



SUBJECT: Transit Single Source Approval – Scheduling Software & Services

TO: Community Planning, Regulation & Mobility Cttee.

FROM: Transit Department

Report Number: TR-04-20

Wards Affected: All

File Numbers: 465-12/770-22

Date to Committee: June 9, 2020

Date to Council: June 22, 2020

Recommendation:

Authorize the Manager of Procurement Services to issue a revised purchase order for Courval Scheduling Inc. (CSched) of Laval, Quebec in the amount of \$128 979.96 + HST for the continued use of HASTUS by CSched for transit workforce scheduling and consulting services.

PURPOSE:

The City's Procurement By-law Section 14.8 requires Council approval for single source procurements with a value of more than \$100,000.

The recommended addition to our existing (single sourced) purchase order will result in the value exceeding \$100,000.

Consequently, this report is being presented.

The purpose of this report is to seek Council approval to single source the procurement of software and consulting services to CSched of Laval, Quebec for the purpose of transit workforce scheduling and roster creation.

An unprojected increase in the amount of consulting services caused additional consulting service hours to be spent in 2019 and 2020. This was due to staffing vacancies in spring 2019; preparation for the major route and schedule change in September 2019; and additional consulting in March 2020 due to schedule modifications required for the downturn in transit service caused by COVID-19.

In order to continue to adapt rapidly to the changing environment within transit, caused by the pandemic situation, Burlington Transit would like to continue to use this software and consulting service combination for the next 4 years until a full assessment of the current smart transit system is planned.

The use of this software contributes directly to the City's Vision to Focus goal of Improving Integrated City Mobility.

Vision to Focus Alignment:

- Improve integrated city mobility
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Background and Discussion:

Burlington Transit's workforce scheduling and roster solution, FX/Blockbuster, has been in use since 2009. This software enables staff to plan and develop bus schedules, trips and schedule shifts for bus operators. The software interface has changed little over the years and few updates were made to improve functionality and modernize the application. The software's algorithm is dated, and errors are compounded, as processes require manual manipulations and manual interventions with GIS and spreadsheet software.

In 2018, Burlington Transit researched alternative methods for transit workforce scheduling and rostering in order to find process efficiencies and labour cost savings. With the planned expansion of Burlington Transit routes, flexibility and modernization was required.

The creation of workforce and bus schedules are completed by the Transit Planner Analysts. The schedules need to ensure that the rules defined in the collective agreement and employment standards are met. Since transit is highly labour driven, the optimal use of labour impacts transit's operating costs and therefore would benefit from the use of advanced scheduling software.

In order to understand if a technology solution will work, pilot projects are used to allow for a test drive of software in a real-world environment. Therefore, HASTUS by CSched, was selected for a 2-year pilot project that would enable transit staff to work with a new software solution during a time when a major transit transformation was being planned and implemented. HASTUS is considered one of the transit industry's major software platforms and is used in transit agencies in the GTA, Canada and internationally. Typical implementations of this solution are done on premises requiring a lot of resources and can be costly. CSched offers the HASTUS solution to smaller transit agencies using a 'software as a service' model. By teaming up with CSched, Burlington Transit would have the opportunity to use industry leading software while

having the support of CSched subject matter experts for consulting and professional services. This model would allow Burlington Transit planners to test drive the software in preparation for the launch of the highly publicized 'September Changes.'

In addition to the access to HASTUS software, CSched also provided:

- Extensive experience with similar sized Canadian transit agencies in developing schedules through their 'Rent-a-Scheduler' service.
- Experience with analyzing and inputting collective agreement rules into their software to ensure adherence.
- Joint optimization of bus and workforce schedules for labour efficiencies.

Strategy/process

A two-year contract was signed in 2019 for a pilot project and benefits were recognized quickly.

The outcome of the pilot project identified the following benefits:

- Continuity of scheduling and developing service when staffing levels were low. This was particularly helpful in the spring of 2019 since the staff position responsible for workforce scheduling had vacated the position in March 2019.
- Transit workforce schedules were more efficient in that there were more revenue hours per operator (revenue hours refer to times when the bus is in service).
- Comparing July 2019 and November 2019, there was a 9% increase in revenue hours using the same number of driver requirements.
- Reduction in the amount of unplanned overtime, resulting in lower overtime costs.
- Ability to turn around schedule changes quickly, this was particularly useful in March 2020 when a modified schedule was required due to the downturn caused by COVID-19.
- Identified the need for the "Roster module" which would lessen the reliance on consulting services as transit staff became more comfortable with the software.

The cost for this solution would be absorbed in the existing transit operating budget as the FX/Blockbuster solution would be retired.

Options Considered

The option of continuing to use the outdated solution FX/Blockbuster is not viable due to its inability to adjust to changing business process; and the fact that the solution does not allow for agility during this uncertain time.

Staff have researched other companies offering consulting and scheduling services and could not find a similar model of 'software as a service' coupled with consulting. In most

cases it was either consulting services only, or software vendors providing software consulting. In these cases, there was limited knowledge of Canadian employment standards, collective agreements and Canadian transit experience.

CSched allows for the combination of software and services, so that the schedules created can be reviewed, analysed and further adjusted by Burlington Transit staff directly in the system.

Financial Matters:

Total Financial Impact

The total cost for the use of the software and for a bank of consulting hours, over 4 years would be \$128 980.00 plus HST. The breakdown is as follows:

IT Management/Infrastructure/Hosting	\$	23,000.00
Support Hours/Consulting	\$	5,400.00
Sublicense use of HASTUS	\$	100,580.00

In 2019/2020 the pilot project implementation which included system configuration, hosting, leasing and consulting services totaled \$68 145.50 plus HST.

Source of Funding

Funding would come from the transit operating budget, whereby the annual fees of HASTUS by CSched would replace the existing FX/Blockbuster fees. The estimate maintenance and support fees for FX/Blockbuster for the next four years would be approximately \$124 000.00 plus HST.

The pilot project utilized PTIF phase 1 funding.

Other Resource Impacts

Staffing impacts would be minimal as the solution has been vetted and approved by the City's ITS department prior to the pilot project implementation.

Climate Implications

Not applicable

Engagement Matters

Burlington Transit staff worked with Procurement and ITS during the acquisition and implementation of the software. ITS assessed the software from a security and application integration perspective. The pilot project was approved through the IT Steering Committee Approval Process.

Conclusion:

Due to the uncertainty caused by the COVID-19 pandemic to the transit industry, Burlington Transit requires flexibility and agility in an ever-changing environment. The use of modern technology coupled with consulting services would enable Burlington Transit to make modifications and improvements to transit workforce and bus schedules, while creating operational efficiencies and cost savings.

Transit staff recommend the use of HASTUS by CSched for software and services as it will provide much needed flexibility in transit scheduling and will assist as transit continues its growth strategy.

Respectfully submitted,

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Report Approval:

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Council. Final approval is by the City Manager.