

April 9, 2015

To: Members
Public Works and Infrastructure Committee

Re: Wastewater Trunk Relief Initiative – Issue and Award RFP

RECOMMENDATION

1. That City Council authorize initiating the process to engage consulting and professional engineering services for the Wastewater Trunk Relief Initiative, pursuant to delegated authority contained in The Regina Administration Bylaw No. 2003-69 with respect to awarding contracts and funding as approved in the Water and Sewer Utility 2015 to 2019 Capital Budget.
2. That City Council authorize the Executive Director of Transportation and Utilities to negotiate, award and enter into the contract with the highest ranked proponent from the Request for Proposal (RFP) process and, to award subsequent phases of work to the successful proponent based on the satisfactory performance on the previous phase of work.
3. That the City Clerk be authorized to execute the contract with the highest ranked proponent upon approval of the Executive Director of Transportation and Utilities; and
4. That this report be forwarded to the April 27, 2015 meeting of City Council for approval.

CONCLUSION

This report presents the Administration's current plan for the Wastewater Trunk Relief Initiative. An RFP will be issued for conceptual design, pre-design, detail design and construction engineering services for the project. The proposals will be received and reviewed and the successful firm will be awarded the project. City Council's delegated authority is required to issue and award the RFP, as the consultant's fees are expected to exceed \$500,000.

BACKGROUND

The City of Regina's (City's) wastewater system conveys domestic and industrial wastewater to the City's Wastewater Treatment Plant (WWTP) through the McCarthy Boulevard Pumping Station (MBPS). The city has experienced unprecedented growth in recent years and this growth, coupled with an aging infrastructure, has created increased stresses on the wastewater collection system, particularly during heavy precipitation events.

The wastewater collection system generally performs well during dry weather conditions; however, it experiences severe surcharging during wet weather events. The consequence of severe surcharging is an unacceptable level of service (i.e. sewer overflow, surface flooding and occasional basement flooding) provided to the public in certain situations.

In 2014, the City completed calibration of its wastewater model to better understand the functioning of the wastewater system under dynamic flow conditions. The City of Regina Strategic Sanitary Sewer Assessment Report (Stantec 2014) was then completed using the calibrated model, to identify the level of service being offered by the existing system and determine hydraulic capacity constraints.

The assessment indicated that overall, the wastewater collection system is only capable of managing approximately a 1:5 year storm event, well below the City's target of a 1:25 year storm event. This means that, statistically, once every five years a storm event occurs that will exceed the hydraulic capacity of our wastewater collections system. The assessment indicated that the capacity at the MBPS is insufficient to convey the full 1:25 year flow and many sections of the collection system did not meet the 1:25 year target.

DISCUSSION

During heavy precipitation events at the end of June 2014, there was widespread basement flooding and bypassing of wastewater at some wastewater pumping stations. The storm event has been classified by the City and the Water Security Agency as approximately a 1:10 year storm event. A review of the flow data from the June 2014 event found that the MBPS did not have sufficient capacity to accommodate the flows during this heavy precipitation event. The sanitary trunk mains were also assessed and were found to have levels of service less than the desired target. The most significant hydraulic restriction is in the South Trunk, having a less than 1:2 year level of service.

The assessment described a phased approach to improving the overall level of service in the wastewater collection system. The initial phase involves upgrading the hydraulic capacity of the MBPS and forcemains to the WWTP and improvements to the South Trunk. Further trunk capacity upgrades are recommended in subsequent phases, based on their estimated level of service. Increasing the capacity of the MBPS would reduce the backwater effect on the entire collection system and provide the greatest system wide benefit, while trunk improvements would have more benefits to particular quadrants of the city.

The City requires the services of a consulting engineering firm to implement the initial phase of the assessment by confirming the City of Regina Strategic Sanitary Sewer Assessment Report recommendations and prioritizing improvements. This engineering commission will also include performing conceptual design, pre-design, detail design and construction engineering services for the Wastewater Trunk Relief Initiative, which will include detailed cost estimates and construction schedules. The engineering fees for this commission are expected to exceed \$500,000. The proposals will be evaluated by a two stage qualification based selection process. The process involves evaluating all the proposals on criteria such as technical expertise, corporate experience, personnel availability, general understanding of the scope of work and overall cost. The highest ranking team is then invited to submit a detailed stage 2 proposal that is evaluated. The City and the consultant will then negotiate the scope of work and, if acceptable to the City, the work will be awarded to the consulting engineering firm.

RECOMMENDATION IMPLICATIONS

Financial Implications

Funding in the amount of \$1,500,000 was approved for the initial engineering services portion of this project in the Water and Sewer Utility 2015 to 2019 Capital Budget. Consulting engineering fees are expected to exceed \$500,000 for this commission; and therefore, Council's approval is

required to award the contract as required by *The Regina Administration Bylaw No. 2003-69, Schedule D, Section 7*. Funding for future phases of work, as identified through this commission and through the Wastewater Master Plan, will be requested through future budget submissions.

Environmental Implications

Completing the design and construction of the Wastewater Trunk Relief Initiative will reduce the frequency and intensity of any future wastewater bypasses. This will have a positive effect on the environment and downstream users.

Policy and/or Strategic Implications

The completed Wastewater Trunk Relief Initiative would help achieve the City's strategic objectives by supporting the goals of:

- Optimizing existing infrastructure; and
- Providing reliable, environmentally sound and sustainable infrastructure solutions.

Other Implications

None with respect to this report.

Accessibility Implications

None with respect to this report.

COMMUNICATIONS

None with respect to this report.

DELEGATED AUTHORITY

The recommendations contained in this report require City Council approval.

Respectfully submitted,



Pat Wilson, Director
Water Works

Respectfully submitted,



Karen Gasmu, P.Eng., Executive Director
Transportation and Utilities

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KS/KD/cp