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Item No. 15.1.8
Halifax Regional Council
May 3, 2022

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed
Denise Schofield, Acting Chief Administrative Officer

DATE: April 11, 2022

SUBJECT: Increase to Contract, - RFP-19-301 Lady Hammond Bridge (BR026) construction administration and site inspection Services

ORIGIN

This report originates from a need to increase the cost for RFP No. 19-301– Lady Hammond Bridge (BR026) construction administration service and estimate beyond 20% and \$20,000 of its original award.

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.

The recommendation complies with all the pre-requisites for Contract Amendment as set out in section 32 of the Administrative Order 2020-004-ADM, the Procurement Administrative Order.

Section 32, Section 7 of the Procurement Administrative Order provides that Halifax Regional Council can approve cumulative contract amendments for any amount.

RECOMMENDATION

It is recommended that Halifax Regional Council approve an increase to contract with SHM Canada Consulting Ltd. (Purchase Order No. 2070818751) for additional construction administration and site inspection services from the original scope in the amount of \$57,701.44 (net HST included) with funding from Project Account CR200003– Bridges, as outlined in the Financial Implications section of this report.

BACKGROUND

The Lady Hammond Bridge is located in the north end of Halifax where Lady Hammond Road crosses over Massachusetts Avenue. The bridge consists of a voided concrete deck that spans approximately 32 meters over four lanes of traffic on Massachusetts Avenue. The bridge is approximately 19.8 meters wide and contains two lanes of traffic with pedestrian sidewalks on either side. Both Level II and Level III bridge inspections conducted in 2017 recommended that the structure needs significant work including repair to the existing abutment walls, soffit concrete near the abutments, as well as replacement of existing bridge bearings, approach slabs, and expansion joints.

In March 2019, a Request for Proposals (RFP-19-301) was issued to prospective proponents to provide Engineering Services for Lady Hammond Bridge (BR026) rehabilitation design. SHM Canada Consulting Ltd. was the successful proponent. The total cost proposal included detailed design, construction administration, site inspection, and bridge certification. The detailed design component of the project was awarded to SHM Canada Consulting Ltd. by the Director's Delegate in May 2019. SHM subsequently completed the detailed design in 2020.

In April 2021, the Chief Administrative Officer awarded Tender No. 21-218 Lady Hammond Road Bridge Rehabilitations to the recommended lowest bidder, Atlantic Underground Services Ltd, for a total amount of \$2,215,488.28 (net HST included). At the same time, the Chief Administrative Officer awarded the construction administration, site inspection, and bridge certification components of RFP-19-301 to SHM Canada Consulting Ltd. for an amount of \$41,714.40 (net HST included). The Consultant's fee was based on hourly rates for full-time site inspection, part-time contract administration, and bridge certification over an estimated construction duration of 75 days (15 weeks).

DISCUSSION

Once construction began in 2021, unforeseen challenges arose which led to several changes and an increase to the construction schedule. Some of the major changes included:

- **Additional Concrete Repair:** As part of the original contract, concrete was removed from the abutments which exposed the vertical faces of the deck. These surfaces were in poor condition requiring additional time and effort to address properly. This work was unknown during design and not part of the original scope as these faces were not accessible during the pre-construction inspections.
- **Bearing Redesign:** Detailed design was completed using the available record drawings. Once construction began, the bearings in the field did not match the record drawing information. Additional field work & efforts were required to revise the bearing layout to suit the actual bridge geometry.
- **Jacking Procedure Development:** Additional field work and analysis were required to determine a different jacking layout that would safely lift the structure. This resulted in additional construction time and effort.

The construction work was originally planned to be completed in three phases in 2021 over a 75-day period. Due to the issues identified above, only one phase of the construction was completed in 2021, requiring all 75 days as per the original contract. Additional time is required in 2022 to complete the remaining phases.

Based on contractor’s revised schedule, approximately 135 days of additional construction time is required in 2022 to complete the project. SHM has provided a change order for additional site inspection and contract administration services for this revised schedule. As a result of this additional scope and time an increase of **\$57,701.44** (net HST included) to SHM’s contract is requested.

A summary of the changes to the original contract award is as follows:

RPF- 19-301- Summary of Changes to SHM Contract (P.O. No. 2070818751)	(Net HST included)
Original Contract Amount (Detailed Design Only)	\$74,846.06
Change Order #1 (additional concrete testing during design) Increase approved to date	\$4,588.58
Construction Services Award	\$41,714.40
Change Order #2- Construction Services Current Funding Request	\$57,701.44

The total cumulative amount of these changes is **\$104,004.42**, which represents a cumulative increase of **139%** to the original construction administration contract value of \$74,846.06. Change Order #1 was required for additional concrete testing to address the issues related to the design work.

As a note the additional changes identified above will result in an increase to the construction contract. Currently the increase is less than 20% of the original contract of \$2,215,488.28 (net HST included), which does not require Council approval. Staff is closely monitoring the extra work and associated costs; however, there is the potential construction cost could exceed 20% of the original contract value. If so, staff will return to Council for approval of those additional costs.

FINANCIAL IMPLICATIONS

Based on the estimated construction administration and site inspection fees of **\$ 55,330.00** plus net HST of \$2,371.44, for a net total of **\$57,701.44**, funding is available in the approved 2022/23 Capital Project Budget from Project Account No. CR200003–Bridges. The budget availability has been confirmed by Finance.

Budget Summary:	<u>Project Account No. CR200003 - Bridges</u>	
	Cumulative Uncommitted Budget	\$ 3,540,953.94
	Less increase to RFP19-301 – Change Order #2	\$ 57,701.44*
	Balance	\$ 3,483,252.50

*The construction administration and site inspection component of this project was originally estimated at \$41,714.40

The balance of funds will be used to implement the remaining 2022/23 Bridge projects approved by Council.

RISK CONSIDERATION

There are risks associated with the recommendation in this report. Unforeseen site conditions during construction have led to additional changes in budget and schedule. To reach this conclusion, consideration was given to financial and service delivery risks.

ENVIRONMENTAL IMPLICATIONS

No environmental implications were identified.

ALTERNATIVES

Halifax Regional Council could choose not to increase the budget for this contract.

ATTACHMENTS

Attachment 1: HRM Lady Hammond Rd Bridge - Construction Services Budget 2022-04-11

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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Innovative Engineering & Design
 Structural Engineering – Structural Health Monitoring

Client: Halifax Regional Municipality (HRM)
Project: 19-301 - Lady Hammond Bridge (BR 026) Rehabilitations Design

Attn: Abdullah Mofarrah, PhD, P. Eng.

COST PROPOSAL- 2021-2022 CONSTRUCTION SERVICES

Table 1: 2021-2022 Construction Services

Task	Cost
2021-2022 Construction Services (Table 2)	\$55,330.00
Sub Total	\$55,330.00
HST (15%)	\$8,299.50
Total Amount	\$63,629.50

Table 2: 2022 Construction Services Budget Abstract

Task	Cost
Construction Administration (Table 3)	\$6,730.00
Onsite Inspection Services (Table 4)	\$48,600.00
Sub Total	\$55,330.00

Table 3: Construction Administration Breakdown

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Total Estimated Construction Administration Cost	\$6,730.00
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Table 4: Inspector's Onsite Inspection Hours

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Total Cost	\$48,600.00
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Table 5: Inspector's on-site time breakdown

Month	Qty	Unit
November 2021	4	Weeks
December 2021	2	Weeks
April 2022	4	Weeks
May 2022	4	Weeks
June 2022	5	Weeks
July 2022	4	Weeks
August 2022	4	Weeks
Total Weeks	27	Weeks



Vidya Limaye, PhD, PEng.
President
SHM Canada Consulting Limited

11-Apr-22