



## THE CITY OF KEY WEST

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### EXECUTIVE SUMMARY

**Date:** April 26, 2018

**To:** Jim Scholl, City Manager

**From:** John Paul Castro, Director of Utilities

**Cc:** Greg Veliz, Assistant City Manager

**Subject:** Approve Task Order No. 1 from Black and Veatch Engineering for the evaluation, design, bid and pre-award services of an additional aeration blower system to the Richard A. Heyman Environmental Protection Facility in the amount of \$190,887.

#### **Action Statement**

This Resolution would approve task order no. 1 from Black and Veatch Engineering in the amount of \$190,887.00 pursuant to resolution number 17-207 for the evaluation, design, bid and pre-award services for an additional blower and air delivery system to the waste water treatment facility.

#### **Background**

The City of Key West (CITY) has decided to improve their existing aeration system at the Richard A. Heyman Environmental Protection Facility (RAHEPF). The existing aeration system comprises of two multistage centrifugal blowers with associated mechanical piping, electrical and instrumentation and controls components. The City desires to increase air control, energy efficiency and redundancy at the facility with the addition of a new blower. The existing layout was designed with space and piping connections for the addition of a third blower unit in the future.

#### **Purpose and Justification**

The purpose of the task order is to allow the consultant to provide an evaluation for the selection of a blower technology that provides the most economical solution for the City assessing both capital and maintenance costs. The evaluation will also include a review of the existing process control and will provide recommendations targeted to continue to comply with the required treated effluent limits, while incorporating energy savings. It is anticipated that energy savings can be obtained by optimizing process control and by utilizing newer blower technology inherently more efficient. Once the City reviews and approves the recommendations (blower

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type selection and process control strategy) from the initial evaluation phase; the blower technology and improved process control upgrades will be incorporated into the detailed design phase.

During the detailed design phase, the consultant will develop construction documents for bidding that includes the addition of a new blower including piping, electrical, and instrumentation and controls modifications to the existing blower system.

Task 1 of the project will involve a site visit to review existing conditions to determine blower performance at different load levels, collect aeration system process performance information and blower power demand. The consultant will then perform an evaluation to select the blower and aeration system type that will be most appropriate for the application that result in the most energy savings to the City.

Task 2 of the project involves project coordination and design services. The consultant will prepare project management documents, monitor the schedule and budget, and review progress with the City. They will provide preliminary design plans for the City to review and then provide detailed design and construction documents.

Task 3 involves bid and pre-award services. The consultant will conduct a pre-bid conference, assist in interpretation of the bid documents, and assist the City during bid opening. They will provide bid construction contract documents and distribute construction contract documents.

### **Financial**

Funding will come from account 403-3804-535-6500. \$700,000 was budgeted for project SE35031801. Staff has reviewed the hourly cost breakdown and believes the rate mixture is properly balanced and match the hourly rates set forth within the contract documents.

### **Recommendation**

Approve task order no. 1 from Black and Veatch Engineering for the evaluation, design, bid and pre-award services for an additional aeration blower system at the Richard A. Heyman Protection Facility.