



MEMORANDUM

To: Mayor and City Council

From: Kent Collins, P.E., Director of Public Works
Jamie Brierton, Capital Program Administrator

Date: August 11, 2020

Reference: Design Contract for Village Parkway Pump Station Improvements and Redundancy

General Information:

- This contract is for detailed design of improvements to the pump station and preliminary design for emergency interconnects with Lewisville, Grapevine and Irving.
- This is the alternative to the second source pump station (Starleaf).
- This will provide redundancy to allow of Village Parkway Pump Station to be taken offline in segments for maintenance.
- This will also provide redundancy in the event the pump station fails.
- Total cost of design contract is \$244,300.00.
- Total estimated construction cost of all improvements is less than \$10 Million. Detailed estimates will be developed as design progresses.

Introduction:

This agenda item is to consider approval to enter into a contract with BGE, Inc, for the design of improvements to the Village Parkway Pump Station to provide redundancy and backup options for our water system.

Analysis:

The City of Coppel is a wholesale water customer of Dallas Water Utilities (DWU). This means we purchase all of our water from Dallas, and it is delivered to us already treated and ready for distribution to our residents and business customers. Our distribution system includes two elevated storage tanks, 200 miles of water main, two ground storage tanks, and the Village Parkway Pump Station. Using these facilities, we purchase and pump more than 3 billion gallons of water annually. The Village Parkway Pump Station has a design capacity of 42 million gallons per day (MGD), however we are currently purchasing no more than 18.5 million gallons per day from DWU.

The Village Parkway Pump Station was constructed in 1990 with four pumps and a single ground storage tank. In 1995 the facility was expanded with two additional pumps and an additional ground storage tank. All the water purchased by the City of Coppell from DWU is delivered to the Village Parkway Pump Station and passes through these two ground storage tanks, then is pumped into our distribution system through this pump station. City staff and contract vendors perform annual preventative maintenance and periodic pump overhaul. However, we are unable to take Village Parkway Pump Station off-line and perform significant maintenance due to the critical nature of the facility. As this station continues to age, there is a need to be able to take the station off-line for longer periods of time for major maintenance and renovation.

In 1999 the city began planning for the construction of an additional pump station and ground storage tank on city-owned land on Starleaf Drive. Preliminary design schematics for the Starleaf project were started in late 2015 through a contract with BGE. This effort included site evaluation, pumping and electrical needs assessment, and related facility evaluation. Based upon this initial effort, BGE developed a preliminary opinion of probable cost of approximately \$16 million. Given this estimate, staff felt that it would be prudent to pause the design and evaluate if other, less costly alternatives exist that would meet the project goals of providing emergency redundancy and allow for Village Parkway to be taken off-line for major renovation.

The City engaged with BGE to assist with the alternative evaluations, which included:

- Evaluating the feasibility of emergency interconnections for treated water with the Cities of Irving, Grapevine and Lewisville, to include facilitation and consultation of meetings, distribution system modeling, and opinions of probable cost for connection facilities.
- Evaluate and make recommendations for redundancy improvements at the existing pump station, including both yard piping and interior pump station gallery piping.
- Evaluate possible redundancy improvements involving the delivery pipelines from DWU and Irving Water Utilities, including potential parallel pipelines.

Based on the alternatives provided, this contract will be for BGE to move forward on the detailed design of the improvements at the Village Parkway Pump Station, preliminary design and coordination for the interconnects with Irving, Lewisville and Grapevine, and preliminary design and coordination with DWU for a potential redundant supply line. The total estimated construction cost for all the improvements including the interconnects and redundant supply line is less than \$10 million. Detailed construction cost estimates will be developed as design progresses.

Legal Review:

The City's standard contract is being utilized which is reviewed by the City Attorney periodically.

Fiscal Impact:

The fiscal impact of this item is \$244,300.00 as provided for in the water/sewer fund, to be reimbursed from 2020 Bond proceeds.

Recommendation:

Public Works recommends approval of the design contract with BGE, Inc.