

WORK ORDER NUMBER 2018007-2

SECTOR 7 (PORPOISE POINT) BEACH AND DUNE RESTORATION PROJECT

PRE-CONSTRUCTION AND BIDDING SERVICES

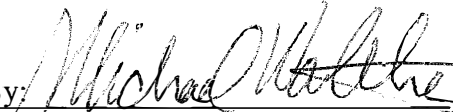
This Work Order Number 2018007-2 is entered into as of this ____ day of _____, 2019 pursuant to that certain Contract Agreement relating to Engineering and Biological support services for Sector 7 (Porpoise Point) Beach and Dune Renourishment Project entered into as January 9, 2018 ("Agreement"), between Indian River County, a political subdivision of the State of Florida ("COUNTY") and Coastal Technology Corporation ("CONSULTANT").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit 1, attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit 2, attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit 2, attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.3 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT
Coastal Technology Corporation

BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY

By: 
Michael Walther, P.E., D.CE

By: _____
Bob Solari, Chairman

Title: Vice President

Attest: Jeffrey R. Smith, Clerk of Court and
Comptroller

Date: 1/15/2019

By: _____
(Seal) Deputy Clerk

Approved:

By: _____
Jason E. Brown, County Administrator

Approved as to form and legal sufficiency:

By: _____
William K. DeBaal, Deputy County Attorney

Exhibit 1

Introduction: The “*Indian River County Beach Preservation Plan Update*” (*Plan*, dated February 2015) recommends re-nourishment of beaches within Sector 7, which extends from Florida Department of Environmental Protection (FDEP) reference monuments R-97 to R-108 (*Project*). The *Project* extends approximately 2.2 miles; a majority of the *Project* area is designated by FDEP as critically eroded. Sector 7 was damaged by Hurricane Matthew in 2016 and Hurricane Irma in 2017; beach re-nourishment is warranted. Construction and re-nourishment of the *Project* area is anticipated between November 2019 and May 2020 or November 2020 and May 2021 - outside the sea turtle nesting season. The COUNTY previously authorized Work Order Number 2018007-1 for design and permitting of the *Project*. This Work Order addresses pre-construction services including:

- pre-construction monitoring services as expected to be required by the FDEP permit; and
- assistance to the COUNTY in soliciting bids and award of a construction contract.

The following describes the specific scope of work under this *Work Order*:

Task 1 – Pre-Construction Services

Task 1a - Permit Compliance: Upon issuance of the FDEP and USACE permits, CONSULTANT will, prepare a summary of FDEP and USACE permit conditions (henceforth referred to as “Permit Tracker”) in the form of an MS EXCEL file identifying each permit condition, the due date, the responsible entity (COUNTY, CONTRACTOR, CONSULTANT, or others), with a slot to identify the date that compliance with the condition was completed. CONSULTANT will prepare the Permit Tracker and the COUNTY will update and maintain the Permit Tracker.

Task 1b - Construction Easements: CONSULTANT will assist the COUNTY in obtaining construction easements from the upland property owners. Specifically under this Task:

- CONSULTANT will compile a list of property owners within the *Project* area; based upon data available from the COUNTY’s Property Appraiser’s office. Prepare an excel file for the COUNTY to track the easement mailings sent to the property owners and easements received by the COUNTY. The COUNTY shall verify the property owners via title search or via other means as may be deemed appropriate by the COUNTY. The COUNTY will provide the easements, sketches and legal descriptions depicting proposed easements at each individual property in the *Project* area. The COUNTY will provide a letter to be sent to each property owner via mail to request execution of the easements; CONSULTANT will review and edit the letter as may be appropriate. The COUNTY will provide the legal description, and sketch in support of the easement.
- The CONSULTANT will mail the letter to each property owner with a copy of the construction easement - after COUNTY acceptance of the letter, and a pre-addressed return envelope with postage included. The COUNTY will track and identify the executed easements received by the COUNTY.
- The CONSULTANT will mail another letter to the property owners that the COUNTY identifies as not providing a construction easement with a pre-addressed return envelope with postage included. This task assumes 70% of the property owners do not respond to the first mailings.
- As may be requested by the COUNTY, contact the remaining property owners identified by the COUNTY via telephone calls or in-person visits with the COUNTY and/or oceanfront property owner – within the budget limits for this task.

Task 1c – Update Construction Quantities & Permit Sketches: CONSULTANT will (a) analyze pre-construction surveys to be collected by the COUNTY in February 2019, (b) assess the estimated volume required for construction, update the Permit Sketches and (c) update the probable cost of construction.

Task 1d – Hardbottom Monitoring - Baseline Survey: CONSULTANT will sub-contract with CSA to provide the pre-construction “baseline” biological monitoring of the nearshore hardbottom generally consistent with the biological monitoring plan approved for the initial nourishment of the Sector 7 project, as the minimum amount of biological hardbottom monitoring expected to be required by the FDEP and USACE permits. FDEP and USACE Permits and biological monitoring plans corresponding to more recent projects have included additional transects and other biological monitoring requirements. The FDEP or USACE could require additional monitoring which may be authorized under Task 1e below.

Nearshore Hardbottom Monitoring

Hardbottom Edge Mapping: CSA will map the position of the nearshore edge of the hardbottom from FDEP monuments R-98 to R-110 using divers with GPS buoy for comparison with the extent of hardbottom delineated from the photography.

Biological Transect Monitoring: CSA will monitor twelve (12) cross-shore permanent hardbottom transects beginning at the 2008 nearshore hardbottom edge and located directly offshore of FDEP Monuments R-99, R-99.6, R-100.4, R-101.7, R-102.9, R-103.5, R-104.1, R-105.8, R-107.3, R-109.2, R-113, and R-115. All twelve (12) of the transects are biological monitoring transects to be performed up to 50 meters in length. A marine biologist will collect qualitative video documentation of the seafloor and associated biota along each of the 12 transect lines. Sand depth measurements will be collected at 1 meter intervals along all 12 transects using a marked steel ruler; physical transitions between sand and hardbottom will be recorded as line intercepts.

Aerial Interpretation of Hardbottom Extent: The COUNTY will provide geo-referenced aerial photography consistent with the Environmental Aerial Photography Monitoring Standards identified in the FDEP document titled “Monitoring Standards for Beach Erosion Control Projects” dated May 2014 edited October 2014; the photography will extend from the vegetation line to a minimum of about 3,000 feet seaward of the shoreline. CSA will employ this photography to delineate the extent of nearshore hardbottom within the *Project* area. The delineation will be performed using GIS software and verified in the field by CSA divers who will perform representative bounce dives within the *Project* area.

Data Analysis and Reporting: CSA shall prepare a Summary Report of Task 1d and 1e results (permanent transects, quadrats, hardbottom edge mapping) and analyses in both hard copy and digital format. The report shall include appropriate graphics/tables, statistical analysis of the collected data, with the following data on DVD or external hard drive:

- a) all digital video and photographs from all transects;
- b) Excel spreadsheets of in-situ quadrat data;
- c) Spatial GIS shapefiles of transects and hardbottom edge mapping; and
- d) Scans of field data sheets and field logbook.

CONSULTANT will review the draft report and provide comments if necessary for permit compliance and ultimately submit CSA's final report to FDEP and USACE.

Task 1e*– If Required, Additional Hardbottom Monitoring – If the FDEP or USACE require additional biological monitoring than outlined in Task 1d, CONSULTANT can provide additional monitoring as described in this task. This task provides up to (i) six (6) additional biological transects to be installed and monitored generally consistent with Task 1d and (ii) extension of up to all 18 transects from 50 meters in length up to 150 meters in length.

Task 2 – Bidding Phase Services

In general, CONSULTANT will assist the COUNTY with solicitation of bids and support construction of the *Project* via use of the offshore sand source or via an upland sand source.

Task 2a – Bidding Phase: Prior to receipt of bids, during the bidding phase, CONSULTANT will:

- (1) address questions from prospective bidders as directed by the COUNTY,
- (2) attend a pre-bid meeting to clarify the proposed construction and address questions posed by prospective bidders, and
- (3) draft addendum to the *Bid Documents* – as requested by the COUNTY.

Upon receipt of bids, the COUNTY will verify that each bid entails a valid bid including the COUNTY's insurance/bond requirements for the work. For the valid bids identified by the COUNTY, CONSULTANT will:

- (1) calculate the mean grain size, median grain size, sorting, and expected overfill factor of any bidder-proposed upland sand sources for comparison with the offshore sand source,
- (2) assess and review the bids to prepare a summary-draft-ranking of the bids,
- (3) meet with the COUNTY to review the results and confirm the recommended ranking of bids, and
- (4) make a recommendation to the COUNTY for Construction Contract award and assist the COUNTY with negotiation of a Construction Contract.

Indian River County Sector 7 Beach and Dune Restoration Project

Work Order Number 2018007-2

Exhibit 2

Estimated Fees and Schedule

January 11, 2019

Notice to Proceed						
January 30, 2019						
Start	Finish	Days	Task Description	Coastal Tech	CSA	Team
30-Jan-19	31-Oct-19	274	Task 1 - Pre-Construction Services			
1-Aug-19	29-Aug-19	28	Task 1a - Permit Compliance	\$3,825	\$0	\$3,825
1-Mar-19	28-Aug-19	180	Task 1b - Construction Easements	\$16,853	\$0	\$16,853
1-Feb-19	2-Apr-19	60	Task 1c - Update Construction Quantities:	\$9,860	\$0	\$9,860
1-Mar-19	31-Oct-19	244	Task 1d - Hardbottom Monitoring - Base Survey	\$16,266	\$188,122	\$204,388
1-Mar-19	31-Oct-19	244	Task 1e* - If Required, Additional Hardbottom Monitoring	\$4,224	\$54,687	\$58,911
1-Jun-19	31-Jul-19	60	Task 2 - Bidding			
1-Jun-19	31-Jul-19	60	Task 2a - Bidding & Contract Award	\$26,715	\$0	\$26,715
Total:				\$77,743	\$242,809	\$320,552

*Optional Task will be performed if additional monitoring is required by FDEP or USACE.