

THE CORPORATION OF THE TOWN OF GEORGINA

REPORT NO. OID-2024-0018

**FOR THE CONSIDERATION OF
COUNCIL**

November 20, 2024

**SUBJECT: MOSSINGTON BRIDGE STUDY RESULTS AND IMPLEMENTATION
PLAN**

1. RECOMMENDATION:

- 1. That Council receive Report No. OID-2024-0018 prepared by the Capital Delivery Division, Operations & Infrastructure Department, regarding the Mossington bridge study results and implementation plan;**
- 2. That Council receive the attached letter of opinion prepared by LHC Heritage Planning & Archaeology Inc., regarding the cultural heritage aspects of the proposed safety measures for the Mossington Bridge; and**
- 3. That Council, acting as the Town's Heritage Advisory Committee, deem the proposed safety measures as acceptable from a cultural heritage standpoint.**

2. PURPOSE:

To update Council on the outcomes of the safety assessment and progress of work to implement safety measures on the Mossington Bridge; and, to seek Council's acknowledgement - acting as the Town's Heritage Advisory Committee - that the proposed safety modifications are acceptable from a cultural heritage standpoint.

3. BACKGROUND:

The Mossington Bridge, located on Hedge Road was built in 1912 and is designated by by-law 2002-0015 (HO-1) as '*a property of historical and architectural value and interest under part iv of the Ontario Heritage Act*'. It is a through-truss steel bridge which provides a crossing over the Black River, painted bright blue, and well-known as 'the blue bridge'. In 2016, the bridge was cleaned, coated and some structural steel repairs were completed.

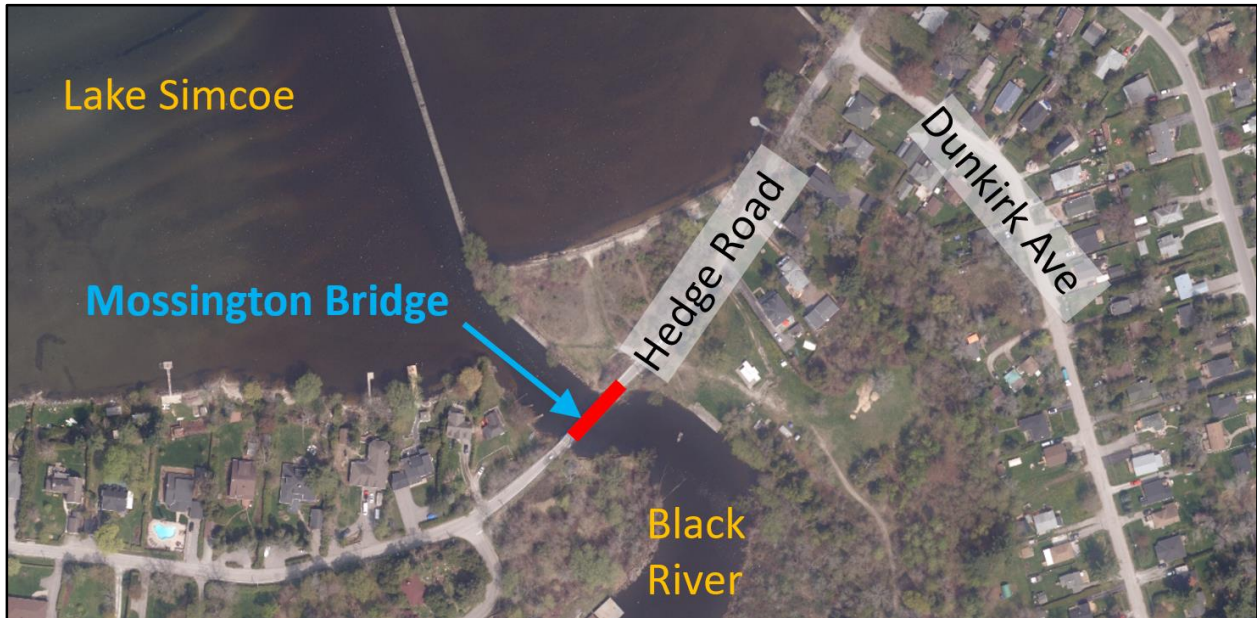


Figure 1 - Mossington Bridge Location

Over the bridge's lifetime, there has been a history of individuals exhibiting hazardous behaviour by climbing and/or jumping from the bridge into the Black River.

In 2022 at the direction of Council, the Town hired Safe Roads Engineering to perform a Safety Assessment study to investigate and evaluate measures to discourage the aforementioned hazardous behaviour. The study recommended the following actions be taken:

- Enhanced signage and safety campaign;
- Enhance security cameras;
- By-law enforcement; and,
- Installation of safety barriers.

In February 2024, the Town retained the services of a professional bridge design engineering firm Doug Dixon & Associates (DDA) to evaluate options for safety barriers, recommend the preferred approach, and prepare the detailed design. This work was completed in July 2024.

In June 2024, the Town retained LHC Heritage Planning & Archaeology Inc. (LHC) to complete a heritage impact review of the proposed safety barriers. In July 2024, LHC provided the attached letter (appendix 1) of opinion confirming that the proposed designed safety modifications are generally consistent with good heritage conservation practices.

In August 2024, the Town retained the services of local steel fabricator, H.T.E. Ltd. partnered with Bau Meister Mechanical Fabrications Ltd., to manufacture and install the proposed safety barriers. DDA carefully reviewed the quotation and has confirmed the pricing as reasonable and at or below market costs at this time.

4. ANALYSIS:

Staff have advanced the implementation of the proposed measures outlined in the safety study, up to the point of installation, as outlined below.

Enhanced signage and safety campaign

New and updated signage will be installed at both ends and on the structure indicating prohibition of stopping, jumping, fishing etc. from the bridge. The signage will provide clear expectations of bridge users.

Enhance security cameras

The bridge has been monitored for a number of years, utilizing a remotely connected camera, to act as a deterrent to hazardous behaviour, as well as documentation should an incident evolve. After reviewing the current hardware, and the resulting images, the Safety Assessment suggests to enhance the cameras both to improve the image quality, angle of the cameras, and opportunity for deterrence.

By-law enforcement

Hedge Road, across the Mossington Bridge, has now been included in the by-law enforcement patrol route, especially important during peak summer periods. The public nuisance by-law that exists today (By law 2020-0073) remains enforceable should there be a need.

Installation of safety barriers

At the preliminary design stage, DDA reviewed and evaluated several options to deter access to the truss structure. Some options were eliminated from further consideration as being unfeasible due to the structural loads (weight) placed on the 112-year-old structure. Feasible options (such as wire barriers or mesh fencing) that had significant heritage-related impacts and/or were found to be less effective in deterring hazardous behaviour were ranked lower than options that were more feasible, provided deterrence, and were not load-prohibited.

The highest scoring option was found to be:

- Add steel plate covers over the truss lattice-work; and,
- Modify and increase the height of the railing.

This approach was found to be effective while still respecting the heritage nature of the bridge, and as such was carried forward to detailed design represented in Figures 1 & 2.

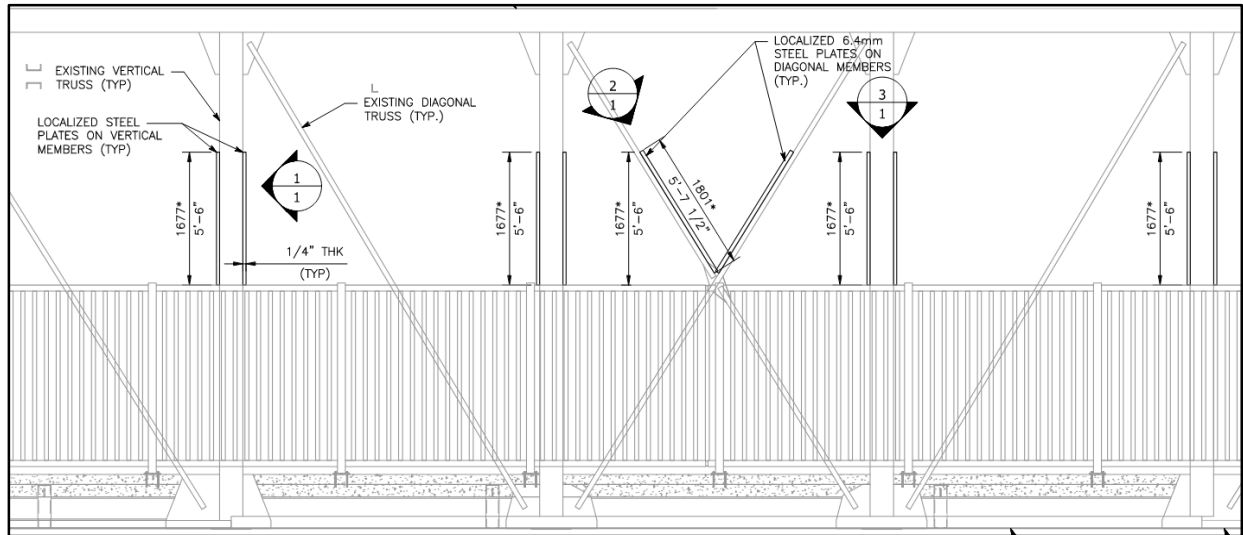


Figure 1 - Proposed steel covers to prevent gripping of truss members

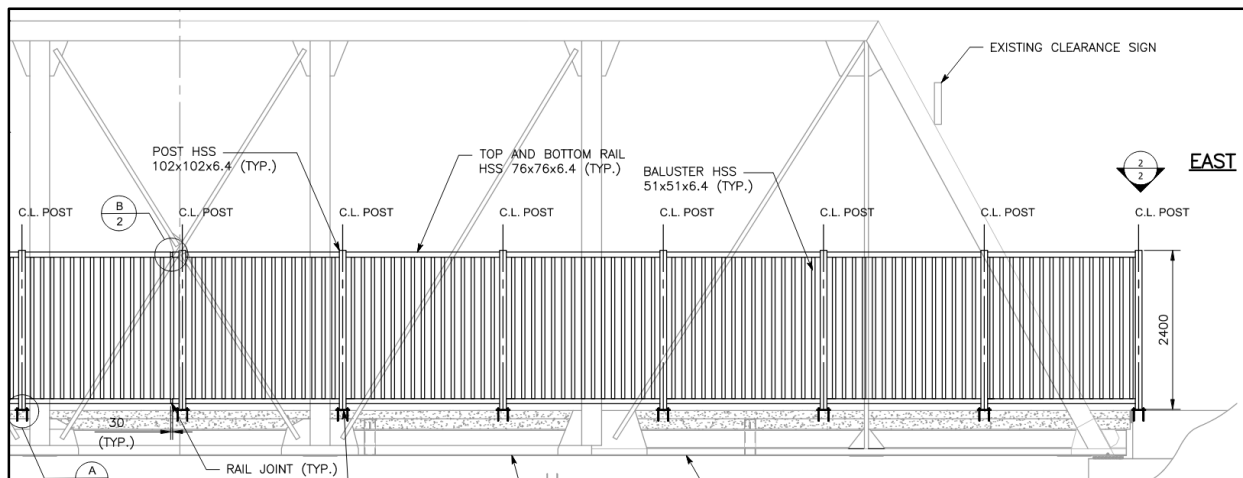


Figure 2 - Proposed railing with vertical bars to prevent handholds

While it is not possible to absolutely prevent individuals from engaging in hazardous behaviour, this proposed design is expected to act as a deterrent.

In its heritage review, LHC found that the heritage impact of these proposed safety measures is minimal as the paint colour, materials of construction and fabrication techniques are compatible with the existing bridge. Of note, is that all steel modifications will be painted in the same blue colour as exists today. In addition, the modifications are such that they could be “reversed” reinstating the original design, if necessarily desired.

LHC also notes the following:

- “...the heritage value of the Bridge has been considered and integrated into the modifications...”; and,
- “...since this change is necessary for safety and security and is reversible it is consistent with heritage conservation guidance...”.

The Town will also follow LHC's additional recommendations regarding documenting the bridge and retaining some or all of the railing. Staff have organized for the railing to be documented, removed and stored for future use within Town.

The Town has engaged the services of local steel fabricator Bau Meister Mechanical Fabrications Ltd./H.T.E. Ltd. to fabricate and install the proposed safety barriers. Fabrication work is underway and installation is anticipated to be carried out in November of 2024.

To ensure the impact of implementing these measures is mitigated as much as possible, November was chosen due to its lighter traffic volumes, limited seasonal visitors, while balancing the beginning of the winter period of snow removal. Temporary closure of the Mossington Bridge will be required for a period of one to two weeks to allow installation of the safety measures. The following steps will be taken in advance of temporary closure of the bridge:

- Coordination with emergency services, operations, school bus, and garbage collection;
- Notification posted on the Town's website one week in advance of the temporary closure;
- Erection of signs at the bridge one week in advance of the temporary closure; and,
- Erection and maintenance of barriers and detour route (Dalton Road/Black River Road/Park Road) signage at closure.

Coincident with temporary closure of the bridge for installation of the safety barriers, the Town will also be installing the camera and sign upgrades simultaneously to discourage hazardous behaviour.

5. RELATIONSHIP TO STRATEGIC PLAN:

"Creating a Vibrant, Healthy, and Safe Community for All" – Support a safe, healthy and inclusive community.

"Delivering Service Excellence" – Proactively manage infrastructure and assets to ensure service continuity.

6. FINANCIAL AND BUDGETARY IMPACT:

The combined budget for assessment and implementation is \$315,100.00.

The contract for the Mossington Bridge Safety Assessment was awarded to Safe Roads Engineering Inc. in the amount of \$14,610.75 (excluding H.S.T.).

Doug Dixon & Associates Inc. was retained to carry out preliminary design, detailed design, and construction contract administration/inspection of safety barriers for the amount of \$31,759.29 (excluding H.S.T.).

As per the recommendations of the Safety Assessment study by Safe Roads Engineering, the Town has committed \$4,000.00 for enhanced signage and \$10,000.00 for enhanced security cameras, of which estimates have come in slightly under budget.

Bau Meister Mechanical Fabrications/HTE was retained to complete fabrication and installation of the safety barriers for the amount of \$238,100.00 (excluding H.S.T.).

Express Traffic Inc. has been retained to provide traffic management services to facilitate temporary closure of the bridge closure at a cost of \$4,030.00 (excluding H.S.T.).

The table below outlines the total approved expenditures for this project, including 1.76% non-recoverable HST:

Mossington Bridge Safety Assessment – Safe Roads Engineering Inc.	-\$14,868
Engineering Services – Doug Dixon & Associates Ltd. (PO#18066)	-\$32,318
Heritage Review - LHC Planning & Archaeology Inc.	-\$7,300
Additional Signage	-\$4,000
Enhance Security Cameras	-\$10,000
Traffic Management	-\$4,324
Fabrication and Installation of Safety Barriers – HTE Ltd.	-\$242,291
Sub-total Expenditures	-\$315,100

7. PUBLIC CONSULTATION AND NOTICE REQUIREMENTS:

Prior to construction, on-site signage will be erected indicating the duration of the works, the nature of disturbances expected, contact information for the Town’s Project Manager and other relevant information. Communications associated with temporary closure of the bridge are described herein.

8. CONCLUSION:

The Town is taking the necessary actions to discourage hazardous behaviour on the Mossington Bridge and enhance safety for all users.

APPROVALS

Prepared By: Kobihan Karunakaran, Jr. Project Manager, Capital Delivery

Reviewed By: Neil MacDonald P.Eng., Manager Capital Delivery

Reviewed By: Rob Wheeler, Deputy CAO/Treasurer

Recommended By: Michael Vos, Director, Operations and Infrastructure

Approved By: Ryan Cronsberry, Chief Administrative Officer

Attachments:

“Letter of Opinion Mossington Bridge Modifications Cultural Heritage Review”, dated July 12, 2024, prepared by LHC Heritage Planning & Archaeology