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Item No. 11.1.2
Halifax Regional Council
April 20, 2021

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed by 
Jacques Dubé, Chief Administrative Officer

DATE: February 16, 2021

SUBJECT: **Award – Alternative Procurement – Halifax Transit Technology Program:
Extension of Program Resources 2021**

ORIGIN

This report originates from the need to extend the existing external resources currently working to deliver projects associated with the Halifax Transit Technology Program.

LEGISLATIVE AUTHORITY

The Municipality may spend money for municipal purposes in accordance with section 79A of the HRM Charter. The recommended contract award complies with all of the pre-requisites for awarding contracts as set out in section 26 of Administrative Order 2020-004-ADM, the *Procurement Administrative Order*.

Section 28 of the *Procurement Administrative Order*, provides that Halifax Regional Council may approve contract awards of any amount.

RECOMMENDATION

It is recommended that Halifax Regional Council award a new contract with Barrington Consulting for Halifax Transit Technology Program (HTTP) program resources at a maximum value of \$1,505,000 (net HST included) with funding from the New Technology project CM180005, as outlined in the Financial Implications section of this report.

BACKGROUND

In December of 2012, HRM's Halifax Transit, in partnership with the Finance, Information, Communications and Technology (FICT) business unit, completed the **Halifax Transit Technology Program (HTTP)** Roadmap identifying all technology-enabled business initiatives required to support Halifax Transit's key business drivers. The HTTP Roadmap recommended the sequence of projects over a multi-year period and estimated cost to develop and implement best practice business processes through sector-leading technology solutions.

RFP 13-098 was awarded to Barrington Consulting in February 2014 to establish the Halifax Transit Technology Program Office.

After the Halifax Transit Technology Program Office was established in February 2014, the HTTP Roadmap was organized into 9 streams of activity:

- P1:** Halifax Transit Technology Program Office
- P2:** AVL+
- P3:** Fixed Route Planning, Scheduling and Operations
- P4:** Driving Simulator
- P5:** Fare Management
- P6:** Paratransit
- P7:** Automated Vehicle Management / Mechanical Integration
- P8:** Security Systems
- P9:** Yard Management

The initial estimated budget for all projects within the HTTP roadmap was \$51 Million.

The Program Team, in conjunction with project teams and Halifax Transit staff, has completed both the **P2 AVL+** and the **P4 Driving Simulator Projects**, representing 2 streams of activity from the original roadmap.

The performance of the program team during the completion of P2 (AVL+) and P4 (Driving Simulator) has been exceptional. The AVL+ project in particular provided many challenges during both planning and implementation. Without the participation of the program resources, the project would certainly have encountered numerous delays and increases in costs.

The following **three** projects are underway with work currently being done by members of the program team, project teams, Halifax Transit staff, and/or other key business stakeholders:

P3 Fixed Route Planning, Scheduling and Operations: This solution will replace the current system with a new solution to create fixed route bus service vehicle and crew schedules, and to make changes to the daily vehicle and crew schedules to accommodate service requirements. The new solution will also implement new functionality, including ferry scheduling, employee self-serve and employee performance management.

P5 Fare Management: This solution will introduce alternative fare payment options to Halifax Transit. Initially, a mobile application will allow passengers to purchase tickets on a mobile device. Visual validation by the bus operators will be in place until automated validators are procured. Following the installation of automated validators, additional payment options (such as smart cards and open payment) will be evaluated.

P6 Paratransit: This project is a multi-phased initiative to enhance the technologies facilitating delivery of the Access-A-Bus service. Phase 1, which has been completed, included an upgrade of the scheduling and dispatching software, plus optimized systems configuration and data conversion. Phase 2, which is currently underway, will introduce MDTs (Mobile Data Terminals) to the Paratransit vehicles, enabling electronic manifests, Automatic Vehicle Location, and other advanced features. Phase 3 will introduce new capabilities for users of the Paratransit service to book rides, through channels such as IVR and Web.

Future projects: Upon completion of the current in-flight projects, the remaining projects will include P7 Automated Vehicle Management, P8 Security Systems, and P9 Yard Management; however, Halifax Transit staff is exploring if these projects will still be required.

An initial study to plan for P7 Automated Vehicle Management indicated that significant process updates and resource planning is a requirement prior to implementing automated vehicle management hardware. Therefore, the initiation of P7, if Halifax Transit is still interested in pursuing a solution after process and resource updates, is at least two years away.

No specific plan was outlined for P8 Security Systems at the initiation of HTTP; however, it was expected that the CCTV solution currently in use on Halifax Transit vehicles would be in need of an upgrade. An upgrade to the CCTV solution took place in 2019 independently of HTTP and, as such, P8 will likely no longer be required.

The initial plan for P9 Yard Management was to implement a complete yard management solution to be used in both Halifax Transit garages; however, P3 Fixed Route Planning, Scheduling, & Operations includes basic yard management functionality. Therefore, it is possible that P9 will no longer be required if the yard management component of P3 is sufficient for Halifax Transit's needs.

The current status of the original 9 streams of activity are summarized as:

Stream	Status	Estimated completion
P1: Halifax Transit Technology Program Office	Ongoing	December 2022
P2: AVL+	Complete	N/A
P3: Fixed Route Planning, Scheduling and Operations	Ongoing	November 2022 (Phase 1) TBD (Phase 2 and 3)
P4: Driving Simulator	Complete	N/A
P5: Fare Management	Ongoing	July 2021 (Phase 1) July 2022 (Phase 2) TBD (Phase 3 and 4)
P6: Paratransit	Ongoing (1 of 3 phases complete)	January 2022 (Phase 2) TBD (Phase 3)
P7: Automated Vehicle Management / Mechanical Integration	TBD	TBD
P8: Security Systems	TBD	TBD
P9: Yard Management	TBD	TBD

The total cost of the remaining streams of activity (not including P7, P8, or P9 as their need is not yet known) is expected to be approximately \$5,500,000.

To date, the performance of the program team on the current in-flight projects has continued to be excellent. The Technical Services division of Halifax Transit does not have sufficient staff to both support ongoing operational needs and project activities. Therefore; the continued participation of the program resources currently working on the Fixed Route Planning, Scheduling & Operations project; one project manager, one solution architect/test manager, and two business analysts; is critical to the future success of the Halifax Transit Technology Program.

In 2013, a Request for Proposal 13-098 was publicly advertised on the Nova Scotia Public Tenders website to secure program resources for 24 months with an option to extend to 60 months. Proposals were received and evaluated, and the contract was awarded to Barrington Consulting as outlined in the approved CAO Award Report from February 2014.

In early 2016, the Municipality exercised the option to extend the contract to a total of 60 months as included in the RFP requirements.

The duration of the original contract was 60 months (24 months with the option to extend for an additional 36 months) based on the initial timeline estimates made by Halifax Transit staff prior to the initiation of the Halifax Transit Technology Program. After completing two major projects and starting work on three major projects, it had become clear to Halifax Transit staff that the time requirements for the implementation of the entire Halifax Transit Technology Roadmap were drastically underestimated. Contract negotiation delays, quality issues encountered with vendors, and overall complexity of the solutions to be delivered have resulted in a longer timeline than originally anticipated.

In late 2019, an exceptional circumstances report was prepared that recommended extending the contract with Barrington Consulting for a further 12 months. That report was approved and, due to a gradual reduction in the number of resources utilized and a shift of focus to utilize the remaining resources solely on the Fixed Route Planning, Scheduling, and Operations project (P3), the external resources have been secured until April 2021.

To date, the total amount approved for external resources dedicated to the Halifax Transit Technology Program has been approximately \$8,100,000 since the initiation of the program in 2014. Of that amount, approximately \$7,950,00 has been spent.

The scope of work to date includes the development of a Transit Technology roadmap, supporting procurement activity related to approved roadmap projects, and project delivery services for awarded roadmap projects (technology, business process, and support process implementation).

Project scope to date has included the implementation of a CAD/AVL solution for Transit Operations to manage the adherence and safety of Transit vehicles, bus destination sign integration for route and message display to the public, public interfaces to support passenger experience (e.g., Automated Stop Announcements, Arrival / Departure Boards & Signs including real-time bus locations, Web & Mobile capabilities for trip planning and real-time bus tracking, IVR Phone System etc.), Automated Passenger Counting, Driver Simulator training solution, Paratransit software upgrade & enhancements, and the current in-flight Fixed Route Planning, Scheduling & Operations project (scope including scheduling, bidding, dispatch, payroll, workforce, bus stop management, and garage yard management solutions for Conventional Bus and Ferry scope).

Due to the updated scope of the Fare Management and Paratransit projects, HRM resources have the ability and the capacity to complete the delivery of these projects. However, based on the current estimated timelines of the Fixed Route Planning, Scheduling, and Operations project and the immense amount of work associated with the delivery of this project, a new contract covering 18 months for the remaining resources is required.

DISCUSSION

Administrative Order 2020-004-ADM Section 16(2), states: For procurement opportunities that exceed thresholds set out in applicable trade agreements, Alternative Procurement may be used, provided that it is not done for the purpose of avoiding competition among suppliers or in a manner that discriminates against suppliers of any jurisdiction covered by an applicable trade agreement, in the following circumstances:

(c) for additional deliveries by the original supplier of Goods, Services or Construction that were not included in the initial procurement, if a change of supplier for such additional Goods, Services or Construction:

- (i) cannot be made for economic or technical reasons such as requirements of interchangeability or interoperability with existing equipment, software, services, or installations procured under the initial procurement; and
- (ii) would cause significant inconvenience or substantial duplication of costs for the Municipality;”

Halifax Transit staff considered alternatives to securing a new contract with Barrington Consulting for the Halifax Transit Technology program resources; however, all options considered included significant challenges:

- having Halifax Transit and ICT staff take on the program team responsibilities would cause considerable delays to the Fixed Route Planning, Scheduling, and Operations project as the work load of the internal teams could not currently support the additional responsibilities associated with the project
- competitively soliciting the services could also cause considerable delays to all in-flight projects as the amount of information to be transferred from the program team resources is immense
- awarding the contract to another vendor could result in significant technical challenges as the current project team has amassed technical knowledge and expertise over the duration of the Halifax Transit Technology Program that other potential vendors could not offer

The amount of this extension had been expected and has been included in the capital budget for fiscal year 2020/2021. As such, no new funds are required.

FINANCIAL IMPLICATIONS

Based on an estimated total cost of \$1,505,000 (net HST included) for the required program management services, funding is available in the approved Capital Budget from Project No. CM180005 – Transit Technology Implementation. The budget availability has been confirmed by Finance.

Budget Summary:	<u>Project Account No. CM180005</u>	
	Cumulative Unspent Budget	\$ 6,568,689
	Less: Contract Barrington for Program Team	<u>\$ 1,505,000</u>
	Balance	\$ 5,063,689

RISK CONSIDERATION

There are no significant risks associated with the recommendations in this Report.

ENVIRONMENTAL IMPLICATIONS

No environmental risks identified.

ALTERNATIVES

Regional Council could choose not to approve this recommendation for a new contract for the Halifax Transit Technology Program office resources. This is not recommended as the required level of knowledge transfer to new program resources and the time required to do this would impact the schedules of the Fixed Route Planning, Scheduling, and Operations project or risk the cancellation of the project.

ATTACHMENTS

None.

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

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