

## RFQ 2016-014 ADDITIONAL SERVICES

### SPECIFIC AUTHORIZATION

#### No. 4

Pursuant to the provisions contained in the "Agreement for Professional Engineering Services" between the City of Fort Pierce (hereinafter referred to as "CITY") and Tetra Tech Inc. (Hereinafter referred to as "ENGINEER") dated Nov. 8, 2016 day of, authorizes the ENGINEER to provide services under the terms and conditions set forth herein and in the AGREEMENT, which is incorporated herein by reference as though set forth in full.

The CITY desires engineering additional services related to, hereinafter referred to as the "Project".

This Project is \_\_\_ is not **X** an FDOT funded project.

#### **Section 1 - Scope of Work**

The scope of work (SOW) described herein was prepared in response to your request for dredge design and permitting of material in the Intracoastal Water Way (herein after "IWW") SL-5 Reach within the dredge limits of the federal navigation channel in St Lucie County.

#### **BACKGROUND AND PROJECT UNDERSTANDING**

The IWW is a federal navigation project maintained by the US Army Corps of Engineers (USACE). Maintenance dredging was conducted in 2017 by FIND. Since the maintenance dredging, additional material has entered the IWW and created a shoal impeding navigation. It is our current understanding that the City would like to dredge this material from the IWW and dispose of the material.

As requested by the City, the tasks as indicated below will be performed on a Time & Materials (T&M) basis.

#### **TASK 1. PROJECT PLANNING AND ADMINISTRATION**

This task includes project administration, progress reporting, project scheduling and project meetings.

Progress status reports will be prepared on a monthly basis and submitted on or about the 25<sup>th</sup> of each month. These reports will include tasks completed, work to be performed in the next reporting period, schedule, required actions, potential efficiencies, delays or impediments to progress.

This SOW assumes the preparation, attendance, and participation of up to two (2) Project Team meetings via phone or web conference.

#### **TASK 2. FIELD SURVEYS AND RESOURCE INVESTIGATIONS**

Field surveys and resource evaluations are required to provide technical support to the regulatory permit application for the proposed turning basin expansion.

##### **2.1 Bathymetric Survey**

It is our assumption that this will be provided as part our annual monitoring efforts and hence no cost is required under this task order.

Task Deliverables:

- Hard copy of the survey, signed and sealed
- Survey technical memo outlining the survey procedures and details
- AutoCAD Civil 3D file of the survey

## **2.2 Topographic Survey of the Beach Disposal Area**

A survey will be needed of the beach disposal area in order to create a final profile of the proposed placement of fill.

Task Deliverables:

- Hard copy of the survey, signed and sealed
- Survey technical memo outlining the survey procedures and details
- AutoCAD Civil 3D file of the survey

## **2.3 Sediment Sampling and Physical Testing**

Permitting and placement of the material on the beach will require sampling for consistency with state standards for grain size, color and percent organics. Hence, representative samples will be collected from the dredge area and the beach. The samples will need to be representative of the full depth of the dredge prism which will be to a depth of -8 feet Mean Lower Low Water (MLLW) plus 1 foot of allowable over depth dredging. Given that the thickness of the sand within the dredge prism may be up to 10 feet thick, vibracore sampling will be required. We anticipate that two cores will be sufficient to characterize the dredged material in the IWW.

The core samples will be logged and sealed at the site and sent to a geotechnical laboratory for testing. Laboratory work will consist of opening the cores and visually classifying the sediments in all layers that may be present. If the sediment sample is primarily sand, the full core sample volume will be mixed, and a subsample will be removed for sediment grain size testing using standard sieve analysis methods.

Task Deliverables:

- Hard copy of the geotechnical report
- Electronic copy of the geotechnical report

## **2.4 Magnetometer Survey and Cultural Resource Assessment**

Since the IWW was dredged in 2017, coordination with SHPO (State Historic Preservation Office) will be necessary as part of the permitting process but we do not expect to perform any field work for cultural resources.

## **2.5 Seagrass Survey**

This will be accomplished under the Eco-Monitoring contract already in place for the Island Breakwaters.

## **TASK 3. DESIGN AND ENGINEERING**

The design of the proposed dredging and placement is based upon the following assumptions:

- The IWW will be dredged to the current design depth of the existing federal navigation channel which is -8 feet MLLW plus 1 foot over depth dredging limit;

- A single dredging area footprint will be considered. Alternatives consisting of varied sizes, depths and configurations are not included as part of the proposed design;
- The sands in the dredge prism are clean, beach quality sands so that no special provisions need be included in the design to receive, dewater, treat and ultimately dispose of any contaminated sediments;
- The dredged material will be placed on the beach south of the Fort Pierce inlet;
- The USACE maintenance dredging project specifications will sufficiently define the requirements for dredging work and they can be used (as developed) as the technical specifications.

### **3.1 Design Drawings outside of existing Marked Channel**

We will prepare if necessary any drawing of the dredge foot print inside the Right of Way (ROW) but outside of the existing marked channel.

Task Deliverables:

- Electronic copy of the dredge design criteria document

### **3.2 Dredging Plans and Specifications**

Tetra Tech will review the USACE proposed dredging design and overlay it with the bathymetry survey in order to establish dredge foot print and volumes to create a dredge plan. For disposal on the beach, we are assuming that the location of any nearshore reefs or special aquatic resources are publicly available and will not require any marine studies or surveys.

The dredge plan will show the configuration, side slopes and dredge prism depth of the of the IWW. The construction document package for the expanded turning basin will consist of the following elements:

- Cover/project location sheet;
- General notes, legends, and abbreviations sheet;
- Dredging plan sheet(s);
- Dredging section sheet(s);
- Detail sheet;
- Dredging technical specifications (USACE specifications).

The package will be prepared to the 30% level of design and will be submitted to the City for review and comment. Tetra Tech will revise the plans as appropriate and submit a 100% level of design package for review and comment by the City. Tetra Tech will address the 100% review comments and produce a final package for use in bidding of the project.

Task Deliverables:

- Draft 30% design development plans and outline specifications and design report;
- Draft 100% design development plans, technical specifications, and design report that will address the City's comments on the 30% documents and advance the level of design to the 100% level;
- Final construction documents consisting of the final plans and specifications.

## **TASK 4. REGULATORY COORDINATION AND PERMITTING**

### **4.1 Pre-application Meeting and Preparation and Submittal of Permit Applications**

This SOW assumes the participation of Tetra Tech's Project Engineer and Senior Scientist/Permitting Specialist in a Pre-Application webinar with the USACE, State Regulatory

review agencies, and/or stakeholder meetings, and one additional agency meeting as requested by the City. We anticipate that the City will utilize the Florida Inland Navigation District's General Permit issued by the USACE. We expect to process maintenance dredging permits with no need for any mitigation. A Coastal permit will also be required by FDEP for disposal of the dredge material on the beach. As part of this process, we will prepare up to 2 Request for additional information (RAIs) in response to agencies request for additional information.

Permit application fees are not included in this SOW.

Task Deliverables:

- Electronic versions of permit applications.

Assumptions: This task assumes that no additional National Environmental Policy Act (NEPA) documentation will be required for processing the Federal or State Authorization. No additional biological studies or assessments will be required or necessary to satisfy coordination with USACE and its federal partners as part of permitting process. Pricing includes:

### **Section 2 Deliverables:**

30 Percent Designs  
100 Percent Designs  
Final Designs  
Signed sealed survey of beach  
Completed Permit Application for Beach Disposal Site

### **Section 3 - Time of Performance**

Execution of this AGREEMENT shall constitute Notice to Proceed (NTP). ENGINEER and CITY agree to the following schedule:

We will prepare a schedule of activities within 7 days of NTP. Pre-application and stake holder meetings would occur within 10 days of NTP. It is expected that we would begin field data collection with 3 weeks of the NTP.

### **Section 4 - Method and Amount of Compensation**

4.1 CITY will compensate ENGINEER for services under this AGREEMENT in accordance with the payment method as set forth in Section 6 of the AGREEMENT.

4.2 The budget (or fee) for the required services is prorated as follows:

Task 1- Project Planning, Administration and Management - \$9,489  
Task 2- Field Data collection (Survey and Sediment Coring)- \$24,693  
Task 3- Design and Engineering - \$48,753  
Task 4-Permitting \$37,334

**Section 5 - CITY's Responsibilities**

CITY hereby designates City Engineer or designee as CITY's representative pursuant to Section 5 of the AGREEMENT.

**Section 6 - Other Provisions**

All applicable portions of the AGREEMENT not specifically modified herein shall remain in full force and effect and are incorporated by reference.

**IN WITNESS WHEREOF**, this AGREEMENT, consisting of three \_\_\_\_\_ pages, has been fully executed on behalf of the ENGINEER by its duly authorized officer, and the CITY has the same to be duly executed in its name and in its behalf, effective as of the date herein above written.

APPROVED AS TO FORM

By: \_\_\_\_\_

By: \_\_\_\_\_  
City Attorney

**THE CITY OF FORT PIERCE**

By: \_\_\_\_\_

Linda Hudson, Mayor

Date: \_\_\_\_\_

**ENGINEER:**

By:  \_\_\_\_\_  
Brian Proctor

Title: Vice President

Date: July 17, 2019