

EXECUTIVE BRIEF ELECTRIC UTILITY MEETING

AGENDA DATE: March 30, 2021

TITLE:

Task Order No. 7 with E.C. Fennell, PA, to complete engineering design for the 6th Ave South Circuits 0601, 0602 & 0604 Storm Hardening and Voltage Conversion

SUMMARY:

Task Order No. 7 authorizes E.C. Fennell, PA, to complete engineering design for the 6th Ave South Circuits 0601, 0602 & 0604 Storm Hardening and Voltage Conversion in the amount not to exceed \$611,419.

BACKGROUND AND JUSTIFICATION:

City previously issued a Request for Qualifications (RFQ 18-303) to provide letters of interest and Professional Qualifications from consulting companies/firms for civil engineering, geotechnical engineering, surveying, architecture, hydrogeological services, energy management and engineering services. E.C. Fennell, PA, was one of three firms selected under the Energy Management category for the Continuing Contracts for Professional Services.

Based on the results of multiple engineering studies, carried out by consulting companies in the past as well as results of an in-house engineering evaluation, a comprehensive electric system upgrade plan has been created and was presented by the Electric Utility Department Staff in 2018 and 2019. Staff's plan has been independently affirmed by an independent engineer (Stantec) in February of 2020. The plan was subsequently presented to bond rating agencies and potential investors in support of the City's recent bond sale specific to utility infrastructure improvements.

The System Hardening and Reliability Improvement Program (SHRIP), focuses on system wide Electric Utility upgrades and re-configuration that affords maximum reliability, improved efficiency, standardized voltage class across the distribution network, and yields a system that can support growth and withstand the effects of high-velocity windstorms.

The current City utility electrical distribution system consists of both 4.16kV and 26.4kV voltage classes dating back to the 1950s in some cases. The SHRIP plan presented by the Electric Utility Department Staff in 2018 and 2019 includes both system hardening & upgrading of the existing 26.4kV sub-transmission and distribution circuits and, completing the conversion of the aged 4.16kV distribution system to 26.4kV.

Utilizing circuit performance and outage data, the Electric Utility force ranked each of the City's circuits based on the following; number of customers affected, number of trip/close operations, feeder outage minutes, and total customer outages minutes. The results of this exercise provided the information needed to begin to address electric system problems, with the highest priority being given to the poorest performing circuits (i.e. those circuits causing the greatest number of outages to the greatest number of customers).

The 6th Avenue South Circuits are supplied power from the existing 6th Avenue South Substation. Three of the circuits, the 4R0601, 4R0602 & 4R0604 are currently operating at

4.16kV and are scheduled for system hardening and voltage upgrade to 26.4kV. The fourth circuit, the 26B0603 was previously converted and is already operating at 26.4kV.

EC Fennell has been tasked to provide engineering design for storm hardening and voltage conversion for the 4R0601, 4R0602 & 4R0604 circuits. ECF will also complete system modeling of all four of the circuits emanating from the 6th Ave South substation to aid in construction sequencing and conversion to a more reliable mesh electrical distribution network. A total of 367 utility poles will be evaluated for replacement and included in the engineering design package for storm-hardening and voltage conversion associated with this project. The design team will prepare all drawings, pole bores, framing standards, materials list, and construction sequencing as part of this Task Order. The task is estimated to be completed in 7 months. A boundary map attached to this Staff Report outlines the service area for each of the 0601, 0602 and 0604 circuits.

MOTION:

Move to approve/disapprove Task Order No. 7 to EC Fennell PA., to complete engineering design for the 6th Ave South Circuits 0601, 0602 & 0604 Storm Hardening and Voltage Conversion at a cost not to exceed \$611,419.

ATTACHMENT(S):

Fiscal Impact Analysis
 Task Order 7
 Boundaries TD-06 0601, 0602 & 0604

FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2021	2022	2023	2024	2025
Capital Expenditures	\$611,419	0	0	0	0
Operating Expenditures	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income	0	0	0	0	0
In-kind Match	0	0	0	0	0
Net Fiscal Impact	\$611,419	0	0	0	0
No. of Addn'l Full-Time Employee Positions	0	0	0	0	0

B. Recommended Sources of Funds/Summary of Fiscal Impact: Funds have been identified in account No. 421-6034-531-63.15

Account Number	Account Description	Project Number	FY21 Budget	Current Balance	Agenda Expenditure	Balance
421-6034-531-63.15	Improve Other that Build/Infrastructure	SH2123	\$8,805,000	\$8,805,000	-\$611,419	\$8,193,581