



THE CITY OF KEY WEST

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MEMORANDUM

TO: Jim Scholl, City Manager

CC: Greg Veliz, Assistant City Manager - Operations
Sarah Spurlock, Assistant City Manager - Admin

FROM: John Paul Castro, Utilities Director

DATE: October 22, 2015

SUBJECT: Requesting Approval of Task Order 4-15 SWR from CH2M Hill Engineers, Inc. for Construction Phase Services for VFD Upgrades to Wastewater Pump Stations A, B, C, D, and DA

Action Statement:

This resolution will approve task order 4-15 SWR from CH2M Hill for construction engineering and inspections services for the VFD upgrade project at pump stations A, B, C, D, and DA pursuant to general services contract 15-208, in an amount not to exceed \$178,892.00

Background:

Due to improvements over the past 15 years in the wastewater infrastructure the volume of flow to the treatment plant has been dramatically decreased. Infiltration and inflow (I&I) has been reduced to almost zero.

The pumps within the system get much lower pressures during normal times and seasons. There is still an inflow of rain water from open clean out's, etc. and high volume seasons that require the pump stations have the ability to move increased flow.

The pumps require a large range curve of operation, more so than single frequency, thus the Variable Frequency Drive (VFD) project at the City's five highest volume pump stations. The project includes new electronic drives for the pump systems that include new structures, breaker panels, connectivity to the SCADA radio system at the WWTP from new antennas, etc.

The electrical system is very specific and require specialized components and engineering.

Purpose and Justification:

CH2M Hill engineered and designed the VFD upgrade project for pump station F that is currently under construction and the five pump stations that make up the VFD upgrade project for stations A, B, C, D, and DA.

The standard building inspections pertain to electric and plumbing code, structural members and are not component specific.

Construction phase services from CH2M Hill are specific to the technical aspects of the project. Engineers review submittals for material specifications pertaining to corrosion resistance, electrical phases, concrete strengths, SCADA radio set-up etc. These elements are crucial to sophisticated electrical systems and those that are systems required to keep wastewater flows running.

Electrical engineers will also test the VFD's and pump stations after construction for flow rates, SCADA telemetry, generator systems, etc.

City staff has reviewed the task order and believe the proposed scope is appropriate to cover the efforts necessary for the construction phase services of this project. The rates are in accordance with resolution 15-208 plus increases agreed upon September 5, 2014 (attached).

Financial Impact:

Funds for the construction phase services will come from account 401-3503-535-6500 which will have a balance of \$233,297.60 after encumbrances for construction.

Options:

1. The City Commission approve the task order from CH2M Hill for construction phase services for the VFD upgrade project in the amount of \$178,892.00
2. The City Commission could elect to not award the contract leaving staff to inspect materials and electrical systems. City staff does not recommend this option as the in house labor and expertise does not exist to review submittals of this technicality or scope.

Recommendation:

City staff recommends option 1, approving task order 4-15 SWR from CH2M Hill for construction phase services for the VFD upgrade project due to the technical specifications of the project.