



MEMORANDUM

To: Mayor and City Council

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

Date: July 26, 2022

Reference: Design Contract Amendment for scope changes to the Water System Redundancy project for Village Parkway Pump Station Improvements

2040: Pillar 0: Sustainable City Government
Goal 3: Well-maintained City Infrastructure

General Information:

- This contract amendment is for finalized detailed designs of permanent improvements to Village Parkway Pump Station.
- This is a continuation of the design to water system redundancy improvements.
- Continuation of this project will provide redundancy to allow of Village Parkway Pump Station to be taken offline in segments for maintenance and repairs.
- This project will also improve flexibility and efficiency in the operation of Village Parkway Pump Station.
- Total original preliminary design contract was \$244,300.00. This amendment is in the amount of \$172,555.00 for a total contract value of \$416,855.00.
- The total estimated cost of the improvements to Village Parkway Pump Station is approximately \$4 Million.

Introduction:

This agenda item is to consider approval of Contract Amendment #1 with BGE, Inc. to finalize the detailed redundancy project design for the Village Parkway Pump Station.

Analysis:

The City of Coppell is a wholesale water customer of Dallas Water Utilities (DWU). This means we purchase all 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, the estimated cost of Starleaf is approximately \$17 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, the city moved forward with a preliminary design contract to start the process in August of 2020, realizing that more detailed design would come as a result of the preliminary findings. The City has sold bonds to cover the cost of all redundancy project efforts. Those preliminary findings led to expanded scope to include significant structural, electrical and geotechnical subconsultant work in addition to completion of the system design by BGE. This amendment to the original contract will be for BGE to move forward on the finalized detailed design of the improvements at the Village Parkway Pump Station. Design contracts for the interconnects

with Grapevine and Lewisville, Interlocal Agreements with both cities, as well as coordination efforts with an Irving/DWU potential redundant supply line will be presented in future meetings.

Legal Review:

Amendment to the city's standard contract is being utilized which was reviewed by the City Attorney.

Fiscal Impact:

The fiscal impact of this item is \$172,555.00 as provided by 2020 Bond proceeds.

Recommendation:

Public Works recommends approval of this item.