
DATE: March 28, 2012

REPORT TITLE: **PROFESSIONAL ENGINEERING SERVICES FOR THE TWINNING OF
ETOBICOKE CREEK SANITARY TRUNK SEWER UNDERNEATH
RUNWAY 23 AT TORONTO PEARSON INTERNATIONAL AIRPORT
CAPITAL PROJECT 11-2210
DOCUMENT 2011-347P
CITY OF MISSISSAUGA, WARD 5**

FROM: Dan Labrecque, Commissioner of Public Works

RECOMMENDATION

That the contract (Document 2011-347P) for professional engineering services for the Twinning of the Etobicoke Creek Sanitary Trunk Sewer underneath Runway 23 at Toronto Pearson International Airport (the Airport) be awarded to Hatch Mott MacDonald in the estimated amount of \$879,731.62 (excluding applicable taxes), under Capital Project 11-2210 in accordance with Purchasing By-law 63-2008.

REPORT HIGHLIGHTS

- The Region of Peel's Water and Wastewater Servicing Master Plan has identified the need for additional capacity for Etobicoke Creek Sanitary Trunk Sewer in order to service future development.
- The Region has been twinning the Etobicoke Creek Sanitary Trunk Sewer from Dundas Street to Highway 407 over the past ten years. The section under the runway is the final phase of this work.
- The Request for Proposal Document 2011-347P was issued competitively and Hatch Mott MacDonald is recommended for award, providing the best overall value to the Region of Peel.

DISCUSSION

1. Background

The Regional Municipality of Peel (the Region) operates and maintains a major sanitary sewer system. There are two major sanitary trunk sewers servicing Peel, Credit Valley Trunk Sewer (West Trunk) and Etobicoke Creek Sanitary Trunk Sewer (East Trunk).

The Regional Municipality of Peel's Water and Wastewater Servicing Master Plan for the Lake Based Systems and the Development Charges Background Study (the Background Study, Region of Peel, 2003) form the background for twinning of this section of the East

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Trunk Sewer. The Master Plan was undertaken to provide a framework for the development of water and wastewater services to accommodate the approved future growth to the year 2031 in accordance with the Region's Official Plan. The Master Plan and the Background Study identified the need for twinning of the proposed section of the Etobicoke Creek Trunk Sewer to address future requirements.

Other sections of the Etobicoke Creek Sanitary Trunk Sewer (East Trunk) between Dundas Street and Highway 407 have been twinned over the past ten years. The proposed section under the Airport runway is the last section to be twinned.

The Region had meetings with the Airport authorities and the scope of the works was defined as per their requirements. In the Request for Proposal (RFP), the Airport security requirements was highlighted as well as coordination, meetings with the Airport authorities for all stages of the works and obtaining permits for performing survey and geotechnical investigation for the preliminary design stage as it may require temporarily shutting down of one of the Airport runways.

It is also prudent to consider an appropriate design and construction methodology under the Airport runway in order to minimize disruption to airport operation and eliminate any impact to the runway. The integrity of the runway must be maintained at all times. In the RFP, the construction methodology was defined as trenchless technology in order to avoid a runway shut-down.

2. Procurement Process

The Region of Peel issued a Request for Proposal Document 2011-347P to obtain professional engineering services to undertake detailed design and construction administration for the trunk sewer.

The Request for Proposal 2011-347P was issued to four professional engineering firms: Hatch Mott MacDonald (HMM), R.V. Anderson Associates Limited, Black & Veatch and CH2M HILL.

A mandatory site visit was held on Thursday, November 17, 2011 at the project site with Toronto Pearson International Airport authorities, representatives from the consulting firms which received a copy of the RFP and the Region's staff. During the site meeting, the location of the existing trunk sewer, existing chambers and manholes, existing creek and utilities, location of runways and taxiways and their proximity to the project site as well as the location of the proposed sanitary trunk sewer, including proposed exit and launching shafts, were visited. During the site meeting, different accesses to the site and security requirements for each access were presented by the Airport authorities.

Three professional engineering 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 Technical Evaluation Team reviews the submissions in accordance with set criteria. The evaluation criteria includes the consultant's understanding of the project and detailed

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design approach and methodology, geotechnical investigation, the Airport security compliance and approvals, construction approach and methodology, contractual issues and overall project management, design team experience and project manager, inspector and contract administrator experience, sub-consultants experience, references of previous projects of similar scale and scope, workplan and appropriateness of project schedule with regards to hours and staff allocation, approach to quality and cost control and estimated cost to complete the assignment.

HMM's approach to the overall project management was detailed and clear, specifically in the areas of wastewater tunneling work and heavy civil engineering design and construction. Their overall key team members have a wealth of experience and have recently successfully completed many tunneling projects similar in scope and size. Their work plan and schedule is in line with the project needs.

HMM has also demonstrated a strong understanding of the sensitivity of working in the Airport. HMM has completed work on the Airport Terminal Redevelopment project in 2010. HMM was responsible for designing and facilitating the construction of the new passenger terminal building, demolition and decommissioning of Terminals 1 and 2, the administration building and the cargo area. HMM also completed the automated people mover tunnels at Washington Dulles International Airport in 2008. The recent two projects have provided exemplary knowledge and experience for HMM to undertake and satisfy the security requirements of the Airport.

HMM's technical submission demonstrates that it is the most capable firm to deliver this assignment considering the complexity of the work, risk mitigation and most importantly the coordination required with the Airport.

Upon completion of the technical evaluation, the purchasing representative completes the financial analysis. The scores are then combined and the overall ranking determined. The evaluation summary was as follows:

Vendor Name	Technical (80 per cent)	Financial (20 per cent)	Price Submitted	Overall Ranking
Hatch Mott MacDonald, Burlington, ON	1	2	\$879,731.62	1
R.V. Anderson Associates Limited, Toronto, ON	3	1	\$670,000	2
Black & Veatch, Markham, ON	2	3	\$1,204,858	3

The proposal submitted by HMM received the highest overall 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 extremely experienced project team. The staff evaluation committee recognizes the complexity and sensitivity of the scope of work and the risks associated with

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projects of this magnitude in the Airport area. Therefore, staff has concluded that the strength of the technical proposal submitted by HMM offsets the differential in the submitted estimated fees and provides the best overall value to the Region.

FINANCIAL IMPLICATIONS

Sufficient funding is available under Capital Project 11-2210.




Dan Labrecque
Commissioner of Public Works

Approved for Submission:



D. Szwarc, Chief Administrative Officer



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c. Legislative Services
 L. Morrow, Acting Director, Purchasing
Manager, Financial Support Unit (FSU)

APPENDIX I

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