TASK ORDER APPROVAL FORM

CONTRACT #: C18-2636-TDD

TASK ORDER #: 13

TASK ORDER AMOUNT: $63,950

CONTRACT: C18-2636-TDD
TAYLOR ENGINEERING, INC.
ENGINEERING & ARCHITECTURAL
CONSTULTING SERVICES
EXPIRES:10/03/2022

OFFERED BY CONSULTANT:

Taylor Engineering, Inc
FIRM'S NAME

Christopher Bender, Ph.D., P.E. ,D.CE
REPRESENTATIVE'S PRINTED NAME

Christoph. J Bende
SIGNATURE

Vice President, Coastal Engineering — March 25, 2022
TITLE — DATE

RECOMMENDED FOR APPROVAL
(Department Director)

Charlotte Dunworth Digitally signed by Charlotte Dunworth Date: 2022.04.12 14:18:36 -05'00'

Jennifer Adams Digitally signed by Jennifer Adams Date: 2022.04.12 14:48:01 -05'00'
SIGNATURE

TDD Director
TITLE

DATE

John Hofstad Digitally signed by John Hofstad Date: 2022.04.14 10:19:48 -05'00'
COUNTY ADMINISTRATOR (if applicable)

DATE

APPROVED BY OKALOOSA COUNTY
(Per Purchasing Manual) Table 1

Jeffrey A Hyde Digitally signed by Jeffrey A Hyde Date: 2022.04.14 08:41:48 -05'00'
PURCHASING MANAGER

DATE

Faye Douglas Digitally signed by Faye Douglas Date: 2022.04.14 09:39:24 -05'00'
OMB DIRECTOR/DATE

DATE

CHAIRMAN (if applicable)

DATE

Revised January 21, 2020

2022 PRE-STORM BEACH MONITORING
OKALOOSA COUNTY, FLORIDA

SCOPE OF SERVICES

Introduction

Okaloosa County's coastal management program relies on formal documentation of the beach condition, project performance, and erosional trends to assess severity of storm impacts and the necessity of future nourishments. Pro-active "pre-storm monitoring" provides an assessment of the existing beach conditions which can provide pre-storm beach conditions that may bolster the potential for disaster recovery assistance or FEMA reimbursement when pre-storm conditions are compared to post-storm conditions.

Taylor Engineering has prepared this Scope of Services to collect the topographic and bathymetric profile data, perform the physical monitoring data processing, data analysis, and reporting for the Western Destin Beach Restoration Project and East Destin monitoring areas.

– SCOPE OF SERVICES –

Task 1. Collect Topographic and Bathymetric Profile Surveys

Taylor Engineering will collect topographic and bathymetric profile surveys of the beach and offshore area to document the summer 2022 beach conditions at all monuments included in the Western Destin Beach Restoration physical monitoring plan and at each monument east of the project to the eastern County line (R-31 – R-50) that generally coincide with the previous Walton/Destin Beach Restoration Project (East Destin). The Western Destin Beach Monitoring area includes profiles at each FDEP reference monument from R-17 to R-30 and additional half-monument surveys near the terminus of the two reaches (i.e., R-20.5, R-23.5, and R-25.5) and between R-24 an R-25 (R-24.5) for a total of 18 profiles. The East Destin monitoring area includes profiles at all monuments between R-31 and R-50 for a total of 20 profiles. In total, the monitoring areas include 38 profiles. The surveying activities and deliverables will conform to the May 2014 Bureau of Beaches and Coastal Systems (BBCS) Monitoring Standards for Beach Erosion Control Projects, Sections 01000 and 01100.

Total Cost Task 1: $26,250.00

Task 2. Western Destin Data Analysis and Reporting

For the Western Destin area, Taylor Engineering will perform beach profile-based analyses in concurrence with Specific Condition 33 and 34 of FDEP Permit No. 0286575-001-JC, the FDEP-approved physical monitoring plan, and the May 2014 BBCS Monitoring Standards for Beach Erosion Control Projects. Specifically, we will determine beach shoreline and volume changes (within the two project reaches, the gap area, and eastern control area) for the following comparison periods: Pre-Construction to 2022 Pre-Storm (Jan. 2013 – June 2022), Post-Construction to 2022 Pre-Storm (Mar. 2013 – June 2022), and 2021 Post-Storm to 2022 Pre-Storm (Oct/Nov. 2020 – June 2022). These comparison periods will

reveal beach changes and project performance since project construction as well as the project evolution following Hurricane Sally in 2020 that will reveal recent changes likely attributable to post-Hurricane Sally beach evolution.

As with previous Western Destin Beach Restoration monitoring efforts, we will convert the data to range/elevation profiles, calculate volume and mean high water position changes, and tabulate these results for analysis. Specifically, we will analyze volume changes within five vertical compartments along each profile — dune to MHW (+0.77 ft-NAVD88), MHW to MLW (-0.47 ft-NAVD88), MLW to -20 ft-NAVD88, -20 ft to -30 ft-NAVD88, and -30 ft to -50 ft-NAVD88. We will then prepare a monitoring report, which will summarize and discuss the survey data, document results of the volume and shoreline change analyses, discuss the changes since the surveys obtained following Hurricane Sally. The report will also include beach monitoring and management recommendations. Report appendices will include plots of survey profiles, graphical representations of volumetric and shoreline position changes, and photographs of the monitoring area. We will submit electronic copies of the survey data and report to Okaloosa County.

Total Cost Task 2: $22,700.00

Task 3. Eastern Destin Data Analysis and Reporting

For the Eastern Destin area, Taylor Engineering will perform beach profile-based analyses in concurrence FDEP Permit No. 0218419-001-JC, the FDEP-approved physical monitoring plan, and the May 2014 BBCS Monitoring Standards for Beach Erosion Control Projects. Specifically, we will determine beach shoreline and volume changes for the following comparison periods: Pre-Construction to 2022 Pre-Storm (Jun. 2005 – June 2022), Post-Construction to 2022 Pre-Storm (Jun. 2007 – June 2022), and the 2020 Post-Storm to 2022 Pre-Storm period (Oct./Nov. 2020 – June 2022). These comparison periods will reveal historical beach changes and project performance since project construction as well as the project evolution following Hurricane Sally in 2020 that will reveal recent changes likely attributable to post-Hurricane Sally beach evolution.

As with previous Walton/Destin Beach Restoration project monitoring efforts, we will convert the data to range/elevation profiles, calculate volume and mean high water position changes, and tabulate these results for analysis. Specifically, we will analyze volume changes within four vertical compartments along each profile — dune to MHW (+0.65 ft-NAVD88), MHW to MLW (-0.62 ft-NAVD88), MLW to -20 ft-NAVD88, and -20 to -30 ft-NAVD88. We will then prepare a monitoring report, which will summarize and discuss the survey data, document results of the volume and shoreline change analyses, discuss the changes brought about by project construction the any beach changes after Hurricane Sally. The report will also include beach monitoring and management recommendations. Report appendices will include plots of survey profiles, graphical representations of volumetric and shoreline position changes, and photographs of the monitoring area. We will submit electronic copies of the survey data and report to Okaloosa County.

Total Cost Task 3: $15,000.00

– END SCOPE OF SERVICES –

Taylor Engineering will perform the above-described scope of services for a fixed fee cost of $63,950.00.

Christoph. J Bende

March 25, 2022

Signature

Date

Christopher Bender, Ph.D., P.E., D.CE Vice President

Printed Name, Title