

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

Date: April 6, 2018

Subject: Request for Proposal Single Source Award
R18-178, Bridge Management Inspection Program

Recommendations

It is recommended that:

1. The Request for Proposal R18-178 Bridge Management Inspection Program in the amount of \$1,882,071.50 (including HST), for a 10 year fixed price contract, be awarded to Engineered Management Systems Inc. of Mississauga, Ontario.
2. The Mayor and Clerk be authorized to enter into the recommended agreements.

Background

The Municipality of Chatham-Kent has one of the largest bridge and culvert inventories in the Province of Ontario, containing approximately 863 structures. A large portion of this inventory is comprised of structures with spans greater than 3.0m. In addition to the large number of structures, the inventory boasts 13 different bridge types ranging from; moveable lift and swing bridges, concrete arches, concrete and steel culverts, concrete rigid frames, single and twin steel bascules, concrete and steel box beams, trusses, concrete and steel I-Girders and T-Girders.

Structures in the bridge and culvert inventory are inspected on a two year rotation as part of a Bridge Asset Management Program to ensure public safety as legislated by the *Public Transportation and Highway Improvement Act*. Inspections are completed in accordance with the Ontario Structure Inspection Manual (OSIM) which documents the extent and severity of condition issues for all bridge components.

Since 2001, Engineered Management System Inc. (EMSI) have been completing bridge and culvert inspections for the Municipality of Chatham-Kent. The information has been used to pro-actively manage the network using a variety of sophisticated analysis tools based on life-cycle cost analysis and fundamental principles of sound asset management.

Over the past 17 years, an extensive rehabilitation program, based on a variety of factors, including life-cycle analysis, has targeted structures representing the greatest potential for increased asset value. At the same time, critical needs have been addressed to ensure the safety of the public and to control the Municipality's exposure to liability. Structure replacement has also been a component of the Bridge Asset Management Program for structures that had no remaining service life due to their age and degree of deterioration.

The current Chatham-Kent Bridge Asset Management Program allows the Municipality to accurately and efficiently manage all the structures in the inventory. Structures are either rehabilitated or replaced at the appropriate time with responsible spending and public safety in mind.

This Request for Proposal (RFP) was issued for services to supply and maintain a Bridge Management Asset Management and Inspection Program because the contract for the current Bridge Management Program has expired. Due to the long term nature of the investment, a 10 year contract was sought.

Comments

This 10 year fixed-price contract will provide a complete Bridge Asset Management Program of the existing bridge and culvert inventory. This contract will be a seamless continuation of what is currently being done.

Specific tasks that are included in this contract are:

- Individual OSIM compliant bi-annual bridge site inspections and reports for each structure in the inventory.
- Data input, updates, storage for all inspection reports and photographs including historical information in order to make comparisons.
- 24/7 Web-based portal access to all bridge information, programs and technical support.
- Continued analytical and management program tools to complete all the tasks listed below:
 - Establish and prioritize yearly budgets.
 - Establish and prioritize future 20 year budgets.
 - Accurately monitor the existing condition of each structure in order to maximize the in-service life before a rehabilitation or replacement is required.
 - Accurately plan the optimal time to perform a rehabilitation to maximize the remaining service life within each structure. Determining the optimal

time of the rehabilitation will maximize the remaining in-service life of the structure until there is a need for replacement. Bridge replacement will be completed when there is no remaining service life in any of the bridge components.

- Ensure responsible expenditures with either rehabilitation or replacement strategies.
- Monitor public safety issues.
- Support applications for funding opportunities.

New technologies noted below may also be used to capture the necessary data required for the evaluation:

- Virtual tours - 360 degree panoramic imaging allowing virtual touring of large bridges. Images are taken with much higher resolution. This allows the opportunity to zoom in and take snapshots of any components for more detailed reviews.
- Drone technology for inspection of otherwise inaccessible components of the larger bridges is available. This may eliminate some situations requiring confined space entry.
- High resolution monitoring of critical structures can be completed by taking successive, very high definition photos that are entered into a software program. The program stitches the very high definition photos together and overlays them to show the progression of cracks, spalls, deformations etc.

The RFP was let in February 2018. Two (2) separate proposals were received by the Purchasing Officer on April 4, 2018 and forwarded to Engineering and Transportation Division for review and evaluation. One of the proposals was rejected because the firm was not a registered bidder. There were 13 firms registered for this RFP with two (2) firms submitting proposals.

Bidder	Location	Bid (including HST)
Engineered Management Systems	Mississauga, ON	\$1,882,071.50
Studio Franchetti Canada Inc.	Toronto, ON	Rejected

The previous 2016 contract of a two (2) year duration was for \$200,000 per year. This contract is 6% less than the previous contract.

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 RFP submission was reviewed by the Engineering and Transportation Division, Infrastructure and Engineering Services.

Financial Implications

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

**Yearly Financial Implications
 R18-178 Bridge Management Inspection Program**

Total fee 2018 (Including HST)	\$ 199,252.90
Total fee 2019 (Including HST)	\$ 177,161.40
Total fee 2020 (Including HST)	\$ 199,252.90
Total fee 2021 (Including HST)	\$ 177,161.40
Total fee 2022 (Including HST)	\$ 199,252.90
Total fee 2023 (Including HST)	\$ 177,161.40
Total fee 2024 (Including HST)	\$ 199,252.90
Total fee 2025 (Including HST)	\$ 177,161.40
Total fee 2026 (Including HST)	\$ 199,252.90
Total fee 2027 (Including HST)	\$ 177,161.40

Note: Even numbered years - 441 bridge structures inspected
 Odd numbered years - 422 bridge structures inspected

**Total Financial Implications
 R18-178 Bridge Management Inspection Program**

Total 10 year Project Costs	Recommended Tender (Including HST)	\$ 1,882,071.50
	Less HST Rebate 11.24%	-\$ 187,207.82
	Total Current Project Costs	\$ 1,694,863.68
	Total Current Project Funding	\$ 1,694,863.68

The yearly project costs listed above will be funded from the Bridge Lifecycle Reserve.

Prepared by:

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(RTC:\Infrastructure & Engineering\I&ES\2018\3997 – Request for Proposal Award
Contract R18-178 Bridge Management Inspection Program)