
DATE: July 27, 2011

REPORT TITLE: **CONSULTING SERVICES FOR WASTEWATER PERMANENT FLOW
MONITORING AND RAIN GAUGE NETWORK
CAPITAL PROJECT 09-2405
DOCUMENT 2011- 044P
REGION OF PEEL**

FROM: Dan Labrecque, Commissioner of Public Works

RECOMMENDATION

That the contract (Document 2011-044P) for consulting services for the wastewater permanent flow monitoring and rain gauge network in The Regional Municipality of Peel, be awarded to Cole Engineering Group Ltd. under Capital Project 09-2405, in the amount of \$497,894 (excluding applicable taxes), in accordance with Purchasing By-law 63-2008.

REPORT HIGHLIGHTS

- The Region of Peel intends to implement a comprehensive permanent flow monitoring program to assist with data collection in support of the Inflow and Infiltration program; provide capacity data in support of planning for future growth; enable the assessment of system performance; support priority setting in the development of the State of Good Repair Program and allow staff to monitor and alarm drainage areas to help prevent basement flooding.
- This project supports the Term of Council Priorities (TOCP) to assess water and wastewater capacity and to enhance integrity of wastewater collection system (TOCP No.5 and TOCP No. 6 respectively)
- The Request for Proposal 2011-044P was issued competitively and Cole Engineering Group Ltd. is recommended for award.

DISCUSSION

1. Background

Acquiring knowledge of the performance of the existing wastewater system is the first step in the Region of Peel's effort to better manage its wastewater assets and plan for future growth. Council recognized this and endorsed the priorities to assess water and wastewater capacity and enhance integrity of wastewater collection system. Past studies for system growth and Inflow and Infiltration (I/I) remediation have utilized a temporary flow and rain monitoring network presently consisting of 52 monitors and six rain gauges. These studies have produced invaluable information critical to system knowledge, inflow and infiltration (I/I)

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remediation, basement flooding remediation works, long term capacity planning, and the development and priority setting of State of Good Repair Programs.

In order to systematically and consistently monitor the performance of the system, staff have determined that a permanent flow monitoring network is crucial. This network will replace many of the temporary monitors presently being utilized and will include flow monitors at critical locations in the system as well as an enhanced rain gauge network allowing staff to monitor rainfall patterns across the drainage basins and analyze the causal relationship to inflow and infiltration and basement flooding. Staff have collaborated with key external stakeholders to ensure effective placement and deployment of the additional rain gauges to assist with data collection to meet the collective requirements. The system will include software and analytical tools to monitor and predict the performance of the wastewater system.

The monitoring network will allow staff to:

- Identify and monitor areas with extraneous flow, and the system's response to rainfall, and identify areas of potential basement flooding
- Identify problematic areas that require remediation
- Support decision making related to infrastructure renewal for the State of Good Repair Program by ensuring infrastructure replacement is sized for actual flows
- Create rainfall IDF (intensity, duration and frequency) curves from rainfall events
- Monitor system performance over time and trend changes
- Update real-time flows for Peel's existing wastewater model (Infoworks CS)
- Analyze areas for future growth impacts
- Monitor flows entering pumping stations
- Provide real-time flow data to the wastewater treatment plant and provide early warning of high flows
- Monitor industrial wastewater contributions in relationship to the sewer surcharge program

2. Procurement Process

The Region of Peel issued a Request for Proposal Document 2011-044P to the following consulting firms: Stantec Consulting Inc., Cole Engineering Group Ltd., XCG Consultants Ltd., AMG Environmental Inc., ADS Environmental Services Inc., Gamsby and Mannerow, AECOM, Genivar Inc. and Insyght Systems Inc.

Four consulting firms submitted proposals on time and the documents were found to be in order. The proposals are submitted in two parts; the first being the technical component and the second the financial component. The Evaluation Team reviews the submissions in accordance with set criteria. The evaluation criteria includes the consultant's understanding of the project, work plan (methodology), value added services, qualifications and experience of the proposed personnel, the consultant's previous experience with similar projects, schedule of work and estimated cost to complete the assignment.

July 27, 2011

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REGION OF PEEL**

Cole Engineering Group Ltd.'s submission provided a comprehensive and realistic approach to identifying the monitoring locations, an alternative methodology to installing flow monitors and a web based distributed rainfall model to assist in determining rainfall and potential flooding within each drainage basin in Peel. In addition, the consultant has proven experience and familiarity with Peel's collection network, having recently completed an I/I analysis for specific areas within Peel. Cole Engineering Group Ltd. also provides an experienced and knowledgeable staff devoted to the project and is presently providing flow monitoring services and I/I reduction services to both York Region and the City of Toronto.

Upon completion of the technical evaluation, only those vendor submissions deemed best qualified to meet the needs of the Agency enter into the second phase of the evaluation where the purchasing representative opens their financial proposals and completes the financial analysis. The scores were then combined and the overall ranking determined.

The evaluation summary is as follows:

Vendor Name and Location	Technical (80 per cent)	Financial (20 per cent)	Price Submitted	Overall Ranking
Cole Engineering Group Ltd., Markham, ON	1	2	\$497,894.00	1
XCG Consultants Ltd., Oakville, ON	3	1	\$477,669.00	2
ADS Environmental Services Inc., Monroe, CT	2	3	\$730,520.39	3

The proposal submitted by Cole Engineering Group Ltd. received the highest score when assessing the combination of technical proficiency and price. The consultant demonstrated a thorough understanding of the assignment, proposed a comprehensive project approach and presented an experienced project team. The staff evaluation team has concluded that the proposal submitted by Cole Engineering Group Ltd. provides the best overall value to the Region of Peel.

July 27, 2011

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FINANCIAL IMPLICATIONS

Sufficient funding is available in Capital Project 09-2405.

CONCLUSION

The project to install permanent flow monitors and rain gauges throughout the Region of Peel supports the Term of Council Priorities to Assess Water and Wastewater Capacity and to Enhance Integrity of Wastewater Collection System. This project will be implemented through collaboration with key stakeholders to ensure effective placement and deployment of the additional rain gauges. The system will include software and analytical tools to monitor and predict the performance of the wastewater system which will enable proactive planning and program development.



per Dan Labrecque
Commissioner of Public Works

Approved for Submission:



D. Szwarc, Chief Administrative Officer

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