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Department of Utilities  
Water Treatment Facility  
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**TO:** Chairperson Greg Dannecker and Members of the Utilities Committee

**FROM:** Utilities Director Chris Shaw

**DATE:** August 9, 2017

**RE:** *Award sole source purchase of Water Plant High Service Pump #3 & #6 Variable Frequency Drive (VFD) equipment and installation services to Werner Electric in the amount of \$85,813.75*

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**BACKGROUND:**

The Appleton Water Treatment Facility (AWTF) utilizes 6 High Lift Service Pumps (HSLP) to pump water from out of the water plant into the City’s water distribution system. Four of the HSLPs have Variable Frequency Drives (VFD) capabilities and are used almost exclusively. VFDs allow the HSLPs to ramp up and down based on demand needs in the distribution system. The #3 and #6 HSLPs were installed with soft starts. These pumps cannot be controlled to demand needs because they lack a VFD. Consequently, #3 & #6 HSLPs have not been run because they cannot be relied on to meet critical demand variability. An example of critical need would be a loss of water pressure due to a fire. If the regulatory floor level pressure is not maintained, the water system would be required to issue a public notice of poor water quality.

**PROJECT OBJECTIVE:**

VFDs would need to be installed on #3 & #6 HSLPs in order to realize value for capital expenditures made toward the original purchase of these pumps. The quote from Werner Electric is for VFDs and installation on the two pumps at a cost of \$85,813.75. The cost includes (2) Allen Bradley Power Flex 755 Digitally Controlled AC Drives. Also included is installation and commissioning by Rockwell Automation. Each drive provided is capable of 415 amps full load. Werner Electric is the only local provider supporting Allen Bradley and Rockwell Automation.

**ELECTRICAL INSTALLATION RFQ PROCESS:**

Quotes were solicited for the electrical installation of the Allen Bradley equipment. Three electrical contractors quoted and the least cost quote was provided by Van Ert Electric Company, Inc. at \$6,225.

**FUNDING:**

The funding source for this project is the 2017 Capital Improvement Project budget. \$146,000 was identified for total project costs.

**RECOMMENDATION:**

I recommend to replace the existing soft starts on #3 and #6 HLSPs with VFDs. Werner Electric Supply is the only provider of the Allen Bradley equipment. Therefore, I recommend Award sole source purchase of Water Plant High Service Pump #3 & #6 Variable Frequency Drive (VFD) equipment and installation services to Werner Electric in the amount of \$85,813.75. The new installation would be commissioned and then warrantied by Rockwell Automation for a period of one year.