



THE CITY OF KEY WEST

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EXECUTIVE SUMMARY

Date: February 12, 2019
To: Jim Scholl, City Manager
From: John Paul Castro, Director of Utilities
Cc: Greg Veliz, Assistant City Manager

Subject: Approve Task Order No. 3 and 4 from Black and Veatch Engineering for the design, bid and pre-award services for the addition of a third effluent pump and the replacement of the existing sludge conveyor belt at the Richard A. Heyman Environmental Facility.

Action Statement

This Resolution would approve task order no. 3 and 4 from Black and Veatch Engineering pursuant to resolution number 17-207 in the amount of \$38,566.00 and \$127,886 respectively. Task order no. 3 is for the additional design, bid and pre-award services for a third effluent pump, VFD and the evaluation of an improved HVAC system within the pump VFD room at the Richard A. Heyman Environmental Protection Facility, and task order no. 4 is to design the replacement of the existing sludge conveyor belt, VFD and scale.

Background

The City of Key West (CITY) contracted with Jacobs Engineering (previously CH2M Engineering) to conduct an Energy Efficiency Master Plan for the City's wastewater treatment plant. The City is currently contracted with Black and Veatch (B&V) for the evaluation, design, bid and pre-bid services for the improvement of the treatment plant's blower and air delivery system. In a continued effort to reduce energy costs, the City has decided to begin implementation of energy efficiency improvements included in Jacobs' Energy Efficiency Master Plan. The City is proposing to add these energy saving items to the Aeration Blower project bid that B&V is in the process of finalizing.

Purpose and Justification

Task Order no. 3 is to replace the existing sludge conveyor belt in the treatment plant's solids building which has reached the end of its useful life (original to the plant, 1989). The City is proposing that B&V add the design of the belt replacement, with a new VFD and scale to the Aeration Blower design project.

MEMORANDUM

Task Order no. 4 is the addition of a third effluent pump and VFD to the deep well injection system. The City currently has two 500 hp deep well injection pumps with the space for a future third pump. Based on an assessment by Jacobs, the City would like B&V to design a smaller pump that will handle 80-90% of average flows to save energy. The proposed pump will only need to be 2~00 horsepower, will work at a more efficient point on the power curve and provide redundancy during repairs and maintenance. This addition is expected to reduce effluent pumping energy consumption by 21%.

The rates from B&V are pursuant to the contract from resolution 17-207 for general engineering services. Staff has reviewed the level of effort and labor mix and believes it is acceptable for both projects.

Combing the three projects streamlines bidding and reduces construction cost and duration by awarding all the projects to one contractor saving the City considerable money.

Financial

Third Effluent Pump Task Order no. 4 design phase was budgeted for \$200,000 in FY19 in account Sewer/Treatment Plant/CIP 401-3504-535-6500. Sludge Conveyor Replacement Task Order no. 3 was budgeted for \$500,000 in FY19 in account Sewer/Treatment Plant/CIP 401-3504-535-6500.

Recommendation

Approve task order no. 3 in the amount of \$38,566.00 and task order no. 4 in the amount of \$127,886.00 from Black and Veatch Engineering pursuant to general engineering services contract, resolution 17-207, for the addition of a third effluent pump with VFD, and evaluation of an improved HVAC system within the pump VFD room and the replacement of the existing sludge conveyor belt, VFD and scale.