

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: July 14, 2010

SUBJECT: PROCUREMENT AUTHORIZATION AMENDMENT
TORONTO-YORK SPADINA SUBWAY EXTENSION PROJECT
CONTRACT NO. A85-75C – VAUGHAN CORPORATE CENTRE
STATION
CONTRACT AMENDMENT NO. 2

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission authorize Contract Amendment No. 2 to Arup Canada Inc., in the amount of \$11,556,000.00 for the completion of detailed design and support during construction for the Vaughan Corporate Centre Station, increasing the total upset limit amount to \$23,556,000.00 from \$12,000,000.00.

FUNDING

Sufficient funds for this expenditure are included in the Toronto-York Spadina Subway Extension (TYSSE) project, as set out on pages 1439 to 1442 of the TTC 2010-2014 Capital Program (Category - Expansion) which was approved by City Council on December 8, 2009.

BACKGROUND

The TTC is implementing the design and construction of an underground subway line from the existing Downsview Station on the Spadina line to the proposed Vaughan Corporate Centre Station located in the City of Vaughan, Region of York. The 8.6 km extension includes six new subway stations, the terminus of which is Vaughan Corporate Centre Station.

The Toronto-York Spadina Subway Extension (TYSSE) project is being funded by the Federal Government, the Province of Ontario, the Regional Municipality of York and the City of Toronto. The TTC is managing the design and construction of the YYSSE project and will own and operate the subway extension.

At the Commission meeting of October 23, 2008, the Commission approved YYSSE's recommendation to award Contract A85-75C for the design of Vaughan Corporate Centre Station to the design team lead by Arup Canada Inc., in the upset limit amount of \$12,000,000.00. The fee was intended to cover design services for the Vaughan Corporate

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Centre Station including preliminary design, detailed design, design support during construction and preparation of record drawings.

At the Commission meeting on December 16, 2009, the Commission approved the conceptual design of the Vaughan Corporate Centre Station. Public presentation of the station concept took place on March 10, 2010, generally with positive feedback.

Contract A85-75C details are as follows:

Original Contract Upset Limit Amount (including GST)	\$12,000,000.00
Previous Amendment	\$0.00
This Contract Amendment (including HST)*	<u>11,556,000.00</u>
Total Revised Upset Limit Amount:	\$23,556,000.00

(*Note: HST is included for work done after July 01, 2010)

The additional amount being requested includes approximately \$1.9M that will be reimbursed by York Region and the City of Vaughan for design of the Highway 7 BRT connection and widening of Millway Avenue.

No work has been done on this contract amendment.

DISCUSSION

The original upset limit was based on the conceptual station design in the Environmental Assessment report in 2006 with an estimated final cost of \$135M. The design consultant was presented with the TYSSE station design philosophy which emphasizes key elements in the TTC design standards, including bright open spaces maximizing the use of natural light, strong aesthetics and public artwork, column free structures, where possible, with high ceilings, and sustainable design to meet the Toronto Green Standard.

The station design concept was developed with input from the major stakeholders including York Region, the City of Vaughan and York Region Rapid Transit Corporation. The subway station is positioned in such a way so as to minimize the impact on surrounding properties and utilities. The design includes a crossover structure south of the station box and a double tailtrack structure north of the station. The main station entrance is on the west side of Millway Avenue north of Highway 7.

The report presented at the December 16, 2009 Commission meeting indicated a capital cost of approximately \$186M, i.e. a cost increase of \$51M over the amount originally budgeted for this station, which is to be covered by the project contingency allowance.

The \$51M cost increase accounted for several conditions not foreseen when the original project budget was established. The station concept presented in the Environmental Assessment required significant modification to fully address field conditions, City of Vaughan planning needs and adoption of updated design criteria. The primary reasons for the increase in the consultant's fees were for scope changes and for concept development to reach a design that was acceptable to the Commission and the City of Vaughan.

Additional design activities are summarized as follows:

- High water table requiring special design measures to counteract flotation of the station box, and detailed design of a more robust structure, impacting the main station box as well as the tailtrack and crossover structures;
- Sustainability and Green Standard, requiring additional studies and design, such as cool roof, energy modelling;
- Redesign of the main entrance pavilion to reduce cost, and then to reorient the structure to address York Region Transit (YRT) and City of Vaughan requirements;
- Extensive preliminary design and costing of alternative bus terminal concepts to address YRT and City of Vaughan requirements, which was later abandoned due to excessive implementation cost;
- Design of an off-street bus terminal for YRT, in lieu of the on-street terminal originally described in the environmental assessment report;
- Design of an integrated connection between the Highway 7 BRT station and the subway station including stairs, escalators and elevators from two bus platforms. Includes planning and design of construction staging with the Highway 7 reconstruction for the busway, and the potential for a separate construction contract;
- Revisions to the track alignment to minimize impact on adjacent properties to reduce potential business loss claims. Several alternatives were evaluated to find the optimum alignment;
- Design of rough-in for the PEDs;
- Addition of construction access shafts to the crossover box and tail track structure to facilitate installation of track materials;
- Extensive re-evaluation and redesign of the station to reduce scope and costs to address major budget overrun;
- Design of underground passage from the station box across Millway Avenue to provide access to the YRT bus terminal;

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- Detailed design of two additional lanes for Millway Avenue to meet City of Vaughan requirements. This requires extensive discussion of alignment options and cost sharing with the City of Vaughan;
- Environmental monitoring of Black Creek prior to construction.

Recoverable fees include \$1.55M from Metrolinx/York Region for the Viva BRT connection and Highway 7 expansion work. Another recoverable fee is \$350,000.00 from the City of Vaughan for the Millway Avenue expansion from three to five lanes.

The total authorization being requested as an upset limit, including design support during construction will not exceed \$23,566,000.00, which is in line with the Professional Engineers Ontario (PEO) guidelines for this type of work. The original authorized fee of \$12,000,000.00 will only be increased on the basis of work plans approved by staff.

JUSTIFICATION

The Contract Amendment is required to pay for the additional engineering costs associated with the increased project work.

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