



Date: August 16, 2016

To: Thomas J. Bonfield, City Manager

Through: W. Bowman Ferguson, Deputy City Manager

From: Donald F. Greeley, Director, Water Management

Subject: Eno River Outfall and Eno Lift Station Analysis and Upgrade
Contract for Professional Engineering Services – McKim & Creed, Inc.

Executive Summary

This contract is to provide Professional Engineering Consulting Services for the Eno River Outfall and Lift Station Analysis and Upgrade project. The Department of Water Management (DWM) issued a Request for Qualifications (RFQ) for engineering services to evaluate and design improvements to increase the capacity and longevity of a critical large sewer outfall and lift station, which serves much of northern Durham County.

Recent studies and field observations indicate that this pipeline is near capacity and should be replaced with a larger pipe to accommodate future development. Based on the current development interest in this basin, the timing of proposed development requires that improvements be complete within the next three years. To ensure this timeframe is met, final design documents are scheduled to be complete by fall 2017. The Eno Lift Station (LS), which is at the receiving end of the Eno River Outfall, will also be evaluated in order to determine if any upgrades are required. Attachment 1 shows the outfall and lift station.

The project will be performed in two phases: Phase I includes the following:

- Evaluation of the outfall and lift station and pre-design services (route study, geotechnical, survey, subsurface utility engineering);
- Design, permitting, bidding, and construction-related services (CRS) for construction contract #1 of the outfall;
- Design of interim lift station improvements, if needed.
- Preparation of a Preliminary Engineering Report (PER).

It is intended to amend the contract for Phase II services. Phase II would include design, permitting, bidding, and CRS for construction contract #2 of the outfall and long-term lift station improvements, if needed.

Six (6) engineering firms submitted qualifications for this project and City staff selected McKim & Creed, Inc. A contract has been negotiated for the Phase I services for a not-to-exceed sum of \$1,830,000.00 (including contingency). These funds are available in the current Capital Improvement Program (CIP) fund.

Recommendation

The Department of Water Management recommends that the City Council:

1. Authorize the City Manager to execute a contract with McKim & Creed, Inc., for engineering services for the Eno River Outfall and Lift Station Analysis and Upgrade project in the total amount not to exceed \$1,664,632.00; and
2. Establish a contingency fund for the contract of \$165,368.00; and
3. Authorize the City Manager or his designee to negotiate amendments to the contract provided that the total contract cost does not exceed \$1,830,000.00.

Background

The City of Durham provides sanitary sewer service to the entire Eno River sewer shed in Durham County, as well as to limited portions of Orange County. This sewer shed drains to the Eno River Outfall following a portion of the Eno River and a number of its tributaries. Recent hydraulic modeling and development interest in this sewer shed has led DWM to evaluate the capacity the Eno River Outfall and the Eno LS, which pumps the sewage to the City's North Durham Water Reclamation Facility (NDWRF).

Based on modeling results, field observations, and proposed development flows, the City will need to increase the size of approximately 20,000 linear feet of the outfall, starting just northwest of the intersection of Guess Road and Horton Road and terminating at the Eno LS. The project area is shown in Attachment 1.

Due to the timing and location of proposed developments near Roxboro Road, project design and construction will be performed so that the eastern half of the Eno River Outfall (Contract #1) reaches substantial completion (i.e. in service) by December 2018, as well as any necessary, interim modifications to the Eno LS. The Phase I services will include the following:

- Evaluation of the outfall and lift station and pre-design services (route study, geotechnical, survey, subsurface utility engineering);
- Design, permitting, bidding, and construction-related services (CRS) for construction contract #1 of the outfall;
- Design of interim lift station improvements, if needed.
- Preparation of a Preliminary Engineering Report (PER).

It is intended to amend the contract for Phase II services. Phase II would include design, permitting, bidding, and CRS for the western half of the Eno River Outfall (Contract #2) and long-term lift station improvements, if needed. It is intended to reach substantial completion of Phase II construction in mid- to late-2019.

Issues/Analysis

In April 2016, DWM advertized an RFQ for professional engineering consultant firms. Six (6) firms submitted a statement of qualifications (SOQ). Responses were received from the following firms:

CDM Smith
Freese and Nichols
Horvath Associates
McKim & Creed, Inc.

WK Dickson/CECO
Wooten Company/RKK

The selection panel for this project included staff from the EO/EA Department and DWM. The panel selected CDM Smith and McKim and Creed for further interviews. After interviewing each of these two firms, the panel selected McKim and Creed to perform this work. They included qualified personnel on the project team, have extensive experience with lift stations and large gravity line design, and have good knowledge of all components of the project.

Alternatives

Not moving ahead with the project: To continue to use the existing outfall and lift station without any upgrade may result in increased maintenance and emergency responses, reduced functionality of that portion of the sewage conveyance system and increased numbers of Sanitary Sewer Overflows (SSO's). In addition, the outfall is nearing capacity, and abandoning the project will likely necessitate a firm denial of receiving any added flows from developments in northern Durham and the City's service area that extends into Orange County.

Financial Impacts

There are currently funds available in these accounts:

4100P002 – 731004 - P28AR	\$1,664,632.00
4100P002 – 731900 - P28AR	\$165,368.00
<u>Total</u>	<u>\$1,830,000.00</u>

UBE Summary

The Equal Opportunity/Equity Assurance Department reviewed the proposal submitted by McKim & Creed of Raleigh, North Carolina to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. The goals for this project are MUBE 8% and WUBE 6%. It was determined that McKim & Creed is in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

McKim & Creed will subcontract to the following certified firms:

Firm	ID	City/State	Amount	% of Contract
Capstone Civil Engineering	MUBE	Charlotte, NC	\$ 111,412.00	6.69%
Critek Engineering Group, PC	MUBE	Greensboro, NC	\$ 94,498.00	5.68%
Planners for Environmental Quality	MUBE	Fairburn, GA	\$ 87,554.00	5.26%
Cooper & Associates Surveyors, PA	WUBE	Cary, NC	\$ 67,577.00	4.06%
SEPI Engineering	WUBE	Raleigh, NC	\$ 33,000.00	1.98%

The MUBE and WUBE goals were exceeded.

WORKFORCE STATISTICS

Workforce statistics for McKim & Creed are as follows:
(Consolidated)

Total Workforce	355	
Total Females	58	(16%)
Total Males	297	(84%)
Black Males	9	(2.5%)
White Males	268	(75%)
Other Males	20	(6%)
Black Females	4	(1%)
White Females	52	(15%)
Other Females	2	(0.5%)

Attachments

Proposed Project Area Exhibit

EO/EA Compliance Report

Agreement which includes Exhibits A-E, H, J, K, Scope of Services, Fee Table, Exhibit Map