

Clause 14 in Report No. 16 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on November 17, 2016.

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Consultant Selection for
Sanitary Sewer and Maintenance Hole
Infrastructure Management

Committee of the Whole recommends adoption of the following recommendations contained in the report dated October 20, 2016 from the Commissioner of Environmental Services:

1. Council authorize the award of contract for a three year, sanitary sewer and maintenance hole infrastructure management contract to CH2M Hill Canada Limited, pursuant to Request for Proposal P-16-69 at a total cost of \$7,328,606.00 excluding HST, and authorize the Commissioner of Environmental Services to execute the contract on behalf of the Region.
2. The Commissioner of Environmental Services be authorized to exercise the option to extend the contract for two additional terms of one year each, on the same terms and conditions, for a total five year cost of \$12,214,343.33, excluding HST, provided that the consultant has performed the services to the satisfaction of the Commissioner and the total cost is within the Capital Spending Authority for this project. The two additional one-year terms are subject to an annual cost adjustment to the lesser of 2.5 per cent or the Consumer Price Index.

Report dated October 20, 2016 from the Commissioner of Environmental Services now follows:

1. Recommendations

It is recommended that:

1. Council authorize the award of contract for a three year, sanitary sewer and maintenance hole infrastructure management contract to CH2M Hill Canada Limited, pursuant to Request for Proposal P-16-69 at a total cost of \$7,328,606.00 excluding HST, and authorize the Commissioner of Environmental Services to execute the contract on behalf of the Region.

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2. The Commissioner of Environmental Services be authorized to exercise the option to extend the contract for two additional terms of one year each, on the same terms and conditions, for a total five year cost of \$12,214,343.33, excluding HST, provided that the consultant has performed the services to the satisfaction of the Commissioner and the total cost is within the Capital Spending Authority for this project. The two additional one-year terms are subject to an annual cost adjustment to the lesser of 2.5 per cent or the Consumer Price Index.

2. Purpose

This report seeks Council approval to retain engineering services for the inspection, condition assessment and rehabilitation planning of sanitary sewers and associated maintenance holes within the Region. Undertaking condition assessment on the Region's assets allows for the reduction of service disruptions associated with premature failure of infrastructure.

The Region's Purchasing Bylaw requires Council authorization to award Request for Proposals over \$2,000,000 or when the recommended proponent does not have the lowest cost. In this case, the recommended proponent's bid is greater than \$2,000,000, and it is not the lowest cost.

3. Background and Previous Council Direction

Inspection and condition assessment is a vital component of the infrastructure renewal planning process as outlined in the Region's Corporate Asset Management Policy

In [November 2013](#), Council adopted a Corporate Asset Management Policy that details principles for a consistent and systematic approach for managing Regional assets to ensure infrastructure is sustainably operated with an acceptable level of service and risk at the lowest lifecycle cost.

Proactive monitoring of asset condition through inspection provides information necessary to identify, plan and prioritize rehabilitation projects. This is a key process in asset management as it allows the Region to build a long-term rehabilitation program which is financially sustainable.

Region owns and operates approximately \$2 billion of sanitary sewers and associated maintenance holes

The Region owns and operates over 214 kilometres of sanitary sewers and 1,400 associated maintenance holes with an estimated replacement cost of \$2 billion. These assets play an important role in delivering sanitary collection and conveyance services to residents and businesses.

Currently, the Region's sanitary sewers and associated maintenance holes are regularly inspected as part of an ongoing program supported by external third-party service providers. As part of this program, a three-year assignment was awarded to Andrews Infrastructure by Council in [February 2014](#) through a competitive bid process. Under this current assignment, approximately 90 kilometers of sanitary sewers and 566 associated maintenance holes were inspected and assessed to date. The current assignment ends in December and a new contract is therefore recommended by this report.

The scope of services of this recommended assignment is similar to the current assignment, however also includes additional requirements for the completion of conceptual designs for proposed rehabilitation works should CCTV video footage identify deficiencies requiring rehabilitation. These conceptual designs are an important addition to the condition assessment program as they allow for more detailed rehabilitation planning and budgeting, which leads to greater financial sustainability and lower overall asset lifecycle costs.

In addition to this assignment, the Region awarded a valve chamber inspection and condition assessment assignment to Ontario Clean Water Agency in [January 2016](#), which includes structural inspection and condition assessment of 159 forcemain valve chambers in the wastewater system. Together these assignments form an integral part of the Region's overall wastewater linear asset inspection program.

4. Analysis and Implications

Request for Proposal P-16-69 was issued in August 2016

In accordance with the Purchasing Bylaw, Request for Proposal P-16-69 was released in August 2016 to obtain engineering services for the inspection and condition assessment of sanitary sewers and associated maintenance holes. The following is a summary of the scope of services detailed in the request for proposal:

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- Sewer and maintenance hole inspection and condition assessments
- Ten conceptual design reports providing an engineering analysis, detailed scope and cost estimates of proposed rehabilitation works
- Project management, planning and reporting
- Quality assurance and control

This assignment is for a three year term with the option to extend for two additional terms of one year each at the Region's discretion, provided that the total cost is within the Capital Spending Authority for this project.

The option to renew is beneficial to the Region because as the proponent gains familiarity and experience with the Region's sanitary sewer system, a more cost effective service can be provided. Also, components of this assignment are highly specialized and therefore limit the number of potential proponents who are capable of completing this work.

Three proponents responded to the Request for Proposal

In accordance with the Region's Purchasing Bylaw, proponents were invited to submit proposals for the assignment through a Request for Proposal that was advertised electronically on *Biddingo.com* and the Region's Bids and Tenders website.

Sixteen proponents obtained the Request for Proposal and three submitted proposals in response. Supplies and Services staff contacted the companies who received the Request for Proposal document but did not submit a proposal. The reasons given for not submitting a bid included the following:

- Insufficient capability to perform the specialized work required
- Inability to submit a competitive bid
- Inability to supply the required service
- Inability to provide sufficient resources
- Current workload could not accommodate this assignment

This assignment requires a highly specialized skill set and equipment to inspect the Region's large diameter sanitary sewer infrastructure under high flow conditions and with large distances between maintenance holes.

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Proposals were evaluated using the two-envelope system

Proposals were evaluated using the two-envelope system with technical and financial information submitted in separate envelopes. The overall proposal score was evaluated based on a weighting of 80 points for the technical proposal, and 20 points for financial proposals. Technical proposals were evaluated prior to any knowledge of financial information.

The Region's proposal evaluation team reviewed technical proposals based on criteria listed in the request for proposal that included:

- Project team experience and qualifications
- Corporate experience
- Experience on projects of similar size and scope
- Project understanding
- Proposed project methodology and deliverables
- Project management approach and resource effort
- Quality assurance and control processes
- Value added and innovative concepts

To be considered for award, proponents must achieve a minimum technical score of 60 per cent (48 points of the potential 80) to have the financial portion of the proposal considered. If a proponent does not achieve this minimum technical score, their financial proposal is returned unopened. Technical and financial results are summarized in Table 1 below.

**Table 1
Proposal Evaluation Summary**

| Firm | Technical Score (out of 80) | Total Fee (excluding taxes) | Financial Score (out of 20) | Total Score (out of 100) |
|---------------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------------------|
| CH2M Hill Canada Limited | 67.61 | \$7,328,606.00 | 18.97 | 86.58 |
| Cole Engineering Group Limited | 51.30 | \$6,951,717.00 | 20.00 | 71.30 |
| Black and Veatch Canada Company | *47.00 | N/A | N/A | N/A |

*Financial proposal returned unopened

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Evaluation of proposals revealed that CH2M Hill Canada Limited achieved the highest total score

CH2M Hill Canada Limited achieved the highest overall technical and total score and is therefore recommended for this assignment.

CH2M Hill Canada's proposal demonstrated comprehensive experience on assignments related specifically to the Region's sanitary sewers system

Assessing the condition, rehabilitation needs and lifecycle of a sanitary sewer system requires a high level of specialization and expertise. CH2M Hill Canada Limited has extensive experience with trunk gravity sewer rehabilitation and has undertaken a number of gravity sewer rehabilitation projects for the Region.

In the past five years, Regional sanitary sewer rehabilitation assignments that CH2M Hill Canada Limited have undertaken include Condition Assessment of the Primary Trunk, a Feasibility Study for Rehabilitation of the York Durham Sewage System North Don Collector and the Detailed Design, Site Inspection and Contract Administration for the Rehabilitation of 16th Avenue, 9th Line Trunk Sewers and South East Collector. Experience working on the Region's sanitary sewer system is beneficial as CH2M Hill Canada Limited has a comprehensive understanding of the key rehabilitation challenges faced by the Region with its sewer infrastructure.

Detailed analysis of financial proposals confirm that CH2M Hill Canada Limited's bid represents good value for the Region

While the overall financial bid from CH2M Hill Canada Limited is higher than that of Cole Engineering Group Limited, an analysis of the distribution of their bid clearly demonstrates allocation of sufficient resources towards the specific services that will ensure successful delivery of this highly specialized assignment. As such, the detailed analysis of the submitted financial proposals confirms that CH2M Hill Canada Limited's bid represents good value for the Region.

The Supplies and Services branch reviewed the evaluation summary and issued their report confirming that CH2M Hill Canada Limited be recommended as the successful overall proponent.

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This assignment supports and aligns with the 2015 to 2019 Strategic Plan and the Region's 2016 Water and Wastewater Master Plan Update

Sanitary sewers and maintenance holes are key components of the wastewater infrastructure system. Proactive management of these assets aligns with the Region's 2015 to 2019 Strategic Plan objective of continuing to deliver and sustain critical infrastructure.

This assignment also aligns with the Infra-stretching principle of the Region's 2016 Water and Wastewater Master Plan Update, which promotes maximizing the useful capacity and useful life of built infrastructure with the benefit of minimizing and/or deferring capital investment.

5. Financial Considerations

The fee for the proposed work for the three year term is \$7,328,606.00, excluding HST. Adequate Capital Spending Authority is included in the approved 2016 budget as part of the Region's Trunk Sewer Rehabilitation Program. Funding for two additional optional one-year terms totaling \$4,885,737.33, excluding HST, will be requested through future budget process. The total five year cost is \$12,214,343.33, excluding HST.

6. Local Municipal Impact

This assignment benefits all nine local municipalities by proactively managing the Region's sanitary sewer system, and thereby minimizing disruption of collecting and conveying wastewater from local sewer systems to Regional treatment facilities.

7. Conclusion

Three proposals were received and evaluated for this assignment in accordance with the Region's Purchasing Bylaw. The proposal submitted by CH2M Hill Canada Limited demonstrated a clear understanding of project requirements, provided an experienced team and a well-thought-out project approach and methodology to complete this assignment. The proposal from CH2M Hill Canada Limited represents best value for money to the Region.

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It is recommended that CH2M Hill Canada Limited be engaged to undertake the inspection and condition assessment assignment of sanitary sewer and maintenance holes for a three year term at a total cost of \$7,328,606.00 with an option to renew for two additional terms of one-year each at the sole discretion of the Region, based on the same terms and conditions for a total five year contract cost of \$12,214,343.33, excluding HST. The additional two one-year terms is subject to an annual cost adjustment to the lesser of 2.5 per cent or the Consumer Price Index.

For more information on this report, please contact Stephen Fung, Director, Infrastructure Asset Management, Environmental Services at ext. 73025.

The Senior Management Group has reviewed this report.

October 20, 2016

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Accessible formats or communication supports are available upon request.