



THE CITY OF KEY WEST

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MEMORANDUM

TO: Jim Scholl, City Manager
Cc: Greg Veliz, Asst. City Manager
FROM: John Paul Castro, Utilities Director
DATE: December 29, 2016

SUBJECT: Approving Task Order 2-17 SWR from CH2M Hill Engineers, Inc. for Design, Permitting, and Bid Phase Services for Effluent Pump FP-3-1 Control and VFD Replacement in the amount of \$56,356.00

Action statement:

Staff requests approval of Task Order 2-17 SWR from CH2M Hill Engineers, Inc. to design, permit, and assist in bid phase services for the effluent pump FP-3-1 control and VFD replacement in the amount of \$56,356.00 pursuant to resolution 15-208.

Background:

The FP-3-1 Programmable Logic Computer (PLC) and VFD are both original to the plant effluent deep well injection system which was built in 2001. The PLC is the main brain behind the injection well 500 horsepower pumps and variable frequency drives that control them. These systems are critical to maintaining treatment plant levels and discharging treated wastewater.

Purpose and Justification:

The control systems for the effluent pumps at the wastewater treatment plant are now antiquated. Staff has to control and program the PLC with an old laptop that is kept on hand specifically for running the PLC and resolving any issues that may arise.

The task order is for CH2M Hill Engineers, Inc. to complete the design of the FP-3-1 PLC to run the effluent pumps. The PLC will have to be designed with a new VFD specifically for pumps over 400 h.p.

The task order also includes construction phase services for the installation of the controls and drives. The contractor and CH2M Hill's electrical engineers will be on site for the start-up of the drive. The drives must be programmed into the controls and tested which may require further programming from the engineer.

Key to the Caribbean – Average yearly temperature 77° F.

Financial Impact:

The FP-3-1 Control and VFD project for the WWTP was not budgeted for FY 17. A budget transfer from reserve account 401-0000-389-9006 to capital account 401-3504-535-6300 will be required for the design funds for this task order of \$56,356.

The previous VFD drive that was purchased in 2015 for the WWTP was \$53,706 (estimated \$60k currently). The PLC estimate is \$45,000. The total project estimate is \$225,000. The project funds for purchase and install will be transferred from reserves after the bids have been received and are brought back for approval.

Recommendation:

Staff recommends approving task order 2-17 SWR from CH2M Hill Engineers, Inc. for design, permitting, and bid phase services for Effluent Pump FP-3-1 Control and VFD Replacement in the amount of \$56,356.00