'
SUBGRADE	S4	43.4'	-7.2'
SUBGRADE	S5	48.4'	-7.2'

*VALUES LISTED ARE FOR EXAMPLE ONLY. CONTRACTOR SHALL PROVIDE ACTUAL SURVEY POINTS AT EACH PROGRESS PROFILE LOCATION AS DESCRIBED IN THE SPECIFICATIONS.

-- End of Section --



DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

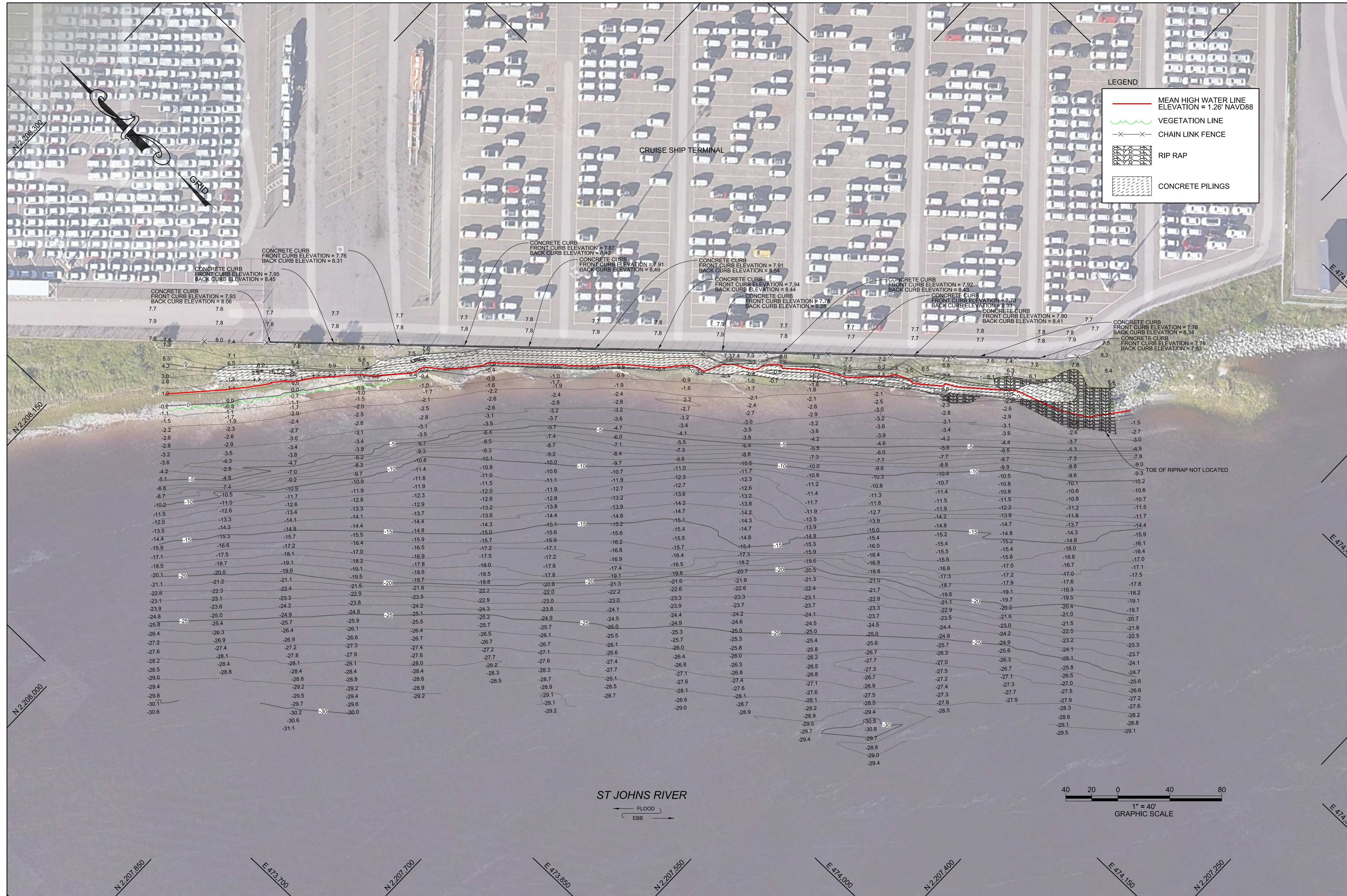
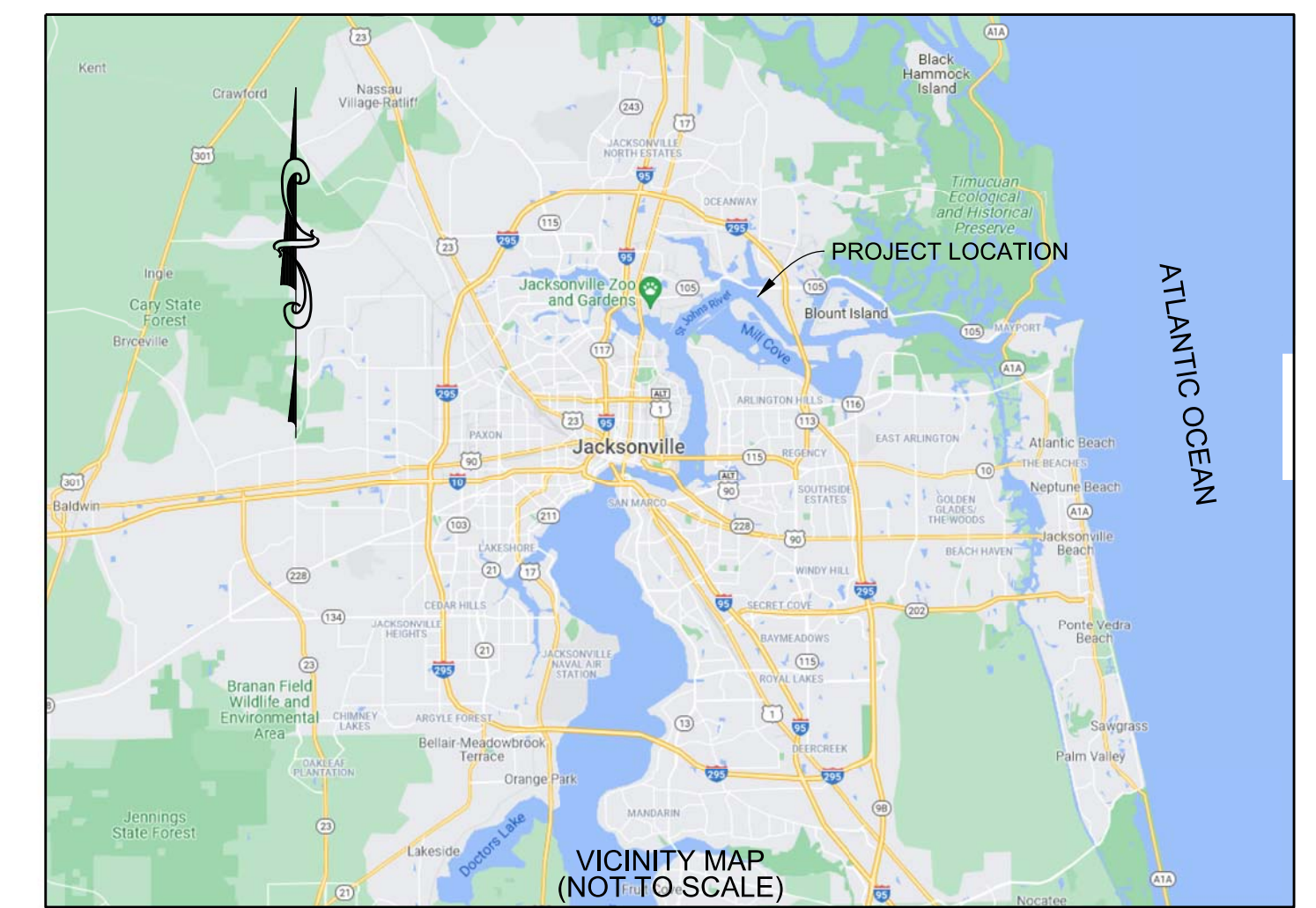
DUVAL COUNTY, FLORIDA

APPENDIX A

Survey (12/17/2021)

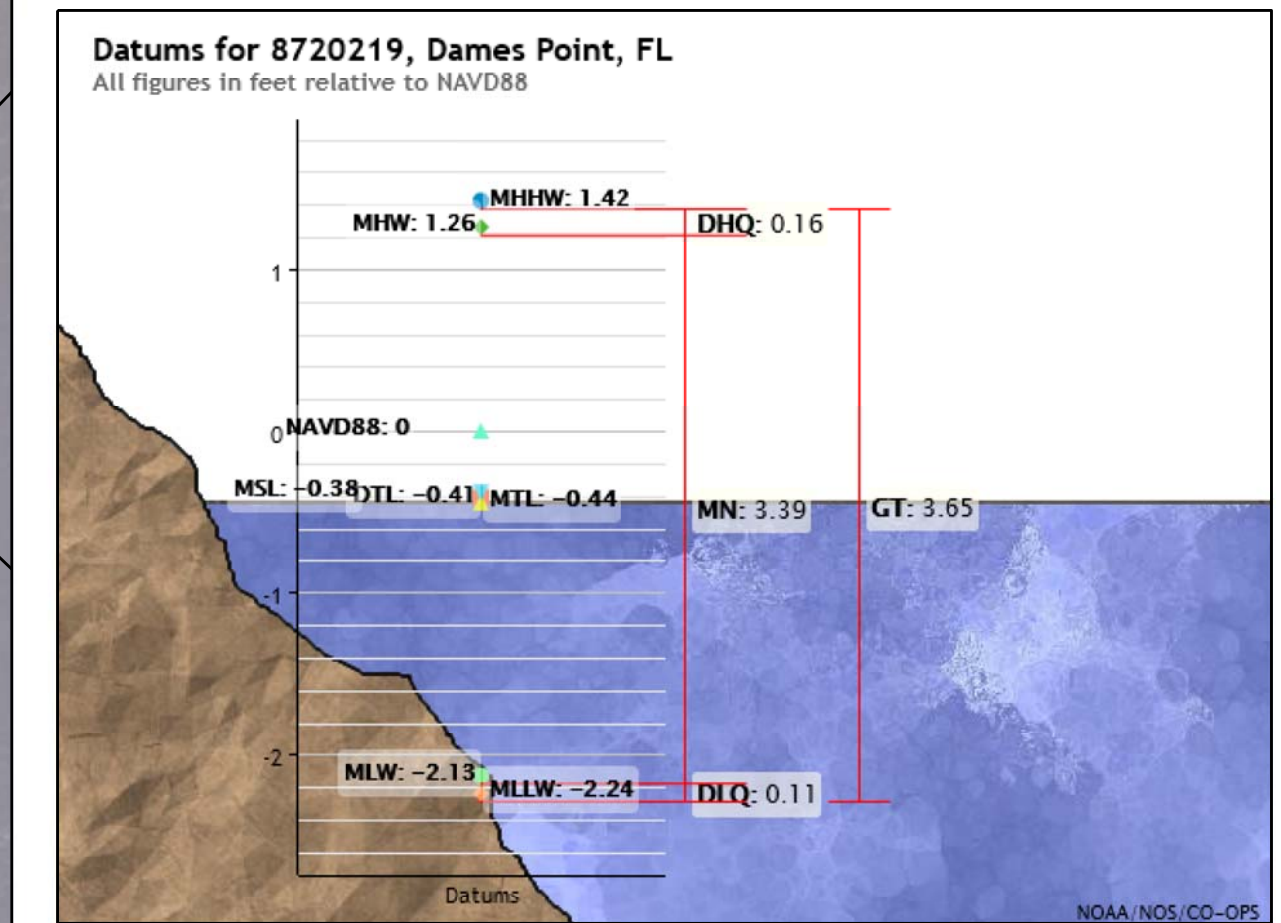
MAP SHOWING A HYDROGRAPHIC AND TOPOGRAPHIC SURVEY

OF THE ST JOHNS RIVER AND ITS SHORELINE AT THE JAXPORT CRUISE SHIP TERMINAL
LOCATED IN JACKSONVILLE, FLORIDA



SURVEY NOTES:

- REFER TO ARC SURVEYING & MAPPING PROJECT NUMBER 21-225.
- SOUNDINGS ARE IN FEET AND TENTHS AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- THE DATE OF SURVEY WAS DECEMBER 17, 2021.
- ALL ELEVATIONS WERE ESTABLISHED FROM NOS TIDAL BENCHMARK "872-0219 TIDAL A", HAVING A PUBLISHED ELEVATION OF 6.49' NAVD88.
- PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83).
- SURVEY WAS PERFORMED USING REAL-TIME KINEMATIC (RTK) GPS SURVEY TECHNIQUES. VERTICAL MEASUREMENTS WERE MADE USING AN ECHOTRAC SOUNDER EQUIPPED WITH A 200KHZ TRANSDUCER.
- THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE ON THE DATE(S) LISTED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME.

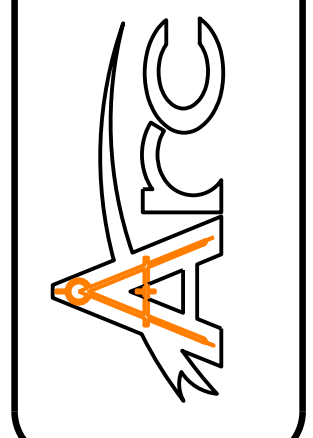


DATE	BY	REVISION

Project Title:
Hydrographic and Topographic Survey of the Jaxport Cruise Ship Terminal
Jacksonville, Florida

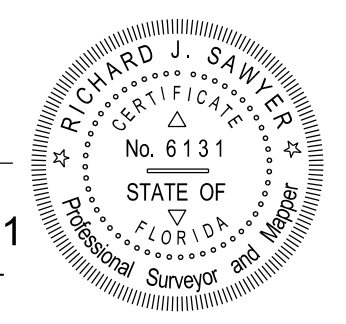
Prepared For:
Taylor Engineering, Inc.
10199 Southside Boulevard, Suite 310
Jacksonville, Florida 32256

Arc Surveying & Mapping, Inc.
Professional Hydrographers • Surveyors • Mappers
5202 San Juan Avenue
Jacksonville, Florida 32210
904.384.8377



LB No. 6487
Drawn By: M. SAWYER
Scale: 1" = 40'
Plot Date: 12/21/21
Checked By: F. SAWYER
Fld Bk / Pg: N/A
ARC Project No.: 21-225
SHEET: 1 OF 1

Richard J. Sawyer Date:
Professional Surveyor and Mapper No. 6131
NOT VALID WITHOUT THE SIGNATURE, DATE AND THE ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER





DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

APPENDIX B

Geotechnical Report



ECS Florida, LLC

Geotechnical Engineering Report JAXPORT Shoreline Protection

Intermodal Drive
Jacksonville, Florida

ECS Project Number 35:32602

March 25, 2022
Revised June 8, 2022





March 25, 2022
Revised June 8, 2022

Mr. Jake Sydnor, P.E.
Taylor Engineering, Inc.
10199 Southside Boulevard
Suite 310
Jacksonville, Florida 32256

ECS Project No. 35:32602
Client ID: 0405

Reference: Geotechnical Engineering Report
JAXPORT Shoreline Protection
Intermodal Drive
Jacksonville, Florida

Dear Mr. Sydnor:

ECS Florida, LLC. (ECS) has completed the subsurface exploration and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our agreed to scope of work. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration conducted and our design and construction recommendations. Note this report has been revised based on our discussion on June 8, 2022.

It has been our pleasure to be of service to Taylor Engineering, Inc. during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify the assumptions of subsurface conditions made for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,
ECS Florida, LLC

Chris Egan, P.E.
Associate Principal Engineer
Registered, Florida No. 79645
Cegan@ecslimited.com

Robert W. Clark, P.E.
Senior Project Engineer
Registered Florida No. 52210
RWClark@ecslimited.com

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Appendix A – Drawings & Reports

- Figure 1 - Site Location Diagram
- Figure 2 - Field Exploration Diagram
- Generalized Subsurface Soil Profile: Cross Section A-A'

Appendix B – Field Operations

- Reference Notes for Boring Logs
- Subsurface Exploration Procedure: Standard Penetration Testing (SPT)
- Boring Logs

1.0 INTRODUCTION

The purpose of this study was to provide geotechnical information for the support of the proposed shoreline protection system along a portion of the JAXPORT shoreline. The recommendations developed for this report are based on project information supplied by Taylor Engineer, Inc.

Our services were provided in accordance with the Taylor Engineering Contract Number C2021-088 dated January 10, 2022.

This report contains the procedures and results of our subsurface exploration program, review of existing site conditions, engineering analyses, and recommendations for the design of the project.

The report includes the following items:

- A brief review and description of our field and laboratory test procedures and the results of testing conducted.
- A review of surface topographical features and site conditions.
- A review of subsurface soil stratigraphy with pertinent available physical properties.
- Final copies of our soil boring logs.
- Estimated settlement for the proposed shoreline protection system.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION/CURRENT SITE USE

The project site is located along the western side of the Dames Point Marine Terminal in Jacksonville, Duval County, Florida. The site is bordered to the north, east, and west by the Dames Point Marine Terminal parking area and to the south by the St. Johns River. The general site location is shown on Figure 1 in Appendix A and in Figure 2.1.1 following.

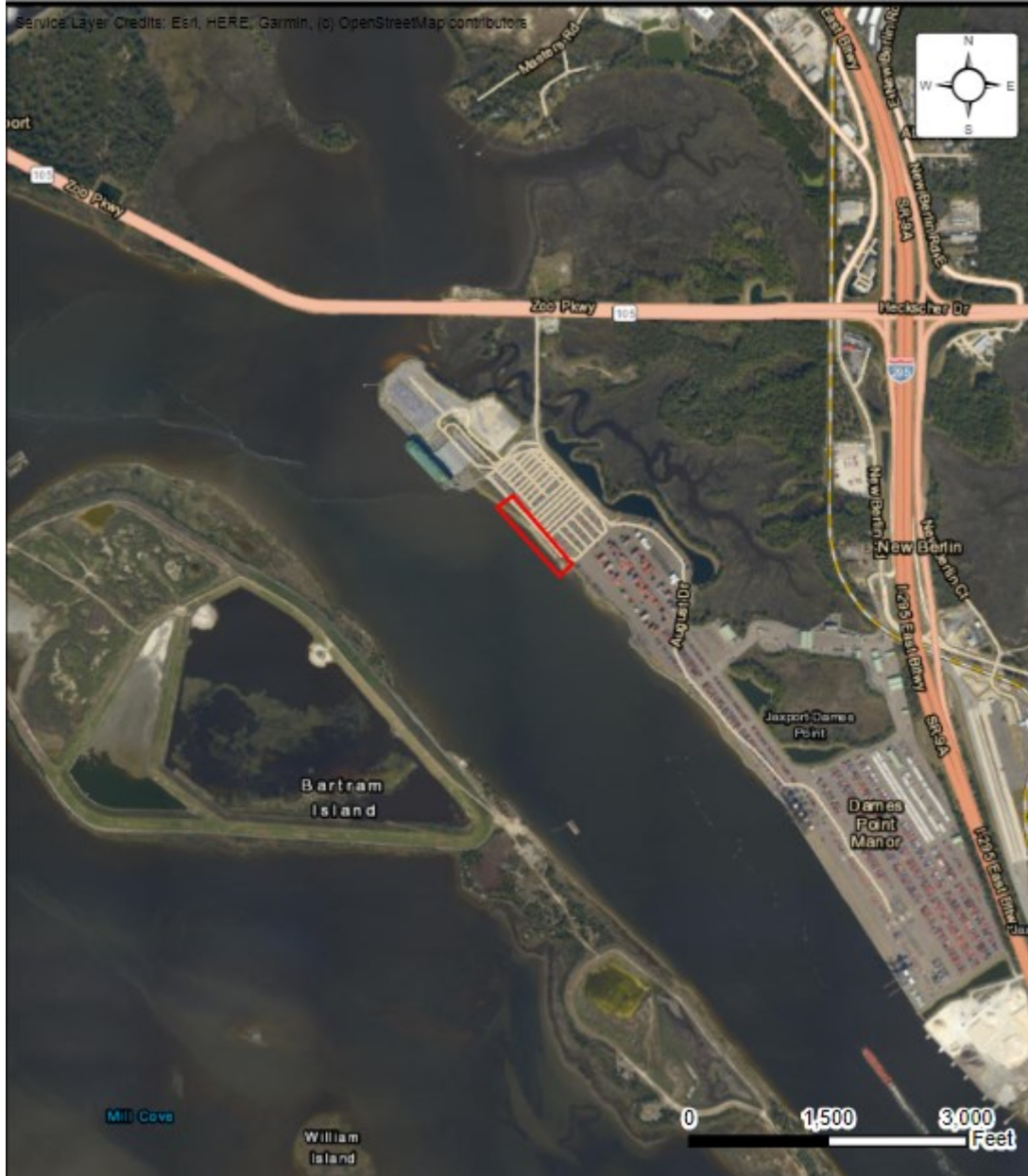


Figure 2.1.1. Site Location

At the time of our exploration, the site was developed as an asphalt roadway and parking area. Based on the as-built drawings prepared by CH2MHill dated April 2001, we understand that the asphalt areas of the site are relatively level and slope towards the drainage structures. The slope on the south side of the parking area slopes downward to the St. Johns River with a topographic high of approximately EL 9 and topographic low of approximately EL 3.

2.2 PROPOSED CONSTRUCTION

The following information explains our understanding of the planned development.

A portion of the shoreline protection system along the existing shoreline of the Dames Point Marine Terminal is being reconstructed. The new shoreline protection system is proposed to be constructed

with a geotextile fabric on the regraded bank and slope area along the shoreline. On the geotextile, a minimum 1-foot layer of bedding stone, which consists of limestone or granite, will be placed. A minimum 3-foot layer of armor stone, which consists of granite, will be placed on top of the bedding stone. We understand the bedding stone will have a unit weight of about 145 pounds per cubic foot (pcf) and the armor stone will have a unit weight of approximately 165 pcf.

If actual project information varies from these conditions, then the recommendations in this report may need to be re-evaluated. We should be contacted if any of the above project information is incorrect so that we may reevaluate our recommendations.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

Our exploration procedures are explained in greater detail in Appendix B including the insert titled Subsurface Exploration Procedures. Our scope of work included drilling three Standard Penetration Test (SPT) borings. Our borings were located with a handheld GPS unit and their approximate locations are shown on the Field Exploration Diagram (Figure 2) in Appendix A.

3.1 SUBSURFACE CHARACTERIZATION

The subsurface conditions encountered were generally consistent with published geological mapping. The following sections provide generalized characterizations of the soil strata. Please refer to the boring logs in Appendix B.

Typical Depth (ft)		Stratum	Description
From	To		
Existing Ground Surface	1 – 1.1	n/a	Asphalt and Limerock
1 – 1.1	8 - 12	I	Loose to Medium Dense Fine SAND (SP) and Fine SAND With Clay (SP-SC), Moist to Wet
8 - 12	20 - 30	II	Medium Dense, Silty Fine to Coarse SAND (SM) with trace clay, Wet

A graphical presentation of the subsurface conditions is shown on the Generalized Subsurface Soil Profiles included in Appendix A.

3.2 ENCOUNTERED GROUNDWATER OBSERVATIONS

Water levels were measured during our field exploration and are presented in our boring logs in Appendix B. Groundwater depths measured at the time of drilling ranged from 6.1 feet to 6.3 feet below the ground surface. Variations in the long-term water table may occur as a result of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors.

3.3 VISUAL CLASSIFICATION

Each sample was visually classified on the basis of texture and plasticity in accordance with ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) and including

USCS classification symbols. After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

4.0 DESIGN RECOMMENDATIONS

Based on the results of the soil borings and the project information, as previously described, we estimate the maximum total settlement of 1 inch, or less, and maximum differential settlement of ½ inch, or less, after initial placement. We note the soil borings were conducted within the asphalt area at the top of the slope. Based on our experience, a layer of very loose sediment may be encountered within the river. We have assumed these sediments, if encountered, will be removed or displaced during the site preparation.

5.0 CLOSING

Our geotechnical exploration has been performed, our findings presented, and our recommendations prepared, in accordance with generally accepted geotechnical engineering principles and practices. ECS is not responsible for any independent conclusions, interpretation, opinions, or recommendations made by others based on the data contained in this report.

Our scope of services was intended to evaluate the soil conditions within the zone of soil influenced by the shore protection system. Our scope of services does not address geologic conditions, such as sinkholes or soil conditions existing below the depth of the soil borings.

If any of the project description information discussed in this report is inaccurate, either due to our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted immediately in order that we can review the report in light of the changes and provide additional or alternate recommendations as may be required to reflect the proposed construction.

We recommend that ECS be retained to review the project's plans and specifications pertaining to our work so that we may ascertain consistency of those plans/specifications with the intent of the geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain these quality assurance services and that ECS be retained to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise.

ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

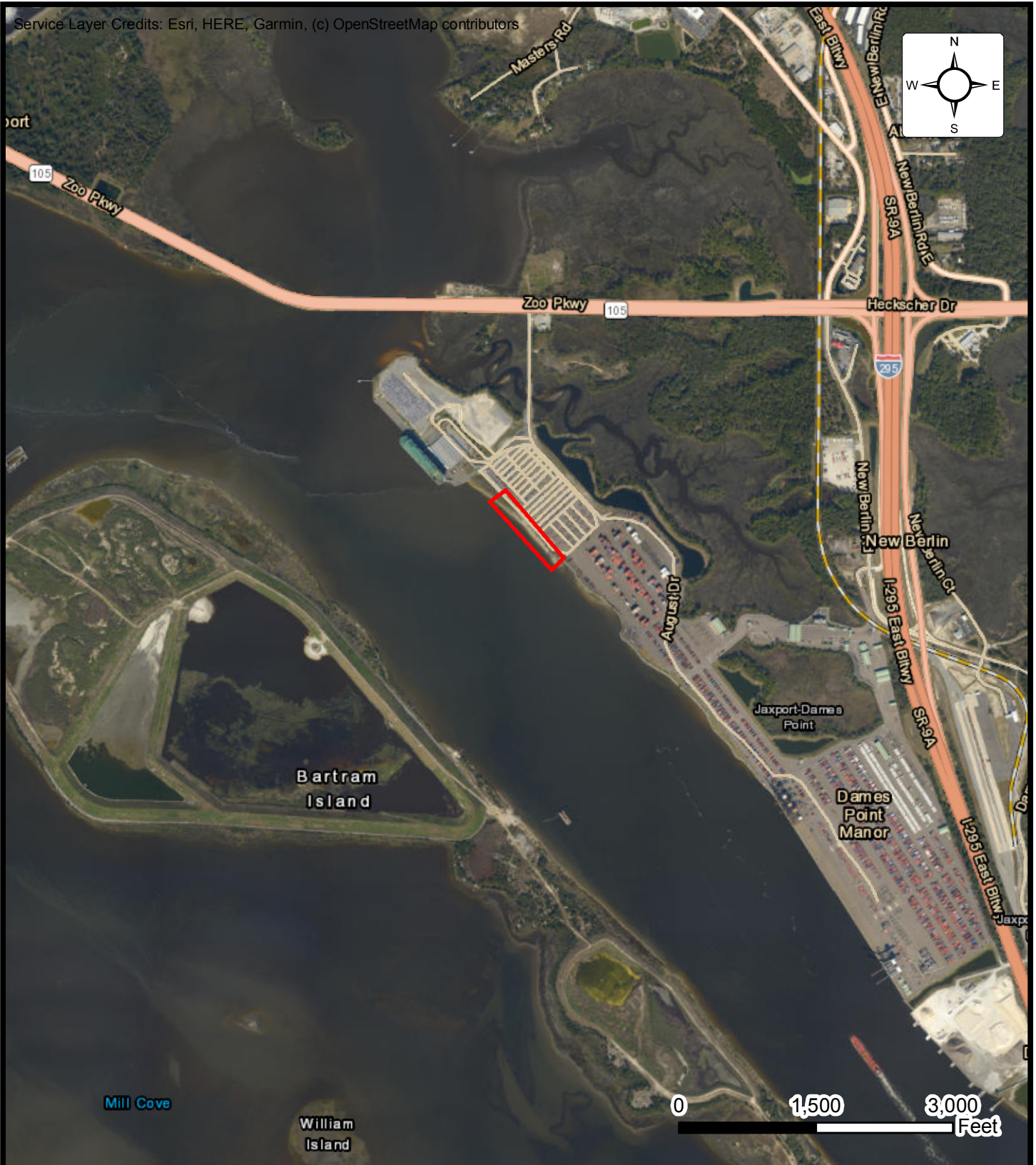
APPENDIX A – Diagrams & Reports

Figure 1 - Site Location Diagram

Figure 2 - Field Exploration Diagram

Generalized Subsurface Soil Profile: Cross Section A-A'

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors



Mill Cove

William Island

0 1,500 3,000 Feet



SITE LOCATION DIAGRAM JAXPORT SHORELINE PROTECTION

5263 INTERMODAL DRIVE, JACKSONVILLE, FLORIDA

TAYLOR ENGINEERING, INC.

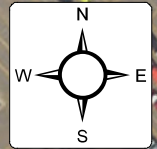
ENGINEER
CME2

SCALE
AS NOTED

PROJECT NO.
35:32602

SHEET
FIGURE 1

DATE
2/15/2022



Jaxport-Dames
Point



B-01



B-02



B-03

Legend



Approximate SPT Boring Locations



FIELD EXPLORATION DIAGRAM JAXPORT SHORELINE PROTECTION

AUGUST DRIVE, JACKSONVILLE, FLORIDA

TAYLOR ENGINEERING, INC.

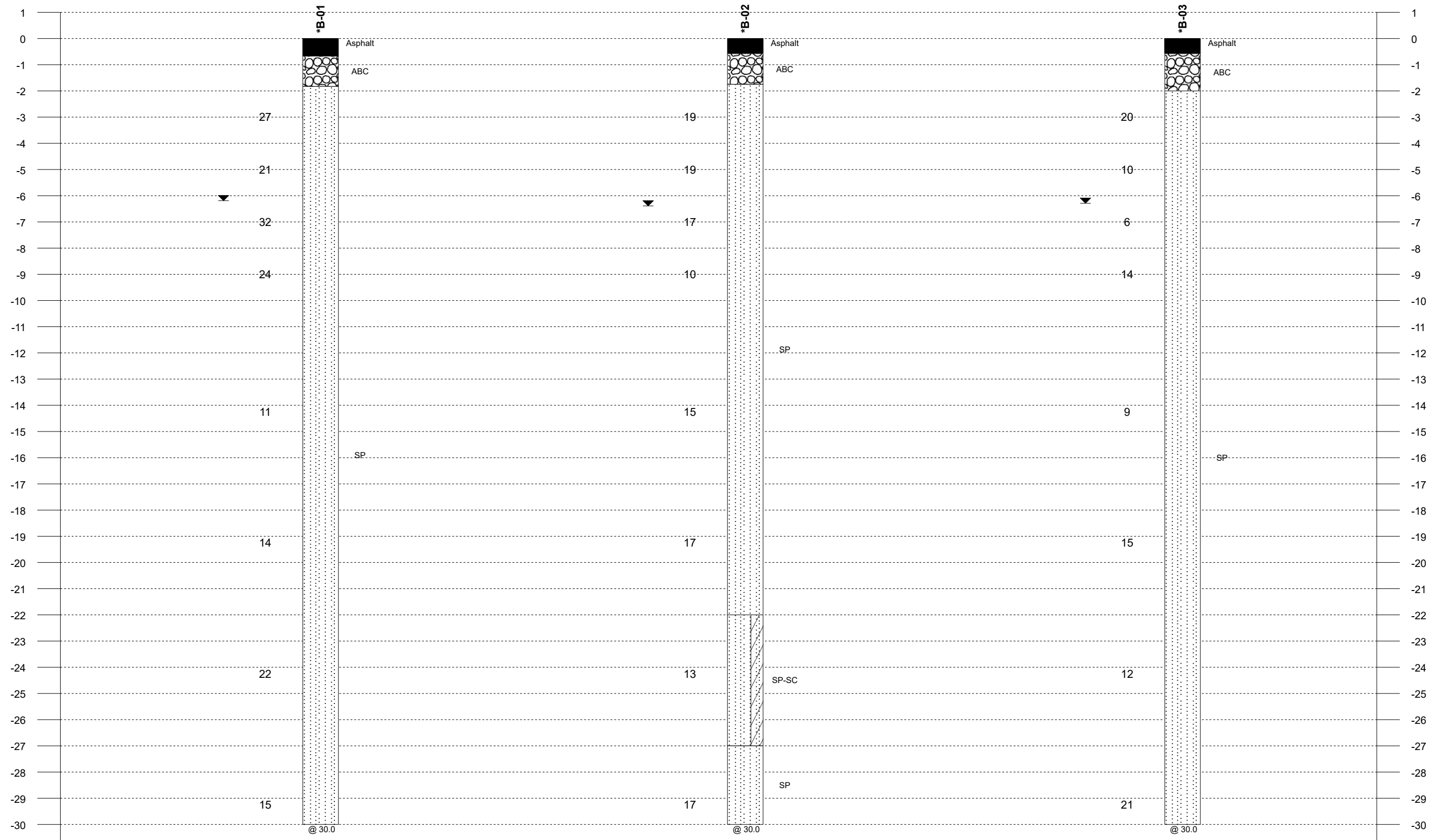
ENGINEER
CME2

SCALE
AS NOTED

PROJECT NO.
35:32602

SHEET
FIGURE 2

DATE
2/15/2022



Legend Key

- Asphalt
- ABC
- Poorly Graded SAND
- Poorly Graded SAND w...

-31.00

Notes:
 1- EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL.
 2- THE NUMBER BELOW THE STRIPS IS THE DISTANCE ALONG THE BASELINE.
 3- SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
 4- STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).

Plastic Limit	Water Content	Liquid Limit
X	●	△
[FINES CONTENT%]		
	BOTTOM OF CASING	
	LOSS OF CIRCULATION	

▽	WL (First Encountered)
▼	WL (Completion)
▽	WL (Seasonal High Water)
▽	WL (Stabilized)

	Fill
	Possible Fill
	Probable Fill
	Rock



GENERALIZED SUBSURFACE SOIL PROFILE Cross Section A-A'

JAXPORT Shoreline Protection
Taylor Engineering, Inc.
August Drive, Jacksonville, Florida 32226

Project No: 35:32602 Date: 06/08/2022

APPENDIX B – Field Operations

Reference Notes for Boring Logs

Subsurface Exploration Procedure: Standard Penetration Testing (SPT)

Boring Logs



REFERENCE NOTES FOR BORING LOGS

MATERIAL ^{1,2}	
	ASPHALT
	CONCRETE
	GRAVEL
	TOPSOIL
	VOID
	BRICK
	AGGREGATE BASE COURSE
	GW WELL-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GP POORLY-GRADED GRAVEL gravel-sand mixtures, little or no fines
	GM SILTY GRAVEL gravel-sand-silt mixtures
	GC CLAYEY GRAVEL gravel-sand-clay mixtures
	SW WELL-GRADED SAND gravelly sand, little or no fines
	SP POORLY-GRADED SAND gravelly sand, little or no fines
	SM SILTY SAND sand-silt mixtures
	SC CLAYEY SAND sand-clay mixtures
	ML SILT non-plastic to medium plasticity
	MH ELASTIC SILT high plasticity
	CL LEAN CLAY low to medium plasticity
	CH FAT CLAY high plasticity
	OL ORGANIC SILT or CLAY non-plastic to low plasticity
	OH ORGANIC SILT or CLAY high plasticity
	PT PEAT highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS			
SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION		
DESIGNATION	PARTICLE SIZES	
Boulders	12 inches (300 mm) or larger	
Cobbles	3 inches to 12 inches (75 mm to 300 mm)	
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")	<0.074 mm (smaller than a No. 200 sieve)	

COHESIVE SILTS & CLAYS		
UNCONFINED COMPRESSIVE STRENGTH, QP ⁴	SPT ⁵ (BPF)	CONSISTENCY ⁷ (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	2 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

RELATIVE AMOUNT ⁷	COARSE GRAINED (%) ⁸	FINE GRAINED (%) ⁸
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective (ex: "Silty")	25 - 45	30 - 45

GRAVELS, SANDS & NON-COHESIVE SILTS	
SPT ⁵	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

WATER LEVELS ⁶	
	WL (First Encountered)
	WL (Completion)
	WL (Seasonal High Water)
	WL (Stabilized)

FILL AND ROCK			
	FILL		POSSIBLE FILL
	PROBABLE FILL		ROCK

¹Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

²To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

³Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

⁴Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

⁵Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

⁶The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

⁷Minor deviation from ASTM D 2488-17 Note 14.

⁸Percentages are estimated to the nearest 5% per ASTM D 2488-17.



SUBSURFACE EXPLORATION PROCEDURE: STANDARD PENETRATION TESTING (SPT) ASTM D 1586 Split-Barrel Sampling

Standard Penetration Testing, or **SPT**, is the most frequently used subsurface exploration test performed worldwide. This test provides samples for identification purposes, as well as a measure of penetration resistance, or N-value. The N-Value, or blow counts, when corrected and correlated, can approximate engineering properties of soils used for geotechnical design and engineering purposes.

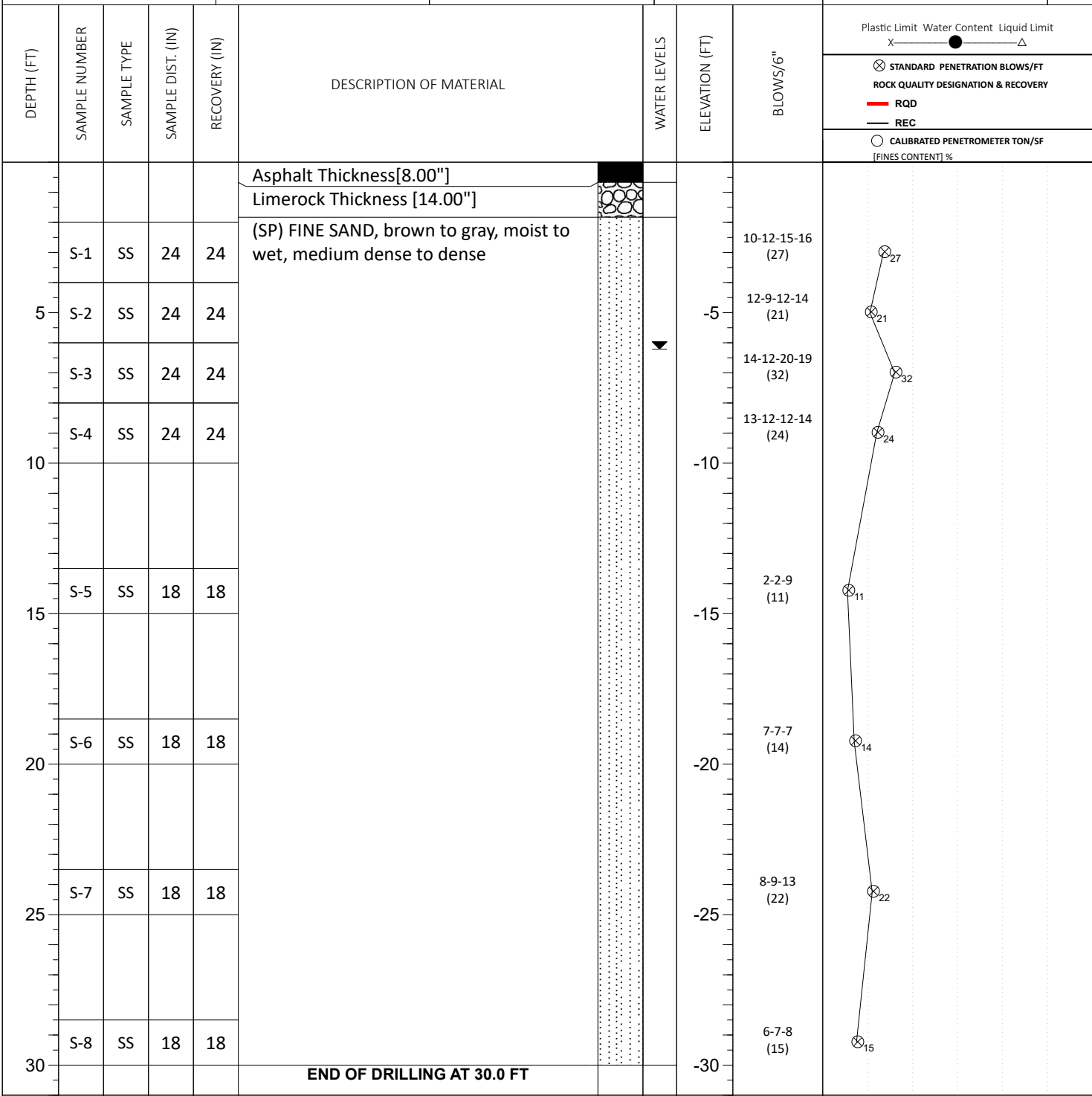
SPT Procedure:

- Involves driving a hollow tube (split-spoon) into the ground by dropping a 140-lb hammer a height of 30-inches at desired depth
- Recording the number of hammer blows required to drive split-spoon a distance of 12 inches (in 3 or 4 Increments of 6 inches each)
- Auger is advanced* and an additional SPT is performed
- One SPT test is typically performed for every two to five feet
- Obtain two-inch diameter soil sample



**Drilling Methods May Vary*— The predominant drilling methods used for SPT are open hole fluid rotary drilling and hollow-stem auger drilling.

SITE LOCATION: August Drive, Jacksonville, Florida 32226			LOSS OF CIRCULATION
NORTHING: 2208116.2	EASTING: 473955.7	STATION:	BOTTOM OF CASING

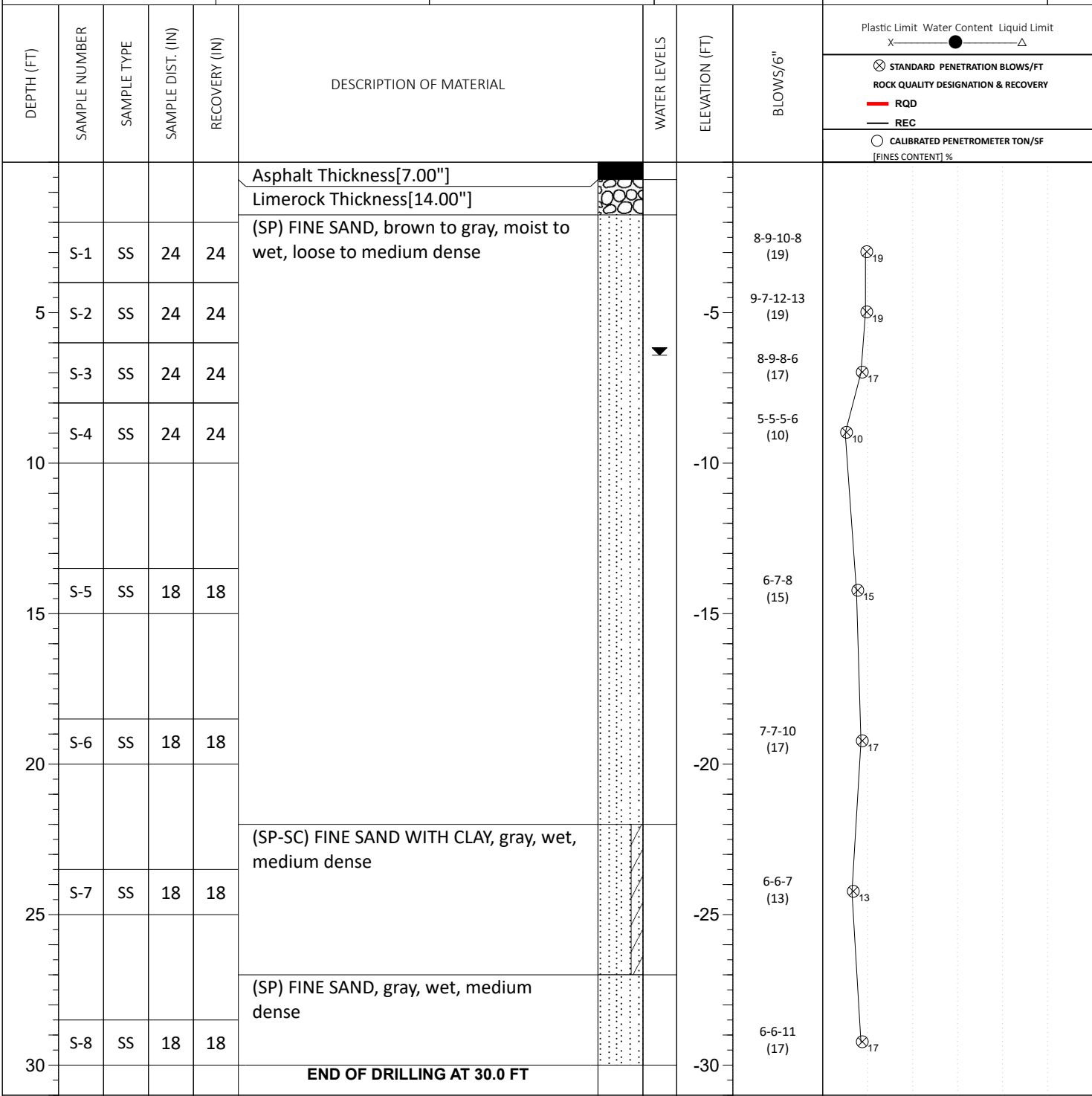


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) 6.10 ∇ WL (Seasonal High Water) ∇ WL (Stabilized)	BORING STARTED: Feb 01 2022 BORING COMPLETED: Feb 01 2022 EQUIPMENT: Truck	CAVE IN DEPTH: HAMMER TYPE: Auto DRILLING METHOD: Mud rotary	
--	---	--	--

GEOTECHNICAL BOREHOLE LOG

SITE LOCATION: August Drive, Jacksonville, Florida 32226			LOSS OF CIRCULATION
NORTHING: 2207866.8	EASTING: 474181.4	STATION:	BOTTOM OF CASING

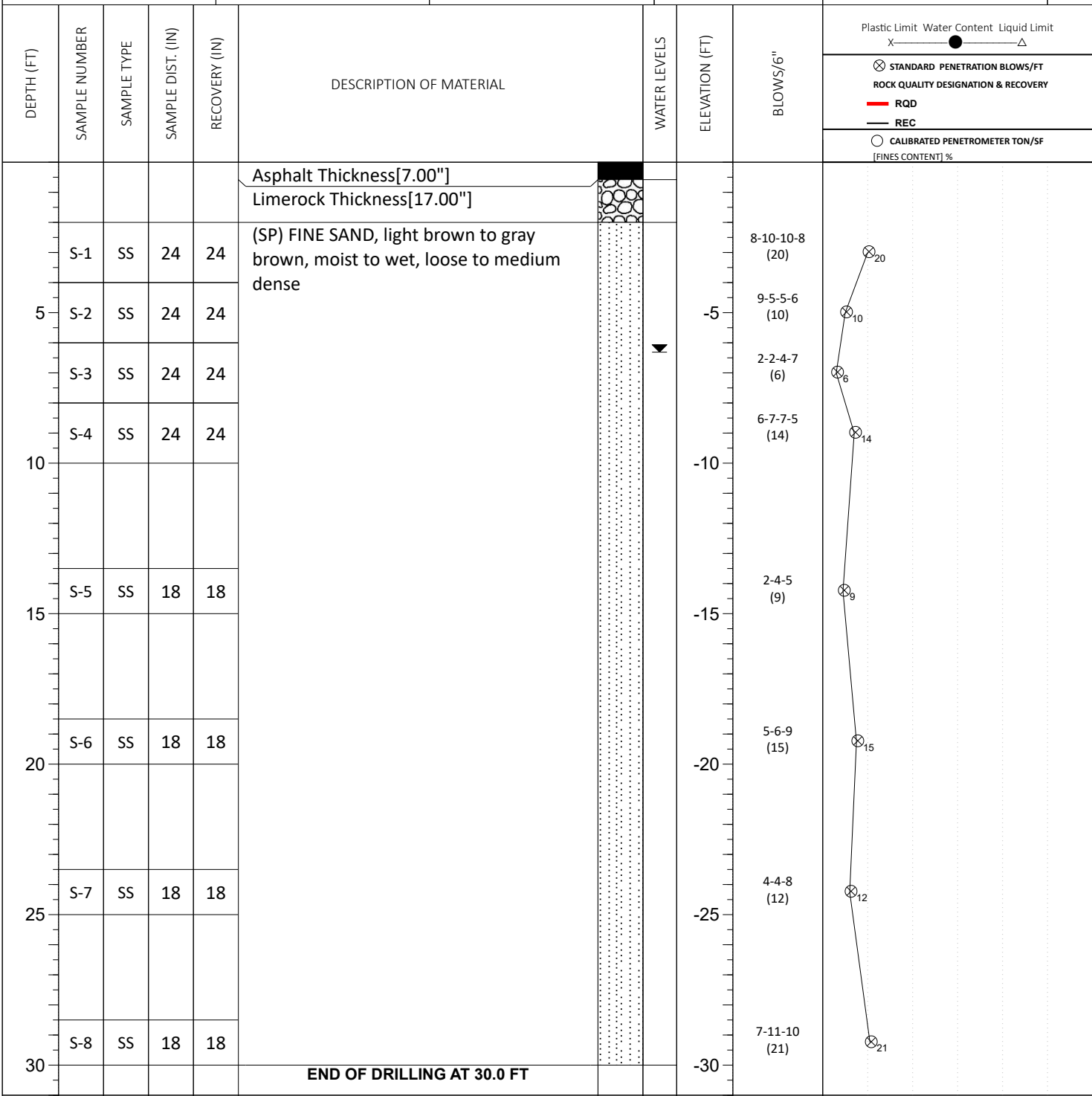


THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) 6.30 ∇ WL (Seasonal High Water) ∇ WL (Stabilized)	BORING STARTED: Feb 01 2022 BORING COMPLETED: Feb 01 2022 EQUIPMENT: Truck	CAVE IN DEPTH: HAMMER TYPE: Auto DRILLING METHOD: Mud rotary	
--	---	--	--

GEOTECHNICAL BOREHOLE LOG

SITE LOCATION: August Drive, Jacksonville, Florida 32226			LOSS OF CIRCULATION
NORTHING: 2207611.9	EASTING: 474416.1	STATION:	BOTTOM OF CASING



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

∇ WL (First Encountered) ▼ WL (Completion) 6.20 ∇ WL (Seasonal High Water) ∇ WL (Stabilized)	BORING STARTED: Feb 01 2022 BORING COMPLETED: Feb 01 2022 EQUIPMENT: Truck	CAVE IN DEPTH: HAMMER TYPE: Auto DRILLING METHOD: Mud rotary	LOGGED BY: CME2
--	---	--	------------------------

GEOTECHNICAL BOREHOLE LOG



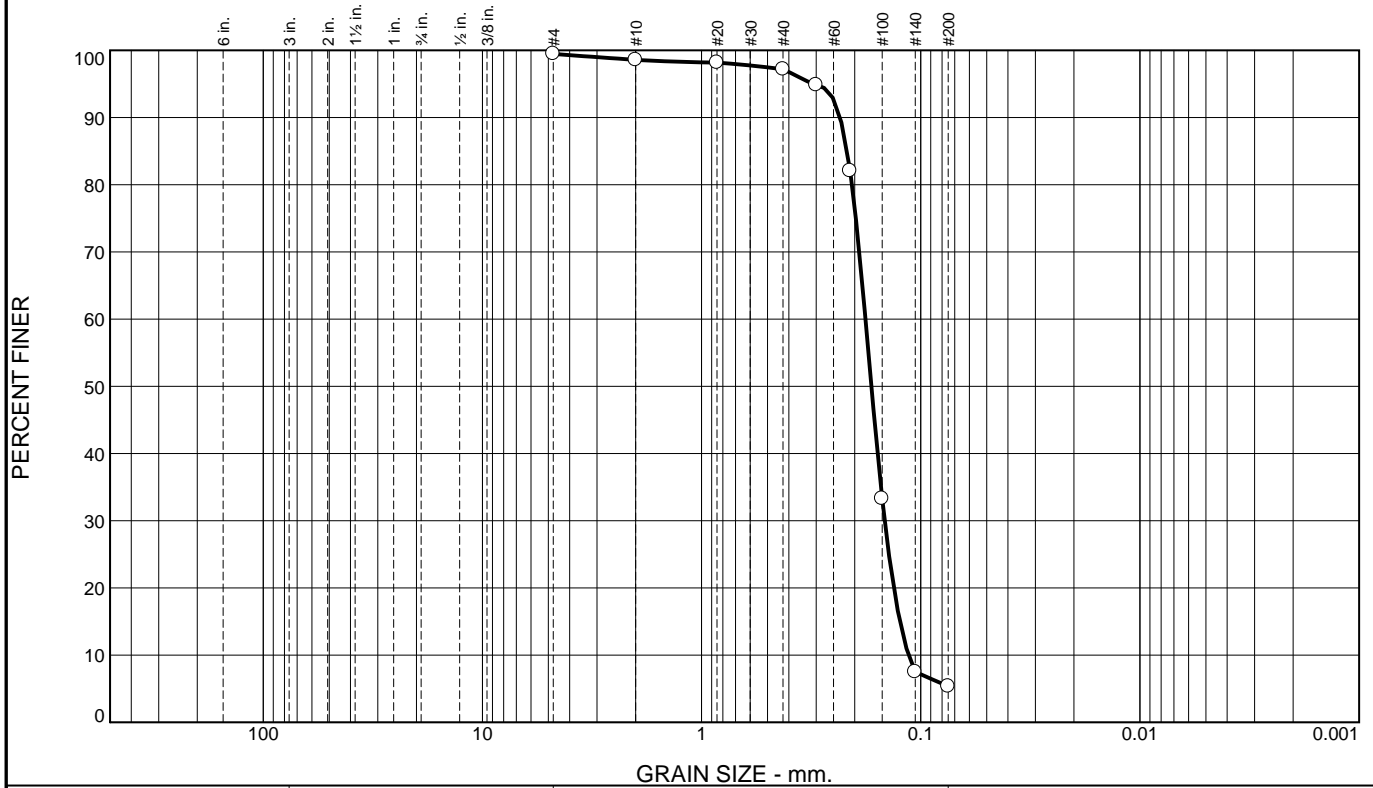
DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

APPENDIX C

Grain-Size and Soil Classification Reports

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	0.9	1.4	91.8	5.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	99.5		
#10	98.6		
#20	98.2		
#40	97.2		
#50	94.8		
#70	82.0		
#100	33.3		
#140	7.5		
#200	5.4		

Material Description

Sand, poorly graded with silt, mostly fine-grained quartz sand, few silt

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2333 D₈₅= 0.2167 D₆₀= 0.1787
D₅₀= 0.1679 D₃₀= 0.1462 D₁₅= 0.1245
D₁₀= 0.1137 C_u= 1.57 C_c= 1.05

Classification

USCS= SP-SM AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-1 Depth: 0"-6"
Sample Number: 1

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

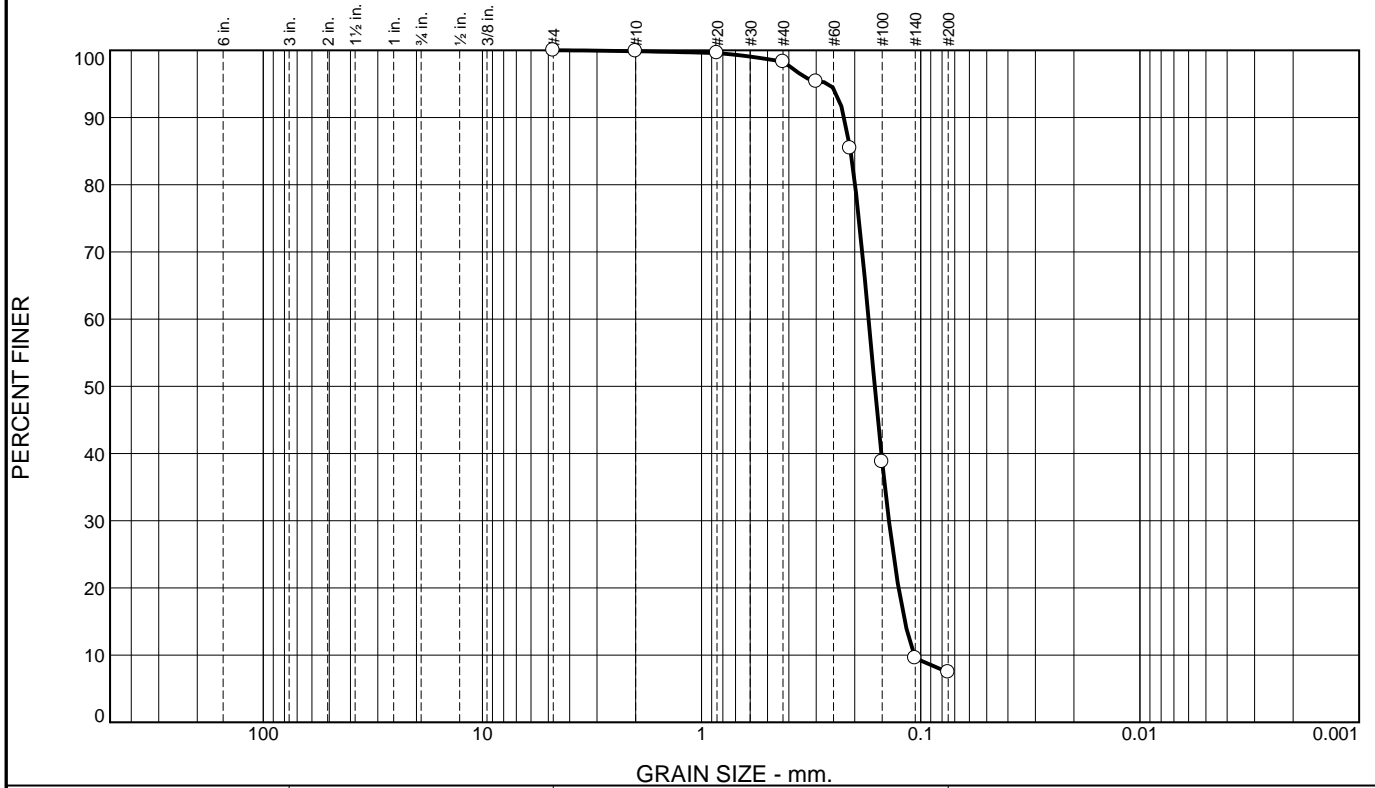
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	1.6	90.9	7.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#20	99.6		
#40	98.3		
#50	95.4		
#70	85.4		
#100	38.8		
#140	9.5		
#200	7.4		

Material Description

Sand, poorly graded with silt, mostly fine-grained quartz sand, few silt

Atterberg Limits
 PL= LL= PI=

Coefficients

D ₉₀ = 0.2231	D ₈₅ = 0.2091	D ₆₀ = 0.1730
D ₅₀ = 0.1621	D ₃₀ = 0.1398	D ₁₅ = 0.1181
D ₁₀ = 0.1073	C _u = 1.61	C _c = 1.05

Classification
 USCS= SP-SM AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-1 Depth: 6"-12"
 Sample Number: 2

Date: 4/4/2022

Taylor Engineering, Inc.

Client: Jax Port
 Project: Shoreline Protection at Dames Point

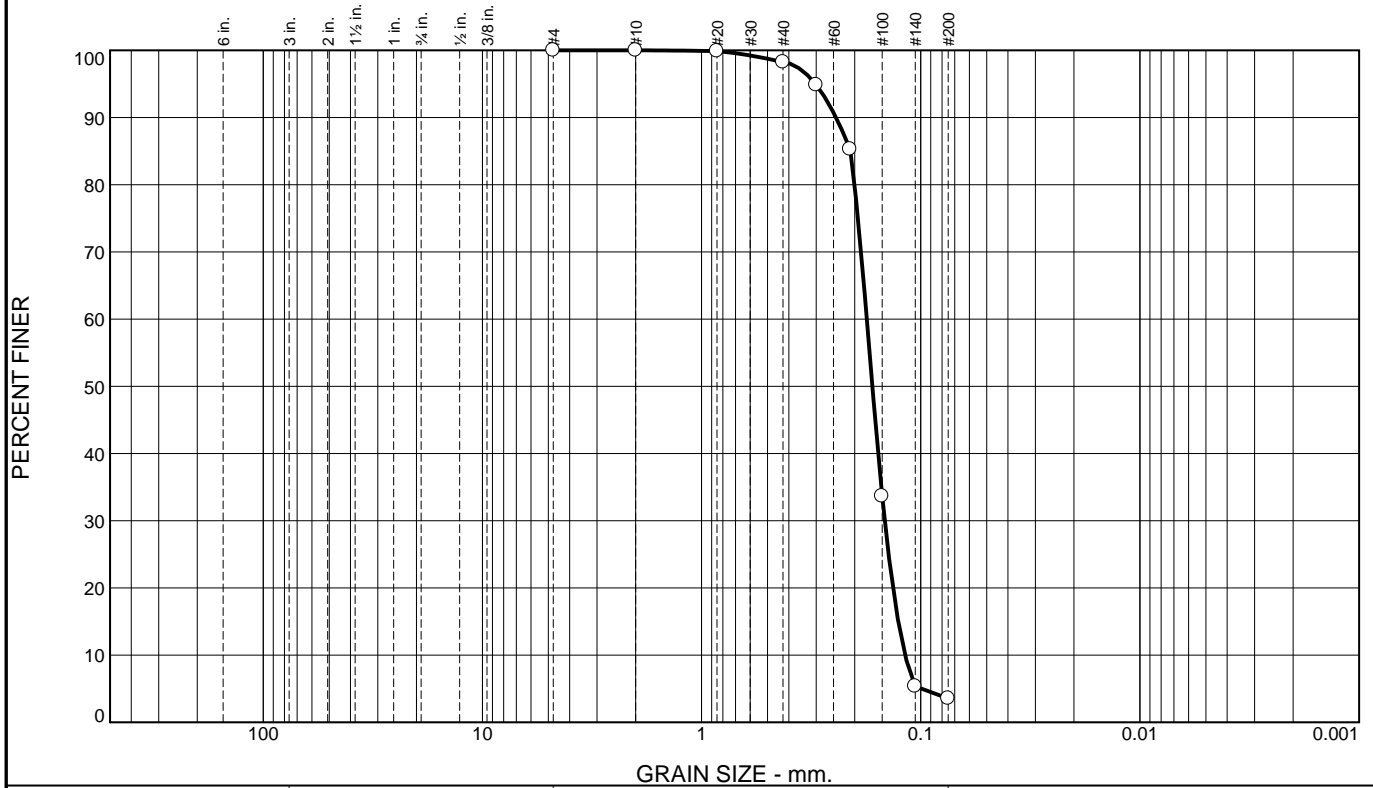
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.8	94.6	3.6	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#20	99.9		
#40	98.2		
#50	94.8		
#70	85.3		
#100	33.7		
#140	5.4		
#200	3.6		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2436 D₈₅= 0.2095 D₆₀= 0.1762
D₅₀= 0.1662 D₃₀= 0.1461 D₁₅= 0.1267
D₁₀= 0.1178 C_u= 1.50 C_c= 1.03

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-1 Depth: 12"-18"
Sample Number: 3

Date: 4/4/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

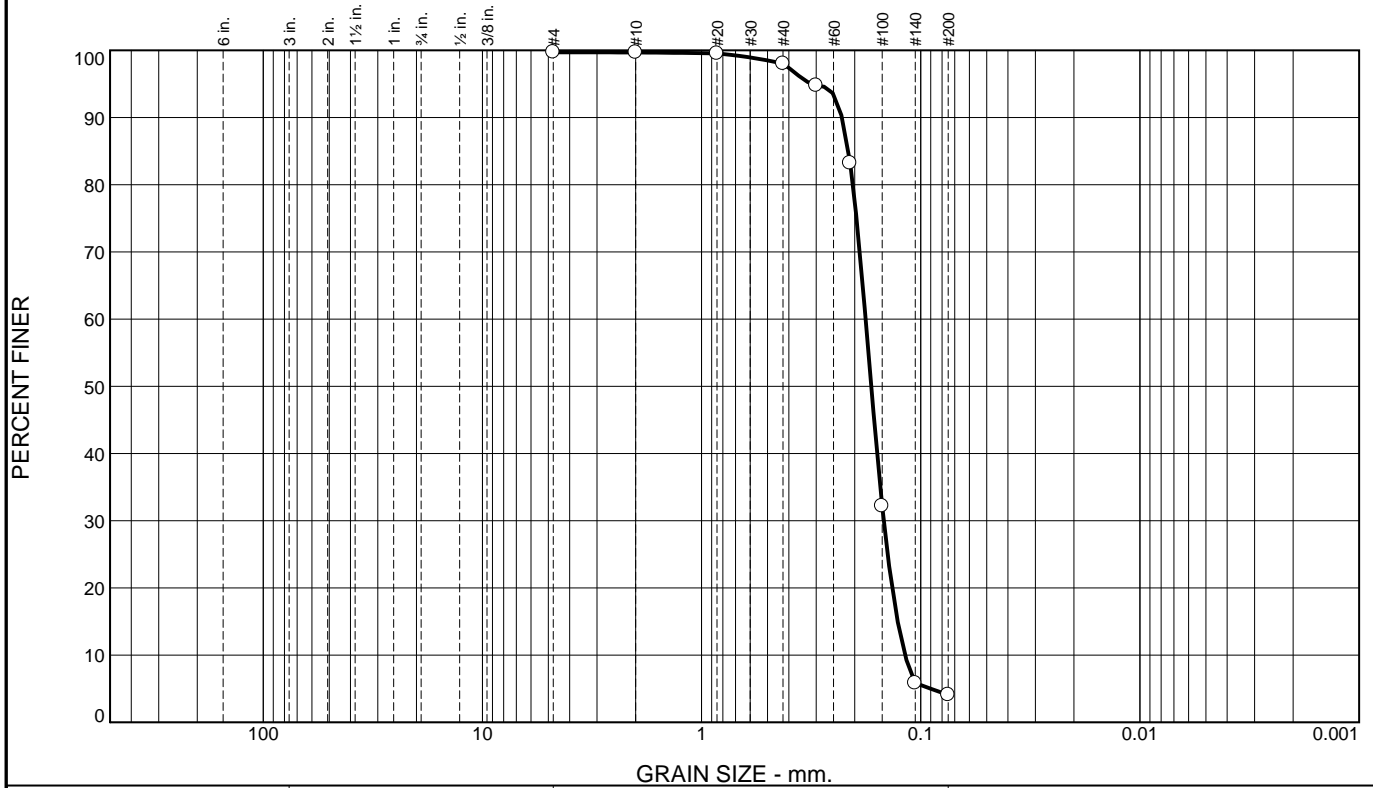
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.0	1.7	93.9	4.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	99.7		
#10	99.7		
#20	99.5		
#40	98.0		
#50	94.8		
#70	83.2		
#100	32.2		
#140	5.8		
#200	4.1		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D ₉₀ = 0.2287	D ₈₅ = 0.2138	D ₆₀ = 0.1784
D ₅₀ = 0.1681	D ₃₀ = 0.1476	D ₁₅ = 0.1275
D ₁₀ = 0.1179	C _u = 1.51	C _c = 1.04

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-1 Depth: 18"-24"
 Sample Number: 4

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
 Project: Shoreline Protection at Dames Point

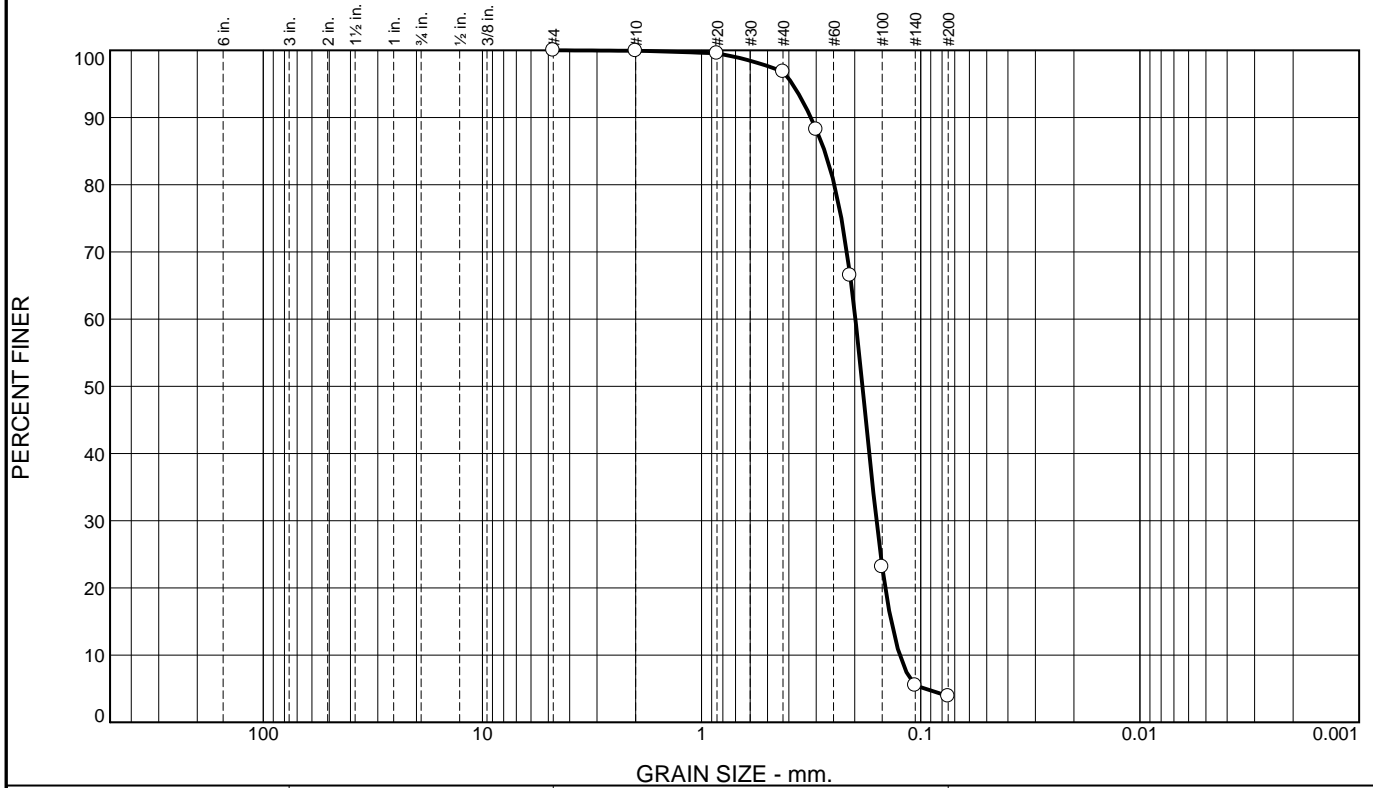
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	3.1	92.9	3.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#20	99.5		
#40	96.8		
#50	88.2		
#70	66.5		
#100	23.1		
#140	5.5		
#200	3.9		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.3175 D₈₅= 0.2745 D₆₀= 0.1988
D₅₀= 0.1844 D₃₀= 0.1592 D₁₅= 0.1365
D₁₀= 0.1248 C_u= 1.59 C_c= 1.02

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-2 Depth: 0"-6"
Sample Number: 1

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

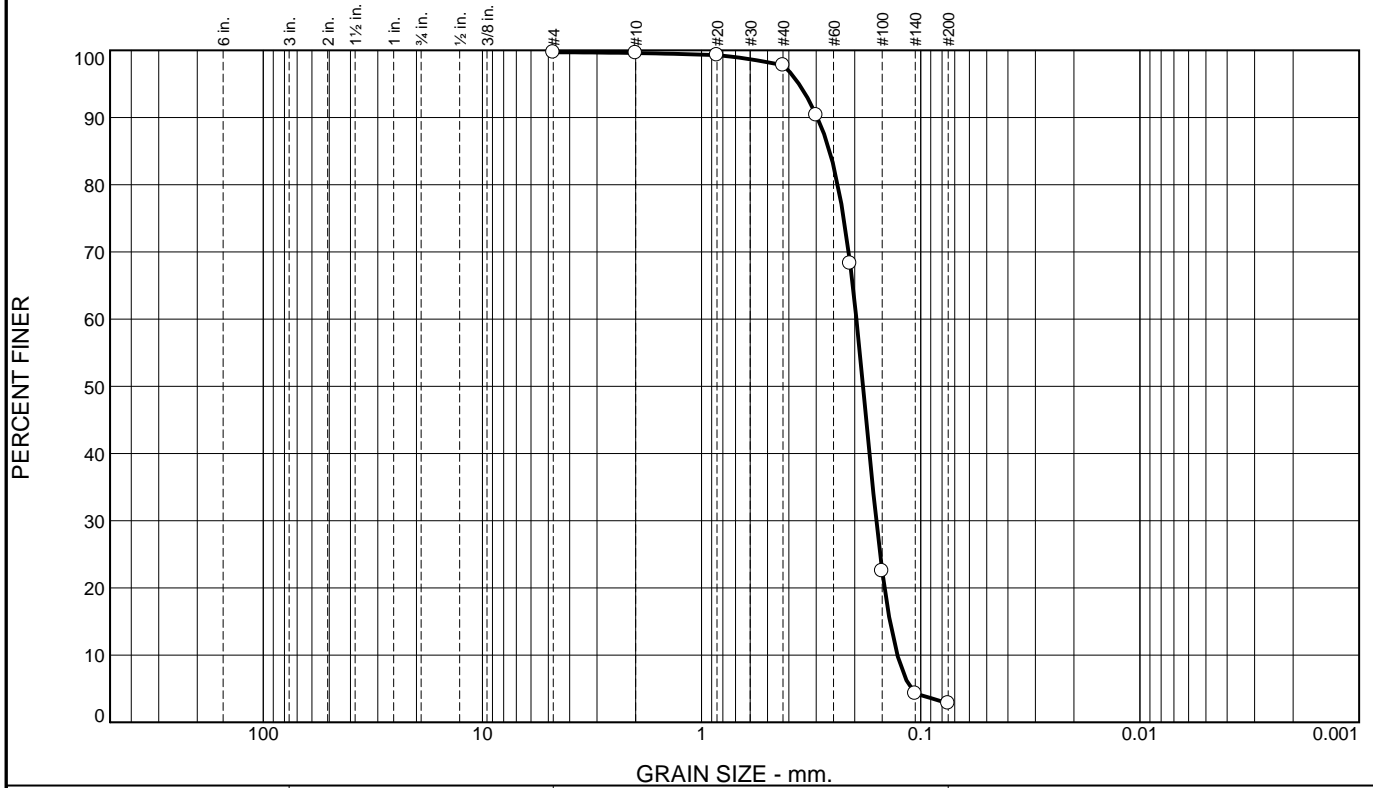
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.3	0.1	1.8	95.0	2.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	99.7		
#10	99.6		
#20	99.3		
#40	97.8		
#50	90.4		
#70	68.3		
#100	22.5		
#140	4.3		
#200	2.8		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2966 D₈₅= 0.2605 D₆₀= 0.1967
D₅₀= 0.1834 D₃₀= 0.1595 D₁₅= 0.1383
D₁₀= 0.1278 C_u= 1.54 C_c= 1.01

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-2 Depth: 6"-12"
Sample Number: 2

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

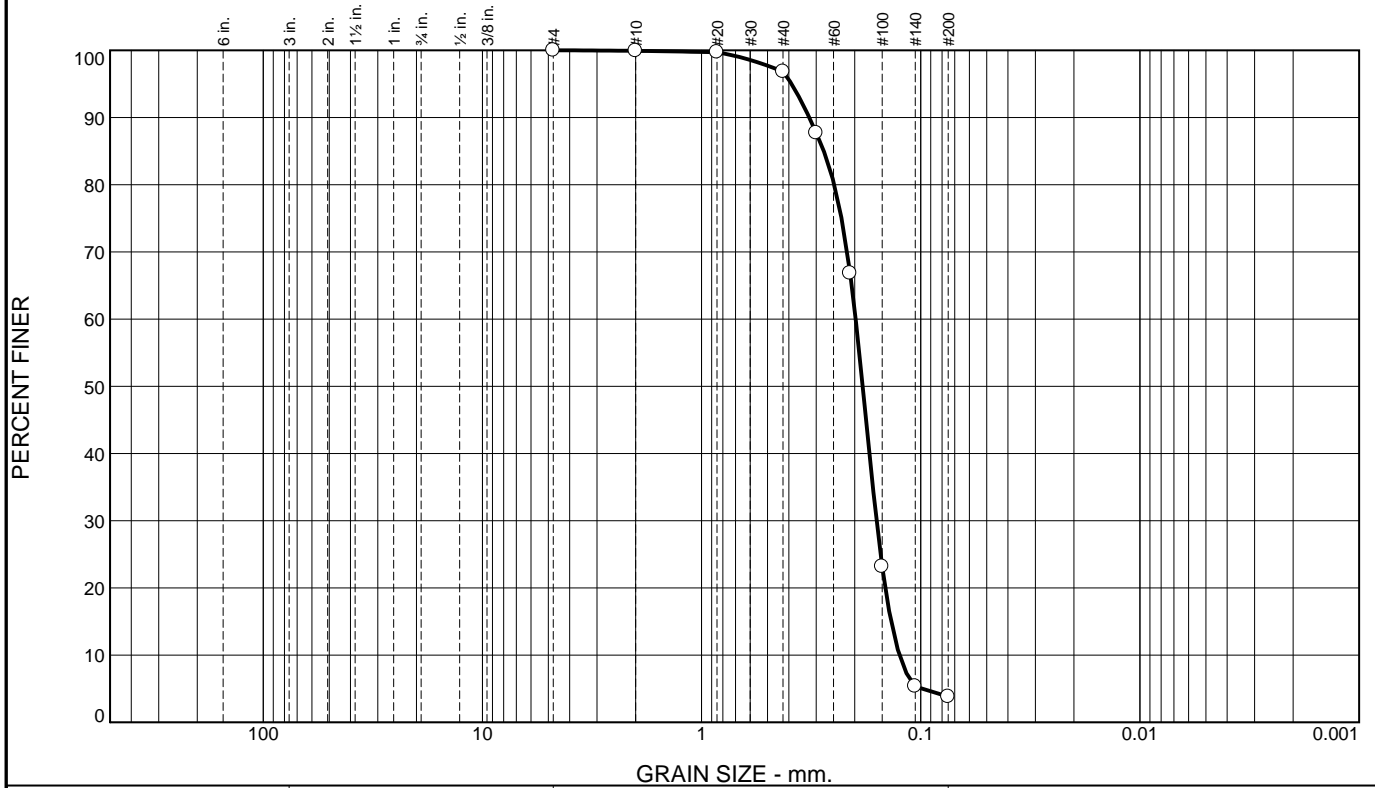
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	3.1	93.0	3.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#20	99.7		
#40	96.8		
#50	87.7		
#70	66.8		
#100	23.2		
#140	5.3		
#200	3.8		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.3228 D₈₅= 0.2771 D₆₀= 0.1982
D₅₀= 0.1841 D₃₀= 0.1591 D₁₅= 0.1366
D₁₀= 0.1251 C_u= 1.58 C_c= 1.02

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-2 Depth: 12"-18"
Sample Number: 3

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

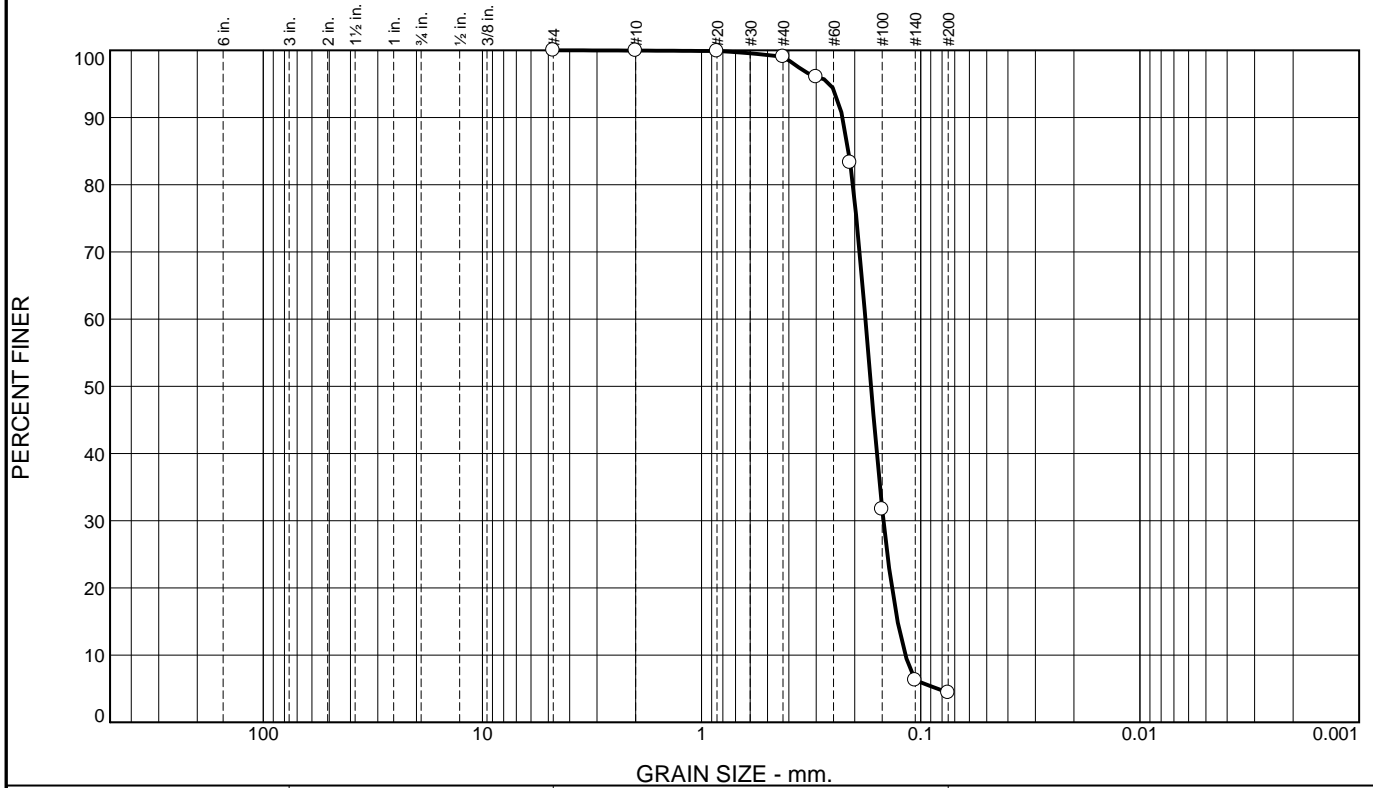
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.0	94.6	4.4	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#20	99.9		
#40	99.0		
#50	96.0		
#70	83.3		
#100	31.7		
#140	6.3		
#200	4.4		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2272 D₈₅= 0.2135 D₆₀= 0.1788
D₅₀= 0.1686 D₃₀= 0.1481 D₁₅= 0.1276
D₁₀= 0.1174 C_u= 1.52 C_c= 1.04

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-2 Depth: 18"-24"
Sample Number: 4

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

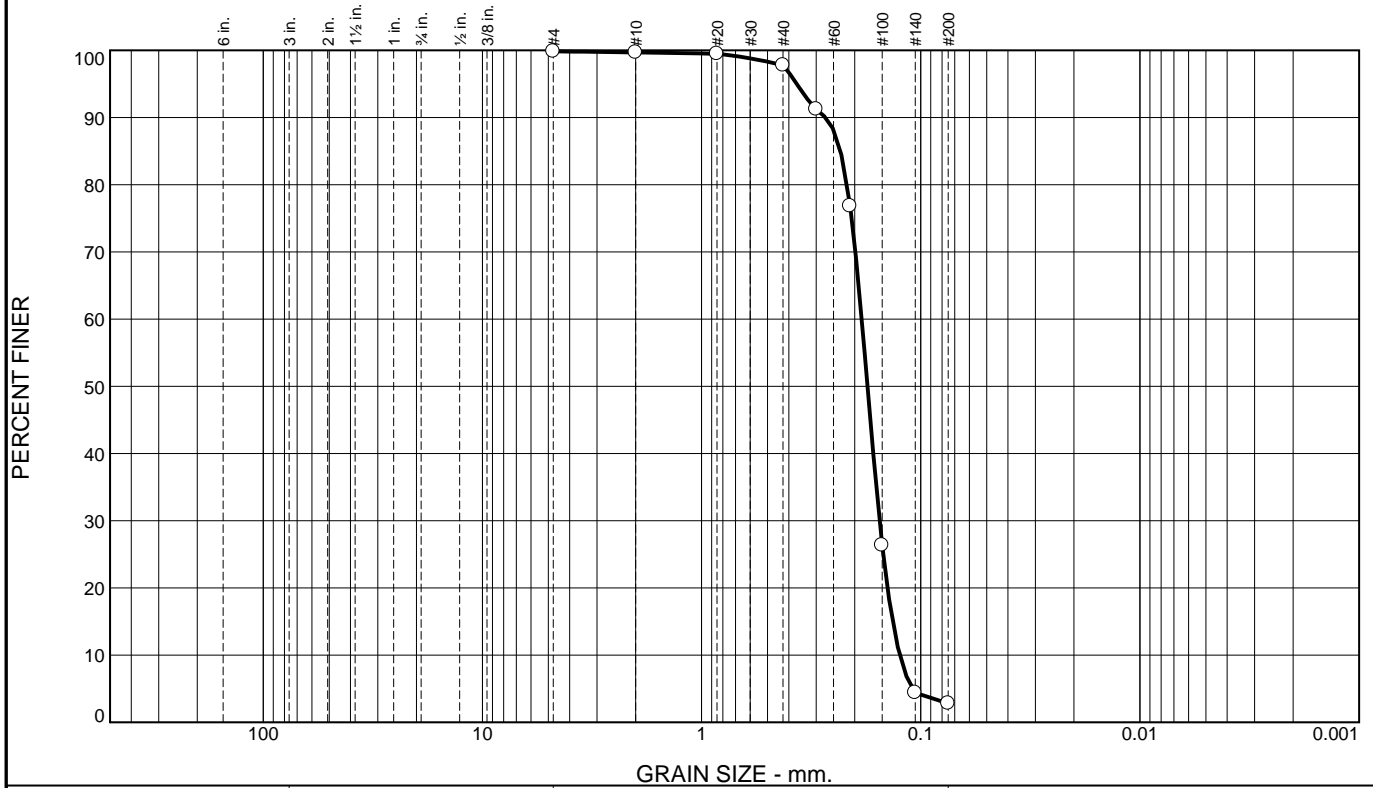
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.2	0.1	1.9	95.0	2.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	99.8		
#10	99.7		
#20	99.5		
#40	97.8		
#50	91.2		
#70	76.8		
#100	26.3		
#140	4.4		
#200	2.8		

Material Description

Sand, poorly graded, mostly fine-grained quartz sand, trace fines

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2722 D₈₅= 0.2323 D₆₀= 0.1859
D₅₀= 0.1749 D₃₀= 0.1541 D₁₅= 0.1344
D₁₀= 0.1247 C_u= 1.49 C_c= 1.02

Classification

USCS= SP AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-2 Depth: 24"-30"
Sample Number: 5

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

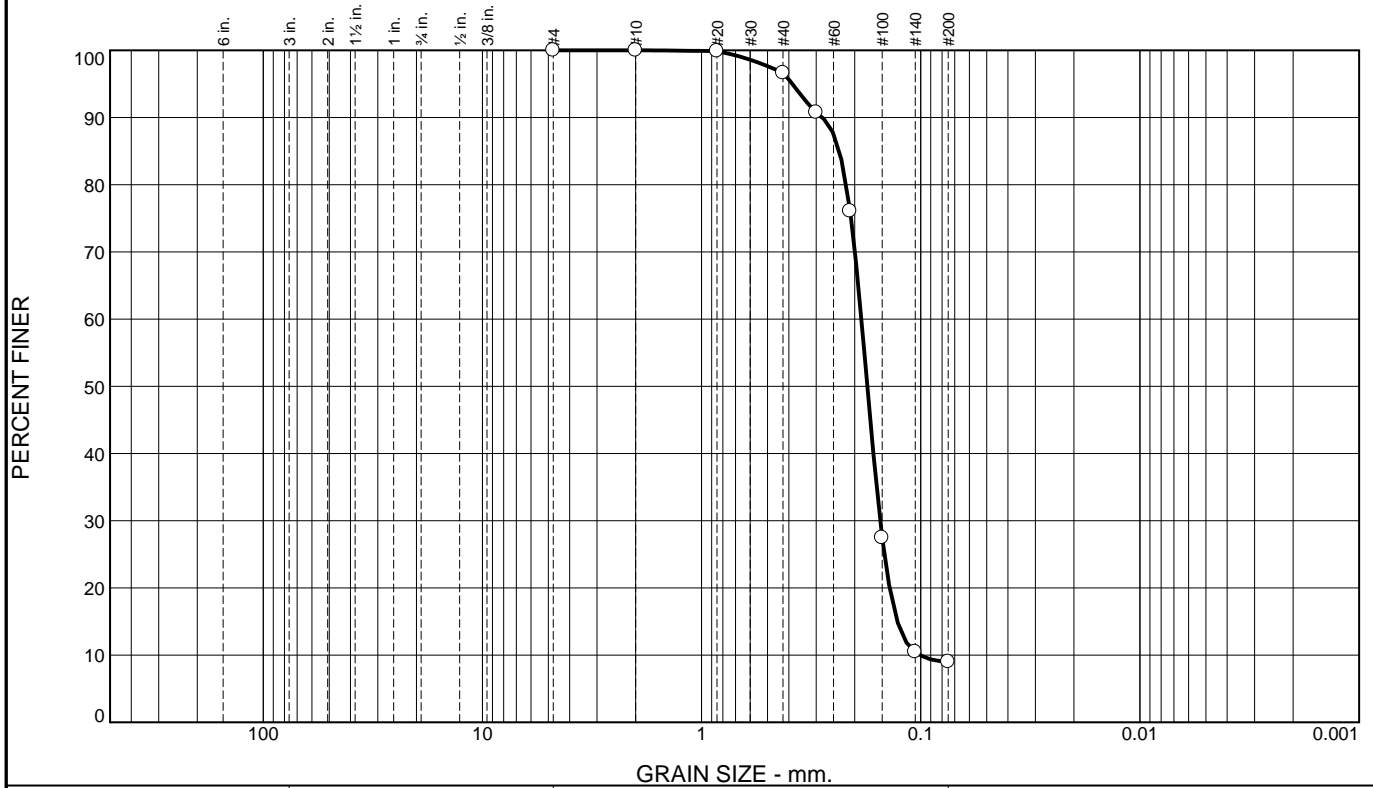
Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	3.4	87.6	9.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#20	99.9		
#40	96.6		
#50	90.8		
#70	76.1		
#100	27.5		
#140	10.5		
#200	9.0		

Material Description

Sand, poorly graded with silt, mostly fine-grained quartz sand, few silt

Atterberg Limits

PL= LL= PI=

Coefficients

D₉₀= 0.2818 D₈₅= 0.2353 D₆₀= 0.1866
D₅₀= 0.1752 D₃₀= 0.1532 D₁₅= 0.1279
D₁₀= 0.1007 C_u= 1.85 C_c= 1.25

Classification

USCS= SP-SM AASHTO=

Remarks

* (no specification provided)

Source of Sample: B-2 Depth: 30"-36"
Sample Number: 6

Date: 4/04/2022

Taylor Engineering, Inc.

Client: Jax Port
Project: Shoreline Protection at Dames Point

Project No: C2021-088

Figure

Tested By: WFW

Checked By: NEL



DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

APPENDIX D

Environmental Permits



FLORIDA DEPARTMENT OF Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Permittee/Authorized Entity:

Jacksonville Port Authority
Attn: James Bennet
2831 Talleyrand Avenue
Jacksonville, Florida, 32206
james.bennett@jaxport.com

JAXPORT Shoreline Stabilization

Authorized Agent:

Noah Adams, Taylor Engineering, Inc.
10199 Southside Boulevard
Jacksonville, Florida, 32256
nadams@tayloengineering.com

Environmental Resource Permit

State-owned Submerged Lands Authorization –Not Applicable

**U.S. Army Corps of Engineers Authorization – Separate Corps Authorization
Required**

Duval County
Permit No.: 16-0186420-007-EI

Permit Issuance Date: August 4, 2022
Permit Construction Phase Expiration Date: August 4, 2027

Environmental Resource Permit

Permittee: Jacksonville Port Authority
Permit No: 16-0186420-007-EI

PROJECT LOCATION

The activities authorized by this permit are located at 9506 August Drive (Parcel ID: 108828-0000), Jacksonville, Florida, 32206, in Section 23, Township 1 South, Range 27 East in Duval County, at Latitude 30° 24' 18.9650" North, Longitude 81° 34' 37.1914" West.

PROJECT DESCRIPTION

The permittee is authorized to replace the existing shoreline stabilization with an armored stone revetment, approximately 693 ft in length. There will be a 10-foot minimum vegetated or gravel buffer between the crest of the revetment and the existing edge of pavement for erosion protection. The proposed revetment will extend a maximum of 73 feet from the back of the curb at the existing edge of pavement. There will be 2,016 square feet, 0.046 acres, of unavoidable impacts to saltwater marsh, due to the construction of the new armored revetment. Authorized activities are depicted on the attached exhibits.

To offset unavoidable impacts that will occur from these authorized activities, the permittee shall purchase 0.03 herbaceous marine credits purchased from North Florida Saltmarsh Mitigation Bank (Permit #: 4-031-129625-5).

AUTHORIZATIONS

JAXPORT Shoreline Stabilization

Environmental Resource Permit

The Department has determined that the activity qualifies for an Environmental Resource Permit. Therefore, the Environmental Resource Permit is hereby granted, pursuant to Part IV of Chapter 373, Florida Statutes (F.S.), and Chapter 62-330, Florida Administrative Code (F.A.C.).

Sovereignty Submerged Lands Authorization

As staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), the Department has determined the activity is not on submerged lands owned by the State of Florida. Therefore, your project is not subject to the requirements of Chapter 253, F.S., or Rule 18-21, F.A.C.

Federal Authorization

Your proposed activity as outlined on your application and attached drawings **does not qualify** for Federal authorization pursuant to the State Programmatic General Permit and a **SEPARATE permit** or authorization **shall be required** from the Corps. You must apply separately to the Corps using the Application for Department of the Army Permit (ENG 4345) or alternative as allowed by Corps regulations. More information on Corps permitting may be found online in the Jacksonville District Regulatory Division Sourcebook:

(<https://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/>).

Authority for review - an agreement with the USACOE entitled "Coordination Agreement Between the U. S. Army Corps of Engineers (Jacksonville District) and the Florida Department of

Environmental Protection (or Duly Authorized Designee), State Programmatic General Permit”, Section 10 of the Rivers and Harbor Act of 1899, and Section 404 of the Clean Water Act.

Coastal Zone Management

Issuance of this authorization also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

Water Quality Certification

This permit also constitutes a water quality certification under Section 401 of the Clean Water Act, 33 U.S.C. 1341

Other Authorizations

You are advised that authorizations or permits for this activity may be required by other federal, state, regional, or local entities including but not limited to local governments or municipalities. This permit does not relieve you from the requirements to obtain all other required permits or authorizations.

The activity described may be conducted only in accordance with the terms, conditions and attachments contained in this document. Issuance and granting of the permit and authorizations herein do not infer, nor guarantee, nor imply that future permits, authorizations, or modifications will be granted by the Department.

PERMIT CONDITIONS

The activities described must be conducted in accordance with:

- **The Specific Conditions**
- **The General Conditions**
- **The limits, conditions and locations of work shown in the attached drawings**
- **The term limits of this authorization**

You are advised to read and understand these conditions and drawings prior to beginning the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings herein. If you are using a contractor, the contractor also should read and understand these conditions and drawings prior to beginning any activity. Failure to comply with these conditions, including any mitigation requirements, shall be grounds for the Department to revoke the permit and authorization and to take appropriate enforcement action. Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and this permit, as described.

SPECIFIC CONDITIONS - PRIOR TO ANY CONSTRUCTION

1. Prior to commencement of work authorized by this permit, the permittee shall provide written notification of the date of the commencement and proposed schedule of construction to the Department of Environmental Protection, Northeast District, 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.

2. **Prior to any construction or impacts authorized by this permit**, the permittee shall provide the Department with documentation that 0.03 of herbaceous marine credits have been deducted

from the credit ledger of the North Florida Saltmarsh mitigation bank (Permit number 4-031-129625-5).

SPECIFIC CONDITIONS – CONSTRUCTION ACTIVITIES

3. This permit does not authorize the removal of any vegetation within the jurisdictional area. No dredging, filling, or other construction activity, including the removal of tree stumps and/or vegetative root masses, shall be conducted within the wetlands other than that performed within the construction limits authorized in this permit.

4. Storage or stockpiling of tools and materials (i.e., lumber, pilings, debris,) within wetlands, along the shoreline, within the littoral zone, or elsewhere within wetlands or other surface waters is prohibited. All vegetative material and debris shall be removed to a self-contained upland disposal area with no stockpiling of debris within wetland areas.

5. Outside the specific limits of construction authorized by this permit, any disturbance of or damage to wetlands shall be corrected by restoring pre-construction elevations as to maintain natural hydrology, drainage patterns, and planting vegetation of the same species, size, and density that exist in adjacent undisturbed wetland areas.

6. The project shall comply with applicable State Water Quality Standards, namely:

- a. Surface Waters, Minimum Criteria, General Criteria – Rule 62-302.500, F.A.C.
- b. Class III Waters – Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife. – Rule 62-302.400, F.A.C.

7. The work shall be performed during periods of average or low water.

8. Floating turbidity curtains (FDOT Type II or equivalent) shall be used to surround the work areas and shall remain in place until such time as turbidity levels within the dredged area have reduced sufficiently so as not to exceed the state water quality standard.

9. All wetland areas or water bodies which are outside the specific limits of construction authorized by this permit shall be protected from erosion, siltation, scouring, excess turbidity, or dewatering.

10. All fill slopes shall be planted with indigenous vegetation, sodded, seeded and mulched, or otherwise vegetatively stabilized within 5 days following their completion, and a substantial vegetative cover shall be established within 30 days of this stabilization activity.

11. All generated spoil material shall be deposited on a self-contained, upland spoil site which will prevent the escape of the spoil material and return water from the spoil site into surface waters.

12. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, stone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section (DHR), at (850)245-6333, as well as the appropriate permitting agency office. Project activities

shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and the proper authorities notified in accordance with section 872.05, F.S. For project activities subject to prior consultation with the DHR and as an alternative to the above requirements, the permittee may follow procedures for unanticipated discoveries as set forth within a cultural resources assessment survey determined complete and sufficient by DHR and included as a specific permit condition herein.

SPECIFIC CONDITIONS – RIPRAP REVETMENT

13. "Riprap" shall consist of unconsolidated boulders, rocks, or clean concrete rubble with no exposed reinforcing rods or similar protrusions. The riprap shall be free of sediment, debris, and toxins or otherwise deleterious substances.

14. The revetment shall be installed so that it ties into and does not extend waterward of the existing revetment Southeast of the project.

SPECIFIC CONDITIONS – MANATEE

15. The Standard Manatee Construction Conditions for In-water Work (2011) must be followed for all in-water activity.

SPECIFIC CONDITIONS - OTHER LISTED SPECIES

16. This permit does not authorize the permittee to cause any adverse impact to or “take” of state listed species and other regulated species of fish and wildlife. Compliance with state laws regulating the take of fish and wildlife is the responsibility of the owner or permittee associated with this project. Please refer to Chapter 68A-27 of the Florida Administrative Code for definitions of “take” and a list of fish and wildlife species. If listed species are observed onsite, Florida Fish and Wildlife Conservation Commission (FWC) staff are available to provide decision support information or assist in obtaining the appropriate FWC permits. Most marine endangered and threatened species are statutorily protected and a “take” permit cannot be issued. Requests for further information or review can be sent to ConservationPlanningServices@MyFWC.com.

17. If new information (e.g. listing of new species, new critical habitat, etc.) shows that the magnitude of impacts to federally listed species has the potential for adverse effects, the U.S. Fish and Wildlife Service (USFWS) will notify the Department. The Department will initiate coordination with the permittee and with the USFWS to determine what adverse impacts are likely and if additional minimization measures, reporting, or monitoring are required in order to be consistent with the Endangered Species Act, as deemed necessary by USFWS.

18. The Permittee shall report any injured, sick, or dead federally or state listed animal(s) discovered onsite to the Florida Fish and Wildlife Conservation Commission Wildlife Alert number at 888-404-FWCC (3922).

GENERAL CONDITIONS FOR INDIVIDUAL PERMITS

The following general conditions are binding on all individual permits issued under this chapter, except where the conditions are not applicable to the authorized activity, or where the conditions

must be modified to accommodate project-specific conditions.

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under chapter 373, F.S.
2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.
3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation, June 2007), and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), which are both incorporated by reference in subparagraph 62-330.050(9)(b)5., F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.
4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice," (October 1, 2013), (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02505>), incorporated by reference herein, indicating the expected start and completion dates. A copy of this form may be obtained from the Agency, as described in subsection 62-330.010(5), F.A.C., and shall be submitted electronically or by mail to the Agency. However, for activities involving more than one acre of construction that also require a NPDES stormwater construction general permit, submittal of the Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Form 62-621.300(4)(b), shall also serve as notice of commencement of construction under this chapter and, in such a case, submittal of Form 62-330.350(1) is not required.
5. Unless the permit is transferred under rule 62-330.340, F.A.C., or transferred to an operating entity under rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms, and conditions of the permit for the life of the project or activity.
6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:
 - a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex – "Construction Completion and Inspection Certification for Activities Associated with a Private Single-Family Dwelling Unit" [Form 62-330.310(3)]; or
 - b. For all other activities – "As-Built Certification and Request for Conversion to Operation Phase" [Form 62-330.310(1)].

- c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.
7. If the final operation and maintenance entity is a third party:
 - a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as-built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.4 of Volume I) as filed with the Florida Department of State, Division of Corporations, and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.
 - b. Within 30 days of submittal of the as-built certification, the permittee shall submit “Request for Transfer of Environmental Resource Permit to the Perpetual Operation and Maintenance Entity” [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.
8. The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.
9. This permit does not:
 - a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in chapter 62-330, F.A.C.;
 - b. Convey to the permittee or create in the permittee any interest in real property;
 - c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
 - d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.
10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.
11. The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.
12. The permittee shall notify the Agency in writing:
 - a. Immediately if any previously submitted information is discovered to be inaccurate; and
 - b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.

13. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.

14. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, stone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section (DHR), at (850)245-6333, as well as the appropriate permitting agency office. Project activities shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and the proper authorities notified in accordance with section 872.05, F.S. For project activities subject to prior consultation with the DHR and as an alternative to the above requirements, the permittee may follow procedures for unanticipated discoveries as set forth within a cultural resources assessment survey determined complete and sufficient by DHR and included as a specific permit condition herein.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under rule 62-330.201, F.A.C., provides otherwise.

16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under chapter 62-330, F.A.C., or cause violations of state water quality standards.

17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with subsection 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

19. In addition to those general conditions in subsection (1), above, the Agency shall impose any additional project-specific special conditions necessary to assure the permitted activities will not be harmful to the water resources, as set forth in rules 62-330.301 and 62-330.302, F.A.C., Volumes I and II, as applicable, and the rules incorporated by reference in this chapter.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for

filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a).

The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and

120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C. If you do not publish notice of this action, this waiver will not apply to persons who have not received written notice of this action.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Thomas G. Kallemeyn
Permitting Program Administrator
Submerged Lands & Environmental
Resource Program

TGK:th

Attachments:

Standard Manatee Construction Conditions 2011
Construction Commencement Notice/Form 62-330.350(1)
Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit/Form 62-330.310(3)
Request to Transfer Permit/Form 62-330.340(1)
Permit Drawings, 10 Pages
Reservation letter, 1 Page

Copies furnished to:

Jake Sydnor, Taylor Engineering, Inc., jsydnor@taylorengeering.com
Kierstin Masse, Taylor Engineering, Inc., kmasse@taylorengeering.com
FWC, Imperiled Species Management Section
Thomas G. Kallemeyn, FDEP NED
Katie Miller, FDEP NED
Kimberly Mann, FDEP NED
Taylor Hohmann, FDEP NED

File

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this permit, including all copies, were mailed before the close of business on **August 4, 2022**, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, under 120.52(7) of the Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

August 4, 2022

Date

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 ½" 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.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:



Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

DRAFT



LOCATION MAP
N.T.S.

ENGINEER CONTACT
TAYLOR ENGINEERING, INC.
10199 SOUTHSIDE BLVD, SUITE 310
JACKSONVILLE, FL 32256
(904) 256-1381

PROPERTY OWNER CONTACT
JACKSONVILLE PORT AUTHORITY (JAXPORT)
2831 TALLEYRAND AVENUE
JACKSONVILLE, FLORIDA 32206
(904) 357-3001

PROJECT LOCATION
DAMES POINT MARINE TERMINAL
JACKSONVILLE, DUVAL COUNTY, FLORIDA 32206
LATITUDE: 30° 24' 18.153" NORTH
LONGITUDE: 81° 34' 27.730" WEST
EASTING: 474,224.21
NORTHING: 2,207,803.31

THE PROJECT IS LOCATED ADJACENT TO THE ST. JOHNS RIVER, IN SECTION 23, TOWNSHIP 1 SOUTH, RANGE 27 EAST.



DRAWING INDEX

- C-1 COVER SHEET
- C-2 GENERAL NOTES
- C-3 GEOTECHNICAL BORING LOCATIONS
- C-4 EXISTING CONDITIONS AND DEMOLITION PLAN
- C-5 PROJECT OVERVIEW PLAN
- C-6 REVETMENT PLAN
- C-7 TYPICAL SECTION DETAIL
- C-8 CROSS-SECTIONS
- C-9 FENCE DETAILS
- C-10 EROSION AND SEDIMENT CONTROL DETAILS



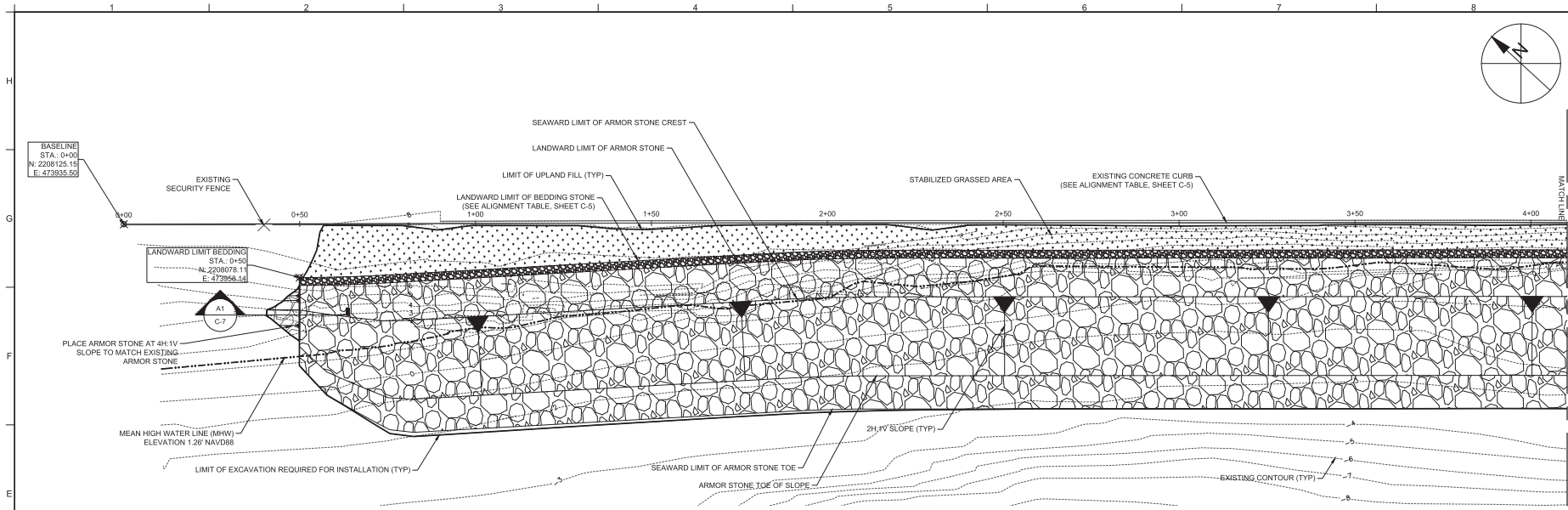
VICINITY MAP

1" = 2000' (22x34)
1" = 4000' (11x17)

REFERENCE:
USA TOPO MAPS, ESRI

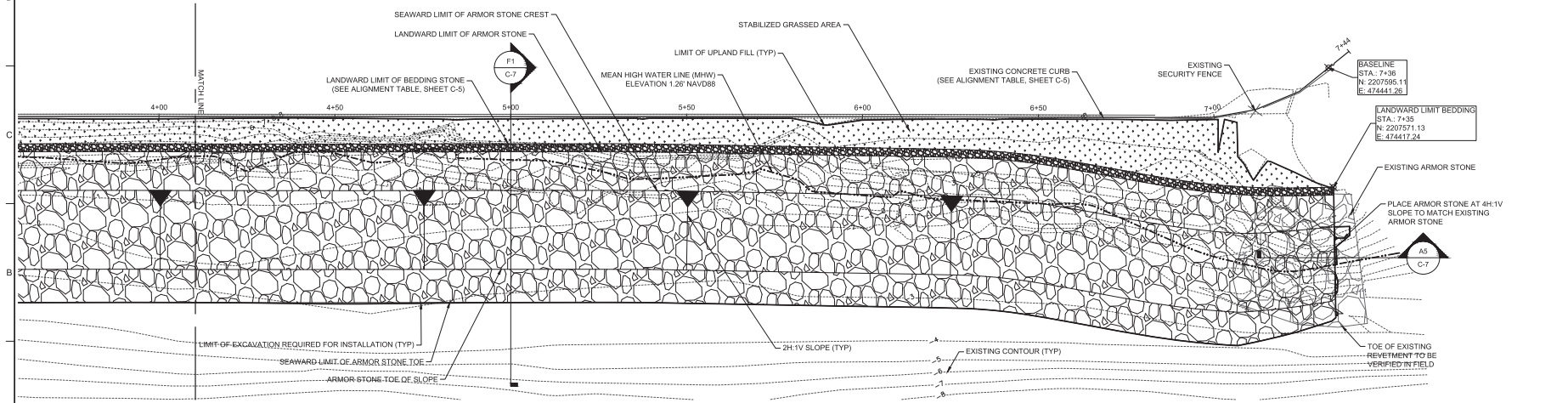


<p>TAYLOR ENGINEERING, INC.</p> <p>10199 SOUTHSIDE BLVD SUITE 310 JACKSONVILLE, FLORIDA 32256 (904) 731-7040 REGISTRY # 4815</p>	<p>PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.</p>	SEAL		
	<p>PROJECT TITLE</p> <p>DAMES POINT MARINE TERMINAL SHORELINE PROTECTION DUVAL COUNTY, FLORIDA</p>	<p>DRAFT</p>		
	<table border="1"> <tr> <td>PROJECT NO</td> <td>C2021-0188</td> </tr> <tr> <td>DATE</td> <td>MAR 2022</td> </tr> </table>		PROJECT NO	C2021-0188
PROJECT NO	C2021-0188			
DATE	MAR 2022			
<p>ENG</p>		<p>C-1</p> <p>SHEET 1 OF 10</p>		



E1 **REVETMENT PLAN - STA. 0+00 TO 4+00**
 22X34: 1" = 16'
 11X17: 1" = 30'

NOTES:
 1. SEE SHEET C-7 FOR STAKEOUT COORDINATES FOR BACK OF CURB BASELINE AND LANDWARD LIMITS OF BEDDING STONE.



A1 **REVETMENT PLAN - STA. 4+00 TO 7+44**
 22X34: 1" = 16'
 11X17: 1" = 30'

DRAFT

**DAMES POINT MARINE TERMINAL
 SHORELINE PROTECTION**
 DUVAL COUNTY, FLORIDA

NO.	DATE	REVISIONS/SUBMISSIONS

PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	DRAGNEY
DRAWN	CAS
CHECKED	CHECKEY
REVIEWED	REBY

REVETMENT PLAN



SEAL

DRAFT

ENG

PROJECT TITLE
**DAMES POINT MARINE TERMINAL
SHORELINE PROTECTION**
DUVAL COUNTY, FLORIDA

PROJECT NO. DATE

NO.	DATE	REVISIONS / SUBMISSIONS



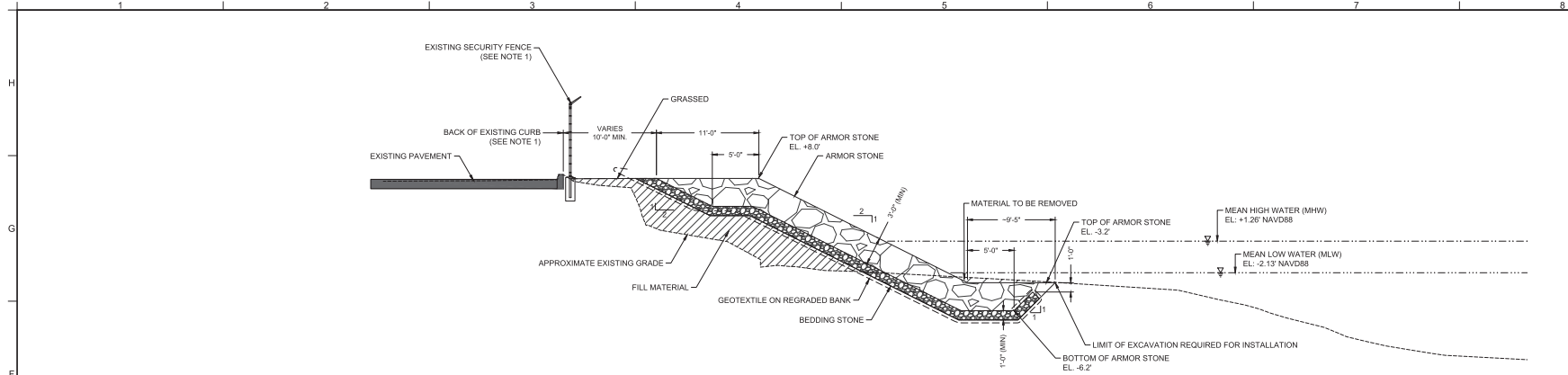
PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	DRAGNEY
DRAWN	CAS
CHECKED	CHECKBY
REVIEWED	REBY

SHEET TITLE

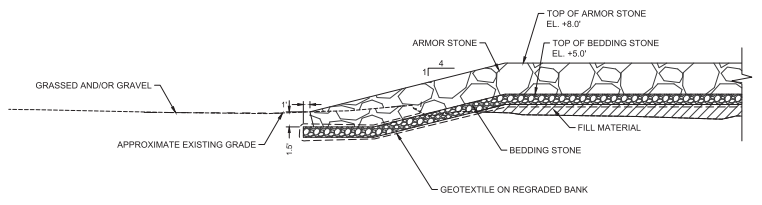
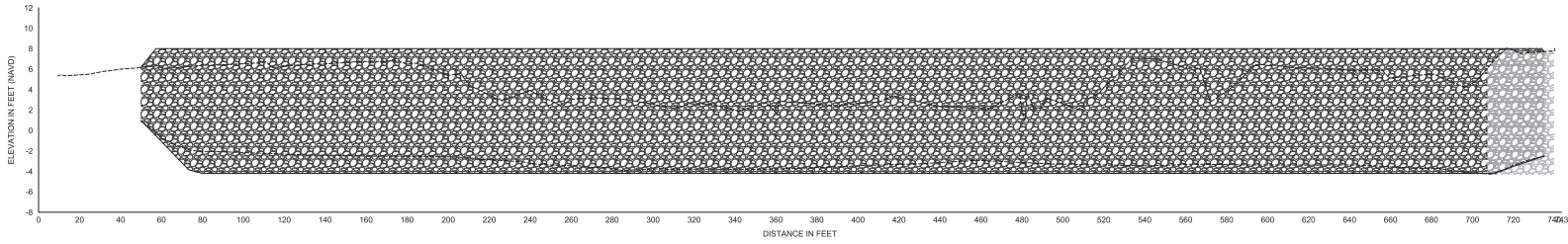
TYPICAL SECTION DETAIL

C-7

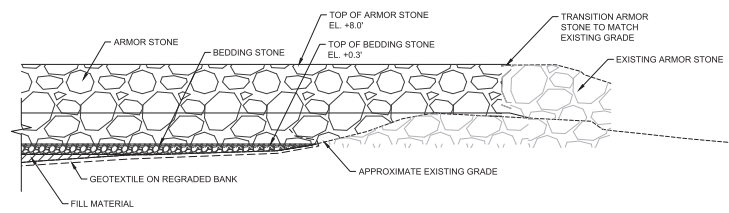
SHEET 7 OF 10



F1 TYPICAL SECTION DETAIL (STA. 5+00)
22x34: 1" = 6'
11x17: 1" = 12'



A1 SECTION DETAIL AT START OF REVETMENT (STA. 0+50)
22x34: 1" = 1'
11x17: 1" = 2'



A5 SECTION DETAIL AT END OF REVETMENT (STA. 7+36)
22x34: 1" = 1'
11x17: 1" = 2'

ANTON TEXELL, INC. 330522 134-37 A6 10/20/2021 10:01 AM C:\Users\pjohnson\OneDrive\Documents\2021\2021-0188-C-07.dwg

PROJECT TITLE

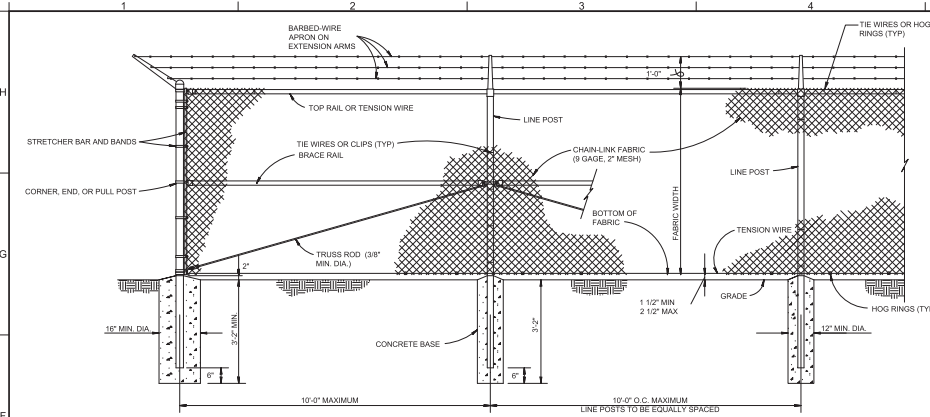
DESIGNED	DATE	NO.	DATE
DRAWN	CAS	NO.	DATE
CHECKED	CHECKY	NO.	DATE
REVIEWED	REBY	NO.	DATE

PRELIMINARY DRAWINGS; THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR ARCHITECT REVIEW. SEE SHEET C-2 FOR GENERAL NOTES. THIS PAGE NOT VALID WITHOUT SHEET C-2.

REVISIONS SUBMISSIONS

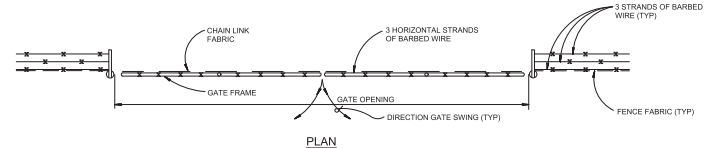
PROJECT NO. C2021-0188
DATE: MAR 2022
DESIGNED: DRAGNY
DRAWN: CAS
CHECKED: CHECKY
REVIEWED: REBY

FENCE DETAILS

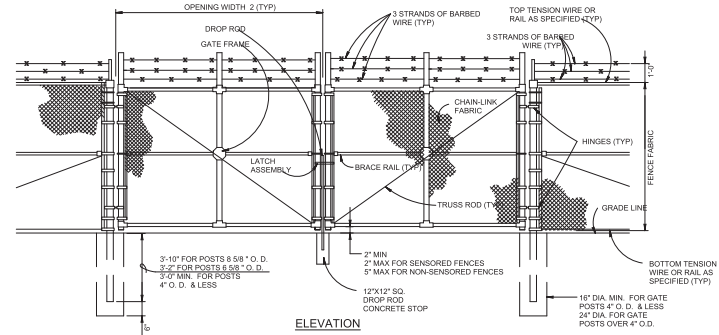


CHAIN-LINK SECURITY FENCE DETAIL

NO SCALE



PLAN



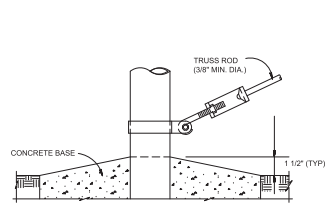
ELEVATION

DOUBLE SWING GATE (TYPE FE-6 FENCE)

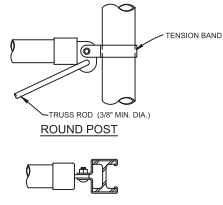
NO SCALE

CHAIN LINK FENCE NOTES:

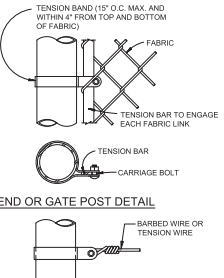
- BRACE AND TRUSS ROD REQUIRED AT GATES AND SIDES OF ALL CORNER POSTS.
- FABRIC TO BE GALVANIZED AFTER WEAVING, ASTM A392, CLASS 1.
- TENSION WIRE TO BE ZINC COATED STEEL, ASTM A324, TYPE II, CLASS 2.
- BARBED WIRE TO BE TWO STRANDS OF NO. 12 1/2 GAUGE, BARBS NO. 14 GAUGE WITH FOUR POINTS 3/8\"/>



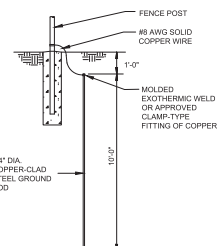
TRUSS ROD AND BAND



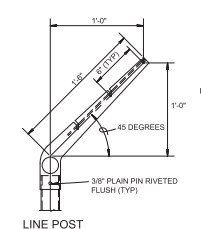
ROUND POST



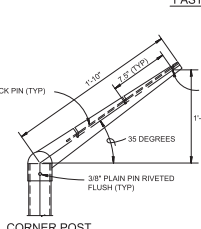
END OR GATE POST DETAIL



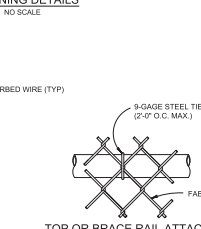
GROUNDING DETAIL



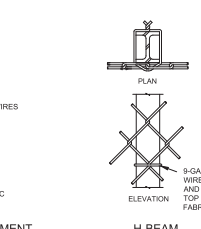
LINE POST



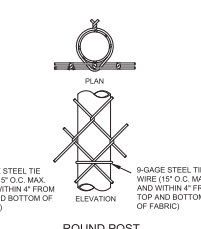
CORNER POST



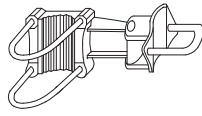
TOP OR BRACE RAIL ATTACHMENT



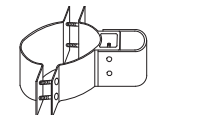
H-BEAM



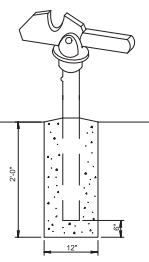
ROUND POST



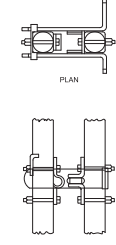
OFFSET HINGE



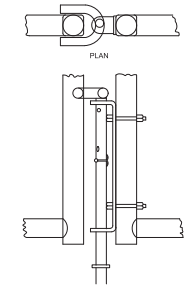
STANDARD HINGE



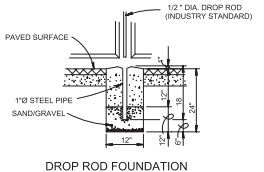
**GATE KEEPER
(TO HOLD GATE OPEN)**



LATCH ASSEMBLY



DROP ROD ASSEMBLY

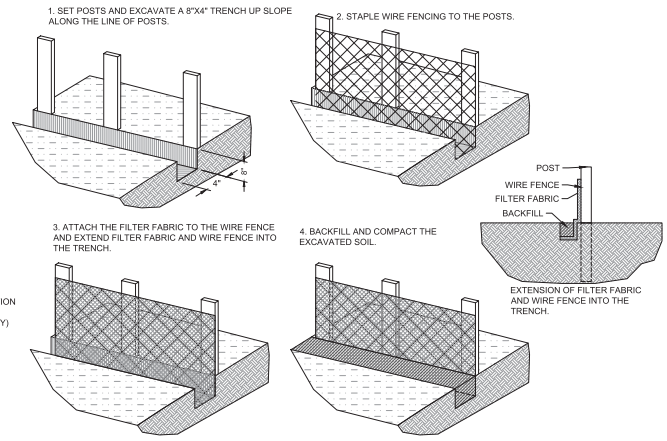
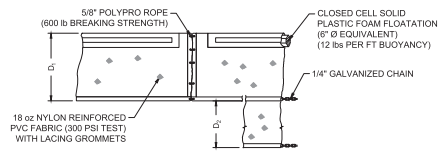
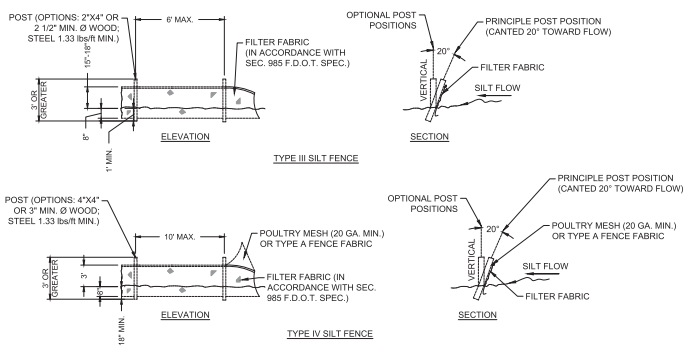
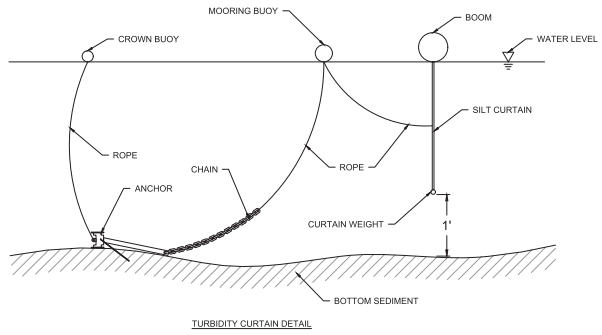


DROP ROD FOUNDATION

FASTENING DETAILS

NO SCALE

H
G
F
E
D
C
B
A



TAYLOR ENGINEERING, INC.

10199 SOUTHSIDE BLVD
SUITE 310
JACKSONVILLE, FLORIDA 32256
(904) 731-7040
REGISTRY # 4815

SEAL

DRAFT

ENG

PROJECT TITLE

DAMES POINT MARINE TERMINAL SHORELINE PROTECTION
DUVAL COUNTY, FLORIDA

NO.	DATE	REVISIONS / SUBMISSIONS

Call It Like You See It

PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	DRAGNY
DRAWN	CAS
CHECKED	CHECKBY
REVIEWED	REBY

SHEET TITLE

EROSION AND SEDIMENT CONTROL DETAILS

ANTON TEXELLE, INC. 3505222 133554.A01 X:\proj\p1801\2021-0188-DRAFT\Drawings\Construction\2021-0188-C-Erosion Control Details.rvt

Riverfront Associates, LLC

344 Pablo Terrace
Ponte Vedra Beach, Florida 32082
904-834-3710

May 12, 2022

Mr. J. Reid Hilliard, Mitigation Bank Technical Program Manager
St. Johns River Water Management District
Maitland Service Center
601 South Lake Destiny Road, Suite 200
Maitland FL 32751

Re: Request for Reservation of Mitigation Credits from North Florida Saltmarsh Mitigation Bank; Permit Number 4-031-129625-5

Dear Reid:

This letter is a request for a reservation of credits from the North Florida Saltmarsh Mitigation Bank. In support of this request, the following information is provided:

- Dames Point Marine Terminal – Shoreline Protection
 - FDEP Application No. 16-0186420-007-EI
- .03 UMAM credits to be purchased
- Type of credits to be purchased: Herbaceous Marine
- .03 credits to be reserved on ledger, location Basin 4

Please reserve the credits on the North Florida Saltwater Marsh Mitigation Bank ledger. If you have any questions regarding this request, please contact me at (904) 834-3710.

Sincerely,



Thomas F. Beeckler,
President
Riverfront Associates, LLC



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT
701 SAN MARCO BOULEVARD
JACKSONVILLE, FLORIDA 32207-8175

October 19, 2022

Regulatory Division
North Permits Branch
Jacksonville Permits Section
SAJ-1994-03114 (SP-BJC)

Jacksonville Port Authority (JAXPORT)
Attn: Mr. James Bennett
2831 Talleyrand Avenue
Jacksonville, Florida 32206
Sent via email: James.Bennett@jaxport.com

Dear Mr. Bennett:

The U.S. Army Corps of Engineers (Corps) is pleased to enclose the Department of the Army permit, which should be available at the construction site. Work may begin immediately but the Corps must be notified of:

- a. The date of commencement of the work,
- b. The dates of work suspensions and resumptions of work, if suspended over a week, and
- c. The date of final completion.

This information should be emailed to the Enforcement Section of the Regulatory Division of the Jacksonville District at saj-rd-enforcement@usace.army.mil. The Enforcement Section is also responsible for inspections to determine whether Permittees have strictly adhered to permit conditions.

Should any other agency require and/or approve changes to the work authorized or obligated by this permit, it is the responsibility of the Permittee to submit a modification request to the Jacksonville Permits Section. The Corps will evaluate the request and determine whether it is appropriate to modify the terms and conditions of the permit. The Permittee must obtain written approval of the requested modifications from the Corps prior to initiation of those changes.

**IT IS NOT LAWFUL TO DEVIATE FROM
THE APPROVED PLANS ENCLOSED.**

Sincerely,

BLAISDELL.MURIE¹ Digitally signed by
BLAISDELL.MURIEL.M.139106469
L.M.139106469
Date: 2022.10.19 11:03:38 -04'00'

for: Shawn H. Zinszer
Chief, Regulatory Division

Enclosures

cc:

Taylor Engineering, Inc., Attn: Mr. Noah Adams – Nadams@tayloengineering.com.

DEPARTMENT OF THE ARMY PERMIT

Permittee: JACKSONVILLE PORT AUTHORITY (JAXPORT)
ATTN: MR. JAMES BENNETT
2831 TALLEYRAND AVENUE
JACKSONVILLE, FLORIDA 32206

Permit No: SAJ-1994-03114 (SP-BJC)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The Permittee is authorized to discharge 422 cubic yards of clean-fill material (riprap) into 0.046-acres of estuarine wetlands and 0.43-acres of surface waters to facilitate the stabilization of 700 feet of shoreline. In addition, the applicant would excavate 1,721 cubic yards of sediment to a depth of -6.8 feet below the mean low water line from 0.15 acres of the aquatic substrate within the St. Johns River. The dredged material would be dewatered on site and then used as backfill for the construction of the revetment. The unused excess dredged material would be stored at Bartram Island Upland Disposal Site. The work described above is to be completed in accordance with the pages of drawings affixed at the end of this permit instrument.

Project Location: The project site is located at 9506 August Drive, in Sections 22 and 23, Township 1 South, Range 27 East, Jacksonville, Duval County, Florida. The central coordinates are Latitude 30.405367°, Longitude -81.577290°. The affected waters of the United States is the St. Johns River.

Directions to site: From Interstate-95 take Exit 362A. Proceed onto Interstate-295 and take Exit 41. Take a left (east) on Heckscher Drive. Proceed until the intersection of August Drive and turn right. The project is at the end of the roadway.

Approximate Central Coordinates: Latitude: 30.405367°
Longitude: -81.577290°

Permit Conditions

General Conditions:

1. The time limit for completing the work authorized ends on **October 19, 2027**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Reporting Address: The Permittee shall submit all reports, notifications, documentation, and correspondence required by the general and special conditions of this permit to either (not both) of the following addresses:

PERMIT NUMBER: SAJ-1994-03114
PERMITTEE: JAXPORT
PAGE 3 of 11

- a. For electronic mail (preferred): SAJ-RD-Enforcement@usace.army.mil (not to exceed 15 MB).
- b. For standard mail: U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232-0019.

The Permittee shall reference this permit number, SAJ-1994-03114 (SP-BJC), on all submittals.

2. Commencement Notification: Within 10 days from the date of initiating the work authorized by this permit, the Permittee shall submit a completed "Commencement Notification" form.

3. Assurance of Navigation and Maintenance: The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

4. Jacksonville District Programmatic Biological Opinion (JAXBO): Structures and activities authorized under this permit will be constructed and operated in accordance with all applicable PDCs contained in the JAXBO, based on the permitted activity. Johnson's seagrass and its critical habitat were delisted from the Endangered Species Act on May 16, 2022. Therefore, JAXBO PDCs required to minimize adverse effects to Johnson's seagrass and its critical habitat are no longer applicable to any project. Failure to comply with applicable PDCs will constitute noncompliance with this permit. In addition, failure to comply with the applicable PDCs, where a take of listed species occurs, would constitute an unauthorized take. The NMFS is the appropriate authority to determine compliance with the Endangered Species Act. The most current version of JAXBO can be accessed at the Jacksonville District Regulatory Division website in the Endangered Species section of the Sourcebook located at:
<http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx>

JAXBO may be subject to revision at any time. The most recent version of the JAXBO must be utilized during the design and construction of the permitted work.

5. Eastern Indigo Snake Protection Measures and Inspection: Permittee shall comply with U.S. Fish and Wildlife Service's "Standard Protection Measures for the Eastern Indigo Snake" dated August 12, 2013. All gopher tortoise burrows, active or inactive, shall be evacuated prior to site manipulation in the vicinity of the burrow. If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a Florida Fish and Wildlife Conservation Commission (FWC) Authorized Gopher Tortoise Agent permit. The excavation method selected shall minimize the potential for injury of an indigo snake. The Permittee shall follow the excavation guidance provided in the most current FWC Gopher Tortoise Permitting Guidelines found at <http://myfwc.com/gophertortoise>. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Holes, cavities, and snake refugia other than gopher tortoise burrows shall be inspected each morning before planned site manipulation of a particular area, and if occupied by an indigo snake, no work shall commence until the snake has vacated the vicinity of the proposed work.

6. Manatee Conditions: The Permittee shall comply with the "Standard Manatee Conditions for In-Water Work – 2011". The most recent version of the Manatee Conditions must be utilized.

7. Manatee Condition for Clamshell Dredge: During clamshell dredging operations, the dredge operator shall gravity-release the clamshell bucket only at the water's surface, and only after confirmation that there are no manatees within the safety distance identified in the standard construction conditions (or a 75-foot buffer if dredging is authorized at night).

8. Fill Material: The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance in toxic amounts, in accordance with Section 307 of the Clean Water Act.

9. Mitigation Bank Credit Purchase: Prior to commencement of work, the Permittee shall provide verification to the Corps that 0.03 estuarine federal mitigation bank credits have been purchased from the North Florida Salt Marsh Mitigation Bank (SAJ-2010-03461). The required verification shall reference this project's permit number SAJ-1994-03114 (SP –BJC).

10. Dredged Material Disposal: The Permittee shall place all dredged material in a self-contained, upland disposal site. The Permittee shall maintain the upland disposal

site to prevent the discharge of dredged material and associated effluent into waters of the United States.

11. Cultural Resources/Historic Properties:

- a. No structure or work shall adversely affect, impact, or disturb properties listed in the *National Register of Historic Places* (NRHP), or those eligible for inclusion in the NRHP.
- b. If, during permitted activities, items that may have historic or archaeological origin are observed the Permittee shall immediately cease all activities adjacent to the discovery that may result in the destruction of these resources and shall prevent his/her employees from further removing, or otherwise damaging, such resources. The applicant shall notify both the Florida Department of State, Division of Historical Resources, Compliance Review Section at (850)-245-6333 and the Corps, of the observations within the same business day (8 hours). Examples of submerged historical, archaeological or cultural resources include shipwrecks, shipwreck debris fields (such as steam engine parts, or wood planks and beams), anchors, ballast rock, concreted iron objects, concentrations of coal, prehistoric watercraft (such as log "dugouts"), and other evidence of human activity. The materials may be deeply buried in sediment, resting in shallow sediments or above them, or protruding into water. The Corps shall coordinate with the Florida State Historic Preservation Officer (SHPO) to assess the significance of the discovery and devise appropriate actions. Project activities shall not resume without verbal and/or written authorization from the Corps.
- c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition and, if deemed necessary by the SHPO or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend, or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.
- d. In the unlikely event that unmarked human remains are identified on non-federal lands; they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical examiner, Corps, and State Archaeologist within

PERMIT NUMBER: SAJ-1994-03114
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the same business day (8-hours). The Corps shall then notify the appropriate SHPO. Based on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend, or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the SHPO and from the Corps.

12. As-Built Certification: Within 60 days of completion of the work authorized by this permit, the Permittee shall submit as-built drawings of the authorized work and a completed "As-Built Certification by Professional Engineer or Surveyor" form to the Corps. The as-built drawings shall be signed and sealed by a registered professional engineer or surveyor and include the following:

- a. A plan view drawing of the location of the authorized work footprint, as shown on the permit drawings, with an overlay of the work as constructed. The plan view drawing should show all existing water management structures and the completed structures, dredge/fill activities, and wetland impacts.
- b. A list of any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the attached "As-Built Certification by Professional Engineer" form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or "As-Built Certification by Professional Engineer" form does not constitute approval of any deviations by the Corps.
- c. The Department of the Army permit number on all sheets submitted.

13. Posting of Permit: The Permittee shall have available and maintain for review a copy of this permit and approved plans at the construction site.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344)

PERMIT NUMBER: SAJ-1994-03114
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PAGE 7 of 11

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)

() Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408)

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

PERMIT NUMBER: SAJ-1994-03114
PERMITTEE: JAXPORT
PAGE 8 of 11

5. **Reevaluation of Permit Decision:** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

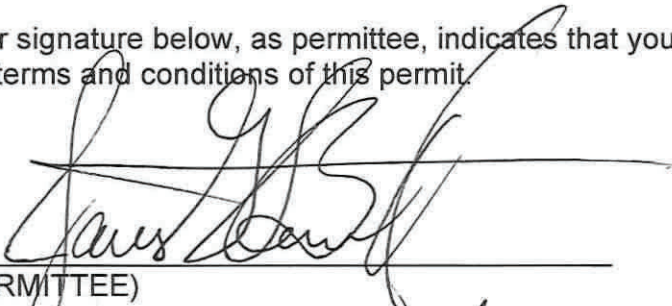
- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions:** General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

PERMIT NUMBER: SAJ-1994-03114
PERMITTEE: JAXPORT
PAGE 9 of 11

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



(PERMITTEE)

10-14-2022
(DATE)

James G. Bennett
(PERMITTEE NAME-PRINTED)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

BLAISDELL.MURI Digitally signed by
BLAISDELL.MURIEL.M.139106469
EL.M.1391064691 Date: 2022.10.19 11:05:30 -04'00'

19 October 2022
Date: _____

for: JAMES L. BOOTH
Colonel, U.S. Army
District Commander

PERMIT NUMBER: SAJ-1994-03114
PERMITTEE: JAXPORT
PAGE 10 of 11

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE-SIGNATURE)

(DATE)

(NAME-PRINTED)

(ADDRESS)

(CITY, STATE, AND ZIP CODE)

PERMIT NUMBER: SAJ-1994-03114
PERMITTEE: JAXPORT
PAGE 11 of 11

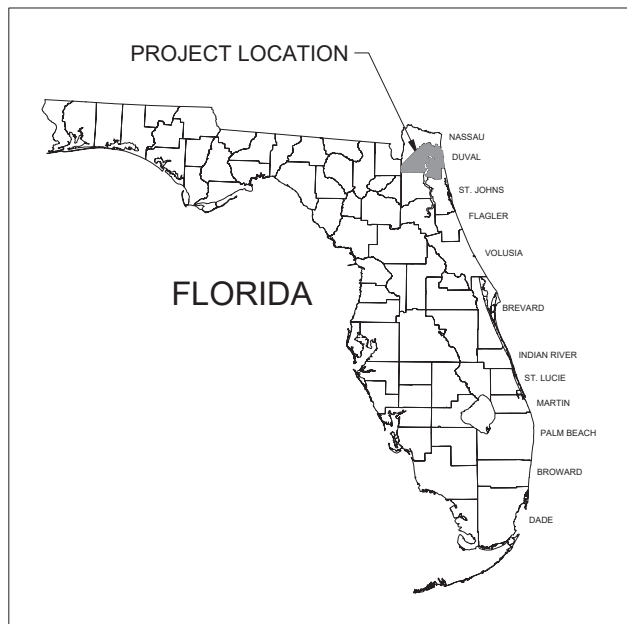
***Attachments to Department of the Army
Permit Number SAJ-1994-03114***

1. PERMIT DRAWINGS: 10 pages
2. WATER QUALITY CERTIFICATION: Specific Conditions of the water quality permit/certification in accordance with General Condition number 5 on page 2 of this DA permit. 24 pages.
3. MANATEE CONDITIONS: 2 pages, *Standard Manatee Conditions for In-Water Work – 2011*
4. EASTERN INDIGO SNAKE CONDITIONS: 3 pages
5. AS-BUILT CERTIFICATION FORM: 2 pages

DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

DRAFT



LOCATION MAP
N.T.S.

ENGINEER CONTACT
TAYLOR ENGINEERING, INC.
10199 SOUTHSIDE BLVD, SUITE 310
JACKSONVILLE, FL 32256
(904) 256-1381

PROPERTY OWNER CONTACT
JACKSONVILLE PORT AUTHORITY (JAXPORT)
2831 TALLEYFRAND AVENUE
JACKSONVILLE, FLORIDA 32206
(904) 357-3001

PROJECT LOCATION
DAMES POINT MARINE TERMINAL
JACKSONVILLE, DUVAL COUNTY, FLORIDA 32206
LATITUDE: 30° 24' 18.153" NORTH
LONGITUDE: 81° 34' 37.738" WEST
EASTING: 474,224.21
NORTHING: 2,207,803.31

THE PROJECT IS LOCATED ADJACENT TO THE ST. JOHNS RIVER, IN SECTION 23, TOWNSHIP 1 SOUTH, RANGE 27 EAST.



DRAWING INDEX

- C-1 COVER SHEET
- C-2 GENERAL NOTES
- C-3 GEOTECHNICAL BORING LOCATIONS
- C-4 EXISTING CONDITIONS AND DEMOLITION PLAN
- C-5 PROJECT OVERVIEW PLAN
- C-6 REVETMENT PLAN
- C-7 TYPICAL SECTION DETAIL
- C-8 CROSS-SECTIONS
- C-9 FENCE DETAILS
- C-10 EROSION AND SEDIMENT CONTROL DETAILS



VICINITY MAP

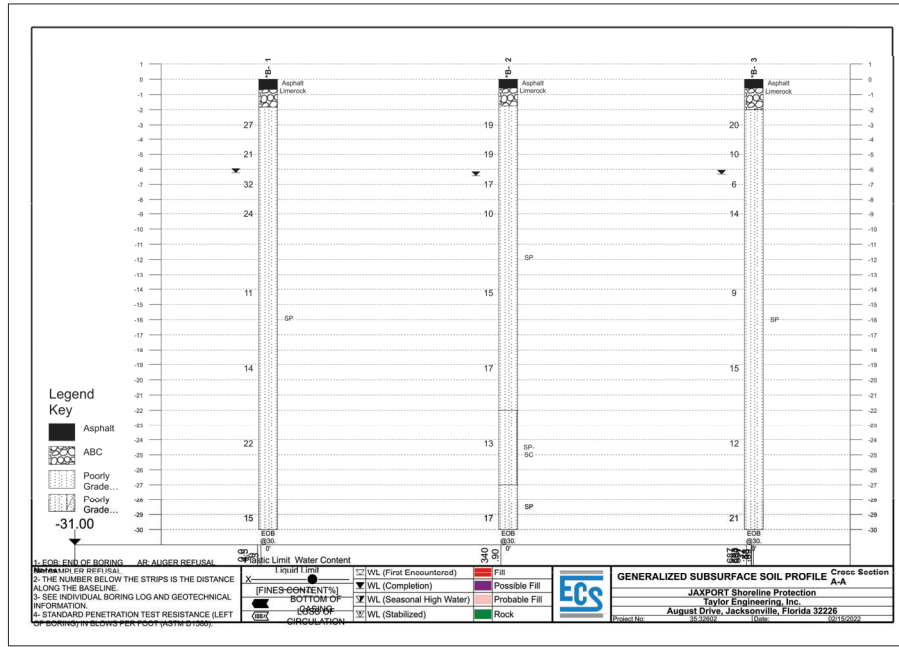
1" = 2000' (22x34)
1" = 4000' (11x17)

REFERENCE:
USA TOPO MAPS, ESRI



<p>TAYLOR ENGINEERING, INC. 10199 SOUTHSIDE BLVD SUITE 310 JACKSONVILLE, FLORIDA 32256 (904) 731-7040 REGISTRY #4815</p>	<p>PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.</p>	<p>SEAL</p> <h1>DRAFT</h1> <p>ENG</p>			
	<p>PROJECT TITLE</p> <p>DAMES POINT MARINE TERMINAL SHORELINE PROTECTION DUVAL COUNTY, FLORIDA</p>				
	<table border="1"> <tr> <td>PROJECT NO</td> <td>C2021-0188</td> </tr> <tr> <td>DATE</td> <td>MAR 2022</td> </tr> </table>	PROJECT NO	C2021-0188	DATE	MAR 2022
PROJECT NO	C2021-0188				
DATE	MAR 2022				

BORING POINT TABLE		
POINT	EASTING	NORTHING
SPT-1	473955.80	2208116.35
SPT-2	474185.84	2207886.53
SPT-3	474414.70	2207614.59



BORING LOGS

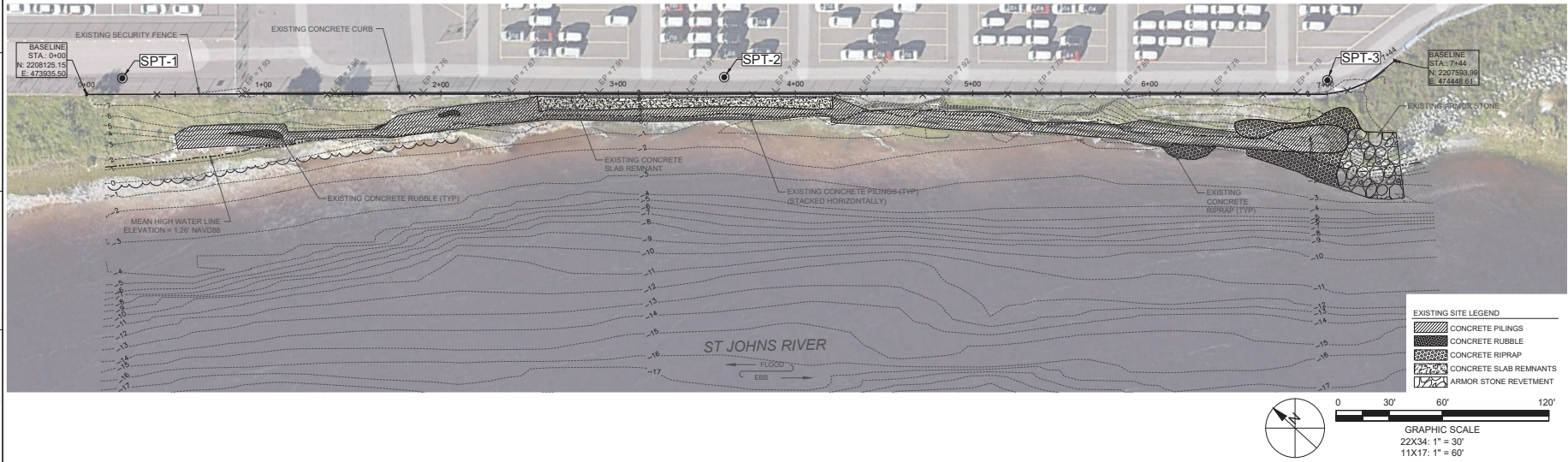
- NOTES:
1. SURVEY BY ABC SURVEYING AND MAPPING, INC., DATED DECEMBER 21, 2021.
 2. PROJECT NUMBER 21-225.
 3. ELEVATIONS ARE IN FEET AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1985 (NAVD83).
 4. PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83).
 5. AERIAL IMAGERY SHOWN OBTAINED FROM GOOGLE EARTH.

TAYLOR ENGINEERING, INC.

10199 SOUTHSIDE BLVD
 SUITE 310
 JACKSONVILLE, FLORIDA 32256
 (904) 731-7040
 REGISTRY # 4815

DRAFT

DAMES POINT MARINE TERMINAL
SHORELINE PROTECTION
 DUVAL COUNTY, FLORIDA



PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. ANY CHANGES TO THESE DRAWINGS MUST BE APPROVED BY THE DESIGNER. THIS SHEET IS VOID WITHOUT SHEET C-2.

NO.	DATE	REVISIONS / SUBMISSIONS

Call it before you dig.

PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	DISNEY
DRAWN	CAS
CHECKED	CHECKY
REVIEWED	REBY

GEOTECHNICAL BORING LOCATIONS



F1 PROJECT LOCATION MAP
 22X34: 1" = 600'
 11X17: 1" = 1,200'

- NOTES:
- CONTRACTOR SHALL REMOVE AND DISPOSE ALL EXISTING DEBRIS IDENTIFIED HERE IN, INCLUDING BUT NOT LIMITED TO CONCRETE PILING, BEAMS, SLABS, RUBBLE, AND RIP RAP. ANY ADDITIONAL DEBRIS NOT IDENTIFIED HEREIN SHALL BE PROMPTLY REMOVED AND DISPOSED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. PRIOR TO BID, CONTRACTOR SHALL CONDUCT A SITE VISIT TO VERIFY FULL EXTENT OF DEBRIS.
 - UPON COMPLETION OF DEMOLITION AND PRIOR TO GRADING AND PLACEMENT OF NEW STONE, THE CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY AND SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL.
 - THE EXISTING SECURITY FENCE MAY BE REMOVED TO ALLOW FOR EASE OF ACCESS TO THE PROJECT SITE. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OWNER ON SECURITY REQUIREMENTS PRIOR TO REMOVAL.
 - THE CONTRACTOR SHALL BE PERMITTED TO SALVAGE AND REUSE EXISTING BEDDING STONE AND/OR ARMOR STONE AT THE APPROVAL OF THE ENGINEER. EXISTING BEDDING STONE AND ARMOR STONE SHALL BE GRANITE, HAVING SIMILAR UNIT WEIGHT, SIZE AND CHARACTERISTICS AS THAT OF THE PROPOSED STONE. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL NOT ASSUME A DEDUCTION IN STONE QUANTITIES DUE TO THE REUSE OF ON-SITE MATERIAL.
 - SURVEY BY ARC SURVEYING AND MAPPING, INC., DATED DECEMBER 21, 2021, PROJECT NUMBER 21-225.
 - ELEVATIONS ARE IN FEET AND REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 - PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE EAST ZONE OF FLORIDA AND ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83).
 - AERIAL IMAGERY SHOWN OBTAINED FROM GOOGLE EARTH.

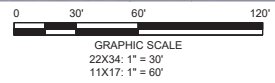
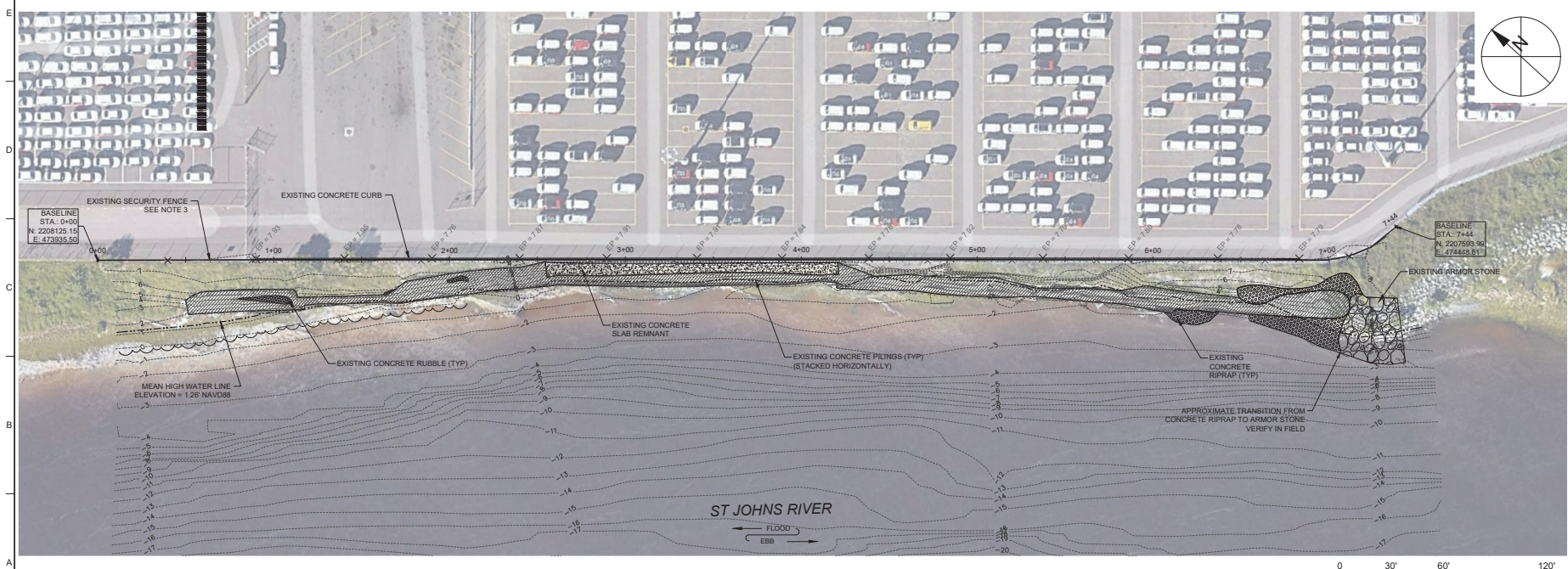
- EXISTING SITE LEGEND
- CONCRETE PILING
 - CONCRETE RUBBLE
 - CONCRETE RIPRAP
 - CONCRETE SLAB REMNANTS
 - ARMOR STONE REVEMENT

TAYLOR ENGINEERING, INC.

10199 SOUTHSIDE BLVD
 SUITE 310
 JACKSONVILLE, FLORIDA 32256
 (904) 731-7040
 REGISTRY # 4815

DRAFT

DAMES POINT MARINE TERMINAL
 SHORELINE PROTECTION
 DUVAL COUNTY, FLORIDA



PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION AND ARE NOT TO BE USED FOR ANY OTHER PURPOSES WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

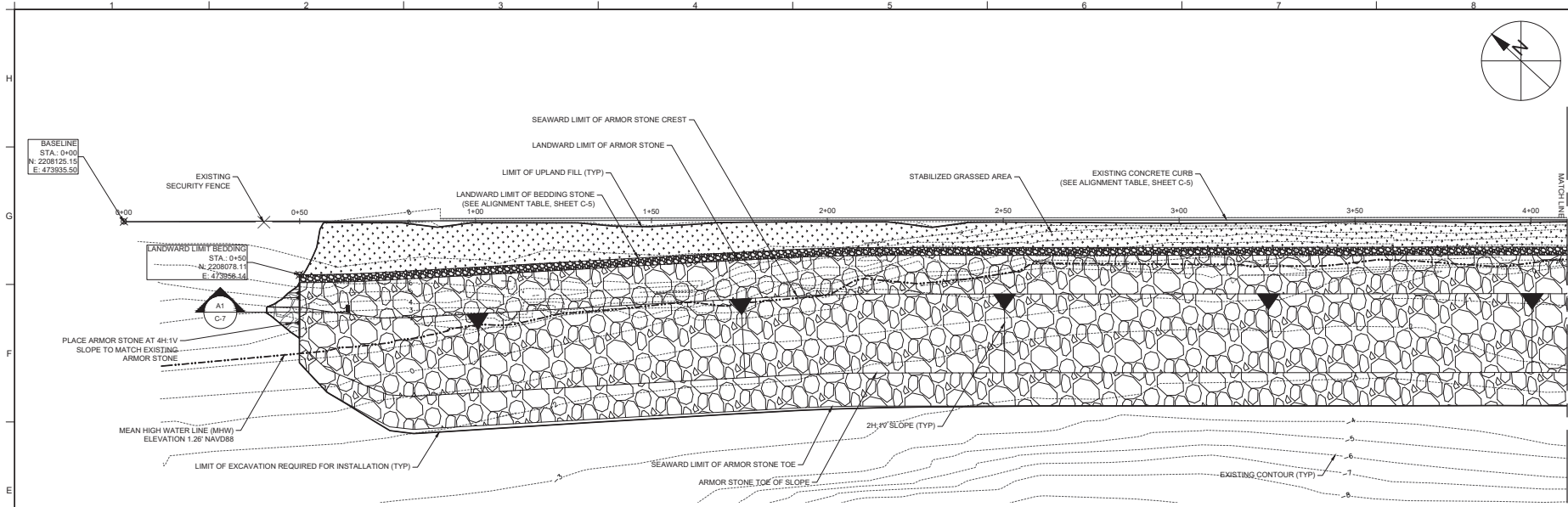
NO.	DATE	REVISIONS / SUBMISSIONS

Call *have you?*

PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	DISNEY
DRAWN	CAS
CHECKED	CHECKBY
REVIEWED	REBY

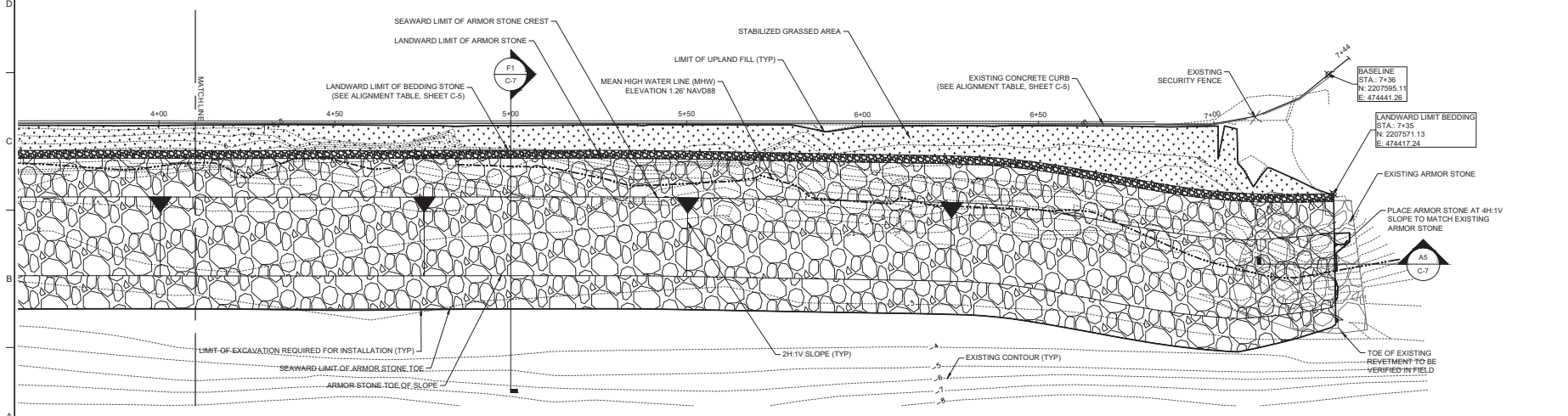
EXISTING CONDITIONS AND DEMOLITION PLAN

ANTONIO VELAZQUEZ: 2025022 103328 AM; KYLE WILSON: 2025022 103328 AM; DMB: 2025022 103328 AM; DMB: 2025022 103328 AM; DMB: 2025022 103328 AM



E1 **REVETMENT PLAN - STA. 0+00 TO 4+00**
 22X34: 1" = 15'
 11X17: 1" = 30'

NOTES:
 1. SEE SHEET C-7 FOR STAKEOUT COORDINATES FOR BACK OF CURB BASELINE AND LANDWARD LIMITS OF BEDDING STONE.



A1 **REVETMENT PLAN - STA. 4+00 TO 7+44**
 22X34: 1" = 15'
 11X17: 1" = 30'

DRAFT

DAMES POINT MARINE TERMINAL SHORELINE PROTECTION
 DUVAL COUNTY, FLORIDA

NO.	DATE	REVISIONS / SUBMISSIONS

PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	RODRIGUEZ
DRAWN	CAS
CHECKED	CHECKLEY
REVIEWED	REBY

REVETMENT PLAN



SEAL

DRAFT

ENG

PROJECT TITLE
**DAMES POINT MARINE TERMINAL
SHORELINE PROTECTION**
DUVAL COUNTY, FLORIDA

NO.	DATE	REVISIONS / SUBMISSIONS



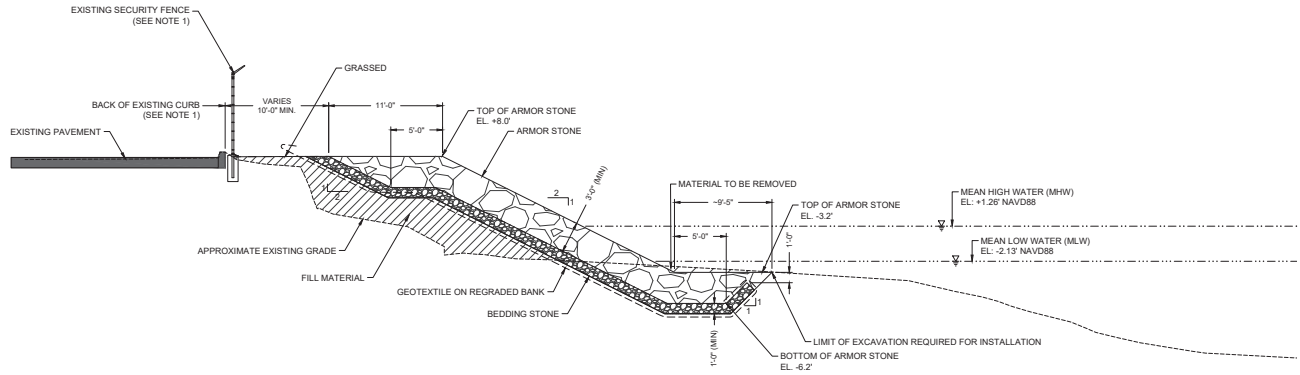
PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	OSBORN
DRAWN	CAS
CHECKED	CHECKBY
REVIEWED	REVIEW

SHEET TITLE

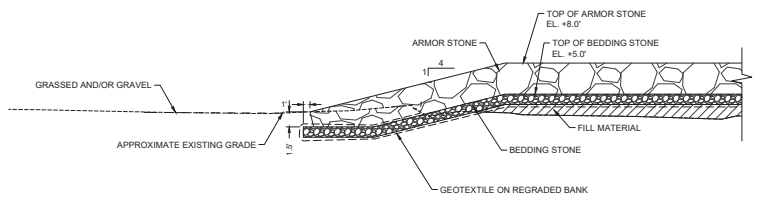
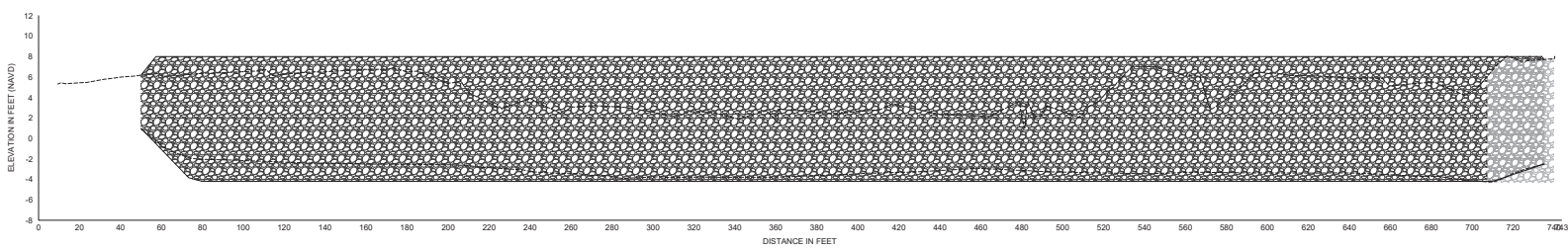
TYPICAL SECTION
DETAIL

C-7

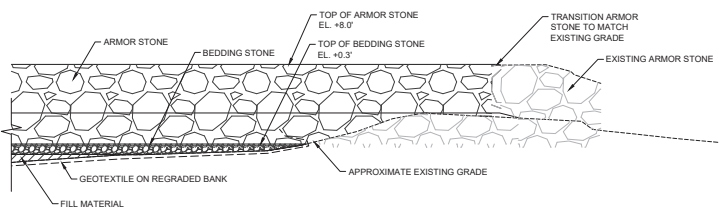
SHEET 7 OF 10



F1 TYPICAL SECTION DETAIL (STA. 5+00)
22x34: 1" = 6'
11x17: 1" = 12'



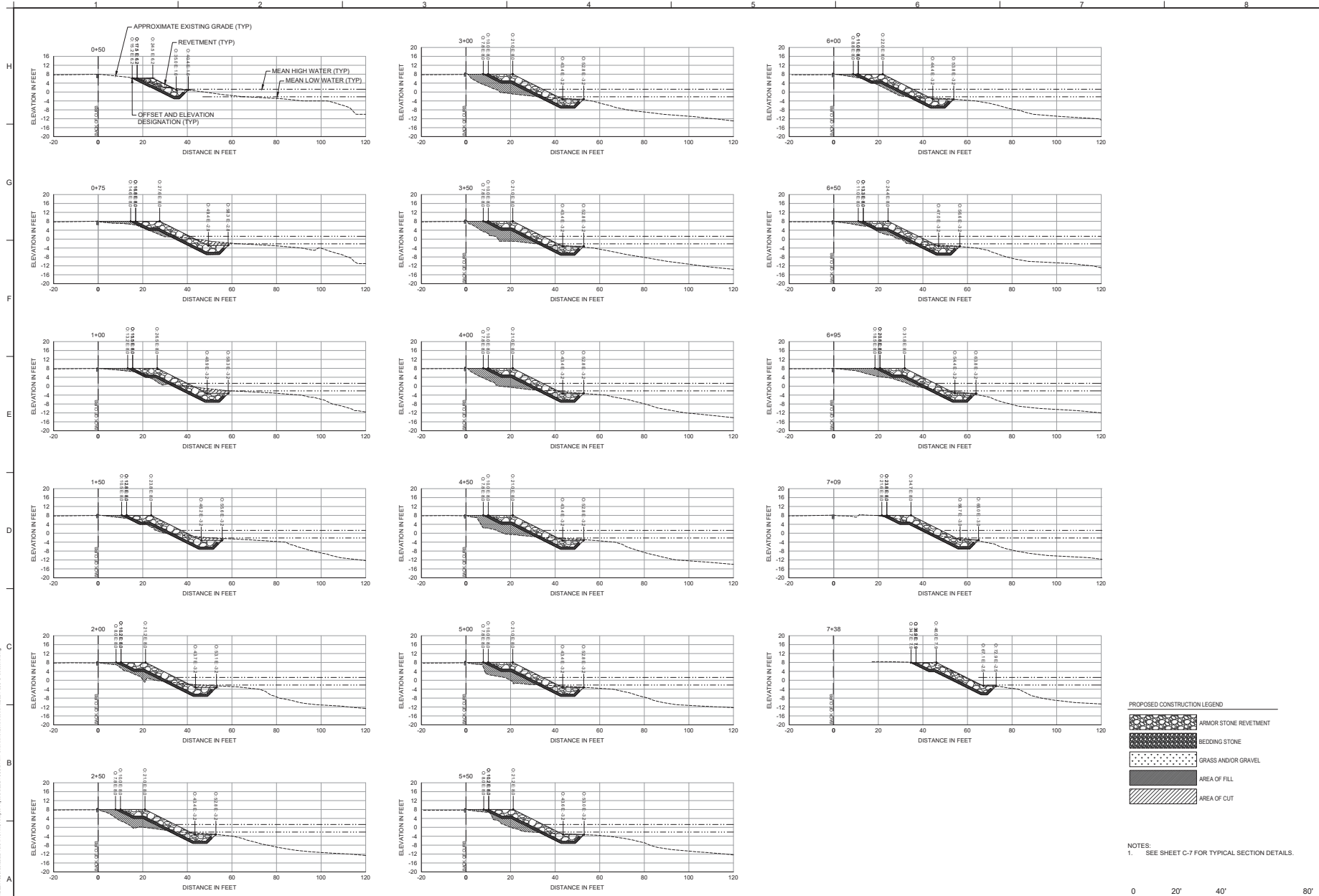
A1 SECTION DETAIL AT START OF REVETMENT (STA. 0+50)
22x34: 1" = 1'
11x17: 1" = 2'



A5 SECTION DETAIL AT END OF REVETMENT (STA. 7+36)
22x34: 1" = 1'
11x17: 1" = 2'

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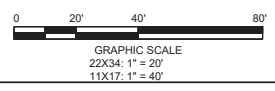
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PROPOSED CONSTRUCTION LEGEND

	ARMOR STONE REVETMENT
	BEDDING STONE
	GRASS AND/OR GRAVEL
	AREA OF FILL
	AREA OF CUT

NOTES:
1. SEE SHEET C-7 FOR TYPICAL SECTION DETAILS.



10199 SOUTHSIDE BLVD
SUITE 310
JACKSONVILLE, FLORIDA 32256
(904)731-7040
REGISTRY # 4815

SEAL
DRAFT
ENG

PROJECT TITLE
**DAMES POINT MARINE TERMINAL
SHORELINE PROTECTION**
DUVAL COUNTY, FLORIDA

NO.	DATE	REVISIONS / SUBMISSIONS



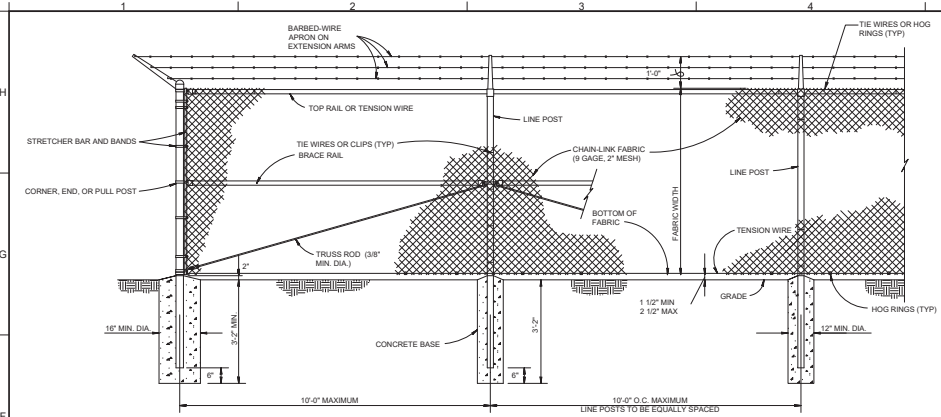
PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	ROSDNEY
DRAWN	CAS
CHECKED	CHECKY
REVIEWED	REBY

SHEET TITLE
CROSS-SECTIONS

C-8
SHEET 8 OF 10

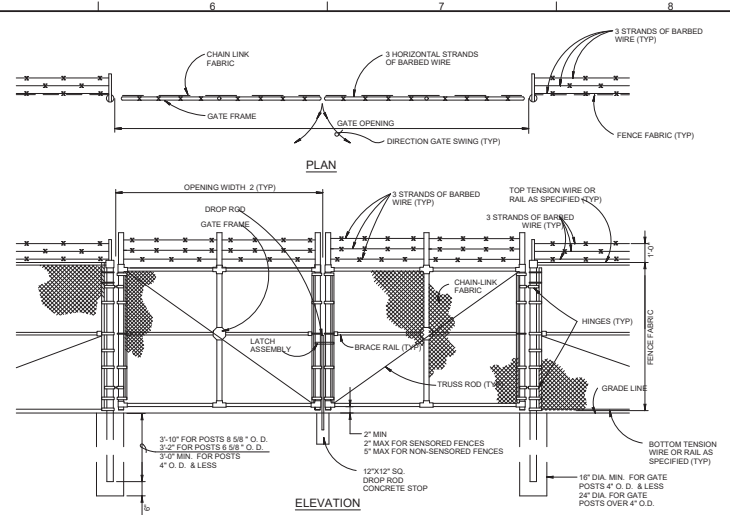
NO.	REVISIONS / SUBMISSIONS	DATE

PROJECT NO.	C2021-0188
DATE	MAR 2022
DESIGNED	DISNEY
DRAWN	CAS
CHECKED	CHECKY
REVIEWED	REBY



CHAIN-LINK SECURITY FENCE DETAIL

NO SCALE



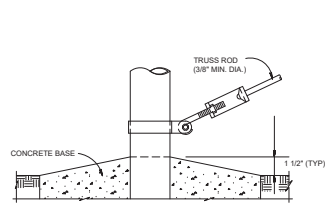
ELEVATION

DOUBLE SWING GATE (TYPE FE-6 FENCE)

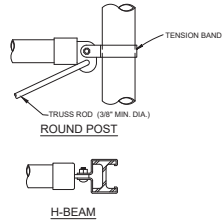
NO SCALE

CHAIN LINK FENCE NOTES:

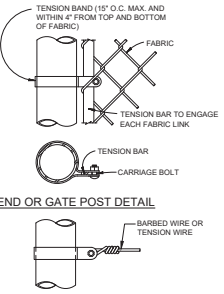
- BRACE AND TRUSS ROD REQUIRED AT GATES AND SIDES OF ALL CORNER POSTS.
- FABRIC TO BE GALVANIZED AFTER WEAVING, ASTM A392, CLASS 1.
- TENSION WIRE TO BE ZINC COATED STEEL, ASTM A824, TYPE II, CLASS 2.
- BARBED WIRE TO BE TWO STRANDS OF NO. 12 1/2 GAUGE, BARBS NO. 14 GAUGE WITH FOUR POINTS 3/8" IN LENGTH, SPACED AT 5".
- LINE POSTS TO BE 2 1/2" DIA. STEEL PIPE, ASTM F1083.
- END, CORNER, ANGLE AND PULL POSTS TO BE 2 1/2" DIA. STEEL PIPE, ASTM F1083.
- GATE POSTS TO BE 8 3/4" DIA. MINIMUM OR AS RECOMMENDED BY THE MANUFACTURER.
- ALL POSTS TO BE ZINC COATED, ASTM F1234, TYPE A, EXTERNAL AND INTERNAL.
- BRACE RAILS TO BE GALVANIZED STEEL PIPE 1 1/2" DIA., ASTM F1083, WITH ZINC COATING AS SPECIFIED FOR POSTS.
- BARB ARMS TO BE 45 DEGREE ARMS SUPPORTING 3 STRANDS OF BARBED WIRE.
- DO NOT INSTALL FABRIC UNTIL CONCRETE HAS CURED 7 DAYS.
- ALL FENCE ELEMENTS SHALL BE GROUNDED AT 100' INTERVALS. THE GROUND ROD SHALL CONSIST OF A COPPER CLAD STEEL ROD, WITH CONNECTION OF SIMILAR METAL IF REQUIRED, OR OF OTHER APPROPRIATE MATERIAL, EIGHT FEET IN LENGTH AND AT LEAST 3/4" IN DIAMETER. THE ROD SHALL BE DRIVEN VERTICALLY UNTIL THE TOP OF THE ROD IS APPROXIMATELY 2 INCHES ABOVE THE PAVEMENT SURFACE. A NO. 6 CONDUCTOR SHALL BE USED TO CONNECT THE ROD AND ALL FENCE ELEMENTS. THE CONDUCTOR SHALL BE CONNECTED TO EACH FENCE ELEMENT AND THE GROUND ROD BY MEANS OF ELECTRICAL-TYPE CLAMPS WHICH WILL PREVENT CORROSION.



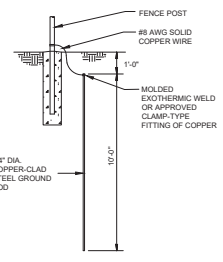
TRUSS ROD AND BAND



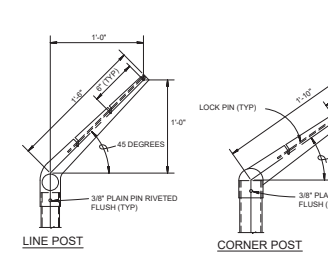
ROUND POST



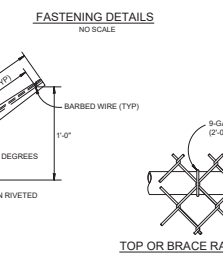
TENSION BAND DETAIL



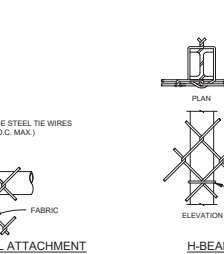
GROUNDING DETAIL



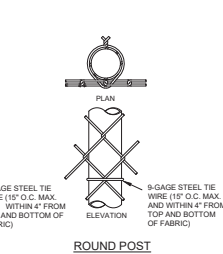
LINE POST



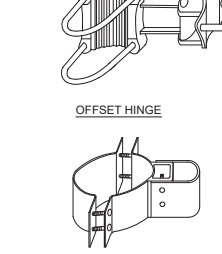
CORNER POST



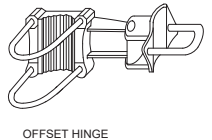
TOP OR BRACE RAIL ATTACHMENT



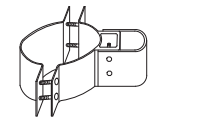
H-BEAM



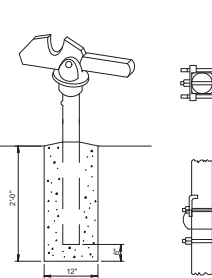
ROUND POST



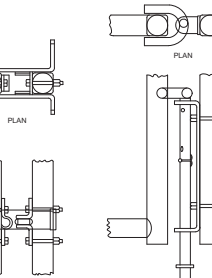
OFFSET HINGE



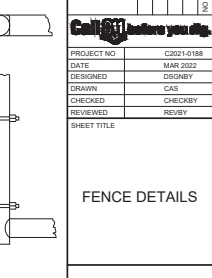
STANDARD HINGE



**GATE KEEPER
(TO HOLD GATE OPEN)**



LATCH ASSEMBLY



DROP ROD ASSEMBLY

PRELIMINARY DRAWINGS. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION. PERMITTING AGENCIES ARE ADVISED TO CHECK FOR ANY REVISIONS. THIS PAGE NOT VALID WITHOUT SHEET C-2.

ANTONIO REBELLO, INC. 3350 S.W. 202nd ST. SUITE 100, MIAMI, FL 33185 (305) 551-1111



FLORIDA DEPARTMENT OF Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Permittee/Authorized Entity:

Jacksonville Port Authority
Attn: James Bennet
2831 Talleyrand Avenue
Jacksonville, Florida, 32206
james.bennett@jaxport.com

JAXPORT Shoreline Stabilization

Authorized Agent:

Noah Adams, Taylor Engineering, Inc.
10199 Southside Boulevard
Jacksonville, Florida, 32256
nadams@tayloengineering.com

Environmental Resource Permit

State-owned Submerged Lands Authorization –Not Applicable

**U.S. Army Corps of Engineers Authorization – Separate Corps Authorization
Required**

Duval County
Permit No.: 16-0186420-007-EI

Permit Issuance Date: August 4, 2022
Permit Construction Phase Expiration Date: August 4, 2027

Environmental Resource Permit

Permittee: Jacksonville Port Authority
Permit No: 16-0186420-007-EI

PROJECT LOCATION

The activities authorized by this permit are located at 9506 August Drive (Parcel ID: 108828-0000), Jacksonville, Florida, 32206, in Section 23, Township 1 South, Range 27 East in Duval County, at Latitude 30° 24' 18.9650" North, Longitude 81° 34' 37.1914" West.

PROJECT DESCRIPTION

The permittee is authorized to replace the existing shoreline stabilization with an armored stone revetment, approximately 693 ft in length. There will be a 10-foot minimum vegetated or gravel buffer between the crest of the revetment and the existing edge of pavement for erosion protection. The proposed revetment will extend a maximum of 73 feet from the back of the curb at the existing edge of pavement. There will be 2,016 square feet, 0.046 acres, of unavoidable impacts to saltwater marsh, due to the construction of the new armored revetment. Authorized activities are depicted on the attached exhibits.

To offset unavoidable impacts that will occur from these authorized activities, the permittee shall purchase 0.03 herbaceous marine credits purchased from North Florida Saltmarsh Mitigation Bank (Permit #: 4-031-129625-5).

AUTHORIZATIONS

JAXPORT Shoreline Stabilization

Environmental Resource Permit

The Department has determined that the activity qualifies for an Environmental Resource Permit. Therefore, the Environmental Resource Permit is hereby granted, pursuant to Part IV of Chapter 373, Florida Statutes (F.S.), and Chapter 62-330, Florida Administrative Code (F.A.C.).

Sovereignty Submerged Lands Authorization

As staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), the Department has determined the activity is not on submerged lands owned by the State of Florida. Therefore, your project is not subject to the requirements of Chapter 253, F.S., or Rule 18-21, F.A.C.

Federal Authorization

Your proposed activity as outlined on your application and attached drawings **does not qualify** for Federal authorization pursuant to the State Programmatic General Permit and a **SEPARATE permit** or authorization **shall be required** from the Corps. You must apply separately to the Corps using the Application for Department of the Army Permit (ENG 4345) or alternative as allowed by Corps regulations. More information on Corps permitting may be found online in the Jacksonville District Regulatory Division Sourcebook:

(<https://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/>).

Authority for review - an agreement with the USACOE entitled "Coordination Agreement Between the U. S. Army Corps of Engineers (Jacksonville District) and the Florida Department of

Environmental Protection (or Duly Authorized Designee), State Programmatic General Permit”, Section 10 of the Rivers and Harbor Act of 1899, and Section 404 of the Clean Water Act.

Coastal Zone Management

Issuance of this authorization also constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

Water Quality Certification

This permit also constitutes a water quality certification under Section 401 of the Clean Water Act, 33 U.S.C. 1341

Other Authorizations

You are advised that authorizations or permits for this activity may be required by other federal, state, regional, or local entities including but not limited to local governments or municipalities. This permit does not relieve you from the requirements to obtain all other required permits or authorizations.

The activity described may be conducted only in accordance with the terms, conditions and attachments contained in this document. Issuance and granting of the permit and authorizations herein do not infer, nor guarantee, nor imply that future permits, authorizations, or modifications will be granted by the Department.

PERMIT CONDITIONS

The activities described must be conducted in accordance with:

- **The Specific Conditions**
- **The General Conditions**
- **The limits, conditions and locations of work shown in the attached drawings**
- **The term limits of this authorization**

You are advised to read and understand these conditions and drawings prior to beginning the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings herein. If you are using a contractor, the contractor also should read and understand these conditions and drawings prior to beginning any activity. Failure to comply with these conditions, including any mitigation requirements, shall be grounds for the Department to revoke the permit and authorization and to take appropriate enforcement action. Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and this permit, as described.

SPECIFIC CONDITIONS - PRIOR TO ANY CONSTRUCTION

1. Prior to commencement of work authorized by this permit, the permittee shall provide written notification of the date of the commencement and proposed schedule of construction to the Department of Environmental Protection, Northeast District, 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.

2. **Prior to any construction or impacts authorized by this permit**, the permittee shall provide the Department with documentation that 0.03 of herbaceous marine credits have been deducted

from the credit ledger of the North Florida Saltmarsh mitigation bank (Permit number 4-031-129625-5).

SPECIFIC CONDITIONS – CONSTRUCTION ACTIVITIES

3. This permit does not authorize the removal of any vegetation within the jurisdictional area. No dredging, filling, or other construction activity, including the removal of tree stumps and/or vegetative root masses, shall be conducted within the wetlands other than that performed within the construction limits authorized in this permit.

4. Storage or stockpiling of tools and materials (i.e., lumber, pilings, debris,) within wetlands, along the shoreline, within the littoral zone, or elsewhere within wetlands or other surface waters is prohibited. All vegetative material and debris shall be removed to a self-contained upland disposal area with no stockpiling of debris within wetland areas.

5. Outside the specific limits of construction authorized by this permit, any disturbance of or damage to wetlands shall be corrected by restoring pre-construction elevations as to maintain natural hydrology, drainage patterns, and planting vegetation of the same species, size, and density that exist in adjacent undisturbed wetland areas.

6. The project shall comply with applicable State Water Quality Standards, namely:

- a. Surface Waters, Minimum Criteria, General Criteria – Rule 62-302.500, F.A.C.
- b. Class III Waters – Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife. – Rule 62-302.400, F.A.C.

7. The work shall be performed during periods of average or low water.

8. Floating turbidity curtains (FDOT Type II or equivalent) shall be used to surround the work areas and shall remain in place until such time as turbidity levels within the dredged area have reduced sufficiently so as not to exceed the state water quality standard.

9. All wetland areas or water bodies which are outside the specific limits of construction authorized by this permit shall be protected from erosion, siltation, scouring, excess turbidity, or dewatering.

10. All fill slopes shall be planted with indigenous vegetation, sodded, seeded and mulched, or otherwise vegetatively stabilized within 5 days following their completion, and a substantial vegetative cover shall be established within 30 days of this stabilization activity.

11. All generated spoil material shall be deposited on a self-contained, upland spoil site which will prevent the escape of the spoil material and return water from the spoil site into surface waters.

12. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, stone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section (DHR), at (850)245-6333, as well as the appropriate permitting agency office. Project activities

shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and the proper authorities notified in accordance with section 872.05, F.S. For project activities subject to prior consultation with the DHR and as an alternative to the above requirements, the permittee may follow procedures for unanticipated discoveries as set forth within a cultural resources assessment survey determined complete and sufficient by DHR and included as a specific permit condition herein.

SPECIFIC CONDITIONS – RIPRAP REVETMENT

13. "Riprap" shall consist of unconsolidated boulders, rocks, or clean concrete rubble with no exposed reinforcing rods or similar protrusions. The riprap shall be free of sediment, debris, and toxins or otherwise deleterious substances.

14. The revetment shall be installed so that it ties into and does not extend waterward of the existing revetment Southeast of the project.

SPECIFIC CONDITIONS – MANATEE

15. The Standard Manatee Construction Conditions for In-water Work (2011) must be followed for all in-water activity.

SPECIFIC CONDITIONS - OTHER LISTED SPECIES

16. This permit does not authorize the permittee to cause any adverse impact to or “take” of state listed species and other regulated species of fish and wildlife. Compliance with state laws regulating the take of fish and wildlife is the responsibility of the owner or permittee associated with this project. Please refer to Chapter 68A-27 of the Florida Administrative Code for definitions of “take” and a list of fish and wildlife species. If listed species are observed onsite, Florida Fish and Wildlife Conservation Commission (FWC) staff are available to provide decision support information or assist in obtaining the appropriate FWC permits. Most marine endangered and threatened species are statutorily protected and a “take” permit cannot be issued. Requests for further information or review can be sent to ConservationPlanningServices@MyFWC.com.

17. If new information (e.g. listing of new species, new critical habitat, etc.) shows that the magnitude of impacts to federally listed species has the potential for adverse effects, the U.S. Fish and Wildlife Service (USFWS) will notify the Department. The Department will initiate coordination with the permittee and with the USFWS to determine what adverse impacts are likely and if additional minimization measures, reporting, or monitoring are required in order to be consistent with the Endangered Species Act, as deemed necessary by USFWS.

18. The Permittee shall report any injured, sick, or dead federally or state listed animal(s) discovered onsite to the Florida Fish and Wildlife Conservation Commission Wildlife Alert number at 888-404-FWCC (3922).

GENERAL CONDITIONS FOR INDIVIDUAL PERMITS

The following general conditions are binding on all individual permits issued under this chapter, except where the conditions are not applicable to the authorized activity, or where the conditions

must be modified to accommodate project-specific conditions.

1. All activities shall be implemented following the plans, specifications and performance criteria approved by this permit. Any deviations must be authorized in a permit modification in accordance with rule 62-330.315, F.A.C. Any deviations that are not so authorized may subject the permittee to enforcement action and revocation of the permit under chapter 373, F.S.
2. A complete copy of this permit shall be kept at the work site of the permitted activity during the construction phase, and shall be available for review at the work site upon request by the Agency staff. The permittee shall require the contractor to review the complete permit prior to beginning construction.
3. Activities shall be conducted in a manner that does not cause or contribute to violations of state water quality standards. Performance-based erosion and sediment control best management practices shall be installed immediately prior to, and be maintained during and after construction as needed, to prevent adverse impacts to the water resources and adjacent lands. Such practices shall be in accordance with the State of Florida Erosion and Sediment Control Designer and Reviewer Manual (Florida Department of Environmental Protection and Florida Department of Transportation, June 2007), and the Florida Stormwater Erosion and Sedimentation Control Inspector's Manual (Florida Department of Environmental Protection, Nonpoint Source Management Section, Tallahassee, Florida, July 2008), which are both incorporated by reference in subparagraph 62-330.050(9)(b)5., F.A.C., unless a project-specific erosion and sediment control plan is approved or other water quality control measures are required as part of the permit.
4. At least 48 hours prior to beginning the authorized activities, the permittee shall submit to the Agency a fully executed Form 62-330.350(1), "Construction Commencement Notice," (October 1, 2013), (<http://www.flrules.org/Gateway/reference.asp?No=Ref-02505>), incorporated by reference herein, indicating the expected start and completion dates. A copy of this form may be obtained from the Agency, as described in subsection 62-330.010(5), F.A.C., and shall be submitted electronically or by mail to the Agency. However, for activities involving more than one acre of construction that also require a NPDES stormwater construction general permit, submittal of the Notice of Intent to Use Generic Permit for Stormwater Discharge from Large and Small Construction Activities, DEP Form 62-621.300(4)(b), shall also serve as notice of commencement of construction under this chapter and, in such a case, submittal of Form 62-330.350(1) is not required.
5. Unless the permit is transferred under rule 62-330.340, F.A.C., or transferred to an operating entity under rule 62-330.310, F.A.C., the permittee is liable to comply with the plans, terms, and conditions of the permit for the life of the project or activity.
6. Within 30 days after completing construction of the entire project, or any independent portion of the project, the permittee shall provide the following to the Agency, as applicable:
 - a. For an individual, private single-family residential dwelling unit, duplex, triplex, or quadruplex – "Construction Completion and Inspection Certification for Activities Associated with a Private Single-Family Dwelling Unit" [Form 62-330.310(3)]; or
 - b. For all other activities – "As-Built Certification and Request for Conversion to Operation Phase" [Form 62-330.310(1)].

- c. If available, an Agency website that fulfills this certification requirement may be used in lieu of the form.
7. If the final operation and maintenance entity is a third party:
 - a. Prior to sales of any lot or unit served by the activity and within one year of permit issuance, or within 30 days of as-built certification, whichever comes first, the permittee shall submit, as applicable, a copy of the operation and maintenance documents (see sections 12.3 thru 12.3.4 of Volume I) as filed with the Florida Department of State, Division of Corporations, and a copy of any easement, plat, or deed restriction needed to operate or maintain the project, as recorded with the Clerk of the Court in the County in which the activity is located.
 - b. Within 30 days of submittal of the as-built certification, the permittee shall submit “Request for Transfer of Environmental Resource Permit to the Perpetual Operation and Maintenance Entity” [Form 62-330.310(2)] to transfer the permit to the operation and maintenance entity, along with the documentation requested in the form. If available, an Agency website that fulfills this transfer requirement may be used in lieu of the form.
 8. The permittee shall notify the Agency in writing of changes required by any other regulatory agency that require changes to the permitted activity, and any required modification of this permit must be obtained prior to implementing the changes.
 9. This permit does not:
 - a. Convey to the permittee any property rights or privileges, or any other rights or privileges other than those specified herein or in chapter 62-330, F.A.C.;
 - b. Convey to the permittee or create in the permittee any interest in real property;
 - c. Relieve the permittee from the need to obtain and comply with any other required federal, state, and local authorization, law, rule, or ordinance; or
 - d. Authorize any entrance upon or work on property that is not owned, held in easement, or controlled by the permittee.
 10. Prior to conducting any activities on state-owned submerged lands or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund, the permittee must receive all necessary approvals and authorizations under chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees of the Internal Improvement Trust Fund shall not be considered received until it has been fully executed.
 11. The permittee shall hold and save the Agency harmless from any and all damages, claims, or liabilities that may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any project authorized by the permit.
 12. The permittee shall notify the Agency in writing:
 - a. Immediately if any previously submitted information is discovered to be inaccurate; and
 - b. Within 30 days of any conveyance or division of ownership or control of the property or the system, other than conveyance via a long-term lease, and the new owner shall request transfer of the permit in accordance with rule 62-330.340, F.A.C. This does not apply to the sale of lots or units in residential or commercial subdivisions or condominiums where the stormwater management system has been completed and converted to the operation phase.

13. Upon reasonable notice to the permittee, Agency staff with proper identification shall have permission to enter, inspect, sample and test the project or activities to ensure conformity with the plans and specifications authorized in the permit.

14. If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, stone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The permittee or other designee shall contact the Florida Department of State, Division of Historical Resources, Compliance Review Section (DHR), at (850)245-6333, as well as the appropriate permitting agency office. Project activities shall not resume without verbal or written authorization from the Division of Historical Resources. If unmarked human remains are encountered, all work shall stop immediately and the proper authorities notified in accordance with section 872.05, F.S. For project activities subject to prior consultation with the DHR and as an alternative to the above requirements, the permittee may follow procedures for unanticipated discoveries as set forth within a cultural resources assessment survey determined complete and sufficient by DHR and included as a specific permit condition herein.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under rule 62-330.201, F.A.C., provides otherwise.

16. The permittee shall provide routine maintenance of all components of the stormwater management system to remove trapped sediments and debris. Removed materials shall be disposed of in a landfill or other uplands in a manner that does not require a permit under chapter 62-330, F.A.C., or cause violations of state water quality standards.

17. This permit is issued based on the applicant's submitted information that reasonably demonstrates that adverse water resource-related impacts will not be caused by the completed permit activity. If any adverse impacts result, the Agency will require the permittee to eliminate the cause, obtain any necessary permit modification, and take any necessary corrective actions to resolve the adverse impacts.

18. A Recorded Notice of Environmental Resource Permit may be recorded in the county public records in accordance with subsection 62-330.090(7), F.A.C. Such notice is not an encumbrance upon the property.

19. In addition to those general conditions in subsection (1), above, the Agency shall impose any additional project-specific special conditions necessary to assure the permitted activities will not be harmful to the water resources, as set forth in rules 62-330.301 and 62-330.302, F.A.C., Volumes I and II, as applicable, and the rules incorporated by reference in this chapter.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for

filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a).

The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and

120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C. If you do not publish notice of this action, this waiver will not apply to persons who have not received written notice of this action.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Executed in Jacksonville, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Thomas G. Kallemeyn
Permitting Program Administrator
Submerged Lands & Environmental
Resource Program

TGK:th

Attachments:

Standard Manatee Construction Conditions 2011
Construction Commencement Notice/Form 62-330.350(1)
Construction Completion and Inspection Certification for Activities Associated With a Private Single-Family Dwelling Unit/Form 62-330.310(3)
Request to Transfer Permit/Form 62-330.340(1)
Permit Drawings, 10 Pages
Reservation letter, 1 Page

Copies furnished to:

Jake Sydnor, Taylor Engineering, Inc., jsydnor@taylorengeering.com
Kierstin Masse, Taylor Engineering, Inc., kmasse@taylorengeering.com
FWC, Imperiled Species Management Section
Thomas G. Kallemeyn, FDEP NED
Katie Miller, FDEP NED
Kimberly Mann, FDEP NED
Taylor Hohmann, FDEP NED

File

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this permit, including all copies, were mailed before the close of business on **August 4, 2022**, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, under 120.52(7) of the Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

August 4, 2022

Date

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 ½" 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.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:



Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: jaxregs@fws.gov; South Florida Field Office: verobeach@fws.gov; Panama City Field Office: panamacity@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

POSTER INFORMATION

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands

and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

PROTECTION UNDER FEDERAL AND STATE LAW: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:

North Florida Field Office – (904) 731-3336
Panama City Field Office – (850) 769-0552
South Florida Field Office – (772) 562-3909

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

AS-BUILT CERTIFICATION BY PROFESSIONAL ENGINEER

Submit this form and one set of as-built engineering drawings to the U.S. Army Corps of Engineers, Enforcement Section, P.O. Box 4970, Jacksonville, Florida, 32262. If you have questions regarding this requirement, please contact the Enforcement Branch at 904-232-3131.

1. Department of the Army Permit Number: SAJ-1994-03114 (SP-BJC)

2. Permittee Information:

Name: _____

Address: _____

3. Project Site Identification (physical location/address):

4. As-Built Certification: I hereby certify that the authorized work, including any mitigation required by Special Conditions to the permit, has been accomplished in accordance with the Department of the Army permit with any deviations noted below. This determination is based upon on-site observation, scheduled, and conducted by me or by a project representative under my direct supervision. I have enclosed one set of as-built engineering drawings.

Signature of Engineer

Name (*Please type*)

(FL, PR, or VI) Reg. Number

Company Name

City

State

ZIP

(Affix Seal)

Date

Telephone Number

COMMENCEMENT NOTIFICATION

Within ten (10) days of initiating the authorized work, submit this form via electronic mail to saj-rd-enforcement@usace.army.mil (preferred, not to exceed 15 MB) or by standard mail to U.S. Army Corps of Engineers, Enforcement Section, Post Office Box 4970, Jacksonville, Florida 32232-0019.

1. Department of the Army Permit Number: SAJ-1994-03114

2. Permittee Information:

Name: _____

Email: _____

Address: _____

Phone: _____

3. Construction Start Date: _____

4. Contact to Schedule Inspection:

Name: _____

Email: _____

Phone: _____

Signature of Permittee

Printed Name of Permittee

Date



DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

DUVAL COUNTY, FLORIDA

APPENDIX E

DRAFT Submittal Register

TECHNICAL SPECIFICATIONS SUBMITTAL REGISTER

DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

T R A N S M I T T A L N O	SPEC. SECTION NO.	DESCRIPTION OF ITEMS SUBMITTED	TYPE			CONTRACTOR ACTION/SCHEDULE DATES			ENGINEER ACTION		REMARKS
			P R E C O U N T I R T U C A L I O N	E N G I N E E R A P P R O V	I N F O R M A T I O N O N L Y	R E V I E W E R	S U B M I S S I O N D A T E	A P P R O V E D E D B Y	M A T E R I A L D E T E R M I N E D	D A T E	
SECTION 01 29 00 MEASUREMENT AND PAYMENT											
01	01 29 00	Schedule of Values	X		X						
02	01 29 00	Construction Schedule	X	X							
03	01 29 00	Revised Construction Schedules		X							
SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION											
04	01 31 00	List of Subcontractors	X		X						
05	01 31 00	Signature of Authority	X		X						
SECTION 01 33 00 SUBMITTAL PROCEDURES											
06	01 33 00	Final Submittal Register	X	X							
SECTION 01 35 43 ENVIRONMENTAL PROTECTION											
07	01 35 43	Environmental Protection Plan	X	X							
08	01 35 43	Erosion and Sediment Control Plan	X		X						
09	01 35 43	Copy of Project Permits and Inspection Logs	X		X						
SECTION 01 40 00 CONTRACTOR QUALITY CONTROL											
10	01 40 00	Quality Control Plan	X	X							
SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS											
11	01 50 00	Mobilization/Demobilization Plan	X		X						
12	01 50 00	Hurricane and Severe Storm Plan	X		X						
13	01 50 00	Temporary Site Facility Drawings	X		X						
SECTION 01 78 00 PROJECT CLOSEOUT											
14	01 77 00	Record Drawings		X							
15	01 77 00	As-Built Drawings		X							
16	01 77 00	Request for Inspection			X						
SECTION 31 23 00 EARTHWORK CONSTRUCTION											
17	31 23 00	Geotechnical Engineer and Testing Laboratory Qualifications/Credentials	X	X							
18	31 23 00	Temporary Stockpile Dewatering Plan	X	X							
19	31 23 00	Earthwork Quality Control Tests (classifications, sieve tests, organic tests, compaction, etc.)		X							

APPROVAL CODES:
 AP- APPROVED AS SUBMITTED
 AC- APPROVED AS CORRECTED
 RR- REVISE AND RESUBMIT, MAKE CORRECTIONS NOTED
 RJ- REJECTED, DEVELOP REPLACEMENT
 NR- SUBMITTAL NOT REQUIRED-RETURNED WITHOUT REVIEW
 IO - SUBMITTAL RECEIVED FOR INFORMATION ONLY
 SI - SUBMIT SPECIFIED ITEM

DAMES POINT MARINE TERMINAL SHORELINE PROTECTION

T R A N S M I T T A L N O	SPEC. SECTION NO.	DESCRIPTION OF ITEMS SUBMITTED	TYPE			CONTRACTOR ACTION/SCHEDULE DATES			ENGINEER ACTION		REMARKS
			P R E S E N T I O N	E N G I N E E R A P P R O V E	I N F O R M A T I O N O N L Y	R E V I E W E R	S U B M I S S I O N D A T E	A P P R O V E D B Y	M A T E R I A L D E D B Y	D A T E	
20	31 23 00	Post Demolition/Pre-Construction Earthwork Survey		X							
21	31 23 00	Surplus Material Placement Plan (if necessary)		X							
SECTION 32 92 19 GRASSING ESTABLISHMENT											
23	32 92 19	Grass Establishment Plan	X	X							
24	32 92 19	Grassing Material Certificates		X							
SECTION 35 31 17 STONE REVETMENT											
25	35 31 17	Independent Testing Laboratory Qualifications	X	X							
26	35 31 17	Geotextile Testing Reports & Product Data	X	X							
27	35 31 17	Stone Testing Reports & Product Data	X	X							
28	35 31 17	Work Plan	X	X							
29	35 31 17	Progress Profile Surveys		X							
CONSTRUCTION DRAWINGS											
30	N/A	Fencing Plan (Temporary & Permanent Security Fencing)	X	X							

APPROVAL CODES:
 AP- APPROVED AS SUBMITTED
 AC- APPROVED AS CORRECTED
 RR- REVISE AND RESUBMIT, MAKE CORRECTIONS NOTED
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