



THE CITY OF KEY WEST

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MEMORANDUM

EXECUTIVE SUMMARY

TO: Bogdan Vitas, City Manager
E. David Fernandez, Assistant City Manager - Operations

FROM: Jay Gewin, Utilities Manager

DATE: November 5, 2013

SUBJECT: **Approval of Task Order 5-13-SWR from CH2M Hill for the Bid and Construction Phase Services for Pump Station F Improvements in the Amount of \$139,274**

ACTION STATEMENT:

This request is to approve task order 5-13-SWR for CH2M HILL to provide bid and construction phase services for the City of Key West for the Pump Station F improvements in the amount of \$139,274.

The agreement will be executed pursuant to F.S. 287.055 (CCNA), City Code 2-841, and the City's contract with CH2M Hill approved by Resolution # 12-280.

BACKGROUND:

During hurricanes or extreme rain events, the City's wastewater collection system is susceptible to dramatic flow increases through the sewer pump stations. In areas of lower elevation, there is a chance that there could be sewer overflows in this type of weather event.

In order to alleviate this concern, the City first conducted a hydraulic analysis of the capacity of the sewer collection system and the WWTP. The City then planned and has begun constructing improvements designed to increase capacity of the wastewater collection system.

Our current wastewater collection system routes sewage flow through an extended chain of pump stations stretching from the Airport, all the way around the island, eventually passing through one 30" pipeline to the WWTP. Therefore if flooding, heavy wastewater flow, or severe rains result in an overflow at a sewer pump station at a lower elevation, it can impact the lift

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

stations in the chain behind it, thereby potentially backing up the sewer system throughout the island.

The City therefore has begun construction of these collection system expansion improvements to minimize the chance of any health risk to our residents by reducing the potential for sewer overflow and giving the City better operational flexibility in the operation of our wastewater collection system. This includes projects such as the new force main on 14th St., and the force main on North Roosevelt Boulevard.

PURPOSE & JUSTIFICATION:

When the City constructed the second deep injection well at the WWTP site, it abandoned what had been a 30" outfall pipeline. The goal of this project is to utilize that abandoned pipeline so that the WWTP is able to accept additional flow into the facility.

The added benefit of utilizing the abandoned pipeline is that it will enable flow from the North Roosevelt Force Main and its linked pump stations to pass directly to the WWTP. This flow would no longer have to be pumped through Pump Stations D and DA. This will therefore significantly lessen the chances of one flooded pump station bottleneck negatively impacting the entire City. Many more non-flooded areas under this plan would now have the ability to pump directly into the WWTP without having to pass through a flooded location. This will improve a flooded pump station's ability to process sewage flow since the volume of material from the other pump stations currently pumping into it will be lessened.

As part of this capacity expansion project, the City is constructing a new North Roosevelt Boulevard force main, and has also constructed a new force main on 14th St.

This brings us to the Pump Station F project that is included in this year's approved capital improvement plan. Once the force main work is complete, the City plans on installing new pumps, a generator, and a new control panel for Pump Station F so that it can effectively pump wastewater through the new force mains. The current pumps are not sized sufficiently to do so, and the current generator cannot provide the required power for new upsized pumps. This task order will include the following bid and construction phase work:

a) Bid Phase Services

- Conduct pre-bid meeting
- Prepare addenda as needed
- Reference check of bid respondents
- Review of bids to ensure responsiveness

b) Construction Phase Services

- Coordination of pre-construction and monthly construction meetings
- Review of up to sixty shop drawings/submittals from contractor
- 24 specialty inspections during construction
- 80 hours of technical interpretations of drawings with any needed revisions
- 3 specialty inspections by Senior Design Engineer
- Assistance with project close-out and punch-list items

- On-site start up assistance with two 3-day site visits
- Preparation of final as-built drawings.

The City does not have the staff available with the time and technical expertise required to perform this design work independently. Staff has reviewed this task order and found it consistent with the hourly rates established in the City's contract with CH2M Hill.

Further, City staff does not feel that the hours that will be billed under this task order are disproportionately allotted to higher-wage management staff. In fact, the Principal Project Manager accounts for approximately 7.5% of the hours allotted in this task order.

The task order also includes CH2M Hill staff's trips to Key West over the course of the project. City staff feels that this number of trips, and the associated costs, are reasonable to assure that the consultant staff has sufficient oversight for the completion of the project.

OPTIONS:

1. The City could elect to not increase the sewer system capacity; however, this leaves the city and its residents more vulnerable to potential sewer overflows in the residential areas of the City during extreme rain events and storm surges. EPA has adopted a zero tolerance policy as it relates to sewer spills. Spills relating to high flow conditions could result in fines. Additionally, the City has already constructed the force main on 14th St. at a cost of \$834,955 and is approximately 90% complete with the \$4 million force main on North Roosevelt.
2. The City may elect to increase sewer system capacity utilizing CH2MHill to perform bid and construction phase services for the Pump Station F project through the approval of this task order. Under this option, potential sewer system surcharging due to extreme rain events will be greatly reduced and the City will further protect the residents and near shore water quality.

FINANCIAL IMPACT:

The cost for this task order is not to exceed \$139,274 and is budgeted in account number 401-3503-535-65/SE0901. The City Commission has budgeted a total of \$1,236,000 for the Pump Station F project between FY 2014 and 2015.

RECOMMENDATION:

Staff recommends option # 2, the authorization of Task Order 5-13-SWR from CH2M Hill in the amount of \$139,274. Staff has conducted a thorough analysis of this task order's schedule, scope, and costs. Our research has resulted in a recommendation to accept this task order from CH2M Hill.