THE CORPORATION OF THE TOWN OF GEORGINA

REPORT NO. OID-2024-0010

FOR THE CONSIDERATION OF COUNCIL
June 12, 2024

SUBJECT: Old Shiloh Road Bridge – Options for Commemoration

1. RECOMMENDATIONS:

1. **That Council receive Report No. OID-2024-0010 prepared by the Capital Delivery Division, Operations & Infrastructure Department dated June 12, 2024 presenting an analysis of options for commemoration of the Old Shiloh Bridge.**

2. **That Council direct staff to include Option X for the commemoration of the Old Shiloh Road Bridge over the course of its replacement; and,**

3. **That Council direct staff to include the associated budget request for the option selected in the 2025 draft budget, to be implemented alongside the next phase of design and construction of the new bridge.**

2. PURPOSE:

The purpose of this report is to analyze options for commemoration of the Old Shiloh Road Bridge and obtain Council's authorization to implement the recommended option in parallel with the other tasks associated with the replacement of the bridge.

3. BACKGROUND:

The Operations & Infrastructure Department is responsible for maintaining the Town of Georgina's road network and infrastructure within the right-of-way including bridges.

The Old Shiloh Road Bridge is a concrete arch bridge that was built in 1925. The bridge is located on Old Shiloh Road, approximately 750 m west of Victoria Road, in the hamlet of Udora.

Deterioration of the Old Shiloh Road Bridge has been observed for many years, with rehabilitative construction previously carried-out in 1988 and again in 2011. Bridge inspections conducted in 2018, 2020 and 2022 confirmed the bridge's poor condition, continuing deterioration, and need for replacement.

The Town retained Tatham Engineering to conduct a Schedule 'B' Municipal Class Environmental Assessment (MCEA) study for the Old Shiloh Road Bridge. The MCEA study was completed in February 2024. The draft MCEA Project File Report

and its attachments were presented to Council on February 28, 2024 in report OID2024-003, describing the consultation and decision-making process that was followed. The MCEA process determined that replacement of the existing bridge with a new two-lane bridge is the recommended preferred approach for the Town. The MCEA study also identified a need to commemorate the history of the bridge, proposing a number of options for consideration.

Through Council Report OID2024-003 Council accepted the recommendation to replace the existing bridge with a new two lane bridge and authorized submission of the completed study documentation to the Ontario Ministry of the Environment, Conservation and Parks for review and posting for public consultation.

Staff were also directed to complete an analysis of costs, timelines and implementation considerations of the non-structural options for heritage commemoration of the Old Shiloh Road Bridge, which is the subject of this report. The options to be analyzed include: incorporation of arch façades on the new bridge, reuse or relocation of portions of the bridge at an alternative location, or erection of a monument, plaque or art installation.

In accordance with Council's direction from report OID2024-003, staff have begun work on the preliminary design stage of replacement of the bridge. Detailed design is planned to commence in 2025 with completion of construction targeted for late 2026. Commemoration of the bridge will be planned and coordinated around the work of replacement of the bridge, and implemented as a separate, independent initiative.

4. ANALYSIS:

As part of the MCEA, a Heritage Impact Assessment and Cultural Heritage Evaluation Report were completed. These studies concluded the following regarding the Old Shiloh Road bridge:

- "*…was determined to have elements of moderate Cultural Heritage Value or Interest...*"
- "*The Cultural Heritage Value of the Bridge could be commemorated through reflection of the architectural form of the existing bridge in the design of the replacement bridge*"
- "*The Cultural Heritage Value of the Bridge could be remembered with a commemorative monument, memorial, or art installation".*

Staff have analyzed three options for commemoration of the existing bridge including:

- Option 1: Equip the new bridge with non-structural, arch façades reflecting the shape of the existing bridge;
- Option 2: Reuse or relocate portions of the existing bridge; and,
- Option 3: Create an interpretative monument, plaque, or art installation.

Option 1: Arch façades

Description:
An arched façade similar in appearance to the primary visual characteristic of the existing bridge could be installed on the new bridge. Such arches would be designed for appearance only; not serving any structural support or safety functions. Arch façades could potentially be constructed of wood, steel, aluminum, or some other material suitable for outdoor environments. Use of concrete or stone for arch façades is precluded due to the large loads that would be applied to the bridge structure.

Key Considerations:
- Arch façades incorporated into the new bridge could be designed to achieve a similar visual impact as the existing historic bridge.
- The commemorative impact of this option would result primarily from persons with history in the area experiencing visual recall cues when within sight of the structure.
- The beneficiaries of this commemoration option would be residents living in close proximity to the bridge as well as other users of this portion of Old Shiloh Road. Of the options analyzed it is anticipated that this option would impact the smallest audience.
- Implementation of arch façades requires coordination with the design of the new replacement bridge.
- Arch façades will require regular maintenance, including regular cleaning and periodic recoating. Depending on the materials of construction used, exposure to road salt will increase the amount of maintenance required.
- Anticipated lifespan: 20 to 50 years (note: highly variable depending on materials selected).

Costs:
- Design and construction: estimated $1,100,000.
- Preventive maintenance: average allowance of $4,000 to $8,000 per year (assuming major maintenance is performed every 5 to 10 years).
- Approximate lifecycle cost (assuming 50 year bridge lifespan): $1.3M to $1.5M.

Timing:
- During 2024 and 2025, structural loads and mounting details for arch façades would need to be incorporated into the design of the new bridge.
- Subsequent to incorporation in the design of the new bridge, the arch façades could be constructed as part of the new bridge works in 2026, or, procured and installed separately at some time in the future, after the new bridge is constructed, provided the design elements are approved ahead of time.

Option 2: Reuse or relocation of portions of the bridge

Description:
Due to the size and configuration of the existing structure, the degree of deterioration that has occurred, and adverse structural impacts that will result from dis-assembly and re-assembly, staff consider that it would be extremely costly and impractical to attempt to completely relocate the entire bridge. Further, it is unwise to attempt to re-use any portion of the existing bridge for any kind of structural support function. As such, these concepts are not included in analysis of this option.

For this option, it is envisioned that a portion of one of the existing bow-string arches could be disassembled, relocated and reconstructed in a new location. In this manner a visual display of the historical bridge could be preserved. It is anticipated that such a display would require a new engineered concrete foundation and structural supports necessary to ensure safety. If located in a publicly accessible area, a reconstructed display would be available to many people and could incorporate educational elements. Examples of potentially appropriate locations for a reconstructed display include: the Udora Community Hall property or the Georgina Pioneer Village.

Key Considerations:
- Use of actual components of the existing bridge would provide concrete links to the past.
- The commemorative impact of this option would result primarily from persons with memories of bow-string arch bridges experiencing visual recall cues, as well as others being given with the opportunity to learn about the history of the bridge.
- The beneficiaries of this form of commemoration would be those who visit the location of the reconstructed display. Of the options analyzed it is anticipated that this option would impact a moderately sized audience.
- Dependent on the location chosen for the re-constructed display, additional unanticipated issues may have to be addressed such as land acquisition, permitting, foundations, and environmental protection.
- Design of foundations, structural supports and dis-assembly of a portion of the existing bridge would require coordination with the design and removal activities of the construction contract for the new bridge.
- Due to the poor condition of the existing bridge, there remains some uncertainty as to the precise extent of work required to dismantle a portion of the existing structure, transport to a new location and re-assemble as the reconstructed display.
- It is anticipated that this option would require only minimal maintenance.
- Anticipated lifespan: 50+ years.

Costs:
- Design and construction: estimated $850,000 (+ additional unanticipated costs)
- Preventive maintenance: average allowance of $1,000 to $1,500 per year (assuming major maintenance is performed every 5 to 10 years).
- Total lifecycle cost (assuming 50 year lifespan): $900k to $925k (+ additional unanticipated costs)

Timing:
- During 2024/2025 the design requirements for disassembly of a portion of the existing bridge would need to be defined and incorporated into the construction plan for the new bridge.
- Design and construction of foundations, structural supports and assembly of the reconstructed display could be included as part of the new bridge works in 2026, or dealt with separately at some time in the future, after the new bridge is constructed.

Option 3: monument, plaque, and art installation

Description:
The existing bridge could be commemorated with a plaque installed on the new bridge. The cost for this is expected to be minimal and should be incorporated into the works for design and construction of the new bridge.

In addition, it is envisioned that an educational/art display commemorating the existing bridge's history could be created and placed in a prominent publicly accessible location. It is envisioned that such a display would include:
- Historic and current photographs of the existing bridge;
- Educational display boards providing information about the bridge and its significance in the local community; and,
- A scale model of the bridge and a portion of the river and surrounding land.

This educational/art display would be located within publicly accessible buildings, such as the atrium of the new civic center, the Udora community hall or display case at the MURC. This display could be periodically moved from location to location to increase its exposure to a larger audience.

Key Considerations:
- Local historians, educators, crafts-persons and artisans could be engaged to assist in preparation of educational/art display.
- The commemorative impact of this option would result primarily from persons with memories of bow-string arch bridges experiencing visual recall cues, as well as others being given with the opportunity to learn about the history of the bridge.

- The beneficiaries of this form of commemoration would be those who visit the location of the reconstructed display. Of the options analyzed it is anticipated that this option would impact the largest audience.
- It is anticipated that this option would require no maintenance.
- Anticipated lifespan: 50+ years.

Costs:
- Implementation: estimated $50,000
- Preventive maintenance: none
- Total lifecycle cost: $50,000

Timing:
- During 2024/2025 a photographic record of the existing bridge would need to be created, prior to commencement of construction of the new bridge.
- All other aspects of implementation of this option can be dealt with independently of the work to remove and replace the bridge.

Based on the above analysis, staff recommend that Council approve one of the options to ensure the bridge is appropriately commemorated. The mounting of a plaque and creation of an educational/art display commemorating the existing bridge's history, as outlined in Option 3, seems to achieve the required commemorative impacts for the largest potential audience, at the lowest cost to the Town.

5. RELATIONSHIP TO STRATEGIC PLAN:

Delivering Service Excellence:
- Proactively manage infrastructure and assets to ensure service continuity

6. FINANCIAL AND BUDGETARY IMPACT:

Business cases 20-OI-05 and 22-CI-OI-22 approved by Council, authorized expenditure of $130,000 to complete the Schedule B Municipal Class Environmental Assessment for the Old Shiloh Road Bridge.

Capital business case 24-CI-OI-16 was approved by Council, authorizing $250,000 to proceed with preliminary design of replacement of the bridge. Staff will be bringing forward future business case(s) for Council's consideration in the applicable budget years, which will address the detailed design and construction phases of this project and reflect the best budgetary information available at each stage of the project.

Previously approved business cases did not address the needs and costs for commemoration of the bridge.

The outcome of Councils decision will require the corresponding budget approval. Should the decision be to include in future design iterations, staff will consider this when preparing the relevant business cases.

7. PUBLIC CONSULTATION AND NOTICE REQUIREMENTS:

Public consultation and feedback has been an important source of information contributing and guiding the project. The project has followed and expanded on the mandatory public consultation and notification requirements of a Schedule B Municipal Class Environmental Assessment as summarized below:

Public Consultation Activities	Date	Role in Schedule B MCEA
Notice of Study Commencement - Website publication - Delivery to local property owners and stakeholder groups - On-site project signage	March 30, 2023 to April 13, 2023	Mandatory
Notice of Public Information Centre - Website publication - Delivery to local property owners and stakeholder groups - Publication in local newspaper	April 26, 2023 to May 11, 2023	Enhancement
Public Information Centre	May 17, 2023	Enhancement
Website/Social Media Posting of Project Documents	Continuous	Enhancement
Notice of Study Completion	April 22, 2024 to May 23, 2024	Mandatory

Although there is no legislative requirement for public consultation regarding the preferred method to commemorate the bridge, interested residents are always able to reach out to the Town staff contacts listed on the project website to express their views and provide input.

During the future engineering and construction phases of the project, staff will continue to keep local residents, Council and stakeholder groups informed as to the progress of the project with briefing notes, website updates, updates, notifications in advance of commencement of construction works and other communications as may be required.

8. CONCLUSION:

In order to commemorate the local significance of the Old Shiloh Road Bridge, staff have prepared an options analysis for Council's review and consideration to include during the course of replacement of the Old Shiloh Road bridge.

APPROVALS

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