

**MANATEE COUNTY  
COQUINA BEACH HURRICANE IDALIA STORM DAMAGE REPAIR PROJECT  
TECHNICAL SPECIFICATIONS**

  
\_\_\_\_\_  
CHELSEA RYAN, P.E. NO. 98991

5/21/2026  
DATE

**MANATEE COUNTY  
COQUINA BEACH HURRICANE IDALIA STORM DAMAGE REPAIR PROJECT  
TECHNICAL SPECIFICATIONS**

**Table of Contents**

**PART 1 – SUPPLEMENTAL GENERAL CONDITIONS**

1.	COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK.....	1
2.	CONTRACT DOCUMENTS.....	1
3.	DELAYS AND EXTENSIONS OF TIME.....	3
4.	PERFORMANCE OF WORK BY CONTRACTOR.....	6
5.	SUBCONTRACTORS.....	7
6.	SIMULTANEOUS WORK BY OTHERS.....	8
7.	SUPERINTENDENT.....	8
8.	ENGINEER.....	9
9.	TECHNICAL DISPUTE RESOLUTION.....	9
10.	PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.....	9
11.	PAYMENT FOR HYDRAULIC FILL PLACEMENT.....	10
12.	PAYMENT FOR BEACH TILLING.....	12
13.	RIGHT TO REFUSE RECOMMENDATION FOR PAYMENT.....	12
14.	COMPLETION OF WORK AND FINAL PAYMENT.....	13
15.	USE OF COMPLETED PORTIONS.....	15
16.	CHANGES AND EXTRAS.....	16
17.	CHANGE OF CONTRACT PRICE.....	16
18.	PHYSICAL DATA.....	17
19.	WEATHER.....	17
20.	BOAT TRAFFIC AND LONGBOAT PASS.....	17
21.	LOCAL PORT.....	17
22.	STATE AND FEDERAL PERMITS, EASEMENTS AND LICENSES.....	18
23.	LAYOUT OF WORK FOR HYDRAULIC FILL PLACEMENT.....	18
24.	CONTRACTOR QUALITY CONTROL.....	19
25.	PERMIT AGENCY PRE-CONSTRUCTION CONFERENCE.....	20
26.	CONTRACT PRE-CONSTRUCTION CONFERENCE.....	21
27.	WATER QUALITY MONITORING BY THE CONTRACTOR.....	21
28.	DREDGE REQUIREMENTS.....	22
29.	MISPLACED MATERIAL, PLANT MACHINERY, EQUIPMENT OR APPLIANCE.....	23
30.	FINAL CLEAN-UP.....	23
31.	SIGNAL LIGHTS.....	24
32.	NOTICE TO MARINERS.....	24
33.	UNDERWATER CABLES, PIPELINES, OUTFALL LINES, ETC.....	24
34.	LEGAL RESTRICTIONS AND TRAFFIC PROVISIONS.....	24
35.	ELECTRICITY AND OTHER UTILITIES.....	25
36.	ASSIGNMENT.....	25

37. PROTECTION OF PROPERTY AND WORK. ....25  
38. SAFETY.....26  
39. OTHER INSURANCE.....27  
40. DEFINITIONS.....27

**PART 2 – TECHNICAL PROVISIONS**

1. COQUINA BEACH RESTORATION PROJECT. ....28  
2. CONTRACTOR QUALIFICATION.....28  
3. ORDER OF WORK, PROJECT SCHEDULE, AND ACCEPTANCE SECTIONS..... 28  
4. DREDGE CUTTERHEAD LOCATION CONTROL.....30  
5. BORROW AREA EXCAVATION. ....30  
6. PIPELINES. .... 36  
7. HYDRAULIC PLACEMENT OF BEACH FILL. .... 37  
8. DRESSING THE NOURISHED BEACH. .... 40  
9. BEFORE AND AFTER DREDGE SURVEYS. .... 41  
10. VESSEL USE AT LONGBOAT PASS..... 44  
11. WORK AREA..... 45  
12. CONSTRUCTION ACCESS..... 45  
13. STAGING AREA. .... 46  
14. DAMAGES..... 46  
15. PROTECTION OF COASTAL STRUCTURES. .... 47  
16. BEACH TILLING. .... 47  
17. NIGHTTIME OPERATIONS. .... 48  
18. CONSTRUCTION PLANS AND CONTRACT DOCUMENTS..... 48  
19. BEACH USE FOR SPECIAL EVENTS. .... 48  
20. NOISE CONTROL. .... 49  
21. RESTRICTION OF PUBLIC ACCESS..... 49

**PART 3 – ENVIRONMENTAL PROVISIONS**

1. SCOPE.....50  
2. QUALITY CONTROL.....50  
3. PERMITS.....50  
4. SUBCONTRACTORS.....51  
5. NOTIFICATION.....51  
6. TURBIDITY CONTROL.....51  
7. PROTECTION OF ENVIRONMENTAL RESOURCES.....52  
8. POST-CONSTRUCTION CLEAN-UP.....56  
9. RESTORATION OF LANDSCAPE DAMAGE.....56  
10. OIL AND HAZARDOUS MATERIAL SPILLS AND CONTAINMENT.....56  
11. MAINTENANCE OF POLLUTION CONTROL FACILITIES.....56

12.	TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL AND ENVIRONMENTAL PROTECTION.....	57
13.	FUEL OIL TRANSFER OPERATIONS. ....	57
14.	ENVIRONMENTAL PROTECTION PLAN.....	57

**APPENDICES**

Appendix A	Contractor’s Daily Quality Control Report Form
Appendix B	Geotechnical Information
Appendix C	Sediment QA/QC Plan
Appendix D	Florida Department of Environmental Protection Permit No. 0298107-009-JN
Appendix D1	Permit Drawings
Appendix D2	FWC Regional Biologist Contact Information
Appendix E	U.S. Army Corps of Engineers Permit No. SAJ-2014-00606 (SP-CSH)
Appendix E1	FWC Standard Manatee Conditions for In-Water Work (2011)
Appendix E2	NMFS Sea Turtle and Smalltooth Sawfish Construction Conditions (2006)
Appendix E3	USFWS Biological Opinion, September 24, 2015 – Terms and Conditions
Appendix E4	USFWS Statewide Programmatic Biological Opinion – Terms and Conditions
Appendix E5	USFWS Programmatic Piping Plover Biological Opinion – Terms and Conditions
Appendix E6	NMFS Gulf Regional Biological Opinion – Terms and Conditions

**MANATEE COUNTY  
COQUINA BEACH HURRICANE IDALIA STORM DAMAGE REPAIR PROJECT  
TECHNICAL SPECIFICATIONS**

**PART 1 – SUPPLEMENTAL GENERAL CONDITIONS**

Notwithstanding any provision to the contrary in the Contract Documents, including but not limited to Section 7(H) of the Construction Agreement, any terms and conditions contained within the Technical Specifications are intended solely to describe the Work and shall not modify, amend, or supersede the terms and conditions of the County’s Construction Agreement. In the event of a conflict, the Construction Agreement shall control.

**1. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK.**

**1.1** The CONTRACTOR shall be required to commence Work as stipulated by the Contract Documents and the Notice to Proceed (NTP) issued by Manatee County (COUNTY). As a requirement of the Contract Documents, the CONTRACTOR shall commence dredging and prosecute said Work diligently and shall substantially complete the Work (“substantial completion”) no later than October 26, 2026. The time stated for substantial completion shall include completion of all dredging and fill placement operations, removal of pipe from the beach, grading, leveling of escarpments in the beach, tilling of the beach (if required), final clean-up of the premises and all repairs or restorations of facilities, structures, vegetation control documentation, or any other item disturbed or damaged by the CONTRACTOR or their subcontractor(s) as a result of project construction activities.

**1.2** The total number of days to complete the entire Work (“final completion”) will be 90 consecutive calendar days from the date of Contract NTP. The time stated for final completion includes lead time for mobilization of all resources (dredge, equipment, personnel and materials, etc.) necessary to complete the work and demobilization of said resources evidenced by the complete removal of all equipment and materials from the beach, staging and access areas, and all project work sites as further described herein.

**2. CONTRACT DOCUMENTS.**

**2.1** The Contract Documents may be altered, amended, added to, or deleted from only by a written modification agreed upon by the COUNTY and CONTRACTOR. The Contract Documents will be constructed in accordance with the laws and ordinances of the State of Florida and Manatee County.

**2.2** The Contract Documents are complementary; what is called for by one Contract Document is binding as if called for by all Contract Documents. Before undertaking the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements.

The CONTRACTOR shall promptly report, in writing, to the ENGINEER, any conflict, error, or discrepancy that the CONTRACTOR may discover. If, during the performance of the Work, the CONTRACTOR finds a conflict, error, or discrepancy in the Contract Documents, the CONTRACTOR shall report it to the ENGINEER, in writing, at once and before proceeding with the Work affected thereby. If any party discovers a conflict or discrepancy, the ENGINEER will determine which Contract requirement is appropriate. The CONTRACTOR shall not be liable to the COUNTY or ENGINEER for failure to report any conflict, error, or discrepancy in the Contract Documents the CONTRACTOR does not find unless CONTRACTOR had actual knowledge thereof or has demonstrated this by their action or should reasonably have known thereof.

**2.3** Contract Documents (Contract) will be furnished to the CONTRACTOR by the COUNTY in digital format without charge, except for applicable publications incorporated into the Contract Documents by reference. The Work shall conform to the Contract Plans entitled "Coquina Beach Hurricane Idalia Storm Damage Repair Project," all of which form a part of these specifications and are made available electronically by Manatee County, Purchasing Department. Requests for Contract Documents shall be directed to the Manatee County Purchasing Department at [purchasing@mymanatee.org](mailto:purchasing@mymanatee.org) or via the County's online procurement portal.

**2.4** It is the intent of the Contract Documents to describe a complete project to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not it is specifically identified. Any technical questions concerning the Contract Documents or work that may reasonably be inferred shall be provided, in writing, to the ENGINEER. Clarifications or interpretations of the technical portions of the Contract Documents shall be issued by the ENGINEER after receipt of written request for clarifications or interpretations from the CONTRACTOR. When words that have a well-known technical or trade meaning to describe work, materials, or equipment, such words shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the law or code of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual or code in effect at the time of opening bids, except as may be otherwise 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 COUNTY, CONTRACTOR or ENGINEER, or any of their agents or employees from those set forth in the Contract Documents.

**2.5** Omissions from the Contract Documents or the misdescription of details of work, which are manifestly necessary to carry out the intent of the Contract Documents, or which are customarily performed, shall not relieve the CONTRACTOR from performing such omitted or misdescribed details of the Work but they shall be performed as if fully

and correctly set forth and described in the Contract Documents. It is the responsibility of the CONTRACTOR to seek clarifications or interpretations from the ENGINEER, in writing, prior to initiating the Work if the CONTRACTOR has any doubt or question concerning the Work. If requests for clarification or interpretations are not submitted in writing, there will be no obligation on the part of the COUNTY or ENGINEER to respond to the CONTRACTOR.

**2.6** Figures marked on the Drawings or Plans shall, in general, be followed in preference to scale measurements. Large scale Plans shall, in general, govern over small scale drawings. The CONTRACTOR shall compare all drawings and verify the figures before laying out the Work and will be responsible for any errors that might have been avoided thereby.

**2.7** Neither CONTRACTOR nor any subcontractor, manufacturer, fabricator, supplier or distributor shall have, or acquire any title to, or ownership rights in, any of the Plans (drawings), Specifications or other documents of the Contract Documents (or copies of any thereof) prepared by the ENGINEER. The CONTRACTOR shall not reuse any of the Contract Documents on extensions of the project or any other project without written consent of the ENGINEER and specific written verification or adaptation by the ENGINEER.

### **3. DELAYS AND EXTENSIONS OF TIME.**

**3.1 No Damage for Delay.** No payment, compensation or adjustment of any kind, other than the extension of time provided for below, shall be made to the CONTRACTOR for damages because of hindrances or delays from any cause in the commencement, prosecution or completion of the Work resulting from the CONTRACTOR's or its agents negligence or non-compliance with the Contract Documents, or including but not limited to:

- (a) Acts of God, such as storms, wave events, hurricanes, tropical storms, tornadoes, earthquakes, floods, or extreme weather;
- (b) Changes in project sequence;
- (c) Project de-acceleration;
- (d) Lack of right-of-way or easement not within the direct control of the COUNTY;
- (e) Lack of approvals;
- (f) Site conditions;
- (g) Presence and operation of other contractors;
- (h) Strikes, lockouts, labor or material shortages;
- (i) Fire;
- (j) Delay in transportation;
- (k) Omissions or errors in the Plans or Specifications;

wherein the CONTRACTOR can conclusively demonstrate that the act or omission clearly caused the delay.

Whether such hindrances or delays be avoidable or unavoidable, the CONTRACTOR agrees that it shall make no claim for, nor be entitled to, compensatory, acceleration, disruption damages or mitigation of liquidated damages, if any, or any other damages of any kind or nature for any such delays or hindrances and will accept in full satisfaction for such delays the extension of time set forth below as project permits allow. The No Damage for Delay provision of this paragraph shall include, but shall not be limited to, increase in time-related costs, escalation in material costs, reduction in material volume, escalation in labor costs, additional equipment requirements, effect on other contracts, increased premiums, lower labor productivity, lost alternative income, additional labor head count, additional premium time labor, additional supervision, and demobilization and remobilization costs.

**3.2 Avoidable Delays by the Contractor.** Avoidable delays or hindrances in the commencement, prosecution or completion of the Work shall include all delays from any cause whatsoever that could have been avoided in the exercise of appropriate planning, care, prudence, foresight, or diligence on the part of the CONTRACTOR or their subcontractors. Delays in the prosecution of parts of the Work that may in themselves be unavoidable but do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the time herein specified, reasonable loss of time resulting from the necessity of submitting reports, plans or surveys to the ENGINEER for review, from conducting surveys, measurements and inspections, and from such interruptions as may occur in the prosecution of the Work on account of the reasonable interference of other contractors employed by the COUNTY which do not necessarily prevent the completion of the Work within the time herein specified shall be deemed avoidable delays within the meaning of this Contract.

**3.3 Unavoidable Delays.** Unavoidable delays in the commencement, prosecution or completion of the Work under this Contract shall include delays that may result through causes beyond the control of the CONTRACTOR and that the CONTRACTOR could not have provided against by the exercise of care, prudence, foresight or diligence. Orders issued by the COUNTY increasing the total amount of work to be done by 25% or more, increasing the quantity of beach fill material to be furnished by 25% or more, lack of rights-of-way, and unforeseen delays in the completion of the Work of other contractors under contract with the COUNTY may be considered unavoidable delays, so far as they necessarily extend the time for completion of the whole Work.

**3.4 Notice of Delays.** Whenever the CONTRACTOR experiences any delay in the prosecution of the Work, the CONTRACTOR shall, immediately upon the occurrence of any event giving rise to a delay, and in any event no later than 72 hours after the onset of the delay, notify the ENGINEER in writing of the occurrence of such delay and its cause and probable length in order that the ENGINEER may determine whether the delay is to

be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work are to be delayed thereby. The notice must also demonstrate that CONTRACTOR will or has used all reasonable means to minimize the delay and contain an estimate of the probable effect that such delay will have on the progress and final completion of the Work. Notification of occurrence of delay will not be considered unless submitted IN WRITING. Delays due to ocean conditions shall not apply to land based work.

**3.5 Extensions of Time for Unavoidable Delays.** For delays that are unavoidable, as determined by the COUNTY and ENGINEER, the CONTRACTOR will be allowed, if it applies for the same in the notice, an extension of time beyond the time specified for completion in the Contract and as specified in an approved change order, proportionate to such unavoidable delay or delays, within which to complete the Contract and within time limitations contained in project permits; and the CONTRACTOR will not be charged, because of an extension of time for such unavoidable delay, any liquidated damages and engineering and construction observation costs as may be charged at the discretion of the COUNTY in the case of avoidable delays. Due to the requirements of the work being funded through agreements with the Federal Emergency Management Agency (FEMA), no extensions of time will be granted beyond December 31, 2026.

**3.6 Remedies for Avoidable Delays.** If (a) the Work called for under this Contract is not finished and completed by the CONTRACTOR in accordance with all requirements, and within the time specified for completion in the Contract Documents, including authorized Change Orders or suspensions of Work not due to the CONTRACTOR's failure to perform according to the Contract Documents; or, (b) if at any time prior to the expiration of said time it should appear to the COUNTY that the CONTRACTOR will be unable to finish and complete said Work as aforesaid within said time, then in that event the COUNTY may terminate this Contract as provided in the COUNTY's Standard Terms and Conditions; or in the exercise of its sole and absolute discretion, allow the CONTRACTOR to complete the Work, providing permits and approvals may be modified to extend the work period, but charge to CONTRACTOR and deduct from the final payment due to the Work, engineering, construction observation, legal and/or administrative expenses computed on the basis equal to the amount of Liquidated Damages specified herein per day until completion of the Work. Any remobilization/demobilization necessary to complete the Work will be done at the CONTRACTOR's expense. Notwithstanding an election made pursuant to this paragraph, the COUNTY may thereafter terminate the Contract, as provided in the COUNTY's Standard Terms and Conditions, if the COUNTY is not adequately assured of prompt completion.

**3.7 Time Extension for Delays for Weather or Sea State which Prevent Work From Being Accomplished.** The CONTRACTOR shall become familiar with the weather and sea conditions for the project site prior to submitting a bid for the Work and shall include appropriate downtime based on the equipment being proposed to execute the Work

within the contractual time for completion. Time extension for delays for unusual weather or sea state which prevent work from being accomplished by the CONTRACTOR will be granted if:

- a) Project permits and FEMA grants allow the work to continue, or time extension to be granted;
- b) A request is made in writing within 72 hours of the delay.
- c) The delay is substantiated, in writing and with wave or weather data, within 72 hours of the onset of the delay.
- d) The wave or weather data indicates that the dredge had to be removed from the project area for safety reasons.
- e) If steps (b), (c) and (d) are not addressed or could not be proven, the COUNTY may not grant an extension of time to complete the project.

**3.8 Permit and Grant Time Extensions.** If construction is not completed within the time frame of the State and Federal permits or grants, the COUNTY may seek modification to allow construction past the permit or grant deadline for construction completion. If the COUNTY attempts to extend the deadlines and is unsuccessful in obtaining an extension of time to complete construction, or if the time extension granted to the COUNTY is not sufficient to complete construction, then the COUNTY may take one of the following actions:

- a) Terminate the Contract and compensate the CONTRACTOR for fill placed within the construction template(s) and for demobilization from the project site in accordance with Contract Documents.
- b) Negotiate with the CONTRACTOR to seek an acceptable agreement allowing for project completion when (if) permits and agencies allow for the resumption of project construction activities at a later date.
- c) Require the CONTRACTOR to remobilize, at the CONTRACTOR's own expense, to complete the project as permit conditions and time frames allow if it is determined by the COUNTY that the CONTRACTOR failed to complete the project by the end of the construction period as identified in the Contract Documents, FEMA grants, or the permits due to the negligence of the CONTRACTOR.

#### **4. PERFORMANCE OF WORK BY CONTRACTOR.**

**4.1 Contractor Participation and Use of Subcontractors.** The CONTRACTOR shall perform on the site, and with their own organization, excluding subcontractors, beach renourishment (beach fill) work equivalent to at least seventy percent (70%) of the total amount of beach nourishment work to be performed under the Contract, based on dollar amount of the Work. If during the progress of work hereunder, the CONTRACTOR requests, in writing, a reduction in such percentage, the percentage of the beach nourishment work required to be performed by the CONTRACTOR may be reduced, provided written approval of such reduction is provided by the COUNTY. Nevertheless,

the CONTRACTOR shall remain responsible for construction of the project as provided for by the Contract Documents, including all work performed by subcontractors.

**4.2 Continuous Construction.** The CONTRACTOR and their subcontractors shall continuously maintain at the project site and on the job, the dredge, materials, equipment and adequate personnel required to continuously construct the project. Under no circumstances will the CONTRACTOR remove the dredge, equipment, materials, subcontractors, and adequate numbers of personnel from the project site without the written consent of the COUNTY unless one or more of the following occurs: the project is determined by the COUNTY to be complete; weather or sea state conditions require movement from the project site; a condition exists which threatens the safety and welfare of personnel or threatens equipment; or the time frame provided for project construction in the Contract Documents, the State of Florida or Federal permits has expired. Removal of equipment, personnel, materials, or subcontractors from the project site which interrupts work progress, without valid reason, prior to the completion of the project, will result in the imposition of liquidated damages.

## **5. SUBCONTRACTORS.**

**5.1 Subcontractor Qualifications.** The CONTRACTOR shall furnish within the bid documents the names of subcontractors proposed for any portion of the Work and provide appropriate information in the bid, such as company experience, personnel experience, equipment, and references to verify the qualifications of the subcontractor to complete the assigned portion of the Work. The CONTRACTOR may use the subcontractors listed in the bid to conduct the Work, and shall identify the Work to be performed by the subcontractor.

**5.2 Subcontractor Acceptance.** The CONTRACTOR shall not employ any subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom the ENGINEER or COUNTY may have a concern or objection. If the ENGINEER or COUNTY has a concern or objection to any subcontractor, other person or organization proposed by the CONTRACTOR before, or after, execution of the Contract Documents, the CONTRACTOR shall submit an acceptable substitute as soon as possible without increase in project cost, or delay in project construction.

**5.3 Subcontractor Work.** The divisions and sections of the Contract Documents and the identifications of any plans shall not control CONTRACTOR in dividing the Work among subcontractors or delineating the Work to be performed by any specific trade.

**5.4 Statutes, Laws and Regulations.** The CONTRACTOR hereby agrees and shall be solely responsible for ensuring that the CONTRACTOR and any subcontractors, fully comply with the requirements of any applicable ordinances, statutes, laws or regulations which may affect this project or the CONTRACTOR's/subcontractor's work under this

project. The CONTRACTOR further agrees that neither the COUNTY nor its ENGINEER shall be responsible for ensuring compliance or notification on any changes or modifications to any such applicable ordinances, laws, statutes, rules or regulations.

## **6. SIMULTANEOUS WORK BY OTHERS.**

**6.1 By COUNTY.** The COUNTY shall have the right to perform or have performed by its forces, or by other contractors, in, about or near the work site or sites during the performance of work by the CONTRACTOR, such other work as COUNTY may desire.

**6.2 Coordination.** The CONTRACTOR shall make every reasonable effort to perform its Work hereunder in such manner as to enable both the Work under this Contract and such other work by such other contractors to be completed without hindrance or interference from each other. The CONTRACTOR shall afford other contractors reasonable opportunity for the execution of their work and shall properly connect and coordinate its Work with the work of other contractors; shall keep itself informed of the progress and the detail of the work of the other contractors; and shall notify the ENGINEER immediately of interference with the CONTRACTOR's work, lack of progress or defective workmanship on the part of other contractors, where such interference, delay or such defective workmanship will impact with CONTRACTOR's own operations or the operations of its subcontractors or effect or delay the CONTRACTOR's Work. Whenever there is interference with work under contracts with the COUNTY, the COUNTY shall decide the manner in which work shall proceed under each Contract in an attempt to reduce or eliminate the interference to the greatest extent practicable. The CONTRACTOR shall proceed at its own risk in the event the CONTRACTOR fails to obtain such prior direction or assistance from the COUNTY. Failure of the CONTRACTOR to keep informed of the work progressing at any other work site or sites and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by the CONTRACTOR of the status of other work as being satisfactory for proper coordination with the CONTRACTOR's own Work.

## **7. SUPERINTENDENT.**

**7.1** The COUNTY and/or ENGINEER may reject the superintendent proposed by the CONTRACTOR. If the proposed superintendent is rejected, the CONTRACTOR will propose an alternate superintendent as soon as possible and without additional cost to the COUNTY.

**7.2** A superintendent(s) of the CONTRACTOR shall be a land based employee and shall be at the beach work site at all times, or otherwise make herself or himself available to the COUNTY and/or ENGINEER at all times during project construction. Under no circumstances will project construction occur without the presence of a superintendent at the beach project site. The CONTRACTOR shall provide to the ENGINEER and COUNTY

a mobile phone number which shall be for a phone, which is in the possession of the superintendent at all times. The COUNTY may request a new superintendent(s) if the existing superintendent is not available to the COUNTY or ENGINEER during the project construction period. In that event, the CONTRACTOR shall provide a new superintendent(s).

## **8. ENGINEER.**

**8.1 Technical Issues.** The ENGINEER shall decide all technical issues of whatever nature may arise relative to the interpretation of the technical portions of the Contract Documents, the Plans, surveys and beach fill volume measurement, and prosecution and fulfillment of this Contract, and as to the character, quality, amount, and value of any work done and materials furnished under this Contract.

**8.2 Engineer Access to the Dredge and Work Site.** The ENGINEER shall have unlimited access to the dredge, beach nourishment construction site, and all CONTRACTOR vessels. The CONTRACTOR shall furnish, at the request of the ENGINEER, safe and suitable transportation from the shore to and from the various pieces of equipment, including the dredge, barges, to and from the spoil site (beach fill area), or as required to administer the Contract Documents. The presence or absence of the ENGINEER shall not relieve the CONTRACTOR of the responsibility for the proper execution of the Work in accordance with the Contract Documents.

## **9. TECHNICAL DISPUTE RESOLUTION.**

The CONTRACTOR shall perform the Work as specified by the Contract Documents. The ENGINEER will interpret the requirements of the technical portion of the Work, as specified in the Technical Specifications and Plans of the Contract Documents. If the CONTRACTOR objects to the ENGINEER's decision, the CONTRACTOR shall, within 48 hours of receiving the ENGINEER's decision, notify the ENGINEER in writing of the CONTRACTOR's objection thereto. The CONTRACTOR and ENGINEER will mutually attempt to resolve the issue; nevertheless, the ENGINEER's decision will be binding upon the CONTRACTOR.

## **10. PAYMENT FOR MOBILIZATION AND DEMOBILIZATION.**

**10.1 Payment for Mobilization and Demobilization for Hydraulic Beach Fill Placement.** All costs connected with the mobilization and demobilization of all the CONTRACTOR's equipment, material and personnel directly related to beach fill placement, including dredge and all other equipment, will be paid for at the Contract lump sum price for this item. Sixty percent (60%) of the lump sum price will be paid to the CONTRACTOR after meeting Before Dredge beach survey requirements described in these Technical Specifications and after commencement of dredging and placement of a quantity of, at minimum, one thousand (1,000) cubic yards of material on the beach and within the beach fill template within a continuous twenty-four (24) hour period, as

verified by survey. The remaining forty percent (40%) will be included in the final payment for Work under this Contract. Payment for mobilization (and all payments except the final payment) will be subject to a retainage until final acceptance of the project by the COUNTY per the COUNTY's Standard Terms and Conditions.

## **11. PAYMENT FOR HYDRAULIC FILL PLACEMENT.**

**11.1. Hydraulic Beach Fill Payment.** Other than costs for mobilization, demobilization, beach tilling, remediation, screening, and removal of non-compliant material, and water quality monitoring, all other costs associated with the beach nourishment project including but not limited to, beach and hydrographic surveying and reporting, debris removal clean-up, excavating, transporting, escarpment leveling, site restoration, and repairs, and constructing the hydraulic beach fill shall be included in the Contract Unit Price per cubic yard on the Bid Form. The Unit Price shall also include all other items of overhead, profit, labor, material and any other costs incidental to performing the Work.

**11.2 Basis of Volume Computation Measurement.** The basis of the volume computation for payment purposes will be the comparison of the post-beach dressing surveyed as-filled after dredge (AD) pay profiles to the before dredge (BD) pay profiles, and the volume within the templates. The quantity (volume) of fill material lying within the construction template, addressed in the Contract Documents and shown in the Plans, will be the basis for payment. The CONTRACTOR shall conduct the BD and AD surveys and prepare computations of volume within the templates as are necessary and as indicated in the Contract Documents in order to determine the quantities placed within the fill acceptance sections between payment profile lines.

**11.3 Requests for Payment.** As further described in the COUNTY's front end documents, the CONTRACTOR may request payment for hydraulic fill placement on a monthly basis, and at completion of the project, upon final acceptance by the ENGINEER of the completed beach nourishment sections. The CONTRACTOR will be eligible for progress payments when fill sections have been filled to a minimum of 95% of the total beach fill section volume. The beach fill volume for a section is the volume to completely fill the minimum 100-foot section along the project baseline to the construction template requirements shown on the Plans. The CONTRACTOR may conduct surveys for payment purposes after completion and dressing of five (5) adjacent fill sections; however, after the initial payment, future payment will be based on a minimum of twenty-five (25) filled and dressed adjacent acceptance sections. For all payments following the initial payment shall occur when at least twenty-five (25) additional adjacent sections have been filled, dressed and approved for payment by the ENGINEER. The CONTRACTOR shall submit to the COUNTY and ENGINEER for review on a monthly basis, an Application for Progress Payment filled out and signed by CONTRACTOR covering the Work completed as is required by the Contract Documents and accompanied by such supporting documentation as is required by the Contract Documents and also as the ENGINEER may

reasonably require. All payments will be subject to retainage per the COUNTY's Standard Terms and Conditions until final acceptance of the project.

**11.4 Fill Tolerances.** Payment shall be for hydraulic fill placed within the construction template with a construction berm elevation of +4.0 feet (NAVD) and a +/-0.5 ft vertical tolerance as shown on the Plans. Payment shall also be provided for fill placed in the upper 0.5 foot berm tolerance, to a maximum of +4.5 feet (NAVD) as shown on the Plans. The berm elevation shall be achieved everywhere within areas filled and for which payment has been requested, must at least meet the minimum berm elevation everywhere on the constructed beach berm from the north project limit to the south project limit shown on the Plans, and the minimum requirement of 95% of the template fill volume for each acceptance section must be met. The CONTRACTOR shall fill any deficient section of beach to, at minimum, meet the minimum berm elevation (+3.5 ft (NAVD)) everywhere on the constructed beach berm, and to a minimum of 95% of the fill volume calculated up to the +4.0 ft (NAVD) elevation for the acceptance section. The COUNTY will withhold payment for acceptance sections that do not meet the minimum required hydraulic fill requirements until the required hydraulic fill placement and dressing has been completed by the CONTRACTOR. The maximum pay volume is 63,450 cubic yards or as otherwise authorized by Change Order. The pay volume will not exceed this value, even though the fill template may have capacity for a larger volume at the time of construction.

**11.5 Computation of Payment Volumes.** Quantities of beach fill satisfactorily placed and meeting beach fill design template requirements and volumes will be computed for payment by use of the average end-area method. The distance between each profile line to be used for fill computation is the perpendicular distance between each profile line along the project baseline shown on the Plans. The CONTRACTOR shall account for this method of fill volume calculation when estimating the bid prices. Payment will be provided for fill contained within the payment profile construction templates plus the upper beach (+0.5 foot) berm tolerance, as shown in the Plans. No payment will be provided for fill placed above the +4.5 foot (NAVD) upper tolerance. The CONTRACTOR's bid shall account for any costs associated with the payment profile requirement, the azimuth of profile lines, the profile measurement technique, survey requirements, potential loss of sand before section survey and acceptance, and the payment volume calculation methodology.

**11.6 Compensatory Slope Adjustment.** During placement of fill, wave conditions may adjust the slope of the placed fill beyond the fill template. In recognition of this natural phenomena, fill located seaward of the fill template slope may qualify for payment where such placed fill is (a) within the limits of the fill project area shown in the Plans, (b) below the mean high water line, (c) contiguous to the fill template, (d) above the BD profile survey, and (e) measured within the AD profile survey. Compensatory slope volumes will be applied only to compensate for lost volume from the template slope below the mean high water line. This volume will not be used to compensate for volume deficiencies

within the fill template on the beach berm located landward of the mean high water elevation on the template slope, or along other fill profiles identified on the Plans. This clause does not relieve the CONTRACTOR from grading the beach berm and slope as shown on the Plans. Compensatory fill volume shall not qualify for payment other than that portion of the volume that was relocated by natural forces seaward beyond the template slope shown in the Plans.

**12. PAYMENT FOR BEACH TILLING.**

Payment for travel, mobilization, demobilization, labor, materials, equipment, fuel, oil, and all other appropriate costs in connection with tilling of the nourished beach shall be included in the Lump Sum price for beach tilling. No partial payments will be issued for this work item.

**13. RIGHT TO REFUSE RECOMMENDATION FOR PAYMENT.**

The ENGINEER may refuse to recommend the whole or any part of any payment if, in their opinion, such representations to the COUNTY would be false. The ENGINEER may also refuse to recommend any payment to protect the COUNTY from loss in the event that:

- (a) The Work is defective or completed Work not accepted by the ENGINEER has been damaged requiring correction or replacement;
- (b) Written claims have been made against COUNTY or liens have been filed in connection with the Work;
- (c) The Contract Price has been reduced because of modification(s) to the project;
- (d) The COUNTY has been required to correct defective Work or complete the Work;
- (e) The CONTRACTOR has not performed the Work in accordance with the Contract Documents;
- (f) The COUNTY has been notified or advised that the CONTRACTOR has failed to make payment to subcontractors, or for labor, materials, or equipment.
- (g) The CONTRACTOR is claiming additional placement of fill volume for placement beyond that measured and calculated using the procedures established in the Contract Documents for computation of quantities for payment purposes.
- (h) The CONTRACTOR is claiming additional payment for any reason not previously agreed to by the COUNTY;
- (i) The CONTRACTOR has not repaired damages caused by the CONTRACTOR's operation to the satisfaction of the COUNTY and/or affected private property

owner.

#### **14. COMPLETION OF WORK AND FINAL PAYMENT.**

**14.1 Beach Escarpment Elimination Before Final Payment.** At the completion of the entire fill placement and beach tilling, and prior to final payment, the CONTRACTOR shall inspect the beach project area for the formation of sand escarpments. Any escarpments in the project area, independent of the escarpment height or the length, shall be leveled or smoothed by the CONTRACTOR to eliminate the escarpment. The ENGINEER, upon request by the CONTRACTOR, will observe the beach after leveling of escarpments by the CONTRACTOR.

**14.2 Completion of All Work.** Upon written notice from CONTRACTOR that the Work is complete, the ENGINEER will observe the Work within five (5) days of receipt of the written notice from the CONTRACTOR and, if required, will notify the CONTRACTOR in writing of all particulars in which this observation reveals that the Work is incomplete or defective. The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

**14.3 Application for Final Payment.** After the CONTRACTOR has completed all such corrections to the satisfaction of the ENGINEER and COUNTY and delivered all required quality control reports, all water quality reports, all technical or cost data requested by the ENGINEER, guarantees, bonds, certificates of inspection, marked-up record documents, and all other documents as required by the Contract Documents or ENGINEER, and after the ENGINEER has indicated that the Work is acceptable to the COUNTY, the CONTRACTOR may make application for final payment, including all retainage. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data, reports and schedules as ENGINEER may reasonably require, together with complete and legally effective releases or waivers (satisfactory to COUNTY) of all Liens arising out of, or filed in connection with the Work. In lieu thereof and as approved by the COUNTY, the CONTRACTOR may furnish receipts or releases in full; an affidavit of the CONTRACTOR providing warranties, covenants, and representation that the releases and receipts include all labor, services, material and equipment bills, and other indebtedness connected with the Work for which the COUNTY or the COUNTY's property might in any way be responsible, that all changes have been paid or otherwise satisfied; and consent of the surety to final payment. If any subcontractor, manufacturer, fabricator, supplier or distributor fails to furnish a release or receipt in full, the CONTRACTOR may furnish a bond or other collateral satisfactory to the COUNTY to indemnify the COUNTY against any lien.

**14.4 Recommendation for Final Payment.** If, on the basis of the ENGINEER's observation of the Work during construction and post-construction, before and after dredge survey data, appropriate site cleanup and completion of all repairs and the ENGINEER's review of the final Application for Payment and accompanying

documentation the ENGINEER is satisfied that the Work has been completed and the CONTRACTOR has fulfilled all of their obligations under the Contract Documents, the ENGINEER will, within fifteen (15) days after receipt of the final Application for Payment, indicate in writing their recommendation of payment and present the application to the COUNTY. Otherwise, the ENGINEER will return the application to the CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case the CONTRACTOR shall make the necessary corrections and resubmit the application.

**14.5 CONTRACTOR's Obligation to Complete Work.** The CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents, and within time limitations, shall be absolute. Neither recommendation of any payment by the ENGINEER, nor the issuance of a certificate of substantial completion, nor any payment by the COUNTY to the CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work of any part thereof by the COUNTY, nor any act of acceptance by the COUNTY nor any failure to do so, nor the issuance of a notice of acceptability by the ENGINEER, nor any correction of defective Work by the COUNTY shall constitute an acceptance of Work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

**14.6 CONTRACTOR Access to the Work.** The COUNTY shall have the right to exclude the CONTRACTOR from the Work after the date of completion, but the COUNTY shall allow the CONTRACTOR reasonable access to complete the Work or correct items as allowed by project permits.

**14.7 Making and Acceptance of Final Payment.** The making and acceptance of final payment shall constitute:

(a) A waiver of all claims by the COUNTY against the CONTRACTOR, except claims arising from unsettled liens, from defective Work appearing after project completion or from failure to comply with the Contract Documents or the terms of any guarantees specified therein; however, it shall not constitute a waiver by the COUNTY of any rights in respect to the CONTRACTOR's continuing obligations under the Contract Documents; and,

(b) A waiver of all claims by the CONTRACTOR against the COUNTY other than those previously made in writing and still unsettled.

**14.8 Defective Work.**

**14.8.1 General.** If within one (1) year after the date of completion or such longer period of time as may be prescribed by law or by the terms of any applicable guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, the CONTRACTOR shall

promptly, without cost to the COUNTY and in accordance with the COUNTY's written instructions, either correct such defective Work, or, if it has been rejected by the COUNTY, remove it from the site and replace it with non-defective Work. If the CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the COUNTY may have the defective Work corrected or the rejected Work removed and replaced. All costs associated with correction of defective Work including compensation for additional professional services, shall be paid by the CONTRACTOR. The CONTRACTOR will not be held responsible for erosion of the beach fill after acceptance of completed fill segments by the ENGINEER. However, if unsuitable material including but not limited to rocks, debris or construction materials placed as a result of the CONTRACTOR's operations are found within one (1) year of the project completion, the CONTRACTOR will be held responsible to correct this at no further cost to the COUNTY.

**14.8.2 Beach Erosion.** The CONTRACTOR will not be responsible for erosion of the accepted beach fill sections after final acceptance of fill sections by the ENGINEER. The CONTRACTOR shall remain responsible for beach fill sections until they are accepted for payment by the ENGINEER. The CONTRACTOR shall be responsible for the placement of material that is not beach compatible or does not meet State of Florida standards for beach material.

**15. USE OF COMPLETED PORTIONS.**

The COUNTY shall have the right to take possession of, and use, any completed or partially completed portions of the Work, prior to the completion of the entire Work. Such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents.

**16. CHANGES AND EXTRAS.**

**16.1 Changes in the Work.** Please refer to the COUNTY's front end documents in addition to the following: The COUNTY shall have the right, within the general scope of the Work and without notice to any surety or sureties of the CONTRACTOR, to make changes in the Work, including but not limited to changes in the Plans, General Conditions, Technical Provisions, and Environmental Provisions pertaining to beach width, beach elevation, beach volume, beach length, environmental protection, Contract time, Contract price, in or to the method or manner of performance of the Work, in or to equipment, materials, service or site, in or to the mode or manner of payment for the Work, or directing a change in the rate of performance of the Work. All changes shall, except in the case of emergencies endangering the safety of personnel or property, be made by modification of the Contract Documents or by written Change Order duly executed by the COUNTY, ENGINEER and CONTRACTOR. Work necessary in connection with emergency changes in the Work shall be strictly limited to the minimum necessary to alleviate the immediate emergency; Work beyond such minimum shall be undertaken only pursuant to a properly issued change order received from the COUNTY. The CONTRACTOR shall promptly comply with any and all written change orders issued by the COUNTY, notwithstanding any disputes. No such change order shall be deemed to invalidate the Contract.

**16.2 No Adjustment of Unit Price.** The volume of material to be placed on the beach is based on beach surveys conducted prior to the construction of the project. It is almost a certainty that the forces of wind and waves have altered the beach since development of the fill templates for the project. No adjustment shall be made in any Unit Price of the Contract for changes ordered by the COUNTY that cause an increase or decrease equal to, or less than twenty-five percent (25%) in the amount of the Work, or by the estimated volume provided in the bid documents of dredged material that is to be placed within fill templates whether individually or in total. It is further provided, however, that no adjustments shall be made in the Contract price or time of performance for either lump sum or unit price work if the change is expressly or reasonably implied by the Contract Drawings and Specifications or is incidental thereto, or if the Work becomes more difficult than the bid price and Contract Documents would reflect, or if CONTRACTOR failed to protest, negotiate, comment or otherwise call to the COUNTY's attention, in writing, any omissions, ambiguities or conflicts in the Contract Documents that CONTRACTOR could have discovered prior to the submission of its bid or execution of the Contract.

**17. CHANGE OF CONTRACT PRICE.**

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

The Contract Price may only be changed by Change Order, Work Directive Change, Admin Contract Adjustment or by a written amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by CONTRACTOR making the claim to OWNER. Notice of the amount of the change order request with supporting data shall be delivered within five (5) calendar days from the beginning of such occurrence and shall be accompanied by CONTRACTOR's written statement that the amount covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event.

**18. PHYSICAL DATA.**

Information and data furnished or referred to in the Contract Documents are furnished, or referred to, for the CONTRACTOR's benefit. However, it is expressly understood that the COUNTY and ENGINEER will not be responsible for any interpretation or conclusion of the CONTRACTOR. Likewise, the COUNTY and ENGINEER will not be responsible for any information provided to the CONTRACTOR by any information agency or other party.

**19. WEATHER.**

The project area may be affected by tropical storms and hurricanes primarily from June through November, and by high wave conditions, stormy and/or rainy weather, including severe thunderstorms, during any time of the year. Wave activity can occur at any time and may be frequent during the winter months. The CONTRACTOR shall be responsible for obtaining information concerning rain, wind, tide and wave conditions that could influence safety, schedule, dredging and disposal operations. Accordingly, the CONTRACTOR shall become familiar with the local weather patterns prior to making a bid for the Work, and account for typical weather activity that can reasonably be expected to occur during the prosecution of said Work.

**20. BOAT TRAFFIC AND LONGBOAT PASS.**

Longboat Pass, located in Manatee County, is a dynamic, tidal inlet that provides access to the Gulf of America from Sarasota Bay. The Work includes dredging the navigation channel through a portion of the inlet and ebb shoal. Boat traffic in the vicinity of the project areas consists primarily of pleasure craft and fishing boats. By submittal of a bid for the Work, the CONTRACTOR acknowledges the challenges and accepts the risks associated with performing operations in this inlet environment and shoal complex adjacent to the open Gulf of America, which is subject to daily tidal currents and frequent wave activity.

**21. LOCAL PORT.**

Tampa Bay, located north of the project areas, is a deep draft maintained port. All inlets and ports are used at the CONTRACTOR's own risk.

**22. STATE AND FEDERAL PERMITS, EASEMENTS AND LICENSES.**

The CONTRACTOR shall comply with all requirements set out in all permits applicable to the Work. Copies of project permits and relevant project attachments are provided as appendices to these Technical Specifications are part of the Contract Documents. Specifically, the CONTRACTOR will familiarize himself/herself with general and specific conditions contained in the Florida Department of Environmental Protection (FDEP) Permit No. 0298107-009-JN, and the U.S. Army Corps of Engineers (USACE) Permit No. SAJ-2014-00606 (SP-CSH) and other State and Federal approvals for the project, including public easements, use of sovereign submerged lands and referenced attachments. The CONTRACTOR shall follow the applicable Terms and Conditions in the following Biological Opinions (BO) that are incorporated by reference in the USACE permit: U.S. Fish and Wildlife Service (USFWS) BO for red knots, dated September 24, 2015; USFWS Statewide Programmatic Biological Opinion (SPBO) for sea turtles, dated February 27, 2015; USFWS Programmatic Piping Plover Biological Opinion (P<sup>3</sup>BO) for piping plovers, dated May 22, 2013; and the National Marine Fisheries Service (NMFS) Gulf Regional Biological Opinion (GRBO). Any other licenses or approvals required for the prosecution of the Work shall be secured and paid for by the CONTRACTOR.

**23. LAYOUT OF WORK FOR HYDRAULIC FILL PLACEMENT.**

**23.1 Survey Control.** Florida Department of Environmental Protection (FDEP) (formerly Department of Natural Resources) second order "A" monuments shall be used for control, once the CONTRACTOR has independently verified the location and elevation of each monument. The FDEP "A" monument location coordinates and elevations for the work site are provided on the Plans, and shall be independently verified by the CONTRACTOR and their surveyor. The CONTRACTOR shall contact the ENGINEER if any discrepancies are discovered in any of the information presented concerning control monumentation. FDEP beach R-monuments or T-monuments shall not to be used as primary control for this project. If the ENGINEER is not contacted by the CONTRACTOR, it is understood that the CONTRACTOR agrees with all information presented in the Plans related to beach monumentation elevation and control information.

**23.2 Surveyor.** The CONTRACTOR shall complete the layout of the Work and shall be responsible for all measurements that may be required for the execution of the layout of the Work, subject to such modifications as the ENGINEER may require to meet changed conditions or as a result of necessary modifications to the Contract Work. The CONTRACTOR will use a surveyor registered in the State of Florida. The licensed surveyor used by the CONTRACTOR will be responsible for all survey work and layout work and shall certify (sign and seal) all survey deliverables.

**23.3 Work Layout.** All temporary marking stakes (including grade stakes) placed by the CONTRACTOR must be recorded on a tracking sheet (available to the ENGINEER upon request) and shall be completely removed upon completion of the project. If grade stakes are used in the performance of the Work, the CONTRACTOR shall provide a signed copy

of the tracking sheet upon the completion of fill placement activities to demonstrate the complete retrieval and removal of all grade stakes prior to making a final Application for Payment.

**23.4 Protection of Survey Monuments.** All permanent markers or survey monuments will not be disturbed, damaged or destroyed by the CONTRACTOR. Disturbed, damaged or destroyed monuments will be replaced by the ENGINEER, at their discretion, and the expense of replacement will be deducted from any amounts due, or to become due to the CONTRACTOR.

## **24. CONTRACTOR QUALITY CONTROL.**

**24.1** The CONTRACTOR is responsible for quality control and shall provide and maintain an effective quality control plan that is received by the COUNTY and ENGINEER seven (7) days prior to the pre-construction conference. For dredging and fill placement operations, the CONTRACTOR shall follow the FDEP approved Sediment QA/QC Plan provided in the appendices.

**24.2 Daily Quality Control Reports.** The CONTRACTOR is required to prepare a Daily Quality Control Report (QCR), and copies shall be furnished to the ENGINEER on a daily basis without exception, by 2:00 p.m. of the following day of each day's report. Electronic submittal of the Daily QCR is acceptable. Daily QCRs will be provided from the Notice to Proceed issuance to the last day of demobilization, including site clean-up. Reports shall be required for each and every day, regardless of whether work is accomplished. An example copy of the Daily QCR is appended to these Technical Specifications. Likewise, the CONTRACTOR's Water Quality Monitoring reports must be prepared in a format acceptable to the regulatory agencies according permit requirements and submitted daily along with the QCR; the COUNTY or ENGINEER will assemble and submit the Water Quality Monitoring reports to the regulatory agencies as required by the project permits. The CONTRACTOR may substitute their own Daily QCR format if: (1) it contains, at minimum, all of the information required by the format example in the Technical Specifications and (2) the CONTRACTOR'S quality control report format is approved by the ENGINEER.

**24.3** The CONTRACTOR shall establish a quality control system to perform sufficient inspections and tests of all items of Work, including that of their subcontractors, and to ensure conformance to applicable provisions of the Contract Documents and Plans with respect to the materials, workmanship, construction, finish, and functional performance. This control will be established for all construction except where the Contract provides for specific COUNTY or ENGINEER control by observation, tests or other means. The CONTRACTOR's control system will specifically include the surveillance and tests required in the Technical Specifications.

**24.4** The CONTRACTOR's quality control system is the means by which the CONTRACTOR is assured that the construction complies with the requirements of the Contract Documents, including all project permits. The controls shall be adequate to cover all construction operations and shall be keyed to the proposed construction sequence.

**24.5** The CONTRACTOR's job supervisory staff may be used for quality control, supplemented as necessary by additional personnel for surveillance, by special technicians, or by testing facilities with the expertise to provide for the controls required by the Technical Specifications.

**24.6** All compliance inspections will be recorded on the Daily QCR, including, but not limited to, the specific items required in each technical section of the specifications. This form shall include records of corrective action taken.

**24.7** If reoccurring deficiencies in an item or items indicate that the quality control system is not adequate, or reports are not being provided in a timely manner, the CONTRACTOR shall undertake such corrective actions as necessary to meet all Contract requirements.

**24.8** No separate payment will be made for CONTRACTOR quality control or Daily QCR.

**24.9** **Delay of Payment.** Failure to provide Daily QCR to the ENGINEER may result in delay in payments to the CONTRACTOR until all due Daily QCR are received and are acceptable to the ENGINEER.

**24.10** The CONTRACTOR shall be responsible for making such inspections, surveys and tests as may be necessary to assure compliance with all the requirements of the Contract Documents and applicable permits. Reports of all inspections, surveys and tests and remedial actions shall be submitted to the ENGINEER in writing.

**24.11** The ENGINEER reserves the right to utilize the CONTRACTOR's control testing laboratory, survey and other equipment to make random tests and surveys, and to check the CONTRACTOR's testing and survey procedures, techniques, and results (where applicable).

**25. PERMIT AGENCY PRE-CONSTRUCTION CONFERENCE.**

A pre-construction meeting will be held at the COUNTY's office, or via teleconference, webinar, or other virtual means at the COUNTY's discretion, with the ENGINEER, COUNTY, CONTRACTOR, marine turtle license holder, shorebird monitor, appropriate State and Federal agencies, and any other individuals as required in compliance with project permit requirements, to discuss permit conditions. Following this meeting, the CONTRACTOR will be required to provide a written affirmative statement that they have read the General and Specific Conditions of the FDEP permit

and understand them (per FDEP General Condition 9). This meeting is separate from the Contract pre-construction conference described below, which will also be held by the COUNTY. These two meetings may be coordinated to occur at the same location, and/or on the same day, pending agency availability and the COUNTY's Standard Terms and Conditions.

**26. CONTRACT PRE-CONSTRUCTION CONFERENCE.**

Please refer to the COUNTY's Standard Terms and Conditions for specific requirements for the Contract pre-construction conference (Project Meeting). After the Contract is awarded and before construction operations are started, the CONTRACTOR shall meet with the ENGINEER and COUNTY at the COUNTY's office, or virtually at the COUNTY's discretion, to discuss the quality control requirements, the permits, and the project. This shall be referred to as a Contract pre-construction conference. The meeting shall develop mutual understanding relative to details of the system, including the forms to be used for recording the quality control operations, inspections, daily reports, applications for payment, administration of the system, and the interrelationship of the CONTRACTOR, ENGINEER, and COUNTY and their respective personnel.

**27. WATER QUALITY MONITORING BY THE CONTRACTOR.**

**27.1** The CONTRACTOR shall be bound and obligated to maintain the quality of the State's waters as stipulated in project permits and in the Florida Administrative Code, Rule 62-312 and 62-302, as they pertain to the Class III waters of this Contract. The CONTRACTOR will be required to make inspections, measurements and observations required by those regulations and the FDEP permit in the vicinity of the dredge, and the spoil site (beach). This includes, but is not limited to, daily turbidity sampling with reports to the ENGINEER, following procedures stated in FDEP permit appended to the Technical Specifications. If it is determined that the quality of the State's waters is not being maintained, the CONTRACTOR will, without delay, follow the procedures provided in the FDEP permit. The water quality monitoring measurements, procedures to maintain water quality and reporting costs will be incorporated into the unit cost for fill in the bid documents.

**27.2** Construction at the project site shall be monitored closely by an experienced, qualified, and independent third party hired by the CONTRACTOR to assure that turbidity levels do not exceed the compliance standards established in the state permit. An individual familiar with beach construction techniques and turbidity monitoring shall be present at all times when fill material is discharged on the beach. This individual shall have authority to alter construction techniques or shut down the dredging or beach construction operations if turbidity levels exceed the compliance standards established in this permit. The names and qualifications of those individuals performing these functions shall be submitted with the CONTRACTOR's bid as required in the Technical Provisions.

**28. DREDGE REQUIREMENTS.**

**28.1 Dredge Capacity.** The CONTRACTOR shall keep on the job a dredge of sufficient capacity to construct the project in a timely manner, with beach fill placement completed no later than stipulated in these Contract Documents. The CONTRACTOR shall also retain, at the project site, all related dredge equipment of sufficient capacity to meet the requirements of the Work. The dredge shall be in satisfactory operating condition, shall be reliable in its performance, and capable of safely and efficiently performing the Work as set forth in the Contract Documents, including the ability to move a mixture of sandy soils with shell from the furthest extent of the borrow area to the beach project area limits shown on the Plans. The dredge shall be of sufficient size and capacity to complete the Work in a timely manner, meeting or exceeding Contract Document requirements for the construction time period. At a minimum, the dredge shall be suitable for hydraulic dredging in exposed areas such as an inlet channel and ebb shoal in the Gulf of America as shown in the Plans. If the CONTRACTOR elects to use a larger dredge, the CONTRACTOR shall consider the existing depths in the areas to be dredged when selecting the physical plant used to execute the project. The CONTRACTOR and CONTRACTOR's employees shall have experience with the dredge being proposed, or similarly used for hydraulic dredging in exposed areas such as in the Gulf of America. The CONTRACTOR may be required to demonstrate and certify the production capacity of the dredge, demonstrating its capability to construct the project within the time limitations, recognizing there will be periods of inactivity due to weather, sea state, etc. If the dredge, in the ENGINEER's opinion, is not of sufficient capacity to complete the Work in the Contract time period, the ENGINEER may direct the CONTRACTOR to replace the dredge with a greater production capacity dredge. Periods of inactivity shall be factored into the CONTRACTOR's consideration of dredge capability to construct the project within Contract time limits. No reduction in the capacity of the dredge employed on the Work shall be made except by written permission of the COUNTY.

**28.2 American Bureau of Shipping Certification for Open Ocean Operation.** It is the CONTRACTOR's responsibility to obtain any and all American Bureau of Shipping (A.B.S.) and U.S. Coast Guard dredge certifications and/or approvals required for the project described herein, to allow for the open ocean operation of the dredge that will be used to complete the Work. A copy of the applicable legal certifications and associated approvals must be provided to the COUNTY and ENGINEER at the time of bid, demonstrating that the plant (dredge) proposed for use on the project is licensed, certified, and capable of conducting open water (Gulf of America) work.

**28.3 Pipelines.** Pipe and pipelines utilized for the project will be in good working order, free of defects. All pipelines, both above and below water, must be kept in good condition at all times. All pipelines shall be maintained free of leaks and deposition of sediment or creation of turbidity. Any leaks or breaks along their length must be promptly and properly repaired. The CONTRACTOR shall cease operations and promptly repair the pipeline to the satisfaction of the ENGINEER in the event of leaks or pipeline breaks. All

pipelines from the borrow area to the fill placement area will be placed in accordance with the Plans and permits, and shall avoid all vegetation and established shorebird protection areas. Use of the pipelines on the beach shall not result in the deposition of rust pieces or deposits that may discolor the beach or present a potential hazard to beach visitors. The CONTRACTOR shall clean the beach of any rust pieces or rust color deposits, and clean the beach of all materials used to seal seams between the connected pipeline segments.

**28.4 Booster Pumps.** Booster pumps are not expected to be used on this project. If the CONTRACTOR anticipates a need for booster pumps to complete the Work, the CONTRACTOR shall indicate the type, size, placement location, anticipated duration, and other particulars of use with the bid as part of the dredge and equipment submittal requirements. Unless requested by the CONTRACTOR in this manner, and subsequently granted by the COUNTY in writing, or by virtue of Contract Award, booster pump use will not be permitted.

## **29. MISPLACED MATERIAL, PLANT MACHINERY, EQUIPMENT OR APPLIANCE.**

Should the CONTRACTOR, during the progress of the Work, lose, discard, throw overboard, sink, or misplace any material, plant, machinery, equipment, or appliance, the CONTRACTOR shall recover and remove the same with the utmost dispatch. The CONTRACTOR shall also give immediate notice to the ENGINEER, with description and location of such material, plant, machinery, equipment, or appliance. Should the ENGINEER discover such material, plant, machinery, equipment, or appliance, the ENGINEER will locate through electronic means or buoy the material, plant, machinery, equipment, or appliance, and notify the CONTRACTOR of its location. Removal of the material, plant, machinery, equipment, or appliance, shall be the responsibility of the CONTRACTOR and cost of the removal will be paid for by the CONTRACTOR. Should the CONTRACTOR refuse, neglect, or delay compliance with the above requirements, such material, plant, machinery, equipment, or appliance may be removed by the COUNTY, and the cost of such removal may be deducted from any money due or to become due to the CONTRACTOR or may be recovered under their bond.

## **30. FINAL CLEAN-UP.**

Final clean-up shall include the removal of the CONTRACTOR's plant and all equipment and materials, and all debris, either for disposal or reuse. Unless otherwise approved in writing by the COUNTY, the CONTRACTOR will not be permitted to abandon stakes, pipelines, cables, pipeline supports, pontoons, or other equipment or materials in the disposal area, pipeline access areas, water areas, underwater in the Gulf of America, passes or inlets, on the beach or other areas adjacent to the work site. Any stakes or other markers placed by the CONTRACTOR must be removed as a part of the final clean-up. All stakes, including grade stakes, placed during the fill operation shall be completely removed and shall not be left buried in the fill. All debris shall be removed from the beach. Final payment will be delayed until all grade stakes are removed from the beach area.

**31. SIGNAL LIGHTS.**

The CONTRACTOR shall display signal lights and conduct their operations in accordance with the most recent and current General Regulations of the Department of the Army and of the U.S. Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges and vessels engaged in laying cables or pipes or in submarine or bank protection operations, lights to be displayed on dredge pipeline and day signals to be displayed by vessels moored or anchored in a fairway or channel and the passing by other vessels or floating plant working navigable channels, as approved by the Secretary of the Army and Commandant, U.S. Coast Guard (33 C.F.R. 80.18 - 8-31a; 33 C.F.R. 95.51 - 95.66; 33 C.F.R. 9.22 - 90.36; 33 C.F.R. 82 and C.G. Pub. 169, Navigation Rules, International-Inland dated May 1 1977) (DAR 7-603.33), or more recently prescribed by applicable regulations.

**32. NOTICE TO MARINERS.**

The CONTRACTOR shall issue a Notice to Mariners regarding the dredging and disposal operation immediately after the Notice to Proceed has been received and prior to the movement of floating equipment into the project area. A copy of the Notice to Mariners shall be provided to the ENGINEER prior to the commencement of Work, including mobilization of equipment to the project site.

Should the CONTRACTOR, during dredging operations, encounter any objects on the ocean bottom that could be a hazard to navigation, he/she will notify the U.S. Coast Guard, any other pertinent agencies, and the ENGINEER immediately as to the location of said object and any other pertinent information necessary for the CONTRACTOR to put out a Notice to Mariners.

**33. UNDERWATER CABLES, PIPELINES, OUTFALL LINES, ETC.**

The CONTRACTOR shall be responsible for verifying the locations and depths of all underwater cables, pipelines, outfall lines, etc. and take precautions against damage which might result from their operations, including without limitation, the placement of dredge spuds and/or anchors which may damage the underwater facilities. If any damage occurs as a result of the CONTRACTOR's operations, the CONTRACTOR will be required to suspend dredging until the damage is repaired and approved by the ENGINEER. Costs of such repairs and downtime of the dredge and attendant plan shall be at the CONTRACTOR's expense.

**34. LEGAL RESTRICTIONS AND TRAFFIC PROVISIONS.**

The CONTRACTOR shall conform to all applicable laws, regulations, or ordinances with regard to labor equipment certification, laws, hours of work and their general operations. The CONTRACTOR shall conduct their operations so that navigation shall not be blocked or closed through Longboat Pass, any thoroughfare nor interfere in any way with traffic on railway,

highways, or on water, without the consent of the proper authorities. The regulations the CONTRACTOR shall adhere to are those established by, but not necessarily limited to, the Department of the Navy, U.S. Coast Guard, Department of the Army, American Bureau of Shipping, all environmental agencies, FDEP, Florida Department of Transportation, and the COUNTY.

### **35. ELECTRICITY AND OTHER UTILITIES.**

All electric current and other utilities required by the CONTRACTOR shall be furnished at the CONTRACTOR's own expense.

### **36. ASSIGNMENT.**

Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other nor shall the CONTRACTOR assign any monies due or to become due to him hereunder, without the previous written consent of the COUNTY.

### **37. PROTECTION OF PROPERTY AND WORK.**

**37.1 Protection of Property.** The CONTRACTOR shall, at the CONTRACTOR's own cost and expense, support and protect all public and private property that may be encountered or endangered in the prosecution of the Work herein contemplated. The CONTRACTOR shall repair to its original condition and make good any damage caused to any such property by reason of its operation, to the satisfaction of the COUNTY, and any owner, before final payment is provided to the CONTRACTOR by the COUNTY.

**37.2 CONTRACTOR Responsibility.** The CONTRACTOR shall at all times guard the work site or sites and adjacent properties from any damage whatsoever in connection with this Contract whether arising from direct operations under this Contract, theft, vandalism or any cause whatsoever. The CONTRACTOR shall at all times protect its own Work from damage; nevertheless, the CONTRACTOR is not responsible for natural erosion of beach sections previously accepted by the ENGINEER for payment. The CONTRACTOR shall make good any and all loss, damage or injury to the Work, whether arising from direct operations under this Contract, weather or sea conditions, theft, vandalism or any cause whatsoever. The CONTRACTOR will not be responsible for maintenance of beach sections previously accepted by the ENGINEER, unless the beach is eroded or damaged due to the activities of the CONTRACTOR.

**37.3 Risk of Loss.** The Work and everything pertaining thereto shall be performed at the sole risk and cost of the CONTRACTOR from commencement until final payment by the COUNTY. Any specific references contained in the Contract Documents, that the CONTRACTOR shall be responsible at its sole risk and cost for the Work or any part thereof are not intended to be, nor shall they be construed to be, an exclusive listing of the

circumstances in which the CONTRACTOR bears the risk of loss, but rather they are intended only to be examples.

**37.4 Risk of Weather Events.** All loss or damage arising out of the nature of the Work, or from the action of the elements, or from weather events, hurricanes, tropical storms, winter storms, adverse sea state, or from any unusual obstruction or difficulty, or any other natural or existing circumstances either known or unforeseen, that may be encountered in the prosecution of the Work, shall be sustained and borne by the CONTRACTOR at its own cost and expense, including all fill placement that has not been accepted by the ENGINEER for payment.

**37.5 No Claims Against COUNTY or ENGINEER.** The CONTRACTOR shall have no claim against the COUNTY or ENGINEER because of any damage or loss to the Work for any reason, or CONTRACTOR's materials, equipment or supplies, including no claim for loss or damage due to simultaneous work by others, and the CONTRACTOR shall be responsible for the complete restoration of damaged Work to its original condition complying with the Contract Documents. Notwithstanding any other provision of this Contract, this obligation shall exist without regard to the availability of any insurance, either of the COUNTY, ENGINEER, or the CONTRACTOR, to indemnify, hold harmless or reimburse the CONTRACTOR for the cost incurred in making such restoration.

**37.6 Beach Erosion.** The CONTRACTOR shall be aware of the dynamic nature of the project site and account for the likelihood of changing site conditions including, but not limited to, beach erosion and accretion, sediment migration and shoaling, and changes to the volume available in the borrow area and/or required by the project fill templates, whether individually or in total. Based on the CONTRACTOR's before dredge surveys (BD), the ENGINEER reserves the right to evaluate the conditions and make a determination regarding adjustments to the Work as prescribed in these Contact Documents. The CONTRACTOR is not responsible for naturally-occurring erosion of any section of the beach fill after it has been accepted for payment by the ENGINEER; however, the CONTRACTOR is responsible for maintaining the beach fill until it is accepted by the ENGINEER and to avoid preventable damage to sections that have been accepted by the ENGINEER. The CONTRACTOR is also responsible to grade and eliminate all beach scarps or cliffs in either of the project fill areas regardless of ENGINEER acceptance, prior to being considered complete and eligible for final payment.

## **38. SAFETY.**

**38.1 Contractor Responsibility for Safety.** The CONTRACTOR is responsible for all safety associated with the project. The CONTRACTOR shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work, including, but not limited to, exclusion of the public from active work sites, protection of beachgoers and watercraft, establishing appropriate safety zones, and use of safety personnel such as spotters and flagmen, with an abundance of caution. The

CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to, the following at a minimum:

- (a) All persons;
- (b) All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site; and,
- (c) Other property at the site or adjacent thereto, including trees, shrubs, lawns, natural vegetation, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

**38.2** The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the Work may affect them. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR. The CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed, the CONTRACTOR has entirely demobilized from the COUNTY, and the ENGINEER has issued a notice to the COUNTY and CONTRACTOR that the Work is acceptable.

### **39. OTHER INSURANCE**

Insurance required to be maintained by the CONTRACTOR is specified in the COUNTY's Standard Terms and Conditions. In addition, unless more specifically required by the COUNTY, Maritime Coverage (Jones Act) and Longshore and Harbor Workers' Compensation Act (LHWCA) coverage shall be maintained where applicable to the completion of the Work.

### **40. DEFINITIONS.**

**40.1 Acceptance Sections.** Acceptance sections are defined as the segment of beach lying between two immediately adjacent pay profile lines, which are located at a perpendicular distance approximately 100 foot apart as indicated in the Plans.

**40.2 Addenda or Addendums.** Written or graphic instruments, explanations, interpretations, changes, corrections, additions, deletions or modifications of the Contract Documents issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

**40.3 Bid.** The offer or proposal of the bidder submitted on the prescribed form, providing all required information, setting forth the prices for the Work to be performed, properly signed or guaranteed.

**40.4 Bonds.** Bid, Performance, and Payment bonds and other instruments that protect against loss due to inability, failure or refusal of the CONTRACTOR to perform the Work specified in the Contract Documents.

**40.5 COUNTY.** Manatee County, Florida and its authorized and legal representatives, the public entity with whom the CONTRACTOR has entered into the agreement and for whom the Work is to be provided.

**40.6 CONTRACTOR.** The person, firm, or corporation with whom the COUNTY has executed the Agreement to furnish the Work called for in the Contract Documents.

**40.7 Date of Completion.** Calendar date when all Work shall be completed in compliance with Contract Documents, the CONTRACTOR has repaired all damage or injury to the work site, cleaned up the work site, and demobilized all equipment and personnel from the project area.

**40.8 Lump Sum Price Work.** Work to be paid for on the basis of a single payment to accomplish a Work task.

**40.9 Permits.** State and Federal approvals to conduct the Work, including conditions and requirements stated therein and incorporated by reference, that are to be adhered to by the CONTRACTOR.

**40.10 Plans (Drawings).** The drawings, plans, maps, profiles, diagrams, and other graphic representations which show character, location, nature, extent and scope of the Work, which have been prepared or approved by ENGINEER and which are considered part of the Contract Documents.

**40.11 Specifications.** Those portions of the Contract Documents consisting of the general requirements and written technical descriptions of products and execution of the Work.

**40.12 Surety.** Any person, firm or corporation which is bound by bid or Contract bond with and for the CONTRACTOR.

**40.13 Written Amendment.** A written amendment of the Contract Documents, signed by the COUNTY and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or nontechnical rather than strictly Work-related aspects of the Contract Documents.

**MANATEE COUNTY  
COQUINA BEACH STORM DAMAGE RESTORATION PROJECT  
TECHNICAL SPECIFICATIONS**

**PART 2 - TECHNICAL PROVISIONS**

Please refer to the COUNTY's front end documents in addition to the following Part 2 – Technical Provisions.

**1. COQUINA BEACH RESTORATION PROJECT.**

The beach nourishment project consists of the hydraulic placement of 63,450 cubic yards of fill on Coquina Beach, located immediately north of Longboat Pass on the southern end of Anna Maria Island in Manatee County. The project area extends approximately 4,895 feet from beach monument number R-36 to R-41 as shown on the Plans. The elevation of the construction berm is +4.0 ft (NAVD) with a +/- 0.5 ft allowable vertical tolerance above and below the construction template to a maximum elevation of +4.5 ft NAVD and minimum elevation of +3.5 ft NAVD. The seaward slope of the fill template is 1 vertical to 15 horizontal from the constructed berm crest to the intersection with the existing seafloor. Payment will be for the not-to-exceed bid quantity of 63,450 cubic yards placed within the beach fill template. The CONTRACTOR will not be paid for any fill in excess of the bid quantity (cy) or any fill placed outside the templates and tolerances. Estimated target fill densities per beach fill cross-section are shown on the Plans. The COUNTY reserves the right to recalculate the target fill densities and distribution based on an updated survey.

Sediment for the project will be obtained by cutter suction dredging within the permitted navigation channel of Longboat Pass, located at the southern project limit, and transported hydraulically to the beach fill site. The navigation channel was most recently dredged between December 2024 and February 2025 and has since refilled with material as a result of natural processes. Based on November 2025 conditions, the borrow area is estimated to contain approximately 104,600 cubic yards of material to -15.6 ft (NAVD), which includes the authorized maximum overdepth allowance.

**2. CONTRACTOR QUALIFICATION.**

The CONTRACTOR shall provide the dredge and all support vessels, labor, equipment, supplies, and materials to perform all operations in connection with excavating, transporting, placing, grading and tilling the beach fill, debris removal, and returning the project site to its preconstruction condition as required by the Contract Documents. In order for the CONTRACTOR to be deemed qualified and responsive, all items listed in Appendix A – Minimum Qualifications must be provided with the bid in accordance with County requirements.

**3. ORDER OF WORK, PROJECT SCHEDULE, AND ACCEPTANCE SECTIONS.**

**3.1 Order of Work and Project Schedule.** The CONTRACTOR shall provide an order of

Work outline and project schedule to the ENGINEER and COUNTY within 10 days after being awarded the agreement for discussion and concurrence. The project schedule shall indicate mobilization, start of sediment discharge onto the beach, estimated construction period, hydraulic fill placement completion date, beach tilling, demobilization and completion of all work. The CONTRACTOR shall describe the order in which the Work will be performed, including the anticipated progression of fill placement along the beach and dredge progression through the borrow area. The borrow area shall be dredged from west to east in a continuous fashion, commencing at the western terminus of the borrow area as shown on the Plans.

The CONTRACTOR shall also forward to COUNTY, as soon as practicable after the first day of each month, a summary report of the progress of the various parts of the Work under the Contract stating the existing status, estimated time of completion and cause of delay, if any. Together with the summary report, CONTRACTOR shall submit any necessary revisions to the original schedule for COUNTY's review and approval.

**3.2 Acceptance Section.** Acceptance sections are defined as the portion of the nourished beach lying between two immediately adjacent pay profile lines, which are identified in the project Plans. Once fill placement begins in an acceptance section, it must be completed before moving to the adjacent acceptance section, unless the ENGINEER approves moving to another acceptance section. Pay profile lines will be established by the CONTRACTOR according to the Plans and shall be spaced at the perpendicular distance apart as shown on the Project Baseline, and at the locations provided in the Plans.

**3.3 Work Hours and Holidays.** Work may occur 24 hours a day on any day during the performance period.

**3.4 Progress Maps.** The CONTRACTOR shall maintain and submit daily progress maps for project performance and completion tracking by acceptance section with correlation to the placed material removal from the borrow area. The Progress Maps may be submitted in digital (i.e. Adobe PDF) format and transmitted by email to the ENGINEER as an attachment to the Daily QCR.

#### 4. DREDGE CUTTERHEAD LOCATION CONTROL.

**4.1 Continuous Electronic Positioning on the Dredge Cutterhead.** The CONTRACTOR is required to have in continuous operation on the dredge electronic positioning equipment that will accurately compute and plot the position of the cutterhead of the dredge. The CONTRACTOR shall adhere to the applicable sections of the FDEP Sediment QA/QC Plan provided in the appendices. Differential Global Positioning System (DGPS), or equivalent, shall be used to maintain precise positioning of the dredge cutterhead. Whenever excavation is underway, the location of the dredge cutterhead shall be continuously monitored and its position recorded in Florida State Plane Coordinates. The dredge cutterhead location shall be recorded at intervals not to exceed two (2) minutes while the dredge is working. Plotters shall also continuously record the deviation (with respect to the datum on the Plans) of the cutterhead and cut elevation as well as the cutterhead horizontal location. The CONTRACTOR shall also continuously record the elevation (with respect to NAVD) of the cutterhead location. Such fixes, and the accompanying plots, shall be furnished to the ENGINEER upon request of the ENGINEER, but no later than daily as part of the Quality Control Reports. The electronic positioning equipment for the dredge cutterhead shall be installed on the dredge prior to the start of excavation so as to monitor, as closely as possible, the actual location of the bottom of the dredge cutterhead while it is excavating sediment. All vertical measurements shall be tide corrected and reported in NAVD88. The operator shall have visual controls that depict the location and depth of the cutterhead within the specified borrow area. The electronic positioning equipment shall be calibrated, maintained and operated so that the maximum error for the fixes recorded does not exceed tolerances in the horizontal position ( $\pm 3$  feet) or vertical position ( $\pm 0.1$  foot). The location on the dredge of the master antenna and the distance and direction from the master antenna to the cutterhead shall be reported in the Quality Control Report.

**4.2 Daily Quality Control Report and Dredge Cutterhead Location.** Daily Quality Control Reports provided to the ENGINEER shall include northing, easting and elevation data in ASCII format provided digitally and plan view and cross-section plots of the previous day's dredge cutterhead locations and show the borrow area limits. The format of the plot may be subject to approval by the ENGINEER. All payments to the CONTRACTOR may be withheld by the COUNTY until all of the required information is provided to the ENGINEER.

#### 5. BORROW AREA EXCAVATION.

**5.1 Sediment QA/QC Plan.** The CONTRACTOR shall follow the FDEP approved Sediment QA/QC Plan provided in the appendices.

**5.2 Borrow Area Sediment Removal Limitations.** All sediment removal shall be within the horizontal and vertical limits of the borrow area shown in the Plans. Under no circumstances shall sediment removal occur below the permitted overdepth elevation as shown in the Plans or permits for the project, referenced to NAVD88. If sediment removal occurs outside of the permitted borrow area, or below the elevation of the borrow area as shown in the Plans, the CONTRACTOR will pay any and all permit fines for the permit violation and shall be responsible for removal of material from the nourished beach which is not acceptable to the State of Florida. The CONTRACTOR will be required to pay for any costs, fines, or other expenses related to excavating outside of or below the permitted borrow area limits and/or permit violations resulting from CONTRACTOR negligence in complying with permits for the project, and may be required by the State of Florida to remove unacceptable material from the beach fill. Removal of unacceptable material from the beach fill will be at the CONTRACTOR's expense. If the CONTRACTOR does not pay any costs, fines, or other expenses related to excavating too deep or outside of the borrow area limits and/or for permit violations, the COUNTY will have the option to deduct from payments due to the CONTRACTOR from the COUNTY, or may be recovered from the CONTRACTOR's bond to cover all costs, fines, or expenses related to excavating outside of borrow area limits and/or removing sediment deeper than allowed within the borrow area. Beach fill that is obtained from unauthorized areas will not be paid for under this Contract. If it is determined that direct mechanical sediment removal has been performed beyond the borrow area(s) limits, the quantity of the material dredged from these areas will be computed and subtracted directly from the pay quantity of material placed on the beach.

**5.3 Sediment Excavation Limits.** The CONTRACTOR shall be allowed to remove material to the maximum elevation of -15.6 feet NAVD within the borrow area boundaries, which is based on the permitted design depth of -13.6 feet NAVD, plus 2 foot of allowable overdepth.

**5.4 Continuous Excavation.** All excavation shall be performed in a continuous manner to the greatest extent practicable to avoid loss of material which could have been excavated from each section of the borrow area. Excavation of sediment shall occur to the horizontal and vertical limits of the borrow area in those borrow area sections excavated by the CONTRACTOR.

**5.5 Uniform Excavation.** All excavation shall be performed in a uniform manner to the greatest extent practicable, so as to avoid creating significant holes, valleys, or ridges within the borrow areas. The borrow area shall be dredged to maximize the removal of sediment from each section of the borrow area, while avoiding excavation outside of the allowable borrow area before moving to the next section of the borrow area. The CONTRACTOR shall demonstrate to the ENGINEER that all sediment resources have been exhausted from each section of the borrow area before moving to the next borrow area section.

**5.6 Borrow Area Check Surveys.** The CONTRACTOR shall provide surveys as part of the Daily Quality Control Report that demonstrates the limits of sediment removal that occurs each day. The surveys are required as part of the normal course of work as additional assurance of compliance with the project permits, Plans and Specifications. The surveys shall be tide corrected and provided as raw digital data (i.e. X, Y, Z), and in cross-section and plan view plots or other graphical format proposed by the CONTRACTOR that is acceptable to the ENGINEER. The surveys shall be collected at a spacing sufficient to demonstrate compliance with project permits.

**5.7 Compliance Criteria for Beach Fill Material.** The CONTRACTOR shall continuously visually monitor the material being placed on the beach. Beach fill material shall meet the requirements of the FDEP approved project Sediment QA/QC Plan and shall conform to the compliance values presented on the plan for the respective project area. Any unacceptable material remaining in the fill shall be removed and disposed of by the CONTRACTOR as approved by the ENGINEER.

**5.8 Unsuitable Material.** If amounts of rock that exceed the FDEP approved Sediment QA/QC Plan, clay, or other debris are encountered in the borrow areas, the CONTRACTOR shall immediately cease dredging and elevate the equipment excavation depth within borrow area limits, or the location of the dredge cutterhead within the borrow area in order to avoid the inclusion of unacceptable amounts of rock, clay, or other debris in the beach fill while staying within the defined area. The location of unsuitable material encountered within the borrow areas shall be noted on the Contractor's Daily Quality Control Reports.

**5.9 Encountering Rock, Rubble or Debris in the Borrow Areas.** During beach fill operations, the CONTRACTOR shall continuously monitor the placement of fill material for the presence of rocks, rubble or debris in the material. If rock in excess of what is permissible by the FDEP approved Sediment QA/QC Plan is encountered during dredging, the CONTRACTOR shall adjust the construction operations to eliminate rock placement on the beach that exceeds permit requirements. The CONTRACTOR shall immediately notify the ENGINEER verbally, and report the encounter with excessive amounts of rock, rubble or debris on the Quality Control Report, providing location in State Plane Coordinates of the area of rock, rubble or debris. Rock, rubble or any other debris larger than three-fourths (3/4) inch in diameter that is excavated and placed on the beach may be required by the COUNTY or the State of Florida to be removed from the beach fill by the CONTRACTOR, at the costs provided in the Bid Form. If the CONTRACTOR fails to remove the rock, rubble or debris from the beach fill to the satisfaction of the COUNTY or State of Florida, such material may be removed by the COUNTY and the cost of such removal may be deducted from any money due, or to become due, to the CONTRACTOR or may be recovered under their bond. The State of Florida has the authority to determine if the quality of material being placed on the beach is acceptable; nevertheless, this does not relieve the CONTRACTOR of responsibility for all placed material, including rock and debris. If the State of Florida makes a specific determination that material being

placed is unacceptable quality, the CONTRACTOR will adjust their operations to avoid the unacceptable material and to place material which is acceptable to the State of Florida.

**5.10 Preservation of Historical, Archeological, and Cultural Resources.** The borrow area is a navigation channel that has been excavated on numerous occasions and most recently between December 2024 and February 2025. Nevertheless, if during construction activities, the CONTRACTOR observes items that may have historical or archeological value, the CONTRACTOR shall immediately cease all activities that may result in the destruction of these resources and shall prevent employees and subcontractors from trespassing on, removing, or otherwise damaging such resources. The CONTRACTOR will immediately relocate to another position in the borrow area and resume construction of the beach nourishment project, and not return to the site in question until State authorities have rendered judgment concerning the potential resources. Such observation shall be reported immediately to the ENGINEER so that the appropriate authorities may be notified and a determination made as to the significance and what, if any, special disposition of the finds shall be made. The CONTRACTOR shall report any observed unauthorized removal or destruction of such resources by any person to the ENGINEER and appropriate State of Florida authorities.

**5.11 Borrow Area Geotechnical Data.** The borrow area is a navigation channel that has been excavated on numerous occasions and most recently between December 2024 and February 2025. Prior to previous dredging events, vibracores (sediment cores) were collected in the Longboat Pass navigation channel in 2007 and 2014, which are depicted on the Plans in the borrow area plan view and cross-section sheets. The resulting geotechnical report and sediment logs are provided as an appendix to these Technical Specifications. Although the material within the permitted limits of the borrow area depicted in the 2007 and 2014 cores is assumed to have been predominantly removed, the channel has infilled as a result of coastal processes. Based on past dredging events, repetitive coastal processes associated with the Longboat Pass channel and previous geotechnical characteristics, the material in the borrow area is expected to have been deposited from the adjacent beaches as a mix of sandy soils with shell. At the CONTRACTOR's own discretion, the CONTRACTOR shall make an independent assessment prior to bidding.

**5.12 Noncompliant Material Remediation and Removal.** Screening at the beach disposal site is not a requirement of the Work. Nevertheless, remediation and removal of noncompliant material is included as an optional item of the Contract to be utilized only at the ENGINEER's direction to address the potential of noncompliant material occurring within the borrow area. If noncompliant material is placed on the beach from within the approved borrow area limits, screening for remediation and removal may be required by the COUNTY. If screening is required for remediation purposes, the method by which the CONTRACTOR removes oversized material shall be of their own design and shall be submitted to the ENGINEER for information purposes prior to commencement of work. All noncompliant material must be disposed of at a legal location at the CONTRACTOR's own discretion per the costs established in the Bid Form. This provision does not exclude

the CONTRACTOR from meeting the sediment quality requirements specified herein and established in the project permits. Likewise, the bid prices for implementing this provision shall not apply to any noncompliant material dredged from outside the approved borrow area limits, for which the CONTRACTOR will be held responsible to remediate, remove, and dispose of at a legal location at the CONTRACTOR's own cost. Crushing or burial of rock or shell and dispersing in the fill material shall not be allowed in any circumstance.

**5.12.1 Beach Fill Quality Control.** The CONTRACTOR shall continuously ensure beach fill material is in compliance with the FDEP Sand Rule, Florida Administrative Code 62B-41.007(2)(j), contract requirements and permit conditions. The CONTRACTOR shall characterize the nature of the sediments dredged from the borrow area and placed along the project shoreline in the Daily QCR. If directed by the ENGINEER, the CONTRACTOR shall acquire the equipment and personnel necessary to remediate the beach fill area.

**5.12.2 Compliance Criteria for Beach Fill Material.** Beach fill material shall meet the requirements of the FDEP approved project Sediment QC/QA Plan and shall conform to the compliance values presented on the plan for the respective project area. Beach fill material shall be clean sediment from the permitted source and free of unacceptable materials, such as debris, asphalt, rocks greater than  $\frac{3}{4}$  inch in diameter, clay balls, and other organics, oil, pollutants and any other foreign materials. Any unacceptable material remaining in the fill shall be removed and disposed of by the CONTRACTOR as approved by the ENGINEER.

**5.12.3 Beach Fill Observation and Sampling.** Beach fill observation shall be performed by the CONTRACTOR at all times during which beach fill material is being placed. The CONTRACTOR shall have on-site personnel to visually monitor the material being placed on the beach and capable of identifying deviations in sediment quality as specified in the Sediment QC/QA Plan, at the active placement location. The selected individual shall have training or experience in beach renourishment, construction inspection and testing and be knowledgeable of the contract requirements and permit conditions. The observer shall remain in constant radio contact with the dredge and shall report encounters with noncompliant materials to the dredge operator. Should any beach fill material not comply with the compliance criteria stated above, the CONTRACTOR shall collect samples of said material at an interval of no greater than 100 feet throughout the noncompliant area and notify the ENGINEER immediately. If the expanse of noncompliant material exceeds the compliance criteria as stated in the Sediment QC/QA Plan, the ENGINEER shall be notified immediately and the CONTRACTOR shall cease borrow area excavation operations and take necessary actions to avoid further discharge of noncompliant material with possible remediation. If requested by the ENGINEER, the collected samples of noncompliant beach sediments shall be analyzed by the CONTRACTOR for grain size distribution, silt content, Munsell Color, carbonate content, and percent visual shell by a certified

laboratory at no cost to the COUNTY using the methods outlined in the Sediment QC/QA Plan.

**5.12.4 Determination of Aerial Extent of Noncompliant Beach Fill.** In the event of encountering noncompliant beach fill, the CONTRACTOR shall follow procedures to determine aerial extent and remediation specified in the Sediment QC/QA Plan and implement the Beach Fill Observation and Sampling provision above. The total square footage and volume of the noncompliant material shall be determined and a site map shall be prepared depicting the location of all samples and the boundaries of all areas of noncompliant fill. Once the CONTRACTOR has the results of the sediment investigation, the ENGINEER shall be notified immediately and provided the information. Notification shall include the map with the aerial extent and volume of all areas of noncompliant beach fill material.

**5.12.5 Remediation and Removal of Noncompliant Beach Fill.** If the ENGINEER determines remediation is required, the CONTRACTOR shall remediate. The method by which the CONTRACTOR remediates shall be of their own design and shall be conducted so as to ensure compliance of the material placed. The ENGINEER shall be notified of the CONTRACTOR's remediation method before the CONTRACTOR proceeds with remediation. All noncompliant material must be disposed of at a legal location at the CONTRACTOR's own discretion. Compensation for Remediation and Removal of Noncompliant Beach Fill will be paid at the unit rates established in the Bid Form for work directed by the ENGINEER as follows:

- a. Remediation of Noncompliant Material - Remediation through the actions of blending, grading, pushing, and mixing as further specified in the Sediment QC/QA Plan will be paid per surface area (square foot or acre) of beach remediated as directed by the ENGINEER.
- b. Screening to Remove Unacceptable Material – Should material screening be required to remove unacceptable material from the beach fill, the work will be paid by cubic yard of material processed by screening operations as directed by the ENGINEER.
- c. Hauling and Disposal of Unacceptable Material – Should screening operations result in unacceptable material that must be hauled away and disposed as directed by the ENGINEER, the quantity will be paid by cubic yard of unacceptable material removed and evidenced by certified documentation (haul tickets, waste disposal records, etc.).

Any costs for remediation and removal actions performed by the CONTRACTOR without the ENGINEER's explicit direction will borne solely by the CONTRACTOR.

The CONTRACTOR shall provide to the ENGINEER all plots, data, and information required by the Sediment QC/QA plan for reporting.

## 6. PIPELINES.

**6.1 Pipeline Placement.** The CONTRACTOR shall avoid areas of the beach outside the fill placement area used by shorebirds. No construction activity, including pipeline placement, shall occur in any vegetated areas because of the potential presence of shorebirds, which are to be protected and avoided.

**6.2 Pipeline Leaks.** The CONTRACTOR shall maintain a tight discharge pipeline at all times. The joints shall be so constructed as to preclude spillage and leakage above and below water. All leaks shall be promptly repaired. Failure to repair leaks or change the method of operation which is resulting in leakage that exceeds turbidity and water quality standards during transport to discharge site will result in suspension of dredging operations and require prompt repair or change of operation to prevent leakage as a prerequisite to the resumption of dredging. Materials used to plug leaks or to seal pipeline joints shall be entirely removed from the beach when the pipeline is removed.

**6.3 Sand Ramps.** The CONTRACTOR is required to build sand ramps a minimum of 15 feet wide over the shore pipe at a maximum of 200 foot intervals to allow pedestrian access to the water. Sand ramps will also be required at the beach access points for each existing public access from the upland throughout the project area. Additional ramps shall be constructed in front of all lifeguard towers, stairways down to the beach, and dune overwalks. After construction, the pipe will be removed and the beach in the area of the ramps leveled and dressed.

**6.4 Booster Pumps and Trucking.** Booster pumps will not be permitted without the written consent of the COUNTY and as described in the Supplemental General Conditions. The CONTRACTOR shall use a dredge of sufficient capability to maintain a sufficient sediment transfer rate to meet or exceed time limitations for project construction. Trucking of sediment will also be prohibited unless approved by the COUNTY in writing upon written request of the CONTRACTOR due to extenuating circumstances.

**6.5 Pipeline Transportation.** A pipeline dredge shall be used to transport material to the project placement site. The CONTRACTOR shall maintain a tight discharge pipeline at all times. The joints shall be so constructed as to preclude spillage and leakage.

**6.6 Submerged Pipeline.** In the event the CONTRACTOR elects to submerge their pipeline, the pipeline shall rest on the bottom, and the top of the submerged pipeline and any anchor securing the submerged pipeline shall be no higher than the project depth for any navigation channel in which the submerged pipeline is placed. Should the CONTRACTOR elect to use a pipeline material which is buoyant or semi-buoyant, such as PVC pipe, plastic, or similar low density materials, the CONTRACTOR shall securely anchor the pipeline to prevent the pipeline from lifting off the bottom under any conditions. The

CONTRACTOR shall make daily inspections of the submerged pipeline to ensure buoyancy has not loosened the anchors. The CONTRACTOR shall retrieve all anchors when the submerged pipeline is removed. The location of the entire length of submerged pipeline shall be marked with signs, buoys, lights and flags conforming to U.S. Coast Guard regulations. No pipelines shall be placed on artificial reefs or within any identified buffer zones.

**6.7 Floating Pipeline.** Should the CONTRACTOR's pipeline not rest on the bottom, it will be considered a floating pipeline and shall be visible on the surface and clearly marked. In no case will the CONTRACTOR's pipeline be allowed to fluctuate between the surface and the bottom, or lie partly submerged except where the pipeline descends from the dredge to a submerged pipeline. Lights shall be installed on the floating pipeline in compliance with U.S. Coast Guard requirements and for safety. The lights shall be supported either by buoys or by temporary piling, provided by the CONTRACTOR. Where the pipeline does not cross a navigable channel, the flashing yellow all around lights shall not be spaced more than 200 feet apart. Closer spacing and specific markings or colors may be required by the U.S. Coast Guard, in which case the requirements of the U.S. Coast Guard shall govern, at no additional cost to the COUNTY.

**6.8 Pipeline Landing Barricade Requirements.** Installation of a barricade is required on all pipelines that encounter land on Anna Maria Island. The purpose of the barricade is to prevent public access onto the pipeline landing.

## **7. HYDRAULIC PLACEMENT OF BEACH FILL.**

**7.1 General.** All sediment excavated from the borrow area shall be transported to, and hydraulically deposited on, the beach within the lines, grades and cross sections shown in the Plans except as may be modified by the ENGINEER. The CONTRACTOR shall maintain and protect the fill in a satisfactory condition at all times until final completion and acceptance of the work. The CONTRACTOR will receive no payment for any fill (sediment) that is not contained within the limits of the hydraulic fill template, with the exception of fill placed in the beach berm tolerance, which is +/- 0.5 feet. The CONTRACTOR must place a minimum of 95% of the template volume between pay profile lines and achieve the minimum beach berm fill elevation of +3.5 feet (NAVD) everywhere in order to be considered for payment of that section, unless otherwise indicated by the ENGINEER in writing.

**7.2 Debris Removal.** Prior to placement of fill, the CONTRACTOR shall remove from the site of the work all loose or partially buried material lying within the foundation limits of the beach fill sections. All material removed shall be disposed of in an appropriate and legal manner and at the expense of the CONTRACTOR.

**7.3 Debris and Rock Disposal.** The CONTRACTOR shall not bury rock or debris within the beach fill. The CONTRACTOR shall remove any rock or debris which is required to be eliminated from the fill, from the beach area and disposed of it in a legal manner.

## 7.4 **Fill Placement.**

**7.4.1 Construction Beach Berm Elevation and Beach Slope.** The elevation of the construction berm is +4.0 ft (NAVD) with a +/- 0.5 ft allowable vertical tolerance above and below the construction template. The seaward beach slope shall be 1 foot vertical to 15 feet horizontal until intersection with the existing beach profile.

**7.4.2 Fill Placement Limits.** The excavated material shall be placed and brought to rest on the beach to the lines, grades, and cross-sections indicated on the Plans, unless otherwise provided for herein or directed by the ENGINEER. The beach is subject to change. Existing beach profile cross-sections at the time the Work is done will likely vary from those shown in the Plans. As a result, the fill volumes by profile will also likely vary from the estimated densities shown on the Plans, dependent upon the availability of capacity within the permitted fill template. The CONTRACTOR shall place the hydraulic fill on the beach in such a manner as to establish a uniform beach between adjacent pay profile lines. Segments of beach located between pay profiles will not be underfilled.

**7.4.3 Fill Placement Control.** The CONTRACTOR shall make every effort to retain placed fill within the beach fill template. Temporary longitudinal dikes, and spreader and pocket pipe shall be used as necessary to prevent gulying and erosion of the beach and hydraulic fill, to retain the hydraulic fill on the beach within the limits of the hydraulic fill template cross-section, and to control water turbidity. The pipeline discharge will be located in such a position or location as determined by the CONTRACTOR to avoid potential undermining of any structure, or at a distance that will avoid undermining or any structural damage. Dikes or mounds shall be constructed parallel to the waterline to direct the pipeline discharge longitudinally along the beach to avoid transverse gulying direct from the discharge point to the ocean and to control water turbidity. The ENGINEER may direct the CONTRACTOR to extend dikes, if necessary, to control turbidity and beach erosion. No undrained pockets shall be left on the renourished beach upon completion of the work. The CONTRACTOR shall not permit spoil water to flow landward of the fill section, or water to pond between the hydraulic fill and upland. The CONTRACTOR shall protect existing drainage and operations. Any material permitted to flow into or restrict the flow of an existing ditch, canal, or drain pipe, shall be promptly removed. All structures within the fill section shall be protected by the CONTRACTOR to prevent damage by the CONTRACTOR's operations.

**7.4.4 Area of No Fill Placement.** The fill shall extend landward to the existing elevation contour that matches the berm crest elevation of +4.0 ft NAVD, with a +/- 0.5 ft tolerance, unless features such as dunes or vegetation, or any structures such as concrete decks, buildings, revetments, or bulkheads inhibit fill placement on, or landward of, those features. If a bulkhead or revetment extends to the

design berm elevation or above, the fill shall terminate at the bulkhead or revetment. If the top of a structure is below the design berm crest elevation of +4.0 ft (NAVD), then the fill shall taper landward (using a 3H to 1V slope) intersecting one (1) foot below the top of the structure to prevent burial or overtopping with sediment. If a dune vegetation line is below the design berm crest of +4.0 ft (NAVD), then the fill shall taper landward (using a 3H to 1V slope) to the edge of the vegetation.

**7.4.5 Right to Vary Beach Dimensions.** The ENGINEER reserves the right to vary the width, volume, slope or grade of the berm from the lines and grades shown on the Plans or observed at the project site in order to establish a uniform beach between adjacent pay profile lines or for the entire length of each project, as shown in the Plans. The hydraulic beach fill cross-sections shown in the Plans are for the purpose of estimating the amount of hydraulic fill needed and will be used by the ENGINEER in making any change in the lines and grades. The CONTRACTOR will not be required to dress the hydraulic fill below mean high water, but will be required to dress the beach as specified herein.

## **7.5 Pay Profiles.**

**7.5.1 Pay Profile Lines.** Based on the pay profile lines presented in the Plans, the CONTRACTOR shall establish beach profiles at the identified locations for purposes of pay volume computations. Pay profile lines are generally spaced at 100 feet apart but may vary for alignment with the design survey profiles collected at FDEP R-Monument locations.

**7.5.2 Fill Placement Tolerance.** The maximum vertical tolerance for fill placement above the design template is 0.5 feet to a maximum of +4.5 ft NAVD. The minimum vertical tolerance for fill placement below the design template is 0.5 feet to a minimum of +3.5 ft NAVD. Payment will be for hydraulic fill placed within the construction template of +4.0 ft NAVD as shown on the Plans, and the beach berm tolerance of 1.0 feet (+/- 0.5 ft). Any material placed above the upper template tolerance may be left in place at the discretion of the ENGINEER; however, this material will not be included in the quantities or volume of material eligible for payment. The CONTRACTOR shall fill any deficient section of beach to be at the minimum elevation of +3.5 feet NAVD everywhere in the project fill area and shall meet the minimum fill volume requirement of 95% of the fill volume to the +4.0 ft NAVD elevation for the acceptance segment. The COUNTY will withhold payment for those sections of beach (segments between pay profiles) that do not meet the minimum hydraulic fill requirement (tolerance and volume) until the appropriate hydraulic fill placement and grading has been completed by the CONTRACTOR. The CONTRACTOR is encouraged to target the specified template elevation of +4.0 ft NAVD and minimize fill placement above the upper tolerance

elevation, which will be considered “non-pay” fill placement. If the CONTRACTOR does fill above the tolerance, that material may be left in place at the ENGINEER’s direction and may require the CONTRACTOR to perform additional surveying and grading at no cost to the COUNTY.

**7.5.3 Maximum Pay Volume.** The maximum pay volume is 63,450 cubic yards or as otherwise authorized by Change Order. The pay volume will not exceed this value, even though the fill template may have capacity for a larger volume at the time of construction.

**7.5.4 Uniform Beach.** The filled beach between the pay profiles will be graded, dressed and uniform in dimension. The constructed beach contour lines between pay profiles including the beach berm break, will be approximately shore parallel and straight line, indicating that the CONTRACTOR constructed a uniform (non-cusped) beach between the profile lines to the appropriate elevation and width, as shown in the Plans or as directed by the ENGINEER.

**7.5.5 Underfilling Between Pay Profile Lines.** If the ENGINEER or COUNTY believe they have observed underfilling of the beach between pay profile lines, the ENGINEER or COUNTY may request a survey be conducted by the CONTRACTOR at the CONTRACTOR's expense to document the elevation of the placed material. If found to be deficient, the CONTRACTOR will place additional hydraulic fill from the borrow area until the beach is uniform in appearance and dimensions between pay profile lines, provides a straight beach berm break between pay profile lines, provides a minimum of 95% of the fill volume and meets the minimum elevation of +3.5 feet NAVD everywhere on the constructed berm in order to qualify for payment of that section. Fill should be obtained from adjacent areas of the beach that have been overfilled exceeding the design template if fill cannot be obtained from the borrow area. This will include fill contained between the elevations of +4.0 feet NAVD and +4.5 feet NAVD.

## **8. DRESSING THE NOURISHED BEACH.**

**8.1 Dressing Before Payment Survey.** Upon completion of all filling operations within an acceptance section, and prior to surveying for payment, the fill shall be graded and dressed with a dragged pipe so as to eliminate any undrained pockets, ridges, and depressions in the hydraulic beach fill surfaces. The beach surface shall be level after dressing is completed. The CONTRACTOR is to grade and dress the hydraulic fill on the beach in such a manner as to establish a uniform berm width and slope between adjacent pay profile lines. The beach slope shall be graded down to a slope not steeper than one (1) foot vertical to fifteen (15) feet horizontal to the water's edge. The CONTRACTOR is responsible to grade down any and all beach escarpments or sand cliffs in the entire restored beach until the CONTRACTOR has demobilized from the project site. The project

site will not be considered complete, nor the CONTRACTOR eligible for final payment until all beach scarps/sand cliffs in the project areas are graded.

**8.2 Misplaced Materials.** If any material is deposited other than in places designated or approved, the CONTRACTOR may be required to remove such misplaced material and redeposit it where directed by the ENGINEER or COUNTY, at the CONTRACTOR's expense. This will include materials within the borrow area, on the seafloor in the Gulf of America, in Longboat Pass, or within inland waterbodies.

**8.3 Removal of Grade Stakes.** If the CONTRACTOR uses grade stakes, the CONTRACTOR shall remove all grade stakes from each completed section prior to dressing the beach. Upon completion of fill placement, the CONTRACTOR shall conduct a search to find each and every stake placed by the CONTRACTOR in the area. Any grade stakes left in the beach will be the sole responsibility and liability of the CONTRACTOR. If the CONTRACTOR fails to remove grade stakes in a timely manner, the COUNTY may have the visible stakes removed and deduct the cost from the CONTRACTOR's final payment.

## **9. BEFORE AND AFTER DREDGE SURVEYS.**

**9.1 General.** Payments will be based on the comparison of before dredge (BD) and after dredge (AD) surveys conducted on the dressed beach certified by the CONTRACTOR's surveyor. The ENGINEER will verify the pay quantities provided by the CONTRACTOR, based on comparison of BD and AD surveys conducted by the CONTRACTOR's surveyor and accepted by the ENGINEER. Surveys will be performed by a surveyor employed by, or a subcontractor of, the CONTRACTOR. The CONTRACTOR shall notify the ENGINEER as to when the surveys will be conducted so that the ENGINEER may observe the survey as it is conducted. The CONTRACTOR's surveyor shall certify all surveys and the ENGINEER must agree, based on submissions provided by the CONTRACTOR's surveyor, that the survey may be used for payment purposes. All survey work conducted by the CONTRACTOR for payment is subject to acceptance by the ENGINEER. Acceptance sections are defined as the segment of beach lying between two immediately adjacent pay profile lines defined on the Plans. The ENGINEER, at their discretion, may conduct surveys to verify surveys performed by the CONTRACTOR for payment purposes.

**9.2 Surveyor.** The surveyor used by the CONTRACTOR must be a registered land surveyor in the State of Florida and shall certify (sign and seal) all survey deliverables.

**9.3 Payment Surveys.** Payments will be based on the result of the comparison of before dredge (BD) and after dredge (AD) surveys conducted on the dressed beach at pay profiles from Station 37+14 to Station 87+00. The ENGINEER will verify the pay quantities provided by the CONTRACTOR based on BD and AD surveys conducted by the CONTRACTOR and accepted by the ENGINEER. Payment (BD and AD) surveys shall be performed and certified by a registered land surveyor employed by the CONTRACTOR. The CONTRACTOR shall notify the COUNTY and the ENGINEER in advance when the

payment surveys will be conducted to provide sufficient time for the survey work to be observed by the ENGINEER's representative at the option of the ENGINEER.

**9.3.1 Before Dredge Survey.** Before dredge (BD) surveys will be conducted by the CONTRACTOR at the spacing and location of pay profile lines as identified in the Plans, which are generally 100 feet apart. BD surveys will be conducted to a minimum distance of 100 feet beyond or seaward of the construction toe of fill. The BD survey will be used as the baseline for volumetric payment for the beach nourishment project. The CONTRACTOR shall not commence construction until the ENGINEER has received the certified (signed and sealed) BD survey and has reviewed the survey for use as the BD survey. The fill template may be revised at the ENGINEER's discretion using the BD survey results.

**9.3.2 After Dredge Survey.** After dredge (AD) surveys shall not be conducted until the beach has been dressed to provide a level and uniform beach surface, removing all depressions, gullies, or other features in the beach which may affect the accuracy of the survey and the volume computation. The AD pay survey shall be conducted prior to tilling the beach.

**9.4 Survey Field Notes Submittal.** The CONTRACTOR shall submit survey field notes to the ENGINEER upon completion of each BD or AD survey to expedite review of each survey. All field notes, survey and volume computations, and the records used by the CONTRACTOR to compute the payment fill quantity shall be furnished to the ENGINEER with the Application for Progress or Final Payment. Failure to provide the specified information will delay recommendation and payment.

**9.5 Survey Error or Volume Computation Discrepancy.** If there is an error or discrepancy in the survey conducted by the CONTRACTOR which affects the payment volume, the CONTRACTOR and the ENGINEER's surveyors will attempt to resolve the survey discrepancy or error. If the discrepancy or error cannot be resolved, the ENGINEER will compute the fill volume for payment purposes. Likewise, if there is an error or discrepancy concerning the payment volume computation, the ENGINEER and CONTRACTOR will attempt to resolve the issue. Nevertheless, the volume determined to be correct by the ENGINEER shall be the volume used for payment purposes.

**9.6 Fill Section Rejection.** The notification of rejection of a fill section will be based on notification to the CONTRACTOR from the ENGINEER. After the survey data has been received by the ENGINEER, the ENGINEER will have five (5) days to review the data and prepare a written response if a section has been rejected, and the reason for rejection.

**9.7 Beach Fill Pay Profile Lines.** The BD and AD surveys shall be conducted at the intervals and locations as indicated in the Plans, to include Station 37+14 through Station 87+00 plus at least one additional R-monument profile line in each direction, and shall extend offshore a minimum distance of 100 feet seaward of the termination of the construction toe of fill. Profiles to be used for payment purposes are strictly limited to

profiles specifically defined by the project baseline on the Plans. For example, FDEP R-monument profile line R-36 (Station 37+14) will be the first payment station, with payment profile lines spaced generally at 100 foot intervals to the south except at the location of the FDEP monuments where the spacing varies to include the FDEP profile location. Pay quantity calculations will utilize the distance between adjacent pay profile lines as shown on the Plans.

**9.8 Survey Requirements.** All beach profile surveys shall be conducted by either differential leveling techniques or with RTK GPS technology to a minimum distance of 100 feet seaward of the termination of the construction toe of fill. The CONTRACTOR shall close all level loops; the closure shall be less than 0.04 feet. All onshore points shall be within  $\pm 1$  foot of the established profile line.

**9.9 Profile Line Azimuth and Measurements.** Profile line surveys shall be conducted along the azimuth indicated in the Plans. A sufficient number of points will be taken along each line to ensure adequate measurements of the entire profile line including topographic features, and major breaks in slope, beach berms, foreshore, and intersection of the fill with the bottom, with a maximum elevation difference of approximately 1 foot between adjacent points. Data points shall be taken at a spacing of not more than 10 feet. The product shall be a continuous line representing the entire beach fill profile plus 100 feet seaward of the construction toe of fill.

**9.10 Beach Survey Deliverables to the ENGINEER.** Deliverables to the ENGINEER shall include processed and tide corrected survey data of easting, northing and elevation from each of the pay stations in ASCII format provided digitally and illustrated in cross-sections on digital plots. Cross-section plots shall show the survey, the construction template, the upper tolerance and the mean high water line. Additional information to be provided to the ENGINEER shall include any corrections and field notes.

**9.11 Before and After Dredge Borrow Area Survey.** A before dredge (BD) survey of the borrow area will be conducted by the CONTRACTOR in accordance with all survey standards established herein. Following collection of the BD survey, and prior to excavation of the fill, the CONTRACTOR's estimate of available material based on the BD survey shall be provided to the ENGINEER along with the survey data. The data shall be collected on uniform (i.e. 100 foot spacing) stations along the baseline shown on the Plans. The borrow area has been established by permit and will not be revised with the BD survey data, although the available volume may vary due to natural processes. The after dredge (AD) survey of the borrow area shall be conducted within 30 days after excavation for the project is complete along the same lines as the BD survey for direct comparison. The CONTRACTOR shall notify the COUNTY and the ENGINEER in advance when the surveys will be conducted to provide sufficient time for the survey work to be observed by the ENGINEER's representative at the option of the ENGINEER.

**9.12 Borrow Area Survey Deliverables to the ENGINEER.** Deliverables to the ENGINEER shall include processed tide corrected survey data of easting, northing and

elevation in ASCII format provided digitally and illustrated in cross-sections on digital plots. Cross-section plots shall show the survey, the permitted after dredge and overdepth elevations shown on the plans. Additional information to be provided the ENGINEER shall include any corrections and field notes.

**9.13 Survey Documentation.** All survey work shall be documented and copies supplied to the ENGINEER. The surveys may be conducted in the presence of the ENGINEER or their representative, at the option of the ENGINEER. The CONTRACTOR shall provide a minimum of three (3) days advance notice to the ENGINEER prior to conducting surveys for payment.

## **10. VESSEL USE AT LONGBOAT PASS.**

**10.1 Vessel-Shore Transfers.** A landing site for shore to vessel to shore transfers of personnel, supplies, etc., may be available near Longboat Pass. The CONTRACTOR is responsible for making all arrangements for vessel-shore transfer facilities. The CONTRACTOR shall bear the responsibility for any damage caused by the use of any site for landing and transfers, and shall maintain navigation through all navigable waterways and boat ramps. The CONTRACTOR shall use any landing site, inlet, transfer area, or staging area at their own risk.

**10.2 Small CONTRACTOR Vessels.** Small CONTRACTOR vessels that can safely navigate through Longboat Pass may be anchored in approved anchorages. The vessels must not block navigation channels leading to Longboat Pass, the interior Waterway, or private docks located along the perimeter of Longboat Pass. The CONTRACTOR shall avoid interference with, or damage to, private or commercial vessels. The CONTRACTOR may use Longboat Pass and local waterways at the CONTRACTOR's own risk.

**10.3 Longboat Pass Commercial Dock/Loading Facility.** The dock area on the east side of Anna Maria Island, immediately north of Longboat Pass in the City of Bradenton Beach, may be available to the CONTRACTOR for barge loading and offloading operations only during the timeframe of this project. No staging of materials or equipment at this facility will be permitted. The CONTRACTOR shall coordinate with Manatee County, as other operations may be occurring simultaneously at this location, including activities by the Town of Longboat Key, which is expected to utilize this limited loading area concurrently during the Coquina Beach project. The CONTRACTOR shall adhere to the Manatee County rate structure for use of the Longboat Pass Commercial Dock/Loading Facility in effect at the time of bid advertisement and shall include all associated costs in their bid. It is also possible that this area will be utilized by other COUNTY operations depending on the timing of the project.

The CONTRACTOR shall secure permission from Manatee County and the City of Bradenton Beach to use this facility. If the CONTRACTOR decides to use this facility, the Work area shall be fenced off by the CONTRACTOR to prevent the public from entering the area used by the CONTRACTOR. However, the CONTRACTOR shall not block and shall

maintain open the road that passes the dock facility and continues beneath the Longboat Pass Bridge. The CONTRACTOR shall not in any way interfere with the public use of the facilities (boat ramps, restrooms, etc.) adjacent to the Longboat Pass Commercial Dock/Loading Facility. If the CONTRACTOR wishes to cordon off an area with fencing, it must be approved by the ENGINEER in advance.

Barges shall not be moored at the loading dock overnight and shall be relocated to Anna Maria Sound for overnight mooring. The CONTRACTOR is advised that outflow currents in the vicinity of Longboat Pass are very strong and shall plan and execute all barge operations accordingly.

**10.4 Dredge Crew Boat Access.** The CONTRACTOR shall use the Coquina Beach South Boat Ramp for marine crew loading and offloading exclusively. The CONTRACTOR shall secure permission prior to using this facility and shall coordinate all Coquina Beach South Boat Ramp operations with Manatee County and the City of Bradenton Beach throughout the duration of the project. The CONTRACTOR shall not use any other boat ramp facilities within Coquina Beach Park for crew loading and offloading within the project area. Public access to the Coquina Beach South Boat Ramp shall be maintained at all times, and the CONTRACTOR shall not block or otherwise interfere with public use of the ramp, adjacent parking areas, or surrounding facilities. The CONTRACTOR's use of the boat ramp, including vessel launch and retrieval, shall be scheduled and conducted in a manner that minimizes conflict with public access and shall be limited to hours approved by Manatee County. Trailer and vehicle parking associated with CONTRACTOR operations shall be restricted to areas designated by Manatee County and shall not displace public parking.

**10.5 Gulf of America Vessel Access.** Longboat Pass (south) and Passage Key Inlet (north) provide access to the Gulf of America from Sarasota Bay and Tampa Bay for numerous boaters. The CONTRACTOR shall maintain ingress and egress to boaters using Longboat Pass and Passage Key Inlet. Under no circumstances will the CONTRACTOR be allowed to block navigational access.

## **11. WORK AREA.**

The construction and borrow area limits available to the CONTRACTOR for accomplishing the Work are shown in the Plans. Construction access to the beach will be as shown in the Plans, as stated in these Technical Specifications. The CONTRACTOR shall accomplish the Work in such a manner so as to minimize disruption to road traffic.

## **12. CONSTRUCTION ACCESS.**

The CONTRACTOR shall limit construction access to the beach at the locations shown in the Plans or as approved by the COUNTY. The CONTRACTOR shall exercise caution when accessing and driving on the beach with vehicles or equipment, particularly with regard to beachgoers and private property. Tracked equipment shall not traverse paved roads, concrete pathways, or paved parking lot. The walking path located between the designated staging area and

construction access can be traversed with tracked equipment with caution but must be documented and protected to prevent damage and restored to pre-construction conditions or better.

In the event that damage is caused by the CONTRACTOR, the CONTRACTOR shall restore all damage to roads, parking lots, sidewalks, walking paths, structures, dune vegetation or any other structure or natural feature to pre-construction conditions or better. The CONTRACTOR will not receive final payment until all damage is restored to the satisfaction of the COUNTY, as stated in these Technical Specifications. All damage will be repaired at the CONTRACTOR's expense.

**12.1 Land Access to the Project Site.** Land access to the landward project area is by two bridges extending from the mainland to Anna Maria Island, State Roads 64 and 70, and a bridge from Longboat Key. The CONTRACTOR is responsible for adhering to all weight and traffic regulations on all roadways.

### **13. STAGING AREA.**

Beach staging areas are limited to the project fill template and alongshore limits shown on the Plans. Off-beach staging and storage areas are also shown on the Plans. The CONTRACTOR shall cordon off and/or fence the staging areas to keep the public away from equipment. The staging areas must be restored to the pre-construction condition upon project completion at the cost of the CONTRACTOR. If additional staging areas are needed, they shall be procured by and at the expense of the CONTRACTOR, and with the approval of the COUNTY.

### **14. DAMAGES.**

The CONTRACTOR shall collect and provide a pre-construction video to include (1) staging and access areas to be used for the Work and (2) the upland dunes, vegetation and infrastructure along the beach within the project limits as documentation of the pre-construction conditions. The video shall be provided the ENGINEER prior to the commencement of equipment arrival in the staging areas and before any site work occurs on the beach. All damages to natural areas, and private or public property resulting from the CONTRACTOR's operations shall be repaired by the CONTRACTOR at the CONTRACTOR's expense. The COUNTY shall determine if repairs are required and the COUNTY or owner of the damaged property will determine if the property has been repaired to its previous condition before the CONTRACTOR receives approval of repairs. If the CONTRACTOR fails to repair damages, the COUNTY may conduct the repair and deduct from payment due to the CONTRACTOR the amount of money required for the repair, including all administrative and engineering costs.

## 15. PROTECTION OF COASTAL STRUCTURES.

Multiple shore protection structures are located in the project area and may be partially or completely buried at the time of construction. Regardless of the level of exposure, coastal structures shall not be damaged or destroyed by the CONTRACTOR. All existing structures shall be left in place and undisturbed. Bulldozers shall avoid all contact with coastal structures including the groins on the project beach. The CONTRACTOR's operations shall not result in the damage or destruction of any coastal structures. The CONTRACTOR's means and methods may necessitate creation of a temporary ramp with sand and protective materials over the Cortez Groins to enable passage of equipment without damage. Bulldozers and any other heavy equipment shall not move over the concrete portions of any groin on Coquina Beach south of R-36 (designated as the Coquina Beach groins), even if the Coquina Beach groins have been covered in sand. The CONTRACTOR may place the bulldozer's blade over the concrete portion of the Coquina Beach groins to grade and dress the beach or perform fill related operations, but it must be done in a manner that will not damage the groins. Bulldozers and other heavy equipment are permitted to move over the buried rubble-mound portions of the Coquina Beach groins if they are covered and protected by sand. If requested by the Engineer, the CONTRACTOR shall excavate the placed beach to expose the groin(s) for examination to determine if the groins have been damaged by the CONTRACTOR at no additional cost to the COUNTY. The CONTRACTOR shall repair damage to coastal structures caused by the CONTRACTOR's operations at no additional cost to the COUNTY.

## 16. BEACH TILLING.

**16.1 General.** The CONTRACTOR may be required to till the beach to reduce fill compaction at the discretion and direction of the Engineer in compliance with the permits and U.S. Fish and Wildlife Service (USFWS) requirements. If the CONTRACTOR is required to till the beach, the CONTRACTOR will be compensated in the lump sum amount indicated on the bid document for beach tilling. If tilling is not conducted by the CONTRACTOR, the amount of monies indicated as the tilling bid amount in the bid document will not be due the CONTRACTOR.

**16.2 Tilling and Dressing the Beach.** Following the completion of beach filling, dressing, and payment survey, the CONTRACTOR will till the constructed portion of the beach to loosen the compaction of the placed material. Tilling will be to a minimum depth of 24 inches throughout the newly placed beach seaward to the visible high water mark to the landward extent of fill placement. It is acknowledged that the tilling depth listed in the Statewide Programmatic Biological Opinion is 36 inches; however, a depth of 24 inches was verified to be acceptable by personal communication with USFWS, which aligns with the 24-inch requirement of the FDEP permit.

The tilling shall be by use of a tracked vehicle (bulldozer, loader, or equivalent) by pulling (rear mount) or pushing (front mount) a rake with the tines of a length appropriate to achieve a tilling depth of 24 inches. Tines will be spaced 15 to 18 inches apart. The CONTRACTOR shall conduct additional tilling as necessary to ensure all of the beach fill

above the mean high water line has a compaction of less than 500 cone penetrometer units, as determined by the ENGINEER. Following tilling, the beach shall again be dressed by dragging a pipe (or similar) lengthwise over the beach. The pipe may be positioned immediately behind the tilling tines to allow for a single operation of tilling and dressing.

**16.3 Avoidance of Groins.** Under no circumstances will tilling and dressing occur over the groins in the project area. Tilling and dressing will be conducted between and around the groins only. The location of the groins shall be staked by the CONTRACTOR prior to tilling, and the stakes maintained at all times. Heavy equipment operators shall be briefed by the CONTRACTOR on the importance of avoiding the groins. The CONTRACTOR shall be responsible for repairing any groin damage caused by their operations before final payment can be provided to the CONTRACTOR. If the CONTRACTOR obtains pre-construction photo documentation of the condition of the groins, the photos shall be provided to the COUNTY prior to the commencement of construction to document the condition of the groins.

## **17. NIGHTTIME OPERATIONS.**

Nighttime is defined as the period of time from sunset to sunrise. During nighttime beach fill operations, the CONTRACTOR shall utilize the minimum lighting that is necessary to accomplish the Work and comply with all OSHA and COUNTY sea turtle protection requirements, if applicable by permit. The CONTRACTOR shall shield or orient the lights to minimize the amount of light to the work area.

## **18. CONSTRUCTION PLANS AND CONTRACT DOCUMENTS.**

A minimum of one (1) complete set of construction Plans and Contract Documents (with permits) shall be kept in the construction office; one set at the dredge and one set at the on-site portable office (dump shack) at all times during project construction. In addition, the surveyor shall have at least one set. Permit notices shall be prominently displayed at the active work site (e.g. dump shack window, bulletin board, etc.) in accordance with regulatory requirements and remain posted for the entire duration of the Work.

## **19. BEACH USE FOR SPECIAL EVENTS.**

Special events may be conducted on the beach, including weddings and COUNTY functions. The CONTRACTOR shall make every effort to accommodate special events including, but not limited to, the burial of shoreline pipe in the vicinity of the special event and avoidance of the special event area with personnel and equipment during the event. The COUNTY or ENGINEER will coordinate with the CONTRACTOR concerning special events. The CONTRACTOR shall address accommodation of special events at no cost to the COUNTY.

## 20. NOISE CONTROL.

The CONTRACTOR, at times, will be working in close proximity to private residences. As a result, noise control is of paramount importance. The CONTRACTOR shall minimize noise so as not to disturb residents living along or near the beach. All hauling and excavating equipment, including dredges, pumps, boosters, as well as engines and motors used on this Work shall be equipped with satisfactory mufflers or other noise abatement devices. The CONTRACTOR shall conduct their operations so as to comply with all Federal, State, and local laws pertaining to noise. The use of horns, whistles, signals, and handling of dredge pipelines shall be held to the minimum necessary in order to ensure as quiet an operation as possible on the job site, especially at night, while maintaining safety on the job site.

**20.1 Booster Pumps Noise Control.** If permitted, booster pumps used on this Work shall be equipped with satisfactory mufflers and/or other sound abatement devices to reduce engine noise. If audible from land, a sound barrier shall be constructed landward of booster pumps in order to reflect noise waterward. The CONTRACTOR shall conduct their operations so as to comply with all Federal, State, and local laws pertaining to noise.

## 21. RESTRICTION OF PUBLIC ACCESS.

The CONTRACTOR shall be required to erect, maintain, and move as necessary, a restrictive barrier around the discharge of their hydraulic pipeline (or other mechanical off loader). The barrier shall be constructed so as to prevent the public from approaching at an unsafe distance the pipeline discharge, or active bulldozers and equipment. At a minimum, the CONTRACTOR shall post signs in a conspicuous manner stating, "**DANGER - HIGH PRESSURE DISCHARGE FROM DREDGE.**" The CONTRACTOR shall be required to prevent any public access to the end of the dredge discharge. If the public does not heed warning signs and/or restrictive barriers, the CONTRACTOR shall contact the COUNTY or local police for assistance in maintaining the public at a safe distance from construction activities.

**MANATEE COUNTY  
COQUINA BEACH STORM DAMAGE RESTORATION PROJECT  
TECHNICAL SPECIFICATIONS**

**PART 3 - ENVIRONMENTAL PROVISIONS**

Please refer to the COUNTY's front end documents in addition to the following Part 3 – Environmental Provisions.

**1. SCOPE.**

This section addresses compliance with environmental conditions of the permits and the prevention of pollution and other environmental damage as the result of construction operations under this Contract and for those measures set forth in the Technical Specifications. For the purpose of this specification, pollution and other environmental damage are defined as the presence of chemical, physical, or biological elements or agents that 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 pollution and damage requires consideration of air, water, land and the marine environment and includes management of construction activities, visual aesthetics, noise, solid waste, radiant energy, and radioactive materials, as well as other pollutants. The CONTRACTOR shall fulfill these specifications at the CONTRACTOR's expense.

**2. QUALITY CONTROL.**

The CONTRACTOR shall establish and maintain quality control and environmental protection for all items set forth herein. The CONTRACTOR shall record on Daily Quality Control reports any problems in complying with laws, regulations and ordinances, as well as project permits, and corrective action taken.

**3. PERMITS.**

The CONTRACTOR shall comply with all requirements under the terms and conditions set out in all permits applicable to the work. Copies of project permits and selected attachments are provided as appendices to the Technical Specifications of the Contract. Specifically, the CONTRACTOR will familiarize himself with specific conditions contained in the Florida Department of Environmental Protection (FDEP) and U.S. Army Corps of Engineers (USACE) permits and other State and Federal approvals for the project, including Biological Opinions. The CONTRACTOR shall follow the applicable Terms and Conditions in the following Biological Opinions (BO) that are incorporated by reference in the USACE permit: U.S. Fish and Wildlife Service (USFWS) BO for red knots, dated September 24, 2015; USFWS Statewide Programmatic Biological Opinion (SPBO) for sea turtles, dated February 27, 2015; USFWS Programmatic Piping Plover Biological Opinion (P<sup>3</sup>BO) for piping plovers, dated May 22, 2013; and the National Marine Fisheries Service (NMFS) Gulf Regional Biological Opinion (GRBO). The Terms and Conditions from each BO are provided as appendices to the Technical Specifications of the Contract. Complete

copies of Biological Opinions are available upon request (2015 BO for red knots) or on the websites provided in the USACE permit (SPBO, P<sup>3</sup>BO, and GRBO). Any other licenses, easements or approvals required, including, but not limited to those which may be required by the COUNTY, shall be secured and paid for by the CONTRACTOR.

#### **4. SUBCONTRACTORS.**

Assurance of compliance with all sections of the Contract by subcontractors will be the responsibility of the CONTRACTOR, including compliance with all environmental and permit requirements.

#### **5. NOTIFICATION.**

The ENGINEER will notify the CONTRACTOR and the COUNTY 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 COUNTY will determine what action will be taken and such response will be transmitted to the CONTRACTOR by the COUNTY, which may include stopping construction of the project until the CONTRACTOR complies with the environmental protection plan. Nevertheless, it remains the sole responsibility of the CONTRACTOR to comply with all applicable Federal, State or Local laws or regulations, permits and all elements of the Environmental Protection Plan. It will also be the CONTRACTOR's responsibility to advise all subcontractors to comply with all applicable laws, regulations, permit requirements and all elements of the Environmental Protection Plan.

#### **6. TURBIDITY CONTROL.**

**6.1 General.** The CONTRACTOR shall be bound and obligated to maintain the quality of the State's waters as stipulated in Chapter 17-3 of the Florida Administrative Code. Water quality monitoring will be performed by the CONTRACTOR, as specified on page 30 of 37 of the FDEP Permit No. 0298107-009-JC, dated March 19, 2015, under the heading "Water Quality Monitoring" numbered as Specific Condition 30. The permit is provided in the appendices of the Technical Specifications. Water quality monitoring will be included in the project construction bid as a portion of the unit cost of the project fill placement.

**6.2 Violations.** The CONTRACTOR shall follow all requirements concerning water quality as provided by permits for the project. In the event of a turbidity violation, the CONTRACTOR shall comply with permit conditions and take immediate corrective action indicated in project permits which could include stopping work, changing construction procedures or environmental protection methods, relocation of the dredge in the borrow area or other action. Construction activities shall not resume until water quality has returned to within standards (as provided by the FDEP permit).

**6.4 Reporting.** Water quality monitoring results will be provided to the ENGINEER, or their representative, on a daily basis. The reports will be sent to the FDEP by the ENGINEER.

## 7. PROTECTION OF ENVIRONMENTAL RESOURCES.

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. The CONTRACTOR shall confine their activities to areas defined by the drawings and specifications. Environmental protection shall be as stated in the following subparagraphs.

### 7.1 Protection of Land Resources.

**7.1.1 General.** Prior to the beginning of any construction, and at the request of the CONTRACTOR, the ENGINEER shall identify land resources to be preserved within the CONTRACTOR's work area, which is defined as the beach seaward of the vegetation line. The CONTRACTOR shall not remove, cut, deface, injure, or destroy land resources including sand dune or berm vegetation, trees, shrubs, vines, grasses, top soil, and land forms without direct written permission from the COUNTY. 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 allowed, the CONTRACTOR shall provide effective protection for land and vegetation resources at all times as defined in the following paragraphs. The CONTRACTOR shall be responsible for the replacement of any damaged or destroyed vegetation, to the satisfaction of the COUNTY. Failure to replace damaged or destroyed vegetation by the CONTRACTOR will result in replacement by the COUNTY; cost of replacement will be deducted from monies due to the CONTRACTOR, or from monies which will be due to the CONTRACTOR by the COUNTY.

**7.1.2 Work Area Limits.** In addition to all of the features listed under Section 7.1.1, isolated areas (if any) within the work area which are to be saved and protected may also be identified by the ENGINEER and marked or fenced by the CONTRACTOR. All monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the marks shall be visible. The CONTRACTOR shall convey to all subcontractors and personnel the purpose of marking and/or protection for all necessary objects.

**7.1.3 Protection of Landscape.** Trees, shrubs, vines, grasses, land forms, and other landscape features within the beach work area are to be preserved. Unless otherwise approved by the ENGINEER or COUNTY, no trees, shrubs, vines, grasses or other vegetation will be harmed or destroyed by the CONTRACTOR for any purpose.

**7.1.4. Fill Placement.** To avoid damage, no fill will be hydraulically placed within 25 feet of dunes, seawalls, or vegetation by direct pipeline discharge. Mechanical or manual means shall be used to place material at such locations.

**7.1.5. Retardation and Control of Runoff.** Runoff from the construction site shall be controlled by construction of diversion ditches, benches, dikes and/or berms to retard and divert runoff to protected drainage courses, and any measures required by area wide plans approved under paragraph 208 of the Clean Water Act. Dikes shall be constructed above the mean high water line and maintained in continuous repair to allow partial settling of fine materials from dredging, or as required by permit documents. The ENGINEER can require the CONTRACTOR to extend dikes up to 500 feet in length if it is deemed necessary for retardation and control of runoff. The extension of dikes, if required, will be provided by the CONTRACTOR at no additional cost.

**7.1.6 Temporary Excavations.** Embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment.

**7.1.7 Disposal of Solid Wastes.** Solid wastes (including clearing debris) shall be placed in containers which are emptied on a regular schedule. The CONTRACTOR shall empty containers when seven-eighths full and will avoid overflow conditions. All handling and disposal shall be conducted to prevent contamination. No steel, cables, wire, pipe, drums or any other debris shall be permitted to be disposed overboard into the waters of the Gulf of America. Disposal of solid wastes or debris in the Gulf of America is a violation of State and Federal laws. If such debris is found, the debris shall be removed by the CONTRACTOR at their own cost, or the cost of removal deducted from the CONTRACTOR's final payment.

**7.1.8 Disposal of Chemical Waste.** 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. The CONTRACTOR shall perform all maintenance of equipment, including but not limited to refueling, filter changes, and replacement of hydraulic lines in a manner so as not to contaminate soils, ground or surface waters, or any other natural resources.

**7.1.9 Disposal of Discarded Materials.** Discarded materials other than those which can be included in the solid waste category will be handled by the CONTRACTOR in the same manner as solid waste.

**7.2 Protection of Fish and Wildlife Resources.** The CONTRACTOR shall keep construction activities under continued surveillance, management, and control to minimize interference with, disturbance to, and impact to, or damage of fish and wildlife. Species that require specific consideration, as well as measures for their protection, will be addressed in the CONTRACTOR's Environmental Protection Plan prior to the beginning of project construction.

**7.2.1 Sea Turtles.** If project construction occurs during a portion of the sea turtle nesting season (May 1 to October 31), construction pipes shall be placed parallel to shore whenever possible, and as far landward as possible without impacting

the dune system, structures, or access points. In order to minimize adverse effects to sea turtles, nighttime lighting will comply with permit conditions and contract documents for the project and include lowering, screening and shielding lights where possible. All temporary storage of equipment shall be off the beach whenever possible, or as far landward as possible without impacting the dune system, structures or access points. The CONTRACTOR shall comply with all sea turtle protection measures outlined in the permits, Biological Opinions (BO), and "Sea Turtle and Smalltooth Sawfish Construction Conditions" (NMFS, 2006) regarding construction procedures, beach lighting and dates of construction. These documents are provided in the appendices of the Technical Specifications.

**7.2.2 Manatee Protection.** In order to ensure that manatees are not adversely affected by construction activities, the CONTRACTOR shall comply with all manatee protection measures outlined in the permits, BOs, and "Standard Manatee Conditions for In-Water Work" (FWC, 2011). These documents are provided in the appendices of the Technical Specifications.

**7.2.3 Seabird and Shorebird Nesting Season.** Breeding season varies by species. Most species have completed the breeding cycle by September 1, but flightless young may be present through September. The following dates are based on the best available information regarding ranges and habitat use by species for this site: February 15 - September 1. The CONTRACTOR shall comply with all seabird and shorebird protection measures outlined in the permits and BOs, which are provided in the appendices of the Technical Specifications.

**7.2.4 Smalltooth Sawfish.** In order to ensure that smalltooth sawfish are not adversely affected by construction activities, the CONTRACTOR shall comply with all smalltooth sawfish protection measures outlined in the permits, BOs, and "Sea Turtle and Smalltooth Sawfish Construction Conditions" (NMFS, 2006). These documents are provided in the appendices of the Technical Specifications.

**7.3 Natural Hardbottom and Artificial Reef Protection.** Hardbottom communities (hardbottoms), including both natural and artificial reef communities, exist immediately offshore of the Coquina Beach project area. Avoidance of the hardbottom communities is encouraged in order to preserve the existing natural environment. Contact with any and all artificial reefs is prohibited. It will be the responsibility of the CONTRACTOR to utilize divers and/or any other variable means to ensure that there are no artificial reefs in jeopardy prior to placing pipes, spuds, anchors, cables, drag arms or any other objects on the bottom. It will be solely the responsibility of the CONTRACTOR to prohibit contact with all artificial reefs. The CONTRACTOR shall take note that the State of Florida has levied significant fines to dredge contractors who have damaged protected hardbottom communities, which include artificial reefs. The CONTRACTOR will be responsible for any and all costs, fines, legal expenses, repairs or mitigation requirements, or any other related expenses, levied by the Local, State or Federal governments with jurisdictional or regulatory authority for damage to hardbottom communities in artificial reefs, other than

for covering the hardbottom with beach fill that have been by permit, acknowledged to be covered with fill as part of project construction.

**7.3.1 Control of Mobilization and Demobilization of Floating Equipment.**

Avoidance of damage to hardbottoms is entirely the responsibility of the CONTRACTOR. Mobilization and demobilization of floating equipment to, and from, the project site will be controlled by the CONTRACTOR to avoid contact with any and all hardbottom formations. The most recent hardbottom mapping data are shown on the Plans; however, it is the CONTRACTOR's responsibility to verify the location of resources. The CONTRACTOR shall avoid passing over hardbottom formations with any equipment.

**7.3.2 Non-Propelled Floating Equipment.** The CONTRACTOR shall directly push or tow with polypropylene (floating) lines all floating equipment that is not self-propelled if traversing near hardbottom areas. No cables, equipment or other objects shall sag or hang over the side of the dredge, any barges or tugs, or any other vessels, floating pipelines, pontoons, or floating equipment. These measures are required to avoid hardbottom damage from sagging cables or other objects.

**7.3.3 Floating Equipment Location Tracking.** The Engineer shall have access upon request to location tracking data for all CONTRACTOR and subcontractor vessels and floating equipment associated with the project.

**7.4 Protection of Air Resources.** 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 Statute, Chapter 403 and others) and all Federal emission and performance laws and standards.

**7.5 Protection of Sound Intrusions.** The CONTRACTOR shall keep construction activities under surveillance, and control to minimize damage to the environment by noise. If booster pumps are used on the beach, the CONTRACTOR shall provide adequate muffler systems and erect a sound barrier to deflect noise in the waterward direction and away from buildings.

**7.6 Dispensing of Fuel.** Secondary containment, which is capable of holding a minimum of 110% of the tank contents, must be provided by the CONTRACTOR for each fuel storage tank. At a minimum, fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. 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 contain the spill and contact

the appropriate local authorities. The CONTRACTOR shall be solely responsible for any fines, penalties or other legal activities related to fuel spills.

**7.7 Storage of Lubricants.** All lubricants and other potential liquid pollutants shall be stored in sealed, non-corrosive containers. Individual containers shall be stored in metal pans with borders banded up and welded at the corners right below the bibb. Pans shall be deep enough to prevent contamination of the ground. Pans shall be kept clean of all spillage or leakage.

**7.8 Temporary Sanitary Facility.** The CONTRACTOR shall supply and maintain, at minimum, one (1) temporary sanitary facility for the use of land based employees and subcontractors. The facility shall be conveniently located in the vicinity of the beach disposal operation, but away from residential and commercial buildings along the coastline. The facility shall be removed at the end of the project.

## **8. POST-CONSTRUCTION CLEAN-UP.**

The CONTRACTOR shall clean up any area used for construction to the pre-construction condition and to the satisfaction of the COUNTY.

## **9. RESTORATION OF LANDSCAPE DAMAGE.**

The CONTRACTOR shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with a plan submitted for approval by the COUNTY. This work shall be accomplished at the CONTRACTOR's expense. Final payment to the CONTRACTOR shall not occur until the ENGINEER and the COUNTY are satisfied with the CONTRACTOR's effort to restore landscape or any other damage caused by the CONTRACTOR or their subcontractors.

## **10. OIL AND HAZARDOUS MATERIAL SPILLS AND CONTAINMENT.**

The CONTRACTOR shall ensure that all hazardous material spills are immediately reported to the proper authorities and the COUNTY. All hazardous material spills shall be immediately cleaned up in accordance with the most recent version of the U.S. Army Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1, or latest version and any other applicable laws or regulations, and the plan developed for spill containment.

## **11. MAINTENANCE OF POLLUTION CONTROL FACILITIES.**

The CONTRACTOR shall maintain constructed facilities and portable pollution control devices for the duration of the Contract or for that length of time construction activities create the particular pollutant.

**12. TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL AND ENVIRONMENTAL PROTECTION.**

The CONTRACTOR shall train all subcontractors and personnel in all phases of environmental protection. All personnel and subcontractors will be familiar with permit requirements, and with the necessity of protection of all habitats. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly trained in the proper use of monitoring devices and abatement equipment, and shall be thoroughly knowledgeable of Federal, State, and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the CONTRACTOR. Quality Control personnel will be identified in the plan.

**13. FUEL OIL TRANSFER OPERATIONS.**

In accordance with the U.S. Coast Guard regulations (33 CFR 156.120 ), couplings used in fuel oil transfer operations on any vessel with a capacity of 250 or more barrels of oil (or fuel) shall be either a bolted or full-threaded connection; or a quick-connect coupling approved by the Commandant; or an automatic back-pressure shutoff nozzle used to fuel the vessel. An executed fuel oil transfer (Declaration) form signed by the tanker man shall be completed for each refueling operation. The U.S. Coast Guard shall also be notified prior to any refueling.

**14. ENVIRONMENTAL PROTECTION PLAN.**

At least seven (7) days prior to the first scheduled pre-construction conference, the CONTRACTOR shall submit in writing an Environmental Protection Plan to the ENGINEER. The Environmental Protection Plan shall include but not be limited to the following:

- (a) Methods for protection of features and habitats to be preserved within authorized work areas. The CONTRACTOR shall prepare a listing of methods to protect resources needing protection, i.e. all vegetation, trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological and cultural resources, manatees, and the marine habitat.
- (b) Procedures to be implemented to provide the required environmental protection and to comply with the applicable permits, 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 procedures set out in accordance with the Environmental Protection Plan.
- (c) Drawings showing locations of any proposed temporary excavations or embankments for haul roads, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

- (d) Environmental monitoring plans for the jobsite, including land, water, air and noise monitoring.
- (e) Oil spill prevention.
- (f) Oil spill contingency plan.
- (g) A protection plan for sea turtles, manatees, seabirds and shorebirds, and smalltooth sawfish.
- (h) Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.
- (i) A statement that the Project Superintendent will be responsible for implementation of the Environmental Protection Plan. The CONTRACTOR's project superintendent shall report directly to the CONTRACTOR's top management and shall have the authority to act for the CONTRACTOR in all environmental protection matters.
- (j) A statement acknowledging that the CONTRACTOR is responsible for environmental protection, including all of the CONTRACTOR's personnel and subcontractors.
- (k) The Environmental Protection Plan will be dated and endorsed by the individual of top management in charge of the construction.

**APPENDIX A**

**CONTRACTOR'S DAILY QUALITY CONTROL REPORT FORM**

DAILY CONTRACTOR QUALITY CONTROL REPORT

Date: \_\_\_\_\_ Report No. \_\_\_\_\_  
(Report is due by 2:00 p.m. of the following day)

PROJECT: 2026 Coquina Beach Hurricane Idalia Storm Damage Repair Project

WEATHER: ( ) Clear ( ) Partly Cloudy ( ) Cloudy ( ) Overcast ( ) Rain TEMP. Min. \_\_\_\_\_ Max. \_\_\_\_\_

Wind Speed \_\_\_\_\_ mph Direction \_\_\_\_\_

Wave Height at:

(1) Borrow site \_\_\_\_\_ feet; Wave Direction \_\_\_\_\_  
(2) Beach disposal site \_\_\_\_\_ feet; Wave Direction \_\_\_\_\_

LOCATION OF DISCHARGE: (Station): \_\_\_\_\_

DRESSING OPERATIONS COMPLETE TO: (Station): \_\_\_\_\_

CONTRACTOR/SUB-CONTRACTOR and area of responsibility:

1. Work Performed Today: (Indicate location and description of work performed. Provide beach fill advance over last 24 hours. Attach dredge position printouts and plot to this report.)
  
2. Results of Surveillance: (Include satisfactory work completed or deficiencies with action to be taken.)
  
3. Water Quality Monitoring: Was water quality monitoring conducted today in compliance with project permit requirements of the Florida Department of Environmental Protection Permit No. \_\_\_\_\_ and water quality protection laws (Yes/No)? \_\_\_\_\_

Were the results provided to the ENGINEER (Yes/No)? \_\_\_\_\_  
 When were the results provided to the ENGINEER date \_\_\_\_\_, time \_\_\_\_\_

4. Remarks: (Address delays and any conflicts in Plans, specifications or instructions.)
  
5. Equipment Data: (Indicate items of construction equipment other than hand tools at job site and whether or not used and if operable.)
  
6. Dredge Status: (Is the dredge working, being refueled or maintained, not operating due to weather/sea state, or is it under repair?)
  
7. Avoidance of Overdredging: Do you certify that the dredge has excavated within the limits of the borrow areas, as shown in the Plans (Yes/No)? \_\_\_\_\_. Also, do you certify that the borrow area has not been excavated below the limit as shown in the Plans (Yes/No)? \_\_\_\_\_

8. Progress Summary:

	This Day	To Date
Worked Hours		
Downtime Hours (Explain Below)		
Length of Discharge Advance on Beach (Ft.)		
Volume Pumped (Estimated c.y.)		
Volume Pay (c.y. accepted sections only)		
Linear % Completed		

Explanation of Downtime:

CONTRACTOR's Verification: The above report is complete and correct and equipment used and work performed during this reporting period are in compliance with the Contract drawings and specifications except as noted above. The CONTRACTOR further certifies that excavation occurred within the limits of the borrow area identified in the Contract Documents.

CONTRACTOR's Approved Authorized Representative

Note: This form must include continuous plots of dredge locations and depths.

**APPENDIX B**

**GEOTECHNICAL INFORMATION**

**APPENDIX C**  
**SEDIMENT QA/QC PLAN**

**APPENDIX D**

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
PERMIT NO. 0298107-009-JN**

**APPENDIX D1**  
**PERMIT DRAWINGS**

**APPENDIX D2**

**FWC REGIONAL BIOLOGIST CONTACT INFORMATION**

**APPENDIX E**

**U.S. ARMY CORPS OF ENGINEERS PERMIT NO. SAJ-2014-00606 (SP-CSH)**

**APPENDIX E1**

**FWC STANDARD MANATEE CONDITIONS FOR IN-WATER WORK (2011)**

**APPENDIX E2**

**NMFS SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS (2006)**

**APPENDIX E3**

**USFWS BIOLOGICAL OPINION, SEPTEMBER 24, 2015  
TERMS AND CONDITIONS**

**APPENDIX E4**

**USFWS STATEWIDE PROGRAMMATIC BIOLOGICAL OPINION  
TERMS AND CONDITIONS**

**APPENDIX E5**

**USFWS PROGRAMMATIC PIPING PLOVER BIOLOGICAL OPINION  
TERMS AND CONDITIONS**

**APPENDIX E6**

**NMFS GULF REGIONAL BIOLOGICAL OPINION  
TERMS AND CONDITIONS**