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**TO:** Chairperson Vered Meltzer and Members of the Utilities Committee

**FROM:** Chris Stempa, Utilities Deputy Director

**DATE:** October 22, 2020

**RE:** *Approve: 2019 AWWTP Improvements Project Engineering Services Amendment #1 increasing the McMahon total contract amount by \$49,630 from \$169,886 to \$219,516*

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**BACKGROUND:**

The Appleton Wastewater Treatment Plant (AWWTP) Improvements Project engineering service contract was awarded to McMahon by Common Council in April 2019. This project was originally comprised by five individual projects identified in the 2019 budget that involve the rehabilitation, replacement, or improvements to address immediate needs and long term reliability. Those project elements include Return Activated Sludge (RAS) pump replacement, piping modifications (e.g. blended sludge, waste gas, and filtrate), primary clarifier concrete recoating, and outside secondary containment (chemical offload) repairs.

The filtrate tank repairs and piping modification contract was awarded by Common Council in early March 2020 in an effort to advance the work ahead of the other project elements because of implications to seasonal low-level ammonia effluents. That decision was necessary to ensure compliance with the Wisconsin Pollution Discharge Elimination System (WPDES) permit and specifically ammonia limits during warm weather months. This task demanded the focus of plant staff and McMahon to facilitate the work until it was successfully completed in May 2020. During that initial phase of active construction there were other critical operation and maintenance needs identified which were outside of McMahon's original contract scope. Additionally, the Utilities Department staff acknowledged synergies with parallel efforts required of 2020 Capital Improvement Projects (CIPs) that had not been initiated at that time. McMahon was asked to provide a contract amendment for authorization summarizing the new scope items highlighted below.

1. Plant Effluent Pumping Station #2 Pump Replacement (2020 CIP)
  - a. Perform hydraulic calculations to determine capacity of existing Plant Effluent Pumping Station in Building H.
  - b. Provide options for replacement of the three plant effluent pumps.
  - c. Provide options for increasing access to the lower level of Building H.

- d. Provide final design services for the Plant Effluent Pump replacement, including replacing piping and providing new drives.
  - e. Provide final design services for new controls for the Plant Effluent Pump Station.
  - f. Provide bidding and construction services for this project.
2. Primary Clarifier #5 and #6 Drive Replacement (2020 CIP)
    - a. Provide final design services for raising the bridge of the two clarifiers and replacing the drive units.
    - b. Provide survey services to determine elevations of the primary influent channel, clarifiers previously raised and clarifiers #5 and #6.
    - c. Observe condition of primary clarifiers #5 and #6 tankage and steel and provide memorandum.
    - d. Provide final design services for the coating or primary clarifier #5 and #6 tankage and steel.
    - e. Provide bidding and construction services for the work on Primary Clarifier #5 and #6.
3. B-Building Headworks Slide Gate Replacement
    - a. Observe condition of severely deteriorated aluminum slide gate in Headworks Building.
    - b. Provide plans and specifications for the replacement of the slide.
    - c. Provide bidding and construction services for this work
4. Blended Sludge Piping Replacement
    - a. Provide options for replacing compromised blended sludge piping in pipe chase and lower level of Digester Building.
    - b. Provide plans and specifications for the replacement of the blended sludge piping.
    - c. Provide bidding and construction services for this work.
5. B-Building and D-Building Programmable Logic Controllers (PLC's)
    - a. Provide plans and specifications for the upgrade of unsupported Schneider Quantum Processors to M580s with Programs to Unity Pro.
    - b. Design new communication cable for the PLC replacements.
    - c. Provide bidding and construction services for this work

## **SUMMARY**

The cost of additional engineering services outlined as part of the McMahon Contract Amendment #1 totals \$49,630. The proposed costs take advantage of parallel engineering activities within McMahon's existing contract. It provides opportunity to receive greater value through economy of scale engineering services and public bid construction. As an example, the estimated fees for standalone engineering services comparable to those outlined in Amendment #1 for only the 2020 Plant Effluent Pumping Station #2 Pump Replacement totaled \$75,000.

This amendment would result in the contract amount increasing from \$169,886 to \$219,516. If you have any questions regarding this project, please contact Chris Stempa at ph: 832-5945.