Staff Report

TO: City Council

FROM: Thaxton Van Belle, General Manager of Utilities

DATE August 16, 2022

SUBJECT: **Capital Improvement Project: Spare Variable Frequency Drive (VFD) Program Purchase**

Background and Analysis:

A variable frequency drive (VFD) is a type of motor controller that drives an electric motor by varying the frequency and voltage of its power supply. This allows a controlled ramp-up of the motor during start-up, saving energy and reducing mechanical stress. VFDs allow pumps to be run at set speeds/rates rather than simply on or off. Both the wastewater treatment plant (WWTP) and lift station system utilize VFDs. Many of the lift station VFDs are due for replacement and while most at the WWTP are new, supply issues related to the pandemic and chip shortage have severely limited availability and generated long lead times.

On June 6, 2022, City Council approved a Capital Improvement Plan that included the purchase of spare VFDs. This will allow the City to replace some VFDs and also have some on hand as spares, which will reduce the likelihood of lengthy rental charges and loss of services. As part of the implementation staff has consulted with electrical engineers, and considered availability, costs, and common use across multiple stations. The procurement, setup and programming will be done by the City's contracted SCADA integration and controls engineer, SKM Engineering.

Fiscal Impact:

The quoted cost of VFDs recommended for purchase is $44,757.79. Staff is requesting the approval of an amount not to exceed $53,000 to anticipate the tax and freight charges. This purchase will be funded from the VFD Spare Program (CIP ISFWW-02), approved by City Council June 6, 2022. The estimated cost to prepare this report is $550.

Recommended Action:

Approve and authorize the purchase of the recommended VFDs with tax and freight by SKM Engineering in an amount not to exceed $53,000.

Attachments:

A. Quote 1
B. Quote 2
C. Quote 3