Form Revised: September 1999

TORONTO TRANSIT COMMISSION

REPORT NO.

MEETING DATE: September 19, 2007

SUBJECT: PROCUREMENT AUTHORIZATION AMENDMENTS-

FOR FIRE VENTILATION UPGRADE PROJECT -

CONSULTANT SERVICES

CONTRACTS D85-9A, D85-9B, D85-9C

RECOMMENDATION

It is recommended that the Commission authorize an increase in the above three contracts for design and support during construction for the Fire Ventilation Upgrade Project as follows:

1. Contract D85-9A with Arup Canada Inc. (Arup)

Increase amount by $1,930,000 for work on Eglinton Station, bringing the total upset limit amount to $4,435,000.

2. Contract D85-9B with Earth Tech Canada Inc. (Earth Tech)

Increase amount by $1,640,000 for work on Lawrence Station, bringing the total upset limit amount to $4,165,000.

3. Contract D85-9C with Hatch Mott MacDonald Ltd. (HMM)

Increase the amount by $1,650,000 for work on North York Centre Station, bringing the total upset limit amount to $4,176,245.

FUNDING

Sufficient funds for the above expenditure are included in Program 3.9 – Buildings and Structures – Fire Ventilation Upgrade Project, (as set out on pages 751-765, State of Good Repair/Safety Category) of the TTC 2007-2011 Capital Program which was approved by City Council on March 7, 2007.

BACKGROUND

The purpose of the Fire Ventilation Upgrade Project is to upgrade the existing subway ventilation system to improve ventilation capacity to reduce the risk and improve safety of customers and employees in the event of a major fire in the subway system by installing high capacity fans and other related equipment.

The project is being implemented in eleven stages with a current targeted completion date of 2019. The design work for Stage 1, comprising of five stations: York Mills, Finch, North York Centre, Lawrence and Eglinton Stations, is scheduled to be completed in 2008 by internal engineering staff. However, due to the complexity of design requiring more resources than originally anticipated, work has only been completed for two stations, York Mills and Finch. Therefore, it is necessary to retain external engineering services to perform design work on the remaining three stations to meet the schedule.

Following a competitive procurement process, three contracts were awarded at the February 9, 2005 Commission meeting to Arup, Earth Tech and HMM respectively for preliminary engineering analyses, design and support during construction for five stations each, for a total of 15 stations in stages 2 to 6 as identified on the attached map (Appendix A). Currently, consultants are engaged in preliminary engineering analyses work including Subway Environment Simulation and Computational Fluid Dynamic modelling and noise studies. When complete, Engineering Design Reports will be issued identifying design options for each station. It is anticipated that design options will be finalized in early 2008 for the 15 stations.

Contract Details are as follows:

	D85-9A Arup	D85-9B Earth Tech	D85-9C HMM
Original Upset Limit Amount	$2,500,000	$2,500,000	$2,500,000
Previous Amendments	5,000	25,000	26,245
This Amendment	1,930,000	1,640,000	1,650,000
Total Revised Upset Limit Amount	$4,435,000	$4,165,000	$4,176,245

Work on these amendments are 2% complete.

The original upset limit amount of $2,500,000 for each contract was based on assumptions of design direction which are being modified as further engineering assessments are being made through detailed computer modelling. Specifically, staff had originally allocated $100,000 per station for preliminary engineering analyses and $400,000 per station for design and support during construction for a total of $500,000 for each station. Based on in-house design experiences at York Mills and Finch Stations and the consultants' on going preliminary engineering analyses for the 15 stations, the resource requirement is significantly higher than originally anticipated. The assignment for all of the 15 stations being designed by the consultants will require significant

increases to the upset limit amounts. Once the engineering analyses are completed to identify recommended design options, staff will report back to the Commission seeking approval to increase the upset limit amount at that time for design and support during construction for the initial 15 stations.

DISCUSSION

The Commission currently has the industry's foremost experts under contracts for the Fire Ventilation Upgrade Project. Three consultants named in this report are providing engineering design services for the 15 stations and a fourth consultant is providing technical peer review service for all design work under a separate contract.

Therefore, it is advantageous to add the design services and support during construction for North York Centre, Lawrence and Eglinton Stations to the existing contracts. The work required is identical to the work being done under the existing three contracts for the 15 stations and the project delivery schedule for Stage 1 can be met.

Staff conducted an assessment to determine which station was the most appropriate to assign to which consultant. Lawrence Station is assigned to Earth Tech based on their familiarity with the station through their involvement with the design of Subway Asbestos Decontamination Facility at the station. This reduces preliminary site investigation and results in a quicker turnaround time for the design. Similarly, North York Centre Station is assigned to HMM because of their involvement with the original station design, eliminating preliminary site investigation. Eglinton Station is assigned to Arup in order to evenly distribute the work load amongst the three contracts.

The consultants were requested to provide a work plan for design and support during construction. The fees submitted by the consultants for professional engineering services to carry the work have been reviewed by staff and are considered to be reasonable based on both the experience of staff and Professional Engineers of Ontario guidelines for schedule of fees for Engineering Services.

JUSTIFICATION

Authorization to amend three contracts D85-9A, D85-9B and D85-9C will allow the consultants to complete the design to meet the schedule and provide support during construction at each of the additional three stations.

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August 21, 2007

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