

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: June 2, 2010

SUBJECT: PROCUREMENT AUTHORIZATION AMENDMENT
TORONTO-YORK SPADINA SUBWAY EXTENSION PROJECT
CONTRACT NO. A85-75B – FINCH WEST STATION
CONTRACT AMENDMENT NO. 6

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission authorize Contract Amendment No. 6 to The Spadina Group Associates (TSGA), in the amount of \$6,589,044.26 for the completion of detailed design and support during construction for the Finch West Station, increasing the total upset limit amount to \$19,000,000 from \$12,410,955.74.

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, one of which is the Finch West 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 A85-75B for the design of Finch West Station to the design team lead by Stevens Group Architects, in the upset limit amount of \$12,000,000. The fee was intended to cover design services for the Finch West Station including preliminary design, detailed design, and design support during construction and preparation of record drawings.

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At the Commission Meeting on January 20, 2010, the Commission approved the conceptual design of the Finch West Station. Public presentation of the station concept took place on March 30, 2010, generally with positive feedback.

Contract A85-75B details are as follows:

Original Contract Upset Limit Amount	\$12,000,000.00
Previous Amendments (Detailed Design and Construction Documentation of the New Fire Hall)	\$410,955.74
This Contract Amendment	<u>\$6,589,044.26</u>
Total Revised Upset Limit Amount:	\$19,000,000.00

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 \$109M. 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 the City of Toronto Planning and the Commission. The subway station was positioned in such a way so as to minimize the impact of utility relocation and diversion. The design includes a four bay bus terminal on the east side of Keele Street and a main entrance on the west side just north of the intersection with Finch Avenue West.

The report presented at the January 20, 2010 Commission meeting indicated a capital cost of approximately \$134 million, i.e. a cost increase of \$25 million over the amount originally budgeted for this station, which is to be covered by the Project contingency allowance. Through the value engineering process conducted by TTC and the design consultant, the indicated capital cost has been reduced to \$131 million, reducing the increase to \$22 million, which is to be covered by the Project contingency allowance.

The \$22 million 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 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 Toronto.

Additional design activities related to the station 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 station structure.
- Sustainability and Toronto Green Standard, requiring additional studies and design (Green roof, energy calculation, etc.).
- Increasing the extent of egress facilities requiring two extra emergency exits.
- Provision of drop shafts at the south limit of the contract consisting of two 17m long by 4m wide individual shafts over the northbound and southbound tracks from street level down to track level.
- The transformer and substation location resulted in the evaluation of numerous locations and development of several design concepts to resolve the optimum operational requirements.
- Redesign of station concept to address excessive capital cost. During the initial concept development, the station box alignment straddled the east right-of-way limit of Keele Street to provide for an open concept allowing natural light to penetrate down through concourse/mezzanine levels down to the station platform. This required relocation of major utilities along the east side of Keele Street. Once the high cost of this concept became apparent, a new concept was developed whereby the station alignment was moved 7 metres to the west to minimize utility relocation costs and with a smaller overall station footprint.
- Design of rough-in for platform edge doors.
- Redesign of bus terminal/transformer and substation structure, and main entrance to reduce cost and achieve the project target budget.
- Several design iterations to accommodate Hydro One Networks Inc. (HONI) requirements for the Tangiers Road extension and the parking lot below the HONI cables.

The design consultant was also requested to perform additional activities that would not normally have been part of the station design work, valued at \$2.1 million, as follows:

- Completion of construction drawings and specifications for the demolition of the existing fire hall.
- Coordination between the Finch West Station Design Team and Finch West LRT designers was required to delineate responsibilities for water, gas and storm utilities being reconfigured within the Keele Street and Finch Avenue intersection. Utility

designs had to be modified to accommodate both the Finch West LRT and project requirements.

- Detailed design of major utility relocations on Keele Street required for construction of the turn back track structure (pocket track) north of Finch West Station.
- City of Toronto requirement that Finch West Station have 120 long term secure bike storage spots.
- Producing and coordinating the traffic management staging plans related to the Finch West Station and north and south tunnel works.
- Additional Environmental scope: EA Amendment for the pocket track, EMP (environmental monitoring plan), ZOI (zone of influence for MOE) and arborist.
- Traffic signal design originally assumed to be undertaken by the City of Toronto.
- Additional disbursements for the international part of the design team.

The total authorization being requested as an upset limit, including design support during construction will not exceed \$19,000,000.00 which is in line with the Professional Engineers of Ontario (PEO) guidelines for this type of project and consistent with costs on previous TTC projects. The design fees are still being negotiated with the design consultant and the original authorized fee of \$12,410,955.74 will only be increased on the basis of work plans approved by staff.

The contract amendment is being requested at this time to ensure that sufficient authorization is in place for the design work to continue so as to avoid delaying completion of the work and late delivery of the Project.

JUSTIFICATION

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

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