

**INDIAN RIVER COUNTY
SECTOR 5 DUNE VEGETATION PROJECT
IRC PROJECT NO. 2112**

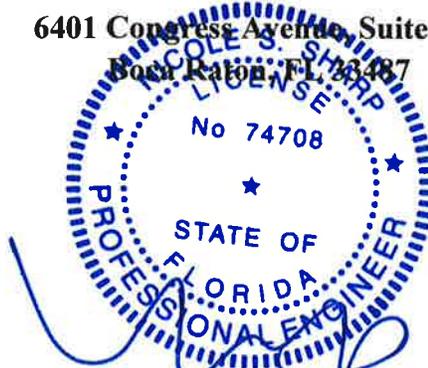
CONSTRUCTION SPECIFICATIONS



**Prepared for:
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**10/4/21
DATE**

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**INDIAN RIVER COUNTY
SECTOR 5 DUNE VEGETATION PROJECT
IRC PROJECT NO.**

TECHNICAL PROVISIONS

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Appendices

Appendix No.

Appendix A Florida Department of Environmental Protection Joint Coastal Permit No. 0363427-010-JC with September 2019 Permit Modification

Appendix B Sample Weekly Quality Control Report

**INDIAN RIVER COUNTY
SECTOR 5 DUNE VEGETATION PROJECT
TECHNICAL PROVISIONS**

1. PROJECT SCOPE.

The COUNTY has undertaken a project to plant approximately 135,000 plant units along the Sector 5 shoreline. The CONTRACTOR shall provide all labor, equipment, supplies and materials to perform all operations in connection with: acquiring, transporting, planting, watering and fertilizing the dune vegetation as indicated on the plans and specified herein. The CONTRACTOR shall have experience performing three (3) similar projects in size and in scope in the past five (5) years. The WORK includes the planting of sea oats (*uniola paniculata*) in the designated dune area along Sector 5 (R-70 to R-86) in Indian River County, FL. Preliminary estimates for the planting areas are within the construction plans.

The Contract will be executed within the time specified in the Agreement and by a schedule proposed by the CONTRACTOR and approved by the COUNTY. The COUNTY desires to have all plants installed within 2 months of a notice to proceed. Sea turtle nesting season must be avoided and all work must be completed by February 28, 2022.

2. ORDER OF WORK AND PROJECT SCHEDULE.

As part of the bid, the CONTRACTOR shall provide an order of work outline and project schedule to the ENGINEER and the COUNTY. The project schedule shall indicate, at a minimum, start of work, construction period, and inspection dates. The CONTRACTOR shall propose in the bid the order in which the WORK will be performed.

3. PERMITS.

The COUNTY has obtained the Florida Department of Environmental Protection (FDEP) permit for this project. The CONTRACTOR shall comply with all conditions of the permits, which are included in the bid package. Permit guidelines for planting dune vegetation during sea turtle nesting season are provided in Appendix A.

The CONTRACTOR is solely responsible for obtaining, at his or her own expense, all other approvals required for transport of material to the project area. This includes any and all roadway permits, clearances and business licenses required to complete the WORK. Beach vehicle permissions for the use of vehicles on the beach will be coordinated through the COUNTY.

The CONTRACTOR shall be responsible for delineating no-planting areas and preventing the placement of plants in such areas. No-planting areas include but are not limited to areas which easements have not been procured. The CONTRACTOR shall not operate equipment or allow operations or storage within the no planting areas.

4. TRANSPORT OF MATERIALS AND EQUIPMENT.

All material and equipment which is transported to, or away from, the site shall be handled in a manner complying with all Federal, State and local permits, laws and regulations.

5. CONSTRUCTION ACCESS.

The CONTRACTOR shall limit construction access to the beach and dune to the locations shown on the plans or as approved by the ENGINEER or COUNTY as listed below. While construction activities are underway at a given section of the project area, the CONTRACTOR shall limit all access to that section's construction access, unless otherwise approved by the COUNTY. The CONTRACTOR shall exercise caution when accessing and driving on the beach and dune. Sections of the beach and dune are heavily used by people during all periods of the year.

The upland staging and access area is located at Tracking Station Park.

6. WORK AREA.

The construction area limits available to the CONTRACTOR for accomplishing the WORK are shown on the construction plans. The CONTRACTOR shall accomplish the WORK in such a manner so as to minimize disruption to traffic on main roads or adjacent sideroads/walkways. To minimize disruption to the beach and dune area, staging and storage shall be restricted to areas approved by the COUNTY or ENGINEER. The storage areas shall be kept neat and orderly, and in a manner supporting the public safety. If an offsite location is used for staging, storage, or any other purpose, the area's vegetation shall not be damaged, if so, the vegetation shall be replaced at the CONTRACTOR's expense.

7. PUBLIC SAFETY.

The CONTRACTOR shall provide and maintain fencing, barricades, warning signals and/or a flag person as required by local, State or Federal regulations if necessary.

8. DAMAGES.

In the event that damage is caused by the CONTRACTOR, the CONTRACTOR shall restore all damage to sidewalks, roads, seawalls, vegetation or any other structure or natural feature to pre-construction conditions or better. All damages to private or public property resulting from the CONTRACTOR's operations shall be repaired by the CONTRACTOR at the CONTRACTOR's expense. The CONTRACTOR will not receive final payment until all damage is restored or addressed to the satisfaction of the COUNTY.

9. QUALITY CONTROL.

9.1 General. The CONTRACTOR shall provide all quality control necessary to construct this project and achieve the success rate specified. The CONTRACTOR will provide a quality control plan for review and approval by the COUNTY within five (5) days prior to a pre-construction conference.

9.2 Daily/Weekly Quality Control Report. The CONTRACTOR will be required to prepare a weekly Quality Control Report and furnish copies to the ENGINEER and COUNTY on a weekly basis during planting. The CONTRACTOR's weekly Quality Control Report is due at 2:00 p.m. on Wednesday each week. The CONTRACTOR shall provide a daily phone or e-mail report to the ENGINEER or COUNTY during actual planting and construction operations. Reports shall be provided from the first week of mobilization to the last day of demobilization, including site clean-up. The CONTRACTOR may substitute his own quality control report format if:

1. It contains, at minimum, all of the information required by the format example in Appendix B.
2. The CONTRACTOR's quality control report format is approved by the ENGINEER and the COUNTY.

10. DUNE VEGETATION.

10.1 General. This section describes the planting of dune vegetation. The Sector 5 shoreline consists of approximately 3.1 miles of shoreline to be planted with dune vegetation from FDEP R-Monument R-70 to R-86.

10.2 Replacement of Existing Dune Plants Damaged by CONTRACTOR. The CONTRACTOR shall preserve and not damage any existing vegetation during the planting process. Any existing or planted dune vegetation that is damaged by the CONTRACTOR during the performance of this contract except as noted above shall be replaced by the CONTRACTOR at no additional cost to the COUNTY. Replacement plants shall be of the same species, size, and numbers as those damaged and shall meet or exceed the specifications for plant material under the paragraph "Plant Material" below. If equivalent size plants cannot be provided, the CONTRACTOR shall plant two (2) plants for every plant damaged. Unless otherwise directed by the ENGINEER, the replacement plant(s) shall be installed at the same location as the plant(s) they are replacing.

10.3 Staking Dune Planting Area. The CONTRACTOR will lay out the perimeter of the planting areas one week prior to working on an area. The landward and seaward extent of planting will be identified by the CONTRACTOR based on the construction plans and as approved by COUNTY and ENGINEER. Gaps in the existing dune vegetation for beach access will be identified by staking. The CONTRACTOR shall be responsible for delineating and staking out areas with no easements and preventing the placement of plants in such areas. The CONTRACTOR shall not commence dune planting installation activities prior to approval from the COUNTY.

10.4 Dune Planting. Plants shall be installed per the specifications and plans (layouts) developed by the ENGINEER. Details are provided in these specifications and construction plans. Planting shall avoid blocking any and all private or public beach access points. Access to the beach shall be maintained at each and every apparent beachfront property or road end, and at each and every apparent vehicle, private, or public beach access or as directed by the COUNTY or ENGINEER. All costs associated with the planting and maintenance of dune vegetation, as described in these provisions, shall be included in the CONTRACTOR's bid.

10.5 Planting Method

10.5.1 Plant Material. Sea oats (*Uniola paniculata*) will be planted along the project area. Acceptable plants for the purpose of this contract are nursery grown plants produced vegetatively from first generation foundation material and/or plants produced vegetatively as successional generations from foundation materials. Plants shall be originate from the Florida peninsula. The contracting nursery shall acclimate plant materials by growing plants in full sun conditions for at least thirty (30) days before planting (i.e., not inside greenhouse, under glass, under shade cloth, etc.). Plants shall be available for inspection at the nursery by the ENGINEER. The CONTRACTOR shall provide written documentation as to the source of the planting units.

All plants used in the project shall have a well-developed root system, meet high standards for health and vitality, have good foliage condition and be free from pest or mechanical damage. The liners for sea oats shall be no less than 12” tall from the top of the root ball to the tip of the longest leave. Plants that do not meet the above criteria shall be rejected and shall not be incorporated into the WORK. Plants that have been rejected by the ENGINEER/or COUNTY shall be removed from the site by the CONTRACTOR at no cost to the COUNTY. Only the ENGINEER or COUNTY can grant exceptions to the criteria described in their section.

10.5.2 Plant Delivery. The plants shall be delivered on flats in a consistent dimension to allow the ENGINEER/or COUNTY to count the delivered plants. Each flat shall contain the same number of plants as specified by the CONTRACTOR.

Each individual shipment of plants to the delivery site shall be accompanied by a delivery slip indicating the following information: 1) source of plant material (nursery name), 2) species (scientific and common name if applicable), 3) plant size, 4) quantity being delivered, and 5) date of delivery. Shipping slips are to be signed by the CONTRACTOR. Copies of the slips shall be provided with the daily quality control reports. The COUNTY and ENGINEER shall be notified three (3) days prior to any and each plant delivery to allow for plant count.

Plants shall be planted on the same day they are delivered to the site if possible. Plants shall not become stressed prior to planting. Plants shall retain their stem and leaf rigidity at all times indicating adequate moisture is being received. Plants shall be watered within the salinity ranges they were grown, if needed. The CONTRACTOR must take the necessary precautions to ensure that plant materials receive adequate water during all phases of the contract prior to actual planting. Plants appearing discolored, shriveled, dehydrated, or otherwise stressed shall be rejected.

10.5.3 Planting Scheme. Plants species shall include sea oats (*Uniola paniculata*). Approximately 135,000 plants are required for this Project. The COUNTY may adjust the quantity of plants based on field adjustments to the

landward limit of toe of dune at the time of construction. The plants shall be installed in accordance with the plans for the project.

Sea Oats (*Uniola paniculata*) shall be spaced 9 inches apart on center with the latter planted towards the seaward side of the planting area. The 1 gallon sea oat species shall be planted toward the center and rear of the designated dune planting areas.

10.5.4 Plant Location on the Beach. The plants will be placed in strips seaward of the existing dune vegetation. These strips will be on the seaward side of the dune crest, dune toe slope and the heightened portion of the landward berm if approved by the COUNTY and ENGINEER. Voids in the existing dune vegetation shall be filled. The location and size of these areas will be identified in the field by the CONTRACTOR and approved by the COUNTY and ENGINEER.

10.5.5 Plant Age and Root Ball Size. Plants shall be at least 30 days old. Plants younger than this specification may be rejected by the ENGINEER. The CONTRACTOR shall provide documentation to the ENGINEER of the location of the seed source, name of the nursery where the plants were grown and approximate time of germination, prior to installing the plant material.

The root ball for Sea Oats (*Uniola paniculata*) shall be no less than 1" x 1" x 2.5" depth. The plants shall have a fully developed root ball, with white or light beige roots.

10.5.6 Supervision of Planting. The CONTRACTOR or a representative designated by the CONTRACTOR shall be present at all times during the installation of the dune vegetation. The CONTRACTOR or designated representative shall be thoroughly familiar with the species being installed and the best methods for their installation, and shall direct all WORK performed under this Contract. The ENGINEER/or COUNTY may adjust any construction plans as the project progresses. The CONTRACTOR or designated representative will take such direction from the ENGINEER/or COUNTY. The CONTRACTOR will provide the ENGINEER/or COUNTY an example of the materials along with the proposed installation locations by stakes one week prior to installation.

10.5.7 Planting Methodology. The CONTRACTOR shall lay out the WORK to ensure that the proper numbers of plants are placed. The CONTRACTOR shall provide the workers a method to quickly and accurately lay out the planting grid, by use of a flexible template or similar devise. The average spacing and density over the zone shall be 9" on center, as shown in the plans or otherwise specified. All containerized plants shall be planted in a dug hole. The plant shall be removed from the container immediately prior to planting and placed into the hole. The root ball shall be placed at a minimum depth of 6 inches deep within the moist zone of the sand.

10.5.8 Fertilization and Water Retention Gel. A minimum of 8 oz. of pre-hydrated gel shall be added prior to plant installation so that the root ball, not the

stems, is in contact with the gel. A pre-hydrating water gel, such as stockosorb, or equivalent, shall be used for all planting units per gel manufacturer specifications. Once the gel is added and plant installed, the distance from the top of the root ball to the sand surface shall be no less than four (4) inches.

For each planting unit, slow release fertilizer shall be added to the gel prior to planting unit installation. A minimum of 2.5 grams of slow release fertilizer shall be included with each plant. The slow release (90-day) pelletized Osmocote or approved equivalent fertilizer shall have an N.P.K. ratio of 18.6.12 with trace elements.

The application of maintenance fertilization during the 90-day warranty and maintenance period may be undertaken by the CONTRACTOR at the CONTRACTOR's discretion. The cost of any and all fertilization shall be included in the per planting unit cost in the bid documents. Maintenance fertilization, if employed, will be undertaken in a manner which complies with all environmental permits applicable to the Project site. The CONTRACTOR will be allowed to maintenance fertilize the installed planting units according to the CONTRACTOR prepared and ENGINEER approved fertilization schedule. Whether the CONTRACTOR chooses to maintenance fertilize or not, compliance with all provisions of the Specifications including, but not limited to, the survival guaranty and replanting sections of the Specifications, shall be met.

10.5.9 Irrigation. The CONTRACTOR will be allowed to irrigate all newly installed planting units according to a CONTRACTOR prepared and ENGINEER approved irrigation schedule. Freshwater shall be provided and applied to the planting zones using either a non-scouring spray applicator or an irrigation system installed by the CONTRACTOR, if needed. The CONTRACTOR shall specify means of and schedule for watering to the ENGINEER/or COUNTY; however, this does not release the CONTRACTOR from his or her responsibilities for plant survival, but is only intended to be informational. The CONTRACTOR shall supply adequate water for the establishment of all plantings. The CONTRACTOR shall be responsible for obtaining, paying for and applying all irrigation water used for this project. An established irrigation system, (if proposed) shall comply with all permits and approvals for the project. The irrigation system shall be removed after a 90-day Maintenance and Warranty Period or as directed by the ENGINEER/or COUNTY.

10.5.10 Maintenance and Warranty Period. The CONTRACTOR shall maintain and irrigate all plantings, starting at the time of plant installation, and continuing for 90 calendar days from the date the ENGINEER/or COUNTY has accepted the initial planting work or for a shorter length of time set at the discretion of the ENGINEER/or COUNTY. Maintenance shall include, but not be limited to, weeding, cultivation, and fertilization, necessary to keep plants in a healthy condition.

10.5.11 Gaps. There are pedestrian accesses or pathways that exist through the dune, existing vegetation, and sandy beach. They are randomly located at residential buildings, empty lots and between buildings. Gaps will be provided in the vegetation strip. The gaps will be at least 5 to 7 feet wide at major pedestrian access points, and at least 4 to 5 feet wide for all other pedestrian access points. Most of the major pedestrian access points are identified in the plans, and the apparent current width shall be maintained. Some but not all private access points are visible in aerial photographs provided. The CONTRACTOR shall use judgment on where to place all pedestrian access points based on the existing paths in order to assure that no planting occurs in such a manner as to block any private or public beach access point. Where no previous alignment is apparent, the access paths through the newly planted vegetation shall be constructed at an angle to the beach, preferably 45 degrees from existing shoreline. The CONTRACTOR shall follow the existing pathway orientation and width where established. No new gaps shall be perpendicular to the shoreline unless approved by the ENGINEER/or COUNTY.

10.6 Approvals

10.6.1 General. The COUNTY and/or ENGINEER will observe planting performance of the dune plantings following (1) an application for payment for initial planting work, (2) midway through the Maintenance and Warranty Period above, and (3) at the completion of the Maintenance and Warranty Period.

10.6.2 Observation and Approval for Initial Plantings. The ENGINEER and/or COUNTY will observe the WORK completed within seven (7) business days of receiving an application for payment for the WORK from the CONTRACTOR, but no earlier than 14 days after planting. The CONTRACTOR or designated representative shall be present during the inspection. Through observation, the ENGINEER and/or COUNTY will determine if one hundred percent (100%) of the plants are in a healthy growing condition within each acceptance section. An acceptance section will be 500 feet alongshore. Plants will be considered healthy if they meet the criteria in paragraph 10.5.1 and show no stress due to a lack of water. Any plant determined by the COUNTY and/or ENGINEER not to be healthy shall be replaced by the CONTRACTOR within five (5) days of the observation of the plants. The COUNTY and/or ENGINEER will provide the CONTRACTOR with a written list of deficiencies. Once the COUNTY and/or ENGINEER determines that the planting specifications have been met, written acceptance of the initial planting work will be provided to the CONTRACTOR and recommendation for payment will be made by the ENGINEER to the COUNTY.

10.6.3 Maintenance and Warranty Period. The CONTRACTOR shall guarantee the survival rate, defined in the contract, for initially installed and replaced plants, for a total of ninety (90) days.

10.6.4 CONTRACTOR Inspections During the Maintenance and Warranty Period. The CONTRACTOR shall make one periodic inspection of each site about

halfway through the warranty period. Within planting areas of questionable growth/success results, the ENGINEER or a representative reserve the right to inspect root penetration for possible replant by the CONTRACTOR. Thirty (30) plants within each questionable planting area may be randomly selected to be dug up for root growth inspection. Eighty (80%) percent of selected plants shall have achieved root penetration of 9” or greater for both grass species. The planting survival shall be deemed a success if both individual planting unit survival and root penetration are met. During the inspection the CONTRACTOR will determine what, if any, changes should occur to insure plant survival. A letter, including any proposed changes, shall be submitted in writing by the CONTRACTOR to the COUNTY and ENGINEER within fourteen (14) days of the inspection.

10.6.5 Final Observation and Approval at the Conclusion of the Maintenance and Warranty Period. The ENGINEER and COUNTY will observe each planting site at the conclusion of the 90-day Maintenance and Warranty Period. The CONTRACTOR or designated representative shall be present during the site visit to observe the plantings. The COUNTY and ENGINEER shall verify that a minimum of eighty percent (80%) of the total plants initially installed or replaced within each 500 foot acceptance section are in a healthy condition. This survival criterion may be modified or waived by the COUNTY and ENGINEER in areas where plant survival has been adversely impacted by unexpected pedestrian traffic, vandalism or major storms. If the plantings do not meet this survival criterion, the COUNTY and ENGINEER shall provide the CONTRACTOR with a letter identifying deficiencies. The CONTRACTOR shall replace the unhealthy plants with the appropriate number of healthy plants, as directed by the COUNTY, within fourteen (14) days of the final site visit. The cost to replace any plants shall be the sole responsibility of the CONTRACTOR. All warranty and survival provisions and requirements will apply to the replaced plants. Once the ENGINEER verifies that the planting specifications have been met, written acceptance will be provided to the CONTRACTOR and COUNTY.

11. CONSTRUCTION PERMISSIONS.

The COUNTY has easements for the maintenance of the beach from upland property owners. Areas where easements have been obtained can be found at: www.ircgov.com/easements. The CONTRACTOR shall not trespass landward of MHW line in areas where easements have not been obtained. This includes placement of plantings and the transit and storage of equipment.

12. NIGHTTIME OPERATIONS.

Nighttime is that period defined as between sunset and daylight. Nighttime construction activities will not be allowed.

13. FINAL CLEAN-UP.

The final clean-up shall leave the beach and dune environment in its natural state. Any alterations to points of access or pathways shall be returned to their original condition by the CONTRACTOR,

before the area is deemed clean. Final clean-up procedures will be further discussed during the pre-construction conference.

14. CONSTRUCTION PLANS AND SPECIFICATIONS.

A complete set of construction maps and specifications shall be kept at the construction site in a dry location at all times during project construction. Additional sets of specifications will be available from the COUNTY in Adobe Acrobat digital format for printing by the CONTRACTOR.

15. FINAL ACCEPTANCE AND PAYMENT.

15.1 The ENGINEER's recommendation of final payment will constitute a representation by the ENGINEER to the COUNTY that the conditions precedent to the CONTRACTOR's being entitled to final payment as set forth in the following paragraphs have been fulfilled.

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

- (a) The WORK is defective, or completed WORK 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 modifications;
- (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 CONTRACTOR has failed to make payment to subcontractors, or for labor, materials, or equipment; or,
- (g) The CONTRACTOR is claiming additional planting beyond that measured and calculated using the procedure established in the Contract Documents.

15.3 Unless the COUNTY and CONTRACTOR agree otherwise in writing and so inform the ENGINEER prior to his issuing the definitive certificate of Substantial Completion, the ENGINEER's aforesaid recommendation will be binding on COUNTY and CONTRACTOR until final payment.

15.4 Upon written notice from CONTRACTOR that the WORK is complete, the ENGINEER will make a final inspection with the COUNTY and CONTRACTOR and will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the WORK is incomplete or defective. The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

15.5 After the CONTRACTOR has completed all such corrections to the satisfaction of the ENGINEER and COUNTY and delivered all maintenance instructions and all other documents as required by the Contract Documents, and after the ENGINEER has indicated that the WORK is acceptable, the CONTRACTOR may make application for final payment. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data 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 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, have been paid or otherwise satisfied; and consent of the Surety, if any, 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.

15.6 If, on the basis of the COUNTY's observation of the WORK during construction and final inspection, 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 his or her obligations under the Contract Documents, the ENGINEER will, within fifteen (15) days after receipt of the final Application for Payment, indicate in writing his recommendation of payment and present the application to the COUNTY for payment. If the application and accompanying documentation are appropriate as to form and substance, the COUNTY shall, within forty-five (45) days after receipt of the ENGINEER's recommendation for Final Payment, pay the CONTRACTOR the amount recommended by the ENGINEER. Thereupon, the ENGINEER will give written notice to the COUNTY and the CONTRACTOR that the WORK is acceptable subject to the provisions of the contract. 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.

15.7 If, through no fault of the CONTRACTOR, final completion of the WORK is significantly delayed thereof and if the ENGINEER so confirms, the COUNTY shall, upon receipt of the CONTRACTOR's final Application for Payment and recommendation of the ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the WORK fully completed and accepted. If the remaining balance to be held by the COUNTY for WORK not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in the

proposal information the written consent of the Surety to the payment of the balance due for that portion of the WORK fully completed and accepted shall be submitted by the CONTRACTOR to the ENGINEER with the application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

15.8 The CONTRACTOR's obligation to perform and complete the WORK in accordance with the Contract Documents 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.

15.9 The COUNTY shall have the right to exclude the CONTRACTOR from the WORK after the date of substantial completion, but the COUNTY shall allow the CONTRACTOR reasonable access to complete or correct items on the tentative list.

15.10 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 final inspection or from failure to comply with the Contract Documents or the terms of any special 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.

15.11 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.

16. CHANGES IN THE WORK.

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 Provisions, 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/Work Change Directive 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/ Work Change Directive received from the ENGINEER. The CONTRACTOR shall promptly comply with any and all written Change Orders/ Work Change Directives issued by the ENGINEER, notwithstanding any disputes. No such Change Order/ Work Change Directive shall be deemed to invalidate the Contract.

The number of plantings to be placed on the beach is based on beach conditions 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 estimated plant quantities 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 quantity provided in the bid documents. 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 the 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 the CONTRACTOR could have discovered prior to the submission of its bid or execution of the Contract.

17. PRE-CONSTRUCTION CONFERENCE.

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 to discuss the permits and the Project. This shall be referred to as a pre-construction conference. The conference shall develop mutual understanding relative to details of the system, including the forms to be used for recording the quality control operations, inspections, daily and weekly reports, administration of the system and the interrelationship of the CONTRACTOR, ENGINEER and COUNTY and their respective inspectors. The CONTRACTOR will provide a sample of the plants proposed for the project for the COUNTY and ENGINEER's approval.

ADMINISTRATION

18. PROTECTION OF PROPERTY, WORK AND PERSONS.

18.1 Protection of Property. The CONTRACTOR shall, at its 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.

18.2 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. 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.

18.3 Protection of Persons. The CONTRACTOR shall be accountable for any injuries or loss of life resulting from its operations. The CONTRACTOR shall be fully responsible for the protection and safety of all persons including members of the public, employees of the COUNTY, the ENGINEER and his employees, and employees of other contractors or subcontractors, and marine turtle monitoring personnel in the area of the WORK; also including people on floating equipment such as barges or other vessels.

18.4 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, including the Plans, 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.

18.5 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, 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 plant placement which has not been accepted by the ENGINEER for payment.

18.6 No Claim Against COUNTY or ENGINEER. The CONTRACTOR shall have no claim against the COUNTY or ENGINEER because of any damage or loss to the WORK 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.

19. SUPERINTENDENT.

The CONTRACTOR shall propose, in writing to the ENGINEER and COUNTY, the name and qualifications of the superintendent(s) to receive the COUNTY's instructions from the ENGINEER and to respond to questions from the ENGINEER. 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. Said instructions, once received by the CONTRACTOR's superintendent, will be legally binding on the CONTRACTOR pursuant to this Contract. Under no circumstances will project construction occur without the presence of a superintendent at the project site.

20. ENGINEER.

20.1 Technical Issues. It is agreed by the parties hereto that the ENGINEER shall decide all technical issues of whatever nature that may arise relative to the interpretation of the technical portions of the Contract Documents, the Plans, surveys and volume measurements 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.

21. SAFETY REQUIREMENTS.

CONTRACTOR Responsibility for Safety. The CONTRACTOR shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the WORK. Safety is the CONTRACTOR's sole responsibility. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

21.1 COUNTY personnel, the ENGINEER and ENGINEER's representatives, State and Federal personnel, the public, all employees and subcontractors involved in the WORK and all other persons who may be affected thereby.

21.2 All the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site.

21.3 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.

21.4 Compliance with Safety Laws. The CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction over the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection, and have at the work site at all times a dedicated safety and flag person.

APPENDIX A

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JOINT COASTAL PERMIT
NO. 0363427-001-JC
WITH SEPTEMBER 2019 PERMIT MODIFICATION



FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

CONSOLIDATED JOINT COASTAL PERMIT AND SOVEREIGN SUBMERGED LANDS AUTHORIZATION

PERMITTEE:

Indian River County
1801 27th Street, Building
A Vero Beach, FL 32960

AGENT:

Thomas P. Pierro, PE, D.CE
APTIM
9143 Philips Highway, Suite 400
Jacksonville, FL, 32256

PERMIT INFORMATION:

Permit Number: 0363427-001-JC

Project Name: Indian River County Sector 5
Beach and Dune Restoration Project.

County: Indian River County.

Issuance Date: 1 February 2019

Expiration Date: 1 February 2034

REGULATORY AUTHORIZATION:

This permit is issued under the authority of Chapter 161 and Part IV of Chapter 373, Florida Statutes (F.S.), and Title 62, Florida Administrative Code (F.A.C.). Pursuant to Operating Agreements executed between the Department of Environmental Protection (Department) and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

PROJECT DESCRIPTION:

The project is to restore 3.1 miles (4.99 kilometers) of beach and dune in Indian River County by placing approximately 155,000 cubic yards (118,500 cubic meters) of sand using upland sources. Following restoration, the project will also include periodic beach nourishment as needed.

The design template includes multiple shoreline segments with dune only or a combination of dune and berm sand placement along the project shoreline. The dune crest elevation consists of a flat dune crest extending from the existing grade at +15.0 feet NAVD at the Departments Reference Monuments R-70 to R-82, then transitions from +15.0 to +14.0 NAVD between R-82 and R-83, continues at +14.0 feet NAVD between R-83 and R-84 then transitions from +14.0 to +13.0 between R-84 to R-85, then

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Indian River County Sector 5 Beach and Dune Restoration Project
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continues at +13.0 feet NAVD between R-85 and R-86, matching an existing backshore structure. The landward dune crest will tie into existing grade or structure, at a slope no steeper than 1V:5H (Vertical: Horizontal). The dune crest width varies along the project area from 11 to 25 feet, and averages 18 feet wide. From the seaward edge of the dune crest, the template is sloped seaward at 1V:3H to +8.0 NAVD. The berm extends seawards from the +8.0 intersections with the dune slope averaging 17 feet wide. The seaward berm slope is 1V:8H until intersecting with the existing profile near mean high water +0.6 feet NAVD. The toe of fill varies along the project area and extended slightly seaward on some sections of the template. Sand placement in the project template between R-85 and R-86 will be a dune only. Salt-tolerant native dune vegetation will be planted on the restored dunes.

The project area is to be restored and nourished with sand trucked from the Stewart Materials Fort Pierce mine. Three construction access points/staging areas have been identified for the project.

PROJECT LOCATION:

The beach restoration and nourishment site is located along approximately 3.1 miles (4.99 kilometers) of Vero Beach, Indian River Shores, and unincorporated Indian River County coastline between the Department Reference Monuments R-70 and R-86, in Indian River County, Sections 19, 20, 29, 32, Townships 32 South, Range 40 East, and Section 5, Township 33 South, Range 40 East; Atlantic Ocean, Class III Florida Waters.

The upland sand source is the Stewart Materials Fort Pierce mine. The upland staging and access areas are located at Tracking Station Park (R-72.7 to 73.2), Jaycee Park and Conn Beach (R-77.0 to R-79.1) and Humiston Park (R-82.8 to 83.4).

PROPRIETARY AUTHORIZATION:

This activity also requires a proprietary authorization, as the activity is located on sovereign submerged lands held in trust by the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees), pursuant to Article X, Section 11 of the Florida Constitution, and Sections 253.002 and 253.77, F.S. The activity is not exempt from the need to obtain a proprietary authorization. The Board of Trustees delegated, to the Department, the responsibility to review and take final action on this request for proprietary authorization in accordance with Section 18-21.0051, F.A.C., and the Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C. This proprietary authorization has been reviewed in accordance with Chapter 253, F.S., Chapter 18-21 and Section 62-330.075, F.A.C., and the policies of the Board of Trustees.

The Department has also determined that the beach restoration activity qualifies for a Letter of Consent to use sovereign, submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and

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conditions herein. Therefore, consent is hereby granted pursuant to Chapter 253.77, F.S., to perform the activity on the specified sovereign submerged lands.

COASTAL ZONE MANAGEMENT:

This permit constitutes a finding of consistency with Florida's Coastal Zone Management Program, as required by Section 307 of the Coastal Zone Management Act.

WATER QUALITY CERTIFICATION:

This permit constitutes certification of compliance with state water quality standards pursuant to Section 401 of the Clean Water Act, 33 U.S.C. 1341.

OTHER PERMITS:

Authorization from the Department does not relieve you from the responsibility of obtaining other permits (Federal, State, or local) that may be required for the project. When the Department received your permit application, a copy was sent to the U.S. Army Corps of Engineers (Corps) for review. The Corps will issue their authorization directly to you, or contact you if additional information is needed. If you have not heard from the Corps within 30 days from the date that your application was received by the Department, contact the nearest Corps regulatory office for status and further information. Failure to obtain Corps authorization prior to construction could subject you to federal enforcement action by that agency.

AGENCY ACTION:

The above-named Permittee is hereby authorized to construct the work that is outlined in the Project Description and Project Location of this permit and as shown on the approved permit drawings, plans and other documents attached hereto. This agency action is based on the information submitted to the Department as part of the permit application, and adherence with the final details of that proposal shall be a requirement of the permit. This permit and authorization to use sovereign submerged lands are subject to the General Conditions, General Consent Conditions and Specific Conditions, which are a binding part of this permit and authorization. Both the Permittee and their Contractor are responsible for reading and understanding this permit (including the permit conditions and the approved permit drawings) prior to commencing the authorized activities, and for ensuring that the work is conducted in conformance with all the terms, conditions and drawings

GENERAL CONDITIONS:

1. All activities authorized by this permit shall be implemented as set forth in the project description, permit drawings, plans and specifications approved as a part of this permit, and all conditions and requirements of this permit. The Permittee

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- shall notify the Department in writing of any anticipated deviation from the permit prior to implementation so that the Department can determine whether a modification of the permit is required pursuant to Rule 62B-49.008, F.A.C.
2. If, for any reason, the Permittee does not comply with any condition or limitation specified in this permit, the Permittee shall immediately provide the Department and the appropriate District office of the Department with a written report containing the following information: a description of and cause of noncompliance; and the period of noncompliance, including dates and times; and, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.
 3. This permit does not eliminate the necessity to obtain any other applicable licenses or permits that may be required by federal, state, local or special district laws and regulations. This permit is not a waiver or approval of any other Department permit or authorization that may be required for other aspects of the total project that are not addressed in this permit.
 4. Pursuant to Sections 253.77 and 373.422, F.S., prior to conducting any works or other activities on state-owned submerged lands, or other lands of the state, title to which is vested in the Board of Trustees, the Permittee must receive all necessary approvals and authorizations under Chapters 253 and 258, F.S. Written authorization that requires formal execution by the Board of Trustees shall not be considered received until it has been fully executed.
 5. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.
 6. This permit does not convey to the Permittee or create in the Permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the Permittee. The issuance of this permit does not convey any vested rights or any exclusive privileges.
 7. This permit or a copy thereof, complete with all conditions, attachments, plans and specifications, modifications, and time extensions shall be kept at the work site of the permitted activity. The Permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

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8. The Permittee, by accepting this permit, specifically agrees to allow authorized Department personnel with proper identification and at reasonable times, access to the premises where the permitted activity is located or conducted for the purpose of ascertaining compliance with the terms of the permit and with the rules of the Department and to have access to and copy any records that must be kept under conditions of the permit; to inspect the facility, equipment, practices, or operations regulated or required under this permit; and to sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.
9. At least 48 hours prior to commencement of activity authorized by this permit, the Permittee shall electronically submit to the Department, by email at JCPCCompliance@dep.state.fl.us, and the appropriate District office of the Department a written notice of commencement of construction indicating the actual start date and the expected completion date and an affirmative statement that the Permittee and the contractor, if one is to be used, have read the general and specific conditions of the permit and understand them.
10. If any prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, shipwreck remains or anchors, dugout canoes or other physical remains that could be associated with Native American cultures, or early Colonial or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The Permittee, or other designee, shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at (850)245- 6333 or (800)847-7278, as well as the appropriate permitting agency office. Project activities shall not resume without verbal and/or written authorization from the Division of Historical Resources. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, F.S.
11. Within 30 days after completion of construction or completion of a subsequent maintenance event authorized by this permit, the Permittee shall electronically submit to the Department, by email at JCPCCompliance@dep.state.fl.us, and the appropriate District office of the Department a written statement of completion and certification by a registered professional engineer. This certification shall state that all locations and elevations specified by the permit have been verified; the activities authorized by the permit have been performed in compliance with the plans and specifications approved as a part of the permit, and all conditions of the permit; or shall describe any deviations from the plans and specifications, and all conditions of the permit. When the completed activity differs substantially from the permitted plans, any substantial deviations shall be noted and explained

on as-built drawings electronically submitted to the Department, by email at JCPCCompliance@dep.state.fl.us.

GENERAL CONSENT CONDITIONS:

1. Authorizations are valid only for the specified activity or use. Any unauthorized deviation from the specified activity or use and the conditions for undertaking that activity or use shall constitute a violation. Violation of the authorization shall result in suspension or revocation of the grantee's use of the sovereignty submerged land unless cured to the satisfaction of the Board.
2. Authorizations convey no title to sovereignty submerged land or water column, nor do they constitute recognition or acknowledgment of any other person's title to such land or water.
3. Authorizations may be modified, suspended or revoked in accordance with their terms or the remedies provided in Sections 253.04 and 258.46, F.S., or Chapter 18-14, F.A.C.
4. Structures or activities shall be constructed and used to avoid or minimize adverse impacts to sovereignty submerged lands and resources.
5. Construction, use or operation of the structure or activity shall not adversely affect any species that is endangered, threatened or of special concern, as listed in Rules 68A- 27.003, 68A-27.004 and 68A-27.005, F.A.C.
6. Structures or activities shall not unreasonably interfere with riparian rights. When a court of competent jurisdiction determines that riparian rights have been unlawfully affected, the structure or activity shall be modified in accordance with the court's decision.
7. Structures or activities shall not create a navigational hazard.
8. Structures shall be maintained in a functional condition and shall be repaired or removed if they become dilapidated to such an extent that they are no longer functional. This shall not be construed to prohibit the repair or replacement subject to the provisions of Rule 18-21.005, F.A.C., within one year, of a structure damaged in a discrete event such as a storm, flood, accident or fire.
9. Structures or activities shall be constructed, operated and maintained solely for water dependent purposes, or for non-water dependent activities authorized under paragraph 18-21.004(1)(f), F.A.C., or any other applicable law.

SPECIFIC CONDITIONS - ADMINISTRATIVE:

1. Pursuant to Chapter 161.141, F.S., prior to construction of the beach restoration, the Board of Trustees must establish the line of mean high water for any area affected by this project that does not already have an Erosion Control Line (ECL). This is required to establish the boundary line between sovereignty lands of the state bordering on the Atlantic Ocean and the upland properties. No work shall commence until the Erosion Control Line has been established to the satisfaction of the Department and recorded in the public records of the county in which the project is located.
2. All reports or notices relating to this permit shall be electronically submitted to the Department's JCP Compliance Officer (e-mail address: JCPCompliance@dep.state.fl.us) unless otherwise specified in the specific conditions of this permit.

SPECIFIC CONDITIONS - PRIOR TO CONSTRUCTION

3. **Notice to Proceed and Pre-Construction Submittals.** No work shall be conducted under this permit until the Permittee has received a written notice to proceed from the Department for each event. At least 30 days prior to the requested date of issuance of the notice to proceed, the Permittee shall submit a written request for a Notice to Proceed along with the following items for review and approval by the Department:
 - a. An electronic copy of detailed *final construction plans and specifications* for all authorized activities. The plans and specifications must be consistent with the project description of this permit and the attached permit drawings, and shall also be certified by a professional engineer (P.E.), who is registered in the State of Florida. The Permittee shall point out any deviations from the Project Description of this permit (as stated above) or the approved permit drawings (attached to this permit), and any significant changes would require a permit modification. The plans and specifications shall include a description of the dredging and construction methods to be utilized and drawings and surveys that show all biological resources and work spaces (e.g., anchoring areas, pipeline corridors, staging areas, boat access corridors, etc.) to be used for this project;
 - b. Documentation that the *Erosion Control Line* has been executed and recorded in the County Records;
 - c. *Turbidity monitoring qualifications*: The names, credentials

(demonstrating experience and qualifications) and contact information for the individuals who will conduct the turbidity monitoring. Turbidity monitors shall have prior training in water quality monitoring and experience in turbidity monitoring for coastal construction projects. The turbidity monitors shall be independent of the design engineer and the construction contractor. If turbidity levels exceed the compliance standards established in this permit, the turbidity monitor shall be required (pursuant to Specific Conditions 27 and 28) to immediately inform the JCP Compliance Officer within 24 hours.

- d. A *Scope of Work* for the turbidity monitoring shall be provided to ensure that the right equipment is available and that monitoring protocols will be sufficient to conduct the monitoring correctly at any location, and under any conditions.
- e. Prior to the second event authorized under this permit, and each subsequent event, the results of the intermediate turbidity monitoring shall be evaluated and provided to the Department. If the results indicate that the project can be built using a smaller mixing zone, this adjustment shall be made through an administrative modification to the permit prior to commencement of construction;
- f. *Draft turbidity sampling map.* An example of the geo-referenced map that will be provided with turbidity reports, including aerial photography and the boundaries for benthic resources (pursuant to Specific Condition 28).
- g. *Biological monitoring qualifications.* Biological monitoring qualifications of firms and their staff shall be submitted to the JCP Compliance Officer for review and approval. If additional monitoring team(s) are subcontracted, or new staff are added to the monitoring team, proposed changes and qualifications shall be submitted to the JCP Compliance Officer for review at least 30 days prior to a monitoring event. The Permittee's selected biological monitoring firm is fully responsible for training of new staff members and subcontractors, as well as the QA/QC verification of their work;
- h. Documentation from the U.S. Fish and Wildlife Service (FWS) that this work will be covered under a **Statewide Programmatic Biological Opinion** or a Biological Opinion (BO) issued for construction on this project site. If the BO contains conditions that are not already contained herein, the Notice to Proceed may be withheld if it is determined that

the permit requires a modification to include those additional conditions.

- i. ***Fish and Wildlife Monitoring Qualification:*** To ensure that individuals conducting monitoring of fish and wildlife resources have the appropriate qualification, the Permittee shall provide documentation demonstrating expertise/experience in surveying the types of resources that are present in the project. The Department and FWC will review this information for confirmation that the monitors are capable of meeting the requirements in this authorization. This documentation shall include the following:
 - a. Marine Turtle Protection: Monitoring plan, including a list of the names and permit numbers for the Marine Turtle Permit Holders.
 - b. Shorebird Protection: Monitoring plan, including a list of Bird Monitors with their contact information, summary of qualifications including bird identification skills, and avian survey experience, proposed locations of shorebird survey routes, and the locations of travel routes.
 - j. ***A Baseline Nearshore Hardbottom Survey.*** A full pre-construction (baseline) survey shall be completed and submitted to the Department prior to the issuance of the Notice to Proceed. This survey shall comply with and meet the requirements of applicable Approved Biological Monitoring Plans.
4. **Pre-Construction Conference.** The Permittee shall conduct a pre-construction conference to review the specific conditions and monitoring requirements of this permit with Permittee's contractors, the engineer of record, those responsible for turbidity monitoring, those responsible for protected species monitoring, staff representatives from the Fish and Wildlife Conservation Commission (FWC) and the JCP Compliance Officer (or designated Department staff representatives) prior to each construction event. In order to ensure that appropriate representatives are available, at least twenty-one (21) days prior to the intended commencement date for the permitted construction, the Permittee is advised to contact the Department, and the other agency representatives listed below:

DEP JCP Compliance Officer
e-mail: JCPCCompliance@dep.state.fl.us

FWC Imperiled Species Management Section

e-mail: marineturtle@myfwc.com

FWC Regional Biologist
See [Contact list](#) for phone numbers
- ([http://myfwc.com/conservation/you-
conserve/wildlife/shorebirds/contacts](http://myfwc.com/conservation/you-
conserve/wildlife/shorebirds/contacts))

The Permittee is also advised to schedule the pre-construction conference at least a week prior to the intended commencement date. At least seven (7) days in advance of the pre- construction conference, the Permittee shall provide written notification, advising the participants of the agreed-upon date, time and location of the meeting, and also provide a meeting agenda and a teleconference number.

SPECIFIC CONDITIONS – CONSTRUCTION ACTIVITIES

5. The Permittee shall not store or stockpile tools, equipment, materials, etc., within littoral zones or elsewhere within surface waters of the state without prior written approval from the Department. Storage, stockpiling or access of equipment on, in, over or through beds of submerged aquatic vegetation, wetlands or hardbottom is prohibited unless it occurs within a work area or ingress/egress corridor that is specifically approved by this permit and is shown on the approved permit drawings. Anchoring or spudding of vessels and barges within beds of aquatic vegetation or hardbottom is also prohibited
6. The Permittee shall not conduct project operations or store project-related equipment in, on or over dunes, or otherwise impact dune vegetation, outside the approved staging, beach access and dune restoration areas designated in the permit drawings.
7. The non-shelly sand product from Stewart Material Mine in Fort Pierce, FL was reviewed and approved for use in this project. Any additional upland sand sources proposed for use under this permit shall be approved via permit modification.
8. Sediment quality will be assessed as outlined in the Sediment QA/QC plan dated 30 August 2018. Any occurrences of placement of material not in compliance with the Plan shall be handled according to the protocols set forth in the Sediment QA/QC plans. The sediment testing result shall be submitted to FDEP within 90 days following the completion of beach construction. The Sediment QA/QC plans shall include the following:

- a. If during construction, the Permittee or Engineer determines that the beach fill material does not comply with the sediment compliance specifications, measures will be taken to avoid further placement of noncompliant fill, and the sediment inspection results will be reported to the Department.
- b. The Permittee will submit post-construction sediment testing results and an analysis report as outlined in the Sediment QA/QC plan to the Department within 90 days following beach construction. The sediment testing results will be certified by a P.E. or P.G. from the testing laboratory. A summary table of the sediment samples and test results for the sediment compliance parameters as outlined in Table 1 of the Sediment QA/QC plan shall accompany the complete set of laboratory testing results. A statement of how the placed fill material compares to the sediment analysis and volume calculations from the geotechnical investigation shall be included in the sediment testing results report.
- c. A post-remediation report containing the site map, sediment analysis, and volume of non-compliant fill material removed and replaced, or otherwise remediated, will be submitted to the Department within 7 days following completion of remediation activities.

SPECIFIC CONDITIONS – WILDLIFE

9. ***In-water Activity.*** The Permittee shall adhere to the following requirements for all in- water activity:
 - a. The Permittee shall instruct all personnel associated with the project about the presence of marine turtles and manatees, and the need to avoid collisions with (and injury to) these protected marine species. The Permittee shall be responsible for harm to these resources and shall require their contractors to advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees or marine turtles, which are protected under the Endangered Species Act, the Marine Mammal Protection Act, the Marine Turtle Protection Act and the Florida Manatee Sanctuary Act.
 - b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate project area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels shall follow routes of deep water whenever possible.

- c. Siltation or turbidity barriers (if used) shall be made of material in which manatees and marine turtles cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers shall not impede manatee or marine turtle movement or travel.
 - d. The Permittee is responsible for all on-site project personnel and shall require them to observe water-related activities for the presence of marine turtles and manatee(s). All in-water operations shall be immediately shall be shut down if a marine turtle or manatee comes within 50 feet of the operation. For unanchored vessels, operators shall disengage the propeller and drift out of the potential impact zone. If drifting would jeopardize the safety of the vessel then idle speed may be used to leave the potential impact zone. Activities shall not resume until the animal(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the animal(s) has not reappeared within 50 feet of the operation. Animals shall not be herded away or harassed into leaving.
 - e. Any collision with (or injury to) a marine turtle or manatee shall be reported immediately to the FWC Hotline at 1-888-404-3922, and to FWC at ImperiledSpecies@myFWC.com. Any collision with (and/or injury to) a marine turtle shall also be reported immediately to the Sea Turtle Stranding and Salvage Network (STSSN) at SeaTurtleStranding@myfwc.com.
 - f. Temporary signs concerning manatees shall be prominently posted prior to and during all in-water project activities, at sufficient locations to be regularly and easily viewed by all personnel engaged in water-related activities. Two temporary signs, which have already been approved for this use by the FWC, shall be posted at each location. One sign shall read "Caution Boaters – Watch for Manatees". A second sign measuring at least 8 ½" by 11", shall explain the requirements for "Idle Speed/No Wake" and the shutdown of in-water operations. All signs shall be removed by the Permittee upon completion of the project. These signs can be viewed at MyFWC.com/manatee. Questions concerning these signs can be sent to ImperiledSpecies@myFWC.com.
10. Beach nourishment shall occur outside of the main part of marine turtle nesting season, starting after October 31 and completed before May 1. During the May 1 through October 31 period, no construction equipment shall be placed or stored on the beach. Temporary approvals of work to extend into marine turtle nesting season may be authorized on a case by case basis. Such authorizations

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shall be in writing from the Department with FWC approval and accompanied by proof the extension is covered under a valid Biological Opinion. If such an authorization is granted all conditions below shall be followed.

11. Construction-related activities are authorized to occur on the nesting beach (seaward of existing coastal armoring structures or dune crest and all sandy beach areas such as those used for beach access during the early nesting season (March 1 through May 1) and late nesting season (November 1 through November 30) under the following conditions:
 - a. Daily early morning marine turtle nest surveys shall start at the beginning of marine turtle nesting season (March 1). Daily nesting surveys shall continue through November 30, or until two weeks after the last crawl in the project area, whichever is earlier.
 - b. Daily nesting surveys shall be conducted beginning ½ hour prior to sunrise, and no construction activity may commence until completion of the marine turtle survey each day.
 - c. The Permittee shall ensure that marine turtle nesting surveys are conducted as required in this authorization, and only conducted by personnel with a valid FWC Marine Turtle Permit, that covers all project activities as required by Chapter 68E-1, F.A.C. If needed, contact FWC at MTP@myfwc.com for information on the authorized Marine Turtle Permit Holders in the project area.
 - d. Only those nests laid in the area where sand placement will occur shall be relocated, and nest relocation shall cease after the sand placement is completed. Nests requiring relocation shall be moved no later than 9 a.m., the morning following deposition (no longer than 12 hours from the time the eggs are laid), to a nearby self-release beach site in a secure setting, where artificial lighting will not interfere with hatchling orientation. The relocation site shall be determined in conjunction with and approved by FWC prior to nest relocations. Relocated nests shall not be placed in organized groupings. Relocated nests shall be randomly staggered along the length and width of beach settings that are not expected to experience any of the following: inundation by high tides; severe erosion; previous egg loss; or illumination by artificial lighting.
 - e. Nests deposited within areas where construction activities will not occur for 65 days, or nests laid in the nourished berm prior to tilling, shall be marked and left in place. The Marine Turtle Permit Holder shall install on-beach markers at the nest site and shall also install a secondary

marker at a point as far landward as possible to assure that the nest can be located should the on-beach marker be lost. No activity shall occur within the marked area, nor shall any activities occur that could result in impacts to the nest. Nest sites shall be inspected daily to assure nest markers remain in place and the nest has not been disturbed by the project activity.

- f. Beginning March 1, daytime surveys shall be conducted for leatherback sea turtle nests. Nighttime surveys for leatherback marine turtles shall begin when the first leatherback crawl is recorded within the project or adjacent beach area through April 30, or until completion of the project, whichever is earliest. Nightly nesting surveys shall be conducted from 9 p.m. until 6 a.m. The project area shall be surveyed at 1-hour intervals and eggs shall be relocated per the preceding requirements. Since leatherbacks require at least 1.5 hours to complete nesting, the 1-hour interval will ensure that all nesting leatherbacks are encountered.

12. ***Construction Area Project Lighting. No temporary lighting of the construction area is authorized at any time during the main portion of marine turtle nesting season (May 1 through October 31).*** During early and late nesting season, direct lighting of the beach and nearshore waters shall be limited to the immediate area of active construction while meeting safety requirements as required by law. Lighting on offshore and onshore equipment shall be minimized by reducing the number of fixtures, shielding, lowering the height and appropriately placing fixtures to avoid excessive illumination of the water's surface and nesting beach. The intensity of lighting shall be reduced to the minimum standard required for general construction area safety. Shields shall be affixed to the light housing on dredge and land-based lights and be large enough to block lamp light from being transmitted outside the construction area or to the adjacent marine turtle nesting beach. (Figure 1 below).

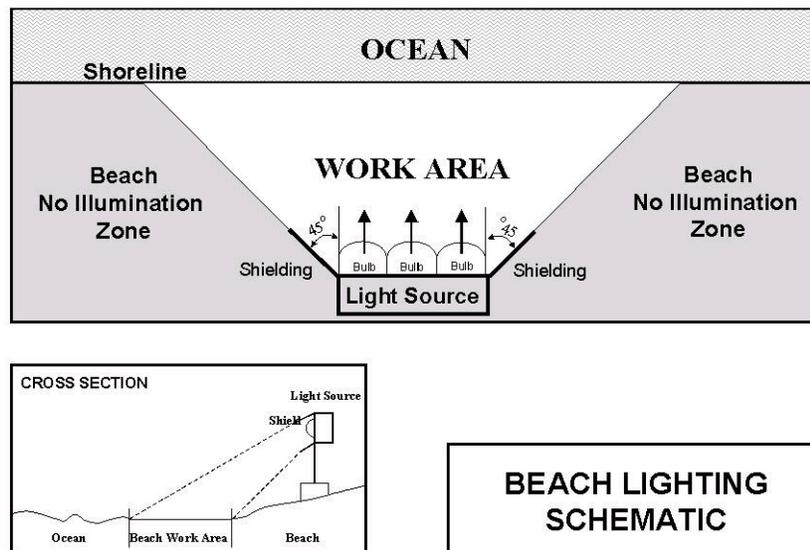


Figure 1

13. **All Beach Related Activities.** The Permittee shall adhere to the following requirements for all beach-related activities during marine turtle and shorebird nesting/breeding seasons (March 1 through October 31) in Indian River County.
- The Permittee shall require their contractor and protected species monitors to inspect all work areas that have excavations and temporary alteration of beach topography to determine which areas have deviations (such as depressions, ruts, holes and vehicle tracks) capable of trapping flightless shorebird chicks or marine turtle hatchlings each day. If so, the deviations shall be filled or leveled from the natural beach profile prior to 9:00 p.m. each day. The beach surface shall also be inspected after completion of the project, and all tracks, mounds, ridges or impressions, etc. left by construction equipment on the beach shall be smoothed and leveled.
 - If any debris, including derelict construction or coastal armoring material, concrete and metal occurs on the beach placement site, it shall be removed from the beach to the maximum extent practicable prior to any placement of fill material. If debris removal activities will take place during protected species nesting seasons, the work shall be conducted during daylight hours only, and shall not commence until completion of daily monitoring surveys.
 - Equipment Storage and Placement.** Staging areas and temporary

storage for construction equipment and pipes shall be located off the beach to the maximum extent practicable during March 1 through October 31. Nighttime storage of construction equipment that is not in use shall be located off the beach. All construction pipes that are in use on the beach shall be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system, and if placed parallel to the dune shall be 5 to 10 feet away from the toe of the dune.

- d. If it is necessary to extend construction pipes past a known shorebird nesting site, then those pipes shall be placed landward of the site before birds are active in that area. No pipe or sand shall be placed seaward of a shorebird nesting site during the shorebird nesting season. If such placement is not feasible for the project, FWC's Regional Biologist shall be contacted for alternative measures. See contacts available at <http://myfwc.com/conservation/you-serve/wildlife/shorebirds/contacts>.
- e. **Beach Driving.** All vehicles shall be operated at speeds less than 6 mph and run at or below the high-tide line. All personnel associated with the project shall be instructed about the potential presence of onsite protected species, and the need to avoid injury and disturbance to these species. In addition, all vehicles operated on the beach shall operate in accordance with the FWC's Best Management Practices for Operating Vehicles on the Beach (<http://myfwc.com/conservation/you-serve/wildlife/beach-driving/>). *Note: when flightless chicks are present within or adjacent to travel corridors, construction-related vehicles shall not be driven through the corridor unless a Bird Monitor is present.*

14. ***Dune Planting Conditions. Planting of dune vegetation is encouraged outside of marine turtle nesting season. However, planting activities may occur during the marine turtle nesting season March 1 through October 31 under the following conditions:***

- a. It is the responsibility of the Permittee to ensure that the project area and access sites are surveyed for marine turtle nesting activity. All nest surveys and activities involving marine turtles shall be conducted only by persons with a valid FWC permit issued pursuant to Florida Administrative Code 68E-1. For information regarding marine turtle permit holders, contact the FWC at MTP@myfwc.com.
- b. Marine turtle nest surveys shall be initiated at the beginning of the nesting season or 65 days prior to installation of plants (whichever is

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later). Surveys shall continue until completion of the project or through September 15 (whichever is earliest). Surveys shall be conducted throughout the project area and all beach access sites.

- c. Any nests deposited in the area shall be left in place. The marine turtle permit holder shall install an on-beach marker at any nest site and a secondary marker located at a point as far landward as possible to ensure that future location of the nest will be possible should the on-beach marker be lost. A series of stakes and survey ribbon or string shall be installed to establish an area of 3 feet radius surrounding the nest. No planting or other activity shall occur within this area nor shall any activity occur which might cause indirect impacts within this area. Nest sites shall be inspected daily to ensure nest markers have not been removed.
- d. The use of heavy equipment (including vehicles such as trucks) is not authorized in marine turtle nesting habitat. A lightweight (ATV style) vehicle, with tire pressures of 10 psi or less can operate on the beach if required.
- e. Any vegetation planting shall be installed by hand labor/tools only.
- f. All activity shall be confined to daylight hours and shall not occur prior to the completion of all necessary marine turtle surveys and conservation activities within the project area. Nighttime storage of equipment or materials shall be off the beach.
- g. In the event a nest is disturbed or uncovered during planting activity, the Permittee shall cease all work and immediately contact the marine turtle permit holder responsible for marine turtle conservation measures within the project area. If a nest(s) cannot be safely avoided during construction, all activity within the affected project area shall be delayed until complete hatching and emergence of the nest.
- h. All planting related activities must avoid marked marine turtle nests including those that may be on the beach before and after the marine turtle nesting season dates (May 1 through October 31). Any impacts to nests or marine turtles that inadvertently occur shall be immediately reported the Florida Fish and Wildlife Conservation Commission (FWC) at MarineTurtle@myfwc.com, and all work shall stop until authorized to continue by the Department and FWC.
- i. All irrigation lines for the dune restoration planting, if proposed, will

be temporarily installed along the landward side of the dune only and will be removed once the plants have become established. Any watering necessary along the seaward side of the dune will be done by hand on an “as needed” basis.

Marine Turtle Protection Conditions.

15. **Fill Restrictions.** During the marine turtle nesting season, the contractor shall not advance the beach fill more than 500 feet along the shoreline between dusk and the following day, until the daily nesting survey is completed, and the beach has been cleared for fill advancement. If the 500-foot advancement limitation is not feasible for the project, an alternative distance shall be established during the preconstruction meeting, if a distance can be agreed upon in consultation with FWC. If the work area is extended, nighttime nesting surveys are required, and a Marine Turtle Permit Holder is required to be present on-site to ensure that no nesting and hatching marine turtles are present. If any nesting turtles are sighted on the beach within the immediate construction area, activities shall cease immediately until the turtle has returned to the water and the Marine Turtle Permit Holder responsible for nest monitoring has relocated the nest.
16. **Marine Turtle or Nest Encounters.** Upon locating a dead or injured marine turtle, a hatchling, or egg that may have been harmed or destroyed as a result of the project, the Permittee shall be responsible for notifying FWC Wildlife Alert at 1-888-404-FWCC (3922). Care shall be taken in handling injured marine turtles or exposed eggs to ensure effective treatment or disposition, and in handling dead specimens to preserve biological materials for later analysis. If a marine turtle nest is excavated during construction activities, but not as part of the authorized nest relocation process outlined in these specific conditions, the permitted person responsible for egg relocation for the project shall be notified immediately so the eggs can be moved to a suitable relocation site.
17. **Tilling, Compaction and Escarpment Remediation Requirements.** For the years after the first-year sand placement (out-year), compaction monitoring, tilling and escarpment monitoring are not required if placed material no longer remains on the dry beach.
 - a. **Compaction Sampling.** Sand compaction shall be monitored in the area of sand placement immediately after completion of the nourishment event, and two weeks prior to marine turtle nesting season, for three (3) subsequent years. If the average value for any depth exceeds 500 pounds per square inch (psi) for any two or more adjacent stations, then that area shall be tilled prior to the beginning of marine turtle nesting season. If a few values exceeding 500 psi are

present randomly within the project area, tilling will not be required. Compaction monitoring shall be in accordance with the following protocol:

- i. Compaction sampling stations shall be located at 500-foot intervals along the project area. One station shall be at the seaward edge of the dune/bulkhead line (when material is placed in this area), and one station shall be midway between the dune line and the high-water line (normal wrack line).
 - ii. At each station, the cone penetrometer shall be pushed to depths of 6, 12 and 18 inches three times (i.e., three replicates at each depth). Material may be removed from the hole if necessary to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lie over less compact layers. Replicates shall be located as close to each other as possible, without interacting with the previous hole and/or disturbed sediments. The three replicate compaction values for each depth shall be averaged to produce final values for each depth at each station. Reports shall include all 18 values for each transect line, and the final 6 averaged compaction values.
 - iii. If values exceeding 500 psi are distributed throughout the project area, but do not exist at two adjacent stations at the same depth, then the Permittee shall consult with the FWC to determine if tilling is required. A tilling waiver based on these compaction values shall be submitted to the FWC at marineturtle@myfwc.com.
- b. **Tilling Requirements.** If tilling is performed regardless of post-construction compaction levels or tilling is required based on compaction measurements, the area shall be tilled to a depth of 36 inches.
- i. All tilling activity shall be completed prior to the marine turtle nesting season. If the project is completed during the marine turtle nesting season, tilling shall not be performed in areas where nests have been left in place or relocated.
 - ii. Each pass of the tilling equipment shall be overlapped to allow thorough and even tilling. A relatively even surface, with no deep

ruts or furrows, shall be created during tilling. To do this, chain-linked fencing or other material shall be dragged over those areas as necessary after tilling.

- iii. Tilling shall occur landward of the wrack line and shall avoid all naturally vegetated areas that are at least 3 square feet in size, as well as any planted areas that have been authorized by the Department. A 3-foot-wide No- Tilling buffer shall be maintained around vegetated areas. The slope between the mean high-water line and the mean low water line shall be maintained to approximate natural slopes.
- c. **Escarpment Surveys.** Visual surveys for escarpments along the project area shall be made immediately after completion of sand placement, two weeks prior to marine turtle nesting season, and weekly for three (3) subsequent years, each year placed sand remains on the beach. Escarpment remediation shall be as follows:
- i. Prior to marine turtle nesting season, escarpments that interfere with marine turtle nesting or that exceed 18 inches in height for a distance of at least 100 feet shall be leveled to the natural beach contour or the beach profile shall be reconfigured to minimize scarp formation. Any escarpment removal shall be reported relative to R-monument location to FWC at marineturtle@myfwc.com, with a copy sent to the JCP Compliance Officer.
 - ii. If weekly surveys during the marine turtle nesting season document escarpments that exceed 18 inches in height for a distance of at least 100 feet and have persisted for more than two weeks, the FWC shall be contacted immediately to determine the appropriate action to be taken. Submitted information shall include locations and measurements of the escarpments and marine turtle nests located within 20 feet of the escarpments, with photographs when possible. Upon written notification, the Permittee shall level escarpments in accordance with methods that minimize impacts to any existing nest in coordination with the FWC and the marine turtle permit holder. An annual summary of escarpment surveys and actions taken shall be submitted electronically to FWC (marineturtle@myfwc.com).
- d. If compaction sampling, tilling or escarpment removal occurs during shorebird breeding season, the Shorebird Conditions (including

surveys) included in this authorization shall be followed. No heavy equipment shall operate, and no compaction sampling or tilling shall occur within 300 feet of any shorebird nest. If flightless shorebird chicks are present within the work zone or equipment travel corridor, a Bird Monitor shall be present during the operation to ensure that no heavy equipment operates within 300 feet of the flightless young. It is the responsibility of the Permittee to ensure that their contractors avoid tilling, scarp removal or dune vegetation planting in areas where nesting birds are present.

18. Post-Construction Monitoring and Reporting Marine Turtle Protection Conditions

- a. For each fill placement event, reports for all required nesting surveys shall be provided for the initial or remaining marine turtle nesting season and for up to three years additional nesting seasons if the placed material remains on the beach, accordance with the Table 1 (below). Surveys shall record the nest numbers, nesting success, reproductive success (hatching and emergence), disorientations, and lost nests due to erosion and/or inundation, by species. If nesting and reproductive success is less than the criteria in the table below, an additional year of monitoring and additional conditions prior to the next sand placement on this beach may be required by the Department and FWC. In accordance with Table 1:
 - i. For the remainder of the nesting season immediately following construction, and for the following year, the number and type of emergences (nests or false crawls) shall be reported per species. A third year of nesting surveys may be required if nesting success for any species on the nourished beach is less than 40%.
 - ii. For the remainder of the nesting season immediately following construction, reproductive success shall be reported for all loggerhead, Kemp's Ridley, green and leatherback nests.
 - iii. If the documented reproductive success for each species meets or exceeds the required criteria, monitoring for reproductive success shall be recommended, but not required for the second-year post-construction.
- b. Data shall be reported for the nourished areas in accordance with **Table 1**. Summaries shall include all crawl activity, hatching success of a representative sampling of nests left in place (if any) by species, project name and applicable project permit numbers and dates of

construction. Summaries shall be submitted in electronic format (Excel spreadsheets) to the FWC Imperiled Species Management section at marineturtle@myfwc.com and copied to JCPCCompliance@dep.state.fl.us. All summaries should be submitted by January 15th of the following year. The FWC Excel spreadsheet is available upon request from marineturtle@myfwc.com.

Table 1. Marine Turtle Monitoring for Beach Placement of Material

Date	Duration	Variable	Criterion
Nesting Success	Year of construction, two years post construction if placed sand remains on beach and variable does not meet criterion based on previous year	Number of nests and non-nesting emergences by day by species	40 percent or greater
Hatching success	Year of construction and one-year post construction if placed sand remains on beach and variable does not meet success criterion based on previous year	Number of hatchlings by species to hatch from egg	60 percent or greater (a statistically valid number of loggerhead and green nests, and all leatherback nests)
Emergence Success	Year of construction and one-year post construction if placed sand remains on beach and variable does not meet success criterion based on previous year	Number of hatchlings by species to emerge from nest onto beach	Average must not be significantly different than the average hatching success
Disorientations	Year of construction and two years post construction if placed sand remains on the beach	Number of nests and individuals that misorient or disorient	

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Date	Duration	Variable	Criterion
Lighting Surveys	Two surveys the year following construction, one survey between May 1 and May 15 and second survey between July 15 and August 1	Number, location and photographs of lights visible from nourished berm, corrective actions and notifications made	Lighting survey and meeting resulting with plan for reduction in lights visible from nourished berm
Compaction	Three seasons following construction. Not required if the beach is tilled prior to nesting season each year placed sand remains on beach	Shear resistance	Less than 500 psi
Escarpment Surveys	Weekly during nesting season for three years each year placed sand remains on the beach	Number of scarps 18 inches or greater extending for more than 100 feet that persist for more than 2 weeks	Successful remediation of all persistent scarps as needed

19. Lighting surveys shall be conducted from the renourished berm and action taken to ensure that no artificial lights are visible from any dry portion of the newly elevated beach. The first survey shall be conducted between May 1 and May 15 for the first nesting season following construction, or immediately after sand placement if construction is not completed until after May 15. The survey shall follow standard techniques for such a survey, such as including the number and type of visible lights, location of lights, and photo documentation (additional techniques as per the 2015 USFWS Statewide Programmatic Biological Opinion).
 - a. For each visible light source, the Permittee shall document that the property owner has been notified of the problem light and has been provided with recommendations for correcting the light. Recommendations shall be in accordance with local lighting ordinances, and a report summarizing all visible lights shall be forwarded to local code enforcement. If no lighting ordinances exist,

the recommendation shall be that no lights or light sources shall be visible from the newly elevated beach. A report summarizing all visible lights shall also be submitted to FWC at marineturtle@myfwc.com and copied to JCPCompliance@dep.state.fl.us by the 1st of the month following the survey.

- b. The second survey shall be conducted between July 15 and August 1 to assess any remaining visible lights requiring corrective action. The survey shall be conducted from the top of the foreshore slope (i.e., the seaward edge of the filled berm before it slopes into the water), facing landward. A summary annual report of the surveys documenting what corrective actions or local enforcement actions have been taken shall be submitted to FWC by December 31 of that year. Upon request by the FWC, the Permittee shall set up a meeting with the county or municipality, USFWS and FWC to discuss the survey report, as well as any documented marine turtle disorientations in or adjacent to the project area.

Shorebird Protection.

20. The term “shorebird” refers to all solitary nesting shorebirds and colonial nesting seabirds. If any project activities as described below are conducted, the following shorebird protection conditions are required during the shorebird breeding cycle, which includes nesting. The following conditions are intended to avoid direct impacts associated with the construction of the project and may not address all potential take incidental to the operation and use related to this authorization.
 - a. Shorebird breeding season dates for this project area are March 1 through September 1. Note that while most species have completed the breeding cycle by September 1, flightless young may be present through September and must be protected if present.
 - b. Any parts of the project where “project activities” on the beach take place entirely outside the breeding season, do not require shorebird surveys. The term “project activities” includes operation of vehicles on the beach, movement or storage of equipment on the beach, sand placement or sand removal, and other similar activities that may harm or disturb shorebirds. Bird survey routes must be established and monitored throughout the entire breeding season in any parts of the project area where: 1) potential shorebird breeding habitat occurs, and 2) project activities are expected to occur at any time within the

breeding season.

- c. Bird surveys shall be conducted in all potential beach-nesting bird habitats within the project boundaries that may be impacted by construction or pre-construction activities. One or more shorebird survey routes shall be established by the Permittee to cover project areas which require shorebird surveys. These routes must be approved by the FWC Regional Biologist as part of the Environmental Protection Plan approval process. Routes shall not be modified without prior FWC approval.
- d. During the pre-construction and construction phases of the project, the Permittee shall ensure that surveys for detecting breeding activity and the presence of flightless chicks shall be completed on a daily basis by a qualified bird monitor prior to movement of equipment, operation of vehicles, or other activities that could potentially disrupt breeding behavior or cause harm to the birds or their eggs or young. If all project activities are completed and all personnel and equipment have been removed from the beach prior to the end of the breeding season, route surveys shall continue to be conducted at least weekly through the end of the breeding season. If breeding or nesting behavior is confirmed by the presence of a scrape, eggs or young, the Permittee (or their designee) shall establish a 300-foot buffer around the site and notify the FWC Regional Biologist within 24 hours.
- e. The Bird Monitor shall conduct a shorebird education and identification program (and/or provide educational materials) with the on-site staff to ensure protection of precocial (mobile) chicks. All personnel are responsible for watching for shorebirds, nests, eggs and chicks. If the Bird Monitor finds that shorebirds are breeding within the project area, a bulletin board shall be placed and maintained in the construction staging area with the location map of the construction site showing the bird breeding areas and a warning, clearly visible, stating that “NESTING BIRDS ARE PROTECTED BY LAW INCLUDING THE FLORIDA ENDANGERED AND THREATENED SPECIES ACT AND THE STATE and FEDERAL MIGRATORY BIRD ACTS”.
- f. **Bird Monitor Requirements.** The Permittee shall ensure that shorebird surveys are conducted by trained, dedicated individuals (Bird Monitor) with proven shorebird identification skills and avian survey experience. Bird Monitors shall review and become familiar with the general information, employ the data collection protocol, and

implement data entry procedures outlined on the FWC's FSD website (<http://www.flshorebirddatabase.org> or [Florida Shorebird Database](#)). The Permittee shall submit a list of Bird Monitors, with their contact information and a summary of qualifications, including bird identification skills and avian survey experience to the FWC Regional Biologist for approval. The Permittee shall submit the names and contact information of the Bird Monitors who have been approved by FWC to JCPCCompliance@dep.state.fl.us, prior to any construction or shorebird surveys. In order to be approved, the Bird Monitors must meet the following minimum qualifications:

- i. Has previously participated in beach-nesting bird surveys in Florida (provide references or resume). Experience with previous projects must document the ability to 1) identify all species of beach-nesting birds by sight and sound, 2) identify breeding/territorial behaviors, and find nests of shorebirds that occur in the project area, and 3) identify habitats preferred by shorebirds nesting in the project area.
 - ii. Have a clear working knowledge of, and adhere to, the [Breeding Bird Protocol for Florida's Seabirds and Shorebirds](#).
 - iii. Have completed full-length webinars: Route-Surveyor Training and Rooftop Monitoring Training, including the annual refresher training. Training resources can be found on [the Florida Shorebird Database](#) (FSD) website.
 - iv. Familiar with [FWC beach driving guidelines](#).
 - v. Experience posting beach-nesting bird sites, consistent with [Florida Shorebird Alliance \(FSA\) Guidelines](#).
 - vi. Has registered as a contributor to the FSD.
21. **Bird Survey Protocols.** Bird survey protocols, including downloadable field data sheets, are available on the [FSD website](#). All breeding activity shall be reported to the FSD website within one week of data collection. If the use of this website is not feasible for data collection, the FWC Regional Biologist must be contacted for alternative methods of reporting. The Permittee shall ensure that the Bird Monitors use the following survey protocols:
- a. Surveys shall be conducted by walking the length of all survey routes and visually surveying for the presence of shorebirds exhibiting

breeding behavior, shorebird chicks or shorebird juveniles, as outlined in the FSD Breeding Bird Protocol for Shorebirds and Seabirds. Use of binoculars (minimum 8x40) is required and use of spotting scope may be necessary to accurately survey the area. If an ATV or other vehicle is needed to cover large survey routes, the Bird Monitor shall stop at intervals of no greater than 600 feet to visually inspect for breeding activity.

- b. Once breeding is confirmed by the presence of a scrape, eggs or young, the Permittee (or their designee) shall notify the FWC Regional Biologist within 24 hours.

22. **Shorebird Buffer Zones and Travel Corridors.** The Permittee shall require the Bird Monitor(s) and Contractor(s) to meet the following:

- a. The Bird Monitor(s) shall establish a disturbance-free buffer zone around any location within the project area where the Bird Monitor has observed shorebirds engaged in breeding behavior, including territory defense. A 300-foot buffer shall be established around each nest or around the perimeter of each colonial nesting area. A 300-foot buffer shall also be placed around the perimeter of areas where shorebirds are seen digging nest scrapes or defending nest territories. All construction activities, movement of vehicles, stockpiling of equipment, and pedestrian traffic are prohibited in the buffer zone. **Smaller, site-specific buffers may be established if approved in writing by the FWC Regional Biologist.** Travel corridors shall be designated and marked outside the buffer areas for pedestrian, equipment or vehicular traffic.
- b. The Bird Monitor(s) shall keep breeding sites under sufficient surveillance to determine if birds appear agitated or disturbed by construction or other activities in adjacent areas. If birds do appear to be agitated or disturbed by these activities, then the Bird Monitor(s) shall immediately widen the buffer zone to a sufficient size to protect breeding birds.
- c. The Bird Monitor(s) shall ensure that where breeding birds will tolerate pedestrian traffic, traditional pedestrian access will not be blocked. This is generally the case with lateral movement of beach-goers walking parallel to the beach at or below the highest tide line. Pedestrian traffic may also be allowed when breeding was initiated within 300 feet of an established beach access pathway.

- d. The Bird Monitor(s) shall ensure that the perimeters of designated buffer zones shall be marked according to FSA Posting Guidelines: (<http://flshorebirdalliance.org/resources/instructions-manuals.aspx>) with posts, twine and FWC-approved signs stating “Do Not Enter, Important Nesting Area” or similar language around the perimeter (see example of signage for marking designated buffer zones at <http://myfwc.com/conservation/you- conserve/wildlife/shorebirds/> . Posts shall not exceed 3 feet in height once installed. Symbolic fencing (twine, string or rope) should be placed between all posts at least 2.5 feet above the ground and rendered clearly visible to pedestrians. If pedestrian pathway and/or equipment travel corridor modifications are approved by the FWC Regional Biologist, these shall be clearly marked. **Posting shall be maintained in good repair until no active nests, eggs, or flightless young are present.** Although solitary nesters may leave the buffer zone temporarily with their chicks, the posted area continues to provide a potential refuge for the family until breeding is complete. Breeding is not considered to be completed until all chicks have fledged.
- e. The Permittee shall ensure that the Bird Monitor(s) designate and mark travel corridors outside the buffer areas so as not to cause disturbance to breeding birds. Heavy equipment, other vehicles, or pedestrians may transit past breeding areas in these corridors. Stopping or turning heavy equipment and vehicles shall be prohibited within the designated travel corridors adjacent to the breeding site. When flightless chicks are present within or adjacent to travel corridors, movement of vehicles shall be adequately monitored by the Bird Monitor(s), who shall advise the contractor whose responsibility it is to ensure no chicks are in the path of the moving vehicle. In addition, tracks, ruts, or holes capable of trapping flightless chicks shall be smoothed or leveled after the Bird Monitor(s) inspect them for the presence of flightless young.
- f. Any injury or death of a shorebird (including crushing eggs or young) resulting from project activities shall be reported immediately to the FWC Regional Biologist.

SPECIFIC CONDITIONS - PHYSICAL MONITORING REQUIRED:

23. The approved Physical Monitoring Plan can be revised at any later time by written request of the Permittee and with the written approval of the Department. If subsequent to approval of the Monitoring Plan there is a request for modification of the permit, the Department may require revised or additional monitoring requirements as a condition of approval of the permit modification.

24. If the collection of profile surveys were to be conducted as part of the county-wide monitoring program, there would be no need to duplicate the monitoring effort and those county-generated profile surveys would be acceptable in meeting this specific physical monitoring requirement, provided they satisfy the general requirements specified below in sub-item (a).

As guidance for obtaining Department approval, the plan shall generally contain the following items:

- a. Topographic and bathymetric profile surveys of the beach and offshore shall be conducted prior to commencement of construction, immediately following completion of construction, and biennially thereafter beginning one or two years following completion of construction. A pre-construction survey of the project area to receive beach fill may use surveys conducted for purposes of construction bidding, contracting or construction management. The post-construction survey of the beach fill may use surveys and other information collected periodically during construction for purposes of construction management and payment. Alternatively, the post-construction survey may consist of a single beach-offshore profile survey event of the project monitoring area conducted within 60 days after completion of beach fill placement.

Thereafter, monitoring surveys shall be conducted biennially beginning approximately one year following completion of construction until the next beach nourishment event or the expiration of the project design life, whichever occurs first. The monitoring surveys shall be conducted during a spring or summer month and repeated as close as practicable during that same month of the year. If the time period between the post-construction survey and the first biennial monitoring survey is less than six months, then the Permittee may at their discretion postpone the first monitoring survey until the following spring/summer.

The monitoring area shall include profile surveys at each of the Department of Environmental Protection's reference monuments within the bounds of the beach fill area and along at least 5,000 feet of the adjacent shoreline on both sides of the beach fill area. All work activities and deliverables for the biennial monitoring surveys shall be conducted in accordance with the latest update of the Department's *Monitoring Standards for Beach Erosion Control Projects, Sections 01000 and 01100*.

- b. The Permittee shall submit an engineering report and the monitoring data to the Department within 90 days following completion of the construction and each biennial monitoring survey.

The report shall summarize and discuss the data, the performance of the beach fill project, and identify erosion and accretion patterns within the monitored area. Results shall be analyzed for patterns, trends, or changes between annual surveys and cumulatively since project construction. In addition, the report shall include a comparative review of project performance to performance expectations and identification of adverse effects attributable to the project.

The report shall specifically include:

- A record of the volume and location of all beach fill or inlet sand bypassing material placed within the project area;
- The volume and percentage of advance nourishment lost since the last beach nourishment project as measured landward of the MHW line of the most recent survey;
- The most recent MHW shoreline positions (feet) in comparison with the design profile at each individual monument location;
- The MHW shoreline position changes (feet) relative to the pre-construction survey at each individual monument location for all the monitoring periods;
- The total measured remaining volume (cubic yards) in comparison with the total predicted remaining volume (cubic yards) above the MHW line and above the Depth of Closure for the entire project area over the successive monitoring periods; and,
- Other shoreline position and volumetric analysis the Permittee or Engineer deem useful in assessing, with quantitative measurements, the performance of the project.

The report shall include computations, tables and graphic illustrations of volumetric and shoreline position changes for the monitoring area. An appendix shall include superimposed plots of the two most recent beach profile surveys, the design profile, and pre- and post-construction beach profile at each individual monument location.

- c. An electronic copy of the monitoring report and the survey data shall be submitted to the Department's JCP Compliance Officer. Failure to submit reports and data in a timely manner constitutes grounds for revocation of the permit. When submitting any monitoring information to the Department, please include a transmittal cover letter clearly labeled with the following at the top of each page: **This monitoring information is submitted in accordance with the approved Monitoring Plan for Permit No. 0363427-001- JC for the monitoring period [XX].**

SPECIFIC CONDITIONS – WATER QUALITY MONITORING:

25. In order to assure that turbidity levels do not exceed the compliance standards established in this permit, construction at the project site shall be monitored closely by an independent third party with formal training in water quality monitoring and professional experience in turbidity monitoring for coastal construction projects. Also, an individual familiar with beach construction techniques and turbidity monitoring shall be present at all times when fill material is placed on the beach. This individual shall have authority to alter construction techniques or shut down the beach construction operations if turbidity levels exceed the compliance standards established in this permit. The names and qualifications of those individuals performing these functions, along with 24-hour contact information, shall be submitted for approval pursuant to Specific Condition 3.

26. Water Quality - Turbidity shall be monitored as follows:

Units: Nephelometric Turbidity Units (NTUs).

Frequency: Monitoring at the placement site shall be conducted 3 times daily, approximately 4 hours apart, and at any other time that there is a likelihood of an exceedance of the turbidity standard, during all operations.

All turbidity sampling shall be conducted while the highest project-related turbidity levels are crossing the edge of the mixing zone. The compliance samples and the corresponding background samples shall be collected at approximately the same time, i.e., one shall immediately follow the other.

Location: **Background:** Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom, clearly outside the influence of any artificially generated turbidity plume or the influence of an outgoing inlet plume.

Beach Site: Samples shall be collected at least 300 meters up-current from any portion of the beach that has been, or is being, filled during the current construction event, at the same distances offshore as the associated compliance samples.

Compliance: Sampling shall occur at surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above the bottom.

Beach Site: Samples shall be collected where the densest portion of the turbidity plume crosses the edge of the mixing zone polygon, which measures up to 150 meters offshore and up to 1,000 meters alongshore or at the edge of the nearest hardbottom in the down-current direction, whichever is closest to the discharge point into the Atlantic Ocean.

Note: If the plume flows parallel to the shoreline, the densest portion of the plume may be close to shore, in shallow water. In that case, it may be necessary to access the sampling location from the shore, in water that is too shallow for a boat.

Intermediate Monitoring (required when using a mixing zone that exceeds 150 meters in size): At surface, mid-depth, and (for sites with depths greater than 25 feet) 2 meters above bottom. At points approximately 250, 500 and 750 meters down-current from the discharge point, within the densest portion of any visible turbidity plume generated by this project. These measurements will be used to calibrate the size of the mixing zone for future events.

Calibration: The instruments used to measure turbidity shall be fully calibrated with primary standards within one month of the commencement of the project, and at least once a month throughout the project. Calibration with secondary standards shall be verified each morning prior to use, after each time the instrument is turned on, and after field sampling using two secondary turbidity “standards” that bracket the anticipated turbidity samples. If the post-sampling calibration value deviates more than 8% from the previous calibration value, results shall be reported as estimated and a description of the

problem shall be included in the field notes.

Analysis of turbidity samples shall be performed in compliance with DEP- SOP-001/01 FT 1600 Field Measurement of Turbidity:

<http://publicfiles.dep.state.fl.us/dear/sas/sopdoc/2008sops/ft1600.pdf>

If the turbidity monitoring protocol specified above prevents the collection of accurate data, the person in charge of the turbidity monitoring shall contact the JCP Compliance Officer to establish a more appropriate protocol. Once approved in writing by the Department, the new protocol shall be implemented through an administrative permit modification.

27. The **compliance** locations given above shall be considered the limits of the temporary mixing zone for turbidity allowed during construction. If monitoring reveals turbidity levels at the **compliance** sites that are greater than 29 NTUs above the corresponding background turbidity levels, construction activities shall **cease immediately** and not resume until corrective measures have been taken and turbidity has returned to acceptable levels. Any such occurrence shall also be immediately reported to the JCP Compliance Officer via email at JCPCompliance@dep.state.fl.us and include in the subject line, "TURBIDITY EXCEEDANCE", and the Project Name and Permit Number. Also notify the Department's Central District office.
- a. When reporting a turbidity exceedance, the following information shall also be included:
 - i. the Project Name;
 - ii. the Permit Number (0363427-001-JC);
 - iii. location and level (NTUs above background) of the turbidity exceedance, (shown on a map with GPS coordinates);
 - iv. the time and date that the exceedance occurred; and
 - v. the time and date that construction ceased.
 - b. Prior to re-commencing the construction, a report shall be emailed to the Department with the same information that was included in the "Exceedance Report", plus the following information:

- i. turbidity monitoring data collected during the shutdown documenting the decline in turbidity levels and achievement of acceptable levels;
 - ii. corrective measures that were taken; and
 - iii. cause of the exceedance.

28. **Turbidity Reports:** All turbidity monitoring data shall be submitted within one week of analysis. The data shall be presented in tabular format, indicating the measured turbidity levels at the compliance sites for each depth, the corresponding background levels at each depth and the number of NTUs over background at each depth. Any exceedances of the turbidity standard (29 NTUs above background) shall be highlighted in the table. In addition to the raw and processed data, the reports shall also contain the following information:
 - a. Time of day samples were taken;
 - b. Dates of sampling and analysis;
 - c. GPS location of sample. When possible, coordinates should be provided in decimal degrees with a 5 decimal level of precision (i.e., 0.000001). Please also indicate the datum;
 - d. Depth of water body;
 - e. Depth of each sample;
 - f. Antecedent weather conditions, including wind direction and velocity;
 - g. Tidal stage and direction of flow;
 - h. Water temperature;
 - i. A geo-referenced map, overlaid on an aerial photograph, indicating the sampling locations (background and compliance), the visible plume pattern within the applicable mixing zone and direction of flow. The turbidity sampling map shall also include the boundaries of the benthic resources within 150 meter of the construction activities for which turbidity was sampled. A sample map shall be reviewed and approved by the Department prior to construction;

- j. A statement describing the methods used in collection, handling, storage and analysis of the samples;
- k. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, calibration of the meter, accuracy of the data and precision of the GPS measurements;
- l. When samples cannot be collected, include an explanation in the report. If unable to collect samples due to severe weather conditions, include a copy of a current report from a reliable, independent source, such as an online weather service.

Weekly turbidity monitoring reports shall be submitted electronically to the JCP Compliance Officer at JCPCompliance@dep.state.fl.us. Reports shall be submitted under a cover letter containing the following statement: "This information is provided in partial fulfillment of the monitoring requirements in Permit No. 0363427-001-JC." The cover letter shall summarize any significant compliance issues. Also, please clearly reference the permit number and project name on each page of the report.

Failure to submit monitoring reports in a timely manner constitutes a violation of the permit pursuant to Chapter 403.161, F.S.,

SPECIFIC CONDITIONS - BIOLOGICAL MONITORING:

29. No impacts to hardbottom resources are authorized by this permit. Biological monitoring of nearshore hardbottom areas shall be conducted to provide the Department with reasonable assurance that any unpermitted, project-related, persistent or temporary, negative impacts (direct or indirect) to hardbottom resources will be documented, if they occur (see Specific Condition 30). Unpermitted project related impacts documented during the course of monitoring shall be mitigated for. Impacts and their mitigation will be handled through compliance and enforcement action, and the amount of mitigation may be determined according to the Department's UMAM assessment.
30. The Permittee shall adhere to the current, Department approved **Biological Monitoring Plan** (dated November 2018), which is a binding part of this permit. The Permittee is responsible for ensuring that their selected monitoring firm is knowledgeable of all permit conditions pertaining to monitoring requirements (including the approved Monitoring Plan); not just the scope of work in the contract prepared by the Permittee/contractor.

The aim of hardbottom biological monitoring is to identify any unpermitted direct and / or secondary adverse impacts to nearshore hardbottom resources due to the spreading of project sand further than permitted (i.e., seaward of the permitted ETOF) should they occur. As such, nearshore hardbottom adjacent to, updrift, and downdrift of the fill template, beyond the ETOF, shall be monitored. A single pre-construction monitoring event shall be conducted prior to the initial fill placement event (beach restoration) conducted under this Permit. This pre-construction monitoring event shall serve as the baseline for all post-construction (beach restoration or nourishment) monitoring conducted under this Permit. An immediate post-construction monitoring event (within six months of project completion) and three annual post-construction monitoring events (Years 1, 2, and 3 post-construction) shall be conducted following each fill placement event (beach restoration or nourishment) (i.e., each fill placement event shall trigger a complete round of post-construction monitoring). Unless otherwise approved by FDEP staff, all monitoring events shall be conducted during summer months (May through September), as close as practicable to the date the baseline survey was conducted. Standard operating procedures shall be used during each monitoring event to provide consistent and repeatable collection of data.

Surveys conducted during each monitoring event will document sediment depth and cover as well as the abundance, distribution, condition, and function of hardbottom resources (biotic assemblages). **Table 2** (below), titled “Hardbottom Monitoring Summary”, summarizes surveys and tasks required in the Biological Monitoring Plan; these are described in detail in the Plan itself. Reports are required to be submitted following each survey, according to the Plan. The Permittee shall acquire written approval from the Department prior to implementing any revisions to the approved Biological Monitoring Plan.

Table 2. Hardbottom Monitoring Summary

Survey Unit	Survey	Frequency	Deliverables
Permanent Transects (N=20); 9 Biological Transects and 11 Sediment Only Transects	Line-Intercept: along all 20 transects	Pre-construction (N=1): Once prior to initial fill placement event.	Excel spreadsheet, PDF of field sheets
	Interval Sediment Depth Measurements: along all 20 transects		Excel spreadsheet, PDF of field sheets
	Qualitative Video: along all 9 Biological transects	Post-construction (N=4 per fill placement event): Immediately (within 6 months) and annually for 3 years (years 1, 2, and 3) following each fill placement event.	Video
	Quadrat Sampling: within all 0.5 m ² quadrats along all 9 Biological transects		Excel spreadsheet, PDF of field sheets
Hardbottom Edge	Mapping of Landward Hardbottom Edge: between R-69.5 and R-87		Shapefiles

Reporting requirements for biological monitoring are as follows:

- a. The biological monitoring firm shall notify the Department (JCP Compliance Officer) when biological monitoring has begun and when biological monitoring has been completed. Additionally, the biological monitoring firm shall submit brief, weekly progress reports to the Department during each monitoring period.

All raw data that are collected shall be submitted simultaneously to the JCP Compliance Officer, the contractor and the Permittee as collected in the field and as entered into spreadsheets for analysis, beginning with the pre-construction (baseline) monitoring event. Raw data associated with post-construction monitoring shall be provided to the JCP Compliance Officer within 45 days of completing each post-construction monitoring event. Raw data shall be provided to the JCP Compliance Officer in electronic format, preferably on a single portable hard drive or via an FTP site. All data shall be provided in a standardized format, as specified in the approved Biological Monitoring Plan. The monitoring agent shall confirm that all data submitted in Excel workbooks (transect monitoring data) are consistent with the field datasheets to ensure accuracy and shall correct any errors or inconsistencies prior to the 45-day deadline. Data provided to the JCP Compliance Officer shall consist of the following: aerial photographs

(if required), video and in situ photographs; hardbottom edge survey data; raw transect survey data, and field datasheets (see **Table 2**, “Hardbottom Monitoring Summary”, above). Descriptions of all raw data materials (and their formats) to be provided to the JCP Compliance Officer are detailed in the attached approved Biological Monitoring Plan.

- c. Within 90 days of completing each post-construction monitoring event, the monitoring agent shall provide a biological monitoring report to the JCP Compliance Officer in electronic format. The report will be submitted by the monitoring firm directly and concurrently to the DEP/Permittee/Agent. The content and format of the monitoring report shall meet the criteria set forth in the approved Biological Monitoring Plan.

SPECIFIC CONDITIONS – POST CONSTRUCTION:

31. Within 90 days after completion, of construction of the permitted or authorized activity, the Permittee shall submit a notice of completion to the JCP Compliance Officer that includes the following information:
 - a. The permit number (0363427-001-JC) and the project name (Indian River County Sector 5 Beach and Dune Restoration Project).
 - b. A statement of full compliance with the requirements and specifications of this permit

NOTICE OF RIGHTS

FLAWAC Review

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

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of

**Joint Coastal Permit
Indian River County Sector 5 Beach and Dune Restoration Project
Permit No. 0363427-001-JC
Page 39 of 36**

Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Attachments:

1. Approved Permit Drawings (15 pages)
2. Biological Monitoring Plan (approved November 2018)
3. Physical Monitoring plan
4. Sediment QA/QC Plan

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Gregory W. Garis
Program Administrator
Beaches, Inlets and Ports
Program Division of Water
Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit and all copies were sent on the filing date below

cc: Robert Brantly, FDEP, DWRM,
Robert.Brantly@dep.state.fl.us;
Jennifer K Steele, FDEP, DWRM,
Jennifer.K.Steele@dep.state.fl.us ;
Brendan Biggs, FDEP, DWRM;
Brendan.Biggs@dep.state.fl.us ;
Rob Buda, FDEP, DWRM,
Rob.Buda@dep.state.fl.us;
Catherine Florko, FDEP, DWRM,
Catherine.Florko@dep.state.fl.us

JCP Compliance Officer
BIPP Permit File
MarineTurtle@MyFWC.com
ConservationPlanningServices@myfwc.com

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

February 1, 2019

Date



FLORIDA DEPARTMENT OF Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

September 9, 2019

Indian River County
1801 27th Street, Building A
Vero Beach, FL 32960

And

Stacy Buck
Aptim
2481 NW Boca Raton Blvd.
Boca Raton, FL 33431

Permit Modification No. 0363427-002-JN
Permit No. 0363427-001-JC, Indian River County
Indian River County Sector 5 Beach and Dune Restoration Project

Your request to modify Permit No. 0363427-001-JC was received on July 7, 2019 and has been reviewed by Florida Department of Environmental Protection (Department) staff. The proposed permit modification is to authorize the use of eight (8) additional upland sand sources for beach nourishment and to authorize an additional construction access corridor and staging area for the project site.

On February 1, 2019, the Department issued Permit No. **0363427-001-JC** to Indian River County to restore 3.1 miles of beach and dune in Indian River County using sand from the Stewart Materials Fort Pierce Mine. The permit authorized an initial placement of approximately 155,000 cubic yards of sand into a variable beach and dune template between Department Range Monuments R-70 and R-85, with dune-only placement between R-85 and R-86.

For additional background, please see the ***CONSOLIDATED NOTICE OF INTENT TO ISSUE JOINT COASTAL PERMIT AND AUTHORIZATION TO USE SOVEREIGN SUBMERGED LANDS*** for Permit No. 0363427-001-JC at the following website:

ftp://ftp.dep.state.fl.us/pub/ENV-PRMT/indian_r/issued/0363427_Indian_River_County_Sector_5/Intent/

Notice of Permit Modification
Permit Modification No. 0363427-002-JN
Indian River County Sector 5 Beach and Dune Restoration Project
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Justification and Staff Assessment

Permit No. 0363427-001-JC currently authorizes the Stewart Materials, Fort Pierce Sand Mine as the sole sand source for the Indian River County Sector 5 project. The County has requested authorization to use sand products from eight additional upland sand mines: Vulcan Materials' Diamond, Witherspoon, and Sandland mines; Stewart Materials' Capron Trail mine; as well as Jahna Industries' Greenbay, Haines City, Independent North and Independent South mines. The requested mines were pre-qualified for use on Indian River County beaches following a Request for Qualifications from the County. Authorization of these additional mines will provide the County with flexibility and competitive pricing when selecting sand products for the Sector 5 beach and dune restoration project. The County additionally requested authorization of a construction access and staging area near R-85 to increase flexibility during construction.

The Department reviewed geotechnical information for each of the proposed sand sources and confirmed that the sediment quality specifications for each meets the compliance specifications of the Sediment QA/QC Plan. Authorization of the additional sand sources and new construction access corridor and staging area are not anticipated to increase the probability of project-related impacts to existing biological resources or water quality standards. The permit shall therefore be modified as follows:

The project description shall be revised as follows (~~strike throughs~~ are deletions, underlines are additions):

The project is to restore 3.1 miles (4.99 kilometers) of beach and dune in Indian River County by placing approximately 155,000 cubic yards (118,500 cubic meters) of sand using upland sources. Following restoration, the project will also include periodic beach nourishment as needed.

The design template includes multiple shoreline segments with dune only or a combination of dune and berm sand placement along the project shoreline. The dune crest elevation consists of a flat dune crest extending from the existing grade at +15.0 feet NAVD at the Departments Reference Monuments R-70 to R-82, then transitions from +15.0 to +14.0 NAVD between R-82 and R-83, continues at +14.0 feet NAVD between R-83 and R-84 then transitions from +14.0 to +13.0 between R-84 to R-85, then continues at +13.0 feet NAVD between R-85 and R-86, matching an existing backshore structure. The landward dune crest will tie into existing grade or structure, at a slope no steeper than 1V:5H (Vertical: Horizontal). The dune crest width varies along the project area from 11 to 25 feet, and averages 18 feet wide. From the seaward edge of the dune crest, the template is sloped seaward at 1V:3H to +8.0 NAVD. The berm extends seawards from the +8.0 intersections with the dune slope averaging 17 feet wide. The seaward berm slope is 1V:8H until intersecting with the existing profile near mean high water +0.6 feet NAVD. The toe of fill varies along the project area and extends ~~ed~~ slightly seaward on some sections of the template. Sand placement in the project template

Notice of Permit Modification
Permit Modification No. 0363427-002-JN
Indian River County Sector 5 Beach and Dune Restoration Project
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between R-85 and R-86 will be a dune only. Salt-tolerant native dune vegetation will be planted on the restored dunes.

The project area is to be restored and nourished with sand trucked from approved upland sand sources. The sand sources authorized for use in this permit are the Vulcan Materials' Diamond, Witherspoon, and Sandland mines; the Stewart Materials' Fort Pierce and Capron Trail mines, and the Jahna Industries' Greenbay, Haines City, Independent North and Independent South mines. ~~the Stewart Materials Fort Pierce mine.~~ ~~Three~~ Four construction access points/staging areas have been identified for the project.

The project location shall be revised as follows (~~striketroughs~~ are deletions, underlines are additions):

The beach restoration and nourishment site is located along approximately 3.1 miles (4.99 kilometers) of Vero Beach, Indian River Shores, and unincorporated Indian River County coastline between the Department Reference Monuments R-70 and R-86, in Indian River County, Sections 19, 20, 29, 32, Townships 32 South, Range 40 East, and Section 5, Township 33 South, Range 40 East, Atlantic Ocean, Class III Florida Waters.

~~The upland sand source is the Stewart Materials Fort Pierce mine.~~ The upland staging and access areas are located at Tracking Station Park (R-72.7 to 73.2), Jaycee Park and Conn Beach (R-77.0 to R-79.1), ~~and~~ Humiston Park (R-82.8 to 83.4) and Riomar Drive (R-85).

The Sediment QA/QC Plan shall be revised as follows;

The Sediment QA/QC Plan (Approved August 2018) shall be replaced with the updated Sediment QA/QC Plan (Approved July 2019).

The set of approved permit drawings shall be revised as follows:

Sheet 5 of the Approved Permit Drawings (Approved February 2019) shall be replaced with a revised Sheet 5 displaying the Riomar Drive staging area (Approved August 2019).

After thorough review of your application, staff finds that the proposed modification is not expected to adversely affect water quality or be contrary to the public interest. Staff has also determined that the proposed alteration does not increase the potential for adverse impact on the coastal system, public beach access seaward of the mean high water line or nesting marine turtles and hatchlings and their habitat, and that the proposed alteration does not reduce the design adequacy of the project. Since the proposed modification is not expected to result in any adverse

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Indian River County Sector 5 Beach and Dune Restoration Project
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environmental impact or water quality degradation the **permit is hereby modified** as stated above. By copy of this letter, the attached drawing, and the attached plan, we are notifying all necessary parties of the modification.

This letter of approval does not alter the **February 1, 2034** expiration date or the Specific Conditions of the permit. This letter, the attached drawing, and the attached plan must be attached to the original permit.

This permit is hereby modified unless a sufficient petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, Florida Statutes (F.S.), as provided below. The procedures for petitioning for a hearing are set forth below. Mediation under Section 120.573, F.S., is not available for this proceeding.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

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

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

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- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

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

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within **14** days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

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

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

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

Notice of Permit Modification
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Department within 20 days from the date when this order is filed with the Clerk of the Department.

Judicial Review

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

If you have any questions regarding this matter, please contact Zach Boudreau by email at William.Boudreau@FloridaDEP.gov or by telephone at (850) 245-7585.

EXECUTION AND CLERKING:

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Gregory W. Garis
Program Administrator
Beaches, Inlets and Ports Program
Division of Water Resource Management

Attachments: Revised Permit Drawings, Sheet 5 (August 2019)
Sediment QA/QC Plan (July 2019)

Notice of Permit Modification
Permit Modification No. 0363427-002-JN
Indian River County Sector 5 Beach and Dune Restoration Project
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CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit and all attachments were sent on the filing date below to the following listed persons:

cc: Ivana Kenny-Carmola, DWRM	JCP Compliance
Zachary Westfall, DWRM	Kristen Sella, FWC
Peter Bacopoulos, DWRM	
Jennifer Steele, DWRM	
Bob Brantly, DWRM	
Roxane Dow, DWRM	

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.

	<u>09/09/2019</u>
Clerk	Date

APPENDIX B

SAMPLE WEEKLY QUALITY CONTROL REPORT

WEEKLY CONTRACTOR QUALITY CONTROL REPORT

Date: _____ Report No.
(Report is due by 2 PM WEDNESDAY)

PROJECT: INDIAN RIVER COUNTY SECTOR 5
DUNE VEGETATION AND FENCE PROJECT

WEATHER: (Summarize pertinent weather condition during the week)

LOCATION OF Planting: R- _____ + _____ to (monument plus a distance)

CONTRACTOR and area of responsibility:

1. Work Performed Last Week: (Indicate location and description of work performed. Provide planting advance over last week.)

2. Results of Surveillance: (Include satisfactory work completed or deficiencies with action to be taken.)

3. Verbal Instructions Received: (List any instructions given by the ENGINEER, construction deficiencies, retesting required, etc., with action to be taken.)

5. Remarks: (Cover delays and any conflicts in plans, specifications or instructions.)

6. Equipment Data: (Indicate items of construction equipment other than hand tools at job site and whether or not used and if operable.)

7. Progress Summary:

	Last Week	To Date
Days		
Downtime Days (Explain Below)		
Plants Placed (Estimated No.)		
Square Foot Planted (s.f.) accepted sections only)		
Linear % Completed		
Area % 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 plans and specifications except as noted above.

CONTRACTOR's Approved Authorized Representative