



DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADDITIONAL SHORELINE STABILIZATION ST. JOHNS COUNTY, FLORIDA

SPECIFICATIONS

**PREPARED FOR THE
FLORIDA INLAND NAVIGATION DISTRICT**

By



**10199 Southside Blvd. Suite 310
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www.TaylorEngineering.com

(Taylor Engineering Contract No. C2021-082-01)

May 2023



This item has been digitally signed and sealed by William Miller Jr. on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Taylor Engineering, Inc., 10199 Southside BLVD, Suite 310
Jacksonville, FL 32256

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SECTION 00 10 00

BID SOLICITATION

Florida Inland Navigation District
1314 Marcinski Road
Jupiter, Florida 33477
(561) 627-3386

DREDGED MATERIAL MANAGEMENT AREA SJ-1 SHORELINE IMPROVEMENTS

The Florida Inland Navigation District (District) will receive sealed bids for the construction of the District's Dredged Material Management Area SJ-1 Shoreline Improvements Project at its offices at 1314 Marcinski Road, Jupiter, Florida 33477 until **2 PM, local time, July 13, 2023** and then, at said office, the bids will be publicly opened or read aloud.

This project generally entails shoreline repairs and general site work at DMMA SJ-1. The work includes stone placement, and shoreline planting.

The SJ-1 project area is located in St. Johns County, Florida (Township 9S; Section 14; Range 30E, St. Johns County, FL). The Contractor will have **270** calendar days (inclusive of a 60-day vegetative establishment period) from the Notice to Proceed to complete the entire project. The District will hold a pre-bid meeting and site visit at **11:00 AM local time, June 21, 2023** at the SJ-1 Dredged Material Management Site. Bidders shall meet at the property entrance gate of the SJ-1 DMMA site.

A Bid Bond will be required for bids that exceed \$200,000.00. Offers providing less than 90 days for District acceptance after the date offers are due will not be considered and will be rejected. Contractors may obtain the Contract Documents, Project Drawings, and Specifications from the offices of the District or the District's website (<http://www.aicw.org>) at no charge.

--End of Section--

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SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

RECEIPT AND OPENING OF BIDS

The Florida Inland Navigation District (herein called the "District") will receive bids at the location and date referenced in SECTION 00 10 00 BID SOLICITATION and then at said office all bids shall be opened at a public meeting and the name of each bidder and the price submitted in the bid shall be read aloud. Any bid received after the time and date specified will not be considered but will be returned unopened. All bid information will be available at the District office when the District provides notice of an intended decision or until thirty (30) days after opening the bids, whichever is earlier. Bidders or their authorized representatives are welcome to request all bid information at that time.

Each Bid must be submitted in an opaque sealed envelope, addressed to:

Florida Inland Navigation District
1314 Marcinski Road
Jupiter, Florida 33477
(561) 627-3386

Each sealed envelope containing a Bid must be plainly marked on the outside as "**Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, Florida**" and the envelope should bear on the outside the name and address of the Bidder, and their Contractor's License Number and classification for the State of Florida. If the Bid is sent through the mail or other delivery system, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the District at the address above with the notation "BID ENCLOSED" on the face of it.

The District may waive any informalities or minor defects or reject any or all Bids. Any Bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof. No Bidder may withdraw a Bid within ninety (90) days after the actual date of the opening thereof. Should there be reasons why the Contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the District and Bidder.

MANDATORY PRE-BID MEETING

The District will hold a **mandatory** pre-bid meeting and site visit at the date, time, and place referenced in SECTION 00 10 00 BID SOLICITATION. Representatives of the District and Engineer will be present at the pre-bid meeting to discuss the project. All Bidders are required to attend and participate in the entire meeting. Failure on the part of any Bidder to attend the pre-bid meeting may, at the District's discretion, render his Bid unresponsive. The Engineer will transmit to all prospective Bidders of record such Addenda as the Engineer considers necessary in response to questions arising at the pre-bid meeting. Oral statements may not be relied upon and will not be binding or legally effective.

PREPARATION OF BIDS

All Bids shall be submitted on reproduced copies of the forms furnished in the following Sections of the Contract Documents.

1. 00 41 63 BID FORM
2. 00 41 63A BID SCHEDULE
3. 00 43 13 BID BOND (if bid exceeds \$200,000.00)
4. 00 45 01 PUBLIC ENTITY CRIME STATEMENT
5. 00 45 02 AFFIDAVIT FOR SURETY COMPANY

These forms, completed in their entirety, together with all other required documents including but not limited to copies of licenses, credentials, reference lists, and project descriptions constitute the "Bid," also called the "Bid Package."

All blank spaces on the BID FORM for Bid prices must be filled in, in ink or typewritten, and the BID FORM must be fully completed and executed when submitted. The total bid price must be written in both words and numbers. In the event of a conflict, the words shall govern. Amounts are products of the Bid Unit Prices multiplied by the estimated quantities. In the event of a conflict between the amounts and the Unit Prices, the Unit Prices shall govern.

CREDENTIALS OF BIDDERS TO BE SUBMITTED WITH BID

Each Bidder shall submit the documentation listed below with the bid package. Failure on the part of the Bidder to submit these items will render the Bid/Bidder unresponsive.

1. Copies of the Bidder's State or County (as applicable) Contracting licenses.
2. The names, addresses, and telephone numbers of three (3) references. Bidders shall use the REFERENCES form provided in SECTION 00 41 63 BID FORM.
3. Descriptions of at least three (3) projects of a similar nature that the Bidder has completed in the last three (3) years or currently has under way. Bidders shall use the SIMILAR PROJECTS form provided in SECTION 00 41 63 BID FORM.
4. Provide a narrative plan for execution of dredging and disposal of dredged material. Bidders shall use the BIDDERS PLAN form provided in SECTION 00 41 63 BID FORM.

Other information, including, but not limited to, additional references, financial data, evidence of qualification to conduct business in the jurisdiction where the project is located, and construction methods and equipment to be utilized in the completion of any portion of the work shall be provided upon specific request by the District. The District reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the District that such Bidder is properly qualified and licensed to carry out the obligations of the Contract Documents and to complete the Work contemplated therein.

INQUIRIES/ADDENDA

Verbal interpretations of the meaning of the Project Drawings, Specifications, or other Contract Documents will not be valid. Every request for interpretations shall be in writing and addressed to Terence Cake, P.E. via e-mail (tcake@taylorengineering.com) (herein after called the "Engineer") and William Miller, P.E. (bmiller@taylorengineering.com), and to be given consideration must be received at least six (6) calendar days prior to the date fixed for the opening of Bids. The Engineer will record its responses to e-mailed inquiries and any supplemental instructions in the form of written Addenda. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications which, if issued, will be posted on the District website not later than four (4) calendar days prior to the Bid opening date. Bidders must acknowledge receipt of the Addenda in their Bid. Failure of any Bidder to receive, or to acknowledge receipt of any such Addenda shall not relieve such Bidder from any obligation under its Bid as submitted, provided, however, that failure to so acknowledge receipt of any such Addenda may render a Bid unresponsive and result in its rejection. Bidders are advised to contact the Engineer and check the District's website (www.aicw.org) prior to submitting Bids to satisfy themselves as to the existence and number of all such Addenda. All Addenda so issued shall become part of the Contract Documents.

PERFORMANCE OF WORK BY THE CONTRACTOR

The Contractor shall perform Work equivalent to at least sixty percent (60%) of the total amount of the Work to be performed under the Contractor with his own organization.

JOINT VENTURE

If the Bid involves a joint venture, a copy of the joint venture agreement shall be included with the Bid along with the attached "Statement of Business Organization."

PUBLIC ENTITY CRIMES

Any Bidder, or any of its Suppliers, Subcontractors, or Consultants who shall perform Work which is intended to benefit the District, shall not be a convicted vendor. Each Bidder shall submit a completed Public Entity Crime Statement with the Bid Form. The Bidder shall use the form provided in SECTION 00 45 01 PUBLIC ENTITY CRIME STATEMENT for this purpose. The Bidder further understands and agrees that any Contract issued as a result of this solicitation shall be either voidable by the District or subject to immediate termination by the District in the event there is any misrepresentation or lack of compliance with the mandates of Section 287.133 F.S. The District, in the event of such termination, shall not be liable to the Contractor for any work or materials furnished.

BID GUARANTY

Bidders are not required to provide a Bid Bond if the Bid amount is less than or equal to \$200,000.00, unless specified in the Supplemental conditions. Each Bid greater than \$200,000.00 must be accompanied by the District's Bid Bond form meeting the standards specified in the General Conditions, including those applicable to the Sureties for the Payment Bond and Performance Bond specified in the General Conditions. The Bond shall be written on the Bid Bond form provided by the District, with Affidavit for Surety Company attached, in an amount not less than ten percent (10%) of the amount of the Bid. The successful Bidder is required to use the District's forms provided in the Contract Documents. Alternate Bond forms will not be accepted. Failure to use the District's Bond forms shall render the Bid unresponsive.

In lieu of the Bid Bond, the Bid may be accompanied by a certified check of any national or state bank made payable to the District in an amount not less than ten percent (10%) of the amount of the Bid. The Bid Bond or certified check shall be conditioned upon the Bidder's:

- A. not withdrawing said Bid within thirty (30) days after date of opening of the same, and
- B. within fifteen (15) calendar days after the prescribed forms are presented to the Bidder:
 - (1) entering into a written Contract with the District, in accordance with the Bid as accepted;
 - (2) providing evidence of insurance in the manner specified by the District; and
 - (3) if the Bid exceeds \$200,000.00, providing a Payment Bond and a Performance Bond as specified in the General Conditions (or, in lieu of the Statutory Payment Bond or Common Law Performance Bond, having provided an alternate form of security as specified in the General Conditions).

Any securities that may be received will be returned to all Bidders, with the exception of the two (2) highest ranked Bidders, within thirty (30) calendar days after the opening of the Bids. Bid bonds will not be returned to the Bidders, unless specifically requested by the Bidder. Any certified check of the two (2) highest ranked Bidders will be returned to them promptly after the District and the successful Bidder have (i) executed the Contract for the work, and (ii) the Contractor (successful Bidder) has secured and tendered to the District a valid and acceptable Payment Bond and a Performance Bond as specified in the General Conditions (or, in lieu of the Payment bond or Performance Bond, having provided an alternate form of security as specified in the General Conditions). Failure of the District to execute the Contract within sixty (60) days after the date of the Bid opening shall initiate release of the Bid Bond, certified check, cashier's check, treasurer's check or bank draft of the highest ranked and second highest ranked Bidders unless mutually agreed otherwise.

POWER OF ATTORNEY

Attorneys-In-Fact who sign Bonds must file with such Bond a certified copy of their power of attorney to sign said Bonds.

WITHDRAWAL OF BIDS

Any Bid may be withdrawn prior to the scheduled time for the opening of Bids or authorized postponement thereof provided that the Bidder submits a written request signed by an authorized representative of the firm that submitted the Bid. No Bidder may withdraw a Bid within thirty (30) days after the actual date of the opening thereof.

NOTICE OF INTENDED AWARD

Tentative Bid tabulations will be posted to the District's website (www.aicw.org) under the bid file folder within three (3) working days of the Bid opening. After completion of the review of the Bids and approval by the District's Board of Commissioners, a final Bid tabulation will be posted to the District's webpage. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

ACCEPTANCE OR REJECTION OF BIDS

The District reserves the right to reject any or all Bids when (i) such rejection is in the interest of the District; (ii) such Bid is void per se; or (iii) the Bid contains any irregularities, PROVIDED, however, that the District reserves the right to waive any minor irregularities and to accept the most responsive and qualified Bid as determined by the District. Bids will be considered irregular if there are omissions, unauthorized alterations of any forms, additions not called for, conditional or unauthorized alternate Bids, or other irregularities of any kind. The District reserves the right to request a written confirmation of the Bid and the responsibility of the Bidder prior to the awarding of the Contract. Failure of the Bidder to confirm the Bid within seven (7) working days from the date of the District's request shall render the Bid unresponsive and will entitle the District to award to the next highest ranked qualified Bidder and shall require forfeiture of the Bid Guaranty.

The Contract will be awarded to the qualified, responsible, and responsive Bidder presenting the lowest Bid.

CONTRACT

The Bidder understands that the Bid form does not constitute a Contract with the Bidder. A binding Contract does not exist until the Contract has been executed by both parties. The Bidder to whom the award is made shall, within fifteen (15) calendar days after receipt of the Contract, execute the Contract in the form attached, entering into a Contract with the District. The executed Contract should be returned to the District accompanied by the required Certificates of Insurance, Performance and Payment Bonds as set forth herein. If the Bidder fails to execute the Contract or provide the insurance and Bonds within fifteen (15) calendar days after receipt of the Contract, there shall be just cause for the annulment of the award and forfeiture of the Bid Guaranty to the District. Award may then be made to the next lowest qualified, responsible, and responsive Bidder or the Work may be re-advertised at the District's sole discretion.

NOTICE TO PROCEED

The Notice to Proceed will be issued within fifteen (15) days of receipt and acceptance of the pre-construction submittals by the District and at completion of the Pre-Construction Meeting. Should there be reasons why the Notice to Proceed cannot be issued within such period; the time may be extended by mutual agreement between the District and Contractor. If the Notice to Proceed has not been issued within the allowed time or within the period mutually agreed upon, the Contractor may terminate the Contract without further liability on the part of either party.

PROJECT DRAWINGS AND SPECIFICATIONS

Up to four (4) sets of the Project Drawings and Specifications will be provided free of charge to the successful Bidder upon award.

SUBSTITUTE MATERIAL AND EQUIPMENT

A Contract, if awarded, will be on the basis of material and equipment described in the Project Drawings and Technical Specifications without consideration of possible substitute or an "equivalent" or "equal" item. Whenever it is indicated that a substitute or an "equivalent" or "equal" item of material or equipment may be furnished or used by the Contractor if acceptable to the Engineer, application for such acceptance will not be considered by the Engineer until after the date of execution of the Contract. In all cases, the low Bidder shall be determined on the basis of the base Bid which shall reflect the costs for the materials and equipment specified. Bidders unable to provide the specified materials and equipment shall be determined unresponsive.

CONDITIONS OF WORK

The Contract Documents contain the provisions required for the construction of the Work. Information obtained from an officer, agent, or employee of the District, Port or Engineer, or any other person shall not

affect the risks or obligations assumed by the Contractor or relieve the Contractor from fulfilling any of the conditions of the Contract. Each Bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract Documents. The failure or omission of any Bidder to so familiarize themselves shall in no way relieve any Bidder from any obligation in respect to their Bid.

All applicable federal, state, and local laws and regulations shall apply to the Work throughout the Contract.

EQUAL OPPORTUNITY

The Florida Inland Navigation District recognizes fair and open competition as a basic tenet of public procurement. Contractors doing business with the District are prohibited from discriminating on the basis of race, color, creed, national origin, handicap, age, or sex. In addition, The District encourages contractors doing business with the District to solicit and utilize minority business enterprises (as defined in Section 288.703, Florida Statutes) as subcontractors and suppliers to the greatest extent possible.

--End of Section--

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SECTION 00 41 63

BID FORM

FLORIDA INLAND NAVIGATION DISTRICT

DREDGED MATERIAL MANAGEMENT AREA SJ-1
ADDITIONAL SHORELINE STABILIZATION
ST JOHNS COUNTY, FLORIDA

Submitted on _____ (Date)

Bidder (Firm Name)

Address

Signature of Authorized Representative

Name & Title

1. The above signed, as Bidder, hereby declares that the only person or persons interested in the Bid as Principal or Principals is or are named herein and that no other person than herein mentioned that has any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud.
2. The Bidder further declares that he has examined the site and has informed himself fully in regard to all conditions pertaining to that place where the Work is to be done; that he has examined the Project Drawings and Specifications for the Work and Contractual Documents relative thereto. The Bidder also acknowledges that he has read all the provisions furnished prior to the opening of Bids; and that he has satisfied himself relative to all Work to be performed.
3. If this Bid is accepted, the undersigned Bidder agrees to complete all Work included under the Contract within 270 calendar days from the date established in the "Notice to Proceed." If the Contractor fails to complete the work within this time the District may obtain the services of another Contractor to complete the Work. Such monies required for the District to complete the Work shall be chargeable to the Contractor.
4. In case of failure on the part of the Contractor to complete the Work within the time fixed in the Contract, or any extension thereof granted, then the Contractor shall be liable to pay the District: (i) not as a penalty but as liquidated damages, \$1,500.00 per day for each calendar day the Work remains incomplete after the expiration of the time limit specified or any extension(s) thereof for the total contract plus (ii) any monies which are paid by the District to any other person, firm or corporation for services rendered for the preservation or completion of the Work. These monies shall include, but are not limited to, all Engineering and Inspection fees required to oversee the completion of the Work. Such monies shall be chargeable to the Contractor and shall be deducted from any monies due said Contractor, or if no money is due or the amount due is insufficient to cover the amount charged, then the Contractor and his Surety shall be liable for said amount. Bidder agrees to perform all the Work described in the Contract Documents for the unit and lump sum prices identified on the following Bid Schedule (located at the end of this section).
5. If this Bid is accepted, it is understood that the terms and conditions of the bid provisions and documents relative thereto, shall be binding upon the parties; however, the undersigned Bidder agrees, upon acceptance and prior to commencement of any Work, to:
 - a. Execute the aforementioned Contract with Florida Inland Navigation District as a written memorial and formalization of said Bid provisions and matters relative.

BID FORM

- b. Provide the necessary Certificates of Insurance, Performance and Payment Bonds (each Bond equal to one hundred percent (100%) of the total Contract Bid), of which this Bid, Instructions to Bidders, General Conditions, Technical Specifications, and Project Drawings shall be made a part for the performance of Work described therein.
 - c. Furnish all necessary materials, equipment, machinery, tools, apparatus, transportation, supervision, labor and all means necessary to construct and complete the Work specified in this Bid and Contract and called for in the Project Drawings, upon "Notice to Proceed with Contract Work" from the Engineer.
 - d. Complete all Contract Work within the time specified in the Bid Form or pay for liquidated damages and cost of supervision for each calendar day in excess thereof according to the terms set forth in the Contract and Specifications.
 - e. Provide complete copies of any or all required insurance policies to the District upon request. The Bidder shall attach to each policy a sworn statement executed by an officer of the Bidder or by the issuing insurance company certifying that the copy is true, correct and complete.
6. The Bidder understands this Bid does not constitute a Contract with the Bidder, and there is no official Contract binding the parties until:
- a. bids are reviewed and accepted by the District; and
 - b. applicable Bonds and Certificates of Insurance are reviewed and accepted by the District; and
 - c. the Contract has been approved by the District; and
 - d. the Contract has been executed by both parties.
7. The undersigned agrees that, in case of failure on his part to execute and deliver the said Contract and the Bonds within fifteen (15) days after receipt of the Contract, the Bid Bond, or securities accompanying his Bid, shall be paid into the funds of Florida Inland Navigation District, otherwise, any Bid Bond or securities accompanying this Bid shall be returned to the undersigned.
8. The Corporation, Partnership or Business name and signature of authorized Corporate Officer, Partner, or Individual making this Bid, together with the signature of the licensee qualifying Bidder, must appear on the signature page of this Bid.
9. The Bidder understands and agrees that he must perform all Work necessary to complete the Work as described in the Project Drawings and Specifications. Payment to the Contractor will be made only for the actual quantities of Work performed and accepted or materials furnished in accordance with the Contract. All Work and materials not specified under "Item" in the Bid shall be considered incidental to the Contract.
10. The Bidder has attached to this Bid an approved Bid Bond or a certified check for the sum of ten percent (10%) of the Bid Amount according to the provisions herein.
11. The Bidder, if apparent low Bidder, agrees to provide the following after the bid opening within the time specified herein:
- a. evidence of the appropriate insurance coverage,
 - b. approved Performance and Payment Bonds for each one hundred (100%) of the Contract Amount according to the conditions under the General Conditions and provisions therein.
 - c. requested credentials, past Work information, and other evidence as requested by the Engineer to verify the ability of the Contractor to perform the Work, if not previously furnished.

12. In accordance with §287.135, Florida Statutes, Bidder hereby certifies that Bidder is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria. "Business operations" means, for purposes specifically related to Cuba or Syria, engaging in commerce in any form in Cuba or Syria, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, military equipment, or any other apparatus of business or commerce.
13. Both the Bidder and the licensee shall fill in the information below, pursuant to Chapter 489, Florida Statutes. Licensee is defined as the person who is the licensed Contractor who qualifies the bidding Company, Corporation or Partnership. If the Bidder is an individual, he must be licensed.

(Please print or type)

BIDDER'S NAME: _____

ADDRESS: _____

PHONE NUMBER: _____

FEID OR SOCIAL SECURITY NUMBER: _____

BIDDER'S SIGNATURE, BY: _____

LICENSE NUMBER: _____

LICENSE TYPE: _____

(Attach copy of license)

STATE OR COUNTY: _____

LICENSE LIMITATIONS, IF ANY: _____

(Attach a separate sheet, if necessary)

LICENSE SIGNATURE, BY: _____

**(If an INDIVIDUAL or SOLE PROPRIETOR
is Bidder, sign on this line.)**

By: _____
Signature

Type or Print Name

Address

**(If a PRINCIPAL OPERATES
UNDER A TRADE NAME or FICTITIOUS
is bidder, fill in the trade name followed
by signature)**

Trade Name

By: _____
Signature

Type or Print Name

**(If a LIMITED LIABILITY COMPANY is Bidder, fill in the trade
name followed by signature)**

LLC Name and State of Organization

By: _____
Signature of Managing Member

Type or Print Name

**(If a GENERAL OR LIMITED PARTNERSHIP
Is bidder, fill in name of joint venture, followed
by signature of the partners signing)**

Name of Partnership

By: _____
Partner

Business Address of Partnership

(Names and Addresses
of all General Partners - attach a
separate sheet if necessary)

(If a CORPORATION is Bidder, fill in the name of the Corporation,
followed by the signature of the
President or Vice President)

(Corporate Seal)

Corporation Name

By: _____
Signature of Officer or Authorized Agent

Address of Corporation

Organized under the Laws of the State of _____, and authorized by the law to make
this Bid and perform all Work and furnish materials and equipment required under the Contract Documents.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as
principal in the within Bid; that _____, who signed the said Bid on behalf of the
Principal, was then _____ of said Corporation; that I know his signature, and his
signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said
Corporation by authority of its governing body.

Secretary

(Corporate Seal)

REFERENCES

Provide the names, addresses, and telephone numbers of three (3) clients (former or current) who can attest to your company's experience in work similar in nature to the Work (i.e., Dredged material management area or structural embankment construction) required to construct this project in the spaces provided below.

FIRM NAME: _____

ADDRESS: _____

CONTACT PERSON: _____

TELEPHONE NUMBER: _____

FIRM NAME: _____

ADDRESS: _____

CONTACT PERSON: _____

TELEPHONE NUMBER: _____

FIRM NAME: _____

ADDRESS: _____

CONTACT PERSON: _____

TELEPHONE NUMBER: _____

SIMILAR PROJECTS

Provide descriptions of at least three (3) projects of a similar nature (i.e., Dredged material management area or structural embankment construction) that the Bidder has completed in the last three (3) years or currently has under way in the spaces provided below. For each project, explain why it is relevant, problems encountered, actions taken to correct problems, and any environmental impacts that were encountered. If additional spaces are needed, make copies of this form.

PROJECT NAME: _____

OWNER'S NAME: _____

CONTACT PERSON: _____ TELEPHONE: _____

START DATE: _____ COMPLETION DATE: _____

DESCRIPTION: _____

PROJECT NAME: _____

OWNER'S NAME: _____

CONTACT PERSON: _____ TELEPHONE: _____

START DATE: _____ COMPLETION DATE: _____

DESCRIPTION: _____

PROJECT NAME: _____

OWNER'S NAME: _____

CONTACT PERSON: _____ TELEPHONE: _____

START DATE: _____ COMPLETION DATE: _____

DESCRIPTION: _____

BIDDERS PLAN

Provide a narrative plan for execution of the work. The plan shall include:

1. Description of project related activities
2. Identification and description of major pieces of equipment required for the project
3. Assurance the Contractor can complete the work within the given amount of time
4. Assurance that the work can be performed within the stated permit conditions.
5. Description of how quality control will be achieved, conducted, and maintained throughout the project duration.
6. Estimate of weekly productivity
7. Other matters the Contractor considers critical to the completion of the work.

If extra space is necessary, append additional pages.

-- END OF SECTION --

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SECTION 00 41 63A

BID SCHEDULE



ALL BID ITEMS SHALL INCLUDE ALL COSTS FOR FURNISHING TO THE OWNER ALL MATERIALS, EQUIPMENT AND SUPPLIES, PERMITS, AND FOR ALL COSTS INCURRED IN PROVIDING ALL WORK SHOWN ON THE PROJECT DRAWINGS AND OUTLINED IN THE CONTRACT SPECIFICATIONS FOR THE CONSTRUCTION.

ITEM	DESCRIPTION	UNITS	QUANTITY	UNIT COST	TOTAL COST
SECTION A: GENERAL ITEMS					
01	Insurance	LS	1	\$	\$
02	Mobilization and Demobilization	LS	1	\$	\$
03	Environmental Protection and Erosion Control	LS	1	\$	\$
04	Construction, Payment, and As-Built Surveys	LS	1	\$	\$
SECTION B: SHORELINE STABILIZATION					
05	Gopher Tortoise Surveys	LS	1	\$	\$
06	Clearing and Grubbing	LS	1	\$	\$
07	Earthwork (Cut, Fill, Grading, & Compaction)	CY	4,470	\$	\$
08	Geotextile Fabric	LS	1	\$	\$
09	Installation of Bedding Stone	TON	1,780	\$	\$
10	Installation of Armor Stone	TON	4,880	\$	\$
11	Install and Establish Sod	SF	20,350	\$	\$

TOTAL BID (ITEMS 01 THRU 11) \$

TOTAL BID PRICE SHALL BE SHOWN IN BOTH WORDS AND NUMBERS. IN CASE OF DISCREPANCIES, THE AMOUNT SHOWN IN WORDS SHALL GOVERN

TOTAL BID PRICE (WRITTEN)

Dollars

Signature of Bidder: _____

Date: _____

Notes:

- (1) Quantities are estimated. Actual quantities may vary.
- (2) All bids must be for the entire work and must have each blank space completed.

Bidder has to sign below that they have read and understood all addendums related to this project. Failure to acknowledge any addendum issued *may* disqualify the Bidder.

Addendum No.1	Date of Receipt:
---------------	------------------

NOTICE TO ALL BIDDERS

1	The District reserves the right to waive any informality in any bid, to reject any and all bids, and to delete any part of any of the above items.
2	Changes in the Contract Price and Contract Time require prior authorization in writing from the District 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.
3	Bid prices for the various work items are intended 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 (under any related pay item), to reflect the total price for completing the project in its entirety.
4	Quantities shown are estimated. Actual quantity may vary due to estimated excavation or fill.
5	Contractor shall meet requirements of all applicable permits and codes (in their current edition).
6	The District will award the bid to the lowest qualified bidder.

Bidder: _____

By: _____

Title: _____

Name of Bidder

Signature of Bidder

Date: _____

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SECTION 00 43 13

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal and _____, as Surety, are held and firmly bound unto Florida Inland Navigation District, in the penal sum of _____ dollars (\$ _____) lawful money of the United States, not less than 10% of the amount of the bid amount, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THE OBLIGATION IS SUCH, that whereas the Principal has submitted the accompanying bid, dated _____, 20____ for the Contract and Specifications for the Dredged Material Management Area SJ-1 Shoreline Improvements.

NOW, THEREFORE, if the Principal:

1. Does not withdraw said Bid within ninety (90) calendar days after date of opening of the same, and
2. Within fifteen (15) calendar days after the prescribed Contract forms are presented to the Contractor:
 - a. Enters into a written Contract with Florida Inland Navigation District, in accordance with the Bid, as accepted; and
 - b. Provides evidence of insurance in the manner specified by the Florida Inland Navigation District;
 - c. Gives a Payment Bond and Performance Bond as specified in the General Conditions (or, in lieu of the Payment Bond and Performance Bond, provides an alternate form of security as specified in the General Conditions).
3. Or in the event of the failure to fully comply with all of the foregoing, if the Principal pays the District the difference between the amount specified in said Bid and the amount for which the District may procure the required Work and/or supplies if the latter amount be in excess of the former, then the above obligations shall be void, and of no effect, otherwise to remain in full force and effect.

DATED ON _____, 20____.

WHEN THE PRINCIPAL IS AN INDIVIDUAL OR SOLE PROPRIETOR:

Signed, sealed, and delivered in the presence of:

(Witness) By: _____
Signature

(Witness) Business Address

WHEN THE PRINCIPAL OPERATES UNDER A TRADE NAME OR FICTITIOUS NAME:

Signed, sealed, and delivered in the presence of:

(Witness) Business Name and Address

(Witness) By: _____
Signature

WHEN THE CONTRACTOR IS A LIMITED LIABILITY COMPANY:

Signed, sealed, and delivered in the presence of:

Witness LLC Name and State of Organization

Witness Signature of Manager or Managing Member

Type or Print Name/Title

WHEN THE PRINCIPAL IS A GENERAL OR LIMITED PARTNERSHIP:

Signed, sealed, and delivered in the presence of:

(Witness) (Name and Address of Partnership)

(Witness) By _____
(Signature of General Partner)

WHEN THE PRINCIPAL IS A CORPORATION:

ATTEST:

(Corporate Principal)

(Corporate Seal) Business Address

(President) By: _____
(Secretary)

ATTEST:

(Corporate Surety)
(Surety Seal)

Business Address

(Secretary) By _____
(Surety)

Florida Resident Agent

(Surety shall provide evidence of signature authority, i.e., a certified copy of Power of Attorney.)

NOTE: If both the Principal and Surety are Corporations, the respective Corporate Seals should be affixed and attached.

--End of Section--

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SECTION 00 45 01

PUBLIC ENTITY CRIME STATEMENT

SWORN STATEMENT PURSUANT TO SECTION 287.133(3) (a), FLORIDA STATUTES,
ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER
OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to _____
[print name of the public entity]
by _____
[print individual's name and title]
for _____
[print name of entity submitting sworn statement]

whose business address is: _____

and (if applicable) its Federal Employer Identification Number (FEIN) is: _____
(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn
statement: _____.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1) (b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in Paragraph 287-133(1) (a), Florida Statutes, means:
- i. A predecessor or successor of a person convicted of a public entity crime, or
 - ii. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
5. I understand that a "person" as defined in Paragraph 287.133(1) (e), Florida Statutes, means any

natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement that I have marked below is true in relation to the entity submitting this sworn statement. [Indicate which statement applies.]

_____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. [Attach a copy of the final order]

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1(ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

[Signature]

[Date]

STATE OF _____

COUNTY OF _____

Before me this day personally appeared _____,
who, being duly sworn, executed this Affidavit and acknowledged to and before me the truthfulness and accuracy of the statements in the Affidavit.

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20____, by AFFIANT,
who is personally known to me.

Name: _____
NOTARY PUBLIC

Commission Expiration Date: _____

--End of Section--

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SECTION 00 45 02

AFFIDAVIT FOR SURETY COMPANY

TO: Florida Inland Navigation District

RE: Contract Name: Dredged Material Management Area SJ-1 Shoreline Improvements: St. Johns
County, Florida

BIDDER: _____

Name: _____

Address: _____

Phone: _____

AMOUNT OF BOND: _____

SURETY COMPANY: _____

Name: _____

Address: _____

Phone: _____

BEFORE ME, the undersigned authority, personally appeared the AFFIANT, who being duly sworn and says:

- (1) He/She is _____ of the Surety Company;
- (2) In accordance with Section 287.0935, Florida Statutes, the Surety Company fulfills each of the following provisions:
 - (a) The Surety Company is licensed to do business in the State of Florida;
 - (b) The Surety Company holds a certificate of authority authorizing it to write surety bonds in Florida;
 - (c) The Surety Company has twice the minimum surplus and capital required by the Florida Insurance Code at the time the invitation to bid is issued;
 - (d) The Surety Company is otherwise in compliance with the provisions of the Florida Insurance Code; and
 - (e) The Surety Company holds a currently valid certificate of authority issued by the United States Department of Treasury under 31 U.S.C. ss. 9304 to 9308.

FURTHER AFFIANT SAYETH NOT.

Signature of AFFIANT: _____ Date: _____
(Officer of Surety Company)

Title of AFFIANT: _____

STATE OF _____

COUNTY OF _____

Before me this day personally appeared _____,
who, being duly sworn, executed this Affidavit and acknowledged to and before me the truthfulness and
accuracy of the statements in the Affidavit.

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20____, by AFFIANT,
who is personally known to me.

Name: _____
NOTARY PUBLIC

Commission Expiration Date: _____

--End of Section--

SECTION 00 51 00

NOTICE OF AWARD

Date: _____

To: _____

Project: Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, Florida

The District has considered the Bid submitted by you for the above-described Work in response to its BID SOLICITATION dated _____, **2023** and INSTRUCTIONS FOR BIDDERS (SECTION 00 21 13).

You are hereby notified that your Bid has been accepted for items in the amount of \$ _____.

You are required by SECTION 00 21 13 INSTRUCTIONS FOR BIDDERS to execute the Contract and furnish the required PERFORMANCE BOND (SECTION 00 61 13.13), PAYMENT BOND (SECTION 00 61 13.16) and certificates of insurance in accordance with GENERAL CONDITIONS (SECTION 00 72 00) within fifteen (15) calendar days from the date of receipt of this Notice of Award. Return all document copies to the District for further processing, review and distribution to the parties to the Contract.

If you fail to execute said Contract and to furnish said Bonds within fifteen (15) days from the date of receipt of this Notice, the District will be entitled to consider all your rights arising out of the District's acceptance of your Bid as abandoned and as a forfeiture of your Bid Bond. The District will be entitled to such other rights as may be granted by law. You are required to return acknowledged copies of this Notice of Award to the District and the Engineer.

Owner: Florida Inland Navigation District

By: _____
(Authorized Signature)

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the Notice of Award is hereby acknowledged by _____.

Authorized Signature: _____

Date: _____

Title: _____

--End of Section--

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SECTION 00 52 00

CONTRACT

CONTRACT
BETWEEN
FLORIDA INLAND NAVIGATION DISTRICT
AND
_____ CONTRACTOR

THIS Contract, made this _____ day of _____, 20____, by and between the Florida Inland Navigation District, an independent special district of the State of Florida, hereinafter designated as the "DISTRICT," and _____, at _____, a _____ Corporation, FEID Number _____, hereinafter designated as the "CONTRACTOR."

WITNESS THAT:

WHEREAS, the District is an independent special district created by the Florida Legislature and given those powers and responsibilities enumerated in Chapter 374, Florida Statutes; and

WHEREAS, the District desires the services of a qualified and experienced Contractor to provide construction services; and

WHEREAS, the District solicited on _____ and received Bids on _____ for the project called "**Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, FL**"

WHEREAS, the Contractor has responded to the District's solicitation and the Contractor is qualified and willing to provide said services; and

WHEREAS, the District has found the Contractor's response to be acceptable and wishes to enter into a Contract; and

WHEREAS, the District has funds in its current fiscal year budget which are available for the funding of the Contract;

NOW THEREFORE, the District and the Contractor in consideration of the benefits flowing from each to the other do hereby agree as follows:

ARTICLE 1 - STATEMENT OF WORK

- 1.1 The Contractor shall furnish all equipment, tools, materials, labor, and everything necessary and shall perform the required Work in accordance with the Contract Documents for the contract entitled "**Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, FL**"

ARTICLE 2 - TERM OF THE CONTRACT

- 2.1 Unless extended or terminated, the period of performance of the Contract shall commence upon the effective date of the Notice to Proceed and continue for a period of **270** calendar days (inclusive of the 60-day vegetative establishment period). The Contractor shall not proceed with Work under this Contract until a Notice to Proceed is received from the District.

ARTICLE 3 - COMPENSATION/CONSIDERATION

- 3.1 The consideration, for the full and complete performance under this Contract, shall be in the amount of \$ _____, subject only to any additions and/or deduction as provided in the Contract Documents and formally approved by the District.

The consideration stated above is based upon the aggregate Contract price submitted to the District, in which the aggregate amount is obtained from the summation of the total prices for each of the Bid items shown in the Bid.

ARTICLE 4 - INVOICING AND PAYMENT

- 4.1 If acceptable progress is being made, the Contractor may request partial payments on monthly estimates, based on the actual value of Work done or completed, which request may be approved and paid by the District. All pay requests shall reference the District's Contract Number, shall follow the same format as AIA Document G702-2017, and shall be in accordance with the terms specified in the General Conditions.
- 4.2 The Executive Director of the District has been authorized to approve and execute change orders, with the concurrent approval of the District's Chair, totaling up to ten (10) per cent of the initially executed contract value. When change orders in total exceed ten (10) percent of the initially executed construct value, they will be presented to the District's Board of Commissioners for approval at one of their regularly scheduled meetings. However, if there is a finding by the Engineer, the District's Executive Director and the District's Chair that a delay in approving the change order will result in an unnecessary delay causing negative financial, environmental, or health safety and welfare impacts, a change order up to 20% of the executed contract value can be executed by the District's Executive Director.

ARTICLE 5 - REMEDIES

- 5.1 If either party initiates legal action, including appeals, to enforce this Contract, the prevailing party shall be entitled to recover a reasonable attorney's fee.
- 5.2 It is acknowledged that the Contractor's failure to complete the Work within the Contract Time provided by the Contract Documents, or any extension thereof granted, will cause the District to incur substantial economic damages and losses of types and in amounts which are impossible to compute and ascertain with certainty as a basis for recovery by the District of actual damages, and that liquidated damages represent a fair, reasonable and appropriate estimate thereof. Accordingly, in lieu of actual damages for such delay, the Contractor agrees that liquidated damages may be assessed and recovered by the District as against Contractor and its Surety, in the event of delayed completion and without the District being required to present any evidence of the amount or character of actual damages sustained by reason thereof; therefore Contractor shall be liable to the District for payment of liquidated damages in the amount of One Thousand Five Hundred Dollars (\$1,500) for each day that Substantial Completion is delayed beyond the Contract Time as adjusted for time extensions provided by the Contract Documents. Such liquidated damages are intended to represent estimated actual damages and are not intended as a penalty, and Contractor shall pay them to District without limiting District's right to terminate this agreement for default as provided elsewhere herein.
- 5.3 In case of any other failure to perform the Contract, the Contractor shall be liable to pay the District any monies which are paid by the District to any other person, firm or corporation for services rendered for the preservation or completion of the Work. These monies shall include, but are not limited to, all Engineering and Inspection fees required to oversee the completion of the Work.
- 5.4 Such liquidated damages and monies shall be chargeable to the Contractor and shall be deducted from any monies due said Contractor, or if no money is due or the amount due is insufficient to cover the amount charged, then the Contractor and his Surety shall be liable for said amount.

ARTICLE 6 - STANDARDS OF COMPLIANCE

- 6.1 The Contractor, its employees, Subcontractors, or assigns, shall comply with all applicable federal, state, and local laws and regulations relating to the performance of this Contract. The District undertakes no duty to ensure such compliance, but will attempt to advise the Contractor, upon request, as to any such laws of which it has present knowledge.
- 6.2 The Contractor hereby assures that no person shall be excluded on the grounds of race, color, creed, national origin, handicap, age, or sex, from participation in, denied the benefits of, or be otherwise subjected to discrimination in any activity under this Contract. The Contractor shall take all measures necessary to effectuate these assurances.
- 6.3 The laws of the State of Florida shall govern all aspects of this Contract. In the event it is necessary for either party to initiate legal action regarding this Contract, venue shall be in the Fifteenth Judicial Circuit or claims under state law and in the Southern District of Florida for any claims which are justifiable in federal court.
- 6.4 The Contractor hereby warrants that he has not, during the bidding process, nor shall he, during the term of this Contract, offer to pay any officer, employee or agent of the District, anything of value including, but not limited to gifts, loans, rewards, promises of future employment, favors or services, based on the understanding that the actions, decision or judgments of such officer, employee, or agent would be influenced thereby. For breach of this provision, the District may terminate this Contract without liability and, at its discretion, deduct or otherwise recover the full amount of such fee, commission, percentage, gift, or other consideration.
- 6.5 The Contractor, by its execution of this Contract, acknowledges and attests neither he, nor any of his suppliers, subcontractors, or consultants who shall perform Work which is intended to benefit the District, is a convicted vendor or, if the Contractor or any affiliate of the Contractor has been convicted of a public entity crime, a period longer than thirty-six (36) months has passed since that person was placed on the convicted vendor list. The Contractor further understands and accepts that this Contract shall be either voidable by the District or subject to immediate termination by the District, in the event there is any misrepresentation or lack of compliance with the mandates of Section 287.133, Florida Statutes. The District, in the event of such termination, shall not incur any liability to the Contractor for any Work or materials furnished. The Contractor is required to submit a completed Public Entity Crime Statement with the Bid Form.

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

- 6.6 While this package cites Florida Department of Transportation (FDOT) specifications and references, the Contractor does not have to be FDOT certified.

ARTICLE 7 - RELATIONSHIP BETWEEN THE PARTIES

- 7.1 The Contractor is an independent Contractor and is not an employee or agent of the District. Nothing in this Contract shall be interpreted to establish any relationship, other than that of an independent Contractor, between the District and the Contractor, its employees, agents, subcontractors, or assigns, during or after the performance of this Contract. The Contractor is free to provide similar services to others.

- 7.2 The Contractor shall not assign, delegate, or otherwise transfer its rights and obligations as set forth in this Contract without the prior written consent of the District.

ARTICLE 8 - GENERAL PROVISIONS

- 8.1 The Contract Documents listed below, by this reference, shall become a part of this Contract as though physically attached as a part hereof and all documents in this Contract shall be interpreted together to yield the most consistent results to achieve the purpose of the project:
- a. General Conditions
 - b. General Requirements
 - c. Technical Specifications
 - e. Project Drawings
 - f. Such addenda supplementing the documents forming this Contract as are referenced to it and attached as a part of it.
 - g. Bid Solicitation, Bid Form, Instructions to Bidders, Addenda, provided however, that no exceptions to the District's specifications, whether stated or implied in the Contractor's Bid, shall be allowed **EXCEPT** as shall be itemized, listed, approved by the District and recorded as written Addenda with the District as a supplement to this Contract.
- 8.2 This Contract states the entire understanding between the parties and supersedes any written or oral representations, statements, negotiations, or agreements to the contrary. The Contractor recognizes that any representations, statements, or negotiations made by District staff do not suffice to legally bind the District in a Contractual relationship unless they have been reduced to writing, approved, and signed by an authorized District representative. This Contract, once properly executed, shall bind the parties, their assigns, and successors in interest.
- 8.3 This Contract may be amended only with the prior written approval of the parties.

IN WITNESS WHEREOF, the parties or their duly authorized representatives hereby execute this Contract on the date first written above.

Legal Form Approved
District Counsel

FLORIDA INLAND NAVIGATION DISTRICT

By: _____

By: _____
Executive Director

Date: _____

WHEN THE CONTRACTOR IS AN INDIVIDUAL OR SOLE PROPRIETOR:

Signed, sealed, and delivered in the presence of:

_Witness

By: _____
Signature

Witness

Type or Print Name

WHEN THE CONTRACTOR OPERATES UNDER A TRADE NAME OR FICTITIOUS NAME:

Signed, sealed, and delivered in the presence of:

_____ Witness	_____ Trade Name or Fictitious Name
_____ Witness	_____ Signature
	_____ Type or Print Name

WHEN THE CONTRACTOR IS A LIMITED LIABILITY COMPANY:

Signed, sealed, and delivered in the presence of:

_____ Witness	_____ LLC Name and State of Organization
_____ Witness	_____ Signature of Manager or Managing Member
	_____ Type or Print Name/Title

WHEN THE CONTRACTOR IS A GENERAL OR LIMITED PARTNERSHIP:

Signed, sealed, and delivered in the presence of:

_____ Witness	_____ Partnership Name
_____ Witness	_____ Signature of General Partner
	_____ Type or Print Name of General Partner

WHEN THE CONTRACTOR IS A CORPORATION:

ATTEST:

_____ Secretary	_____ Corporation Name
(Corporate Seal)	By: _____ Signature of Officer or Authorized Agent
	_____ Type or Print Name/Title

--End of Section--

SECTION 00 55 00
NOTICE TO PROCEED

Dated: _____

To: _____

Project: Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, FL

In accordance with the Contract, for the above referenced project dated _____, you are hereby notified to commence Work on _____, and you are to complete the Work within **270** consecutive days (inclusive of the 60-day vegetative establishment period).

Owner: Florida Inland Navigation District

Authorized Signature: _____ Date: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the Notice of Proceed is hereby acknowledged by:

Authorized Signature: _____ Date: _____

Title: _____

--End of Section--

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SECTION 00 61 13.13

PERFORMANCE BOND

District's Contract No. _____

Surety Bond No. _____

BY THIS BOND, know that _____ as Principal, herewith called Contractor, and _____, as Surety, hereinafter called Surety, are bound to the Florida Inland Navigation District, as Obligee, herein called District, in the amount of: _____ Dollars (\$ _____) for payment of which Contractor and Surety bind themselves, their heirs, personal representatives, executors, administrators, successors and assigns, jointly and severally, with reference to a written agreement entered into by Contractor and District, the construction of the Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, FL project.

THE CONDITION OF THIS BOND is that if the Contractor:

1. Performs said Contract in accordance with its terms and conditions; and
2. Pays District all losses, damages, expenses, costs, and attorney's fees, including appellate proceedings, that District sustains because of a default by Contractor under the Contract; and
3. Pays District any and all other amounts due District by Contractor because of a default by Contractor under the Contract; and
4. Perform the guarantee of all Work and materials furnished under the Contract for the time specified in the Contract:

THEN THIS BOND IS VOID, OTHERWISE, IT REMAINS IN FULL FORCE.

Any changes in or under the Contract documents and compliance or noncompliance with formalities connected with the Contract or with the changes, do not affect the Surety's obligation under this bond. Surety hereby waives notice of any alteration or extension of time made by the District.

Dated on _____, 20____.

Contractor's Principal Business Address and Telephone No.:

Phone: () ____ - ____

Surety's Principal Business Address and Telephone No.:

Phone: () ____ - ____

District's Principal Business Address and Telephone No.:

1314 Marcinski Road
Jupiter, Florida 33477
Phone: (561) 627-3386

WHEN THE PRINCIPAL IS AN INDIVIDUAL OR SOLE PROPRIETOR:

Signed, sealed, and delivered in the presence of:

(Witness) By: _____
Signature

(Witness) Business Address

WHEN THE PRINCIPAL OPERATES UNDER A TRADE NAME OR FICTITIOUS NAME:

Signed, sealed, and delivered in the presence of:

(Witness) Business Name and Address

(Witness) By: _____
Signature

WHEN THE CONTRACTOR IS A LIMITED LIABILITY COMPANY:

Signed, sealed, and delivered in the presence of:

Witness LLC Name and State of Organization

Witness Signature of Manager or Managing Member

Type or Print Name/Title

WHEN THE PRINCIPAL IS A GENERAL OR LIMITED PARTNERSHIP:

Signed, sealed, and delivered in the presence of:

(Witness) (Name and Address of Partnership)

(Witness) By _____
(Signature of General Partner)

WHEN THE PRINCIPAL IS A CORPORATION:

ATTEST:

(Corporate Principal)

(Corporate Seal) Business Address

(President) By: _____
(Secretary)

ATTEST:

(Corporate Surety)
(Surety Seal)

Business Address

(Secretary) By _____
(Surety)

Florida Resident Agent

(Surety shall provide evidence of signature authority, i.e., a certified copy of Power of Attorney.)

NOTE: If both the Principal and Surety are Corporations, the respective Corporate Seals should be affixed and attached.

--End of Section--

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SECTION 00 61 13.16

PAYMENT BOND

District's Contract No. _____

Surety Bond No. _____

BY THIS BOND, know that _____ as Principal, herewith called Contractor, and _____, as Surety, hereinafter called Surety, are bound to Florida Inland Navigation District, as Oblige, herein called District, in the amount of: _____ Dollars (\$) for payment of which Contractor and Surety bind themselves, their heirs, personal representatives, executors, administrators, successors and assigns, jointly and severally, with reference to a written agreement entered into by Contractor and District, the construction of the Dredged Material Management Area SJ-1 Shoreline Improvements; St. Johns County, FL.

THE CONDITION OF THIS BOND is that if the Contractor:

Promptly makes payments to all claimants as defined in Section 255.05(1), Florida Statutes, supplying Contractor with labor, material, or supplies, used directly or indirectly by Contractor in the prosecution of the Work provided for in the Contract;

THEN THIS BOND IS VOID, OTHERWISE, IT REMAINS IN FULL FORCE.

Any changes in or under the Contract documents and compliance or noncompliance with formalities, connected with the Contract or with the changes, do not affect Surety's obligation under this bond. Surety hereby waives notice of any alteration or extension of time made by the District.

Any action instituted by a Claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2) and (10), Florida Statutes.

DATED on _____, 20__.

Contractor's Principal Business Address and Telephone No.:

Phone: () ____ - _____

Surety's Principal Business Address and Telephone No.:

Phone: () ____ - _____

District's Principal Business Address and Telephone No.:

1314 Marcinski Road
Jupiter, Florida 33477
Phone:(561)627-3386

WHEN THE PRINCIPAL IS AN INDIVIDUAL OR SOLE PROPRIETOR:

Signed, sealed, and delivered in the presence of:

(Witness) By: _____
Signature

(Witness) Business Address

WHEN THE PRINCIPAL OPERATES UNDER A TRADE NAME OR FICTITIOUS NAME:

Signed, sealed, and delivered in the presence of:

(Witness) Business Name and Address

(Witness) By: _____
Signature

WHEN THE CONTRACTOR IS A LIMITED LIABILITY COMPANY:

Signed, sealed, and delivered in the presence of:

Witness LLC Name and State of Organization

Witness Signature of Manager or Managing Member

Type or Print Name/Title

WHEN THE PRINCIPAL IS A GENERAL OR LIMITED PARTNERSHIP:

Signed, sealed, and delivered in the presence of:

(Witness) (Name and Address of Partnership)

(Witness) By _____
(Signature of General Partner)

WHEN THE PRINCIPAL IS A CORPORATION:

ATTEST:

(Corporate Principal)

(Corporate Seal) Business Address

(President) By: _____
(Secretary)

ATTEST:

(Corporate Surety)
(Surety Seal)

Business Address

(Secretary) By _____
(Surety)

Florida Resident Agent

(Surety shall provide evidence of signature authority, i.e., a certified copy of Power of Attorney.)

NOTE: If both the Principal and Surety are Corporations, the respective Corporate Seals should be affixed and attached.

--End of Section--

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DATE OF ISSUANCE: _____
PROJECT NAME: Dredged Material Management Area SJ-1 Shoreline Improvements;
St. Johns County, FL
OWNER: Florida Inland Navigation District
CONTRACTOR: _____
CONTRACT DATE: _____

This Certificate of Substantial Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

To: Florida Inland Navigation District
OWNER

And to: _____
CONTRACTOR

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and that part of the Work is hereby declared to be substantially complete in accordance with the Contract Documents on:

DATE OF SUBSTANTIAL COMPLETION

A tentative list of items to be completed or corrected, prepared by Contractor and verified and amended by the Engineer is attached hereto. This list may not be all-inclusive, and failure to include any items in the tentative list does not alter the responsibility of Contractor to complete all the Work in accordance with the Contract Documents. The items in the tentative list shall be completed or corrected by Contractor within ____ days of the above Date of Substantial Completion.

The responsibilities between Owner and Contractor for security, operation, insurance, and warranties and guarantees shall be as follows:

OWNER: _____

CONTRACTOR: _____

The following documents are attached to and made part of this Certificate: _____

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer on: _____
DATE

Taylor Engineering, Inc. _____ By: _____
ENGINEER (Authorized Signature)

Contractor accepts this Certificate of Substantial Completion on: _____
Date

_____ By: _____
CONTRACTOR (Authorized Signature)

Owner accepts the Work or designated portion thereof as substantially complete and will assume full possession thereof on: _____
Date

Florida Inland Navigation District _____ By: _____
OWNER (Authorized Signature)

--End of Section--

SECTION 00 72 00

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in the Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda: Written or graphic instruments issued prior to the opening of Bids that modify or interpret the Contract Documents by additions, deletions, clarifications, or corrections.

Application for Payment: The form furnished or approved by the District which is to be used by the Contractor in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Bid: The offer or proposal of the bidder submitted on the prescribed form setting forth the price(s) for the Work to be performed.

Bidder: Any person, firm, partnership, or corporation submitting a Bid for the Work.

Bonds: Bid, Payment, and Performance Bonds and other instruments of security, furnished by the Contractor and the Contractor's Surety in accordance with the Contract Documents.

Change Order: A written order to the Contractor, signed by the District, authorizing an addition, deletion, or revision in the Work or an adjustment in the Contract Price or Contract Time issued on or after the effective date of the Contract.

Claim: A demand or assertion by one of the parties seeking, as a matter of right, an adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract.

Construction Change Directive: A written order to the Contractor, prepared by the Engineer and signed by the District, directing a change to the Work prior to agreement on adjustment, if any, in the Contract Price or Contract Time, or both.

Contract: The written agreement between the District and the Contractor covering the Work to be performed and other Contract Documents are made a part of the Contract.

Contract Documents: The Contract, including the Bid Solicitation, Instructions for Bidders, Contractor's Bid, Bid Bond, Payment Bond, Performance Bond, Notice of Award, Notice to Proceed, Change Order(s), General Conditions, Project Drawings, Specifications, Addenda, and all Modifications issued after the effective date of the Agreement.

Contract Price: The total monies payable by the District to the Contractor under the Contract Documents.

Contract Time: The number of calendar days or the date stated in the Contract Documents for the completion of the Work.

Contractor: The person, firm, or corporation with whom the District has entered into the Contract.

Day: A calendar day of twenty-four (24) hours measured from midnight to the next midnight.

Defective: Term used to describe Work that is unsatisfactory, faulty or deficient, in that it does not conform to the requirements of the Contract Documents or does not meet the requirements of any inspection, referenced standard, test or approval or has been damaged prior to final acceptance.

District: The Florida Inland Navigation District is an independent special District created under the laws of the State of Florida.

District Observer: The Engineer, Engineer's representative, or Resident Authorized Representative.

Engineer: The person, firm, or corporation named as such in the Contract Documents.

Engineer's Consultants: A person, firm, or corporation having a Contract with the District or the Engineer to furnish services as the District's or Engineer's independent professional associate or consultant with respect to the Work or Project.

Effective Date of the Contract: The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.

Executive Director: The person employed as the District's Executive Director or his or her designee.

Field Order: A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Engineer to the Contractor during construction.

Furnish: to provide or install complete in place.

General Requirements: Sections of Division 01 of the Specifications.

Governing Board: The Board of Commissioners of the Florida Inland Navigation District.

Laws and Regulations: Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

Liens: Liens, changes, security interest or encumbrances upon real property or personal property.

Milestone: A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

Modification: (a) A Written Amendment of the Contract Documents signed by the District and the Contractor, (b) a Change Order or (c) a Field Order. A Modification may only be issued after Effective Date of the Contract.

Notice of Award: The written notice of the acceptance of the Bid from the District to the successful Bidder.

Notice to Proceed: Written notice given by the District to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contractor shall start to perform the Contractor's obligations under the Contract Documents.

Partial Utilization: Use by the District of a substantially completed part of the Work for the purpose for which it is intended prior to substantial completion of all the Work.

Project: The total construction of which the Work to be provided under the Contract Documents may be the whole or a part as indicated elsewhere in the Contract Documents.

Project Drawings: The part of the Contract Documents which show largely through graphical presentation the character, extent and scope of the Work to be furnished and performed by the Contractor and which have been prepared or approved by the Engineer. Shop drawings are not Project Drawings as so defined.

Resident Project Representative: An authorized representative of the District who is assigned to perform construction observation.

Samples: Physical examples of materials, equipment, or Workmanship that are representative of some portion of the Work and establish standards by which some portion of Work will be judged.

Shop Drawings: All drawings, diagrams, illustrations, brochures, schedules, and other data or information that are specifically prepared or assembled by the Contractor and submitted by the Contractor to illustrate some portion of the Work.

Specifications: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards, and Workmanship as applied to the Work and certain administrative details applicable thereto.

Subcontractor: An individual, firm, or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion: The date determined by the Engineer when the construction of the Work or an expressly stipulated part thereof is sufficiently completed, in accordance with the Contract Documents, so that the Work or stipulated part can be fully utilized for the purposes for which it is intended.

Supplier: A manufacturer, fabricator, supplier, distributor, materialman, vendor, firm, corporation or organization having a direct contract with the Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by the Contractor or any Subcontractor.

Surety: The corporate body which is bound with the Contractor and which engages to be responsible for the Contractor and the acceptable performance of the Work.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, handholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, natural gas, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Unit Price Work: Work to be paid for on the basis of unit prices.

Work: The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

Written Amendment: A written amendment of the Contract Documents, signed by the District and the Contractor on or after the effective Date of the Agreement and normally dealing with the non-engineering or non-technical rather than strictly construction-related aspects of the Contract Documents.

Written Notice: Any written notice to any party to the Contract relative to any part of this Contract. Such notice shall be considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at the party's last given address, or as to the Contractor, delivered in person to said party or said party's authorized representative at the Project site. Email to the last given email address, and delivery by a recognized overnight delivery service shall constitute written notice. However, written notice by any means other than certified or registered mail shall not be deemed complete until actually received by the addressee. If email is used, it is up to the party sending the email to verify receipt by asking for a verification reply or electronic read notice.

ARTICLE 2 - CONDITIONS AFFECTING WORK

The Contractor acknowledges that he has investigated and correlated his observations with the requirements of the Contract and satisfied himself as to the conditions affecting the Work. These conditions include, but are not restricted to, those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electrical power, roads and uncertainties of weather, river stages, tides or similar physical conditions at the site, and the character of equipment and facilities needed preliminary to and during prosecution of the Work. The Contractor further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as

this information is reasonably ascertainable from an inspection of the site, including all exploratory Work done by the District, as well as from information presented by the Project Drawings and Specifications made a part of this Contract. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The District assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the District, its officers or employees prior to the execution of the Contract, unless such information has been stated expressly in the Contract.

ARTICLE 3 - CONTRACT DOCUMENTS

The Contract Documents comprise the entire agreement between the District and the Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project. It is the intent of the Contract Documents to describe the functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials, equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as to be required to produce the intended result shall be furnished and performed whether or not specifically called for. When words and phrases that have a well-known technical or construction industry or trade meaning are used to describe Work, materials or equipment such words or phrases shall be interpreted in accordance with that meaning. Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations, of any governmental authority, whether such reference be specific or be implied, shall mean the latest standard, specification, manual, code, Laws or Regulations in effect on the date of the Bid Solicitation except as may otherwise be specifically stated. However, no provision of any referenced standard, specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the District, the Contractor or the Engineer, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the District, the Engineer, or any of the Engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents. Clarifications and interpretations of the Contract Documents shall be issued by the Engineer.

Brand names where used in the Contract Documents, are intended to denote the standard of quality required for the particular material or product. The term "equal" or "equivalent," when used in connection with brand names, shall be interpreted to mean a material or product that is similar and equal in type, quality, size, capacity, composition, finish, color and other applicable characteristics to the material or product specified by trade name, and that is suitable for the same use and capable of performing the same function, in the opinion of the Engineer, as the material or product so specified. Proposed equivalent items must be approved by the Engineer before they are purchased or incorporated in the Work. When a brand name, catalog number, or other identification, is used without the phrase "or equal," the Contractor shall use the item specified. "Equivalent" or "equal" items will only be approved after the Contractor has been furnished with the Notice to Proceed.

If, during the performance of the Work, the Contractor discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the Work or any such standard, specification, manual or code, the Contractor shall report all errors to the Engineer in writing at once and the Contractor shall not proceed with the Work affected thereby (exception in an emergency as provided for in the Contract Documents) until an amendment or supplement to the Contract Documents has been issued.

ARTICLE 4 - SPECIFICATIONS AND PROJECT DRAWINGS

The Contractor shall check all Project Drawings furnished to him immediately upon their receipt and shall promptly notify the Engineer of all errors, inconsistencies, omissions, and discrepancies. Dimensions marked on Project Drawings shall, in general, be followed in preference to scaled measurements. Anything mentioned in the Specifications and not shown on the Project Drawings, or shown on the Project Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both. In the case of an inconsistency between Drawings and Specifications or within either document not clarified by addendum, the

better quality or greater quantity of Work shall be provided in accordance with the Engineer's interpretation. In case of a discrepancy either in the dimensions, in the Project Drawings, or in the Specifications, the matter shall be submitted to the District who shall make a determination in writing. Any adjustment by the Contractor without such a determination by the District shall be at his own risk and expense. All deviations made by the Contractor from the Specifications and Project Drawings will be compiled and provided to the District in the form of Record Drawings (see SECTION 01 77 00 PROJECT CLOSEOUT). The District may furnish from time to time such detail Project Drawings and other information considered necessary to clarify the Contract.

Omissions from the Project Drawings or Specifications or the misdescription of details of Work which are manifestly necessary to carry out the intent of the Project Drawings and Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the Work as if fully and correctly described in the Project Drawings and Specifications. If the Contractor performs any construction activity knowing it involves a recognized error, inconsistency, or omission in the Contract without providing written notice to the District, the Contractor shall assume appropriate responsibility for such performance and shall bear an appropriate amount of the attributable costs for correction. Standard references used in the Specifications shall be the latest revision or edition of that reference, any such referenced paragraph, or section revised shall apply to the Work as indicated.

ARTICLE 5 - CONSTRUCTION BONDS

5.1 BONDS REQUIRED

If the Contract price is in excess of two-hundred thousand dollars (\$200,000.00), the Contractor shall, within fifteen (15) calendar days after receipt of the Contract for execution, provide the District with a payment bond and a performance bond in accordance with Florida Statutes § 255.05(1) in an amount not less than the Contract Price. The form of the payment and performance bonds shall be as provided IN SECTION 00 61 13.13 PERFORMANCE BOND and 00 61 13.16 PAYMENT BOND, with a Power of Attorney Affidavit attached. Contractor, at Contractor's Expense, shall record the Performance Bond and the Payment Bond in the Public Records of the county where the improvement is located and deliver a certified copy of each recorded bond to the District. Contractor shall perform no work, and the District shall not make any payment to Contractor until Contractor has delivered certified copies of the recorded bond to the District. Failure to provide the Bond(s) with the fifteen (15) day period shall be sufficient cause for the District to deem the Bidder non-responsive and nullify the Contract Award.

5.2 SURETIES QUALIFICATIONS

All bonds required under this Contract, including, but not by way of limitation, any Bid Bond, Payment Bond or Performance Bond, shall be written through a reputable and responsible Surety Bond agency licensed to do business in the State of Florida and with a Surety which holds a certificate of authority authorizing it to write Surety Bonds in Florida meeting the following requirements:

BOND REQUIREMENTS FOR CONSTRUCTION CONTRACTS

CONTRACT SUM	A.M. BEST'S RATING CLASSIFICATION / OTHER REQUIREMENTS	BEST'S FINANCIAL SIZE CATEGORY
From: \$ 0.00 To: \$200,000.00	Bid or Payment Bond or Performance Bond Not Required (unless specified in Supplemental Conditions)	Not Applicable
From: \$200,000.01 To: \$500,000.00	All Bonds Required: B+ or better (See requirements under paragraph 1 below)	No Minimum Required
From: \$500,000.01 To: \$2,500,000.00	A - or better Circular 570 requirements (paragraph 2 below)	
From: \$2,500,000.01 or more	A - or better Circular 570 requirements (paragraph 2 below)	V or larger

(1) Contract Price of five-hundred thousand dollars (\$500,000.00) or Less:

If the Contract price is five-hundred thousand dollars (\$500,000.00) or less, Bonds with a Surety company in compliance with the following requirements shall be acceptable:

- (a) The surety company is licensed to do business in the State of Florida;
- (b) The surety company holds a certificate of authority authorizing it to write Surety Bonds in the State Florida;
- (c) The surety company has twice the minimum surplus and capital required by the Florida Insurance code at the time the Bid Solicitation is issued;
- (d) The surety company is otherwise in compliance with the provisions of the Florida Insurance Code; and,
- (e) The surety company holds a currently valid certificate of authority issued by the U.S. Department of the Treasury under 31 U.S.C. ss.9304 to 9308.

In order to qualify as an acceptable Surety company under this paragraph (1), an Affidavit for Surety Company shall be executed by an Officer of the Surety Bond insurer as evidence that a Surety company complies with the foregoing requirements.

(2) Circular 570, Contract Price of \$500,000.01 or more:

If the Contract price is \$500,000.01 or greater, the Surety shall also comply with the Circular 570 requirements as set forth in this paragraph (2). The Surety shall maintain a current certificate of authority as an acceptable Surety on Federal Bonds in accordance with U.S. Department of Treasury Circular 570, current revision. If the amount of the Bond exceeds the underwriting limitations set forth in the Circular, in order to qualify, the net retention of the Surety company shall not exceed the underwriting limitation in the Circular and the excess risk must be protected by coinsurance, reinsurance, or other methods in accordance with Treasury Circular 297, revised September 1, 1978 (3) CFR Section 223.10 - Section 223.111. Further, the surety company shall provide the District with evidence satisfactory to the District, that such excess risk has been protected in an acceptable manner.

5.3 ADDITIONAL OR REPLACEMENT BOND

It is further mutually agreed between the parties hereto that if, at any time, the District shall deem the Surety or Sureties upon any Bond to be unsatisfactory, or if, for any reason, such Bond ceases to be adequate, the Contractor shall, at his expense within five (5) business days after the receipt of notice from the District to do so, furnish an additional or replacement Bond or Bonds on the District's standard form, amount, and with such Surety or Sureties as shall be satisfactory to the District. In such event, no further payments to the Contractor shall be deemed due under this Contract until such new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the District.

In addition, the Contractor shall for any increases in the Contract amount automatically increase the amount of the Payment Bond and the Performance Bond to equal the revised amount of the Contract and shall provide the District with evidence of the same.

5.4 FLORIDA RESIDENT AGENT

The Surety Company shall have a Florida resident agent whose name shall be listed in the prescribed space on the forms provided by the District for all Bonds required by the District.

5.5 ALTERNATIVE FORM OF SECURITY

In lieu of the Payment Bond and the Performance Bond, the Contractor may, pursuant to Section 255.05, Florida Statutes, provide an alternate form of security in the form of cash, a money order, a certified check, or an irrevocable letter of credit. Any such alternative form of security shall be for the same purpose and be subject to the same conditions as those applicable to the Bond for which the alternative form of security is being substituted. The determination of the value of an alternative form of security shall be made by the District.

ARTICLE 6 - INSURANCE REQUIREMENTS

Without limiting any of the other obligations or liabilities of Contractor, Contractor shall provide, pay for, and maintain in force until all of its work to be performed under this Contract has been completed and accepted by the District (or for such duration as is otherwise specified hereinafter), the insurance coverages set forth herein.

6.1 WORKERS' COMPENSATION/EMPLOYER'S LIABILITY INSURANCE

Such insurance to apply for all employees in compliance with the "Workers' Compensation Law" of the State of Florida and all applicable federal laws. Such insurance shall be no more restrictive than that provided by the latest edition of the standard Workers' Compensation Policy, as filed for use in Florida by the National Council on Compensation Insurance (NCCI), without any restrictive endorsements other than any endorsements required by NCCI or the State of Florida. In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for the Federal Employer's Liability Act and any other applicable Federal or State law. In addition, the policy(ies) must include:

The minimum amount of coverage (inclusive of any amount provided by an umbrella or excess policy) shall be:

Part One: "Statutory"
Part Two: \$1,000,000 Each Accident
\$1,000,000 Disease – Policy Limit
\$1,000,000 Disease – Each Employee

In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for:

- a. If any of Contractor's employees or subcontractors' (of any tier) employees will be involved in loading, unloading, building or repairing vessels, coverage shall be included for the U.S Longshoremen & Harbor Workers Act. Such coverage shall be provided on a form no more restrictive than NCCI Form WC 00 01 06A Longshore and Harbor Workers' Compensation Act Coverage Endorsement.
- b. If any of Contractor's employees or subcontractors' (of any tier) employees will be working as the masters or crew members of any vessel, coverage shall be included for losses arising out of injuries to such employees. Such coverage is to be provided on a form no more restrictive than the latest edition of the NCCI Form WC 00 02 01B Maritime Coverage Endorsement.

In the event that Contractor provides all or a portion of the Workers' Compensation/Employers Liability insurance required herein via a professional employer organization ("PEO") or employee leasing company, any such Workers' Compensation/Employers Liability insurance provided will only be deemed acceptable solely for the purposes of insuring Contractor's enrolled employees. In addition, and notwithstanding the foregoing, in order to adequately protect the District against injuries to uninsured employees of Subcontractors and non-enrolled employees of Contractor, Contractor must still procure, maintain, and furnish District with evidence of a stand-alone separate Workers' Compensation/Employers Liability insurance policy issued with Contractor as the named insured, and complying with all requirements for Contractor provided Workers' Compensation contained in the Agreement. It is permissible for Contractor to exclude payroll of leased employees from such separate Workers' Compensation/Employers Liability insurance policy.

The Workers' Compensation policy must be endorsed to waive the insurers right to subrogate against the District and District's Commissioners, officers, employees and agents in the manner which would result from the attachment of the NCCI Waiver Of Our Right To Recover From Others Endorsement (Advisory Form WC 00 03 13) with the District and the District's Commissioners, officers, employees and agents scheduled thereon.

6.2 COMMERCIAL GENERAL LIABILITY INSURANCE

Such insurance shall be on a form no more restrictive than that provided by the latest edition of the standard Commercial General Liability Form (Form CG 00 01) as filed for use in the State of Florida by the Insurance Services Office (ISO), without any restrictive endorsements other than any endorsements specifically required by ISO or the State of Florida. The coverage may include restrictive endorsements which exclude coverage for liability arising out of:

Mold, fungus, or bacteria

Terrorism

Silica, asbestos or lead

Sexual molestation

The minimum limits (inclusive of amounts provided by an umbrella or excess policy) shall be:

\$5,000,000	General Aggregate
\$2,000,000	Products/Completed Operations Aggregate
\$2,000,000	Personal and Advertising Injury
\$5,000,000	Each Occurrence

Contractor shall continue to maintain products/completed operations coverage in the amount stated above for a period of three (3) years after the final completion of the Work. The insurance shall be on a form no more restrictive than, and shall cover those sources of liability which would be covered by Coverage A of, the latest occurrence form edition of the Commercial General Liability Coverage Form (ISO Form CG 00 01), or of the occurrence Products/Completed Operations Liability Coverage Form (ISO Form CG 00 37), as filed for use in the State of Florida by ISO, without any restrictive endorsements other than those which, under an ISO filing, must be attached to the policy (i.e., mandatory endorsements).

District and District's Commissioners, officers, employees and agents shall be included as an "Additional Insured" on a form no more restrictive than ISO form CG 20 10 (Additional Insured – Owners, Lessees, or Contractor) combined with ISO form CG 20 37 (Additional Insured – Owners, Lessees or Contractors – Completed Operations).

Contractor shall cause its subcontractors to purchase and maintain commercial general liability insurance in the minimum amount of \$1,000,000, covering District and Contractor.

6.3 BUSINESS AUTOMOBILE LIABILITY INSURANCE

Such insurance shall be provided on a form no more restrictive than that provided by Section II (Liability Coverage) of the most recent version of the standard Business Auto Policy (ISO Form CA 00 01) without any restrictive endorsements, including coverage for liability contractually assumed. The policy shall cover all owned, non-owned, and hired autos used in connection with the performance of work under this Contract.

The minimum limits (inclusive of any amounts provided by an umbrella or excess policy) shall be:

\$1,000,000	Each Occurrence – Bodily Injury and Property Damage Combined
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6.4 WATERCRAFT/VESSEL LIABILITY INSURANCE

To the extent watercraft are utilized, Contractor shall purchase and maintain, or cause its subcontractors to purchase and maintain, insurance which shall, at a minimum, cover Contractor and subcontractors for injuries or damage arising out of the use of all owned, non-owned and hired watercraft. The insurance shall include the District and District's Commissioners, officers, employees and agents "Additional Insureds".

The limits applicable to watercraft liability (inclusive of any amounts provided by an umbrella or excess policy) shall be:

Each Occurrence/Annual Aggregate	\$5,000,000
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6.5 POLLUTION/ENVIRONMENTAL IMPAIRMENT LIABILITY INSURANCE

Such insurance shall include clean-up costs and cover Contractor for liability resulting from pollution or other environmental impairment arising out of, or in connection with, work performed under this Contract, or which arises out of, or in connection with this Contract, including coverage for clean-up of pollution conditions and third-party bodily injury and property damage claims arising from pollution conditions. Such insurance shall also include transportation coverage and non-owned disposal site coverage. Such insurance shall be on a form acceptable to District.

District and District's Commissioners, officers, employees and agents shall be included as "Additional Insureds" on the policy.

Coverage must either be on an occurrence basis; or, if on a claims-made basis, the coverage must respond to all claims reported within three years following the period for which coverage is required and which would have been covered had the coverage been on an occurrence basis.

The minimum limits (inclusive of any amounts provided by an umbrella or excess policy) shall be:

\$5,000,000	Each Claim/Occurrence
-------------	-----------------------

\$5,000,000	Annual Aggregate
-------------	------------------

6.6 PROPERTY/BUILDER'S RISK

Contractor shall be responsible to maintain Builder's Risk and/or and Installation policy for all construction projects. The coverage limit shall be equal to 100% of the completed value of the project. Such coverage shall be written on "all-risk" including coverage for the perils of windstorm and flood. Such coverage shall be written on an "agreed value" basis and shall not be subject to a coinsurance clause. The maximum deductible for other than windstorm and flood shall be \$25,000. The maximum deductible for windstorm and/or flood shall be 2% of the value of the project at the time of the loss. District shall be included on the policy as a Named Insured and a loss payee.

Until such insurance is no longer required by this Contract, Contractor shall provide District with renewal or replacement evidence of insurance at least fifteen (15) days prior to the expiration or termination of such insurance.

All policies required by this Contract shall be endorsed to provide that the insurer will provide District thirty (30) days' advance notice of any cancellation of the policy, except in cases of cancellation for non-payment of premium for which District shall be given ten (10) days' advance notice.

Insurers providing the insurance required by this Contract must either be: (1) authorized by a subsisting certificate of authority issued by the State of Florida to transact insurance in the State of Florida, or (2) except with respect to coverage for the liability imposed by the Florida Workers' Compensation Act, an eligible surplus lines insurer under Florida Statutes.

In addition, each such insurer shall have and maintain throughout the period for which coverage is required, a Best's Rating of "A-" or better and a Financial Size Category of "VII" or better according to A. M. Best Company.

Contractor shall provide to District satisfactory evidence of the insurance required in the Contract within fifteen (15) calendar days after notification of award of the Contract. As evidence of compliance with the insurance required herein, Contractor shall furnish District with one of the following forms of acceptable evidence of insurance:

- a.
 - 1. an appropriate Certificate of Insurance (which identifies the project) and is signed by an authorized representative of the insurer evidencing all coverage required; and
 - 2. a copy of the actual additional insured endorsement as issued on the policy(ies), signed by an authorized representative of the insurer(s) verifying inclusion of the District and the District's Commissioners, officers, employees and agents as additional insureds;
- b. the original of the policy(ies); or
- c. other evidence satisfactory to the District.

The official title of the certificate holder is Florida Inland Navigation District. This official title shall be used in all insurance documentation.

Notwithstanding the prior submission of a Certificate of Insurance, copies of endorsements, or other evidence initially acceptable to the District, if requested by the District, Contractor shall, within thirty (30) days after receipt of a written request from District, provide the District with a certified copy or certified copies of the policy or policies providing the coverage required herein. Contractor may redact or omit, or cause to be redacted or omitted, those provisions of the policy or policies which are not relevant to the insurance required herein.

The insurance provided by the Contractor shall apply on a primary basis to and shall not require contribution from any other insurance or self-insurance maintained by the District or the District's Commissioners, members, officers, employees or agents. Any insurance, or self-insurance, maintained by the District shall be in excess of, and shall not contribute with, the insurance provided by Contractor.

District and Contractor, each for itself and on behalf of its insurers, to the fullest extent permitted by law without voiding the insurance required hereunder, waive all rights against each other and any of their other contractors, subcontractors, agents and employees, each of the other, for damages or loss to the extent covered and paid for by any insurance maintained by the other party.

Except where prior written approval has been obtained hereunder, the insurance maintained by Contractor shall apply on a first dollar basis without application of a deductible or self-insured retention. Contractor shall pay on behalf of the District or the District's Commissioners, officers, employees and agents any deductible or self-insured retention applicable to a claim against the District or the District's Commissioners, officers, and employees.

District reserves the right, but not the obligation, to review and revise any insurance requirements at the time of contract renewal and/or any amendments, not limited to deductibles, limits, coverages and endorsements based on insurance market conditions affecting the availability or affordability of coverage; or changes in the scope of work/specifications affecting the applicability of coverage.

Compliance with these insurance requirements shall not limit the liability of Contractor, its subcontractors, sub-subcontractors, employees or agents. Any remedy provided to the District or the District's Commissioners, officers or employees by the insurance provided by Contractor or the District shall be in addition to and not in lieu of any other remedy (including, but not limited to, as an indemnitee of Contractor) available to District under this Contract or otherwise.

Neither approval nor failure to disapprove insurance furnished by Contractor shall relieve Contractor from the responsibility to provide insurance as required by this Contract.

ARTICLE 7 - INDEMNIFICATION

The Contractor shall indemnify and hold harmless the District, its officers, agents, guests, invitees and employees, from all liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor in the performance of the Contract. The Contractor shall include substantially the same indemnification provisions in all contracts with Subcontractors.

The Contractor acknowledges that it is solely responsible for ensuring the safety of the premises to protect its employees, Subcontractors, invitees, licensees and all other persons during the course of the Work.

ARTICLE 8 - SCHEDULES

Within ten (10) days after the Effective Date of Contract, the Contractor shall submit to the Engineer for review a preliminary progress schedule (See SECTION 01 29 00 MEASUREMENT AND PAYMENT) indicating the starting and completion dates of the various stages of the Work, including any Milestones specified in the Contract Documents.

Prior to the submission of the first Application for Payment, the Contractor shall submit a finalized progress schedule. No progress payment shall be made to the Contractor until the schedule is submitted to and acceptable to the Engineer as provided herein. The progress schedule will be acceptable to the Engineer as providing an orderly progression of the Work to completion within any specified Milestones and Contract Time, but such acceptance will neither impose on the Engineer responsibility for the sequencing, progress or scheduling of the Work nor interfere with or relieve the Contractor from full responsibility thereof. The Contractor's schedule of values will be acceptable to the Engineer as to form and substance.

ARTICLE 9 - SUPERINTENDENCE BY CONTRACTOR

The Contractor, at all times during performance and until the Work is completed and accepted, shall give his personal superintendence to the Work or have a competent superintendent at the project site, satisfactory to the District and with authority to act for the Contractor.

9.1 PERFORMANCE OF WORK BY THE CONTRACTOR

The Contractor shall, with his own organization, perform Work equivalent to at least forty percent (40%) of the total amount of the Work, based on percentage of Contract value, to be performed under the Contract.

9.2 SUBCONTRACTORS

The Contractor is as fully responsible to the District for the acts, coordination, and omissions of his Subcontractors and of persons, either directly employed by said Subcontractor, as he is for the acts and omissions of persons directly employed by him. The Contractor shall submit the names of the Subcontractors proposed for the Work for District acceptance at the pre-construction meeting. The Contractor shall not substitute any Subcontractor without the prior consent of the District. Nothing contained in the Contract shall create any Contractual relationship between any Subcontractor and the District. All Subcontractors shall complete and submit to the Engineer a Public Entity Crime Statement.

9.3 PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES

In accordance with §287.135, Florida Statutes, Contractor certifies that Bidder is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria. "Business operations" means, for purposes specifically related to Cuba or Syria, engaging in commerce in any form in Cuba or Syria, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing, or operating equipment, facilities, personnel, products, services, personal property, real property, military equipment, or any other apparatus of business or commerce. District may terminate the contract if Contractor is found to have submitted a false certification, been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or been engaged in business operations in Cuba or Syria.

ARTICLE 10 - PERMITS

The Contractor shall, without additional expense to the District, be responsible for obtaining licenses and permits and for complying with any applicable federal, state, and municipal laws, codes, and regulations in connection with the prosecution of the Work. The District will obtain the environmental permits indicated in SECTION 01 35 43 ENVIRONMENTAL PROTECTION; the Contractor will obtain any other environmental permits.

ARTICLE 11 - PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES, AND IMPROVEMENTS

The Contractor will preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site of Work which is not to be removed. Care will be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations or by the careless operation of equipment, or by Workmen, shall be trimmed with a clean cut and painted with an approved tree-pruning compound as directed by the District. The Contractor will protect from damage all existing improvements, District easements, or utilities at or near the site of the Work, the location of which is made known to him, or the existence of which may be reasonably inferred from a site inspection, and will repair or restore any damage to such facilities, and shall be responsible for any interruption of utility services, resulting from failure to comply with the requirements of this Contract or the failure to exercise reasonable care in the performance of the Work. If the Contractor fails or refuses to repair any such damage promptly, the District may have the necessary Work performed and charge the cost thereof to the Contractor. The Contractor shall follow all requirements set forth in SECTION 01 35 43 ENVIRONMENTAL PROTECTION.

ARTICLE 12 - SAFETY

The Contractor shall be responsible for providing safe and healthful working conditions for employees of the Contractor, Subcontractors, the District, or its invitees. The Contractor shall initiate and maintain an accident prevention program that should include, but is not limited to, the following: Establish and supervise programs for the education and training of employees in the recognition, avoidance, and prevention of unsafe conditions and acts.

The Contractor shall be responsible for providing first-aid services and medical care to all his employees. The Contractor shall establish and maintain good housekeeping practices throughout all phases. The Contractor shall be responsible for requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions.

The District's Observer may, but is not required to, order that the Work be stopped if a condition of immediate danger exists. Nothing contained herein shall be construed to shift responsibility or risk of loss for injuries or damage sustained as a result of a violation of this section from the Contractor to the District and the Contractor shall remain solely and exclusively responsible for compliance with all safety requirements and for the safety of all persons and property at the project site. Employees required to handle or use toxins, caustics and other harmful substances shall be instructed regarding the safe handling and use, and be made aware of the

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potential hazards, personal hygiene, and personal protective measures required. All Work shall meet and be in compliance with standards and regulations set forth by Occupational Safety and Health Administration (OSHA), Florida Department of Labor and Employment Security and any and all other appropriate federal, state, local or District safety and health standards including but not limited to OSHA Excavation Safety Standards as enumerated in the "Trench Safety Act" Section 553.60, Florida Statutes.

12.1 EMERGENCIES

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the District, is obligated to act to prevent threatened damage, injury or loss. If the Contractor believes that any significant change in the Work or Contract Document have been caused thereby, prompt written notice shall be given to the Engineer. If the Engineer determines that a change in the Contract Documents is necessary due to the action taken by the Contractor in the event of the emergency, a Field Order or Change Order will be issued.

ARTICLE 13 - DIFFERING SITE CONDITIONS

During the progress of the Work should the Contractor encounter differing site conditions, the Contractor shall within 48 hours, and before such conditions are disturbed, deliver to the District written notice of:

- a. Subsurface, submerged or latent physical conditions at the site differing materially from those indicated in this Contract, or;
- b. Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in this Contract.

The Engineer shall promptly investigate the conditions, and shall render a non-binding opinion as to whether such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the Work under this Contract, whether or not changed as a result of such conditions, and shall make a non-binding recommendation for an adjustment to the Contract Price, the Contract Time, or both. Contractor and the Executive Director shall meet and discuss the Engineer's recommendation and shall attempt to negotiate a mutually acceptable adjustment. If the Contractor and the Executive Director reach agreement, the terms of the adjustment shall be documented by a Change Order. If the Executive Director finds that a change to the work is warranted by differing site conditions but the Contractor does not agree with the proposed adjustment to the Contract Price, Contract Time, or both, the Executive Director may issue a Construction Change Directive. During the Engineer's investigation, the Contractor shall proceed with those portions of the Work which do not disturb such conditions. Engineer shall notify Contractor in writing when Work may resume in the area of the differing site conditions. If the Contractor disagrees with the Executive Director's findings regarding the non-existence of differing site conditions or the Executive Director's proposed adjustment, if any, the Contractor may file a Claim in accordance with Section 14.6 of these General Conditions within 30 days of receipt of the Executive Director's determination.

No Claim by the Contractor for an adjustment hereunder shall be allowed if asserted after final payment under this Contract.

ARTICLE 14 – CHANGES TO THE WORK; CLAIMS

The District may, without invalidation of the Contract, at any time, without notice to the Sureties, by Change Order or Construction Change Directive, make any change in the Work within the general scope of the Contract. The Engineer may, without invalidation of the Contract, at any time, without notice to the Sureties, by Field Order, make any change in the Work, not involving an adjustment in the Contract Price or an extension of the Contract Time, within the general scope of the Contract.

Upon receiving a Change Order, Construction Change Directive or a Field Order the Contractor will promptly proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents.

14.1 FIELD ORDERS

The Engineer may authorize minor variations in the Work from the requirements of the Contract Documents that do not involve extra cost or extension of time and are compatible with the design concept of the completed project as a functioning whole as indicated by the Contract Documents. These shall be accomplished by a Field Order and will be binding on the District and the Contractor who shall perform the Work involved promptly. If the District or the Contractor believes that a Field Order justifies an adjustment in the Contract Price or the Contract Time, the District or the Contractor may make a written Claim for such an adjustment as provided in Section 14.6.

14.2 CHANGE ORDERS

The District and the Contractor shall execute appropriate Change Orders covering:

- a) Changes in the Work where the District and the Contractor are in agreement with:
 - 1. the change in the Work;
 - 2. the amount of the adjustment, if any, in the Contract Price; and
 - 3. the amount of the adjustment, if any, in the Contract Time.
- b) Changes in the Work which are required because of acceptance of defective Work or correcting defective Work;
- c) Changes in the Contract Price or Contract Time, or both, which are agreed to by the parties; and
- d) Changes in the Contract Price or Contract Time, or both, which embody the substance of any written decision rendered by the Governing Board pursuant to the paragraph entitled "Claims" of these General Conditions provided that, in lieu of executing any such Change Order, an appeal may be taken from any decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, the Contractor shall carry on the Work and adhere to the progress schedule.

The District and the Contractor will execute appropriate Change Orders prepared by the Engineer covering changes in the Work to be performed as provided in the paragraph entitled "Differing Site Conditions," and Work performed in an emergency as provided in the paragraph entitled "Emergencies" and any other Claim for a change in the Contract Time or the Contract Price which is approved by the parties.

14.3 CONSTRUCTION CHANGE DIRECTIVES

The District may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Price and Contract Time being adjusted accordingly.

A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

If the Construction Change Directive provides for an adjustment to the Contract Price, the adjustment shall be based on one or more of the methods provided in Section 14.5.

Upon receipt of a Construction Change Directive, the Contractor shall promptly, but in no event more than ten (10) days after receipt, proceed with the change in the Work involved and advise the Engineer of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Price or Contract Time.

A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Price and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be deemed as a Change Order.

Pending final determination of the total cost of a Construction Change Directive to the District, amounts not in dispute for such changes in the Work shall be included in applications for payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs. For any portion of such cost that remains in dispute, the Engineer will make an interim determination for purposes of monthly certification for payment for those costs. That determination of cost shall adjust the Contract Price on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Section 14.6.

When the District and Contractor agree with the determination made by the Engineer concerning the adjustments in the Contract Price and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

14.4 SURETY NOTIFICATION

It is the Contractor's responsibility to notify the Surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable bonds shall be adjusted accordingly. The Contractor will furnish proof of such adjustment to the District.

14.5 CHANGE OF CONTRACT PRICE

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to the Contractor for performing the Work. All duties, responsibilities, and obligations assigned to or undertaken by the Contractor shall be at the Contractor's expense without change in the Contract Price.

If the Contractor wishes to make a Claim for an increase in the Contract Price, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 12.1.

If the Contractor believes that additional cost is involved for reasons including but not limited to (1) a written interpretation by the Engineer, (2) an order by the District to stop the Work where the Contractor was not at fault, (3) a Field Order (4) failure of payment by the District, (5) termination of the Contract by the District, (6) District's suspension, or (7) other reasonable grounds, a Claim shall be filed in accordance with Section 14.6.

The Contract Price may only be changed by a Change Order, Construction Change Directive or Written Amendment. Any Claim for an adjustment in the Contract Price shall be based on written notice delivered by the party making the Claim to the other party and to the Engineer promptly (but in no event later than ten (10) days) after the start of the occurrence or event giving rise to the Claim and stating the general nature of the Claim. Notice of the amount of the Claim with supporting data shall be delivered within thirty (30) days after the start of such occurrence or event (unless the Engineer allows additional time for Claimant to submit additional or more accurate data in support of the Claim) and shall be accompanied by Claimant's written statement that the adjustment Claimed covers all known amounts to which the Claimant is entitled as a result of said occurrence or event. All Claims for adjustment in the Contract Price shall be initially reviewed by the Engineer in accordance with the paragraphs entitled "Claims" of these General Conditions. No Claim for an adjustment in Contract Price will be valid unless submitted in accordance with this paragraph.

The value of any Work covered by a Change Order, Construction Change Directive or of any Claim for an adjustment in the Contract Price shall be determined in one of the following ways:

- a. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved;
- b. By a mutually agreed lump sum; or
- c. The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the Work plus a fixed amount (Contractor's fee) to be agreed upon but not to exceed fifteen (15%) percent of the actual cost of such Work to cover

the cost of general overhead and profit.

Whenever the cost of any Work is to be determined pursuant to subparagraphs b. or c. above, the Contractor will submit in form prescribed by the Engineer an itemized cost breakdown together with supporting data.

The term Cost of the Work means the sum of all costs necessarily incurred and paid by the Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by the District, such costs shall be in amounts no higher than those prevailing at the locality of the Project.

The Contractor, in connection with any proposal he makes for a Contract modification, shall furnish a price breakdown, itemized as required by the District. Unless otherwise directed, the breakdown shall be in sufficient detail to permit an analysis of all materials, labor, equipment, subcontract, and overhead costs, as well as profit, and shall cover all Work involved in the modification, whether such Work was deleted, added or changed. Any amount claimed for subcontracts shall be supported by a similar price breakdown. In addition, if the proposal includes a time extension, a justification therefore, shall also be furnished. The proposal, together with the price breakdown and time extension justification, shall be furnished by the date specified by the District.

14.6 CLAIMS AND CLAIMS DISPUTES

Claims must be initiated by written notice to the other party with a copy to the Engineer. The responsibility to substantiate the Claim shall rest with the party making the Claim.

Claims shall be referred initially to the Engineer for analysis and a non-binding recommendation. The Engineer shall provide his analysis and non-binding recommendation to both parties within a reasonable amount of time, not to exceed thirty (30) days, unless otherwise agreed by the parties. Upon receipt of the Engineer's analysis and non-binding recommendation, the Contractor and the Executive Director shall meet and attempt in good faith to negotiate a mutually acceptable resolution of the Claim. If the parties successfully negotiate a mutually acceptable resolution, the terms shall be documented by a Change Order or Written Amendment, as appropriate, and signed by both parties.

If the parties fail to reach a mutually acceptable resolution of the Claim, the Claimant shall have the right to have the Claim reviewed by the Governing Board. The Claimant shall file a written request for Governing Board review within thirty (30) days of the termination of negotiations. The Governing Board shall review the Claim at the next available regularly scheduled Governing Board meeting. The decision of the Governing Board shall be final and binding on the parties.

Pending final resolution of a Claim, except as otherwise agreed in writing or as otherwise provided in the General Conditions, the Contractor shall proceed diligently with performance of the Contract and the District shall continue to make payments in accordance with the Contract Documents.

14.7 TIME EXTENSION

The Contract Time or milestones may only be changed by a Change Order, Construction Change Directive or Written Amendment. The Contractor's right to proceed shall not be terminated nor the Contractor charged with liquidated damages and associated District expenses if the delay in the completion of the Work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, acts of the public enemy, acts of the District, acts of another Contractor in performance of a contract with the District, fires, floods, epidemics, quarantine restrictions, strikes, embargoes, unusually severe weather, or delays of Subcontractors or suppliers arising from unforeseeable causes beyond the control and without fault or negligence of both the Contractor and such Subcontractor or suppliers.

Any request by the Contractor for an extension of the Contract Time shall be based on a written notice delivered by the Contractor to the Executive Director with a copy to the Engineer promptly (but in no event later than ten (10) days) after the start of the occurrence or event giving rise to the request. The notice shall state the number of calendar days being requested and the reason (or reasons) for the need for the additional

time. The Engineer shall promptly investigate the stated reasons for the time extension, and shall render a non-binding opinion as to whether such reasons cause an increase in the time required for, performance of any part of the Work under this Contract and shall make a non-binding recommendation for an adjustment to the Contract Time. Contractor and the Executive Director shall meet and discuss the Engineer's recommendation and shall attempt to negotiate a mutually acceptable adjustment. If the Contractor and the Executive Director reach agreement, the terms of the adjustment shall be documented by a Change Order. If the Executive Director finds that a change to the Contract Time is warranted but the Contractor does not agree with the proposed adjustment to the Contract Time, the Executive Director may issue a Construction Change Directive. If the Contractor disagrees with the Executive Director's findings regarding the non-existence of grounds for a time extension or the Executive Director's proposed adjustment of the Contract Time, if any, the Contractor may file a Claim in accordance with Section 14.6 of these General Conditions within 30 days of receipt of the Executive Director's determination.

No Claim for an extension of the Contract Time will be valid if not submitted in accordance with this paragraph.

ARTICLE 15 - TERMINATION AND SUSPENSION

15.1 TERMINATION FOR CAUSE

The District may terminate the Contract if the Contractor:

- a. Persistently or repeatedly refuses or fails to supply enough skilled Workers or proper materials;
- b. Fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- c. Disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction;
- d. Is adjudged bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency;
- e. Repeatedly or consistently fails to meet project schedules;
- f. Otherwise is guilty of substantial breach of a provision of the Contract.

When any of the above reasons exist, the District may, without prejudice to any other rights or remedies of the District and after giving the Contractor and the Contractor's Surety seven (7) days written notice, terminate employment of the Contractor and may, subject to any prior rights of the Surety:

- a. Take possession of the site and all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- b. Accept assignment of subcontracts; and
- c. Finish the Work by whatever reasonable method the District may deem expedient.

When the District terminates the Contract for one of the reasons stated in this paragraph, the Contractor shall not be entitled to receive further payment until the Work is finished. If the unpaid balance of the Contract Sum exceeds costs of finishing the Work as determined by the District, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the District. This obligation for payment shall survive termination of the Contract. Upon a final determination that the termination was improper, it will be deemed converted to a termination for convenience and the Contractor's remedy for a wrongful termination will be limited to recovery of profit for the completed Work and reasonable termination costs.

15.2 TERMINATION FOR CONVENIENCE

The performance of Work under this Contract may be terminated by the District in accordance with this clause in whole, or from time to time in part, whenever the Engineer shall determine that such termination is in the best interest of the District. Any such termination shall be affected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination become effective. After receipt of a Notice of Termination, and except as otherwise directed by the District, the Contractor shall:

- a. Stop Work under the Contract on the date and to the extent specified in the Notice of Termination;
- b. Place no further orders or subcontracts for materials, services, or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;
- c. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;
- d. Assign to the District, in the manner, at the times, and to the extent directed by the District, all of the right, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the District shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- e. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the District, to the extent required, which approval or ratification shall be final for all the purposes of this clause;
- f. Transfer title and deliver to the District, in the manner, at the times, and to the extent, if any, directed by the District: The fabricated or unfabricated parts, Work in process, completed Work, supplies, and other material produced as a part of, or acquired in connection with, the performance of the Work terminated by the Notice of Termination, and the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the District;
- g. Use best efforts to sell, in the manner, at the times, to the extent, and at the price directed or authorized by the District, any property of the types referred to in (f) above; provided , however, the Contractor shall not be required to extend credit to any purchaser, and may acquire any such property under the conditions prescribed by and at a price or prices approved by the District; and provided further, the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the District to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as the District may direct;
- h. Complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and;
- i. Take such action as may be necessary, or as the District may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the District has or may acquire an interest.

After receipt of a Notice of Termination, the Contractor shall submit to the District his termination Claim, in the form and with certification, prescribed by the District. The Contractor and the District may agree upon the whole or any part of the amount to be paid to the Contractor by reason of the total or partial termination of Work pursuant to this clause. This amount may include a reasonable allowance for profit on Work not performed, provided that such agreed amount, exclusive of settlement costs, shall not exceed the total Contract price as reduced by the amount of payments otherwise made and as reduced by the estimated cost of the Contractor's overhead and administrative expenses for Work not performed, and as further reduced by the Contract price of Work not terminated. The Contract shall be amended accordingly, and the Contractor

shall be paid the agreed amount in accordance with the Section entitled "Payment to Contractor."

15.3 SUSPENSION OF WORK

The District may, with or without cause, order the Contractor in writing to suspend, delay, or interrupt the Work, in whole or in part, for such period of time as the District may determine. An adjustment shall be made for increases in the cost of performance of the Contract, including profit on the increased cost of performance caused by suspension, delay, or interruption.

No adjustment shall be made to the extent:

- a. That performance is, was, or would have been so suspended, delayed, or interrupted by another cause for which the Contractor is responsible; or
- b. That an equitable adjustment is made or denied under another provision of this Contract.

Adjustments made in the cost of performance may have a mutually agreed, fixed, or percentage fee.

ARTICLE 16 – PAYMENT AND COMPLETION

16.1 INSPECTION AND ACCEPTANCE

All Work shall be subject to inspection and test by the District at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of the District and shall not relieve the Contractor of the responsibility of providing quality control measures to assure that the Work strictly complies with the Contract requirements. No inspection or test by the District shall be construed as constituting or implying acceptance. Inspection or test shall not relieve the Contractor of responsibility for damage to or loss of the material or Work in place prior to acceptance and shall not in any way affect the continuing rights of the District after acceptance of the completed Work.

The presence or absence of a District Observer does not relieve the Contractor from any contract requirement, nor is the inspector authorized to change any term or condition of the Specifications without the District's written authorization.

The Contractor shall maintain an adequate inspection system and perform such inspections as will ensure that the Work performed under the Contract conforms to Contract requirements. The Contractor shall maintain complete inspection records and make them available to the District (within fifteen [15] days upon request). All Work shall be conducted under the general direction of the Engineer and is subject to District inspection and test at all places and at all reasonable times before acceptance to ensure strict compliance with the terms of the Contract.

The Contractor shall promptly furnish, without additional charge, all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by the Engineer. The District may charge to the Contractor any additional cost of inspection or test when Work is not ready at the time specified by the Contractor for inspection or test, or when prior rejection makes reinspection or retest necessary. The District shall perform all inspections and tests in a manner that will not unnecessarily delay the Work. Special, full size, and performance tests shall be performed as described in the Contract.

The Contractor shall, without charge, replace any material or correct any workmanship found by the District not to conform to the Contract requirements, unless the District consents to accept such material or workmanship with an appropriate adjustment in Contract price. The Contractor shall promptly segregate and remove rejected material from the premises. If the Contractor does not promptly replace rejected material or correct rejected workmanship, the District:

- a. May, by Contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or

- b. May terminate the Contractor's right to proceed in accordance with the paragraph of this section entitled "Termination for Default."

The Contractor shall furnish promptly, without additional charge, all facilities, labor and material reasonable need for performing such safe and convenient inspections and tests as may be required by the District. All inspections and tests by the District shall be performed in such manner as not to unnecessarily delay the Work. The District reserves the right to charge to the Contractor any additional cost of inspection or test when material or Workmanship is not ready at the time specified by the Contractor for inspection or test, or when reinspection or retest is necessitated by Work not complying with the Contract and/or any applicable federal, state or municipal laws, codes and regulations in connection with the prosecution of the Work.

Should it be considered necessary or advisable by the District at any time before acceptance of the entire Work to make an examination of Work already completed, by removing or tearing out the same, the Contractor shall, on request, promptly furnish all necessary facilities, labor, and material. If such Work is found to be defective or not conforming in any material respect, due to the fault of the Contractor or his Subcontractors, he shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such Work is found to meet the requirements of the Contract, an equitable adjustment shall be made in the Contract price to compensate the Contractor for the additional services involved in such examination and reconstruction and, if completion of the Work has been delayed thereby, he shall, in addition, be granted a suitable extension of time.

Unless otherwise provided in this Contract, acceptance by the District shall be made as promptly as practicable after completion and inspection of all Work required by this Contract, or that portion of the Work, that the District determines can be accepted separately. Acceptance shall be final and conclusive, except as regards latent defects, fraud, or such gross mistakes as may amount to fraud or as regards the District's rights under any warranty or guarantee. The District shall evidence acceptance of the Work in writing by approved request for "Final Payment" and by issuance of the Certificate of Final Completion.

16.2 SCHEDULE OF VALUES

The accepted schedule of values will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to or provided by the Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

16.3 PAYMENT TO CONTRACTOR

At least ten (10) days before each progress payment is scheduled (but not more often than once a month), the Contractor will submit to the Engineer for review an Application for Payment filled out and signed by the Contractor covering the Work completed during the period covered by the Application for Payment and supported by such documentation as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing by both parties, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation, satisfactory to the District, as will establish the District's title to the material and equipment and protect the District's interest therein, including applicable insurance. The Engineer will, within fifteen (15) days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application for Payment to the District or return the Application for Payment to the Contractor indicating in writing reasons for refusing to recommend payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application for Payment. The District will, within fifteen (15) days of presentation of an approved Application for Payment, pay the Contractor a progress payment on the basis of the approved Application for Payment less the retainage. The retainage shall be an amount equal to 10 percent of said estimate until 50 percent of the Work has been completed. At 50 percent completion, further partial payments shall be made in full to the Contractor and no additional amounts may be retained unless the Engineer certifies that the Work is not proceeding satisfactorily but amounts previously retained shall not be paid to the Contractor. At 50 percent completion or any time thereafter when the progress of the Work is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 10 percent of the value of the Work completed. Upon

substantial completion of the Work, any amount retained may be paid to the Contractor. When the Work has been substantially completed except for Work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the District are valid reasons for noncompletion, the District may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the Work still to be completed or corrected.

16.4 CONTRACTOR'S WARRANTY OF TITLE

The Contractor warrants and guarantees that title to all Work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will pass to the District upon Contractor's receipt of the Payment, free and clear of all Liens; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor or by any other person performing the Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person.

16.5 APPLICATION FOR PAYMENT REVIEW

The Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by the Engineer to the District based on the Engineer's on-site observations of the executed Work as an experienced and qualified design professional and on the Engineer's review of the Application for Payment and the accompanying data and schedules, that, to the best of the Engineer's knowledge, information and belief, that the Work has progressed to the point indicated; the quality of the Work is generally in accordance with the Contractor Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent test called for in the Contract Documents and any qualifications stated in the recommendation); and that the Contractor is entitled to payment of the amount recommended. However, by recommending any such payment the Engineer will not thereby be deemed to have represented that exhaustive or continuous on-site observations to check the quality or the quantity of the Work, were made or that the means, methods, techniques, sequences, and procedures of construction were reviewed or that any examination to ascertain how or for what purpose the Contractor has used the moneys paid or to be paid to the Contractor on account of the Contract Price were made, or that title to any Work, materials, or equipment has passed to the District free and clear of any Liens. The Contractor shall make the following certification on each request for payment:

I certify that to the best of my knowledge and belief that all items and amounts herein are correct; that all Work has been performed and/or material supplied in conformance with the Contract Documents, and that the balance due is appropriate for payment.

The Engineer may refuse to recommend the whole or any part of any payment if, in the Engineer's opinion, it would be incorrect to make such representations to the District. The Engineer may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspection or tests, nullify any such payment previously recommended, to such extent as may be necessary in the Engineer's opinion to protect the District from loss because:

- a. The Work is defective, or completed Work has been damaged requiring correction or replacement,
- b. The Work for which payment is requested cannot be verified,
- c. Claims or Liens have been filed or there is reasonable evidence indicating the probable filing thereof,
- d. The Contract Price has been reduced because of Modification,
- e. The District has been required to correct defective Work or complete the Work.
- f. Of unsatisfactory prosecution of the Work, including failure to clean up.

- g. Of persistent failure to cooperate with other contractors on the Project and persistent failure to carry out the Work in accordance with the Contract Documents.
- h. Of any other violation of, or failure to comply with, the provisions of the Contract Documents.

Upon completion and acceptance of the Work, the Engineer will issue a Certificate of Final Completion attached to the final Application for Payment that the Work has been accepted by the Engineer under the conditions of the Contract Documents. The entire balance found to be due the Contractor, including the retained percentages, but except such sums as may be lawfully retained by the District, will be paid to the Contractor within thirty (30) days of completion and acceptance of the Work.

16.6 SUBSTANTIAL COMPLETION

When the Contractor considers the entire Work ready for its intended use the Contractor shall notify the District and the Engineer in writing the entire Work is substantially complete, except for items specifically listed by the Contractor as incomplete, and request the Engineer issue a Certificate of Substantial Completion. Within a reasonable time thereafter, the District, the Contractor, and the Engineer shall observe the Work to determine the status of completion. If the Engineer does not consider the Work substantially complete, the Engineer will notify the Contractor in writing giving the reasons therefore. If the Engineer considers the Work substantially complete, the Engineer will prepare and deliver to the District a tentative Certificate of Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. The District shall have seven (7) days after receipt of the tentative certificate during which to make written objection to the Engineer as to any provisions of the certificate or attached list. If, after considering such objections, the Engineer concludes that the Work is not substantially complete, the Engineer will within fourteen (14) days after submission of the tentative certificate to the District notify the Contractor in writing, stating the reasons therefore. If, after consideration of the District's objections, the Engineer considers the Work substantially complete, the Engineer will within said fourteen (14) days execute and deliver to the District and the Contractor a definitive Certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as the Engineer believes justified after consideration of any objections from the District. At the time of delivery of the tentative Certificate of Substantial Completion, the Engineer will deliver to the District and the Contractor a written recommendation as to division of responsibilities pending final payment between the District and the Contractor with respect to security, operation, safety, maintenance, heat, utilities, insurance, and warranties. Unless the District and the Contractor agree otherwise in writing and so inform the Engineer in writing prior to the Engineer's issuing the definitive Certificate of Substantial Completion, the Engineer's aforesaid recommendation will be binding on the District and the Contractor until final payment. The District shall have the right to exclude the Contractor from the Work after the date of Substantial Completion, but the District shall allow the Contractor reasonable access to complete or correct items on the tentative list.

16.7 FINAL APPLICATION FOR PAYMENT

After the Contractor has completed all remaining work and corrections as stated on the punch list to the satisfaction of the Engineer and delivered all maintenance and operating instruction, schedules, guarantees, bonds, certificates of inspection, as-built Project Drawings, marked-up record documents and other documents — all as required by the Contract Documents, and after the Engineer has indicated the Work is acceptable — the Contractor may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to the District) of all liens arising out of or filed in connection with the Work. In lieu thereof and as approved by the District, the Contractor may furnish receipts or releases in full; an affidavit of the Contractor that the releases and receipts include all labor, services, material and equipment for which the District or the District's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, the Contractor may furnish a bond or other collateral satisfactory to the District to indemnify the District against any lien. The Contractor shall not be required to provide any releases or waivers from claimants provided that the Payment Bond has been recorded and delivered in accordance with Section 5.1 and the Surety has provided the District with a written consent regarding the Project in accordance with Section 255.05(11),

GENERAL CONDITIONS

Florida Statutes and such written consent has not been revoked.

16.8 USE AND POSSESSION PRIOR TO COMPLETION

The District shall have the right to take possession of or use any completed or partially completed part of the Work. Such possession or use shall not be deemed an acceptance of any Work under the Contract. If such prior possession or use by the District delays the progress of the Work or causes additional expense to the Contractor, an equitable adjustment in the Contract price or the time of completion will be made, and the Contract shall be modified in writing accordingly.

16.9 OTHER CONTRACTS

The District may undertake or award other contracts for additional Work, and the Contractor shall fully cooperate with such other contractors and District employees and carefully coordinate his own Work to such additional Work as may be directed by the District. The Contractor shall not commit or permit any act that will interfere with the performance of Work by any other contractor or by District employees.

16.10 MATERIAL AND WORKMANSHIP

Unless otherwise specifically provided in this Contract, all equipment, material and articles incorporated in the Work covered by this Contract are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in this Contract, reference to any equipment, material, article or patented process, by trade name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and the Contractor may, at his option, use any equipment, material, article or process which, in the judgment of the District, is equal to that named. The Contractor shall furnish to the District, for his approval, the name of the manufacturer, the model number and other identifying data and information respecting the performance, capacity, nature, and rating of the machinery and mechanical and other equipment that the Contractor contemplates incorporating in the Work. The Contractor shall furnish the District, for approval, full information concerning the material or articles that he contemplates incorporating in the Work. When so directed, samples shall be submitted for approval at the Contractor's expense. Machinery, equipment, material, and articles installed or used without required approval shall be at the risk of subsequent rejection. All Work under this Contract shall be performed in a skillful and workmanlike manner. The District may, in writing, require the Contractor to remove from the Work any employee the District deems incompetent, careless, or otherwise objectionable.

16.11 WARRANTY

The Contractor warrants to the District that all materials and equipment furnished under this Contract will be new and that all Work will be of good quality free from faults and defects and is in conformance with the Contract. All Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the District, the Contractor shall furnish satisfactory evidence as to the kind and quality of the materials and equipment. Any Work, equipment or materials that, within one (1) year from the date of substantial completion as determined by the District, is not in conformance with the Contract or is otherwise found to be defective, must be corrected or replaced, at Contractor's expense.

16.12 WORK AND STORAGE AREAS

All operations of the Contractor, including storage of materials upon District premises, shall be confined to areas authorized or approved by the District. Temporary buildings, storage sheds, shops, offices, etc., may be erected by the Contractor only with the approval of the District and shall be built with labor and materials furnished by the Contractor without expense to the District. Such temporary buildings and utilities shall remain the property of the Contractor and shall be removed by him at his expense upon the completion of the Work. With the written consent of the District, such buildings and utilities may be abandoned and need not be removed.

The Contractor shall, under regulations prescribed by the District, use only established roadways or construct and use such temporary roadways as may be authorized by the District. Where materials are

transported in the prosecution of the Work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by a federal, state, or local law or regulations. When it is necessary to cross curbing or sidewalks, protection against damage shall be provided by the Contractor and any damaged roads, curbing or sidewalks shall be repaired by, or at the expense of the Contractor.

The Contractor shall not store materials, except those to be incorporated in the Work, on the Project site. Portions of completed Work and materials incorporated in the Work shall be deemed to have become the property of the District, but if any such materials or parts of the Work become lost, damaged, or destroyed by any means whatsoever, the Contractor shall satisfactorily repair and replace the same at his own cost. The Contractor shall be responsible for any materials of construction stored on the site, and shall replace, in kind, any such materials lost, damaged, or destroyed at his own expense.

The Contractor shall maintain, where and when needed, suitable and sufficient guard signs and barriers, and at night, suitable and sufficient lights for the prevention of accidents. Guard signs and lights shall comply with OSHA, FDOT, and Coast Guard regulations. Lights shall be shielded or directed to minimize unwanted light pollution.

The Contractor shall clear from within the limits of the District's Work area all objectionable debris necessary to conduct the Work operations. The Work area shall, at all times, be kept free from accumulation of waste material or rubbish, and prior to completion of the Work, all rubbish, tools, equipment and materials shall be removed from, on or about the site.

Upon completion of the Work specified herein and before acceptance and final payment shall be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish and temporary structures. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily. Any salvaged material not specified to be disposed of otherwise, shall become the property of the Contractor and shall be removed from the site.

16.13 TAX EXEMPTION

The District is exempted from payment of Florida State Sales and Use taxes and Federal Excise tax. The Contractor, however, shall not be exempted from paying Florida State Sales and Use taxes to the appropriate governmental agencies or for payment by the Contractor to supplier for taxes on materials used to fulfill its Contractual obligations with the District.

The Contractor shall be responsible and liable for the payment of all of its FICA/Social Security and other taxes resulting from this Contract.

16.14 RECORDS

The Contractor shall maintain records and the District shall have inspection and audit rights as follows:

- a. Maintenance of records: The Contractor shall maintain all financial and non-financial records and reports directly or indirectly related to the negotiation or performance of this Contract including supporting documentation for any service rates, expenses, research or reports. Such records shall be maintained and made available for inspection for a period of five (5) years from completing performance and receiving final payment under this Contract.
- b. Examination of records: The District or its designated agent shall have the right to examine in accordance with generally accepted governmental auditing standards all records directly or indirectly related to this Contract. Such examination may be made only within five (5) years from the date of final payment under this Contract and upon reasonable notice, time, and place.

Records that relate to any litigation, appeals, or settlements of Claims arising from performance under this Contract shall be made available until a final disposition has been made of such litigation, appeals, or Claims.

- c. Cost and pricing data: The Contractor, by executing this Contract, certifies to truth-in-negotiation, specifically that wage rates and other factual unit costs supporting the consideration are accurate, complete, and current at the time of Contracting. The Contractor agrees that the District may adjust the consideration for this Contract to exclude any significant sums by which the consideration was increased due to inaccurate, incomplete, or non-current wage rates and other actual unit costs. The District shall make any such adjustment within one (1) year following the termination of this Contract.

16.15 PUBLIC ACCESS

The Contractor shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should the Contractor assert any exemptions to the requirements of Chapter 119 F.S. and related statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon the Contractor.

16.16 NONDISCRIMINATION

The Contractor hereby assures that no person shall be excluded on the grounds of race, color, creed, national origin, disability, age or sex from participation in, denied the benefits of, or otherwise be subjected to discrimination in any activity under this Contract. The Contractor shall take all measures necessary to effectuate these assurances.

16.17 FORCE MAJEURE

Notwithstanding any provisions of this Contract to the contrary, the parties shall not be held liable if failure or delay in the performance of this Contract arises from fires, floods, strikes, embargoes, acts of the public enemy, unusually severe weather, outbreak of war, restraint of Government, riots, civil commotion, force majeure, act of God, or for any other cause of the same character which is unavoidable through the exercise of due care and beyond the control of the parties.

ARTICLE 17 – VALUE ENGINEERING

17.1 GENERAL

The Contractor is encouraged to develop, prepare, and submit Value Engineering Proposals (VEP's) voluntarily. The Contractor shall share in any Contract savings realized from accepted VEP's in accordance with the paragraph below.

17.2 VEP PREPARATION

As a minimum, the Contractor shall include in each VEP the information described in subparagraphs 1 through 8 below:

1. A description of the difference between the existing Contract requirement and that proposed, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, and the effect of the change on the end item's performance.
2. A list and analysis of the Contract requirements that must be changed if the VEP is accepted, including any suggested specification revisions.
3. A separate, detailed cost estimate for: 1) the affected portions of the existing contract requirement, and 2) the VEP. The cost reduction associated with the VEP shall take into account the Contractor's costs, including any amount attributable to subcontracts under the paragraph below.
4. A description and estimate of costs that District may incur in implementing the VEP, such as test and evaluation, operating, maintenance and support costs.

5. A prediction of any effects the proposed change would have on the operating costs of the District.
6. A statement of the time by which a Contract amendment accepting the VEP must be issued in order to achieve the maximum cost reduction, noting any effect on the Contract completion time.
7. Identification of any previous submissions of the VEP, including the dates submitted, the Contract numbers involved, and previous District actions.
8. Any design change to the plans and specifications must be prepared under the supervision of a Professional Engineer in the State of Florida at the Contractor's expense. Such changes shall adhere to Florida law and the Florida Board of Professional Engineer's rules for taking over or modifying another Engineer's work. The Contractor will submit signed and sealed drawings and calculations to the District's Engineer (and if applicable, the project's Engineer of Record) for approval. Drawings and calculations will be signed and sealed by a professional Florida Engineer.

17.3 SUBMISSION

The Contractor shall submit VEP's to the Engineer.

17.4 EXECUTION

The Engineer shall notify the Contractor of the status of the VEP within fourteen (14) calendar days after Engineer receives it. If additional time is required, the Engineer shall provide the reason for the delay and the expected date of the decision. The District will process VEP's expeditiously; however, it shall not be liable for any delay in acting upon a VEP.

If the VEP is not accepted, the Engineer shall notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VEP, in whole or in part, at any time before it is accepted by the District. The Engineer may require that the Contractor provide written notification before undertaking significant expenditures for VEP effort.

Any VEP may be accepted, in whole or in part, by the District's execution of an amendment to this Contract citing this clause: the District may accept the VEP, even though an agreement on price reduction has not been reached, by issuing the Contractor a Construction Change Directive to proceed with the change. Until a Construction Change Directive is issued, or a Contract amendment applies a VEP to this Contract, the Contractor shall perform in accordance with the existing Contract. The District's decision to accept or reject, all or part of any VEP, shall be final and not subject to the Disputes clause or otherwise subject to litigation.

17.5 SHARING

The Contractor's share of savings is determined by subtracting District's costs (i.e. test and evaluation, operating, maintenance and support costs, etc.) from Contract savings and multiplying the result by fifty percent (50%).

Payment of any share due the Contractor for use of a VEP on this Contract shall be authorized by an amendment to this Contract to accept the VEP and reduce the Contract price by the amount of the Contract savings. This amendment will also add the Contractors share of savings to the Contract Price.

The Contractor is encouraged to include an appropriate Value Engineering clause in any subcontract and to share any cost savings with its Subcontractors.

Substitution of materials and/or equipment in lieu of that specified shall not necessarily be considered a VEP. To be considered as a VEP, the substitution must involve cost savings other than a simple reduction in price of the equipment or materials.

ARTICLE 18 – RESPONSIBILITIES

18.1 DISTRICT'S RESPONSIBILITIES

Except as otherwise provided in these General Conditions, the District will issue all communications to the Contractor through the Engineer.

The District will furnish the data required of the District under the Contract Documents promptly and shall make payments to the Contractor promptly when they are due as provided in these General Conditions.

Unless otherwise indicated, the District's duties in respect of providing lands and easements are set forth elsewhere in these General Conditions.

In addition to the District's rights to request changes in the Work in accordance with the section entitled "CHANGES IN THE WORK" of the General Conditions, the District will be obligated to execute necessary Change Orders.

The District will not supervise, direct or have control or authority over, nor be responsible for, the Contractor's means, sequences or procedures of construction or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with Laws and Regulations applicable to the performance of the Work. The District will not be responsible for the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

18.2 ENGINEER'S RESPONSIBILITIES

a. District's Representative

The Engineer will be the District's representative during the construction period. The duties and responsibilities and the limitations of the authority of the Engineer as the District's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of the District and the Engineer.

b. Visits to the Site

The Engineer will make visits to the site on a regular basis at intervals appropriate to the various stages of construction as the Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and quality of the various aspects of the Contractor's executed Work. Based on information obtained during such visits and observations, the Engineer will endeavor for the benefit of the District to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Engineer's efforts will be directed toward providing the District a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and on-site observations, the Engineer will keep the District informed of the progress of the Work and will endeavor to guard the District against defects and deficiencies in the Work.

The Engineer's visits and on-site observations are subject to all the limitations on the Engineer's authority and responsibility set forth in these General Conditions, and particularly, but without limitation, during or as a result of the Engineer's on-site visits or observations of the Contractor's Work the Engineer will not supervise, direct, control or have authority over or be responsible for the Contractor's techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work.

c. Clarifications and Interpretations

The Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as the Engineer may determine necessary, which shall be consistent with the intent or reasonably inferable from the Contract Documents. Such written clarifications and interpretations will be binding on the District and the Contractor. If the District or the Contractor believes that a written clarification or interpretation

justifies an adjustment in the Contract Price or the Contract Time, the District or Contractor may make a written Claim therefore as provided in these General Conditions. The Engineer and the District shall not be held responsible for all ambiguities (latent and patent) found in the Contract Documents.

ARTICLE 19 - SUPPLEMENTARY CONDITIONS

19.1 CONSTRUCTION DRAWINGS AND SPECIFICATIONS DISTRIBUTION

The Contractor will be supplied with four (4) copies of the Project Drawings and Specifications. Additional copies can be obtained by the Contractor at reproduction cost. The Contractor shall have one (1) set of the Project Drawings and Specifications at the job site at all times.

19.2 "AS-BUILT" CONTRACT DRAWINGS

The Contractor shall maintain a separate set of full-size Contract Drawings, marked up in red, to indicate as-built conditions. These Drawings shall be maintained in a current condition at all times until completion of the Work and shall be available for review by the Engineer at all times. All variations from the Contract Drawings, for whatever reasons, including those occasioned by modifications, optional materials, and the required coordination between trades, shall be indicated. These variations shall be shown in the same general detail utilized in the Contract Drawings. Upon completion of the Work, the marked-up Drawings shall be furnished to the Engineer prior to acceptance of the Work. The Engineer reserves the right to withhold final payment until acceptable as-built Contract Drawings have been submitted.

19.3 RETAINAGE INVESTMENT

The retainage amount withheld in the Contractor's Application for Payments shall be invested by the District at the current rate provided by the State Board of Administration for the duration of the Project. If the Project is completed within the time limits specified and at the Contract Price specified, subject to any authorized modification thereto, the interest earned on the retainage shall be paid to the Contractor. Any expenses charged by the financial institution for the retainage investment account will be deducted from the interest earned on the account. Payment of the interest to the Contractor shall be made with the final payment, after the Engineer certifies the Work, including incomplete minor items remaining after substantial completion, has been completed within the time specified and within the current Contract Price. If the Contractor does not satisfy the time and/or price conditions, the District will retain the interest earned on retainage.

19.4 PERMITS

The District will supply environmental license agreements and permits required by the Florida Department of Environmental Protection and the U. S. Army Corps of Engineers (**APPENDIX B**). The Contractor is responsible for all other permits required during construction.

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SECTION 00 73 19

SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This specification covers the requirements for safety and occupational health requirements for the protection of the Contractor, Engineer personnel, property and other resources.

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 National Standards Institute (ANSI)
ANSI A10.32 Personal Fall Protection for Use in Construction and Demolition Operations
- B. American Society of Safety Professionals (ASSE)
ANSI/ASSE Z359.1 Safety Requirements for Personal Fall Arrest Systems and Subsystems and Components
ASSE A10.34 Protection of the Public on or Adjacent to Construction Sites
- C. American Society of Mechanical Engineers (ASME)
ASME B30.22 Articulating Boom Cranes
ASME B30.3 Tower Cranes: Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings
ASME B30.5 Mobile and Locomotive Cranes
ASME B30.8 Floating Cranes and Floating Derricks
- D. National Fire Protection Association (NFPA)
NFPA 10HB10 Portable Fire Extinguishers
NFPA 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 70 National Electrical Code
NFPA 70E Standard for Electrical Safety in the Workplace
- E. U.S. Army Corps of Engineers (USACE)
EM 385-1-1 Safety and Health Requirements
- F. U.S. National Archives and Records Administration (NARA)
29 CFR 1910.146 Permit-required Confined Spaces
29 CFR 1926 Safety and Health Regulations for Construction
29 CFR 1926.500 Fall Protection

1.3 SUBMITTALS

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

- A. Accident Prevention Plan (APP)
 - 1. Submit the APP to the Engineer for information only at or before the scheduled pre-construction meeting.
- B. Activity Hazard Analysis (AHA)
 - 1. Submit the AHA for review at least fifteen (15) calendar days prior to the start of each phase.
- C. Accident Reports
 - 1. Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."
- D. Drug Free Work Place Compliance
 - 1. Submit the Drug Free Work Place Compliance documentation form (SECTION 00 73 19A DRUG-FREE WORKPLACE FORM) to the Engineer at or before the scheduled pre-construction meeting.
- E. Personnel Qualification Requirements
 - 1. Submit personnel qualifications per requirements for the Site Safety and Health Officer (SSHO) and Crane Operators (Paragraph 1.4.A) at or before the scheduled pre-construction meeting.

1.4 SITE QUALIFICATIONS, DUTIES AND MEETINGS

- A. Personnel Qualifications
 - 1. Site Safety and Health Officer (SSHO)
 - a. Site Safety and Health Officer (SSHO) shall be provided at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The Contractor Quality Control (QC) person can be the SSHO on this project. The SSHO shall meet the following requirements:
 - 1) A minimum of 5 years safety work on similar projects.
 - 2) 30-hour OSHA construction safety class or equivalent within the last 5 years.
 - 3) An average of at least 24 hours of formal safety training each year for the past 5 years.
 - 4) Competent person training as needed.
 - 2. Crane Operators
 - a. Crane operators shall meet the requirements in USACE EM 385-1-1, Section 16. In addition, for mobile cranes with Original Equipment Manufacturer (OEM) rated capacities of 50,000 pounds or greater, crane operators shall be designated as

qualified by a source that qualifies crane operators (i.e., union, a government agency, or an organization that tests and qualifies crane operators). Proof of current qualification shall be provided.

3. Site Safety and Health Officer (SSHO)/Superintendent Personnel Duties

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Safety inspection logs shall be attached to the Contractors' daily quality control report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Production reports for prime and sub-contractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.
- e. Implement and enforce accepted APPS and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. A list of unresolved safety and health deficiencies shall be posted on the safety bulletin board.
- g. Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

B. Meetings

1. Preconstruction Conference

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).
- b. The Contractor shall discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Engineer's representative as to which phases will require an analysis. In addition, a schedule for the preparation, submittal, review, and acceptance of AHAs shall be established to preclude project delays.
- c. Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Work shall not begin until there is an accepted APP.
- d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

2. Safety Meetings

- a. Safety meetings shall be conducted and documented as required by EM 385-1-1. Minutes showing contract title, signatures of attendees and a list of topics discussed shall be attached to the Contractor's daily quality control report.

1.5 ACCIDENT PREVENTION PLAN (APP)

- A. The Contractor shall use a qualified person to prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of USACE EM 385-1-1 and as supplemented herein. Cover all paragraph and subparagraph elements in USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plans". Specific requirements for some of the APP elements are described below. The APP shall be job-specific and shall address any unusual or unique aspects of the project or activity for which it is written. The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Engineer considers the Prime Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated CSP and/or CIH.
- B. Submit the APP to the Engineer at or before the preconstruction conference for information.
- C. Once received by the Engineer, the APP and attachments will be part of the Contract. Disregarding the provisions of this Contract or the received APP will be cause for stopping of work, at the discretion of the Engineer, until the matter has been rectified.
- D. Once work begins, changes to the received APP shall be made with the knowledge and concurrence of the Engineer, project superintendent, SSHO and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the Engineer within 24 hours of discovery. Eliminate/remove the hazard. In the interim, all necessary action shall be taken to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by ASSE A10.34) and the environment.
- E. Copies of the accepted plan will be maintained at the resident engineer's office and at the job site.
- F. The APP shall be continuously reviewed and amended, as necessary, throughout the life of the contract. Unusual or high-hazard activities not identified in the original APP shall be incorporated in the plan as they are discovered.

1.6 ACTIVITY HAZARD ANALYSIS (AHA)

- A. The Activity Hazard Analysis (AHA) format shall be in accordance with USACE EM 385-1-1. Submit the AHA for review at least fifteen (15) calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

- B. The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.
- C. The activity hazard analyses shall be developed using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the Engineer.

1.7 DISPLAY OF SAFETY INFORMATION

- A. Within 1 calendar day after commencement of work, erect a safety bulletin board at the job site. The safety bulletin board shall include information and be maintained as required by EM 385-1-1, Section 01.A.07.

1.8 SITE SAFETY REFERENCE MATERIALS

- A. Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

1.9 EMERGENCY MEDICAL TREATMENT

- A. Contractors will arrange for their own emergency medical treatment. Engineer has no responsibility to provide emergency medical treatment.

1.10 REPORTS

- A. Accident Reports
 - 1. For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the USACE Accident Investigation Report Form 3394 and provide the report to the Engineer within 5 calendar day(s) of the accident. The Engineer will provide copies of any required or special forms.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 CONSTRUCTION AND/OR OTHER WORK

- A. The Contractor shall comply with USACE EM 385-1-1, NFPA 241, the APP, the AHA, Federal and/or State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard shall prevail.

3.2 PRE-OUTAGE COORDINATION MEETING

- A. Contractors are required to apply for utility outages at least fifteen (15) days in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, the Contractor shall attend a pre-outage coordination meeting with the Engineer and the Public Utilities representative to review the scope of work

and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

3.3 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

- A. The Contractor shall establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. The program shall include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.
- B. Training
 - 1. The Contractor shall institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, the Contractor shall provide training for each employee who might be exposed to fall hazards. A competent person for fall protection shall provide the training. Training requirements shall be in accordance with USACE EM 385-1-1, Section 21.C.
- C. Fall Protection Equipment and Systems
 - 1. The Contractor shall enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Employees shall be protected from fall hazards as specified in EM 385-1-1, Section 21. In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with USACE EM 385-1-1, paragraphs 5.J. and 5.K. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with all applicable requirements.
- D. Personal Fall Arrest Equipment
 - 1. Personal fall arrest equipment, systems, subsystems, and components shall meet ANSI A10.32 and ASSE Z359.1. Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 6 feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken into consideration when attaching a person to a fall arrest system.
- E. Existing Anchorage
 - 1. Existing anchorages, to be used for attachment of personal fall arrest equipment, shall be certified (or re-certified) by a qualified person for fall protection in accordance with ASSE Z359.1. Existing horizontal lifeline anchorages shall be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

F. Horizontal Lifelines

1. Horizontal lifelines shall be designed, installed, certified and used under the supervision of a qualified person for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.502(d)(15)).

G. Guardrails and Safety Nets

1. Guardrails and safety nets shall be designed, installed and used in accordance with EM 385-1-1, 29 CFR 1926.502(b) and 29 CFR 1926.502(c).

H. Rescue and Evacuation Procedures

1. When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. A Rescue and Evacuation Plan shall be prepared by the contractor and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. The Rescue and Evacuation Plan shall be included in the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

3.4 EQUIPMENT

A. Material Handling Equipment

1. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
2. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.
3. Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

B. Weight Handling Equipment

1. Cranes and derricks shall be equipped as specified in EM 385-1-1, Section 16.
2. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with the manufacturer's recommended procedures.
3. The Contractor shall comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.
4. Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.
5. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 Section 11 and ASME B30.5 or ASME B30.22 as applicable.

6. Crane suspended personnel work platforms (baskets) shall not be used unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Personnel shall not be lifted with a line hoist or friction crane.
7. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.
8. All employees shall be kept clear of loads about to be lifted and of suspended loads.
9. The Contractor shall use cribbing when performing lifts on outriggers.
10. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
11. A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.
12. Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by Engineer personnel.
13. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Engineer personnel.
14. Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

3.5 ELECTRICAL

A. Conduct of Electrical Work

1. Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Engineer and Station Utilities for identification. The Engineer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. In addition, provide electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA.

B. Portable Extension Cords

1. Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered and protected from damage. All damaged extension cords shall be immediately removed from service. Portable extension cords shall meet the requirements of NFPA 70.

3.6 WORK IN CONFINED SPACES

- A. The Contractor shall comply with the requirements in Section 34.A of USACE EM 385-1-1 and OSHA 29 CFR 1910.146 Any potential for a hazard in the confined space requires a permit system to be used.
1. Entry procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 34.A.05 of USACE EM 385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.
 2. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

3.7 DRUG-FREE WORK PLACE

- A. The Contractor shall submit required certification (see SECTION 00 73 19A DRUG-FREE WORKPLACE FORM) that they have or will establish a drug free workplace in accordance with Florida Statute 287.087.

-End of Section-

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SECTION 00 73 19A

DRUG-FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies

That _____ does:

(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation programs, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, plea of guilty or nolo contendere to, any violation of Chapter 1893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program, if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Contractor's Signature

Date

--End of Section--

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CHANGE ORDER

Agreement Date: _____

Owner:

The following changes are hereby made to the Contract Documents:

Justification:

Change in Contract Price:

Original Contract Price: \$ _____

Current Contract Price adjusted by previous Change Order \$ _____

The Contract Price due to this Change Order will be
(Increased) (Decreased) by: \$ _____

The new Contract Price including this Change Order will be: \$ _____

Change in Contract Time:

Original Completion Date: _____

Current completion date adjusted by previous Change Order: _____

The Contract time due to this Change Order will be (Increased
or Decreased) by the indicated number of calendar days: _____

The new Contract Time including this Change Order will be: _____

Recommended By: _____

ENGINEER

Authorized Signature: _____

Date: _____

Title: _____

Ordered By: _____

DISTRICT EXECUTIVE DIRECTOR

Authorized Signature: _____

Date: _____

Title: _____

Approved By: _____

DISTRICT BOARD CHAIR

Authorized Signature: _____

Date: _____

Title: _____

Accepted By: _____

CONTRACTOR

Authorized Signature: _____

Date: _____

Title: _____

--End of Section--

SECTION 00 94 63
CHANGE ORDER

Change Order No. _____

Date: _____

Agreement Date: _____

Project Name: Dredged Material Management Area SJ-1 Shoreline Stabilization

Owner: Florida Inland Navigation District

Contractor: _____

The following changes are hereby made to the Contract Documents:

Justification:

**SECTION 00 94 63
CHANGE ORDER**

Change in Contract Price:

Original Contract Price:	\$ _____ -
Current Contract Price adjusted by previous Change Order	\$ _____ -
The Contract Price due to this Change Order will be Increased by:	\$ _____ -
The new Contract Price including this Change Order will be:	\$ _____ -

Change in Contract Time:

Original Completion Date:	_____
Current completion date adjusted by previous Change Order:	_____
The Contract time due to this Change Order will be (Increased or Decreased) by the indicated number of calendar days:	_____
The new Completion Date including this Change Order will be:	_____

Recommended By:

Authorized Signature: _____	Date: _____
Title: _____	

Ordered By:

Authorized Signature: _____	Date: _____
Title: _____	

Accepted By:

Authorized Signature: _____	Date: _____
Title: _____	

--End of Section--

SECTION 01 11 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Description

1. This project entails the construction of a rock revetment on the east side of the Dredge Material Management Area property SJ-1, south of the existing rock revetment and north of the wetlands.
2. The major categories of work include, but are not limited to the following:
 - a. Survey for gopher tortoise
 - b. Clearing and grubbing the work areas
 - c. Earthwork (cut, fill, and grading)
 - d. Soil compaction
 - e. Install base and armor stone
 - f. Install and establish sod
3. The Florida Inland Navigation District and their Engineering representative, Taylor Engineering, Inc., will administer the entirety of this project.

B. Location

1. The project area locates in St. Johns County, lies on the western bank of the Matanzas River, and approximately 1.5 miles northwest of Matanzas Inlet.

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 Schedule 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 is also included in the compensation provided in SECTION 00 41 63A BID SCHEDULE.
- 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 Schedule, to reflect the total price for completing the project in its entirety, as depicted on the Project Drawings and specified herein. Unless there is a specific line item for administrative costs, such as Project Management, Quality Control and Safety, 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 project drawings, specifications, and bid schedule.

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 the Preconstruction Meeting:

- A. 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. 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.
- B. Construction Schedule:
 - 1. Prepare draft Construction Schedule for Preconstruction Meeting. Within 10 days after effective date of contract prepare and submit to the Engineer for approval a construction schedule in the form of a progress chart. The Contractor shall indicate on the progress chart, the bid items contained in the contract, showing the amount of the item and its relative weighted percentage of the total contract. The Contractor may separate features of work under each item to show salient work elements such as procurement of materials, plants, and equipment, and supplemental work elements such as excavation, reinforcing steel, backfill, etc. These salient features shall total to the cost and weighted

percentages shown for the major bid item. When quantity variations impact the weighted percentages of a separate item by five percent or more, the Contractor shall revise the contract progress charts to accurately reflect the impact of such variations.

2. Revised Construction Schedule:

- a. 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.

1.3 MEASUREMENT

- A. Measurement for Payment for this Project is based upon completion of the Work in accordance with Project Drawings and Specifications for each of the items. Field measurements will determine the percent complete of work components when listed on the approved Schedule of Values. Measurements will be made using linear, area, volumetric units, or by units quantity counts, as listed on the SECTION 00 41 63A BID SCHEDULE for unit quantity items and at the Engineer's sole discretion for lump sum items.
- 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.
- 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.
- F. Measurement by Area: Measured by square dimension using mean length and width or radius, in feet and hundredths of a foot.
- G. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness, in feet and hundredths of a foot.
- H. 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.

1.4 UNIT PRICE CONTRACT

- A. Unless indicated on the Contract Documents, all work indicated on the Project 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 Schedule 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 Project Drawings and specified herein. The basis of payment for an item in the amount shown in the Bid Schedule 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 or Work Change Directive. 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.

1.5 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 Schedule Item. The Work shall include all miscellaneous and ancillary items necessary to construct a complete and functional Project.

1.6 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 in the Schedule of Bid Items. The Contractor shall submit a Schedule of Values and shall be consistent with SECTION 01 33 00 SUBMITTAL PROCEDURES.

1.7 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. 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 Project Drawings and Specifications.

C. Progress Payments

1. One progress payment will be made upon completion of mobilization to the site.
2. Subsequent progress payments will be made upon receipt and acceptance of surveys used for progress payments. Surveys will be evaluated based on the volumetric change. The Contractor is required to have all surveys performed by a Florida licensed professional surveyor.
3. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by a unit price of the item. Final payment for unit price Work will be accomplished by reconciliation Change Orders to adjust quantities at the end of the Project.
4. No payment, partial or complete, will be made for defective or rejected Work.
5. 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 as part of the Proposal and the Contract, under the several scheduled items of the Project.

1.8 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 Proposal 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 Proposal 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; 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 Project Drawings.
- D. Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated there with shall be included in the applicable unit prices or lump-sum prices contained in the Bid Schedule.
- 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. Attached is a description of the Work listed in the Schedule of Bid Items. This description is not intended to be a complete and all-inclusive record of the required work items. Work includes but is not limited to the following:
- H. Bid Item Description: Lump Sum Items

- a. **Insurance** – Payment will be as a lump sum (LS) for costs associated with or incidental to acquiring and maintaining the appropriate insurance requirements for this project. 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.
 - b. **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.
 - c. **Environmental Protection and Erosion Control** – Payment 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 and erosion control. Forty percent (40%) of the lump sum payment will be payable to the Contractor upon completion of the erosion control measures at the work site with the remaining sixty percent (60%) payable in equal sums for each remaining payment application.
- Construction, Payment, and As-Built Surveys** – Payment will be as a lump sum (LS) for full compensation for furnishing and installing all materials, labor, and equipment required for completing all construction layout surveys, payment quantity surveys, and as-built record surveys. The lump sum payment will be payable in equal sums for each payment application.
- d. **Gopher Tortoise Surveys** – Payment will be made as a Lump Sum (LS) for costs associated with all surveys needed for the entirety of the Work to monitor gopher tortoises within the specified limits presented in the Construction Drawings.
 - e. **Clearing and Grubbing** – Payment will be made as a Lump Sum (LS) for costs associated with all clearing and grubbing of the area within the specified clearing limits. Payment will be according to the estimated area complete as approved by the Engineer.

2. Unit Price Items

- a. **Earthwork (Cut, Fill, Grading, & Compaction)** – Payment will be made as a unit price (Cubic Yards) for all costs associated with preparing the base of the rock revetment for construction within the final grades shown on the Project Drawings. Payment shall include cut and fill, grading and compaction.

The Contractor is advised that this bid quantity reflects the Engineer's best estimate of the proposed on-site fill volume compacted to the density required in the Specifications. The Contractor is responsible for determining the volume of borrow material required to obtain this compacted quantity.
- b. **Installation of Base and Armor Stone** – Payment will be made as a unit price (Tons) for the costs associated with the base and armor stone. Payment will be full compensation for furnishing all materials, labor, and

equipment required to complete installation of the Work. The lump sum payment will be payable as the estimated percentage of completion requested by the Contractor and field verified by the Engineer. The weight of the stone required is based on the following stone characteristics:

	Density (pcf)	Weight, p = 20% (tons)
Armor stone	155	4,880
Base stone	135	1,780

pcf = pounds per cubic foot p = porosity

- c. **Installation and Establish Sod** – Payment will be made as a unit price (Square Feet) for the costs associated with sod. Payment will be full compensation for all labor, material, and other work required to establish the sod. The District will pay seventy percent (70%) of the total compensation due for sod establishment upon approval of the completed work after the preliminary inspection. The remaining thirty percent (30%) will be paid once the sod is accepted at the conclusion of the Sod Establishment Period.

1.9 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 or of the Owner, 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 Owner. The determination for the adjustment will be done by 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 Owner. The determination for the adjustment will be done by the Engineer, whose determination will be final.
- C. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- D. The authority of the Engineer to assess the defect and identify payment adjustment is final.
- E. 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 quantity measurements to support all requested earnings. Ensure that sum of 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.

-- END OF SECTION --

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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 offsite fabricators. The Contractor shall use computers, e-mail, 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 quote.
- 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 clean up 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, to minimize disruption of Owner's activities.
- D. Work by Others
 - 1. During construction period, others may perform construction or maintenance work within construction limits. The Contractor shall coordinate work by others with Engineer and the District and schedule activities to avoid problems at no additional cost.

1.4 PROJECT MEETINGS

- A. The Engineer and the District require the following types of project meetings, all of which are described below:
1. Preconstruction Meeting
 2. Coordination Meeting
 3. 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 General Conditions
 - d. Contract Supplementary Conditions
 - e. Contract Administration
 - f. Progress Payment
 - g. Correspondence Procedures
 - h. Project Schedule
 - i. Submittal Register
 - j. Labor Requirements
 - k. General Site Safety
 2. Preconstruction Meeting Attendees
 - a. Permit Authority Representatives
 - b. District Engineer
 - c. District Representative
 - d. Contractor Representatives
 3. Preconstruction Meeting Minutes
 - a. The Contractor will take detailed minutes of Preconstruction Meeting and may use an audio or video tape. Copies of typed minutes will be provided to the Engineer to review within three working days after the meeting. Audio or video tapes if used will be made available for the Engineer to review.
 4. Preconstruction Meeting Submittals
 - a. The timing of submission of submittals and completion of the Preconstruction Meeting is intended to allow the Contractor, Engineer, and the District adequate time to prepare for commencement of work. However, should the Contractor fail to submit required items within the times stated, the District 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 prior to the Preconstruction Meeting, the Contractor will not be permitted to commence work until these 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 Engineer/the

District. Submittals required by this Section are described in paragraph SUBMITTALS above.

5. Other Division 01 Submittals to bring in draft form to Preconstruction Meeting:
 - a. Accident Prevention Plan – See SECTION 00 73 19 SAFETY AND OCCUPATION HEALTH REQUIREMENTS
 - b. Drug Free Work Place Compliance – See SECTION 00 73 19 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS
 - c. Personnel Qualifications – See SECTION 00 73 19 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS
 - d. Construction Schedule - See SECTION 01 29 00 MEASUREMENT AND PAYMENT
 - e. List of Subcontractors - See SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION
 - f. Signature of Authority – See SECTION 01 31 00 PROJECT MANAGEMENT AND COORDINATION
 - g. Draft Submittal Register - See SECTION 01 33 00 SUBMITTAL PROCEDURES
 - h. Environmental Protection Plan – See SECTION 01 35 43 ENVIRONMENTAL PROTECTION
 - i. Contractor Quality Control Plan - See SECTION 01 40 00 CONTRACTOR QUALITY CONTROL
6. Divisions 02 through 35 Submittals
 - a. In addition to the above, 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.
7. 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, Accident Prevention Plan – SECTION 00 73 19 SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS, Environmental Protection Plan - SECTION 01 35 43 ENVIRONMENTAL PROTECTION, and Quality Control Plan – SECTION 01 40 00 CONTRACTOR'S QUALITY CONTROL 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 SECTION 00 72 00 GENERAL CONDITIONS. While the Contractor is working under a conditionally accepted interim plan, funds may be retained from progress payments in accordance with the SECTION 00 72 00 GENERAL CONDITIONS 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 SECTION 00 72 00 GENERAL CONDITIONS and the Contractor will not be entitled to an equitable adjustment of either performance period or contract price.

C. Coordination Meeting

1. The Coordination Meeting is scheduled, convened, and conducted by Engineer after a Preconstruction Meeting and prior to starting physical construction. Draft plans submitted after NOA (i.e., Construction Schedule, Submittal Register, Environmental Protection Plan, and Quality Control Plan) will have been reviewed. Coordination Meeting is primarily for on-site Contractor Quality Control staff, including subcontractor and supplier employees performing quality control, to meet and discuss the project in detail. Purposes of Coordination Meeting are:
 - a. Achieve mutual understanding with Contractor of required Quality Control
 - b. Jointly review submitted draft plans; resolve issues of concern
 - c. Discuss project plans and specifications, schedule, documentation
 - d. Establish a good working relationship between the Contractor's Quality Control Staff and Quality Assurance Representatives

D. Construction Progress Meetings

1. Construction progress meetings will occur on-site in the job-trailer provided by the Contractor or another near-site location agreed to by all parties. 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"), a minimum of one construction progress meeting per week is typical of a project of this scope. The Engineer will notify the Contractor when and if construction progress meetings will convene weekly. 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 and may use an audio or video tape. Copies of typed minutes will be provided to the Engineer to review within three (3) working days of each meeting. Audio or video tapes if used will be made available for the Engineer to review
4. Progress Meeting Participants typically include:
 - a. Engineer
 - b. Owner 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 recording 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)

B. PROGRESS MEETING AGENDA

Modify agenda as needed for on-going work.

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
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

-- End of Section --

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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 Project 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. Included are 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 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, before cross-sections and after cross-sections.
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 on Equipment and Materials where a written certificate or guarantee from the manufacturer or Supplier is called for in the Specifications.
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. Draft Submittal Register

1. Submit Draft Submittal Register, coordinated with Construction Schedule, for Engineer Approval at or before the scheduled pre-construction meeting.

B. Revised Submittal Register

1. Submit Revised Submittal Register with each monthly payment application to the Engineer.

1.4 PROCEDURES

- A. Before commencing work, the Contractor will review the Submittal Register and note and 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 test of 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 via email at the email address listed in Instructions to Bidders.
- C. For submittal files too large to send via email, the Engineer will provide the Contractor with an ftp site to upload the electronic submittal to.
- 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 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; and 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. 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 (AP) – No further action is required by the Contractor for this submittal; Contractor shall pursue with the Work described by this submittal.
- F. For submittals returned Rejected (RE) – 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 (RR) – 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 Corrected (AC) – 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 (SNR), File for Record, no further action is required by the Contractor for this submittal.
- J. For submittals returned Submittal Received, for Information Only (SRI) – File for Record, no further action is required by the Contractor for this submittal.
- K. For submittals returned Submit Specified Item (SSI) – 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 Project Drawings shall be so scheduled. Adequate time, a minimum of ten (10) calendar days exclusive of mailing time, shall be allowed on the Submittal Register for review and approval. No delays, damages, or time extensions will be allowed for time lost in late submittals.

1.10 DEVIATIONS

- A. The Contractor shall set forth in writing the reason for any deviations 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. **APPENDIX E** provides a Draft Submittal Register 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 construction-testing submittals that have failed tests criteria or are otherwise unacceptable.

-- END OF SECTION --

SECTION 01 33 00A
SUBMITTAL REGISTER

PROJECT NAME: Dredged Management Material Area SJ-1 Shoreline Improvements; St. Johns County, FL							CONTRACTOR:					
			TYPE			CONTRACTOR ACTION/SCHEDULE DATES			ENGINEER ACTION		REMARKS	
T R A N S M I T T A L N O	SPEC. SECTION NO.	DESCRIPTION OF ITEMS SUBMITTED	P R E C S O U N B S M T I R T U C A T 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 V N E E D E D B Y	M A T L N E E D E D B Y	DATE	A P P R O V A L C O D E	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
SJ-1 SHORELINE IMPROVEMENTS												
SECTION 01 31 00 PROJECT MANAGEMENT												
01	01 31 00	List of Subcontractors	X		X							
02	01 31 00	Signiture of Authority	X		X							
03	00 73 19	Accident Prevention Plan (APP)	X		X							
04	00 73 19	Accident Reports			X							
SECTION 01 33 00 SUBMITTAL PROCEDURES												
05	01 33 00	Final Submittal Register	X	X								
SECTION 01 35 43 ENVIRONMENTAL PROTECTION												
06	01 35 43	Gopher Tortoise Survey	X		X							
07	01 35 43	Confirmation of Gopher Tortoise Relocation	X		X							
08	01 35 43	Environmental Protection Plan	X	X								
09	01 35 43	Erosion and Sediment Control Plan	X	X								
10	01 35 43	Fuel Storage Tank and Spill Containment	X	X								
11	01 35 43	Copy of Project Permits and Inspection Logs	X		X							
SECTION 01 45 00 CONTRACTOR QUALITY CONTROL												
12	01 45 00	Quality Control Plan	X	X								
13	01 45 00	Quality Control Logs			X							
14	01 45 00	Registered Surveyor Qualifications	X	X								
SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS												
15	01 50 00	Mobilization/Demobilization Plan	X	X								
16	01 50 00	Hurricane and Severe Storm Plan	X	X								
17	01 50 00	Temporary Facility Shop Drawings	X	X								
SECTION 01 77 00 PROJECT CLOSE OUT												
18	01 77 00	Record Drawings		X								
19	01 77 00	As-Built Drawings		X								
20	01 77 00	Request for Inspection			X							
SECTION 31 10 00 SITE CLEARING AND GRUBBING												
21	31 10 00	Vegatative and Rubbish Disposal Verification	X	X								
SECTION 33 05 61 DRAINAGE STRUCTURES												
22	33 05 61	Inlet Shop Drawings	X	X								
23	33 05 61	HDPE Pipe Product Information	X	X								
SECTION 35 20 26 SEA OAT PLANTING												
24	35 20 26	Watering Plan	X	X								
25	35 20 26	Planting Material Certificates	X	X								

SECTION 01 33 00A
SUBMITTAL REGISTER

PROJECT NAME: Dredged Management Material Area SJ-1 Shoreline Improvements; St. Johns County, FL							CONTRACTOR:						
			TYPE			CONTRACTOR ACTION/SCHEDULE DATES				ENGINEER ACTION		REMARKS	
T R A N S M I T T A L N O	SPEC. SECTION NO.	DESCRIPTION OF ITEMS SUBMITTED	P R E C O U N S M T I R T U T C A T L I O N	E N G I N 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 N E E D E D B Y	M A T L N E E D E D B Y	DATE	A P P R O V A L C O D E	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	
SECTION 35 42 37 BEDDING AND ARMOR STONE													
26	35 31 17	Armor Stone Product Data		X									
27	35 31 17	Bedding Stone Product Data	X	X									
28	35 31 17	Stone Test Results	X	X									
29	35 31 17	Stone Samples											
30	35 31 17	Stone Inspection Notice			X								
31	35 31 17	Geotextile Fabric Product Data	X	X									

SECTION 01 35 43

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.01 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. It is the Contractor's responsibility to obtain all relevant Federal, State, and local permits 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.

1.02 SUBMITTALS

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

- A. Environmental Protection Plan
 - 1. 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:
 - a. 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.

- b. 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 accident, natural causes, or failure to follow the procedure set out in accordance with the environmental protection plan.
- c. Methods for protection of Endangered Species (if applicable).
- d. Methods for protecting during construction activities.
- e. 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 to be taken to meet Federal, State, and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.
- f. A statement identifying the Contractor's personnel who shall be responsible for implementation of the Environmental Protection Plan.
- g. A Certification Letter must be signed acknowledging the Contractor has a copy of all environmental permits applicable to the project and understand the conditions in the permits.

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 proper 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 to the Engineer throughout the Work.

D. Fuel Storage Tank and Spill Containment

- 1. The Contractor shall submit information on the storage tank used.

1.03 SUBCONTRACTORS

- A. Assurance of compliance with this section by subcontractors will be the responsibility of the Contractor.

1.04 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 insure 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 40 00 Contractor Quality Control.

1.05 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

2.01 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.

2.02 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.

2.03 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.

2.04 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

3.01 PROTECTION OF ENVIRONMENTAL RESOURCES

A. General

1. For contract work, 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 drawings and specifications. Environmental protection shall be as stated in the following paragraphs. 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.

a. Work Area Limits

- 1) The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas determined by the Engineer. Temporary movement or relocation of the Contractor facilities shall be made only upon approval by the Engineer.
- 2) Prior to any construction, the Contractor shall mark the 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.

b. Protection of Landscape

- 1) Trees and their roots, shrubs, vines, grasses, land forms, 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.

c. Disturbed Areas

1) The Contractor shall effectively prevent erosion and control sedimentation through approved methods include, but are not limited to, the following:

a) 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 diversion ditches, benches, and by any other erosion control measures necessary.

b) The Contractor shall select, implement, and maintain erosion and sediment control measures as required by local, state, and federal laws and regulations.

d. Location of Field Offices, Storage, and Other Contractor Facilities

1) Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas approved by Engineer. Temporary movement or relocation of Contractor's facilities shall be made only on approval by Engineer.

2. 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.

3. Dispensing of Fuel

a. 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 ascertain that no contamination of the ground takes place. 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 spilling of fuel occur the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area.

4. 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.

5. 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 or other hazardous substances from entering the ground, drainage, or local bodies of water. Provide containment, diversionary structures, or equipment to prevent discharged oil 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 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 Storage Tank Installation: All oil 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 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 spills when it can be shown that oil was discharged as a result of willful negligence or willful misconduct. 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 plans and environmental documents. The Contractor shall erect suitable erosion control barriers at least 30 feet upland and along the entire length of all wetland delineation lines/agricultural canals 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 drawings and environmental documents. 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 offsite streams, intertidal areas and crossings, lakes, ditches, rivers, and other water improvements including on-site retention areas from siltation from erosion, run off, concrete truck wash, mortar mixer cleanout, and other construction activities. Under no circumstances will material delivery trucks be cleaned out or washed out on FIND property. 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 be controlled at all times, 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. 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.

3.02 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 the Construction Drawings. These features shall be coordinated with all applicable construction features to assure the continuous and effective control of erosion and degradation of surface water quality 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.

2. The Contractor may remove the silt fence surrounding the perimeter of the construction site upon final grading and grassing.
3. Any adjacent/off-site wetland areas around the perimeter of the Work shall be protected from construction activities and construction-related runoff through the use of 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 the Contractor's negligence, 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. Where the area affected is undeveloped with no maintained stand of grass, the area shall be sodded with Bahia, and where affected areas are grassed, the sod shall match the applicable vegetative cover.

3.03 POST CONSTRUCTION CLEANUP

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

3.04 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 shall not be compensable. Any adjustments to the contract performance period or price that are required as a result of compliance with this section shall be made in accordance with the provisions of the Contract Clause entitled "SUSPENSION OF WORK."

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SECTION 01 40 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.

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. Contractor Quality Control Plan
 - 1. At or before the scheduled pre-construction meeting, the Contractor shall submit the Contractor Quality Control (CQC) Plan for review and acceptance by the Engineer no later than twenty (20) calendar days after receipt of the Notice to Proceed. The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used.
 - 2. If the Contractor fails to submit an acceptable CQC Plan with the time prescribed, construction shall not start unless an acceptable plan is submitted and approved.
- B. Registered Surveyor Qualifications
 - 1. At least fifteen (15) days before construction commencement, the Contractor shall submit the name and credentials of an independent Florida registered professional surveyor who will perform the surveying portions of the contract work for Engineer approval. The company and personnel shall show experience in this type of work. The submittal must provide the name and type of equipment used for the project. All survey work shall be overseen and sealed by a Florida registered professional surveyor.
- C. Quality Control Logs

1. Submit a weekly (or daily if requested by Engineer) 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.

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 non-compliance 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 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:

- a. 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. Additionally, all survey work shall be overseen and sealed by a Florida registered professional surveyor.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the Contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters shall also be furnished to the Engineer.
- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with SECTION 01 33 00 SUBMITTAL PROCEDURES.

- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Engineer.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task that is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable feature under a particular section. This list will be agreed upon during the Coordination Meeting.

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 the 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.

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. Minutes of the meeting shall be prepared by the Engineer and signed by the Contractor. The minutes shall become a part of the contract file. 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. The organization shall designate a Safety Officer and a qualified Endangered Species Monitor who will serve as members of the CQC staff and designate a qualified surveyor for quantity measurement.

B. CQC System Manager

1. The Contractor shall identify as CQC System Manager 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 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, containing 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. Florida Registered Professional Surveyor

1. A Florida registered professional surveyor shall perform all layouts of the work and quantity surveys required to carry out the project work. The Florida registered professional Surveyor shall certify all field notes, computations, and all other records relating to surveys or layouts of the work.
2. The Florida registered professional surveyor must have appropriate equipment to be able to work within inclement weather conditions.

E. 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 SUBMITTALS

- A. Submittals shall be made as specified in SECTION 01 33 00 SUBMITTAL PROCEDURES. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 CONTROL

- A. The Contractor 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. Control shall be conducted by the CQC System Manager for each definable feature of work as follows:

1. Prior Beginning of Work

This 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 submitted data, 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 repetitive deficiencies. Document construction tolerances and workmanship standards for the feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Engineer.
- j. Review requirements under permits, environmental protection, and protection of environmental species.

2. During Work

This shall be accomplished during the construction 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 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.
- 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. 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.
- 3. Additional Work
 - a. Additional work 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; when other problems develop.

3.7 TESTS

A. Testing Procedure

- 1. The Contractor shall perform specified tests and required monitoring instrumentation or 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:
 - a. Verify that testing standard or procedures comply with contract requirements
 - b. Verify that facilities and testing equipment are available and comply with testing standards.
 - c. Check test instruments calibration data against certified standards
 - d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
 - e. Results of tests and monitoring instruments, both passing and failing, shall be recorded on the CQC report 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 information 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.

3.8 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.

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.

3.9 COMPLETION INSPECTION

A. Punch-Out Inspection

1. Near the completion of all work or any increment thereof, the CQC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been correct. Once this is accomplished, the Contractor shall notify the Engineer that the facility is ready for "Pre-Final" inspection.

B. Pre-Final Inspection

1. The Engineer may perform a Pre-Final Inspection to verify that the Work is complete. The Contractor's CQC System Manager shall ensure that all items identified as needing completion or corrections have been addressed before requesting a final inspection. Any items noted on the Pre-Final Inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

C. Final Acceptance Inspection

1. The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and Engineer's Representative shall be in attendance at this inspection. Additional Owner personnel may also be in attendance. The final acceptance inspection will be formally scheduled by the Engineer based upon results of the Pre-Final inspection. Notice shall be given to the Engineer at least fourteen (14) days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of Contractor to have all

contract work acceptably complete for this inspection will be cause for the Owner to bill the Contractor for the Owner's additional inspection cost. In addition to the Owner, other agencies may attend.

3.10 DOCUMENTATION

- 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 work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:
1. Contractor/subcontractor and their area of responsibility.
 2. Operating plan/equipment with ours worked, idle, or down for repair.
 3. Work performed each day, giving location, description, and by whom.
 4. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
 5. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
 6. Submittals reviewed, with contract reference, by whom, and action taken.
 7. Off-site surveillance activities, including actions taken.
 8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
 9. Instructions give/received and conflicts in plans and/or specifications.
 10. Contractor's verification statement.
- B. These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. One copy of these records in electronic report form (Adobe PDF format) shall be furnished to the Engineer daily within twenty-four (24) hours after the date(s) covered by the report, except that reports need not be submitted for days which no work is performed. As a minimum, one report shall be prepared and submitted for every seven (7) days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.11 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 --

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 utilities, vehicular access and parking, and project identification. The Contractor is responsible for adherence to and reporting requirements for all applicable permit conditions.
- B. See SECTION 01 35 43 ENVIRONMENTAL PROTECTION for requirements including silt control, trailer placement, fueling restrictions, dust control, solid waste, and clean-up. Upon completion of project, clean-up and restore area in accordance with SECTION 00 72 00 GENERAL 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 (1997) National Electrical Safety Code
- B. National Fire Protection Association (NFPA)
NFPA 70 (1999) National Electrical Code
- C. U.S. Army Corps of Engineers (USACE)
USACE CESAJR 385-1-1 (1998) Safety and Occupational Health Program

1.3 SUBMITTALS

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

A. Mobilization/Demobilization Plan

1. At least fifteen (15) calendar days prior to construction commencement, the Contractor shall submit a Mobilization/Demobilization Plan. This plan shall be submitted within ten (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. At least fifteen (15) calendar days prior to construction commencement, the Contractor shall prepare a Hurricane and Severe Storm Plan. This plan shall include but not be limited to 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 Shop Drawings

1. Within ten (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 shall include, but not be limited to, the following:
 - a. Traffic control plan (with adjacent landowner at site access point)
 - b. 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 EXISTING 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, and electrically grounded and have fire extinguisher station.

2.2 FIELD OFFICE

- A. The Contractor shall mobilize the field office to the site within (20) twenty days after the NTP and the field office shall remain at the project site until Substantial Completion.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Identification of Employees
 - 1. Contractor and Subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.
- B. Employee Parking
 - 1. Park employee's vehicles in areas designated by the Owner away from construction traffic, within reasonable walking distance of site. 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 and storage area with the Owner's material should be locking type with lighting.
- C. Onsite Information
 - 1. Keep copy of Project 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. 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 ~~owning~~ 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 Sign
 - 1. 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 access and temporary roads, as necessary, to maintain traffic. 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, on roads selected for hauling material to and from the site, shall interfere as little as possible with the adjacent landowner. 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. Refer to SECTION 01 35 43 ENVIRONMENTAL PROTECTION.

B. Fuel Storage and Fueling Operations

1. Refer to SECTION 01 35 43 ENVIRONMENTAL PROTECTION. Provide light when fueling at night.

3.6 SECURITY PERSONNEL

A. Site security shall include, but not be limited to:

1. Limit vehicular access to authorized vehicles and personnel only.
2. Maintain a sign-in log documenting visitors, deliveries, and security incidents.
3. Check fenced areas, equipment, trailers on a daily basis. If damage is observed or vandalism is found report to the Engineer.
4. No visitors will be allowed on site without knowledge of Contractor and permission of the Owner. Direct visitors to report upon arrival to Contractor's Field Office 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. Materials resulting from demolition activities that are salvageable shall be stored within the fenced area described above or at the supplemental storage area. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored. Refer to SECTION 01 35 43 ENVIRONMENTAL PROTECTION for solid waste and post construction clean-up.

3.8 RESTORATION OF STAGING AREA

- #### **A.**
- Upon completion of the project and after removal of trailers, materials, and equipment from within the staging area. Areas used by the Contractor for the storage of equipment or material, or other use, shall be landscaped in accordance with SECTION 35 20 26 SEA OAT PLANTING. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including topsoil and seeding as necessary.

-End of Section-

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SECTION 01 77 00

PROJECT CLOSEOUT

PART 1 GENERAL

1.01 SUBMITTALS

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

A. Record Drawings

1. Submit one (1) full-size hard copy and one (1) electronic copy of the Record Drawings for Engineer approval at least two (2) calendar days prior to requesting inspection for Substantial Completion.

B. As-Built Drawings

1. Submit five (5) full-size hard copy sets of signed and sealed As-Built Drawings.
2. Submit two (2) CDs containing the electronic AutoCAD drawing files (compatible with AutoCAD 2018 and a PDF printout of the As-Built Drawings. All survey data shall be referenced to the horizontal projection NAD83, Florida East, Ft, and the vertical datum in NAVD 88, Mean Lower Low Water (MLLW).
3. As-Built Drawings shall be submitted no later than thirty (30) calendar days post-project completion.

C. Request for Inspection

1. The Contractor shall notify both the Owner and Engineer in writing five (5) calendar days prior to substantial completion and the final acceptance inspection. The Owner and Engineer will then set up an appropriate time for the inspection(s).

1.02 PROJECT RECORD DOCUMENTS

A. Record Drawings:

1. Throughout the project, maintain at least one clean, undamaged full-size hard copy set of Project 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 substantially 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 District but was not shown on the Project Drawings or Shop Drawings.
5. Note related Change-Order numbers where applicable.
6. All changes due to field 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 plans 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.
9. The Owner will make electronic copies available to the Contractor for Record Drawing purposes whatever versions of the bid plans exist. The Contractor must obtain the concurrence of the Engineer as to form and content of record information provided in electronic format prior to proceeding, but in general, information similar to that shown below needs to be similarly provided.
 - a. Record information weekly concurrently with construction progress.
 - b. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work. Mark each document "PROJECT RECORD" in neat, large, printed letters.
 - c. Mark new information that is important to the Owner but was not shown on Project Drawings or Shop Drawings.
 - d. Note related change-order numbers where applicable.
 - e. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
 - f. Include the following:
 - 1) Dates of areas dredged
 - 2) Depths of dredging per day or section.
 - 3) Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements (vertical and horizontal location of buried or encased piping, raceways, cables, etc.).
 - 4) Where Submittals (like shop drawings) are used for mark-up, record a cross-reference at corresponding location on Drawings.
 - 5) Field changes of dimension and detail.
 - 6) Changes made by Change Order or other Modifications.
 - 7) Details not on original Project Drawings.

- 8) Record drawings shall include a plot of the actual excavation cross-sections plotted at the same station as and on top of the design cross-sections.

B. As-Built Drawings:

1. Within fifteen (15) days of Substantial Completion, the Contractor shall complete an as-built survey and submit an As-Built Drawing set of the completed dike, gravel toe drain pipes, weirs, weir pipes, timber walkway, roads, ditches, inlets, culverts, fence line, fence gates, edge of clearing, and other construction items as deemed necessary by the Engineer. The as-built survey shall show plan location and elevation of constructed features. Approval and acceptance of final As-Built Drawings shall be accomplished before final payment is made to the Contractor.
2. The Contractor will rely on the Project Drawings as the basis for the As-Built Drawing set. The Engineer will provide electronic copies of the Project Drawings in AutoCAD at the Preconstruction Meeting.
3. Submit two (2) CDs containing the electronic AutoCAD drawing files (compatible with AutoCAD 2018 or later format) and a PDF printout of the As-Built Drawings. Survey data shall be in the same horizontal coordinate system and vertical datum used in the project drawings.
4. 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.
5. The Surveyor shall sign the cover sheet of the marked-up drawings in the following manner: "I CERTIFY THAT THESE CORRECTED DRAWINGS INDICATE CONSTRUCTION AS ACTUALLY PERFORMED AND ARE AN ACCURATE REPRESENTATION OF THE SPECIFIED WORK. THESE CORRECTED DRAWINGS ARE APPROVED FOR PREPARATION OF AS-BUILT DRAWINGS."
6. The As-Built Drawing set shall display the constructed dike cross sections superimposed on the Project Drawing sheets displaying the planned dike 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 Project Drawings shall be made to plot faded and in the background of the constructed features.
7. The As-Built Drawing set shall display as-built elevations and locations of the completed dike, weirs, roads, ditches, and walkway next to those design elevations and locations shown on the Project Drawings for comparison. Where the specifications list required tolerances, the As-Built Drawings shall clearly indicate if the constructed item is out of tolerance.
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 District and Engineer reserves 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 District 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.

1.03 SUBSTANTIAL COMPLETION

- A. The District 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. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Submit preliminary Post-Dredging survey drawings and electronic files, damage or settlement surveys, property surveys, and similar final record information as indicated.
 - 6. Complete final cleanup requirements.
- C. Inspection Procedures
 - 1. On receipt of a written request for inspection from the Contractor, the Engineer will schedule the inspection within 3 days or advise the Contractor of 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 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 punch list of minor items that need completion.
 - 2. The Engineer will repeat inspection when requested and assured that the Work is substantially complete.
 - 3. Results of the completed inspection will form the basis of requirements for final acceptance.

1.04 FINAL ACCEPTANCE

- A. The District will consider the project complete upon completion of the Grassing Establishment Period and with final acceptance of grassing.
- B. Before requesting inspection for Certification of Final Acceptance, complete the following:
 - 1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
 - 2. Submit an updated final statement, accounting for final additional changes to the Contract
 - 3. Submit a certified copy of the Engineer's final inspection list of items to be completed or corrected, endorsed and dated by the Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Engineer.
 - 4. Submit Consent of Surety to final payment.
 - 5. Submit a final liquidated damages settlement statement.
 - 6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- C. Re-inspection Procedure: The Engineer will re-inspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Engineer.
 - 1) Upon completion of re-inspection, the Engineer will prepare a certificate of final acceptance. If the Work is incomplete, the Engineer will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 - 2) If necessary, re-inspection will be repeated.

PART 2 PRODUCTS

2.01 AUTOCAD DRAWINGS

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

PART 3 EXECUTION

3.01 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. Prior to final completion, or District occupancy, Contractor shall conduct an inspection of the site, and all work areas, to verify that the entire work area is clean.
- E. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.
- F. 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 District's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.
- G. Where extra materials of value remain after completion of associated Work, they become the District's property. Store or dispose of these materials as directed by the District.
- H. Prior to final completion, or District occupancy, Contractor shall conduct an inspection of the site, and all work areas, to verify that the entire work area is clean.
 - 1. Upon completion of dewatering and final offloading, all applicable access roads, pipeline access, and parkway amenities shall be returned to its preconstruction condition.
 - 2. After the Contractor completes the final site cleaning, the Engineer and Contractor shall arrange a meeting that involves the FIND and Taylor Engineering to inspect the site conditions.
- I. The Engineer will not recommend final payment and release of retainage until the Contractor has completed the site restoration as described in this section.

-- END OF SECTION --

SECTION 31 10 00

SITE CLEARING AND GRUBBING

PART 1 GENERAL

1.01 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.

1.02 DEFINITIONS

- A. Clearing – the felling, trimming, and cutting of trees into sections and the satisfactory offsite disposal of the trees and other vegetation designated for removal, including down timber, snags, brush, etc., occurring within the construction boundary as shown on the Construction Drawings.
- B. Grubbing - the excavation, removal, and disposal of stumps, roots, and buried debris occurring within the construction boundary as 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 non-burnable materials, which are not covered by other Bid Items.

1.03 SUBMITTALS

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

- A. Vegetative and Rubbish Disposal Verification
 - 1. Verification of proper disposal operations shall be provided to the Engineer for information only within five (5) working days of the commencement of disposal operations and will state where those materials are being disposed.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.01 PROTECTION

- A. Entrance and Access Roads
 - 1. Keep the site entrance and access roads free of cut timber and debris at all times.

B. Trees, Shrubs, and Existing Facilities

1. Trees and vegetation to be left standing 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.

C. Utility Lines

1. Locate existing underground utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.

3.02 CLEARING

- A. Trees, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface. Resulting vegetation shall be disposed of by hauling off-site and properly disposed.

3.03 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 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.

3.04 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 disposed offsite. All vegetative and woody materials shall become the property of the Contractor, and shall be disposed in accordance with all local, State and Federal laws, regulations, and requirements.

B. Burning

1. Burning 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 requirements. Verification of proper disposal and disposal site for subject materials shall be provided to the Engineer within five (5) working days of the materials being removed from the site. No burning of material described in this section will be allowed onsite.

3.05 SITE CLEANUP

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

-- END OF SECTION --

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SECTION 32 92 16
SEA OAT PLANTING

PART 1 GENERAL

1.01 SUMMARY

- A. The work covered by this section consist of furnishing all labor, plants, equipment, and materials, and performing all operations in connection with planting sea oats landward of the revetment as specified herein.

1.02 DEFINITIONS

- A. Planting Unit
 - 1. For the purposes of this project, the term "planting unit" refers to vegetative material with at least two stems of an individual, viable, nursery grown plant of sea oats (*Uniola paniculata*) that is installed within a single hole created on the beach. No other plant species will be accepted as substitutes without approval of the Owners/Engineer.

1.03 ORDER OF WORK

- A. After completion of all fill and final grading, the Contractor shall plant sea oats on all areas of the dike disturbed by excavation and fill activities. The purpose of the vegetation is to keep wind blown sand from being blown off the dike and to further enhance and stabilize the dike.

1.04 SUBMITTALS

- A. Watering Plan
 - 1. The Contractor shall furnish to the Engineer a plan for watering the plants and an itemized list of equipment that will be used during watering operations.
- B. Certificates of Compliance
 - 1. Before delivery, certificates of compliance shall be submitted to the Engineer certifying that the materials meet the required specification.

PART 2 PRODUCTS

2.01 PLANTING MATERIALS

- A. The source of all planting units delivered under this bid item will be limited to propagated plants collected from Florida east coast. Source material collected from areas other than Florida east coast will be rejected. The Contractor will be required to provide written documentation as to the source of the planting units. Documentation shall include collection permits or contracts from the FDEP, the U.S. Department of Agriculture, or other comparable documents.

2.02 PROPOGATION METHODS

A. Liners

1. All plant materials shall be grown in multi-well trays (liners) not to exceed a size of approximately 1.5 inches wide by 1.5 inches long and not less than 2.5 inches in depth.

B. Viable Liner Plants

1. Viable planting units will include only those plants with at least two emergent stems. Planting units with fewer than two stems will not be accepted. Prior to shipping, roots should fill the entire volume of the liner, but should not be root bound.

C. Micropropagation

1. Planting units grown from approved sources via micropropagation techniques may be accepted. Plants produced from cuttings or the division of larger plants may be used if the material is derived from Florida Panhandle sources and meets all of the specifications for seed-producing planting units. However, planting units derived from micropropagation techniques shall not exceed 25% of the total number of planting units delivered.

D. Inspections

1. The Contractor shall provide the Engineer and Owner with access to all nursery operations in the manner and time frame requested by the Owner for the purpose of performing compliance inspections of the propagation and production methods being employed by the Contractor.

2.03 PLANT PREPARATION

- ### **A.**
- The root ball shall be properly moistened to prevent desiccation. All planting units shall be handled, packed, transported, and stored at the installation site in such a manner as to ensure protection against desiccation, thermal stress, disease, or physical damage. Planting units deemed to have been improperly handled, packed, transported, or stored will be rejected by the Engineer.

2.04 PLANT SIZE, AGE, AND CONDITION

A. Plant Size

1. Planting units shall be no less than 8 inches, and no more than 16 inches in height, as measured from the top of the root ball to the apical meristem. The Engineer will reject any plants not meeting these size constraints.

B. Plant Age

1. Deliverable planting units shall be 90-days to 120-days old, as measured from the approximate time of germination. The Engineer may reject planting units younger or older than this specification. The contractor will provide the Engineer proof of planting units age.

C. Number of Planting Units Delivered

1. Planting units delivered to the work site shall be contained in consistent, accessible, and uniform packing materials, such as waxed boxes. Each box delivered to a work site will be subject to planting unit inspection and counting. A standard number of within-specification

planting units (e.g., 500 per box) for the packaging will be established before the Engineer will accept the delivery of planting units to the work site. The Engineer will reject boxing of planting units, which contain fewer than the established standard number of within-specification planting units. If more than one box is found to contain fewer than the established standard planting unit count, all boxes of plants delivered to the work site with the substandard boxes will be rejected. Boxes of planting units found to contain more than the standard number of planting units will be considered to contain only the standard number of planting units per box.

PART 3 EXECUTION

3.01 PLANTING DEPTH AND SPACING

A. Planting Unit Depth

1. All planting units shall be installed at a minimum depth of 6 inches, as measured from the top of the root ball to the sand surface. The Engineer will reject plants not installed at or below this depth. Planting units which are out-of-specification with regard to the provisions of this planting unit depth specification will be planted solely at the Contractor's risk, and will be subject to all of the survival criteria and warranty provisions detailed below, in "SUCCESS CRITERIA AND REPLANTING."

B. Planting Unit Spacing

1. Planting units shall be planted in rows, with the lower limit of the planting zone at the toe of the dike. Successive rows shall be 18 inches apart and parallel to the bottom-most row. Planting units in each row shall be planted on 18-inch centers. Planting units in each row shall be staggered mid-way (in the shore-parallel direction) between planting units in the adjacent rows. Planting units which are out-of-specification with regard to the provisions of this planting unit depth specification will be planted solely at the Contractor's risk, and will be subject to all of the survival criteria and warranty provisions detailed below, in "SUCCESS CRITERIA AND REPLANTING."

3.02 SOIL AMENDMENTS

A. Fertilizer

1. The Contractor shall place approximately one-half teaspoon of slow release (90-day) pelletized Osmocote fertilizer, or Engineer-approved substitute, with an N:P:K ratio of 18-6-12, plus trace elements, beneath the root zone of each planting unit during installation. The fertilizer shall conform to the applicable State of Florida fertilizer laws. The Contractor may apply fertilizer at the start of the 60-day establishment period. The cost of any maintenance fertilization shall be included in the "installation" unit cost schedule that accompanies the Contractor's bid documents. Maintenance fertilization, if employed, will be undertaken in a manner that complies with all environmental permits applicable to the project site.

B. Water

1. The Contractor shall "water in" (initially irrigate) all newly installed planting units such that the root zone of all newly installed planting units is thoroughly saturated. The amount of water needed for the initial irrigation will vary due to site soil texture and exposure. The Contractor may use Terra-sorb, or similar products for the initial "water in" irrigation. Additional irrigation is not required; however, if the Contractor believes that additional

irrigation is needed to meet the required plant survival criteria, the Contractor shall notify the Engineer. Water shall be fresh and free from injurious amount of oil, acid, alkali salts, or other materials harmful to the growth of the plants. The Contractor will be responsible for obtaining and applying all irrigation water required. The Contractor shall remove irrigation systems and other structures placed during plant installation after the plantings are established. The Contractor shall comply with all applicable permits and ordinances.

3.03 SUCCESS CRITERIA AND REPLANTING

A. Planting Unit Success Criteria

1. The Contractor shall “water in” (initially irrigate) all newly installed planting units such that the root zone of all newly installed planting units is thoroughly saturated. The amount of water needed for the initial irrigation will vary due to site soil texture and exposure. The Contractor may use Terra-sorb, or similar products for the initial “water in” irrigation. Additional irrigation is not required; however, if the Contractor believes that additional irrigation is needed to meet the required plant survival criteria, the Contractor shall notify the Engineer. Water shall be fresh and free from injurious amount of oil, acid, alkali salts, or other materials harmful to the growth of the plants. The Contractor will be responsible for obtaining and applying all irrigation water required. The Contractor shall remove irrigation systems and other structures placed during plant installation after the plantings are established. The Contractor shall comply with all applicable permits and ordinances.

B. Whole-Site Survival Rate

1. A minimum survival rate of 80% of all planting units installed over the site as a whole shall be achieved. Plants will be considered to be surviving if they show clearly vigorous rhizome and white, turgid roots, even in the absence of vital above ground growth. Survival of the whole site shall be determined after one season (60 days) after planting. If success criteria is not met the establishment period will be extended.

C. Survival Pattern

1. A minimum of 80% of the planting width perpendicular to the toe of the dike shall be occupied by surviving planting units at all locations. For example, for a three-foot planting width (measured shore-parallel), a minimum of 14 out of 18 plants must survive within any nine-foot wide perpendicular transect through the planting zone. This success criterion may be waived, at the discretion of the Engineer, in areas where plant survival has been adversely impacted by unexpected pedestrian traffic.

D. Planting Root Penetration

1. A minimum of 24 out of 30 (80%) randomly selected plants shall have achieved root penetration of nine inches or greater, as measured from the top of the root ball down. The 30 randomly selected plants used to determine this measure of success shall be tagged in the field by the Contractor and the Engineer immediately following plant installation. This success criterion may be waived, at the discretion of the Engineer, if lesser root penetration is otherwise determined to be acceptable, or if it was caused by factors outside the control of the Contractor (e.g., excessive natural rainfall).

E. Replanting of Units

1. If any of the above success criteria are not met, as determined by the Engineer, the Contractor shall replant with viable, and within specification, planting units in all areas considered to be deficient according to the planting unit success criteria. The replanting of planting units will be the sole responsibility of the Contractor and be completed at no cost

to the Owner. All warranty and survival provisions and requirements will apply to replanted planting units.

F. Initial Planting Unit Survival

1. Planting units that do not survive for a minimum of 10 days after installation will be rejected and not be considered eligible for payment. New, within specification, planting units will be installed by the Contractor in areas that do not survive for a minimum of 10 days. Contractor will be responsible for installing the new replacement planting units within five days of notification by the Engineer that an area of initial planting units did not survive for 10 days. The replacement planting units will be considered eligible for payment as "original" planting units only after they have survived a minimum of 10 days from installation.

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SECTION 35 31 17

STONE PLACEMENT FOR SHORELINE STABILIZATION

PART 1 GENERAL

1.01 SUMMARY

- A. The Work covered by this section consists of furnishing all labor, materials, and equipment in connection with construction and installation of a stone revetment features as described in the Construction Drawings.

1.02 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
AASHTO T85	Specific Gravity of Coarse Aggregate Standard Specification for Highway Bridges (1997 Interim)

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

EM 1110-2-1100	The Coastal Engineering Manual
EM 1110-2-2302	Construction with Large Stone

C. American Society for Testing and Materials

ASTM C88	Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
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
ASTM D1556	Test for Density of Soil and Soil Aggregates in Place by the Sand Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
ASTM D2922	Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D698	Laboratory Compaction Characteristics of Soil Using Standard Effort
ASTM D4643	Standard Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method
ASTM D2487	Classification of Soils for Engineering Purposes
ASTM D422	Standard Test Method for Amount of Material in Soils Finer than the No. 200 Sieve
ASTM D1388	Flexural Rigidity (Option A)
ASTM D4355	Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)

ASTM D4759	Standard Practice for Determining the Specification Conformance of Geosynthetics
ASTM D5732-95	Standard Test Method for Stiffness of Fabrics
ASTM D5818	Practice for Obtaining Samples of Geosynthetics from a Test Section for Assessment of Installation Damage
ASTM D6473	Specific Gravity and Absorption of Rock for Erosion Control

D. U.S. Environmental Protection Agency (EPA)

EPA9090 Compatibility Test for Wastes and Membrane Liners

E. Florida Department of Transportation (FDOT)

Roadway and Traffic Design Standards, 2008 edition

Standard Specifications for Roadway and Bridge Construction, 2007 edition

1.03 DEFINITIONS

- A. Minimum Average Roll Value – Value based on testing and determined in accordance with ASTM D 4759.
- B. True Tensile Modulus in Use – The ratio of tensile strength to corresponding strain (e.g. 1%). The tensile strength is measured via GRI GG1 as modified by AASHTO Standard Specification for Highway Bridges, 1997 Interim, using a single rib having the greater of 3 junctions or 8 inches and tested at a strain rate of 10 percent per minute based on this gauge length without deforming test materials under load before measuring such resistance or employing “secant” or “offset” tangent methods of measurement so as to overstate tensile properties. Values shown are minimum average roll values.
- C. Junction Strength – Breaking tensile strength of junctions when tested in accordance with GRI GG2 as modified by AASHTO Standard Specification for Highway Bridges, 1997 Interim, using a single rib having the greater of 3 junctions or 8 inches and tested at a strain rate of 10 percent per minute based on this gauge length. Values shown are minimum average roll values.
- D. Flexural Stiffness (also known as Flexural Rigidity) - Resistance to bending force measured via ASTM D 5732-95 using specimens of width two ribs wide, with transverse ribs cut flush with exterior edges of longitudinal ribs (as a “ladder”), and of length sufficiently long to enable measurement of the overhang dimension. The overall Flexural Rigidity is calculated as the square root of the product of machine- and cross-machine-direction Flexural Rigidity values. Values shown are minimum average roll values.
- E. Resistance to Installation Damage – Resistance to loss of load capacity or structural integrity when subjected to mechanical stress in installation measured via ASTM D 5818 in a crushed stone classified as a poorly graded gravel with a maximum 2 inch particle size (GP). Values shown are typical values.
- F. Resistance to Long Term Degradation – Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments measured via EPA 9090 immersion testing. Values shown are typical values.
- G. Ultraviolet Stability – The ratio of tensile strength after exposure to the tensile strength prior to exposure, with exposure per ASTM D 4355 and tensile strengths measured via GRI GG1 as discussed above for “True Tensile Modulus in Use.”

1.04 ORDER OF WORK

- A. The CONTRACTOR shall follow the proposed order of work unless otherwise approved by the ENGINEER. The CONTRACTOR shall properly sequence stone placement with to ensure an efficient construction operation that maintains the proposed schedule, minimizes repeated work, and ensures work components do not conflict.

1.05 PHYSICAL DATA

- A. Physical Conditions: The indications of physical conditions on the Project Specifications and Construction Drawings are the result of site investigations by the referenced surveys or data. 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.
- B. Maritime Traffic: Maritime Traffic in the project area consists of small to mid-size (approx. 20ft – 40ft) recreation and commercial vessels of all types and sizes.

1.06 SUBMITTALS

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

- A. Geotextile fabric: The CONTRACTOR shall submit manufacturer's information and certification that the proposed geotextile fabric meets these specifications prior to ordering. CONTRACTOR's submittal shall also include a minimum 6" x 6" physical sample of the composite material. The CONTRACTOR shall provide the submittal a minimum of fourteen (14) days prior to the planned date for ordering the material.
- B. Stone Product Data: The CONTRACTOR shall submit a certified report detailing the properties of the various stone materials proposed for construction. The report shall demonstrate the stone meets all the requirements of the Project Specifications prior to ordering material. The report shall include a description of the source materials, quarry location, and material properties. The certified report shall detail the armor stone, bedding stone, gradation, and material quality testing results from a qualified independent testing laboratory selected and compensated by the CONTRACTOR. In addition, the report shall include letters of certification for all types of stone stating that the stone meets the gradation and material property requirements of the Project Specifications. The CONTRACTOR shall provide the submittal a minimum of fourteen (14) days prior to the planned date for ordering the stone. The CONTRACTOR may not use more than one quarry without prior acceptance of the ENGINEER. The ENGINEER will require additional tests, at no cost to the OWNER, if additional quarries are requested.
- C. Armor Stone Weight Test: The CONTRACTOR shall perform weight tests of the armor stone in the presence of the ENGINEER or OWNER. If the ENGINEER or OWNER are not available, the CONTRACTOR may provide certified test results from a certified geotechnical laboratory to the ENGINEER that the stone shipped complies with the Project Specifications.
 - 1. For the weight test, the test sample shall be representative of the stone being shipped (minimum 10 stone samples for each test) and shall be performed three (3) times for the armor stones at: 1) when the first shipment of stone is being loaded and before delivery of that stone to the site; 2) when approximately 50% of the armor stone has been loaded; and, 3) near the completion of the project when approximately 75 – 80% of the armor stone has been loaded. Each weighted stone shall be clearly marked with its weight. The CONTRACTOR shall provide a minimum of 5 representative stones with marked weights at a convenient location at the quarry site and at the project site (or staging area) where

the CONTRACTOR and ENGINEER can compare selected armor stones. The ENGINEER may require the CONTRACTOR to perform additional stone weight tests should stone not appearing to meet the requirements of these weight specifications be delivered to the site.

2. A test sample shall entail measurement and notation of: the net weight of the total sample, the weight of each stone in the sample, and average dimensions (from three spatial dimensions) of each stone in the sample. The CONTRACTOR shall provide a report for each test including:
 - a. Date of the test
 - b. The samples net weight
 - c. Total number of stones for each test
 - d. The average three spatial dimensions measured for each stone in the sample
 - e. The weight of each stone
 - f. The certified laboratory report verifying the unit weight, specific gravity, absorption, Los Angeles Abrasion and Soundness (see GENERAL STONE SPECIFICATIONS below).
 3. Failure of the tests on two subsequent samples will be cause for rejection of the quarry and/or quarrying process. The CONTRACTOR shall not install stone that fails to meet the parameters of the Project Specifications. Any additional tests required due to failure of the test samples will be made at no cost to the OWNER.
- D. Stone Placement Plan: The CONTRACTOR shall submit to the OWNER and ENGINEER a written stone placement plan. The plan shall identify staging areas where stone will be offloaded, staged and stored, transportation methodology, and scheduling. The plan shall describe the measures and controls to properly excavate to the required elevations; methods to construct, fill, and install the stone foundation; measures to protect the underlayment units from damage during placement operations; method(s) and sequence of stone placement; and equipment to be used during each phase of placement. The plan shall also describe verification measures to ensure the techniques will allow for suitable control of stone location, slopes, and proper interlock with the underlying or adjacent stones to resist displacement by wave and current action and to form a uniform and compact section. In addition, on the day construction commences, the CONTRACTOR shall provide an on-site demonstration to verify that the placement technique is satisfactory.
- E. (As Necessary) Restoration Plan: At the request of the ENGINEER, the CONTRACTOR shall submit a plan to address all identified site restoration requirements. The plan shall provide written and/or graphic representation of the CONTRACTORS proposed site restoration activities. The restoration plan will also include a schedule for completion of the restoration work. The Contactor shall provide the restoration plan to the ENGINEER within 10 days of receiving a request from the ENGINEER. The CONTRACTOR will address any comments or requests made by the ENGINEER and commence restoration work immediately upon receipt of submittal approval.
- F. As-Built Survey: Upon completion of the structure, the CONTRACTOR shall provide as-built surveys of all features and prepare a certified survey drawing. A Professional Land Surveyor licensed in the state of Florida. The survey drawing shall be referenced to State Plan Florida North, NAD 1983 (Horizontal) and North American Vertical Datum (NAVD) 1988 (Vertical).

Where excavation is required to meet the desired grades, the base elevations, toe of the structure, and constructed grades shall all be surveyed prior to backfilling, final stone placement, or site restoration. This survey is required for payment of the structure(s) in the submitted

progress payment. In addition, a final certified as-built survey is required as a condition for final payment that will include all structures and features associated with the project.

The surveyor will collect data in sections a maximum spacing of 25 feet along the centerline axis of the constructed structures. The surveys shall extend a minimum of 25 ft beyond the farthest edge of construction on all sides of the structures (seaward, landward and alongshore). Point elevations along each section line shall be collected at all grade changes and between grade changes at spacing no greater than 5 ft. The CONTRACTOR shall provide the certified as-built survey drawing and field notes to the ENGINEER within seven (7) calendar days of conducting the field survey. The ENGINEER shall review the survey and identify as-built deficiencies or approve the submittal within five (5) working days of receiving the survey. The final as-built survey of the structure and all project components must be submitted and approved prior to authorization to demobilize from the site.

PART 2 PRODUCTS

2.01 GENERAL STONE SPECIFICATIONS

- A. All stone shall be a hard, durable natural stone such that it will not disintegrate under the elements and it will not break during handling. Stone shall be of a suitable quality to ensure permanence in the 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 causes. The stone shall be clean and reasonably free from soil, dust, quarry fines, and shall contain no refuse.
- B. The faces of individual pieces of stone shall be roughly angular, not rounded, in shape.
- C. The ENGINEER reserves the right to refuse payment for stone delivered to the site that does not meet the Project Specifications. The CONTRACTOR shall remove any unacceptable stone from the work site at no additional cost to the OWNER. Unacceptable stone shall not be utilized for construction unless specifically authorized by the ENGINEER.
- D. 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.
- E. The ENGINEER may require the CONTRACTOR to perform additional testing for stone delivered to the site that does not appear to meet the Project 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 the Project Specifications.

2.02 FOUNDATION MATERIALS

- A. Bedding Stone with Geotextile Fabric
 - 1. Bedding Stone
 - a. A. All bedding stone, shall be granite or durable quality limestone and meet or exceed the following physical characteristics:
 - 1) Unit Weight (ASTM C127) = 135 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. Geotextile Fabric

- a. The geotextile fabric shall consist of a high-tenacity monofilament polypropylene yarns, which are woven into a stable network such that the yarns retain their relative position. Fabric material shall be inert to biological degradation and resist naturally encountered chemicals, alkalis, and acids. The geotextile fabric shall be Mirafi® FW404 or ENGINEER accepted equivalent and shall have the following characteristics:

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MINIMUM AVERAGE	
			ROLL VALUE	
			MD ¹	CD ¹
Grab Tensile Strength	ASTM D4632	lbs (N)	400 (1780)	315 (1402)
Grab Tensile Elongation	ASTM D4632	%	15	15
Trapezoid Tear Strength	ASTM D4533	lbs (N)	150 (668)	165 (734)
CBR Puncture Strength	ASTM D6241	lbs (N)	1150 (5118)	
			MINIMUM ROLL VALUE	
Percent Open Area	COE-02215	%	1.0	
Permittivity	ASTM D4491	sec ⁻¹	0.9	
Flow Rate	ASTM D4491	gal/min/ft ² (l/min/m ²)	70 (2852)	
			MAXIMUM OPENING SIZE	
Apparent Opening Size (AOS)	ASTM D4751	U.S. Sieve (mm)	40 (0.425)	
			MINIMUM TEST VALUE	
UV Resistance (at 500 hours)	ASTM D4355	% strength retained	90	

¹ MD - Machine, or roll, direction; CD - Cross machine direction

2.03 ARMOR STONE

- A. All armor stone, shall meet or exceed the following physical characteristics:
1. Unit Weight (ASTM C 127) = 155 lb/cf (Minimum)
 2. Absorption (ASTMC127) = Maximum 2%
 3. Los Angeles Abrasion (ASTM C131) = Maximum Loss 45%
 4. Soundness (AASHTO T104) = Maximum Loss 12%
- B. The CONTRACTOR shall provide armor stone for stabilization and revetment extension structures as shown in the Construction Drawings and having the weight 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 structure shall have weights equal to or greater than the "W₅₀" value provided above. No more than 10% of the stones delivered for a given segment shall have weight less than the minimum stone weight value provided. No more than 5% of the stones delivered for a given segment shall have a weight in excess of the maximum stone weight 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.

2.04 QUALITY CONTROL

- A. All testing, either pre-construction or construction, as required herein or in the contract documents, shall be performed by an independent qualified testing company. The costs of all such testing shall be borne by the CONTRACTOR and shall be included in the bid price.
- B. The qualified testing agency shall be approved per FDOT standards, AASHTO standards or similar standards as approved by the ENGINEER. All testing work shall be done under the supervision of a professional ENGINEER registered in Florida and shall be signed and sealed by a licensed professional ENGINEER registered in Florida if requested.
- C. Unless modified by the contract documents, submittals and request for information shall be submitted to the ENGINEER in accordance with the submittal procedures outlined in the Project Specifications.

2.05 MATERIAL SUBMITTALS

- A. Geotextile Fabric Product Data: The CONTRACTOR shall submit manufacturer's information and certification that the proposed composite geotextile fabric meets these specifications prior to ordering. CONTRACTOR's submittal shall also include a minimum 6" x 6" physical sample of the composite material. The CONTRACTOR shall provide the submittal a minimum of fourteen (14) days prior to the planned date for ordering the material.
- B. Stone Product Data: The CONTRACTOR shall submit a certified report detailing the properties of the various stone materials proposed for construction. The report shall demonstrate the stone meets all the requirements of the Project Specifications prior to ordering material. The report shall include a description of the source materials, quarry location, and material properties. The certified report shall detail the armor stone and bedding stone, gradation, and material quality testing results from a qualified independent testing laboratory selected and compensated by the CONTRACTOR. In addition, the report shall include letters of certification for all types of stone stating that the stone meets the gradation and material property requirements of the Project Specifications. The CONTRACTOR shall provide the submittal a minimum of fourteen (14) days prior to the planned date for ordering the stone. The CONTRACTOR may not use more than one quarry without prior acceptance of the ENGINEER. The ENGINEER will require additional tests, at no cost to the OWNER, if additional quarries are requested.
- C. Armor Stone Weight Test: The CONTRACTOR shall perform weight tests of the armor stone in the presence of the ENGINEER or OWNER. If the ENGINEER or OWNER are not available, the CONTRACTOR may provide certified test results from a certified geotechnical laboratory to the ENGINEER that the stone shipped complies with the Project Specifications.
1. For the weight test, the test sample shall be representative of the stone being shipped (minimum 10 stone samples for each test) and shall be performed three (3) times for the armor stones at: 1) when the first shipment of stone is being loaded and before delivery of that stone to the site; 2) when approximately 50% of the armor stone has been loaded; and, 3) near the completion of the project when approximately 75 – 80% of the armor stone has been loaded. Each weighted stone shall be clearly marked with its weight. The CONTRACTOR shall provide a minimum of 5 representative stones with marked weights at a convenient location at the quarry site and at the project site (or staging area) where the CONTRACTOR and ENGINEER can compare selected armor stones. The ENGINEER may require the CONTRACTOR to perform additional stone weight tests should stone not appearing to meet the requirements of these weight specifications be delivered to the site.
 2. A test sample shall entail measurement and notation of: the net weight of the total sample, the weight of each stone in the sample, and average dimensions (from three spatial dimensions) of each stone in the sample. The CONTRACTOR shall provide a report for each test including:
 - a. Date of the test
 - b. The samples net weight
 - c. Total number of stones for each test
 - d. The average three spatial dimensions measured for each stone in the sample
 - e. The weight of each stone
 - f. The certified laboratory report verifying the unit weight, specific gravity, absorption, Los Angeles Abrasion and Soundness (see GENERAL STONE SPECIFICATIONS below).

- 1) Failure of the tests on two subsequent samples will be cause for rejection of the quarry and/or quarrying process. The CONTRACTOR shall not install stone that fails to meet the parameters of the Project Specifications. Any additional tests required due to failure of the test samples will be made at no cost to the OWNER.

PART 3 EXECUTION

3.01 EXAMINATION

- A. The CONTRACTOR shall check the stone and geotextiles materials upon delivery to verify that the proper material has been received and the material meets the requirements of the Project 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.

3.02 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 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 or other deleterious materials from coming in contact with and affixing to the geotextile, or stone materials.
- C. The CONTRACTOR shall offload all the bedding and armor rock material on the designated offload pad shown in the Construction Drawings.
- D. Storage of stone material seaward of the MHW line before permanent placement is not permitted.

3.03 GRADING

- A. General
 1. CONTRACTOR shall prepare grade following the alignment and slope presented in the Construction Drawings.
 2. CONTRACTOR can use backfill material from the designated borrow area as needed before placing the foundation.

3.04 COMPACTION

1. Compact the stabilization material to 95% max density (Modified Proctor ASTM D 1557) within the entire limits of the width and depth of the area to be stabilized. Compact the materials at a moisture content required to achieve the specified compaction. If the moisture content of the material is improper for attaining the specified density, moisten the material or permit it to dry until the proper moisture content for the specified compaction is reached.

3.05 FOUNDATION

A. General

1. The foundation shall be constructed in accordance with the Construction Drawings and shall consist of a Geotextile fabric underlayment with bedding stone.

B. Geotextile Fabric and Bedding Stone

1. Geotextile Fabric Installation

- a. Geotextile Fabric shall be installed as noted on the Construction Drawings.
- b. CONTRACTOR shall propose the geotextile fabric 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.
- c. The CONTRACTOR's installation plan may include pinning the geotextile fabric in accordance with the manufacture's recommendations.
- d. The geotextile 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.
- e. CONTRACTOR shall not stretch or tear the composite geotextile fabric.

2. Bedding Stone

- a. Bedding Stone shall be installed as noted on the Construction Drawings.
- b. Before placing bedding stone, any organic material and/or debris shall be removed and disposed of by the CONTRACTOR. The disposal site for this material shall be offsite and accepted by the ENGINEER and local municipality.
- c. CONTRACTOR shall propose the Bedding Stone 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. Any deviation from the Work Plan submittal shall require additional review and acceptance by the ENGINEER.
- d. Bedding Stone shall be placed in a manner to assure accurate placement within the foundation footprint.
- e. Grading and placement of the bedding stone shall be conducted in a manner that does not damage or move the Geotextile fabric.
- f. CONTRACTOR shall propose method of grading that ensures required minimum thickness and tolerances are met.
- g. CONTRACTOR shall recover and re-install to final grade stones that roll outside the toe of the structure.

3. Tolerances defined in Section 3.07

3.06 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 Construction Drawings and requires acceptance by the ENGINEER.
- B. Installation should be performed so that existing revetment remain undamaged. Stone shall be placed to match the future 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.
- C. CONTRACTOR shall make reasonable effort to limit stone freefall. Stone shall be handled and placed in a manner that prevents damage to the foundation and minimizes stone breakage. After armor stone placement, the CONTRACTOR should avoid grading.
- D. Stone shall be handled in a manner that minimizes the introduction of dirt, organic matter, or other objectionable materials.
- E. Stone shall only be placed once the required grades have been reached and the foundation is installed. To avoid settlement of the structure or potential foundation failures, the armor and/or toe protection stone at the base of the structure shall be placed directly atop the foundation. The CONTRACTOR is not permitted to place any stone if the foundation has become buried by sand, sediment, or if debris is atop the foundation.
- F. The CONTRACTOR shall place the armor stone in numbers and layers as necessary to meet the design template depicted in the Construction Drawings. In no locations shall the structure consist of less than the minimum total thickness and steeper than depicted in the Construction Drawings.
- G. The north end of the structure should be tie in the existing revetment and following the alignment. The south end of the structures shall be tapered as shown in the Construction Drawings and provide all required structure elevation, slopes, neat lines, armor thicknesses, etc.
- H. The CONTRACTOR shall place all stones by clamshell, bucket, stone grab or other method as submitted in the stone placement 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 and to form a uniform and compact section. Stones shall be carefully placed to leave no large voids. The CONTRACTOR shall place the stones one layer at a time, built-up evenly. 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 bedding and 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 one (1) foot. Stones shall be set in a manner that will ensure that a minimum of four sides of the stone will be in contact with adjacent stones so that interstices between adjacent stones shall be as small as the character of the stone will permit. All stones should be placed in a random fashion as to size and orientation to achieve maximum interlocking and minimum voids. All stones when placed shall be stable, keyed, and interlocked with no hanging or perched stones. Final shaping of the stone shall be performed concurrently with the initial placement of stones to avoid rehandling.
- J. The finished work shall be a well-distributed mass, free of pockets of either smaller or larger stone with a minimum of voids and a maximum of interlocking of stone. The finished surface shall be relatively uniform and shall contain the maximum amount of stone as can be obtained by performing the work as specified. The structure will be observed for conformance to the design both during construction and upon completion.

- K. The CONTRACTOR shall take extra precaution when placing stone adjacent to existing revetment and wetlands
- L. Tolerances
 - 1. Defined in Section 3.07
- M. Repair
 - 1. Any geotextile fabric units damaged during fabrication, 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.
 - 2. 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 proposed structures unless accepted by the ENGINEER.
- N. Maintenance
 - 1. The CONTRACTOR shall be responsible for care and maintenance of all rock placed 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.
 - 2. In the event of sliding, settlement, or failure of any completed section 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 structure. 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 foregoing operations 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.
- O. Quality Control
 - 1. The CONTRACTOR shall check the geotextile fabric upon delivery to verify that the proper material has been received. These materials shall be inspected by the CONTRACTOR to be free of flaws or damage occurring during manufacturing, shipping, or handling.
 - 2. 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 and lifetime of the structure, 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 structure.
 - 3. The CONTRACTOR shall be responsible for verifying the quality and suitability of all stone materials and construction methods used to construct the structures. The removal and replacement of any substandard or damaged materials from the structure shall be at the expense of the CONTRACTOR.

3.07 TOLERANCE

- A. The finished surface and stone layer thickness shall not deviate from the lines and grades shown on the Construction Drawings by more than the tolerances listed below. Tolerance thicknesses are measured perpendicular to the indicated neat lines.

Vertical Neat Line Tolerances

Material	Above Neat Line (inches)	Below Neat Line (inches)
Armor stone	6	2
Bedding Stone Foundation	4	2

1. Horizontal tolerances are +/- 1 feet from the plan view layout. The seaward end of the structure must be placed upland of the Mean High Water Line.
2. Placed material that is beyond the maximum tolerances stated herein is ineligible for payment unless specifically accepted by the ENGINEER and OWNER.
3. 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.

3.08 AS-BUILT SURVEYS

The CONTRACTOR shall conduct and provide post-construction surveys to document the as-built conditions. The As-Built survey shall meet the conditions specified under this Section.

3.09 PERMITS

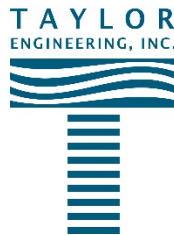
The Florida Department of Environmental Protection and U.S. Army Corps of Engineers does not require a permit for the proposed work placed above the Mean High Water Line. The CONTRACTOR shall be responsible for obtaining any other necessary permits required to complete the work. The CONTRACTOR shall be responsible for ensuring that all work necessary for construction of the structures and associated appurtenances complies with the conditions set forth in the permit documents. The CONTRACTOR will obtain and comply with any and all permits for this project. In the case of conflict with the Project 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.

-- END OF SECTION --



DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADDITIONAL SHORELINE IMPROVEMENTS ST. JOHNS COUNTY, FLORIDA

APPENDIX A Project Drawings



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Fax: (904) 731-9847

www.TaylorEngineering.com

(Taylor Engineering Contract No. C2021-082-01)

FLORIDA INLAND NAVIGATION DISTRICT DREDGED MATERIAL AREA SJ-1 ADDITIONAL SHORELINE IMPROVEMENTS

ST. JOHNS COUNTY, FLORIDA



LOCATION MAP
N.T.S.

APPLICANT
FLORIDA INLAND NAVIGATION DISTRICT
1314 MARCINSKI ROAD
JUPITER, FLORIDA 33477
MARK CROSLEY

ENGINEER
TAYLOR ENGINEERING, INC.
10199 SOUTHSIDE BOULEVARD, SUITE 310
JACKSONVILLE, FLORIDA 32256
TERENCE CAKE, ENGINEERING AGENT
(904) 731-7040



DRAWING INDEX

- C-1 TITLE SHEET
- C-2 GENERAL NOTES
- C-3 PROJECT OVERVIEW
- C-4 GOPHER TORTOISE SURVEY
- C-5 EXISTING CONDITIONS
- C-6 SITE PLAN
- C-7 CONTROL PLAN
- C-8 CROSS-SECTIONS
- C-9 CROSS-SECTIONS
- C-10 PLANTING PLAN
- C-11 EROSION AND SEDIMENT CONTROL DETAILS



VICINITY MAP
1"= 4000' (22x34)
1"= 8000' (11x17)

REFERENCE:
USA TOPO MAPS, ESRI

THIS ITEM HAS BEEN DIGITALLY SIGNED AND
SEALED BY **WILLIAM MILLER JR.** ON THE DATE
ADJACENT TO THE SEAL.

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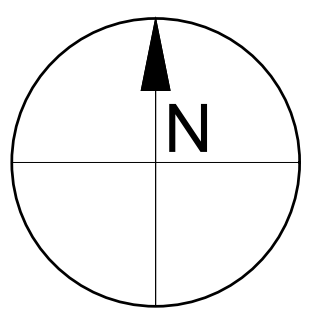
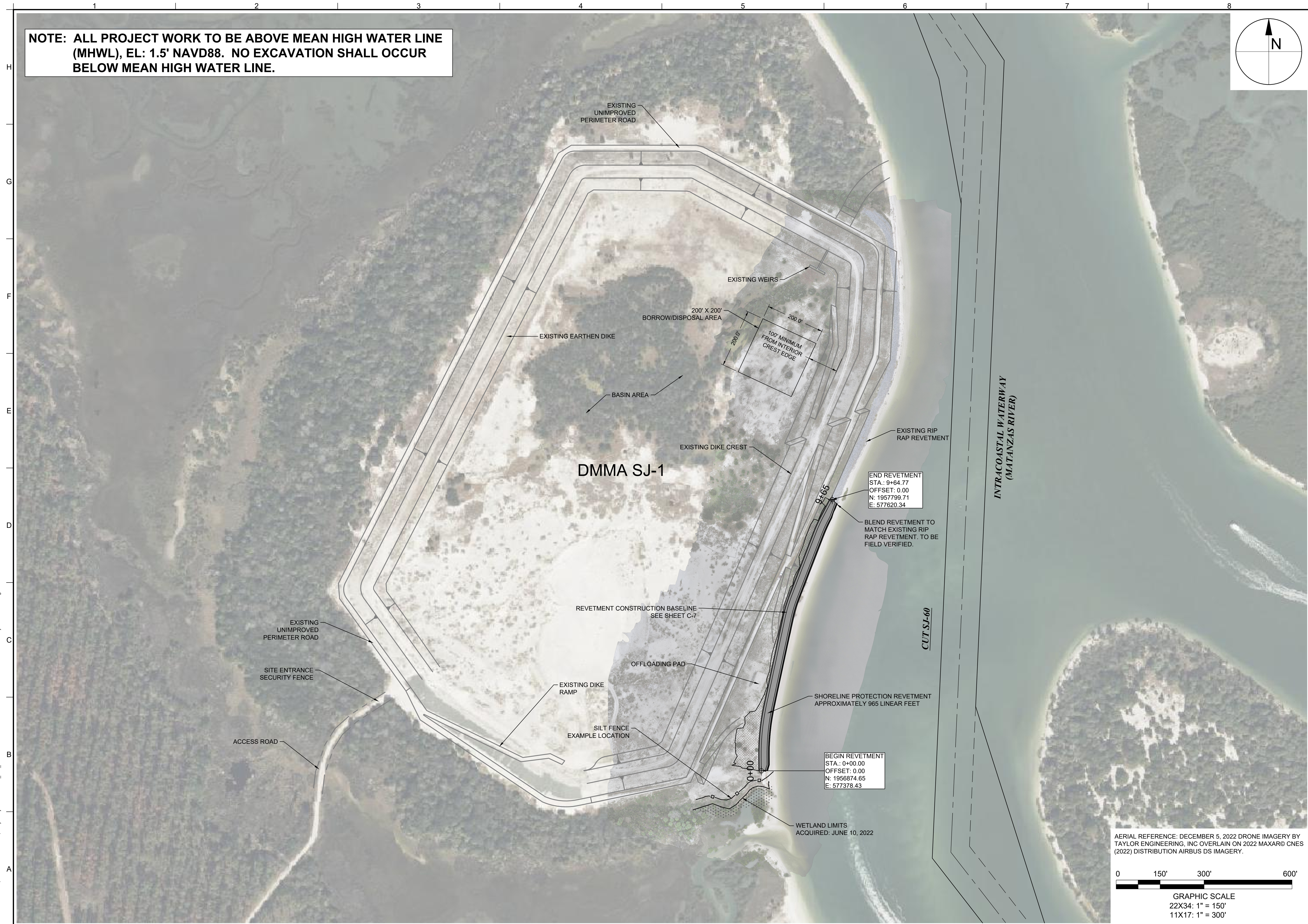
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**FLORIDA INLAND
NAVIGATION DISTRICT
DREDGED MATERIAL AREA
SJ-1 ADDITIONAL SHORELINE
IMPROVEMENTS**
ST. JOHNS COUNTY, FLORIDA

PROJECT NO	C2021-082
DATE	4/10/2023

C-1

SHEET 1 OF 11

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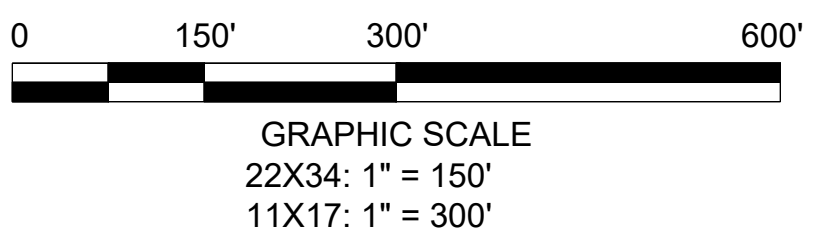
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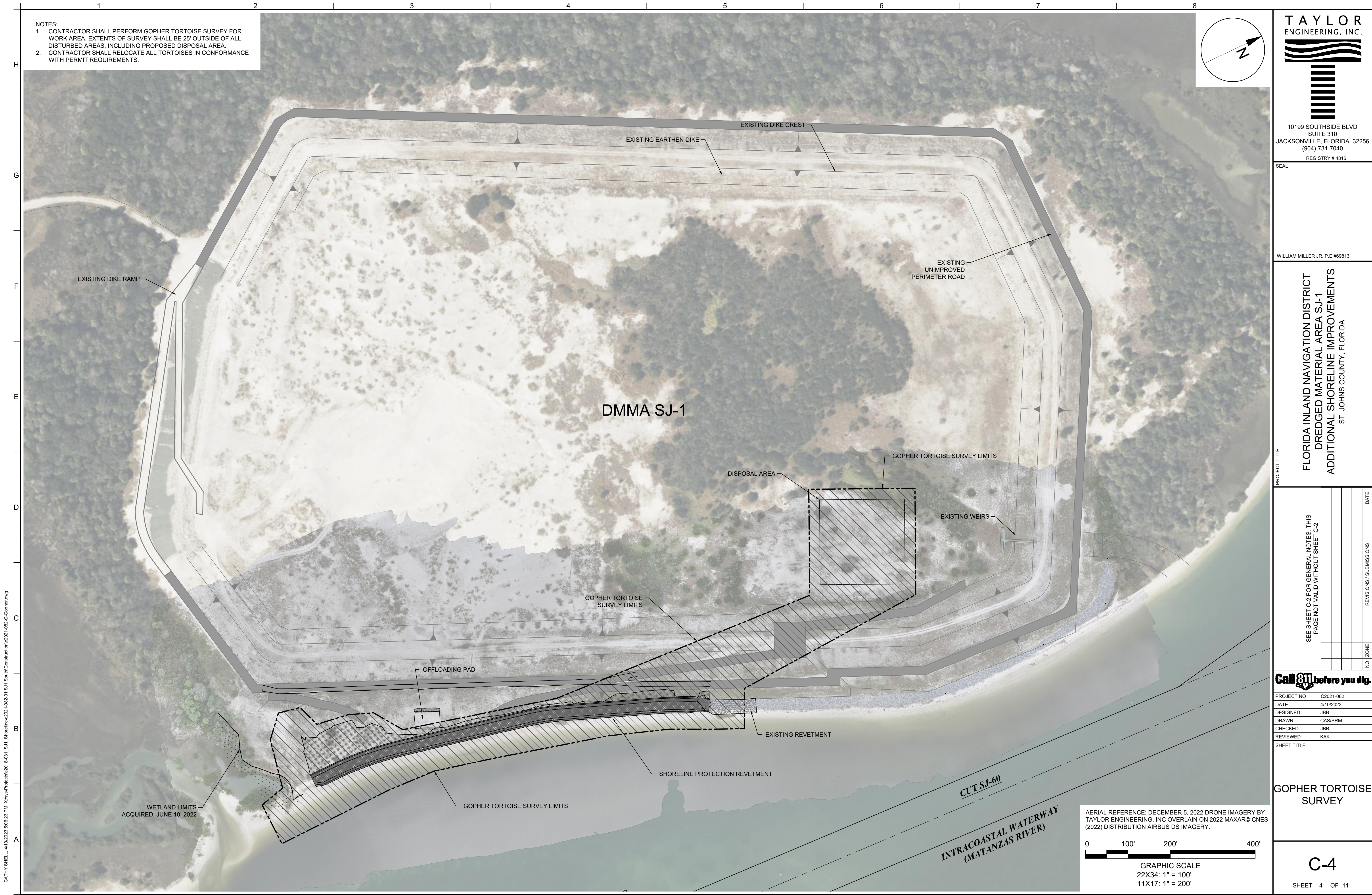
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DESIGNED	JBB
DRAWN	CAS/SRM
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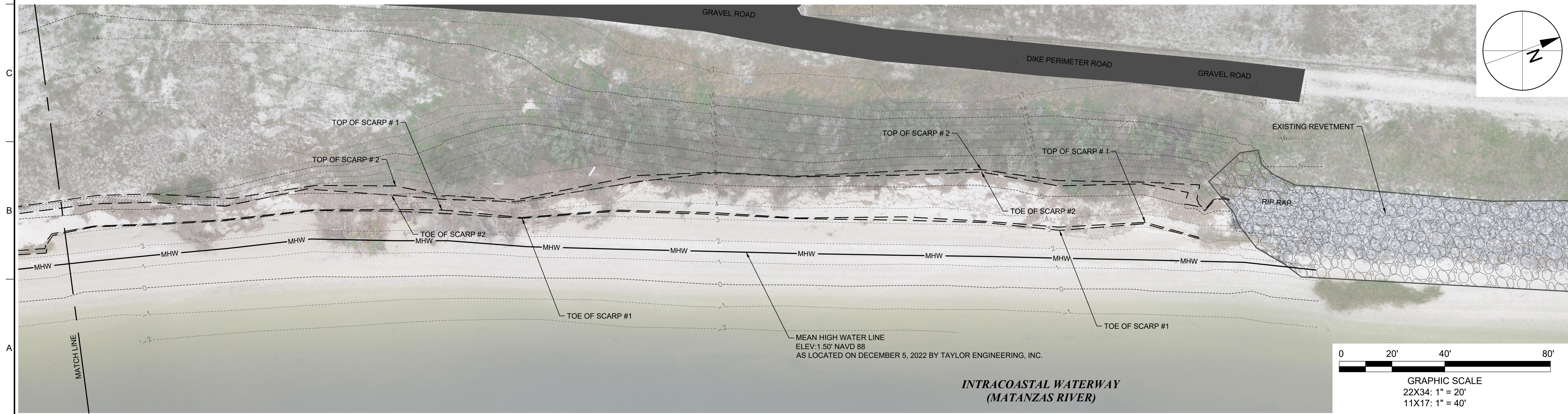
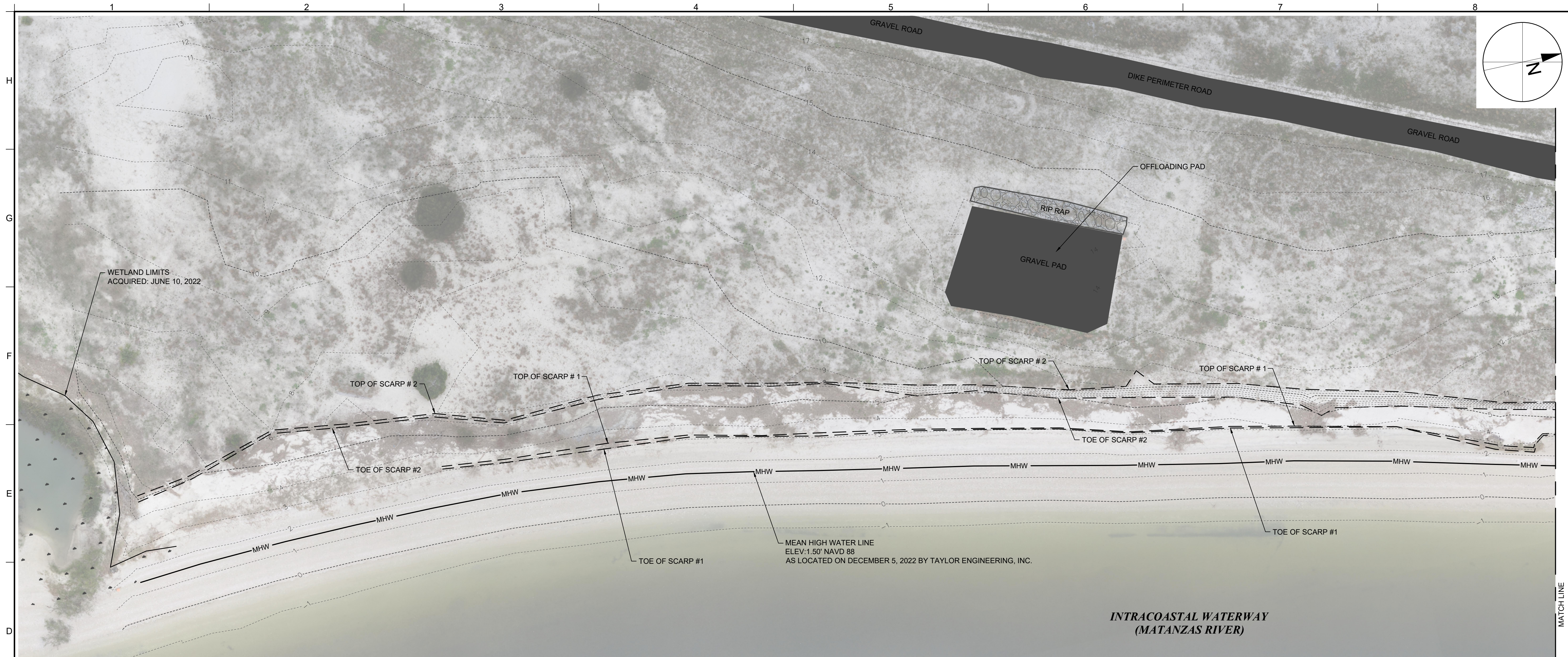
PROJECT OVERVIEW



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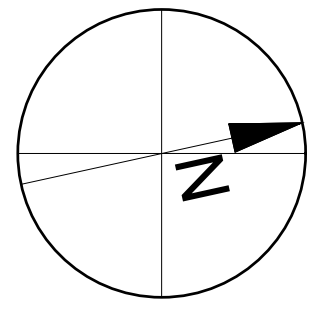
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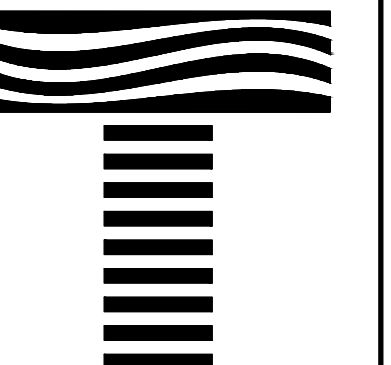
EXISTING
CONDITIONS

C-5
SHEET 5 OF 11

NOTE: ALL PROJECT WORK TO BE ABOVE MEAN HIGH WATER LINE (MHWL), EL: 1.5' NAVD88. NO EXCAVATION SHALL OCCUR BELOW MEAN HIGH WATER LINE.



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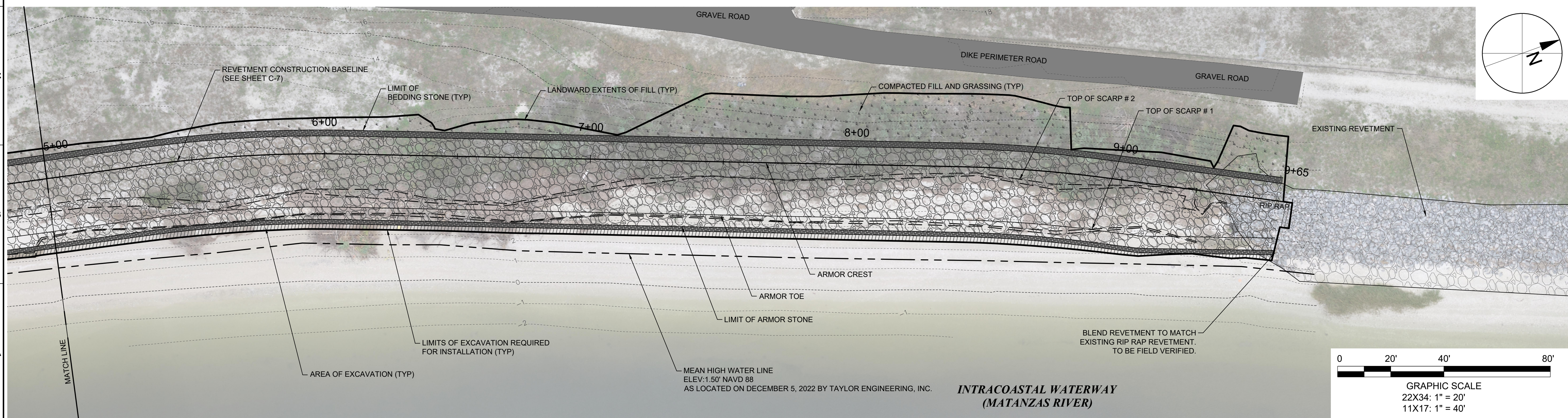
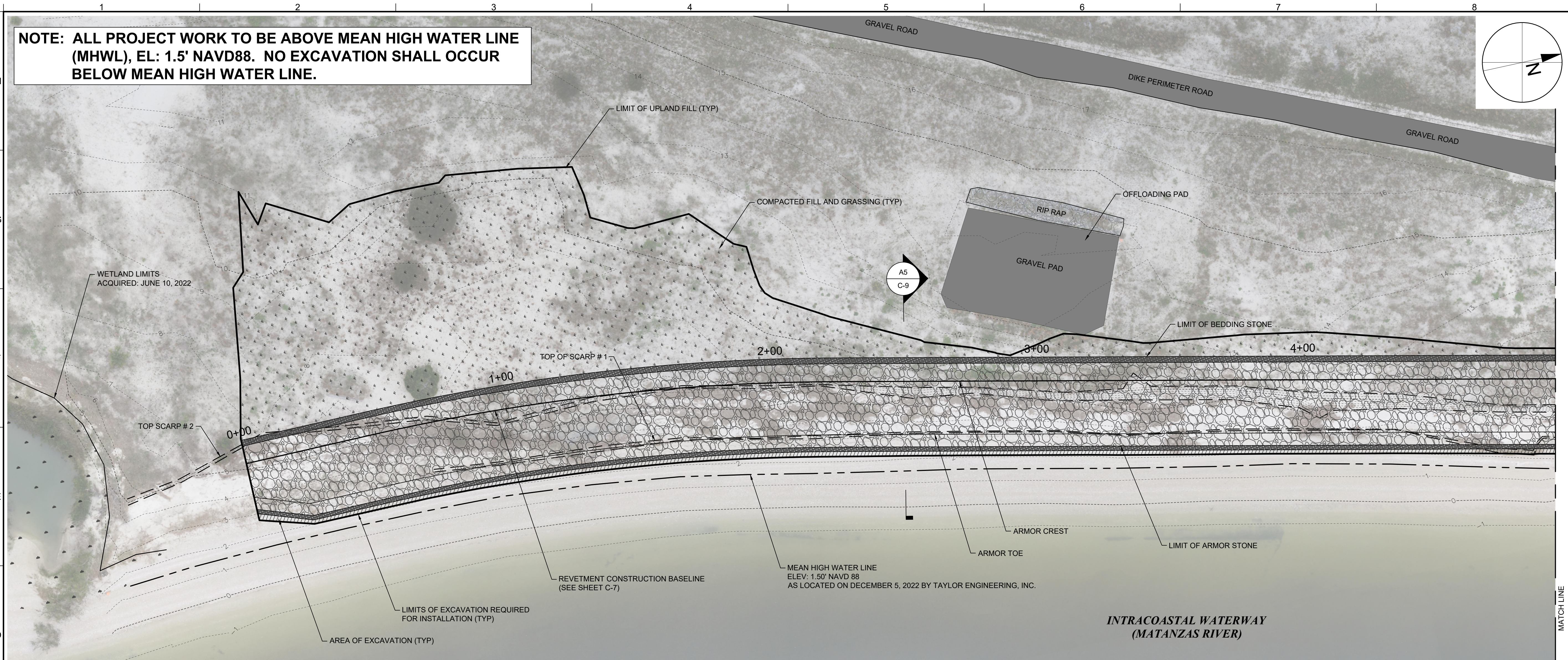
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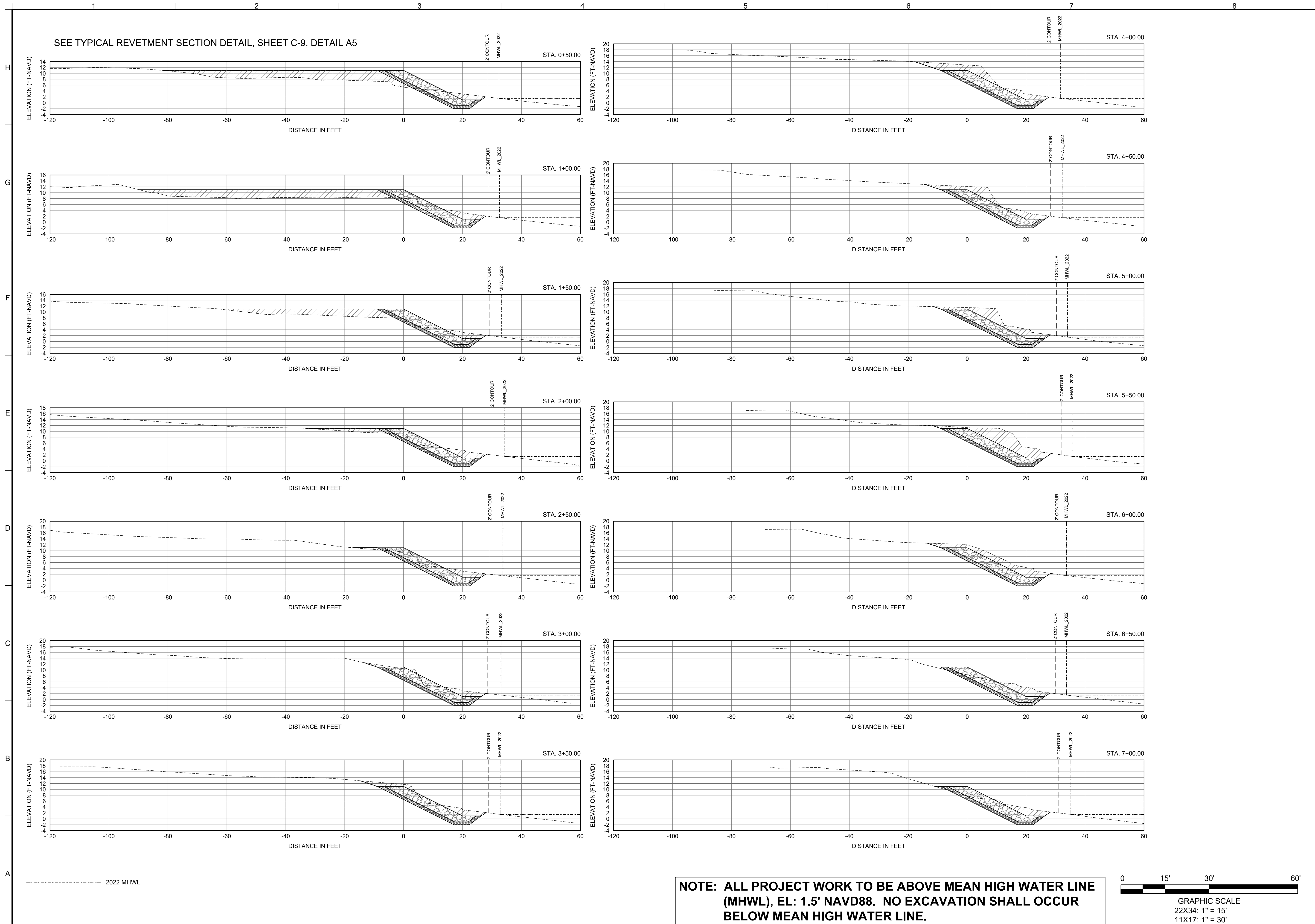
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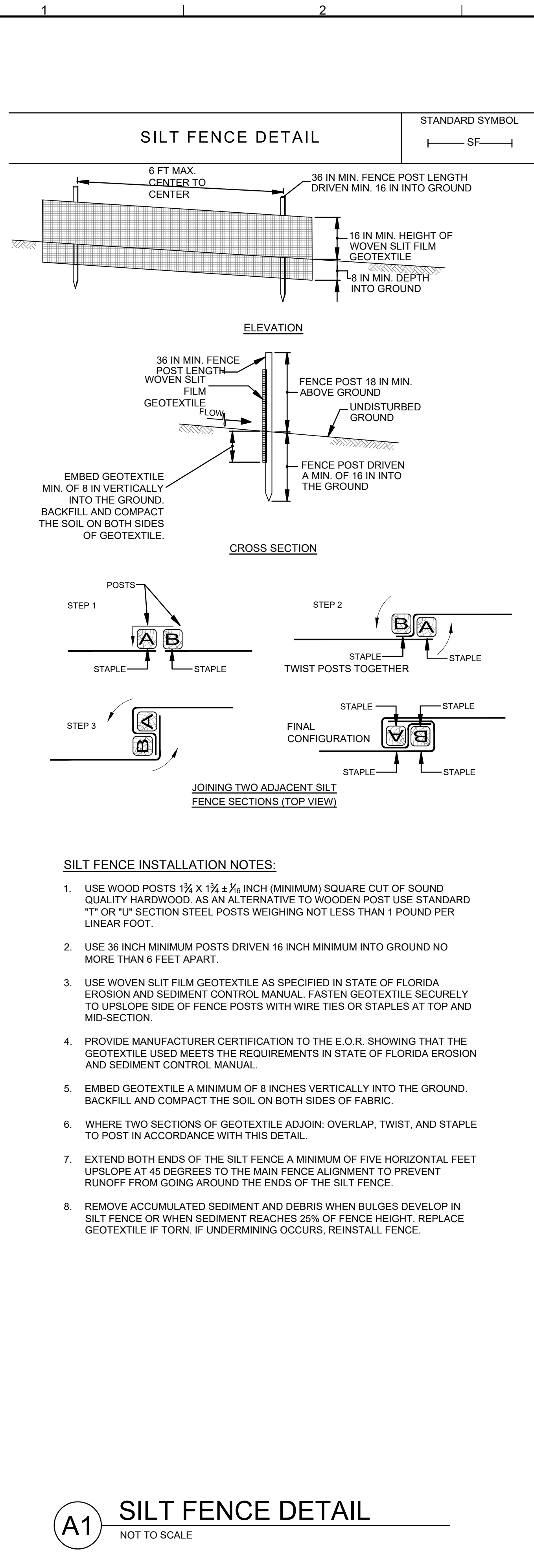
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CROSS-SECTIONS

C-8

SHEET 8 OF 11



1. USE WOOD POSTS $1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN STATE OF FLORIDA EROSION AND SEDIMENT CONTROL MANUAL. FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE E.O.R. SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN STATE OF FLORIDA EROSION AND SEDIMENT CONTROL MANUAL.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND COMPLY WITH STATE WATER QUALITY CRITERIA FOR STORMWATER DISCHARGE. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO TURBIDITY CURTAINS, MULCHING, HAY BALES, AND SILT FENCE. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSTRUCTION COSTS, AND FINES.
2. DISTURBED AREAS SHALL BE VEGETATED, FERTILIZED, MULCHED, AND MAINTAINED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING PERMANENT VEGETATION AT ALL DISTURBED AREAS PER NPDES FINAL STABILIZATION REQUIREMENTS.
4. EROSION CONTROL MEASURES SHALL BE MAINTAINED FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL PERMANENT VEGETATION IS ESTABLISHED.
5. EROSION CONTROL MEASURES SHALL BE PLACED TO CONTAIN ALL PORTS OF DISCHARGE TO SURFACE WATERS OR WETLANDS INCLUDING CURB INLETS, DITCH BOTTOM INLETS, DITCHES, AND DOWNSTREAM PORTIONS OF NATURAL DRAINAGE PATHWAYS, STREAMS, CANALS, AND TIDAL WATERS ADJACENT TO CONSTRUCTION.
6. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS.
7. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
8. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
9. TURBIDITY CONTROL MEASURES SHALL BE USED THROUGHOUT CONSTRUCTION TO CONTROL EROSION AND SILTATION TO ENSURE THERE ARE NO VIOLATIONS OF STATE OR FEDERAL WATER QUALITY STANDARDS. TURBIDITY CONTROL MEASURES SHALL BE: (1) FOR THE SMALLEST PRACTICABLE AREA; (2) MONITORED DAILY TO ENSURE LISTED SPECIES ARE NOT ENTANGLED OR TRAPPED IN THE PROJECT AREA; (3) SHALL BE REMOVED PROMPTLY UPON PROJECT COMPLETION AND THE RETURN OF WATER QUALITY CONDITIONS; (4) AND SHALL NOT BLOCK ENTRY TO OR EXIT FROM DESIGNATED CRITICAL HABITAT. SILTATION BARRIERS SHALL BE MADE OF MATERIAL IN WHICH LISTED SPECIES CANNOT BECOME ENTANGLED (I.E., REINFORCED IMPERMEABLE POLYCARBONATE VINYL FABRIC [PVC]).
10. TURBIDITY CURTAINS ARE NOT REQUIRED WHERE NOT PRACTICAL IN DYNAMIC SYSTEMS SUCH AS SURF ZONES AND COULD ACTUALLY DO MORE HARM THAN GOOD IF THE CURTAINS BECOME DETACHED (E.G., THEY COULD ENTRAP PELAGIC ORGANISMS AND BECOME ENTANGLED AROUND BENTHIC ORGANISMS, SUCH AS CORAL).

PROJECT TITLE
FLORIDA INLAND NAVIGATION DISTRICT
DREDGED MATERIAL AREA SJ-1
ADDITIONAL SHORELINE IMPROVEMENTS
ST. JOHNS COUNTY, FLORIDA

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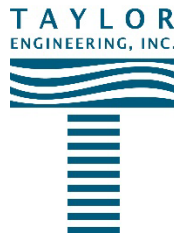
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SHEET 11 OF 11



DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADDITIONAL SHORELINE IMPROVEMENTS ST. JOHNS COUNTY, FLORIDA

APPENDIX B Sediment Report



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Jacksonville, Florida 32256

Phone: (904) 731-7040

Fax: (904) 731-9847

www.TaylorEngineering.com

(Taylor Engineering Contract No. C2021-082-01)

June 28, 2022

Re: SJ-1 Additional Shoreline Stabilization
C2021-082-01
Geotechnical Investigation

The Taylor Engineering Coastal Geosciences Laboratory is pleased to submit the following sediment data for the SJ-1 Additional Shoreline Stabilization project. Taylor Engineering representatives collected 11 samples from three hand auger borings at the project location (Attachment A) on June 15th, 2022 and provided them to Taylor Engineering's Coastal Geosciences Laboratory in Jacksonville, Florida. Laboratory testing included sieve analysis (ASTM D422-63 and D1140). Attached to this letter are the field boring photos (Attachment B), boring logs (Attachment C), sediment characteristics summary table (Attachment D), granulometric tables (Attachment E), and gradation curves (Attachment F). Taylor Engineering's Coastal Geosciences Laboratory stores the excess untested sediment.

The sediment samples consisted mostly of poorly graded fine-grained sand with varying amounts of clay, shell, and shell hash. The mean grain size ranged from 0.15 mm to 0.55 mm with an average mean grain size of 0.23 mm. Fines content (% passing #200 sieve) ranged from 0.3% to 30.4% with an average content of 3.3%. Fine gravel content (% retained on #4 sieve) consisted of shell and ranged from 0.0% to 22.1% with an average content of 4.6%. Moist Munsell color ranged from 5Y 5/1 (gray) to 10Y 5/1 (greenish gray).

Please contact me if you need additional information.

Sincerely,



Natalie Lamb
Staff Geologist

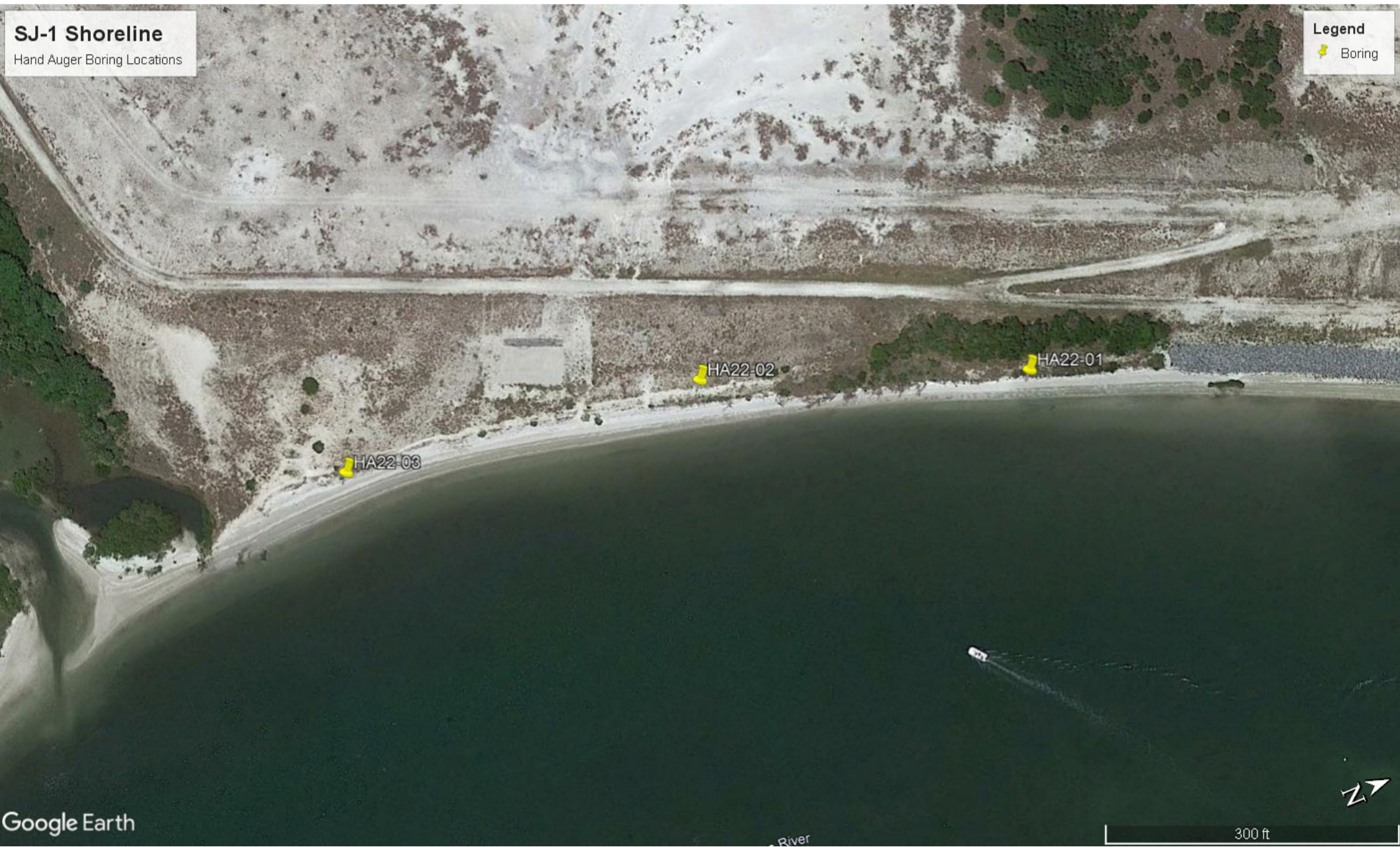
Attachments (6)

ATTACHMENT A
SAMPLE LOCATIONS MAP

SJ-1 Shoreline
Hand Auger Boring Locations

Legend

 Boring



ATTACHMENT B
FIELD BORING PHOTOS

HA22-01
0.0 to 4.0 Feet

Top of
Boring

2.5 Feet

End of Boring
4.0 Feet



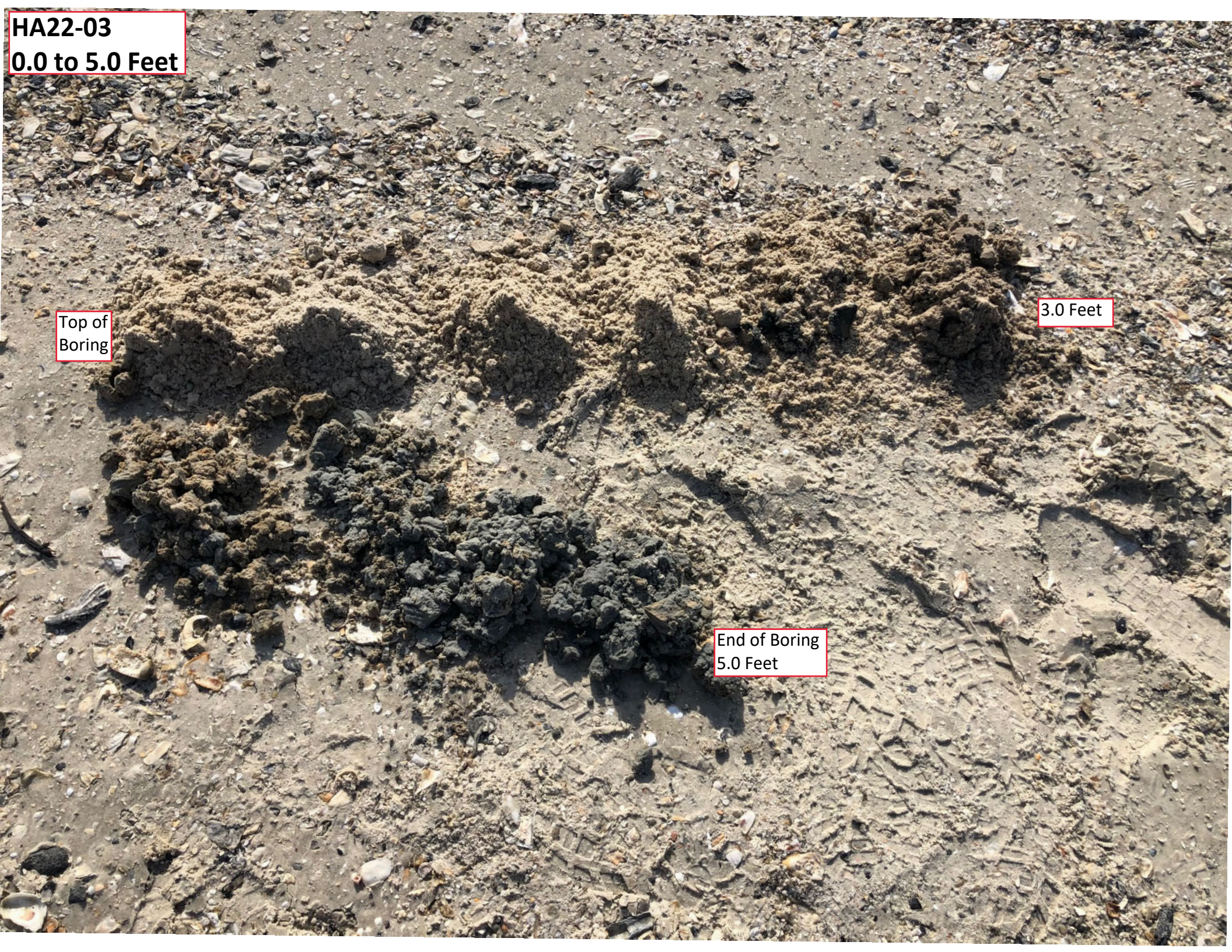


HA22-02
0.0 to 6.0 Feet

Top of
Boring

3.0 Feet

End of Boring
6.0 Feet



HA22-03
0.0 to 5.0 Feet

Top of
Boring

3.0 Feet

End of Boring
5.0 Feet

ATTACHMENT C
BORING LOGS

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Jacksonville, FL			SHEET 1 OF 1 SHEETS																	
1. PROJECT SJ-1 Shoreline Stabilization SJ-1				9. SIZE AND TYPE OF BIT 3 Inch Hand Auger																				
2. BORING DESIGNATION HA22-01		LOCATION COORDINATES X = 577,581 Y = 1,957,635		10. COORDINATE SYSTEM/DATUM State Plane, FLE (U.S. Ft.)		HORIZONTAL NAD83	VERTICAL NAVD88																	
3. DRILLING AGENCY Taylor Engineering		CONTRACTOR FILE NO. C2021-082-01		11. MANUFACTURER'S DESIGNATION OF DRILL Hand Auger		<input type="checkbox"/> AUTO HAMMER <input checked="" type="checkbox"/> MANUAL HAMMER																		
4. NAME OF DRILLER Will Warren, PG				12. TOTAL SAMPLES		DISTURBED 4	UNDISTURBED (UD) 0																	
5. DIRECTION OF BORING <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED		DEG. FROM VERTICAL		13. TOTAL NUMBER CORE BOXES		0																		
		BEARING		14. ELEVATION GROUND WATER		0.0 Ft.																		
6. THICKNESS OF OVERBURDEN N/A				15. DATE BORING		STARTED 06-15-22	COMPLETED 06-15-22																	
7. DEPTH DRILLED INTO ROCK N/A				16. ELEVATION TOP OF BORING		3.0 Ft.																		
8. TOTAL DEPTH OF BORING 4.0 Ft.				17. TOTAL RECOVERY FOR BORING		100 %																		
				18. SIGNATURE AND TITLE OF INSPECTOR Will Warren, PG, Geologist																				
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE															
3.0	0.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, wet, 5Y 5/1 gray (SP)		1		3.0																	
1.5	1.5		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little shell, moist, 5Y 5/1 gray (SP)		2		1.5																	
0.5	2.5		SAND, poorly-graded, mostly fine-grained sand-sized quartz, little shell, moist, 10Y 5/1 greenish gray (SP)		3		0.5																	
-0.5	3.5		SAND, poorly-graded, mostly fine-grained sand-sized quartz, moist, 10Y 5/1 greenish gray (SP)		4		-0.5																	
-1.0	4.0						-1.0																	
			NOTES: 1. Taylor Engineering is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results <table border="1"> <thead> <tr> <th>SAMPLE ID</th> <th>SAMPLE DEPTH</th> <th>LABORATORY CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.0/1.5</td> <td>SP*</td> </tr> <tr> <td>2</td> <td>1.5/2.5</td> <td>SP*</td> </tr> <tr> <td>3</td> <td>2.5/3.5</td> <td>SP*</td> </tr> <tr> <td>4</td> <td>3.5/4.0</td> <td>SP*</td> </tr> </tbody> </table> *Lab visual classification based on gradation curve	SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION	1	0.0/1.5	SP*	2	1.5/2.5	SP*	3	2.5/3.5	SP*	4	3.5/4.0	SP*	Abbreviations:					
SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION																						
1	0.0/1.5	SP*																						
2	1.5/2.5	SP*																						
3	2.5/3.5	SP*																						
4	3.5/4.0	SP*																						

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Jacksonville, FL			SHEET 1 OF 1 SHEETS														
1. PROJECT SJ-1 Shoreline Stabilization SJ-1				9. SIZE AND TYPE OF BIT 3 Inch Hand Auger																	
2. BORING DESIGNATION HA22-02		LOCATION COORDINATES X = 577,458 Y = 1,957,322		10. COORDINATE SYSTEM/DATUM State Plane, FLE (U.S. Ft.)		HORIZONTAL NAD83	VERTICAL NAVD88														
3. DRILLING AGENCY Taylor Engineering		CONTRACTOR FILE NO. C2021-082-01		11. MANUFACTURER'S DESIGNATION OF DRILL Hand Auger		<input type="checkbox"/> AUTO HAMMER <input checked="" type="checkbox"/> MANUAL HAMMER															
4. NAME OF DRILLER Will Warren, PG				12. TOTAL SAMPLES		DISTURBED 3	UNDISTURBED (UD) 0														
5. DIRECTION OF BORING <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				13. TOTAL NUMBER CORE BOXES 0		14. ELEVATION GROUND WATER 0.0 Ft.															
6. THICKNESS OF OVERBURDEN N/A				15. DATE BORING		STARTED 06-15-22	COMPLETED 06-15-22														
7. DEPTH DRILLED INTO ROCK N/A				16. ELEVATION TOP OF BORING 5.5 Ft.		17. TOTAL RECOVERY FOR BORING 100 %															
8. TOTAL DEPTH OF BORING 6.0 Ft.				18. SIGNATURE AND TITLE OF INSPECTOR Will Warren, PG, Geologist																	
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE												
5.5	0.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, moist, 5GY 5/1 greenish gray (SP) SAND, poorly-graded, mostly fine-grained sand-sized quartz, moist, 10Y 5/1 greenish gray (SP)				5.5		0												
3.5	2.0			1			3.5														
				2			1.5														
				3																	
-0.5	6.0						-0.5		5												
			NOTES: 1. Taylor Engineering is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results <table border="1"> <thead> <tr> <th>SAMPLE ID</th> <th>SAMPLE DEPTH</th> <th>LABORATORY CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.0/2.0</td> <td>SP*</td> </tr> <tr> <td>2</td> <td>2.0/4.0</td> <td>SP*</td> </tr> <tr> <td>3</td> <td>4.0/6.0</td> <td>SP*</td> </tr> </tbody> </table> *Lab visual classification based on gradation curve	SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION	1	0.0/2.0	SP*	2	2.0/4.0	SP*	3	4.0/6.0	SP*				Abbreviations:		10
SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION																			
1	0.0/2.0	SP*																			
2	2.0/4.0	SP*																			
3	4.0/6.0	SP*																			

DRILLING LOG		DIVISION South Atlantic		INSTALLATION Jacksonville, FL			SHEET 1 OF 1 SHEETS																	
1. PROJECT SJ-1 Shoreline Stabilization SJ-1				9. SIZE AND TYPE OF BIT 3 Inch Hand Auger																				
2. BORING DESIGNATION HA22-03		LOCATION COORDINATES X = 577,405 Y = 1,956,955		10. COORDINATE SYSTEM/DATUM State Plane, FLE (U.S. Ft.)		HORIZONTAL NAD83	VERTICAL NAVD88																	
3. DRILLING AGENCY Taylor Engineering		CONTRACTOR FILE NO. C2021-082-01		11. MANUFACTURER'S DESIGNATION OF DRILL Hand Auger		<input type="checkbox"/> AUTO HAMMER <input checked="" type="checkbox"/> MANUAL HAMMER																		
4. NAME OF DRILLER Will Warren, PG				12. TOTAL SAMPLES		DISTURBED 4	UNDISTURBED (UD) 0																	
5. DIRECTION OF BORING <input checked="" type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED				13. TOTAL NUMBER CORE BOXES		0																		
6. THICKNESS OF OVERBURDEN N/A				14. ELEVATION GROUND WATER		0.5 Ft.																		
7. DEPTH DRILLED INTO ROCK N/A				15. DATE BORING		STARTED 06-15-22	COMPLETED 06-15-22																	
8. TOTAL DEPTH OF BORING 5.0 Ft.				16. ELEVATION TOP OF BORING		2.5 Ft.																		
				17. TOTAL RECOVERY FOR BORING		100 %																		
				18. SIGNATURE AND TITLE OF INSPECTOR Will Warren, PG, Geologist																				
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS	% REC.	BOX OR SAMPLE	RQD OR UD	REMARKS	BLOWS/ 1 FT.	N-VALUE															
2.5	0.0		SAND, poorly-graded, mostly fine-grained sand-sized quartz, moist, 10Y 5/1 greenish gray (SP)		1		2.5																	
0.5	2.0						0.5																	
0.0	2.5		SAND, clayey, mostly fine-grained sand-sized quartz, some clay, moist, 10Y 5/1 greenish gray (SC)		2		0.0																	
			SAND, poorly-graded, mostly fine-grained sand-sized quartz, moist, 10Y 5/1 greenish gray (SP)		3		-1.0																	
-2.5	5.0		From El. -1.0 to -2.5 Ft., mostly fine-grained sand-sized quartz, moist, 10Y 5/1 greenish gray		4		-2.5																	
			NOTES: 1. Taylor Engineering is the custodian for these original files. 2. Soils are field visually classified in accordance with the Unified Soils Classification System. 3. Laboratory Testing Results <table border="1"> <thead> <tr> <th>SAMPLE ID</th> <th>SAMPLE DEPTH</th> <th>LABORATORY CLASSIFICATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.0/2.0</td> <td>SP*</td> </tr> <tr> <td>2</td> <td>2.0/2.5</td> <td>SC*</td> </tr> <tr> <td>3</td> <td>2.5/3.5</td> <td>SP*</td> </tr> <tr> <td>4</td> <td>3.5/5.0</td> <td>SP*</td> </tr> </tbody> </table> *Lab visual classification based on gradation curve	SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION	1	0.0/2.0	SP*	2	2.0/2.5	SC*	3	2.5/3.5	SP*	4	3.5/5.0	SP*	Abbreviations:					
SAMPLE ID	SAMPLE DEPTH	LABORATORY CLASSIFICATION																						
1	0.0/2.0	SP*																						
2	2.0/2.5	SC*																						
3	2.5/3.5	SP*																						
4	3.5/5.0	SP*																						

ATTACHMENT D
SEDIMENT TESTING RESULTS SUMMARY TABLE

Sediment Testing Results Summary Table

Boring	Sample Number	Depth (ft)	Elevation (MLLW)	USCS Classification	Retained #4 Sieve (%)	Passing #200 Sieve (%)	Mean (mm)	Moist Munsell Color
HA22-01	1	0.0	3.0	SP	1.0	0.8	0.18	5Y 5/1
	2	1.5	1.5	SP	22.1	1.3	0.55	5Y 5/1
	3	2.5	0.5	SP	17.6	0.7	0.48	10Y 5/1
	4	3.5	-0.5	SP	9.1	0.6	0.27	10Y 5/1
HA22-02	1	0.0	5.5	SP	0.8	0.6	0.17	5GY 5/1
	2	2.0	3.5	SP	0.0	0.4	0.16	10Y 5/1
	3	4.0	1.5	SP	0.0	0.6	0.16	10Y 5/1
HA22-03	1	0.0	2.5	SP	0.1	0.3	0.15	10Y 5/1
	2	2.0	0.5	SC	0.0	30.4	0.16	10Y 5/1
	3	2.5	0.0	SP	0.0	0.4	0.16	10Y 5/1
	4	3.5	-2.5	SP	0.0	0.6	0.15	10Y 5/1

ATTACHMENT E
GRANULOMETRIC TABLES

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-01 @ 0 ft

Analysis Date: 6/22/2022

Easting (ft):

577,581

Northing (ft):

1,957,635

Coordinate System:

State Plane, FLE (U.S. Ft.)

Elevation (ft):

3.0 NAVD88

USCS:

SP

Munsell:

5Y 5/1

Fines (%):

#200 - 0.78

Organics (%):

Carbonates (%):

Shells (%):

Sieve Number

Sieve Size
(Phi)

Sieve Size
(Millimeters)

% Weight
Retained

C. % Weight
Retained

#4

-2.25

4.75

0.96

0.96

#10

-1.00

2.00

1.72

2.67

#20

0.25

0.85

1.34

4.01

#40

1.25

0.43

1.81

5.82

#50

1.75

0.30

1.17

6.99

#70

2.25

0.21

3.04

10.04

#100

2.75

0.15

49.65

59.68

#140

3.25

0.11

35.48

95.17

#200

3.75

0.08

4.05

99.22

SAND, poorly-graded, mostly
fine-grained sand-sized quartz
(SP)

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.25

3.09

2.97

2.65

2.40

2.31

0.80

Moment

Mean Phi

Mean mm

Median Phi

Median mm

Sorting

Skewness

Kurtosis

Statistics

2.50

0.18

2.65

0.16

0.78

-3.26

16.49

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-01 @ 1.5 ft

Analysis Date: 6/22/2022

Easting (ft): 577,581	Northing (ft): 1,957,635	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 1.5 NAVD88
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USCS: SP	Munsell: 5Y 5/1	Fines (%): #200 - 1.31	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	22.06	22.06
#10	-1.00	2.00	9.36	31.42
#20	0.25	0.85	4.76	36.17
#40	1.25	0.43	3.15	39.33
#50	1.75	0.30	0.88	40.21
#70	2.25	0.21	1.51	41.72
#100	2.75	0.15	26.89	68.60
#140	3.25	0.11	28.04	96.64
#200	3.75	0.08	2.04	98.69

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little shell (SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.22	3.02	2.86	2.40	-1.86			
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.86	0.55	2.40	0.19	1.69	0.59	1.55

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-01 @ 2.5 ft

Analysis Date: 6/22/2022

Easting (ft): 577,581	Northing (ft): 1,957,635	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 0.5 NAVD88
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USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.68	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	17.56	17.56
#10	-1.00	2.00	10.03	27.59
#20	0.25	0.85	4.80	32.39
#40	1.25	0.43	3.03	35.42
#50	1.75	0.30	0.95	36.37
#70	2.25	0.21	1.42	37.79
#100	2.75	0.15	34.87	72.66
#140	3.25	0.11	24.27	96.93
#200	3.75	0.08	2.39	99.32

SAND, poorly-graded, mostly
fine-grained sand-sized quartz, little
shell (SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.21	2.98	2.80	2.43	-1.32			
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.07	0.48	2.43	0.19	1.62	0.24	1.64

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-01 @ 3.5 ft

Analysis Date: 6/22/2022

Easting (ft): 577,581	Northing (ft): 1,957,635	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): -0.5 NAVD88
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USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.64	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	9.06	9.06
#10	-1.00	2.00	4.83	13.89
#20	0.25	0.85	2.53	16.42
#40	1.25	0.43	1.78	18.20
#50	1.75	0.30	0.72	18.92
#70	2.25	0.21	1.45	20.37
#100	2.75	0.15	39.60	59.98
#140	3.25	0.11	36.64	96.62
#200	3.75	0.08	2.74	99.36

SAND, poorly-graded, mostly
fine-grained sand-sized quartz
(SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.23	3.08	2.95	2.62	2.31	0.04		
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	1.90	0.27	2.62	0.16	1.19	-1.05	4.47

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-02 @ 0 ft

Analysis Date: 6/22/2022

Easting (ft): 577,458	Northing (ft): 1,957,322	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 5.5 NAVD88
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USCS: SP	Munsell: 5GY 5/1	Fines (%): #200 - 0.62	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.75	0.75
#10	-1.00	2.00	1.29	2.03
#20	0.25	0.85	1.30	3.33
#40	1.25	0.43	1.07	4.40
#50	1.75	0.30	1.08	5.48
#70	2.25	0.21	2.89	8.37
#100	2.75	0.15	43.53	51.91
#140	3.25	0.11	43.36	95.26
#200	3.75	0.08	4.11	99.38

SAND, poorly-graded, mostly
fine-grained sand-sized quartz
(SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.25	3.12	3.02	2.73	2.44	2.34	1.53	
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.58	0.17	2.73	0.15	0.72	-3.58	19.71

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-02 @ 2 ft

Analysis Date: 6/22/2022

Easting (ft): 577,458	Northing (ft): 1,957,322	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 3.5 NAVD88
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USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.40	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.05	0.05
#10	-1.00	2.00	0.62	0.67
#20	0.25	0.85	0.87	1.54
#40	1.25	0.43	1.33	2.87
#50	1.75	0.30	1.08	3.95
#70	2.25	0.21	3.88	7.83
#100	2.75	0.15	54.03	61.86
#140	3.25	0.11	32.93	94.79
#200	3.75	0.08	4.82	99.60

SAND, poorly-graded, mostly fine-grained sand-sized quartz (SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.27	3.09	2.95	2.64	2.41	2.33	1.89	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.61	0.16	2.64	0.16	0.6	-3.53	22.57

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-02 @ 4 ft

Analysis Date: 6/22/2022

Easting (ft): 577,458	Northing (ft): 1,957,322	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 1.5 NAVD88
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USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.59	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.03	0.03
#10	-1.00	2.00	0.39	0.41
#20	0.25	0.85	1.07	1.49
#40	1.25	0.43	1.35	2.84
#50	1.75	0.30	1.09	3.93
#70	2.25	0.21	3.81	7.74
#100	2.75	0.15	48.22	55.96
#140	3.25	0.11	39.95	95.91
#200	3.75	0.08	3.49	99.41

SAND, poorly-graded, mostly fine-grained sand-sized quartz (SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.24	3.10	2.99	2.69	2.43	2.34	1.89	
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.63	0.16	2.69	0.15	0.58	-3.45	21.26

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granulometric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-03 @ 0 ft

Analysis Date: 6/22/2022

Easting (ft): 577,405	Northing (ft): 1,956,955	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 2.5 NAVD88
---------------------------------	------------------------------------	--	--------------------------------------

USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.32	Organics (%):	Carbonates (%):	Shells (%):
--------------------	----------------------------	----------------------------------	---------------	-----------------	-------------

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.07	0.07
#10	-1.00	2.00	0.13	0.20
#20	0.25	0.85	0.06	0.26
#40	1.25	0.43	0.07	0.33
#50	1.75	0.30	0.13	0.46
#70	2.25	0.21	1.51	1.97
#100	2.75	0.15	52.04	54.01
#140	3.25	0.11	40.49	94.50
#200	3.75	0.08	5.18	99.68

SAND, poorly-graded, mostly
fine-grained sand-sized quartz
(SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.30	3.12	3.01	2.71	2.47	2.38	2.28	
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.73	0.15	2.71	0.15	0.36	-2.48	33.34

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granulometric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-03 @ 2 ft

Analysis Date: 6/22/2022

Easting (ft): 577,405	Northing (ft): 1,956,955	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 0.5 NAVD88
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USCS: SC	Munsell: 10Y 5/1	Fines (%): #200 - 30.38	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#10	-1.00	2.00	0.16	0.16
#20	0.25	0.85	0.55	0.71
#40	1.25	0.43	0.96	1.67
#50	1.75	0.30	1.17	2.84
#70	2.25	0.21	4.49	7.33
#100	2.75	0.15	30.39	37.73
#140	3.25	0.11	28.93	66.66
#200	3.75	0.08	2.96	69.62

SAND, clayey, mostly fine-grained sand-sized quartz, some clay (SC)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
			2.96	2.54	2.39	1.99	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.65	0.16	2.96	0.13	0.55	-2.89	17.83

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-03 @ 2.5 ft

Analysis Date: 6/22/2022

Easting (ft): 577,405	Northing (ft): 1,956,955	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): 0.0 NAVD88
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USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.42	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#10	-1.00	2.00	0.05	0.05
#20	0.25	0.85	0.06	0.11
#40	1.25	0.43	0.36	0.47
#50	1.75	0.30	0.70	1.17
#70	2.25	0.21	2.55	3.72
#100	2.75	0.15	58.18	61.90
#140	3.25	0.11	34.07	95.97
#200	3.75	0.08	3.61	99.58

SAND, poorly-graded, mostly
fine-grained sand-sized quartz
(SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.24	3.07	2.94	2.65	2.43	2.36	2.26	
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.68	0.16	2.65	0.16	0.36	-1.6	18.99

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

Granularmetric Report



Taylor Engineering, Inc.

Project Name:
SJ-1 Shoreline Stabilization

Sample Name: HA22-03 @ 3.5 ft

Analysis Date: 6/22/2022

Easting (ft): 577,405	Northing (ft): 1,956,955	Coordinate System: State Plane, FLE (U.S. Ft.)	Elevation (ft): -1.0 NAVD88
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USCS: SP	Munsell: 10Y 5/1	Fines (%): #200 - 0.58	Organics (%):	Carbonates (%):	Shells (%):
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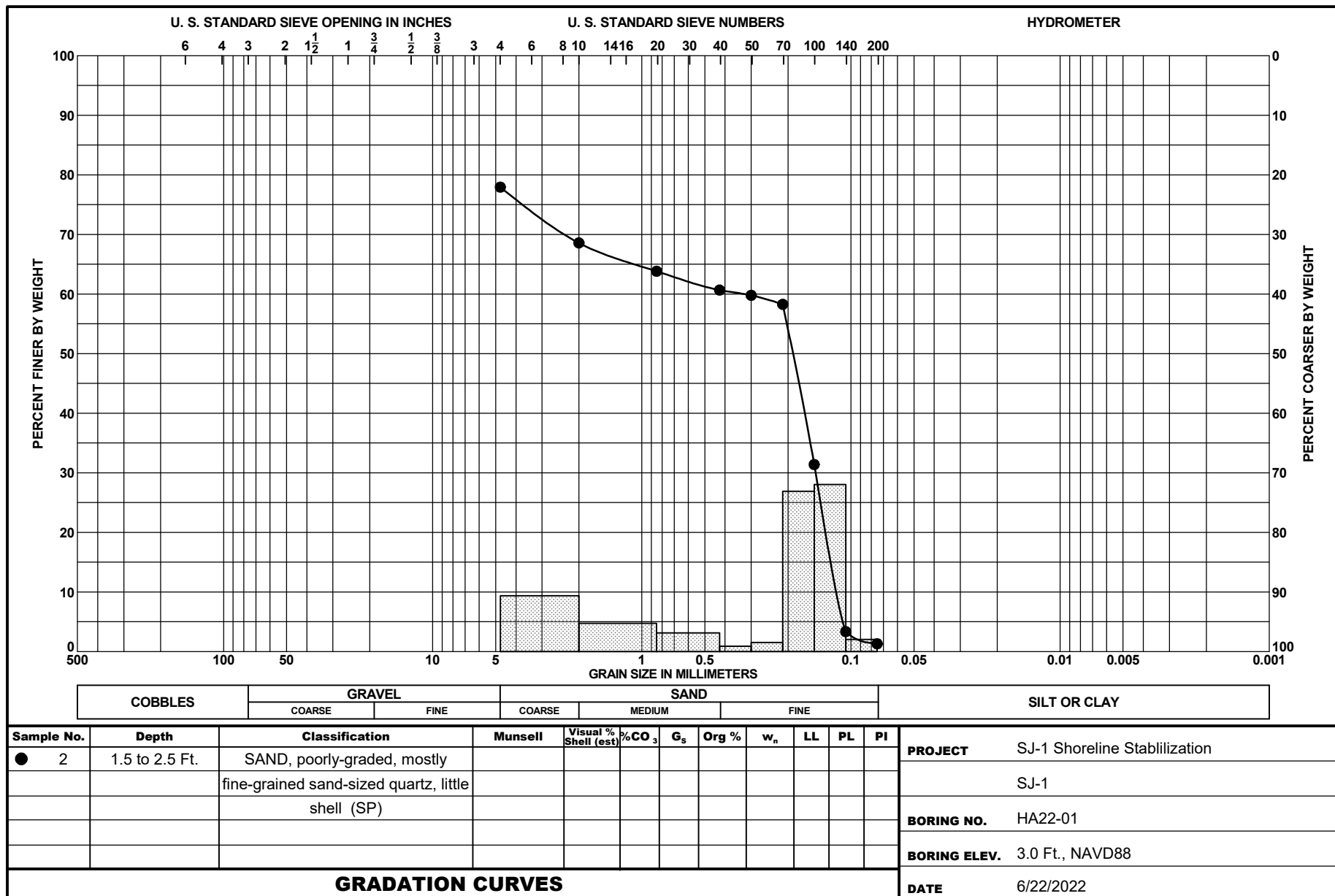
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#10	-1.00	2.00	0.05	0.05
#20	0.25	0.85	0.03	0.07
#40	1.25	0.43	0.21	0.29
#50	1.75	0.30	0.49	0.78
#70	2.25	0.21	2.00	2.78
#100	2.75	0.15	51.32	54.10
#140	3.25	0.11	42.01	96.11
#200	3.75	0.08	3.31	99.42

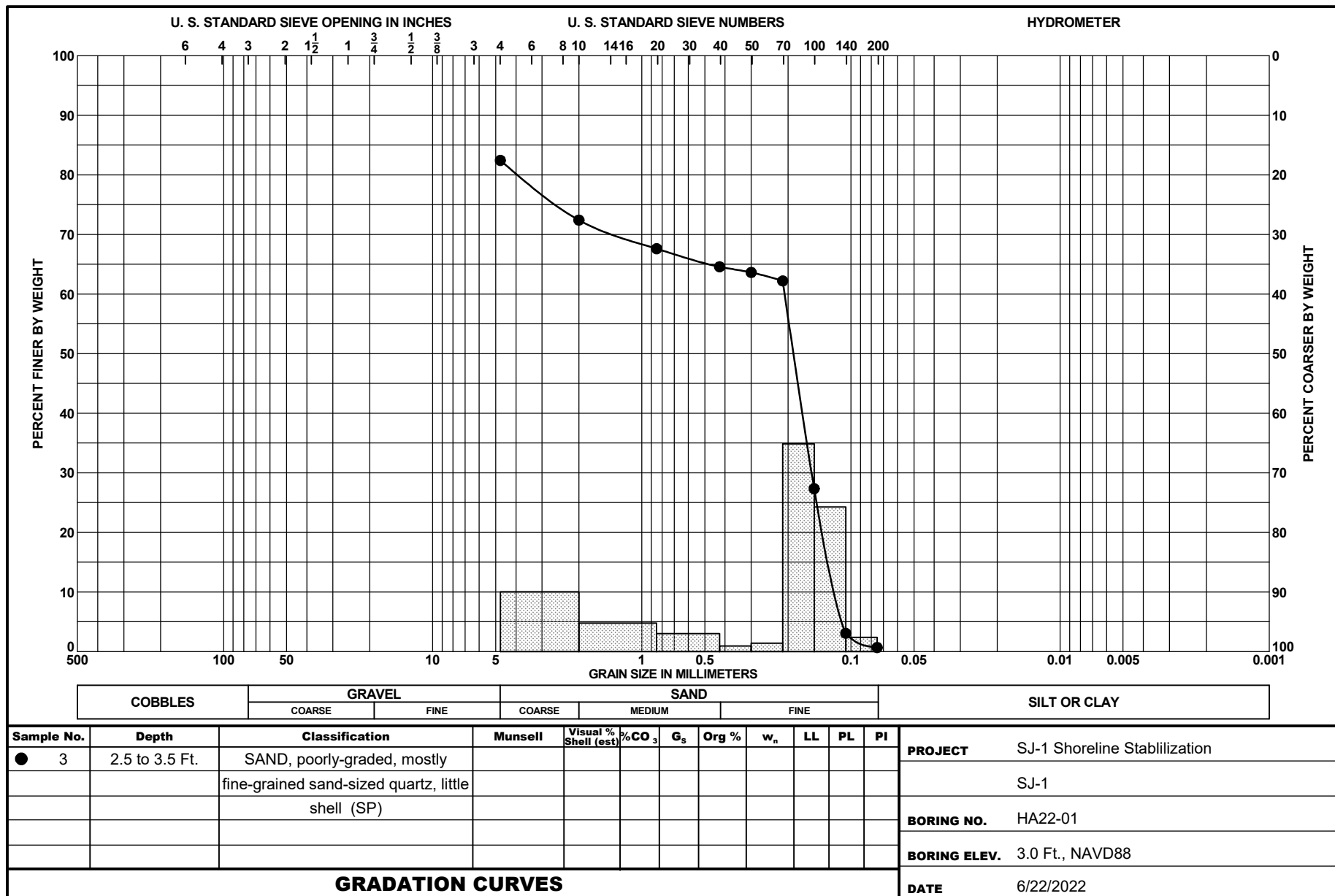
SAND, poorly-graded, mostly
fine-grained sand-sized quartz
(SP)

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.24	3.11	3.00	2.71	2.47	2.38	2.27	
Moment	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
Statistics	2.72	0.15	2.71	0.15	0.34	-1.54	19.12

GRANULARMETRIC REPORT % SJ-1_GINT.GPJ CESAJ 20171021.GDT 6/28/22

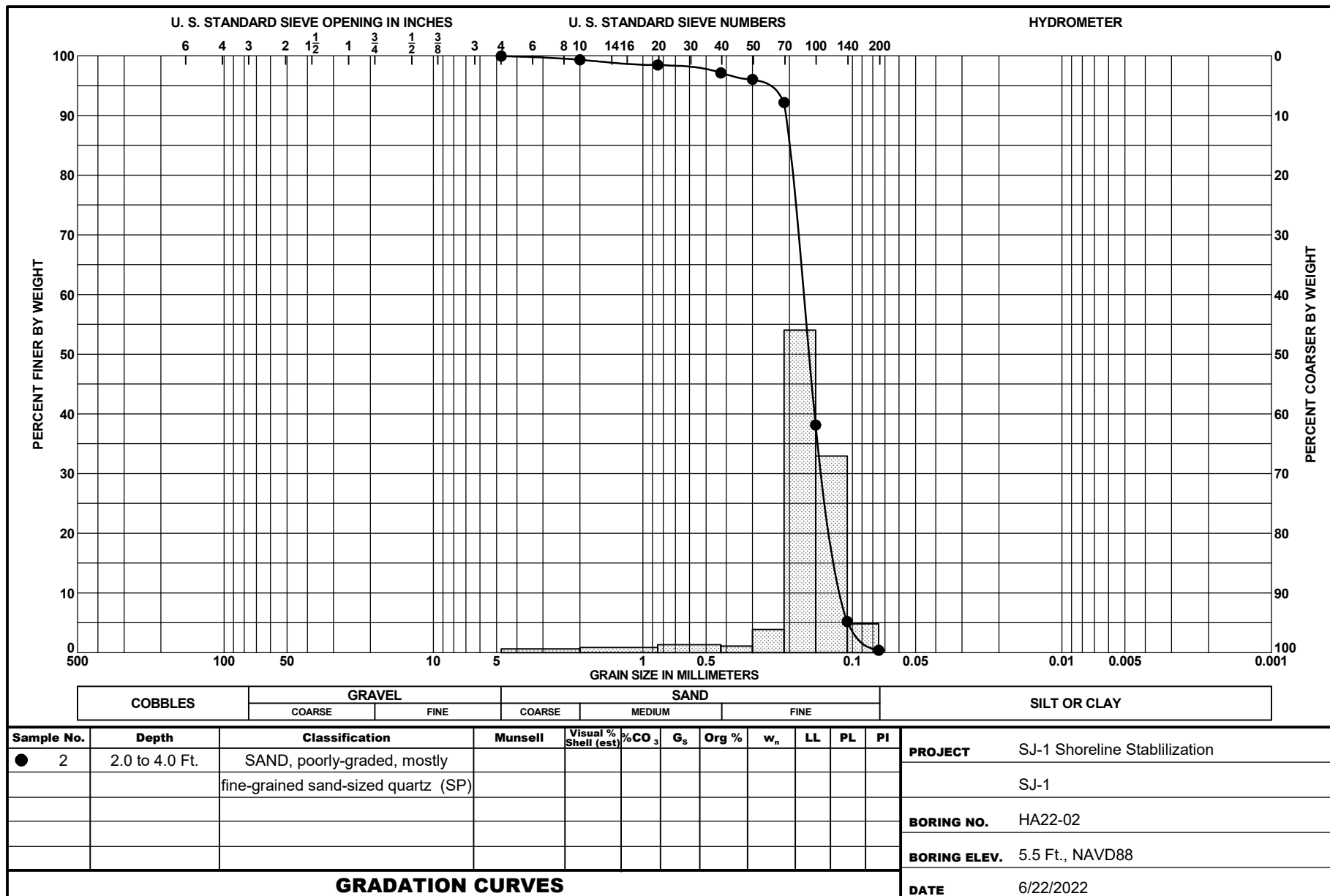
ATTACHMENT F
GRAIN SIZE DISTRIBUTION CURVES



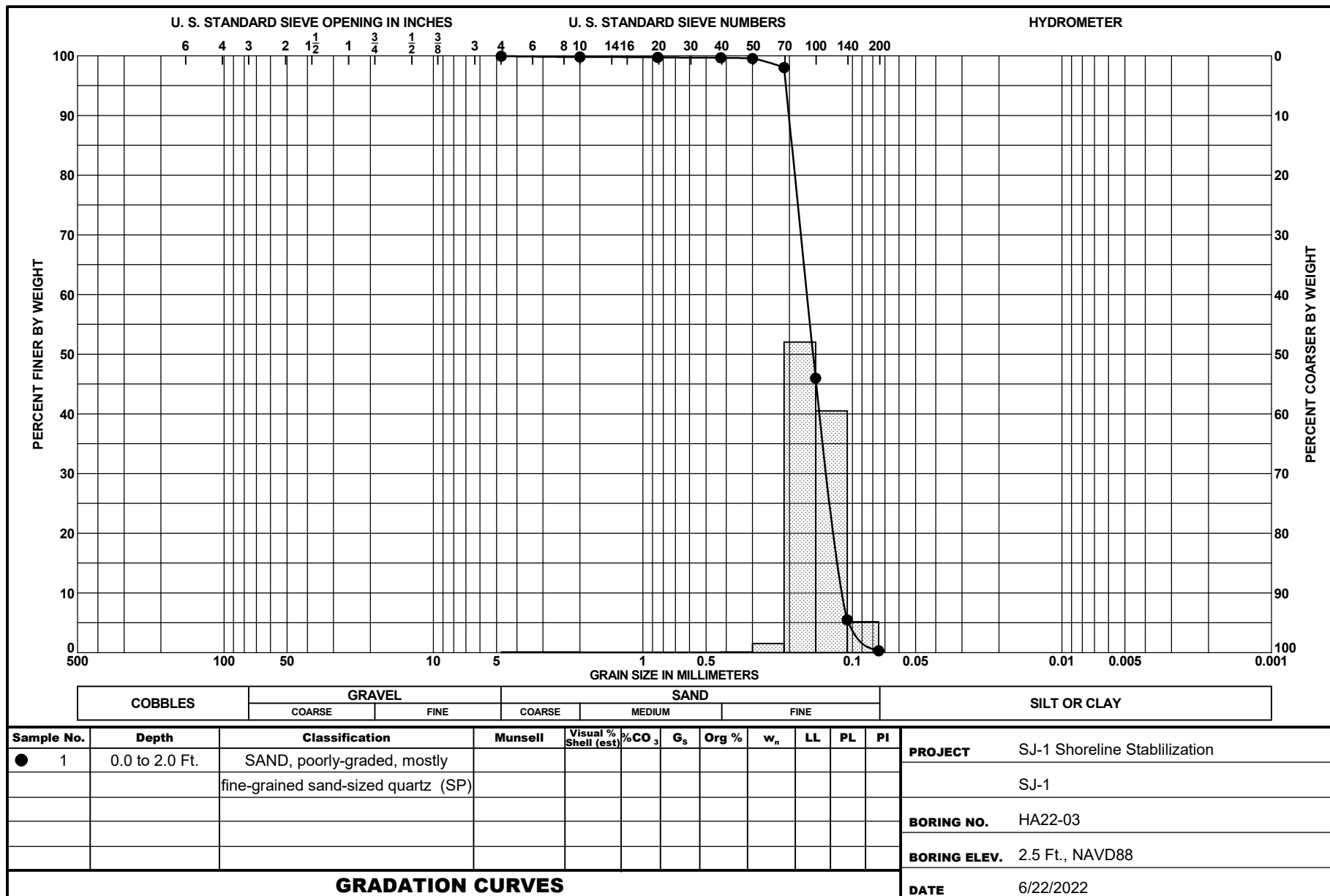


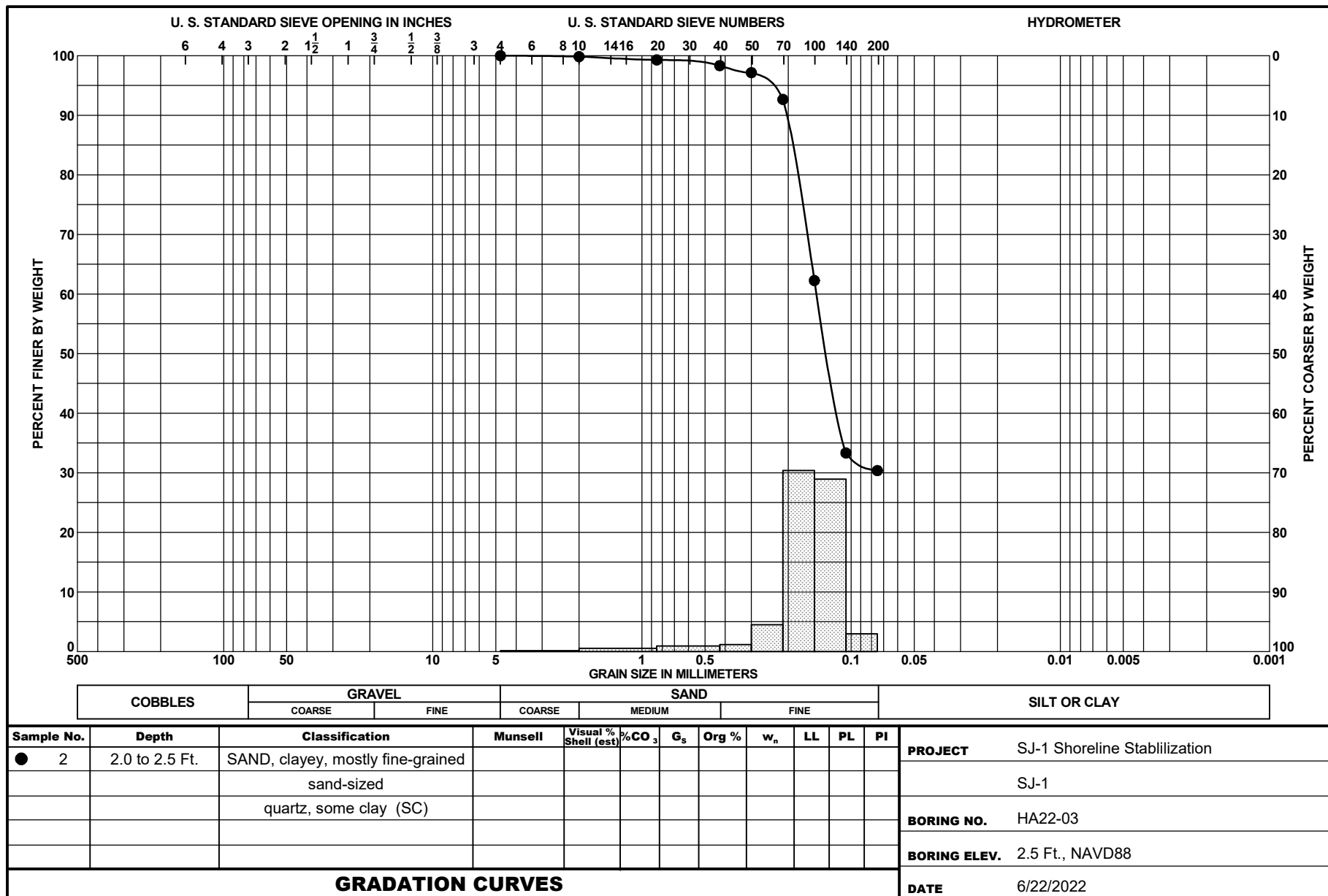


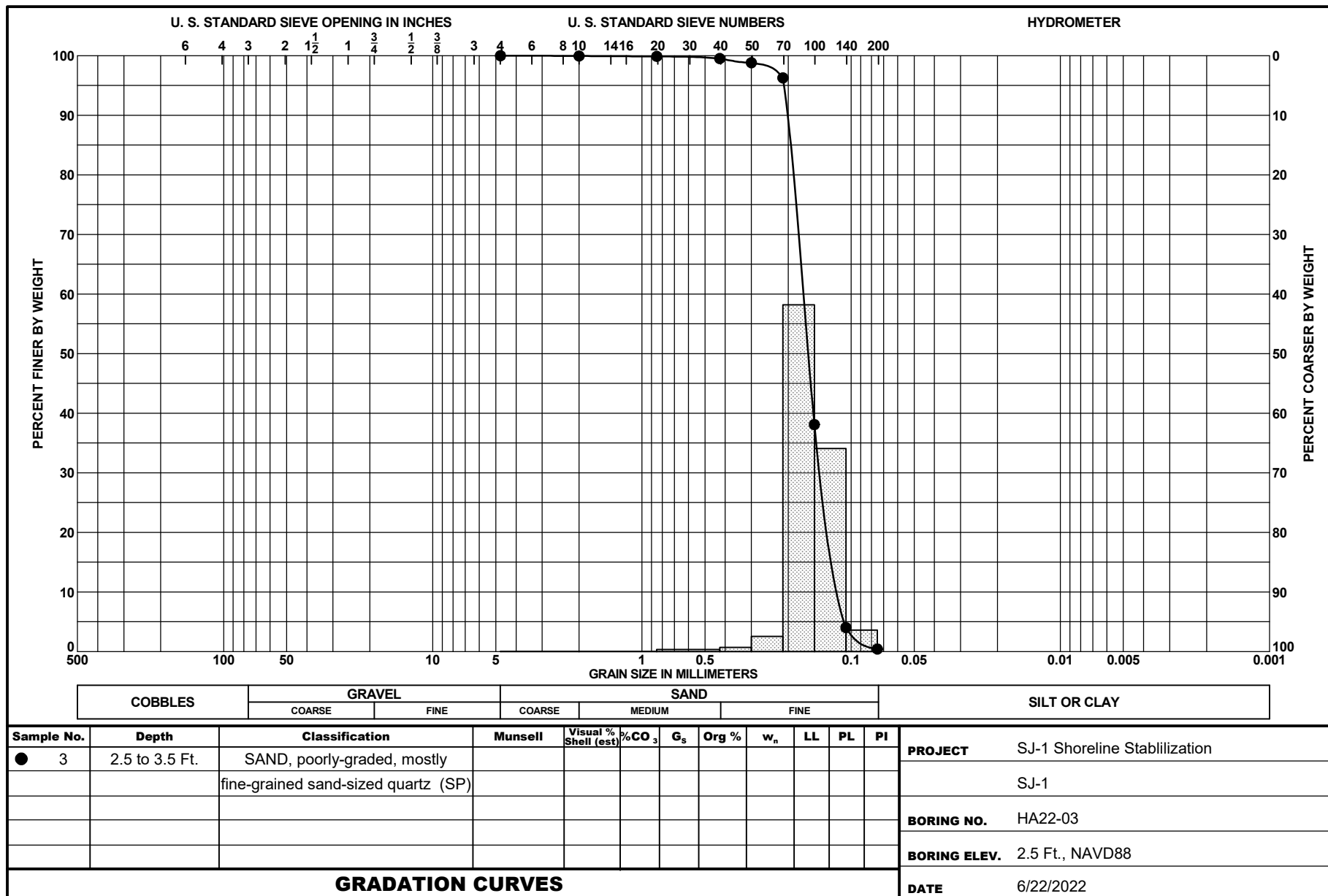


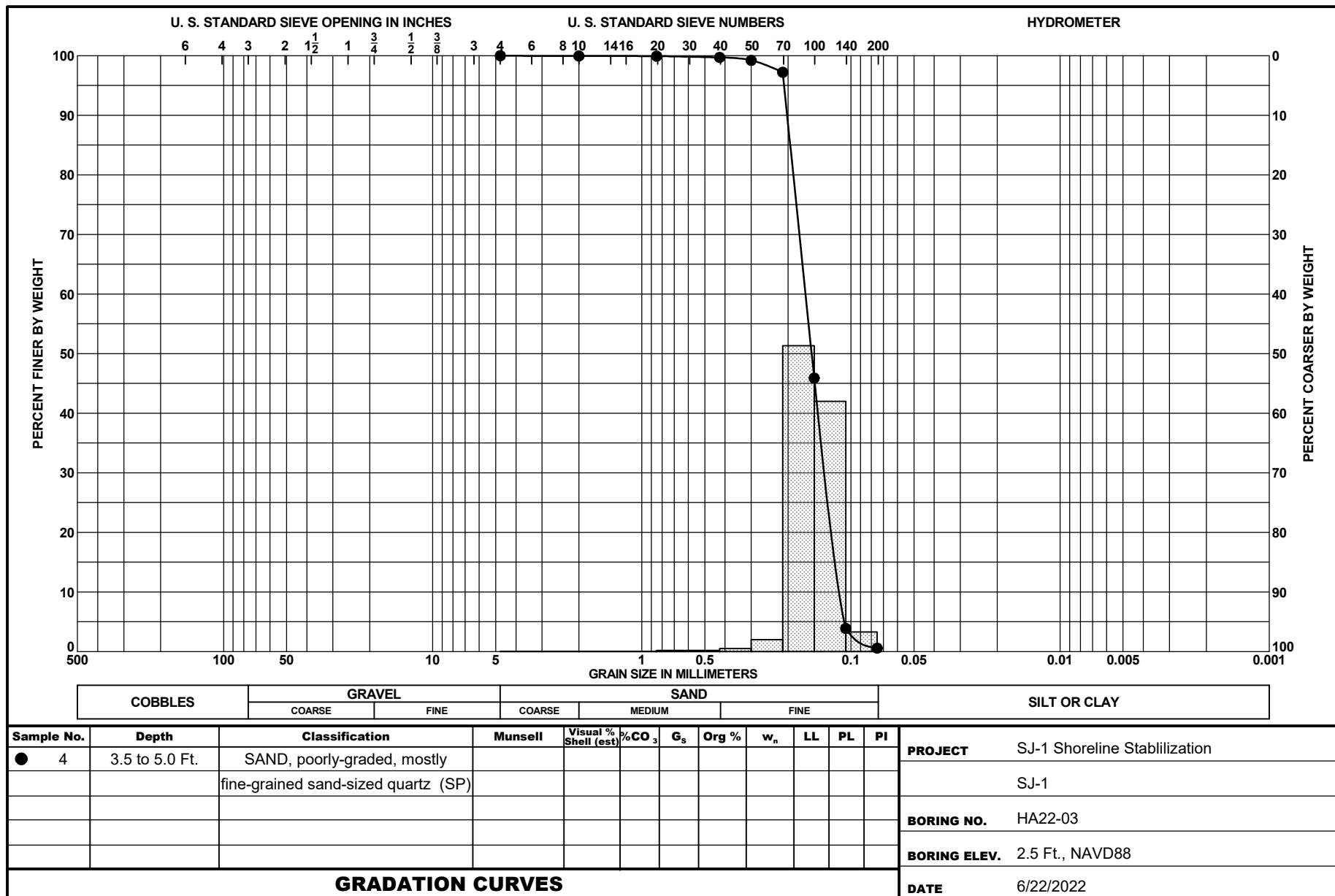








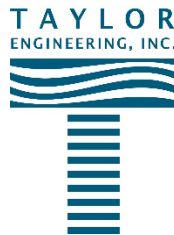






DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADDITIONAL SHORELINE IMPROVEMENTS ST. JOHNS COUNTY, FLORIDA

APPENDIX C Draft Submittal Register



10199 Southside Blvd. Suite 310
Jacksonville, Florida 32256
Phone: (904) 731-7040
Fax: (904) 731-9847
www.TaylorEngineering.com
(Taylor Engineering Contract No. C2021-082-01)

SECTION 01 33 00A
SUBMITTAL REGISTER

PROJECT NAME: Dredged Management Material Area SJ-1 Shoreline Improvements; St. Johns County, FL						CONTRACTOR:						
			TYPE			CONTRACTOR ACTION/SCHEDULE DATES			ENGINEER ACTION		REMARKS	
T R A N S M I T T A L N O	SPEC. SECTION NO.	DESCRIPTION OF ITEMS SUBMITTED	P R E C O U N B S M T I R T U T L I O N	E N G I N 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 N E E D E D B Y	M A T T L N E E D E D B Y	D A T E	A P P R O V A L C O D E	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
SJ-1 SHORELINE IMPROVEMENTS												
SECTION 01 31 00 PROJECT MANAGEMENT												
01	01 31 00	List of Subcontractors	X		X							
02	01 31 00	Signature of Authority	X		X							
03	00 73 19	Accident Prevention Plan (APP)	X		X							
04	00 73 19	Accident Reports			X							
SECTION 01 33 00 SUBMITTAL PROCEDURES												
05	01 33 00	Final Submittal Register	X	X								
SECTION 01 35 43 ENVIRONMENTAL PROTECTION												
06	01 35 43	Gopher Tortoise Survey	X		X							
07	01 35 43	Confirmation of Gopher Tortoise Relocation	X		X							
08	01 35 43	Environmental Protection Plan	X	X								
09	01 35 43	Erosion and Sediment Control Plan	X	X								
10	01 35 43	Fuel Storage Tank and Spill Containment	X	X								
11	01 35 43	Copy of Project Permits and Inspection Logs	X		X							
SECTION 01 45 00 CONTRACTOR QUALITY CONTROL												
12	01 45 00	Quality Control Plan	X	X								
13	01 45 00	Quality Control Logs			X							
14	01 45 00	Registered Surveyor Qualifications	X	X								
SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS												
15	01 50 00	Mobilization/Demobilization Plan	X	X								
16	01 50 00	Hurricane and Severe Storm Plan	X	X								
17	01 50 00	Temporary Facility Shop Drawings	X	X								
SECTION 01 77 00 PROJECT CLOSE OUT												
18	01 77 00	Record Drawings		X								
19	01 77 00	As-Built Drawings		X								
20	01 77 00	Request for Inspection			X							
SECTION 31 10 00 SITE CLEARING AND GRUBBING												
21	31 10 00	Vegatative and Rubbish Disposal Verification	X	X								
SECTION 33 05 61 DRAINAGE STRUCTURES												
22	33 05 61	Inlet Shop Drawings	X	X								
23	33 05 61	HDPE Pipe Product Information	X	X								
SECTION 35 20 26 SEA OAT PLANTING												
24	35 20 26	Watering Plan	X	X								
25	35 20 26	Planting Material Certificates	X	X								
SECTION 35 42 37 BEDDING AND ARMOR STONE												
26	35 31 17	Armor Stone Product Data		X								

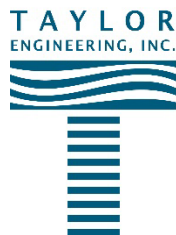
SECTION 01 33 00A
SUBMITTAL REGISTER

PROJECT NAME: Dredged Management Material Area SJ-1 Shoreline Improvements; St. Johns County, FL						CONTRACTOR:						
			TYPE			CONTRACTOR ACTION/SCHEDULE DATES			ENGINEER ACTION		REMARKS	
T R A N S M I T T A L N O	SPEC. SECTION NO.	DESCRIPTION OF ITEMS SUBMITTED	P R E C S O U N B S M T I R T U T C A T L I O N	E N G I N E R A T I O N P P 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 N E E D E D B Y	M A T T E R I A L N E E D E D B Y	DATE	A P P R O V E D A L C O R R E C T E D	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
27	35 31 17	Bedding Stone Product Data	X	X								
28	35 31 17	Stone Test Results	X	X								
29	35 31 17	Stone Samples										
30	35 31 17	Stone Inspection Notice			X							
31	35 31 17	Geotextile Fabric Product Data	X	X								



DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADDITIONAL SHORELINE IMPROVEMENTS ST. JOHNS COUNTY, FLORIDA

APPENDIX D General Forms



10199 Southside Blvd. Suite 310
Jacksonville, Florida 32256
Phone: (904) 731-7040
Fax: (904) 731-9847

www.TaylorEngineering.com

(Taylor Engineering Contract No. C2021-082-01)

PREPATORY PHASE CHECKLIST

PROJECT: DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADITONAL SHORELINE IMPROVEMENTS; ST JOHNS COUNTY, FLORIDA

SPECIFICATION SECTION & PARAGRAPH: _____ **TITLE:** _____
DRAWING SHEET NUMBER: _____ **WORK SEGMENT:** _____

A. PERSONNEL PRESENT

NAME	POSITION	COMPANY
1.		
2.		
3.		
4.		
5.		

**Attach additional sheets as necessary*

B. HAS EACH SPECIFICATION PARAGRAPH AND DRAWING BEEN STUDIED?
YES _____ NO _____

C. SUBMITTALS INVOLVED

NUMBER AND ITEM	CODE	CONTRACTOR OR ENGINEER APPROVAL
1.		
2.		
3.		
4.		
5.		

**Attach additional sheets as necessary*

HAVE ALL ITEMS INVOLVED BEEN APPROVED?
YES _____ NO _____

IF NO, LIST: _____

D. ARE ALL MATERIALS ON HAND?
YES _____ NO _____

HAVE ALL MATERIALS BEEN CHECKED FOR CONTRACT COMPLAINEE AGAINST SHOP APPROVED DRAWINGS?
YES _____ NO _____

ITEMS NOT ON HAND OR IN ACCORDANCE WITH TRANSMITTALS:

1. _____
2. _____
3. _____

E. TESTS REQUIRED IN ACCORDANCE WITH CONTRACT REQUIREMENTS:

TEST	NUMBER AND ITEM
1.	
2.	
3.	
4.	

**Attach additional sheets as necessary*

F. ACCIDENT PREVENTION PREPLANNING – HAZARD CONTROL MEASURES

APPLICABLE OUTLINES (attach completed copies):

1. _____
2. _____
3. _____
4. _____

OPERATIONAL EQUIPMENT CHECKLISTS

ATTACHED FOR:

1. _____
2. _____
3. _____
4. _____

ON FILE FOR:

1. _____
2. _____
3. _____
4. _____

G. HAVE PROCEDURES FOR ACCOMPLISHING WORK BEEN REVIEWED WITH APPROPRIATE PEOPLE?

YES _____ NO _____

H. HAS ALL PRELIMINARY WORK BEEN ACCOMPLISHED IN ACCORD WITH CONTRACT REQUIREMENTS AND IS THIS SEGMENT OF WORK READY TO START?

YES _____ NO _____

IF NO, EXPLAIN ANY PROBLEMS ON ATTACHED SHEETS.

CQC SYSTEM MANAGER SIGNATURE & DATE

INITIAL PHASE CHECKLIST

PROJECT: DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADITIONAL SHORELINE IMPROVEMENTS; ST JOHNS COUNTY, FLORIDA

SPECIFICATION SECTION & PARAGRAPH: _____ **TITLE:** _____
DESCRIPTION AND LOCATION OF WORK INSPECTED: _____

A. PERSONNEL PRESENT

NAME	POSITION	COMPANY
1.		
2.		
3.		
4.		
5.		

**Attach additional sheets as necessary*

B. MATERIAL BEING USED ARE IN STRICT COMPLIANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS?

YES _____ NO _____

IF NO, EXPLAIN: _____

C. PROCEDURES AND/OR WORK METHODS WITNESSED ARE IN STRICT COMPLIANCE WITH THE REQUIREMENT OF THE CONTRACT SPECIFICATIONS?

YES _____ NO _____

IF NO, EXPLAIN: _____

D. WORKMANSHIP IS ACCEPTABLE?

YES _____ NO _____

STATE AREAS WHERE IMPROVEMENT IS NEEDED: _____

E. SAFETY VIOLATIONS AND CORRECTIVE ACTIONS TAKEN? _____

CQC SYSTEM MANAGER SIGNATURE & DATE

AFFIDAVIT

PROJECT: DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADITIONAL SHORELINE IMPROVEMENTS; ST. JOHNS COUNTY, FLORIDA

STATE OF FLORIDA

COUNTY OF _____

Before me, the undersigned authority, authorized to administer oaths and take acknowledgements, personally appeared _____, who, after being first duly sworn, upon oath deposes and says that all lienors contracting directly with, or directly employed by (him, them, it) and that all taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax) as amended, have been paid and discharged, and that all bills, wages, fees, claims, and other charges incurred by _____ in connection with the construction of: _____

_____ have been paid in full.

SIGNED:

By: _____

WITNESSES:

By: _____

Sworn and subscribed to before me this day _____, 20____AD.

Notary Public
State of Florida-at-Large
My Commission Expires: _____

CERTIFICATION OF CONTRACTOR

PROJECT: DREDGED MATERIAL MANAGEMENT AREA AREA SJ-1 ADITONAL
SHORELINE IMPROVEMENTS; ST. JOHNS COUNTY, FLORIDA

According to the best of my knowledge and belief, I certify that all items and amounts shown on Application for Payment No. _____ are correct, and that all work has been performed and/or materials supplied in full accordance with the terms and conditions of this Contract, dated _____, 20_____, between _____ (Owner) and _____ (Contractor);

I further certify that all just and lawful bills against the undersigned and his subcontractors and suppliers for labor, materials and equipment employed in the performance of this Contract have been paid in full accordance with their terms and conditions; that all taxes imposed by Chapter 212, Florida Statutes (Sales and Use Tax Act), as amended, have been paid and discharged; and that there are no Vendor's, Mechanic's or other Liens or right to liens or conditional sales contracts which should be satisfied or discharged before such payment is made.

Date: _____ Contractor: _____

STATE OF FLORIDA

COUNTY OF _____

Personally appeared before me this _____ day of _____, 20____

_____ known (or made known) to me as the _____

_____ (Owner) (Partner) (Corporate Officer) – Give Title of _____

_____ Contractor(s), who subscribed and swore to the above instrument in my presence.

Notary Public
State of Florida-at-Large
My Commission Expires: _____

The Contractor shall execute this Certificate and attach it to each Application for Payment.

FINAL RELEASE OF LIEN

PROJECT: DREDGED MATERIAL MANAGEMENT AREA SJ-1 ADDITIONAL SHORELINE IMPROVEMENTS; ST. JOHNS COUNTY, FLORIDA

KNOW ALL MEN BY THESE PRESENT, that _____
_____ for and in consideration of the sum
of _____ Dollars (\$) paid
to _____ by the _____
_____ receipt of which is hereby acknowledged, do(es) hereby release and quitclaim to
the Owner, its successors or assigns, all liens, lien rights, claims or demands of any kind
whatsoever which _____ now has (have)
or might have against the property, building, and/or for any incidental expense for the
construction of: _____

thereon or in otherwise improving said property situated as above described.

IN WITNESS WHEREOF _____ have (has) hereunto set hand and seal this _____
day of _____, 20____, A.D.

WITNESS:

(Seal)

Sworn and subscribed to before me this day _____, 20____AD.

Notary Public
State of Florida-at-Large
My Commission Expires: _____