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CONSULTANT SELECTION FOR DETAILED DESIGN, CONTRACT ADMINISTRATION AND SITE INSPECTION FOR BLACK CREEK SEWAGE PUMPING STATION UPGRADES AND MANHOLE REHABILITATION, PROJECT 78531 EI10103

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated December 16, 2011, from the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. The Municipal Infrastructure Group Ltd. be engaged to undertake detailed design, contract administration and site inspection for the Black Creek Sewage Pumping Station Upgrades and Manhole Rehabilitation as outlined in this report, at a fee of \$985,500 excluding taxes. The fee includes:
 - a) \$637,430 for detail design and engineering services.
 - b) \$348,070 for contract administration and site inspection services, based on 60 weeks construction duration estimated by staff.
2. The Commissioner of Environmental Services be authorized to adjust the contract administration and site inspection fees using the competitive unit price of \$5,801.17 per week, excluding taxes, once the updated construction duration is determined and specified in the tender documents, within the Total Project Budget Authority.

2. PURPOSE

This report seeks Council authorization to retain engineering consulting services related to detailed design, contract administration and site inspection for the Black Creek Sewage Pumping Station Upgrades and Manhole Rehabilitation in the City of Vaughan. A location plan is appended to this report (*see Attachment 1*).

The Region's Purchasing By-law requires Council authorization to award a Request for Proposal (RFP) over \$500,000 or when the recommended proponent does not have the lowest cost. In this case, the recommended proponent submitted the lowest responsive bid; however, their bid is greater than \$500,000.

3. BACKGROUND

Black Creek Sewage Pumping Station is a critical facility which was commissioned in 1982

The Black Creek Sewage Pumping Station was built and commissioned in 1982. Black Creek Sewage Pumping Station is a critical primary pumping station that receives flows from Humber Pumping Station and the “north” catchment area, and then transfers large volumes of sewage to Leslie Street Pumping Station. Black Creek Sewage Pumping Station is a wet/dry well configuration with sewage entering via a 1050mm diameter gravity sanitary sewer and continues through a screening area into the wet well, then discharges through two 600mm diameter forcemains to a single 1050mm diameter gravity sewer to the Leslie Street Pumping Station. Two gravity sewer manholes downstream of Black Creek Sewage Pumping Station are to be structurally rehabilitated as part of this project scope.

A recently completed condition assessment identified facility deficiencies and provided a prioritized list of recommended upgrades

A detailed field investigation and condition assessment of the Black Creek Sewage Pumping Station was recently completed. This assessment identified deficiencies and provided a prioritized list of recommendations for facility upgrades.

Project scope includes rehabilitation, upgrades, replacements and maintenance to improve facility and wastewater collection system security, integrity and reliability

This project will address all issues identified by the condition assessment and by Region personnel resulting in safe and efficient operation of the Black Creek Sewage Pumping Station. Project scope is organized by asset class and outlined below:

Life, health and safety:

- Ventilation system upgrades to ensure the dry well is under positive pressure
- Eye wash station upgrades
- Emergency exit lighting assessment and upgrades
- Installation of hazardous gas monitoring system

Site and property:

- Parking area improvements and entrance way paving
- Drainage improvements of site surface water runoff
- Erosion control measures between the overflow and outfall structure

Process:

- Single forcemain operation strategy

- Replace numerous valves and secure others
- Install pumps for the service water tank

Structural:

- Rehabilitation of screen room stairwell concrete damage
- Grout and seal cracks
- Structural rehabilitation of two manholes

Building mechanical:

- Upgrade of sump pump system
- Modify the service water piping and replace current P trap priming system
- Ventilation system testing and balancing

Electrical:

- Install high resistance grounding
- Upgrade ventilation control and switches
- Replace exposed below grade wiring

SCADA / Instrumentation and Control:

- Improve operational strategy for the standby power operation
- Update process control narrative, and piping and instrumentation diagrams
- Install vibration sensors on the pumps

4. ANALYSIS AND OPTIONS

Request for Proposal P-11-83 issued to five pre-qualified consulting engineering firms

In accordance with the Region's Purchasing By-law, a Request for Qualification P-10-164 for detailed design, contract administration and site inspection for the Black Creek Sewage Pumping Station Upgrades and Manhole Rehabilitation project was advertised in the *Daily Commercial News* and electronically on *Biddingo.com*.

Based on the information provided in the formal responses to the Request for Qualification P-10-164, the following five firms were invited to submit a proposal in response to a Request for Proposal P-11-83.

- Associated Engineering (Ont.) Ltd.
- Hatch Mott MacDonald Ltd.
- The Municipal Infrastructure Group Ltd.
- Conestoga-Rovers & Associates
- GHD Inc.

The Request for Proposal P-11-83 detailed the scope of work required, which included the following services:

- Project management, planning and control
- Detailed design and tendering
- Procurement of approvals
- Construction contract administration and site inspection
- Quality assurance and quality control

Proposals evaluated using the two-envelope system

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

The Region's proposal evaluation team reviewed the five technical proposals based on the following criteria as listed in the Request for Proposal P-11-83:

Project Team Experience

- Stability and reputation with the Region and/or other clients
- Project Manager(s) and key staff experience
- Technical support staff experience
- Staff training
- Sub consultant's experience
- Other miscellaneous items

Project Implementation

- Completeness and comprehensiveness of the proposal
- Understanding of the project and services to be provided
- Viability of the approach methodology
- Understanding the deliverables to be provided
- Project management approach
- Implementation of QA/QC process and its deliverables
- Approach to Health and Safety
- Other miscellaneous items

Technical components of the proposal must achieve a minimum technical score of 60% (48 points out of the potential 80 points) 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.

Table 1
Consultant Proposal Evaluation Summary

Consulting Engineering Firm	Technical Score (out of 80)	Total Fee (\$ (excluding taxes))	Financial Score (out of 20)	Total Score (out of 100)	Cost Per Technical Point (\$)
The Municipal Infrastructure Group Ltd.	60.20	985,500.00	20.00	80.20	16,370.43
Conestoga-Rovers & Associates	61.90	1,135,269.50	17.35	79.25	18,340.38
GHD Inc.	54.70	1,167,267.00	16.89	71.58	N/A
Associated Engineering (Ont.) Ltd.	53.35	1,104,640.00	17.83	71.18	N/A
Hatch Mott MacDonald Ltd.	48.75	1,235,884.00	15.95	64.69	N/A

Evaluation of proposals revealed The Municipal Infrastructure Group Ltd. achieving highest total score and lowest price per technical score

The firm with the highest total score is The Municipal Infrastructure Group Ltd. Given that the total score achieved by one other firm was within five (5) points of the highest total score, a “dollar cost methodology” calculation was completed, as required by the Purchasing By-law. Results of this calculation, as shown in Table 1, determined that the proposal submitted by The Municipal Infrastructure Group Ltd. represents the best overall value to the Region.

Link to key Council-approved Plans

The Black Creek Sewage Pumping Station is a critical component of the Region’s wastewater infrastructure. The upgrades of the Black Creek Sewage Pumping Station and Manhole Rehabilitation is a key project that aligns with the Region’s 2011 to 2015 Strategic Planning objective of continuing to deliver and sustain critical infrastructure.

Recent operational changes (namely, the diversion of a portion of sanitary flows to the Region of Peel) have resulted in an increased contribution of industrial discharges to the Black Creek Pumping Station. As a result, the Black Creek Pumping Station may be at higher risk of degradation due to the possible harmful effects of industrial discharge. In October 2011, Council endorsed the “Improving York Region’s Sewer Use Compliance Program to Protect Shared Infrastructure” report. The strategy outlined in the report along with the updated Sewer Use By-law approved by Council in November 2011 will allow for a more proactive approach for the protection of infrastructure, through the enhancement of monitoring and enforcement activities and enhanced full cost recovery for surcharge parameters and non-compliance.

5. FINANCIAL IMPLICATIONS

The fee for the proposed scope of work is \$985,500, excluding taxes. The proposed 2012 Capital Budget identifies a Total Project Budget Authority for this project of \$4,518,000.

The fees of the proposed work include construction, contract administration and site inspection for an estimated duration of construction of 300 working days (60 weeks). Based on the competitive prices within the financial proposal submitted by The Municipal Infrastructure Group Ltd., this equates to a prorated value of \$5,801.17 for each week of construction. This value will be used to calculate either the increase or decrease in the fee, as the case may be, to account for the actual duration of construction.

Should the actual duration of construction increase, as determined by the detailed design and specified in the tender documents, it is recommended that the Commissioner of Environmental Services be authorized to adjust the fee accordingly by the amount of \$5,801.17 per week excluding taxes.

6. LOCAL MUNICIPAL IMPACT

This project will ensure safe and efficient operation of Black Creek Sewage Pumping Station resulting in improvements to the overall wastewater collection system. The City of Vaughan will directly benefit from this improved facility and wastewater collection system security, integrity and reliability.

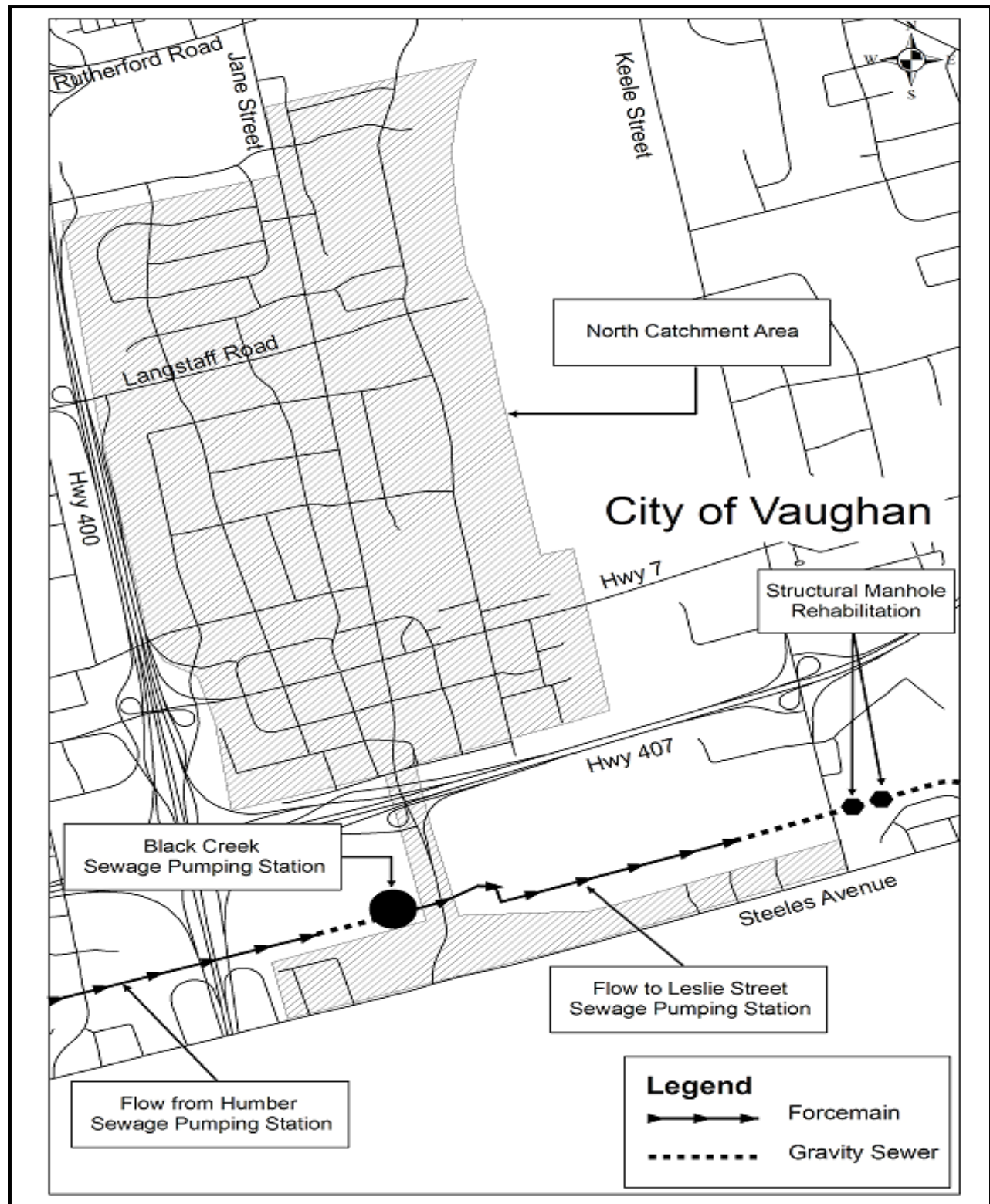
7. CONCLUSION

Five proposals from engineering consultants were received and evaluated for this project in accordance with the Region's Purchasing By-law. The proposal from The Municipal Infrastructure Group Ltd. represents the best overall value to the Region and it is recommended that The Municipal Infrastructure Group Ltd. be engaged to undertake the detailed design, contract administration and site inspection for the Black Creek Sewage Pumping Station Upgrades and Manhole Rehabilitation at a cost of \$985,500 excluding taxes.

For more information on this report, please contact Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services at 905-830-4444 Ext. 5070.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)



LOCATION PLAN AND SERVICING AREA

Consultant Selection for Detailed Design, Contract Administration and Site Inspection for Black Creek Sewage Pumping Station Upgrades and Manhole Rehabilitation, City of Vaughan – Project 78531 EI10103