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

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

**DATE:** January 19, 2024

**RE:** *Approve: Sole Source Engineering Services Contract to McMahon Associates as part of the 2024 Aeration Process Upgrades Project in the amount of \$64,500 with a 12% contingency of \$7,740 for a Project Total not to exceed \$72,240*

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#### **BACKGROUND:**

The Appleton Wastewater Treatment Plant (AWWTP) operates two early 1990's vintage positive displacement rotary lobe blowers which supply low-pressure air to a network of submerged diffusers located within the mixed liquor channel and the aeration tank inlet channels. These diffusers are designed to create turbulence within flow and keep solids in suspension. The channel aeration blower equipment was commissioned as part of a major upgrade project in the early 1990's and has proven to be reliable for over 30 years of operation. However, it has reached its useful life and one of the blowers now requires replacement. The 2024 CIP identified \$600,000 in total funding that will implement a project that would replace existing aeration equipment with present-day blower technology.

After one of the blowers failed in early 2023, the engineering services of McMahon were solicited to provide a mixed liquor channel blower equipment alternatives evaluation. The evaluation compared four different blower technologies including the option of rehabilitating the existing 30-year-old units. The 2024 budget was formulated based on that evaluation. The engineering document was also provided to Focus on Energy to determine grant eligibility for selected technology alternative that provided the best simple payback exclusive of potential Focus on Energy grant funding. It should be noted that blower rehabilitation was eliminated from consideration because it was unlikely that the equipment would last another 20-years. Furthermore, that option came at the highest annual electrical cost when extrapolating over that period.

#### **PROPOSAL**

The McMahon proposal includes suite of engineering services which have become standard for the Utilities Department as part of larger construction projects like this one. Those services include the core elements associated with design, bidding, and construction management. The cost for professional services outlined in their proposal totals \$64,500.

## **SOLE SOURCE JUSTIFICATION**

The 2024 CIP Aeration Project Upgrades project identified \$87,500 for engineering services which represents approximately 15% (industry standard) of the overall budget which totals \$600,000. McMahon's proposal is 11% of the overall construction budget. The equipment alternatives evaluation McMahon completed in 2023 will be used as a springboard for the next phase of design. Contracting with another firm as part of formal Request for Proposal (RFP) process would not yield cost savings. First, the typical RFP process that the Utilities Department requires involves firms to generate detailed proposals from which they are evaluated and scored. That time and effort comes at a cost which is absorbed by the firms but passed back to the city as part of the total engineering service fees. Second, engineering firms do not typically rely on another firm's work because of the potential risk exposure. As such, work completed by McMahon would likely be replicated at the cost of the Utilities Department without yielding measurable results. Lastly, McMahon's approach to the equipment alternatives evaluation is worth noting. The inclusion of existing blower rehabilitation as part of the energy payback calculations was not something initially considered by Utilities Department staff because of concerns pertaining to equipment longevity and/or reliability. By including that as part of the analysis, McMahon highlighted the increased delta in energy cost savings compared to the new technology alternatives. As recently as January 17, 2024, Focus on Energy indicated that based on the alternatives evaluation there is a potential energy incentive available totaling \$21,000 which could be applied to a completed project further reducing the payback period.

McMahon has provided quality engineering services on a number of different projects at the AWWTP over the years and their proposal reflects the value the city would be receiving for the reasons previously described. As such, I recommend that McMahon be considered for a sole source contract as part of the 2024 Aeration Process Upgrades Project.

## **RECOMMENDATION**

Approval of a sole source Engineering contract to McMahon Associates as part of the 2024 Aeration Process Upgrades Project in the amount of \$64,500 with a 12% contingency of \$7,740 for a Project Total not to exceed \$72,240.

If you have any questions or require additional information regarding this project, please contact Chris Stempa at 920-832-5945.