

THE CORPORATION OF THE CITY OF SARNIA
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ENGINEERING DEPARTMENT

OPEN SESSION REPORT

TO: Mayor Bradley and Members of Sarnia City Council

FROM: J.P. André Morin, P.Eng., City Engineer

DATE: September 2, 2014

SUBJECT: Cull Drain Pedestrian Bridge – Urgent Action

Recommendation:

It is recommended:

1. That Sarnia City Council accept the quotation by Curran Contractors in the amount of \$111,300.00 (\$113,258.88 including non-rebateable portion of HST) for removal and disposal of the entire Cull Drain Bridge Structure (no salvage), or
2. That Sarnia City Council accept the quotation by Cope Construction in the amount of \$226,413.00 (\$230,397.87 including non-rebateable portion of HST) for removal, demolition, and disposal of the Cull Drain Bridge with salvaging of the trusses and relocation of the trusses to Mike Weir Park for possible future preservation works.

Background:

At the August 7, 2014 Special Council Meeting, staff and our consulting engineer presented the Engineer's Report recommending that the bridge be removed immediately. At this meeting Council requested that staff report back to Council as soon as possible on demolition costs which would include various options.

On August 14, 2014, staff met with three (3) contractors for two (2) quotations to remove the bridge. The first quotation (A: Dismantle) was to dismantle and remove the bridge completely, and the second quotation (B: Dismantle & Salvage) was to dismantle the bridge but salvage the trusses for future preservation.

During the on-site meeting with the contractors, a major concern they expressed was on salvaging and relocating the 30m trusses in their fragile condition. Staff agreed that the trusses could be dismantled in a method that

the re-assembly of the trusses could be completed without losing the structural integrity.

The following quotations were received and opened:

Contractor	A: Dismantle (Excluding H.S.T)	B: Dismantle & Salvage Trusses (Excluding H.S.T.)	Salvage Success Rate
Cope Construction	\$218,702.00	\$226,413.00	95%
Curran Contractors	\$111,300.00	\$594,000.00	80%
Triad Contracting (with Wicks Construction)	\$117,508.00	No Submission	N/A

Note: each quotation includes a 20% contingency

Comments:

The three local construction companies were selected as they each employ a Professional Engineer that is needed to ensure that the bridge is structurally stable before work on and under the bridge proceeds and they are able to develop a plan to support and remove the trusses in an effort to salvage.

Each contractor prepared their own method of dismantling and salvage that their experience and equipment suited.

Triad Contracting were not in favour to Dismantle & Salvage the trusses (quotation 'B') due to the extreme cost (extensive shoring) and no guarantee that the trusses would be restorable at a practical and reasonable cost.

The salvage success rate was determined by each contractor based on their method to remove the bridge deck without adding increased stress to the trusses and the removal and relocation of the trusses. Although this is only self-determination, it does add merit when determining the method on removing the bridge.

The low prices submitted for quotation 'A' by Curran Contractors requires a fifteen (15) day construction period, quotation 'B' by Cope Construction requires a twenty (20) day construction period. The method must be approved by the St. Clair Region Conservation Authority and the Department of Fisheries and Oceans before a schedule can be completed. Also this work will require to be completed when dry weather and low winds are expected which may delay portions of the project.

Four pieces of correspondence were received regarding the Cull Drain Pedestrian Bridge and have been attached to this report.

Consultation:

Staff have contacted and consulted with the St. Clair Region Conservation Authority and the Department of Fisheries and Oceans (DFO). An application for 'Request for Review' has been submitted to the DFO, and staff will work with the agencies and our successful contractor to acquire all necessary approvals to complete the removal of the bridge.

Financial Implications:

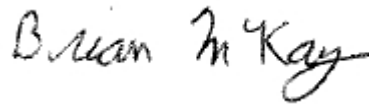
It is proposed to fund this project from the "Rehabilitation of Various Structures (Bridges and Culverts)" capital funding which has a current uncommitted balance of \$499,883.

Reviewed by:



J.P. André Morin, P.Eng.
City Engineer

Approved by:



Brian McKay, CPA, CA
Acting City Manager

This report was prepared by Mike Berkvens, Development Manager.

Attachments:

- Letter from Steve Loxton dated August 28, 2014
- Letter from Richard Longley dated September 2, 2014
- Letter from Nathan Holth dated September 3, 2014
- Letter from Victoria Schauteet dated September 2, 2014

Steve Loxton
Friends of Cull Drain Bridge
270 Kathleen Ave.
Sarnia, ON N7T 1E3

August 28, 2014

Ms. Margaret Misek-Evans
City Manager
The Corporation of the City of Sarnia
255 North Christina Street
PO BOX 3018
Sarnia, Ontario N7T 7N2

Letter of Request to the City of Sarnia

Dear Ms. Margaret Misek-Evans,

I'm writing to you today on behalf of the group, "**Friends of Cull Drain Bridge**". Our group has been working to have the Cull Drain Bridge restored (most economically, off-site) and put back into service in its original location.

Alternately, we are also developing proposals to salvage the trusses for display and/or adaptive reuse, such as a fishing pier, observation platform, etc.; perhaps in Mike Weir Park, or the Wawanosh Wetlands, or in some other meaningful and useful way that helps Sarnians preserve and interpret their cultural heritage and demonstrate their commitment to Sustainability.

Background

This bridge has been determined, by the Sarnia Heritage Committee, to have "considerable heritage significance", using provincially accepted guidelines. In addition, the committee, to which I am a member, has passed a motion endorsing the salvage of "at least the trusses, for adaptive reuse and/or display", due to their heritage value.

Besides its heritage value, the bridge has long provided, until its closure, an important access route for local residents and a scenic destination for many throughout the city and county. As a landmark and attraction in any future expansion of the city's recreational trail network, and/or its

inclusion in regional/international trails (for example, the Waterfront Regeneration Trust's Great Lakes Trail), the bridge also holds much more value and potential than any prefabricated replacement.

As a result of last month's bridge inspection report and subsequent emergency council meeting, it is almost certain that the bridge will be removed in an expedited manner, for the sake of public safety. While staff have been directed to explore all options, including non-destructive salvage of the bridge's trusses, we understand that the cost of doing so may be more costly than a complete demolition.

However, due to the bridge's heritage value, its scenic location, its potential as a signature feature on any future recreational trail, not to mention its utility to local residents, in a rapidly growing part of the city (Brights Grove) which will require such amenities, we feel that an investment of both public and private resources in this bridge is both justified and warranted.

The question then becomes, where do we find these resources? Recently, two potential answers to this question have emerged.

1. Potential for Funding - The OCIF

First, on Aug. 17th, 2014, the Province of Ontario announced two new infrastructure funding programs specifically geared to municipalities of 100,000 population, or less: the Ontario Community Infrastructure Fund (OCIF) and the Small Communities Fund (SCF).

The aligned programs have an ***Expression of Interest deadline of September 19, 2014.***

The documentation for both programs can be found, here:

http://www.moi.gov.on.ca/en/infrastructure/building_together_mis/index.asp

Of interest, in this case, and referenced below, please see the .pdf document found linked to at the above URL, under the OCIF heading, entitled:

"Program manual – Application-based component"

Based on the program manual, we believe that the Cull Drain Bridge may be eligible for funding under the application based component. In support of this, we extract the following from the program manual:

- The OCIF includes bridges as eligible for funding. (Sec. 3; pg. 5)

- Under “What types of projects are eligible for funding?” “Ontario’s priority will be projects that focus on renewal, rehabilitation, and replacement projects.” (Sec. 5.7; pg. 10)
- In assessing project eligibility, “The Province will review projects ... to confirm whether or not the proposed project would address an existing health and/or safety issue” (Sec. 6.1 (a); pg. 11)

In addition, we note below that public/private partnerships are encouraged and advantageous to the municipality, in terms of the maximum eligible cost and scope of projects:

- “Can two or more eligible applicants submit a project together?” “Yes. Joint projects are encouraged under both programs.” (Sec. 5.5; pg. 9)
- “Who is an eligible applicant?” “Private sector bodies (for-profit or not-for-profit organizations) with support by a municipality by way of resolution in council” (Sec. 3; pg. 5)
- “Under the OCIF, joint projects may be larger than projects submitted by a single applicant. Joint applicants may request up to 90% of total project costs, or \$2 million in provincial funding per applicant, whichever is the lower amount (e.g., a project submitted by two eligible applicants would have a maximum provincial share of **\$4 million**.” [*emphasis mine - s.l.*] (Sec. 5.5; pg. 9)

Finally, in reference to the possibility of the bridge being rehabilitated as part of a larger project to protect shoreline and/or develop a recreational trail on the old Lakeshore Rd. R.O.W. east of the bridge to Mike Weir Park:

- “Can a project include multiple components?” “Yes, projects can include multiple components.” “Eligible applicants must demonstrate that each component of the project is inter-related and meets eligibility requirements.” (Sec. 5.6; pg. 9, 10)

Priorities

While we appreciate that the city may have other infrastructure projects considered to be a higher priority, according to its Asset Management Plan, we feel that:

1. these might be addressed through application to the concurrently announced Small Communities Fund (SCF); the joint Fed./Prov. program geared more towards larger, higher cost “critical core infrastructure projects” and for which we do not believe the Cull Drain Bridge and/or a recreational trail project would be eligible.

2. the rehabilitation of the Cull Drain Bridge (ideally, in conjunction with development of the east side trail to Mike Weir Park), would be a beneficial addition to the city's suite of cultural heritage/recreational infrastructure, given:
 - a. its noted local and regional heritage value
 - b. its utility as a local access route
 - c. its scenic location and aesthetic qualities
 - d. its ability to address increasing demands for such cultural/recreational amenities in the high growth Brights Grove area
 - e. and its potential value to community development and tourism, if incorporated into an anticipated regional trails, such as the Waterfront Regeneration Trust trail, which is now expanding into Lambton County, from both south and east of Sarnia.

We believe these factors more than qualify the bridge (and/or trail expansion) as an important and valuable piece of city infrastructure, justifying a long term investment, in pursuit of sustainable economic growth and improved quality-of-life for all Sarnians.

This brings us to the second part of the answer to the question of where resources to rehabilitate, or adaptively reuse, the Cull Drain Bridge would come from, as eluded to above.

Potential for Funding Through Fundraising and Participation by Non-Profit Advocacy Groups

Our group, the Friends of Cull Drain Bridge, have always believed that any project of this type must have community support and utilize, to the greatest extent possible, private resources in order to be successful.

Our group, in consultation and/or collaboration with heritage bridge advocates, Bluewater Trails, the Architectural Conservancy of Ontario (ACO) and other community based groups, were in the process of establishing that support, collecting those resources and formulating proposals and a plan of action, when the anticipated timeline of our efforts was preempted by the late safety inspection.

Despite this grave setback, we have carried on and rallied the community to this cause.

(As attested to by our online petition to save the bridge, which has collected over 200 signatures to date: <https://www.change.org/p/sarnia-city-council-save-the-cull-drain-bridge>)

Keeping in mind the time constraints, the practical results have been quite promising to date:

- We have begun to raise funds and have collected almost \$3000 towards the preservation of the bridge, or its trusses, in just the last week.
- We have secured a letter-of-intent from a local resident, who has offered up her 7 acre property as a temporary storage area for the trusses, if required. The property is convenient to the bridge and a preliminary inspection has found it to be suitable and safe. (This letter will be provided to the city and council before, or when the matter comes before council).

We are prepared to work with the city to see that, at the very least, the bridge trusses are properly cared for and preserved while their final disposition is determined.

Other Potential Cost Savings

Despite a preliminary report by city staff that estimated that rehabilitation of the bridge could cost as much as \$1 million, this estimate is based on an in situ restoration. Our research has found and therefore, we have always advocated, an off-site restoration as a solution potentially competitive with the cost of replacement.

This option has never been costed by the city. However, with the likely removal of the bridge for public safety reasons, we have explored it and been informed by heritage bridge restoration experts, that the non-destructive salvage of the trusses would be sufficient to rehabilitate the bridge for a return to its original location and still preserve its primary structural, heritage and aesthetic attributes.

Such a restoration could be done now, if provincial and/or private funds were secured. Or, under an adaptive reuse scenario, the trusses would survive, to continue that reuse function indefinitely and still be available, if and when funding and resources (such as volunteers, industrial sponsorship, grants, etc.) were available and if other conditions favourable to restoration and re-installation emerged, at some future date.

Our Requests

Submit an EOI under the OCIF

Therefore, we would like to formally request:

1. that the city explore the possibility of submitting an EOI for funding under the OCIF, for a project that would include off-site rehabilitation of the bridge, with its return to service in

its original location

2. and to further explore the possibility of combining the above project with the development of a recreational trail along the east side ROW of old Lakeshore Rd. to Mike Weir Park.

Ideally, these projects would be carried out in partnership with ourselves and/or another specifically formed umbrella group, consisting of potential community stakeholders, such as Bluewater Trails, Communities In Bloom, etc., or non-profit organizations; for example, the Waterfront Regeneration Trust, ACO, etc.

Salvage the Trusses for Adaptive Reuse

If the city determines not to submit an EOI, and/or it is deemed as ineligible by the city and/or the province, we would request that:

1. the city choose to non-destructively salvage at least the trusses of the bridge, for adaptive reuse and/or display
2. to work with our group in securing suitable temporary storage, while final disposition is determined, so that a community based funding and preservation solution can be arrived at. This could include the possibility of transferring ownership of the salvaged parts of the bridge to ourselves, or other third party, if the city declines to take on the project
3. and to explore the cost of restoring the bridge's trusses off-site, for adaptive reuse and/or eventual re-installation, either now, once provincial, etc. funding is available or, at a future date, when conditions allow; possibly, after a period of storage and/or interim preservation work (possibly, by volunteers, etc.) and/or a period of adaptive reuse.

We ask that the city take these requests under consideration by staff and council, as required and provide our group and the community with a timely response, given the time constraints, safety concerns and deadline for EOIs under the OCIF.

Conclusion

Finally, we ask the city and council, should an EOI for this project not be submitted/accepted, to take into consideration the fact that the timely announcement of these new provincial programs constitute an unanticipated source of municipal funding. And that as such, regardless of how the city chooses to take advantage of this potential "windfall", it could potentially free up resources for investment in the preservation of the Cull Drain Bridge and/or development of the east side ROW, in partnership with the community.

We can't think of a more appropriate, or beneficial, project to celebrate and reinvigorate our city's centennial investments, than to work together with the city in preserving a heritage asset that was built in Sarnia, by Sarnians in 1910, during the heady years of expansion, leading up to the incorporation of the city.

Regards,

Steve Loxton

Acting Chairman,

Friends of Cull Drain Bridge

sluggo7@hotmail.com

519-490-3800





From: Richard Longley, President
Architectural Conservancy of Ontario
403 -10 Adelaide Street East, Toronto ON M5C 1J3
416-367-8075 x 201 email: President@arconserv.ca

To: Ms. Margaret Misek-Evans, City Manager
Corporation of the City of Sarnia
255 North Christina Street
PO Box 3018, Sarnia, ON N7T 7N2

Steve Loxton, Friends of Cull Drain Bridge

Bob Hulley, Chair
ACO Credit & Humber Watershed Branch

Roger Dorton, OC., C.M., PhD., P.Eng

Re: Sarnia Cull Drain Bridge

Sept. 2, 2014

Dear Ms. Misek-Evans,

In May of this year, the Architectural Conservancy of Ontario was approached by the **Friends of Cull Drain Bridge (FCDB)**, for advice on how best to proceed in their efforts to save this threatened heritage structure. As a result, a correspondence was established with Robert Hulley, Chair of ACO Credit & Humber Watershed Branch and an expert on the bridges of southern Ontario. Bob then consulted with Roger Dorton, C.M., PhD., P.Eng., former Head Bridge Engineer at the Ontario Ministry of Transportation, former Vice-President of the International Association for Bridge and Structural Engineering, a fellow of the Canadian Academy of Engineering and one of Canada's foremost Bridge Engineers.



Bob Hulley and Dr Dorton examined detailed documentation regarding the Cull Drain Bridge, including Nathan Holth's extensive historic, photographic and structural record of it on his website HistoricBridges.org and information provided by Steve Loxton of FCDB (and the Sarnia Heritage Committee, which has documented a heritage assessment of the bridge.)

After reviewing the documentation, Bob Hulley and Dr Dorton agreed that: "from the photographs and description the Cull Drain Bridge, it appears to be a very interesting bridge and very rare."

In addition, the fact that the Cull Drain Bridge survives in essentially original condition, is extremely rare for one of its age and this adds considerably to its value as an unaltered example of what was the state of the bridge builder's art, at the time of its fabrication and installation.

For these reasons and due to its local heritage significance as determined by the Sarnia Heritage Committee, ACO is emphatic in its endorsement of the opinion of Bob Hulley and Dr Dorton and it recommends that the City of Sarnia considers all possible preservation options.

Ontario's inventory of surviving heritage truss bridges is shrinking. In the Cull Drain Bridge, Sarnia possesses an especially fine and provincially rare example of one of these structures, in an exceptionally beautiful setting. As such, the ACO believes the Cull Drain Bridge bridge should be preserved, for the benefit of the people of Sarnia and of Ontario, for now and the future,

With regards,

A handwritten signature in black ink, which reads "Richard Longley". The signature is fluid and cursive, with a long horizontal stroke at the bottom.

Richard Longley, President
Architectural Conservancy Ontario



Nathan Holth
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Dewitt, MI, 48820

269-290-2593
nathan@historicbridges.org

Ms. Margaret MiskEvans, City Manager
Corporation of the City of Sarnia
255 North Christina Street
PO Box 3018, Sarnia, ON N7T 7N2

September 3, 2014

Dear Ms. MiskEvans:

I am the author of www.historicbridges.org and have been supportive of the efforts of the Friends of Cull Drain Bridge (FCDB) to inspire the preservation of the Old Lakeshore Road Bridge, an important heritage truss bridge currently at risk for demolition. I have visited the bridge several times over the past ten years and have maintained a webpage with numerous photos and extensive information about the bridge on HistoricBridges.org for many years as well.

Built by the Jenks-Dresser Company of Sarnia, Ontario in 1910, the bridge is one of the few known surviving bridges of this Sarnia-based company. A Sarnia-built bridge within the City of Sarnia, it truly is Sarnia's own heritage. It also is rare on a provincial level as an early example of its truss design in Ontario, and also an excellent, unaltered example of period bridge construction materials and techniques.

Given the bridge's heritage significance, I strongly believe any effort that would prevent the destruction of the bridge trusses is worthwhile. I encourage the City of Sarnia to give serious consideration to any preservation opportunities for this bridge.

I have photographed heritage bridges across the province of Ontario, and my studies place particular focus on metal truss bridges. Heritage truss bridges of all types are being demolished in Ontario at an alarming rate. A decision to preserve the Old Lakeshore Road Bridge will help ensure that an example of this disappearing bridge type remains a part of Ontario's beautiful landscape.

Sincerely,

A handwritten signature in black ink that reads 'Nathan Holth'.

Nathan Holth

Author/Webmaster, HistoricBridges.org

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Mike Berkvens, C.E.T., Development Manager

Corporation of the City of Sarnia

255 North Christina Street

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Re: Sarnia Cull Drain Bridge

Sept. 2, 2014

Dear Mr. Berkvens,

As a member of the Friends of Cull Drain Bridge group, I would like to offer our property at Lot 1 Concession 1 Plympton Township. (Corner of Mandaumin and Old Lakeshore/Egremont roads - entering from Egremont) as a place for temporary storage of the salvaged trusses of the bridge after removal, if such a place is required.

This offer is conditional on us reaching an agreement satisfactory to both parties. This would be a temporary measure until the trusses have a more permanent location as I understand the bridge has to be removed immediately.

I am sure we all understand the huge heritage value of preserving these last remnants of our local history and I would like to help make that possible.

Thank you,

Vicki Schauteet