

Municipality of Chatham-Kent

Infrastructure and Engineering Services

Engineering and Transportation Division

To: Mayor and Members of Council

From: Jason Cikatricis, C.E.T.,
Engineering Technologist - Engineering & Transportation Division

Date: September 6, 2018

Subject: Single Source - Electrical Rehabilitation of the Base Line Bridge
over the Sydenham River, Community of Wallaceburg

Recommendations

It is recommended that:

1. The work associated with the Electrical Rehabilitation of the Base Line Bridge over the Sydenham River, Community of Wallaceburg, be single sourced to Datasoft, of London Ontario at a value of \$ 304,983.50 (including HST and contingency).
2. The Mayor and Clerk be authorized to enter into the recommended agreements.

Background

The Procurement By-law #03-2016 was adopted by Council on January 11, 2016. The Single Source section of the Procurement by-law states the following:

A non-competitive direct award of Contract may be used to purchase Deliverables from Municipal funds only and with a value of \$100,000 or less with the prior approval of the CAO under the following circumstances:

- a. Where there is one (1) or no (0) Response to a competitive process;**
- b. To recognize exclusive rights, or to maintain specialized products that must be maintained by the manufacturer or its representative or where the Municipality is contractually bound to purchase a Deliverable from one Supplier;
- c. To purchase an item for testing or trial use;
- d. Where Deliverables are in short supply due to market conditions, including geographic limitations and lack of competition;
- e. To exercise a purchase option under a rental contract;

- f. To purchase Goods offered for sale by auction or tender;
 - g. Where a competitive method of purchasing could interfere with the Municipality's ability to maintain security or order, or to protect human, animal or plant life. For clarity, this exception only applies where the competitive method of purchasing is what causes the interference, not where the good or service being purchased affects the ability to maintain security or order, or protects human, animal or plant life.
 - h. Where an unforeseeable situation of urgency exists and competitive methods of purchasing would result in the Municipality's inability to obtain the Deliverable in time. For clarity, this exception cannot be used where the urgency was foreseeable;
- or,
- i. Where Deliverables relating to matters of a confidential or privileged nature are required and disclosure of these matters could reasonably be expected to compromise confidentiality, cause economic disruption, or otherwise be contrary to the public interest.

The Base Line Bridge was built in 1994, has an east-west orientation, and is located on Base Line in the Community of Wallaceburg. This Swing Bridge carries two lanes of predominantly vehicular traffic across the Sydenham River in three non-continuous spans, with a total crossing length of 118.85 m and a maximum clearance of 8.0 m. The deck has a travelled width of 8.5 m and an overall width of 13.95 m.

Due to the fact that the Lord Selkirk Bridge is currently load restricted, all truck traffic is being detoured across the Base Line Bridge. The recommended rehabilitation in this report does not include mechanical and structural work in order to allow vehicular traffic to continue to use the bridge until the Lord Selkirk Bridge has been rehabilitated.

Over the past few years, there have been a number of occurrences where the Base Line Bridge became fixed in the open position while allowing marine traffic to pass. Once opened, it was not able to close to allow vehicular traffic to pass. This was a result of faulty sensors and the inability to override the bridge programming to force the system to close the bridge. This resulted in an approximate 4 to 5 hour delay whereby no vehicular traffic could use the bridge.

To resolve the vehicular traffic issue, Chatham-Kent Public Works staff have to set up an emergency detour consisting of: Murray Street Bridge, Margaret Avenue, Fork Street, Wellington Street and Dufferin Avenue. This is not the preferred option as these road segments were not intended for heavy truck traffic.

Currently, to resolve the bridge open/close issue, two (2) contractors have to mobilize to the site. The first contractor has to provide boat transportation for the second contractor to access the center pier located in the Sydenham River. The second contractor has to climb the ladder attached to the center pier to be able to directly connect a laptop to the system. Once connected, a computer program is used to override the system to allow

the bridge to be closed. This process is becoming more difficult to perform as contractors are becoming reluctant to use a boat to access the center pier to override the system.

This road has an AADT of 5,600 and the speed limit at this location is 50 km/hr.

In 2009, a contract was let for the installation of: a hydraulic pump, a hydraulic overflow tank, electric panel for traffic gates and electric bypass panel.

Bi-annual inspections have been conducted by the Municipality of Chatham-Kent (as legislated under the *Public Transportation and Highway Improvement Act*) to continually monitor the condition of the structures and to ensure public safety. All structures form part of the comprehensive 20 Year Plan managed by the Engineering and Transportation Division.

In August 2016, AECOM Canada Ltd. was retained to complete a detailed bridge condition survey and assessment of the Base Line Bridge, Lord Selkirk Bridge and Murray Street Bridge. A separate report was prepared for each structure.

The Tender was let February 8, 2018 and closed March 8, 2018. The Purchasing Officer did not receive any tenders.

Electrical issues relating to the Base Line Bridge are as follows:

- Faulty sensors - two (2) of the four (4) east abutment end jack pressure sensors malfunction during bridge operations.
- Deteriorated electrical conduits, improperly supported cables, corrosion in junction boxes and exposed feeder wires.
- The programmable logic controller (PLC) responsible for operation of the bridge is being phased out and replacement parts may no longer be available.



Figure 1. Base Line over Sydenham River

Comments

It is recommended that single sourcing for the work associated with the Electrical Rehabilitation of the Base Line Bridge over the Sydenham River, Community of Wallaceburg, to Datasoft, of London Ontario as there were no (0) responses to a competitive process.

Datasoft has been providing maintenance services on this bridge for approximately 10 years which is why they are the preferred contractor for this project.

This contract consists of electrical repairs as outlined below;

Electrical Repairs:

- Replace existing main programmable logic controller (PLC).
- Replace existing control tower programmable logic controller (PLC).
- Replace existing west gate programmable logic controller (PLC).
- Replace input / output modules.
- Install new wireless equipment (transmitter / receiver) to eliminate the need to access the center pier to over-ride the system.
- Replace various limit switches identified by maintenance personnel.
- Replace select conduit and wiring.
- Install new pushbuttons and/or switches.

Per the terms of the agreement, work may commence any time after Council Award with a substantial completion date of May 1, 2019.

There are no expected bridge closures required for road traffic to perform the work. In the event a short duration closure is required, it will be kept to a minimum, and the contractor will be required to provide notice to the Municipality at least 48 hours in advance.

The bid is approximately \$ 90,000 less than the Engineer's estimate.

Areas of Strategic Focus and Critical Success Factors

The recommendations in this report support the following areas of strategic focus:

- Economic Prosperity:
Chatham-Kent is an innovative and thriving community with a diversified economy
- A Healthy and Safe Community: Chatham-Kent is a healthy and safe community with sustainable population growth
- People and Culture:
Chatham-Kent is recognized as a culturally vibrant, dynamic, and creative community
- Environmental Sustainability:
Chatham-Kent is a community that is environmentally sustainable and promotes stewardship of our natural resources

The recommendations in this report support the following critical success factors:

- Financial Sustainability:
The Corporation of the Municipality of Chatham-Kent is financially sustainable
- Open, Transparent and Effective Governance:
The Corporation of the Municipality of Chatham-Kent is open, transparent and effectively governed with efficient and bold, visionary leadership
- Has the potential to support all areas of strategic focus & critical success factors
- Neutral issues (does not support negatively or positively)

Consultation

The price submission made by Datasoft was reviewed by the Purchasing Officer, the Engineering and Transportation Division, Infrastructure and Engineering Services and by AECOM Canada Ltd.

Financial Implications

Project fees associated with this contract will be funded as summarized in the following table:

Financial Implications
Electrical Rehabilitation – Base Line Bridge over the Sydenham River
Project Costs

Recommended Tender ^A (Including HST)	\$ 304,983.50
Recommended Contingency Allowance ^B	\$ 70,000.00
Less HST Rebate 11.24%	-\$ 34,280.15
Total Current Project Costs	\$ 270,703.35
Total Current Project Funding	\$ 270,703.35

Note A: Contingency is carried as a total of \$70,000 and is accounted for in the Recommended Tender.

Note B: Contingency allowance may or may not be expended and is recommended to address any unforeseen issues which present during the course of the project and are not covered by the contract specifications. This allowance may also be required for additional tariffs that may be imposed on some of the required components.

The total current project costs listed above will be funded from the Infrastructure Backlog Reserve.

Prepared by:

Reviewed by:

Jason Cikatricis, C.E.T.
Engineering Technologist,
Engineering and Transportation

Chris Thibert, P.Eng.
Director,
Engineering and Transportation

Reviewed by:

Thomas Kelly, P.Eng., MBA
General Manager
Infrastructure and Engineering Services

Consulted and confirmed the content of the consultation section of the report by:

Jennifer Scherle
Purchasing Officer

Attachments: Appendix A Consultant's Letter of Recommendation

(RTC:\Infrastructure & Engineering\I&ES\2018\4042 – Single Source Award: Electrical Rehabilitation – Base Line Bridge over the Sydenham River)

September 6 2018

Jason Cikatricis, C.E.T.
Engineering Technologist
Infrastructure and Engineering Services
Municipality of Chatham-Kent

315 King Street West
Chatham, ON N7M 5K8

AECOM has reviewed Datasoft's quotation and we believe that it is fair. AECOM sees no reason for the Municipality of Chatham Kent not to accept the bid.

AECOM had estimated the work to be approximately \$300,000. At \$207,950, Datasoft is \$92,050 below AECOM's estimate.

Please note that because of the current political situation and ongoing negotiations taking place between Canada and the US regarding the NAFTA trade agreement, some items on Datasoft's quotation could be vulnerable to unexpected tariffs and other sudden cost increases. Items on the quote that are vulnerable to tariffs are valued at \$92,950. AECOM advises that you carry a large contingency budget of at least 50% of these items ($0.5 \times 92,950 = \$46,475$) to protect the project against tariffs or cost increases due to the NAFTA negotiations. This contingency can be released once Datasoft reports that all equipment and materials required for the project have been delivered to the site.

The quote does not include any allowance for the replacement of cables and junction boxes. AECOM does not anticipate that the existing electrical cables and junction boxes will need to be replaced, but the cables should be tested to confirm that they are in good working condition. The Municipality should carry an additional contingency for the replacement of cables and junction boxes should the cables be found to be in poor condition. AECOM recommends that you carry a contingency of \$25,000 for this work.

AECOM's recommendation is that you accept this quotation and carry a budget of \$279,425 for the project, including the original quote of \$207,950 + the contingency budgets of \$46,475 for tariffs and \$25,000 for potential extra work.

Please note that this does not include any allowance for AECOM's fee to complete construction inspection.

Yours sincerely,



James Wallace, P.Eng.
Engineering Manager
AECOM Canada Ltd.
T: 905 668 9363
M: 289 928 0195
E: James.Wallace@aecom.com