

HALIFAX

P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 15.1.5
Halifax Regional Council
July 16, 2019

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: June 3, 2019

SUBJECT: **Increase to Contract, RFP No. 18-307- Consulting Engineering Services for BR122 Shore Road Bridge Replacement Design**

ORIGIN

This report originates from a need to increase the cost for RFP No. 18-307- Consulting Engineering Services for BR122 Shore Road Bridge Replacement Design and estimate beyond 20% and \$20,000 of its original award.

LEGISLATIVE AUTHORITY

79A(1) Subject to subsections (2) to (4), the Municipality may only spend money for municipal purposes if

- (a) the expenditure is included in the Municipality's operating budget or capital budget or is otherwise authorized by the Municipality;
- (b) the expenditure is in respect of an emergency under the Emergency Management Act; or
- (c) the expenditure is legally required to be paid.

Appendix B of 2016-005-ADM, the Procurement Administrative Order, provides that contract amendments that exceed the greater of 20% of the original award amount or \$20,000, must be approved by Council for funds to be issued.

RECOMMENDATION

1. It is recommended that the Halifax Regional Council enter into a cost sharing agreement with Halifax Water for \$13,625 (Net HST included), to the Project Account CR180003– Bridges as outlined in the Financial Implications section of this report.
2. It is recommended that the Halifax Regional Council approve an increase to contract with Hatch Corporation (Purchase Order No. 2070797017) for additional work from the original scope in the

Recommendation continued on page 2

amount of **\$43,275**(net HST included) with funding from Project Account CR180003– Bridges as outlined in the Financial Implications section of this report.

BACKGROUND

Shore Road Bridge (BR122) is located at Shore Road (Fisherman's Cove) in Eastern Passage, NS. It is a single span timber crib and timber girder structure, approximately 4.8 meters in length with overall bridge width of 12.3 meters. In 2017, HRM retained the services of CBCL Limited to complete a Level 2 inspection for 106 bridge structures including Shore Road Bridge. Based on the structural conditions and service life of the bridge, the inspection report recommended for the replacement of the Shore Road Bridge (BR122).

The approved 2018/19 Capital Budget includes funds for the detailed design and replacement of Shore Road Bridge (BR122) including renewal of the existing asphalt sidewalk to concrete (from Cow Bay Road to the bridge, east side), a new sidewalk from the Cow Bay Road to Government Wharf Road (west side), and a paving overlay from the Cow Bay Road to Oceanlea Drive and associated reinstatements. A Request for Proposal (RFP) 18-307 was publicly advertised on the Province of Nova Scotia's Procurement website on 10 May 2018 and closed on 07 June 2018.

Based on competitive evaluation of all received bids, on July 2018 Project Planning and Design Services awarded Hatch Corporation for \$ 60,407.00 (Net HST included) to provide Consulting Engineering Services and to complete replacement design for BR122 Shore Road Bridge.

DISCUSSION

Once design work commenced it became apparent that Halifax Water (HW) owns and operates a 300-mm diameter water main and 762 mm diameter sanitary sewer that runs directly underneath the existing Shore Rd bridge, which require replacement. Halifax Water is incorporating sewer and watermain replacement design with the Shore Rd bridge design by Hatch. The cost of this work is recoverable by HRM from Halifax Water as per the attached cost sharing letter.

Additional legal survey is required to complete the design of new sidewalk from the Cow Bay Road to Government Wharf Road (west side). This survey will confirm the extent of the HRM Right of Way. Additional engineering and drafting are required for fish by-pass design. This design will mitigate the impact on fish and fish habitat and may allow the bridge replacement to occur outside of the typical construction window. The construction timelines will ultimately be at the direction of Fisheries and Oceans Canada. The additional design work and approval require the project to be delayed until the spring of 2020. HRM has therefore requested that Hatch complete an inspection of the bridge to confirm the structural condition and service life until replacement of the bridge.

The additional scope of work including consultant's fee can be summarized as follows:

- Design of Halifax Water (HW) owned water main and sanitary sewer that run directly underneath the existing Shore Rd bridge. Fee increases of \$13,625 (Net HST included);
- Additional legal survey from the Cow Bay Road to Government Wharf Road (west side). Fee increases of \$6,769 (Net HST included)

- Additional engineering and drafting for fish by-pass design during construction. Fee increases of \$20,796 (Net HST included)
- Inspection of the bridge to confirm structural condition, and service life of the bridge until replacement. Fee increases of \$2,085 (Net HST included)

As a result of the above additional scope, the cumulative increase of consultant's fees is **\$ 43,275** (net HST included).

Staff has recommended an increase to Hatch Corporation (PO# 2070797017) for changes to the contracted scope of work in the amount of **\$43,275** (Net HST included).

A summary of the changes are as follows:

Contract Award (Net HST included)	\$ 60,407
Current Request for Increase (net HST included)	\$ 43,275
Cumulative Increase to Date (net HST included)	\$ 43,275
New Contract Value (Net HST included)	\$103,682

This request for increase **\$43,275** (Net HST included) represents a cumulative increase of 71.64% to the original contract of \$60,407.

A copy of the change request and Halifax Water Cost Sharing letter is attached to this report.

FINANCIAL IMPLICATIONS

Funding in the amount of **\$41,496** plus net HST of **\$1,779** for a net total of **\$43,275**, is available from Project Account No. CR180003– Bridges. The budget availability has been confirmed by Finance.

Budget Summary: **Project Account No. CR180003– Bridges**

Cumulative Unspent Budget	\$4,794,109
Add Halifax Water Cost Shared	\$ 13,625
Less: Increase to RFP No. 18-307	<u>(\$ 43,275)</u>
Balance	\$4,764,459

As a result of cost sharing, the net cost to HRM is \$29,650 The balance of funds will be used to implement the remaining 2019/20 Bridge projects approved by Council.

RISK CONSIDERATION

There are no significant risks associated with the recommendations in this report. However, additional design time could delay the project for construction in 2020. This will be communicated to the residents. The risks considered are low. To reach this conclusion, consideration was given to financial, legal and compliance, and service delivery risks.

ENVIRONMENTAL IMPLICATIONS

The additional work includes design effort to minimize the impact to fish and fish habitat near the project limits.

ALTERNATIVES

The Halifax Regional Council could choose not to increase the budget for this contract. This is not recommended by staff as the additional work is required to complete the replacement design of Shore Road Bridge (BR122).

ATTACHMENTS

A1: Halifax Water cost sharing letter
A2: Hatch change requests

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.

Report Prepared by: Abdullah Mofarrah, P. Eng., Design Engineering Team Lead, Project Planning and Design, 902.490.5019

Report Approved by: Original Signed
Anne Sherwood, P. Eng. A/Manager, Project Planning and Design, 902.490.6872

Procurement Review: Original Signed
Jane Pryor, Manager, Procurement, 902.490-4200

Report Approved by: Original Signed by 
Brad Anguish, P. Eng., Director, Transportation and Public Works 902.490.6206



PO Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

DATE: February 07, 2019

MEMORANDUM

TO: Jamie Hannam, P. Eng.
Director, Engineering and Information Services, Halifax Water

CC: Kevin Healy, P.Eng., Project Engainer, Halifax Water
David Ellis, P.Eng., Halifax Water
David Hubley, P. Eng., Manager, Project Planning and Design, HRM
Anne Sherwood, P. Eng., Senior Design Engineer, PPD, HRM

FROM: Abdullah Mofarrah, P. Eng., Design Engineering Team Lead, PPD, HRM

SUBJECT: Cost Sharing Agreement Tender No. 19-213-BR122 Shore Road Bridge Replacement, Eastern Passage, Nova Scotia.

Prior to award the contract a cost sharing agreement must be finalized between Halifax Regional Municipality (HRM) and Halifax Water (HW).

Please find enclosed proposal fees from HATCH to provide Professional Consulting Services to complete the design of Halifax Water Utilities, with the Shore Road Bridge replacement project. Based on the proposal from HATCH, HW's cost share related to utilities design with Shore Road bridge replacement project can be summarized as follows:

Estimated Cost for HW

Design fees for existing watermain & sanitary sewer	=	\$ 12,872.00
Overhead and contract administration cost 1.5%		
of HW cost Share	=	\$193.08
Subtotal for HW Cost	=	\$13,065.08
Net HST (i.e., 4.286%)	=	\$559.97
Total Estimated Cost for HW	=	\$13,625.05 (net HST included)

Actual cost sharing for this project will be based on final amount required and determined during design phase of the project.

TRANSPORTATION AND PUBLIC WORKS- PROJECT PLANNING & DESIGN SERVICES

Tel: 902.490.5019 Fax: 902.490.4858
Email: mofarra@halifax.ca halifax.ca

If these terms meet with your approval, please sign below and return this document to my attention.
Please let me know if you have any questions or concerns.

Regards,



Digitally signed by Jamie
Hannam
Date: 2019.02.14 10:26:08
-04 00'

Abdullah Mofarrah, P. Eng.
Design Engineering Team Lead
HRM

Jamie Hannam, P. Eng.
Director, Engineering and
Information Services, HW

Date

Attachment(s): proposal from HATCH

TRANSPORTATION AND PUBLIC WORKS- PROJECT PLANNING & DESIGN SERVICES

Tel: 902.490.5019 Fax: 902.490.4858
Email: mofarra@halifax.ca halifax.ca

Project Change Order No.1

February 19, 2019

Halifax Regional Municipality
HRM - Replacement Design of Shore Rd
Bridge - BR122

Legal Survey

Justification:

The original scope of work for legal survey was to locate the two properties (PID 00400457 and PID 00401398) at the bridge to determine if the new proposed bridge corridor fell within the adjacent properties and if there was a need for HRM to acquire property near the bridge. The survey has evaluated that property acquisition near the bridge is not necessary. However, there are a number of properties near the Shore Rd. between the bridge and the intersection at Main Rd.

Hatch recommends that the extent of the legal survey be increased to include the properties along Shore Rd between the bridge and intersection. Since the new road will be widened to include curb and sidewalks on either side, it may appear that the new road is infringing on adjacent properties. A legal survey at this location will set survey markers and legal boundaries that will eliminate any confusion during construction. It is recommended that this work be completed prior to construction so boundaries can be clearly marked on IFC drawings.

Scope of Change Order:

The following outlines the survey works completed to date as well as the additional legal survey proposed herein:

ADDITIONAL WORK – COMPLETE LEGAL SURVEY TO MAIN RD. INTERSECTION	
Survey to Collect Evidence	\$
Boundary Determination	\$
Plan	\$
Place Survey Markers	\$
Incorporate additional survey in IFC drawings	\$
Sub-Total	\$ 6,490.00
Change Order Request for:	\$ 6,490.00

Prices above exclude HST

Note: the additional survey will be limited to the extents of the road corridor with survey markers placed at points of curvature along the road alignment and does not include the determination of the side boundaries of adjacent properties.

The amount of the change order is **\$6,490.00 + HST**. Which includes additional work required to complete increase in the legal survey.

If HRM accepts this change request by Hatch for the additional work and the underestimated work in the original scope, please sign below and return to Hatch.

Signed on behalf of Hatch by:

Signed on behalf of Halifax Regional Municipality
by:



Name: Sheamus MacNeil, P. Eng.
Title: Project Manager
Date: February 19, 2019

Name: _____
Title: _____
Date: _____

Project Change Order No.3

May 6, 2019

Halifax Regional Municipality HRM - Replacement Design of Shore Rd Bridge - BR122

Design of Fish By-Pass Pipe

Change Order 1 Description:

Additional legal survey submitted previously.

Change Order 2 Description:

Replacement of sanitary sewer and watermain for Halifax Water submitted previously.

Change Order 3 Description:

Additional engineering and drafting for the design of a fish by-pass pipe.

Department of Fisheries (DFO) has stated that to allow bridge replacement outside of the fish window (June 1st to September 30th) the contractor must maintain flow through the site at all times. Hatch will consider two options to provide continual fish passage during construction.

Option 1) run a by-pass pipe through the center of existing channel to be supported by timber trestles to allow for excavation and bridge replacement. Pipes to be connected to both the upstream and downstream cofferdam by a concrete bulkhead.

Option 2) Excavate and install a fish bypass pipe north of the current excavation. This pipe will remain in service and provide additional capacity to pass flow from a flow event. A separate cofferdam arrangement will be required to facilitate this work.

Scope of Change Order:

The following outlines the work items required to completed the engineering work for a fish by-pass pipe design:

- Project Management and Admin and liaison with NSE and DFO.
- Revise the HECRAS model and re-evaluate the hydrotechnical engineering for the two options mentioned above.
- Provide brief memo outlining preferred option.
- Design and drafting to update drawings showing the proposed fish by-pass plan, profile, sections and details.

- Update to cost estimates and specifications to reflect the fish by-pass pipe design and construction

Change Order No.3	\$ 19,941.00
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The amount of this change order is **\$19,941.00 + HST**.

If HRM accepts this change request by Hatch, please sign below and return to Hatch.

Signed on behalf of Hatch by:

Signed on behalf of Halifax Regional Municipality by:

Name: Sheamus MacNeil, P. Eng.

Name: _____

Title: Project Manager

Title: _____

Date: May 6, 2019

Date: _____

Project Change Order No.4

May 6, 2019

Halifax Regional Municipality
HRM - Replacement Design of Shore Rd
Bridge - BR122

Inspection Memo for Service Life Extension

Change Order 1 Description:

Additional legal survey submitted previously.

Change Order 2 Description:

Replacement of sanitary sewer and watermain for Halifax Water submitted previously.

Change Order 3 Description:

Additional engineering and drafting for the design of a fish by-pass pipe.

Change Order 4 Description:

Complete an inspection of the bridge and provide HRM with a brief memo report stating whether or not the service life of the bridge can be extended by one year.

Scope of Change Order:

The following outlines the work items required to complete the inspection and memo at the Shore Road bridge:

- Complete an inspection during low tide to view the structure at arms length and evaluate the existing condition of the timber bridge beams and timber crib abutments. The inspection will be completed by a senior engineer and a junior engineer.
- Provide an opinion on the acceptability of extending the service life of the bridge in a memo.

Change Order No.4	\$ 2,000.00
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The amount of this change order is **\$2,000.00 + HST**.

If HRM accepts this change request by Hatch, please sign below and return to Hatch.

Signed on behalf of Hatch by:

Signed on behalf of Halifax Regional Municipality by:

Name: Sheamus MacNeil, P. Eng.

Name: _____

Title: Project Manager

Title: _____

Date: May 6, 2019

Date: _____