

# TORONTO TRANSIT COMMISSION REPORT NO.

**MEETING DATE:** April 27, 2009

**SUBJECT:** PROCUREMENT AUTHORIZATION - DESIGN & SUPPLY RADIO  
BASED AUTOMATIC TRAIN CONTROL FOR YUS SUBWAY

## **ACTION ITEM**

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### **RECOMMENDATION**

It is recommended that the Commission authorize:

1. a total expenditure up to \$57,552,402.72 (CAD) for the Design and Supply of Radio Based ATC/CBTC for YUS Subway as more particularly set out in paragraphs (a) – (e) below:
  - (a) the award of contract to Alstom Transportation Information and Security Inc. in the amount of \$50,757,369.60 (CAD), inclusive of GST, for a Contract for Design & Supply of Radio Based ATC/CBTC For YUS Subway (Proposal No. P31PV08752);
  - (b) the expenditure of funds up to an amount of \$100,000.00 (CAD) for freight and brokerage fees associated with the supply of the Radio Based ATC/CBTC for YUS Subway;
  - (c) the expenditure of funds up to the amount of \$779,404.44 (CAD) for Recommended Maintenance Spare Parts for the Radio Based ATC/CBTC for YUS Subway;
  - (d) the expenditure of funds up to the amount of \$2,415,633.68 (CAD) for Provincial Sales Tax (Self-Assessed) related to the Design and Supply of Radio Based ATC/CBTC for YUS Subway; and
  - (e) the expenditure of funds up to 3,500,000.00 (CAD) for Foreign Exchange Adjustment relating to Contract for the Design and Supply of Radio Based ATC/CBTC for YUS Subway.

### **FUNDING**

Sufficient funds for this expenditure are included as set out in Project 2.4 – YUS ATO Resignalling Line on pages 515 – 524 of the TTC 2009-2013 Capital Program which was approved by City Council on December 10, 2008.

## **BACKGROUND**

The Resignalling of the YUS subway line utilizing Automatic Train Control (ATC) will improve safety, capacity, operating efficiencies and cost effectiveness throughout the length of the line. ATC enforces a minimum safe separation between trains based on the safe braking distance from the last verified location of the rear of a preceding train, or any other obstruction such as disturbed switches. This state of the art technology allows trains to travel closer together than the traditional fixed block system currently employed on the YUS line. This ability for trains to travel closer together increases both service carrying capacity and flexibility; resulting in more trains to be scheduled and proportionally more passengers to be carried. There will be increased opportunities for operational flexibility which will allow for improved capability to manage delays and other operational efficiencies.

## **DISCUSSION**

The Contract is for the design, supply, and technical support for the installation and testing of an Automatic Train Control (ATC) system for the Yonge-University-Spadina Subway Line. The work includes the supply of processor-based Zone Controllers that control sections of the line and communicate via a radio-based Data Communications System (DCS) to the trainborne controllers on the new Toronto Rocket (TR) trains. The Zone Controllers will also communicate with the Central Signalling System at Transit Control, and the new Computer-Based Interlocking (CBI), which is being supplied under a separate contract.

The proposal included a submission of unit prices for the supply of maintenance spare parts. Specified Option Prices were required to be submitted for the provision of: an Automatic Train Supervision System capable of supporting Communications-Based Train Control (CBTC); additional ATC-CBTC equipment for the new YUS line extensions TYSSE and North Yonge; and additional ATC-CBTC sets of trainborne equipment required to equip the extra TR trains that will be required to provide the planned increase in train throughput that will be achievable with ATC-CBTC. Consideration for the optional prices, which are valid up to 36 months from notification of award, is subject to future funding.

A Request for Proposals was posted on the TTC's Web site as of July 10 2008. A total of ten companies requested copies of the proposal documents, of which four submitted proposals. The successful proponent will be required to provide an Irrevocable Letter of Credit in the amount of 30% of the contract value.

The Proposal Documents specified a four step evaluation process to determine a Preferred Proponent which evaluation required that a Proponent pass each step before proceeding to the next step. These steps were as follows:

- Step 1 - a commercial compliancy review;
- Step 2 - a pass/fail criteria test (based mainly on previous experience)
- Step 3 - a technical evaluation assessment (all proponents who scored 85% or higher were deemed to be equal), and;

- Step 4 - an evaluation of the separately submitted sealed pricing information.

The Proponent that passed Steps 1, 2 and 3 and had the lowest evaluated price was determined to be the Preferred Proponent.

Once a Preferred Proponent was determined based on the 4 Step evaluation process, the TTC reserved the right to negotiate any aspect of the Preferred Proponent's Proposal including any amendments to the Proposal that were reasonably required to accommodate the design and performance intent of the Contract.

Bombardier Transportation Canada Inc. and Thales Rail Signalling Solutions Inc. both failed to provide an acceptable Agreement to Provide an Irrevocable Letter of Credit in accordance with the mandatory submission requirements as set out in the Request for Proposals (RFP). As such, neither bid was formally evaluated past Step 1.

Alstom Transportation Information and Security Inc. (Alstom) and Siemens Canada Limited both submitted proposals that passed all the proposal evaluation steps. Upon a review of the pricing submissions (Step 4 of the evaluation), it was determined that Alstom had provided the lowest evaluated priced proposal as detailed in Appendix A and Alstom was the Preferred Proponent.

Alstom has completed work of a similar size and nature in the past, including the supply of the Central Signalling System at the Commission's Transit Control Centre. Alstom is not registered to collect Ontario PST which will be self-assessed and paid by the Commission. The proposal price is subject to foreign exchange adjustment based on rates stated in the proposal. Based on a review of Alstom's financial statements, it appears that Alstom has the financial capability to perform this work.

After concluding the evaluation of the bids and determining that Alstom was the Preferred Proponent, meetings were held with Alstom, in accordance with the express terms of the RFP, to negotiate certain aspects of its proposal. Alstom's proposal meets the requirements of the RFP and is considered acceptable and they are recommended for award.

### **JUSTIFICATION**

The ATC-CBTC Resignalling of the YUS using ATC is necessary to meet the predicted increase in ridership by providing the maximum train throughput capacity utilizing the latest proven technology along with the new Toronto Rocket trains.

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April 7, 2009

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Attachment: Appendix A

## APPENDIX A

### DESIGN & SUPPLY RADIO BASED ATC/CBTC FOR YUS SUBWAY

#### PROPOSAL SUMMARY

##### PROPONENT

Alstom Transportation  
Information and Security Inc. \*

Siemens Canada Limited

##### PROPOSAL PRICE

\$50,757,369.60 (CAD) \*\*

\$110,164,726.00 (CAD)

\* Recommended for Award

\*\* Excluding PST