



## Report for Action

# Relief Line South - Geotechnical Consulting Services

**Date:** February 15, 2018  
**To:** TTC Board  
**From:** Chief Capital Officer

## Summary

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The purpose of this report is to obtain authorization for the award of Contract G85-355 for Geotechnical Consulting Services for the Relief Line South (RLS). This work is required to determine the preliminary soil, rock and groundwater conditions along the alignment, which is then used to develop preliminary design and costing for the station and tunnel structures. Geo-environmental investigations are also part of these services in order to provide information to support property acquisition, soil and groundwater disposal, and health and safety planning.

The work of this contract will advance the preliminary design of the RLS, based on the approved alignment, to a Class 3 cost estimate and schedule. At completion of this stage gate, a report is scheduled to be presented to the Board and City Council in the fourth quarter of 2019.

## Recommendations

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It is recommended that the Board authorize the award of Contract G85-355 for Geotechnical Consulting Services for the Relief Line South to the following firms, each in the noted upset limit amounts, in Canadian funds, for a two year duration from the notification of award, on the basis of lowest total evaluated price of the qualified proponents:

Firm	Upset Limit
Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited (AMEC)	\$9,500,000.00
WSP Canada Inc.	\$7,750,000.00
Thurber Engineering Ltd.	\$7,750,000.00
Total Overall Upset Limit Amount	\$25,000,000.00

## **Financial Summary**

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Sufficient funds are included in the Relief Line Capital Project for this requirement as approved in the 2018-2027 Capital Budget and Plan by the Board on November 28, 2017.

The Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **Equity/Accessibility Matters**

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The RLS will be designed and constructed to be accessible.

## **Decision History**

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The TTC's 2017-2026 Capital Budget includes \$55.52M for preliminary RLS design, as approved by City Council on February 15, 2017.

At its meeting of July 12 to 16, 2016, City Council approved the Pape-Eastern-Queen alignment for the RLS, subject to assessment of an additional alignment segment, west of Pape Avenue, starting immediately north of the GO tracks on Pape Avenue to south of Queen Street, with a station box at Queen Street and Carlaw Avenue.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX16.1>

In May 2017, City Council approved the following:

- The segment of the Relief Line South from immediately north of the GO tracks at Gerrard Avenue East south to Queen Street East;
- Commencement of the TPAP Process;
- Advance the planning and design of the RLS based on the recommended alignment and report to City Council when a Class 3 cost estimate and schedule have been developed for the project, which is anticipated to be in the fourth quarter of 2019; and
- The City Manager to negotiate and enter into a Memorandum of Understanding with Metrolinx and TTC to define roles and responsibilities and the cost-sharing agreement between Metrolinx, the City of Toronto and Toronto Transit Commission to complete the planning and design work required to develop a Class 3 cost estimate and schedule for the RLS.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.EX25.1>

## **Issue Background**

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City, Metrolinx and TTC staff are collaborating to advance the preliminary design for the RLS project.

This report addresses the retention of firms that will perform geotechnical, geo-environmental and hydrogeological investigations, in support of the preliminary design of the Relief Line South. This work is required to determine and assess the preliminary soil, rock and groundwater conditions along the length of the alignment. The information obtained through these preliminary investigations will be interpreted by the geotechnical engineers, and provided to the tunnel and station design teams to enable preliminary structural design and costing of the station and tunnel structures. This information is also used to establish preliminary design parameters for the tunnel boring machine.

In addition, information obtained through the preliminary geo-environmental investigations is used to assess the environmental condition and potential impacts of both the soil and groundwater along the length of the subway alignment. This information is used, along with Ministry of the Environment and Climate Change criteria and City By-laws, to determine the preliminary disposal requirements, including cost, for both soil and groundwater.

The geo-environmental investigations (Phase I and II Environmental Site Assessments) are also part of the due diligence for planning property acquisition.

The work of this contract is required regardless of the project delivery strategy.

Contract work will be administered on a work assignment release basis. As each required task is identified, a work plan is prepared with an estimate. Work on the task will only commence as authorized by TTC staff in the form of a work assignment release, and payment for services will be based on the actual work performed at the approved billing rates.

## **Comments**

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A Request for Proposals was publicly advertised on the Merx website as well as the TTC's website as of November 13, 2017. Copies of the proposal documents were downloaded by 29 companies, of which 11 submitted a proposal by the closing date of January 4, 2018.

The evaluation of proposals was based on a two envelope process which consisted of both qualitative and pricing components. The compliant proposals were first reviewed and rated by the TTC evaluation team on the qualitative aspects of the proposal using the associated weightings described in the proposal document. The proposals that scored a total qualitative rating of 80 or better were considered qualified, and the pricing components for these submissions were opened for evaluation. The evaluation criteria are described in Attachment 1.

Peto MacCallum Ltd. and Sirati & Partners Consultants Ltd. submitted proposals that were not compliant. Peto MacCallum Ltd.'s proposal did not contain a Proposal Form. Sirati & Partners Consultants Ltd.'s proposal did not contain Appendix B – Proposed Project Key Staff Summary Form. TTC legal opinion was sought and these proposals were deemed to be non-compliant in accordance with TTC's Bid Irregularities and were not evaluated further.

Of the remaining nine proposals, the following six achieved a score of 80% or more, based on the qualitative evaluation and had their pricing components evaluated:

- Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited;
- Englobe Corp.;
- GHD Limited;
- Golder Associates Ltd.
- Thurber Engineering Ltd.; and
- WSP Canada Inc.

Of these, the following three companies had the lowest evaluated price and are recommended for award:

- Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited;
- Thurber Engineering Ltd.; and
- WSP Canada Inc.

The recommended upset limits were calculated based on the total evaluated prices of the three Proponents. As AMEC's total evaluated price is approximately 20% lower than Thurber and WSP, their recommended upset limit amount is approximately 20% higher. As Thurber and WSP's pricing was within 1% of each other, their recommended amounts are identical.

These three companies have satisfactorily performed previous work for the TTC.

By awarding Contract G85-355, the geotechnical, geo-environmental and hydrogeological work will proceed in order to support the RLS preliminary design.

## **Contact**

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## **Signature**

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Susan Reed Tanaka  
Chief Capital Officer

03080-60-115

**ATTACHMENT 1  
RELIEF LINE SOUTH - GEOTECHNICAL CONSULTING SERVICES  
EVALUATION CRITERIA**

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**A. Corporate Qualifications**

- Number of years in business
- Depth of available resources
- CADD facilities and compliance to TTC CADD standards
- Local in-house laboratory facilities
- Relevant corporate experience

**B. Staff Qualifications/Experience**

- Number of years of direct experience
- Technical qualifications
- Relevant experience

**C. Pricing Evaluation**

COMPANY NAME	TOTAL EVALUATED PRICE**
<b>Amec Foster Wheeler Environment &amp; Infrastructure, a Division of Amec Foster Wheeler Americas Limited***</b>	\$5,850,888.58*
<b>WSP Canada Inc.***</b>	\$6,881,054.21*
<b>Thurber Engineering Ltd. ***</b>	\$6,995,135.05*
GHD Limited	\$6,999,478.77*
Englobe Corp.	\$7,634,025.07*
Golder Associates Ltd.	\$7,733,938.77*

(\*) - Subjective quantities were used to establish comparative pricing for evaluation purposes only.

(\*\*) – The 2-year Contract Total Evaluated Price is derived as a sum of estimated hours multiplied by the hourly billing rate of each key staff member, multiplied by the estimated hours, plus the sum of the estimated quantities for various services multiplied by the unit prices. There were 111 unit price items identified on the Price Schedule for the various services. The RFP Document indicated that TTC intended to award up to 3 contracts.

(\*\*\*) - Recommended for award.