



Agenda Action Form Overview

The Board is requested to award a construction contract to MV Electric, LLC for the construction of the Influent Pump Station Back-Up Power Modification in the amount of \$739,500 and to authorize the County Manager to execute the contract and to authorize the County Manager to execute any related contract amendments, not to exceed a total project budget of \$813,450.

Background/Justification

The Triangle Wastewater Treatment Plant (TWWTP) is designed to treat up to 12 million gallons per day (MGD) of wastewater. All of the wastewater entering the TWWTP for treatment must be pumped into the treatment process through the influent pump station (IPS). The IPS is designed with four 200-hp pumps capable of handling approximately 15 MGD of wastewater each. Additional pumping capacity above and beyond the 12 MGD treatment capacity of the TWWTP is required due to high flow events and as redundancy in the event of a pump failure. Each pump is controlled by a variable frequency drive that controls the motor speed based on wastewater flow into the plant. Additionally, the IPS has a generator that can supply power for several days in the event of power loss from Duke Energy.

The Influent Pump Station Back-Up Power Modification includes two main components: (1) installation of an electrical interconnect between the IPS generator and the bio-solids building generator, and (2) replacement of the VFDs at the IPS.

The electrical interconnect between the IPS generator and the bio-solids building generator will allow the bio-solids generator to run the IPS in the event the IPS generator fails during a power outage. While there is a low probability of the IPS generator and Duke Energy both failing to provide power to the IPS, even a short interruption of power for a few hours could be catastrophic resulting in a potential sewer spill of all wastewater tributary to the TWWTP. Furthermore, the TWWTP National Pollutant Discharge Elimination Permit (NC0026051), Section C.7 states “the permittee is responsible for maintain adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures.” As two independent generators would be available, the electrical interconnect will greatly reduce the probability of the IPS being unpowered for an extended amount of time.

Over the past year, two of the four VFDs have failed due to equipment age. Additionally, spare parts are no longer manufactured for the existing VFDs. Part of the work included in IFB 18-001 Rebid 2, involves the removal of all of the existing IPS VFDs and the installations of new VFDs. Once installed, the new VFDs should operate trouble free for the next ten to fifteen years.

Policy Impact

This action is in accordance with Durham County Strategic Plan Goal 4: “Environmental Stewardship and Community Prosperity,” as this project will ensure reliable operation of the Triangle Wastewater Treatment Plant.

Procurement Background



Type of purchase

- ☐ Goods
- ☐ Services
- ☐ Architect, Engineer or Surveyor Services
- ☒ Construction and Repair

Did this request for purchase go through a bid process? Yes ☒ No ☐

Goods: Bids required if $\geq \$30,000$, BOCC approval if $\geq \$90,000$

Services: Bids required if $\geq \$30,000$, BOCC approval if $> \$40,000$

Construction/Repair work: Bids required if $\geq \$30,000$, BOCC approval if $\geq \$500,000$

If yes, attach a copy of bid tab and the minority and women business enterprise (MWBE) compliance review form provided by the Purchasing Division.

If no, why?

- ☐ Sole source exemption
- ☐ Cooperative purchasing program exemption
- ☐ State and federal contract exemption
- ☐ Contract is an amendment to an existing contract
- ☐ Other (please explain)

If exempted from bidding, has this request been reviewed and approved by the Purchasing Division in the agenda Legistar system? Yes ☐ No ☐

If no, why?

Fiscal Impact

The construction costs associated with the Influent Pump Station Back-Up Power Modification should not exceed \$813,450. The construction costs will be funded from the Enterprise Fund.

Recommendation

The County Manager recommends the Board award a construction contract to MV Electric, LLC for the construction of the Influent Pump Station Back-Up Power Modification in the amount of \$739,500 and to authorize the County Manager to execute any related contract amendments, not to exceed a total project budget of \$813,450.