



STAFF REPORT ACTION REQUIRED

Procurement Authorization – Supply, Installation and Maintenance of Faregates for PRESTO

Date:	July 29, 2015
To:	TTC Board
From:	Chief Executive Officer

Summary

TTC and Metrolinx executed an Agreement in 2012 for the full roll-out and adoption of the PRESTO fare payment system across all TTC transit modes. Under the terms of the TTC-Metrolinx Agreement, Metrolinx is responsible for supplying and maintaining all PRESTO fare processing equipment. Metrolinx has awarded a contract to Scheidt & Bachmann GmbH (S&B) for the supply of various PRESTO fare payment processing devices. The contract is intended to be used by Metrolinx and transit agencies participating in the PRESTO system. The contract award includes the option to supply faregate devices complete with an integrated PRESTO card reader.

Currently, farelines at TTC subway stations use rotary style turnstiles, mechanical crash gates, and varied types of easy access gate equipment to control customer entry and exit. Modifying the various types of current fareline equipment to accept PRESTO card payments is technically challenging and costly. Faregate devices are equipped with a PRESTO card reader and include a paddle based approach (see Appendix A) for providing secure entry and exit control along with other sophisticated revenue management and access control systems. Purchasing faregates to replace existing TTC fareline equipment supports the modernization of the TTC and timelines associated with the PRESTO implementation. Although the Metrolinx contract includes the option for purchasing faregates with integrated PRESTO card readers, Metrolinx is not responsible for the replacement or modification of existing TTC fareline equipment.

Recommendations

It is recommended that the Board:

1. Approve the award of a contract up to a maximum value of \$17.1 million for the purchase of up to 450 faregates from Scheidt & Bachmann GmbH (S&B), including associated implementation work and maintenance, in accordance with Metrolinx's Master Agreement with Scheidt & Bachmann for "The Supply and Delivery of Hardware Only Solution for Validator Devices". Additionally, negotiate TTC legacy fare media add-ons, and associated license fees, software and hosting services for the faregates.
2. Authorize TTC staff to negotiate and execute an acceptable agreement with Scheidt & Bachmann (based on the terms of the Metrolinx Master Agreement) and all terms and conditions acceptable to TTC's General Counsel.

Implementation Points

Following approval of the recommendations, staff will:

- Negotiate an agreement and contract with S&B for the supply of up to 450 faregates, and associated implementation work, license fees, TTC legacy fare media add-ons, maintenance, software and hosting, using the Metrolinx contract award to S&B as the basis; and
- Confirm the detailed schedule for the PRESTO implementation.

Financial Summary

Approximately \$17.1 million in funding required for the initial supply, installation and maintenance for the new faregates is available from the following sources: Toronto-York Spadina Subway Extension (TYSSE CTT134), TTC Turnstile Replacement (CTT056), TTC-PRESTO Project (CTT141) and Metrolinx.

In June 2015, TTC staff informed the Board of the plan to replace all existing turnstiles and fareline equipment with new faregates (approximately 1,100 new faregates in total). The overall capital cost for the supply, installation and maintenance of 1,100 new faregates is estimated to be \$49 million. As noted above, funding sources for the initial procurement (\$17.1 million) have been identified and the remainder of the total cost will be submitted as part of the 2016-2025 Capital Budget and Plan. Subject to Council approval of the TTC's 2016-2025 Capital Budget and Plan in February 2016, TTC will seek Board approval to award the supply, installation and maintenance of the remaining new faregates.

In addition to the capital expenditures, business discussions are underway regarding the on-going faregate maintenance requirements. The on-going operating impacts are

estimated to be up to \$4 million per year for vendor support and maintenance. These costs of up to \$4 million represent an increase to the Operating Budget for faregate maintenance and support but will not impact the Operating Budget until 2018. These costs are incorporated into the capital costs of the project (\$49 million) for the first two years of the implementation. After this period, these costs will be included as part of the TTC 2018 Operating Budget request.

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

Decision History

May 2012 – Framework for Agreement between TTC and Metrolinx/PRESTO. TTC Board (Commission):

- Reaffirmed the framework and general principles for implementing Metrolinx/PRESTO fare collection system on TTC premises (including vehicles, as applicable), that were approved by the Commission on November 23, 2011;
- Delegated authority to the Chief Executive Officer to continue to negotiate with Metrolinx and execute any and all necessary agreements with Metrolinx related to the design, implementation and operation of the PRESTO Services.

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2012/May_1/Supplementary_Agenda_Other/Supplementary_Agenda.jsp

December 2012 – TTC/Metrolinx Agreement. The TTC entered into the Master E-Fare Collection Outsourcing Agreement (the Agreement), dated Nov. 28, 2012 with Metrolinx to implement the PRESTO farecard system at the TTC. The Agreement includes provisions for Metrolinx to design, procure, build, install, operate, service and maintain the PRESTO farecard system consistent with agreed upon TTC business and performance requirements. Metrolinx will retain 5.25% of revenue collected by the PRESTO system. The TTC's scope of work within the Agreement includes supporting Metrolinx activities and the overall project management and oversight to ensure the PRESTO farecard system fully meets TTC's business requirements

http://www.metrolinx.com/en/projectsandprograms/presto/presto_reports.aspx

August 2014 – The Board received a status update on the implementation of PRESTO at the TTC. The presentation included a new plan for farelines that would include both faregates and integrated turnstiles. The presentation identified that 60 faregates were to be acquired from Metrolinx through a special arrangement between TTC and Metrolinx.

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2014/August_19/Agenda/index.jsp

January 2015 - Metrolinx Contract Award. Metrolinx awards contracts to S&B for the design, development, installation and maintenance of three categories of Electronic Fare Management devices.

January 2015 - Confirmation of PRESTO Program Implementation Targets on TTC. TTC and Metrolinx jointly developed a PRESTO implementation program that includes: all legacy streetcars by end of 2015; all TTC stations and transit modes to be PRESTO-enabled by the end of 2016.

<http://www.ttc.ca/News/2015/January/index.jsp>

June 2015 - Board Report provided PRESTO implementation update and discussed changes to station operations that would be supported by installation of faregates.

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2015/June_22/Agenda/index.jsp

Issue Background

TTC and Metrolinx executed an Agreement in 2012 for the full roll-out and adoption of the PRESTO fare payment system across all TTC transit modes. Currently, PRESTO has been enabled at 26 subway stations and PRESTO devices have been installed on all new low-floor streetcars. The implementation of the PRESTO system will continue, with all legacy streetcars receiving PRESTO devices by the end of 2015. In addition, customers will be able to use the PRESTO system at all subway stations and throughout the entire TTC by the end of 2016.

Access control to TTC stations is currently controlled by TTC Collectors in booths at stations and mechanical fareline equipment. The fareline equipment consists of turnstiles, mechanical crash gates, and various types of easy access gate equipment that accept TTC tokens and passes. In order to support the implementation of PRESTO, it was originally thought desirable that existing and new turnstile equipment should be capable of accepting existing fare media as well as PRESTO and debit/credit (open payment) card fare payments. To that end TTC staff has designed a technical turnstile solution capable of accepting tokens, passes, and PRESTO fare payments for a limited number of existing turnstile devices.

However, the existing turnstile equipment is deteriorating and has severe corrosion and mechanical problems. In addition, due to the complexities associated with our existing fare media, the development of a solution for all existing turnstile equipment has been technically challenging. It has taken considerably longer than anticipated and is still not completed. Incorporating these older technologies into newer turnstiles and adapting it to the PRESTO system has also driven up the cost of new turnstiles, while limiting the number of suppliers to a few specialty shops capable of assembling the different technologies into one unit.

In October 2013 Metrolinx initiated a procurement process to purchase fare management device hardware, software and services to complete the PRESTO implementation at the TTC and other participating transit agencies within the Province. TTC staff provided Metrolinx the technical specifications for faregate equipment to be included in the RFP. The process began with a publicly advertised Request for Qualification (RFQ) for three categories of devices:

- (1) Hardware Only Solution for Validator Devices;
- (2) Hardware Only Solution for Handheld and Point of Sale Devices; and
- (3) Hardware and Software Solution for Self-Serve Devices

Category 1 included the provision for the supply of Integrated Fare Gate Transaction Processors (i.e. faregates) with an integrated PRESTO card reader. The Metrolinx contract covers the scope of TTC's requirements, including device installation and maintenance.

The Metrolinx RFQ closed in January 2014 and resulted in the prequalification of four firms in Category 1. In May 2014, three separate Requests for Proposals (RFP's) were issued to the pre-qualified firms. The successful proponent for Category 1 was S&B.

Metrolinx procurement policy and procedures are consistent with TTC's procurement policies and procedures and were followed to obtain open competitive bidding in accordance with the public Request for Proposal format. Additionally, the Metrolinx procurements were monitored by a Fairness Commissioner, who has provided an opinion that the selection process for the RFQ and each of the RFP's was conducted in a fair, open and transparent manner that is consistent with the requirements of the Management Board of Cabinet Procurement Directive and Implementation Guidelines.

TTC staff have also reviewed documents related to the RFP and confirm the process to have been fair, open and transparent.

Metrolinx staff confirmed S&B proposal unit prices were competitive based on historical costs for other similar devices previously purchased by Metrolinx from S&B and other vendors. In addition, the proposal unit prices are comparable to previous prices for TTC turnstiles. Finally, TTC reached out to a North American transit authority that has similar fare gates that were recently procured from S&B and confirmed the proposal unit prices for the fare gates bid to Metrolinx are competitive. These comparisons demonstrate the value for money represented by this proposal.

The Metrolinx Master Agreement expressly permits a "Metrolinx Client", defined to include TTC, the ability to use the Agreement to directly purchase any equipment based on the pre-established unit pricing. The unit pricing in the agreement includes unit costs for the supply, implementation and maintenance of each faregate. Additionally, the TTC will negotiate the cost of additional TTC legacy fare media add-ons, software, hosting and license fees not included in the Metrolinx agreement. The TTC legacy fare media

add-ons are required to allow a subset of the faregates to accept both PRESTO and legacy fare media payments initially during the transition from TTC's legacy fare media to the full implementation of PRESTO. This will be necessary to support the convenient movement of TTC customers through the faregates during the transition period when both legacy fare media and PRESTO payments will be accepted.

Accessibility/Equity Matters

Current fareline configurations for subway station entrances include a single accessible gate per fareline. The new fareline configurations incorporating faregates will include two fully accessible aisles at most station entrances. This will provide redundancy and ease customer flows by providing dedicated entry and exit walkways.

The new faregates are wider than TTC's current turnstiles and this will improve the customer experience across the entire subway network and increase accessibility for all customers requiring more space (e.g. customers using mobility devices).

Comments

With the launch of the PRESTO system on the new streetcars on August 31 2014, the TTC began the overhaul and automation of the TTC fare collection system and transition away from conventional TTC fare media. The overall objective is to have the TTC system PRESTO-enabled by the end of 2016 while maintaining quality standards and ensuring a positive customer experience. This will allow the TTC to stop selling tickets, tokens and passes from station booths and accepting legacy fare media during 2017. Additional staff will be available within stations to provide customer service and to perform other station management and control functions. The installation of faregates supports these operational changes by providing a modern revenue management, control and reporting system for subway stations.

Harmonization of Fareline Equipment

Faregates will replace a variety of existing fareline equipment with a single, consistent access control solution. The new farelines at stations will include an accessible aisle at all locations and a second accessible aisle at most stations. The PRESTO card reader will be located to optimize access and use by a variety of customers. A second card reader can be installed on the paid side of each faregate to provide flexibility for the possible future implementation of tap-on/tap-off fare policies and additional ridership data.

Improved Fareline Performance

The average aisle width and number of aisles within the new farelines will be increased with the implementation of faregates. This will have a corresponding increase in fareline performance during normal operations and emergency evacuation situations. The faregates can also be configured for entry/exit, entry only or exit only operation, locally

at the station or remotely from a central location. This will provide a dramatic increase in the control of customer flows. In addition, faregates will provide sophisticated fraud detection and fault identification management and reporting.

Secondary Station Entrances

The current high-gate turnstile designs do not offer an accessible solution and provide an inconsistent customer experience versus the turnstiles at main station entrances. The high-gate turnstile design at station secondary entrances are also problematic for PRESTO integration. The installation of faregates at secondary entrances will provide a consistent customer experience, improved fareline performance and further support for the modernization of station operations.

Cost Avoidance

Using the Metrolinx contract award to procure faregates for the TTC avoids additional costs and time in developing fare payment software to integrate an alternative vendor's faregate hardware to the PRESTO system. The integration software solution for the S&B faregate is being provided as a component of the supply of the initial 60 faregates. This approach also avoids the preparation of additional proposal documents and the time necessary to complete a full and separate procurement process which could impact the overall PRESTO implementation schedule. Acceptable contract and established technical terms have already been established based on TTC requirements. The implementation of faregates also avoids the costs in not having to provide turnstiles as an interim and continued solution until an alternative faregate solution is available.

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Attachments – Appendix A

Appendix A S&B Faregate Illustration



The passage control system is designed for entrance and exit control in public transport areas.

- Version with an extra wide passage. Allows a comfortable access for people with a mobility challenges or customers with pram or luggage
- Programmable logic controllers (PLC) for controlling the opening mechanism
- Equipped with light barriers for passage monitoring and to avoid fraud