



Heritage Bridge Evaluation

for

the Municipal

Class EA

(MCEA) Process

Start Time 1:30



May 16, 2023



Paul Knowles, P.Eng., is the MEA's MCEA Advisor. He graduated from Queen's University as a Civil Engineer and worked in the private sector for 9 years before joining the Town of Carleton Place as Town Engineer in 1989. His involvement with the Municipal Engineers Association (MEA) and the Municipal Class Environment Assessment (MCEA) began shortly thereafter. In 1993, Paul was promoted to CAO for Carleton Place but continued his engineering work and remained very active with the MEA as a Board member (2008 – 2018) and as its President in 2017,

Throughout the years, Paul has been involved in all aspects of the MCEA document, including all re-writes and amendments. Paul officially retired from Carleton Place at the end of 2018 but is continuing to work with MEA as its MCEA Advisor, delivering training programs and pursuing improvements to the MCEA process



Topics for Today

MCEA Schedule Determination for Bridges

Detailed Review of Updated Heritage Checklist

Transition of Project if Schedule Changed



Municipal Bridges

Criteria for Evaluating Potential for Cultural Heritage Resources

Revised April 27, 2023

This checklist was prepared by the Municipal Engineers Association in consultation with the Ministry of Heritage, Sport, Tourism and Culture Industries (MCM) to assist with undertaking cultural heritage due diligence as per the requirements of the Municipal Class Environmental Assessment.

Project Name:

Location:

Municipality:

Project Engineer:

Checklist completed by:

Date:

NOTE: Complete all sections of Checklist. Both Built Heritage Resources/Cultural Heritage Landscapes (B) and Archaeological (C) Sections must be satisfied before proceeding.

Questions apply to the entire study area including temporary storage or work areas as well as temporary roads/detours, except as otherwise stated.

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
- large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

Answer each question in succession and follow the instructions in blue. Continue until all questions are answered or a definitive conclusion is reached.

Refer to the Appendix for additional details and resources to assist in answering select questions.



Bridge Projects

Maintenance and Repairs Schedule A





PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

1. Normal or emergency operation and maintenance of linear paved facilities, cycling lanes/facilities & multi-purpose paths, sidewalks, parking lots and related facilities located within or outside existing rights- of-way

- *Related facilities include bridges.*

Maintenance means work that extends the life of the structure or keeps the structure safe for intended use.

Repairs means work that fixes or replaces components of the structure to return the structure to its original condition.

YES - Schedule A

Complete Part C of this checklist to determine whether an archaeological assessment is required

If traffic/access will be impacted during the work, the community should be notified



Font Colour

Green – MEA's Advice

Blue - Instructions

1. Normal or emergency operation and maintenance of linear paved facilities, cycling lanes/facilities & multi-purpose paths, sidewalks, parking lots and related facilities located within or outside existing rights- of-way

- *Related facilities include bridges.*

Maintenance means work that extends the life of the structure or keeps the structure safe for intended use.

Repairs means work that fixes or replaces components of the structure to return the structure to its original condition.

YES - Schedule A

Complete Part C of this checklist to determine whether an archaeological assessment is required

If traffic/access will be impacted during the work, the community should be notified



Exempt Projects Cannot be Elevated

Projects Classified into appropriate Schedule

Proposed Project may have greater environmental impact than indicated by the Schedule

Consider Elevating Level of Assessment
Schedule B  C only

Schedule A or A+ not eligible to elevate to Schedule B/C



More Homes, More Choice Act 2019 Amends EA Act

(4) An undertaking listed in the following schedules, groups or categories of an approved class environmental assessment, as amended or re-named from time to time before May 1, 2019, and that is carried out by a person authorized to proceed in accordance with that class environmental assessment, is **exempt from this Act**:

1. Go Transit....
2. Provincial Transportation Facilities...
3. **Schedules A and A+ of the Municipal Class Environmental Assessment** approved by the Lieutenant Governor in Council on October 4, 2000 under Order in Council 1923/2000.



Select Schedule

Legislative Hierarchy

Parliament Approved Act

Cabinet Approved Regulation

Minister Approved Class EA

The Act states that the projects listed in Schedule A and A+ are exempt



Select Schedule

2023 MCEA - Section A.1.2.2

The classification of the various undertakings in the approved class of undertakings is provided in Appendix 1. The types of projects and activities are intended to be categorized based on the magnitude of their anticipated environmental impact. In specific cases, however, a project may have a greater environmental impact than indicated by the Schedule. For Schedule B projects, the proponent may, at its discretion, decide to carry out the process for a Schedule C project. For schedule C projects, the proponent may decide to carry out an individual EA. Proponents of exempt projects may decide to carry out an EA-like process outside of the EAA regime.



Types of Projects - Schedules

Schedules

A

A+

B

C



Schedule B

Elevate

Schedule C

Schedule C

Elevate

Comprehensive

Exempt

EA-like process



Bridge Projects



Retire Bridge
Schedule **A+**



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

24a Retirement of existing roads and road related facilities.

- *Related facilities include bridges*
- *Proponents should consider cultural heritage value in accordance with MEA's Municipal Heritage Bridge Checklist developed with the Ministry of Citizenship and Multiculturalism (MCM) and posted on the MEA website. Completion of the checklist does not mean approval or permission from MCM to remove a bridge with potential heritage value*

RETIREMENT

Means the taking out of operation, abandonment, removal, demolition or disposal of a road, bridge, sewage, stormwater management or water facility for which approval under the EAA would have been necessary for its establishment and includes sale, lease, or other transfer of the facility for purposes of taking out of operation, abandonment, removal, demolition or disposal.



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

24a Retirement of existing roads and road related facilities.

- *Related facilities include bridges*
- *Proponents should consider cultural heritage value in accordance with MEA's Municipal Heritage Bridge Checklist developed with the Ministry of Citizenship and Multiculturalism (MCM) and posted on the MEA website. Completion of the checklist does not mean approval or permission from MCM to remove a bridge with potential heritage value*

Exempt – Schedule A+

Complete Parts B of this checklist if the bridge is > 40 years old and C of this checklist if the project involves excavation activities to determine whether any technical cultural heritage studies are required prior to removal of the bridge



Bridge Projects

Reconstruct Bridge





PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

25b Construction or removal of sidewalks, multi-purpose paths or cycling facilities including water crossings outside existing right-of-way and/or in a utility or rail corridor

Schedule A+ if <\$4.1m

Schedule B if >\$4.1m

Schedule C if >\$12m

This clause does not include qualifiers such as property requirements or proximity to sensitive features. Instead cost of project triggers classification



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

30. Reconstruction of a water crossing where the reconstructed facility will be for the same purpose, use, capacity and at the same location

- *Capacity refers to either hydraulic or road capacity but does not include alterations to include or remove facilities for cycling, pedestrians or to support utilities*
- *This includes ferry docks*

Item 30 applies to bridges <40 yrs old.

Exempt – Schedule A+

If the project involves excavation, complete Part C of this checklist to determine whether an archaeological assessment is required.

2023 MCEA

One Lane Bridge
to Two Lanes
Schedule A+



Significant
Change



BRIDGE CAPACITY

Means the number of through travel lanes for vehicles on the bridge. Adjusting lane width to current standards that do not increase the number of travel lanes and cycling, parking or turning lanes are not through travel lanes. Increasing the width of a narrow bridge (one lane with two way traffic) to the current standard to accommodate two way traffic (two lane) is not considered an increase in capacity.

OPERATION

Means use, maintenance, repair, and management of a municipal facility where the purpose, use, capacity and location remain the same.

Same purpose, use, capacity and location refers to the replacement or upgrading of a structure or facility or its performance, where the objective and application remain unchanged, and the volume, size and capability do not exceed the minimum municipal standard (defined above), or the existing rated capacity (defined above), and there is no substantial change in location



Hydraulic capacity of a bridge is controlled by the openings between abutment walls and piers. The bridge elevation needs to be set a minimum clearance above high-water elevations. Further adjusting the elevation of the bridge to match road grades will not change the hydraulic characteristics. However, if the hydraulic capacity of the bridge is part of the flood control system for the water course and the openings between abutment walls and piers is changing then item 63 “Modify existing water crossings for the purposes of flood control” from the Water/Wastewater table applies and the project is Schedule B.



Substantial Change - Within the existing road allowance or utility corridor, a substantial change could be considered a change of more than approximately >10%. For example, a road allowance 20m wide and 1 km long has an area of 20,000 m² and a change of < 2000m² would be <10%

Property Acquisition – No EA process is required for property purchase. If the proponent acquires property through separate process (negotiation with owner or planning policies for minimum width of road allowances) such that the proponent owns the property required for a project before the Notice of Completion then no property acquisition is required for the project. For many project types, this could mean the project would be classified as Schedule A or A+ (exempt). If there is dispute about the property acquisition then a Schedule B process should be followed to support the acquisition (expropriation).

Utility Corridor – A utility corridor may include property that is non-linear, for example a rectangular area for a Stormwater Management Pond.



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

31a Reconstruction of, or alteration to a structure or the grading adjacent to it, when the structure is over 40 years old and has been found not to have cultural heritage value or interest

To determine whether a bridge has “cultural heritage value”, refer to the MEA’s municipal heritage bridge checklist developed with the Ministry of Citizenship and Multiculturalism and posted on the MEA website

Item 31 applies to bridges >40 yrs old.

Exempt – Schedule A+

Complete Parts B and C of this checklist to determine whether any technical cultural heritage studies are required.



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

31b Reconstruction of, or alteration to a structure or the grading adjacent to it when the structure is over 40 years old, the structure is found to have cultural heritage value or interest, and the heritage attributes will be conserved in accordance with the recommendations of a Heritage Impact Assessment
To determine whether a bridge has “cultural heritage value”, refer to the MEA’s municipal heritage bridge checklist developed with the Ministry of Citizenship and Multiculturalism and posted on the MEA website

Exempt - Schedule A+ after completing Archaeological Screening Process (ASP) and provided the heritage attributes will be conserved in accordance with the recommendations of a Heritage Impact Assessment

Complete Parts B and C of this checklist to determine whether any technical cultural heritage studies are required.



A1-2 Archaeological Screening Process (ASP)

The projects that are identified as eligible for screening, subject to the archaeological screening process (identified as “ASP”) may be exempt from the requirements of the EAA as determined by the archaeological screening process set out below. In order to proceed with a project that is identified as eligible for screening, a proponent must either;

- (i) carry out the process for a Schedule B/C project; or
- (ii) complete the archaeological screening process and follow the directions set out in the screening process.

If the outcome of the screening process is that the project is exempt from the requirements of the EAA, the proponent may proceed with the undertaking/project without further application of the EAA to the project



A1-2 Archaeological Screening Process (ASP)

ASP involves considering the following three questions;

1. Does the project area include known or potential archaeological resources?
2. Based on the archaeological assessment(s), will the proposed project/undertaking have negative impacts (effects) to archaeological resources?
3. Based on the archaeological assessment(s), will any negative impacts (effects) be appropriately mitigated?

To view a training module that explains the ASP and illustrates how to sample projects completed the process [CLICK HERE](#)

Training is being developed



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

31c Reconstruction of, or alteration to a structure or the grading adjacent to it, when the structure is over 40 years old the structure is found to have cultural heritage value or interest, but heritage attributes will not be conserved in accordance with the recommendations of a Heritage Impact Assessment

To determine whether a bridge has “cultural heritage value”, refer to the MEA’s municipal heritage bridge checklist developed with the Ministry of Citizenship and Multiculturalism and posted on the MEA website

Schedule B

Proponents should always strive to conserve/recognize cultural heritage attributes.



2023 MCEA

Active Transportation Bridges
Schedule **A+ or B**





PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

32a Construction of underpasses or overpasses for pedestrian, cycling, recreational or agricultural use

Exempt - Schedule A+ if <\$3M

This clause does not include qualifiers such as property requirements or proximity to sensitive features



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

32b Construction of underpasses or overpasses for pedestrian, cycling, recreational or agricultural use, and where the underpass or overpass would **not be located in or adjacent** to an environmentally sensitive natural area, potential built heritage resource or cultural heritage landscape or other sensitive land use, or on lands with archaeological potential

- *To determine whether there is “archaeological potential” refer to MCM’s Criteria for Evaluating Archaeological Potential checklist*

Refer to new definition of “environmentally sensitive natural area” in the Glossary

Applies to projects >\$3M

Schedule A+ after completing Archaeological Screening Process (ASP)

Otherwise Schedule B



ENVIRONMENTALLY SENSITIVE NATURAL AREA (See Roads, Water and Wastewater Tables)

Means any of the following:

- An area reserved or set apart as a provincial park or conservation reserve under the *Provincial Parks and Conservation Reserves Act, 2006*
- An area set apart as a wilderness area under the *Wilderness Areas Act*
- An area designated by a municipality in its official plan as environmentally significant, however expressed, including designations of areas as environmentally sensitive, as being of environmental concern and as being ecologically significant
- An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the *Niagara Escarpment Planning and Development Act*
- A property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the *Oak Ridges Moraine Conservation Act, 2001* applies
- A hazardous site where property or lands could be unsafe for development and site alteration due to naturally occurring hazards; such as, unstable soils (sensitive marine clays, organic soils) or unstable bedrock
- An area identified as a key hydrologic area, such as; significant groundwater recharge areas, highly vulnerable aquifers, and significant surface water contribution areas that are necessary for the ecological and hydrologic integrity of a watershed.
- An area identified as having key hydrological features, such as; permanent and intermittent streams, inland lands and their littoral zones, seepage areas and springs, and wetlands.
- An area identified as having key natural heritage features such as; habitat of endangered species and threatened species; fish habitat; wetlands; life science areas of natural and scientific interest (ANSIs), significant valleylands, significant woodlands; significant wildlife habitat (including habitat of special concern species); sand barrens, savannahs, and tallgrass prairies; and alvars.



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

32c Construction of underpasses or overpasses for pedestrian, cycling, recreational or agricultural use, and where the underpass or overpass would be **located in or adjacent** to an environmentally sensitive natural area, potential built heritage resource or cultural heritage landscape or other sensitive land use, or on lands with archaeological potential

- *To determine whether there is “archaeological potential” refer to MCM’s Criteria for Evaluating Archaeological Potential checklist*

Refer to new definition for “environmentally sensitive natural area” in the Glossary

Applies to projects >\$3M

Schedule B



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

35 Reconstruction of a water crossing where the reconstructed facility will **not be** for the same purpose, use, capacity or at the same location

- *Capacity refers to either hydraulic or road capacity but does not include alterations to include or remove facilities for cycling, pedestrians or to support utilities*
- *This includes ferry docks*

Schedule B

Applies to all bridges with an increase to travel lanes



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

36a Reconstruction of, or alteration to a structure or the grading adjacent to it when the structure is over 40 years old and has cultural heritage value or interest and the heritage attributes will **not be** conserved in accordance with the recommendations of a Heritage Impact Assessment

To determine whether a bridge has “cultural heritage value”, refer to the MEA’s municipal heritage bridge checklist developed with the Ministry of Citizenship and Multiculturalism and posted on the MEA website

Schedule B

Applies to all bridges with an increase to travel lanes

Proponents should always strive to conserve/recognize cultural heritage attributes

The completion of Parts B and C of this checklist may aid in organizing consultation with MCM and Indigenous Communities.



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

36b Reconstruction of, or alteration to a structure or the grading adjacent to it when the structure is over 40 years old and is not found to have cultural heritage value or interest or is found to have cultural heritage value or interest but the heritage attributes **will be** conserved in accordance with the recommendations of a Heritage Impact Assessment

To determine whether a bridge has “cultural heritage value”, refer to the MEA’s municipal heritage bridge checklist developed with the Ministry of Citizenship and Multiculturalism and posted on the MEA website

Schedule B

The heading for this group of projects is “RECOONSTNRUCTION OF BRIDGES WITH INCREASE TO TRAVEL LANES”. The increase to travel lanes triggers Schedule B

The completion of Parts B and C of this checklist may aid in organizing consultation with MCM and Indigenous Communities.



2023 MCEA

New Bridges Schedule **B**





PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

37 Construction of new water crossings

- *This includes ferry docks*
- *This does not include culverts. See Projects # 8 and 20*

38 Construction of new grade separations and interchanges

Schedule B

Instead of completing this checklist, use the following checklists to determine whether technical cultural heritage studies are required:

- [Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes](#)
- [Criteria for Evaluating Archaeological Potential](#)

[Criteria for Evaluating Marine Archaeological Potential](#) (if planning in-water works)



PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

New and major Bridge Projects Schedule B not C

Schedule B - Notice of Completion issued after the preferred solution is identified.

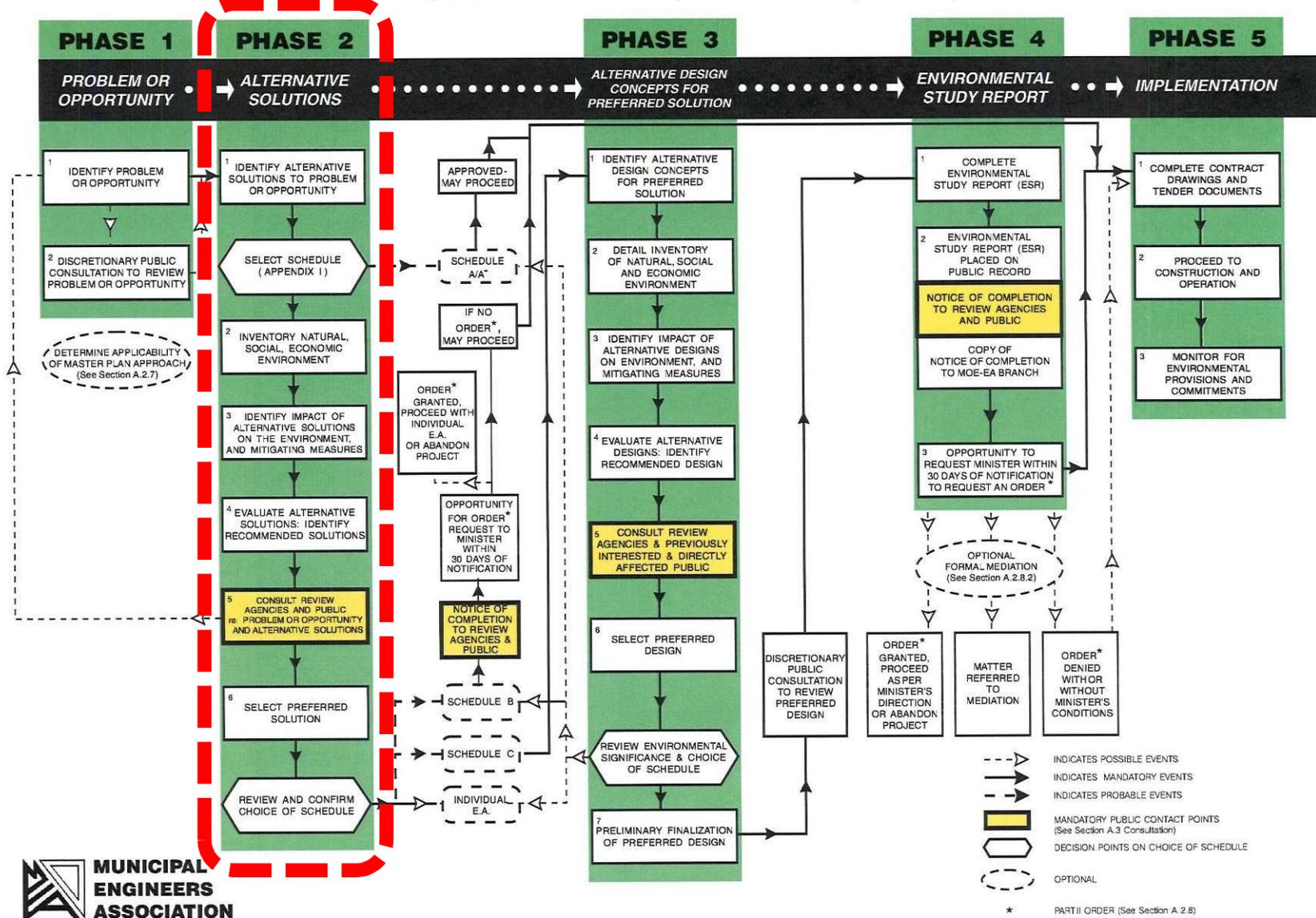
Community may have some interest in the design concepts and the design concept selected.

Proponent may include information about design concepts during the mandatory public contact required in the Schedule B process

○ .



NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA





2023 MCEA

Project to Address an Emergency
Notify Director
Schedule **A+**





PART A – MUNICIPAL CLASS EA ACTIVITY SELECTION

15 Any road project classified as a Schedule B or C undertaking for where the proponents determined that the work must be undertaken to address an emergency and the Director of the EAB is notified, and the conservation authority where relevant. A situation created by intentional delay does not constitute an emergency

Notice should be provided within 30 days at the latest

Schedule A+ Exempt



Questions?



Sample Project 1

Steel Girders/Concrete Deck

Constructed 1928

Rehabilitated 1983
(deck/railing)

Poor structural condition steel
girders need to be replaced

Railing does not meet crash
test

Stone piers and abutment
walls to be rehabilitate

Historical Town Hall adjacent





Sample Project 2

Steel Girders/Concrete Deck
Plain Concrete Substructure
needs repairs

Constructed 1984

Widen Bridge to two lanes and
add sidewalk





Sample Project 3

Ridge Frame

Constructed 1961

Deck/Substructure poor
condition - Replace

Include cycle lane





PART B – SCREENING FOR BUILT HERITAGE RESOURCES AND CULTURAL HERITAGE LANDSCAPES

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person to undertake technical cultural heritage studies as identified at the end of Part B.

Part B1: Screening for Recognized Cultural Heritage Value or Interest

- 1 Is the proposed undertaking consistent with an approved conservation plan, if one exists?

Municipal heritage staff and municipal heritage committees can help determine whether an approved conservation plan, or previous cultural heritage evaluation, exist.

YES, then it is not necessary to complete the remaining questions in the checklist. The proponent will include this information in the project file and follow the recommendations of the conservation plan during project planning and implementation.

NO, continue to question 2.



Part B1: Screening for Recognized Cultural Heritage Value or Interest

2. Has the bridge and the study area been evaluated before and found not be of cultural heritage value or interest (CHVI)?

A previous evaluation might have been carried out by:

- A heritage consultant, in a CHER prepared for a previous consultant/applicant

- The Municipal Heritage Committee, in considering the property for inclusion on the municipality's Heritage Register

- The municipality, in a Bridge Infrastructure Master Plan

Evaluations should use the criteria in Ontario Regulation 9/06. Re-evaluation is necessary if new information is available or there is evidence that heritage attributes have changed

YES, it is not necessary to complete the remaining questions in the Part B. The proponent will summarize the previous evaluation and add this checklist to the project file, with appropriate documentation demonstrating that a cultural heritage evaluation was undertaken. Proceed to Part C: Screening for Archaeological Resources.

NO, continue to question 3.



Part B1: Screening for Recognized Cultural Heritage Value or Interest

3. Is the bridge, or a parcel of land in the study area:

a. designated under the *Ontario Heritage Act*?

For OHA-designated properties contact the municipal clerk, or search the Ontario Heritage Trust (OHT) Register at <https://www.heritagetrust.on.ca/en/pages/tools/ontario-heritage-act-register>

b. subject to an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*?

- For municipal easements, contact the municipal clerk

- For OHT easements, contact the OHT Provincial Heritage Registrar at registrar@heritagetrust.on.ca or see <https://www.heritagetrust.on.ca/en/property-types/easement-properties>

- Easements can also be identified through the local land registry (title search)



Part B1: Screening for Recognized Cultural Heritage Value or Interest

3. Is the bridge, or a parcel of land in the study area:
 - c. included on a register or inventory of heritage properties maintained by the municipality?

For listed or inventoried properties, contact the municipal clerk or heritage staff
For properties subject to a notice of intention to designate or notice of Heritage Conservation District Study, contact the municipal clerk or heritage staff
For provincial heritage properties, contact the MCM Registrar at registrar@ontario.ca



Part B1: Screening for Recognized Cultural Heritage Value or Interest

3. Is the bridge, or a parcel of land in the study area:

d. subject to a notice of

- intention to designate (under Part IV of the *Ontario Heritage Act*)?
- a Heritage Conservation District study area by-law (under Part V of the *Ontario Heritage Act*)?

For properties subject to a notice of intention to designate or notice of Heritage Conservation District Study, contact the municipal clerk or heritage staff

e. included in MCM's list of provincial heritage properties?

For provincial heritage properties, contact the MCM Registrar at registrar@ontario.ca



Part B1: Screening for Recognized Cultural Heritage Value or Interest

3. Is the bridge, or a parcel of land in the study area:
 - f. designated under the *Heritage Railway Stations Protection Act*?
 - g. designated under the *Heritage Lighthouse Protection Act*?
 - h. identified as a Federal heritage Building by Federal Heritage Buildings Review Office?
 - i. a National Historic Site or part of one?

For all federal designations, search the Directory of Federal Heritage Designations at https://www.pc.gc.ca/apps/dfhd/default_eng.aspx



Part B1: Screening for Recognized Cultural Heritage Value or Interest

3. Is the bridge, or a parcel of land in the study area:
- j. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

For UNESCO World Heritage Sites see the UNESCO website:

<http://whc.unesco.org/en/statesparties/CA> (note: as of 2020, Ontario's only UNESCO World Heritage Sites are the Rideau Canal and Pimachiowin Aki)

YES to any of the questions 3a through 3h, a Heritage Impact Assessment (HIA) is necessary. Proceed to Part C.

YES to either of questions 3i or 3j, follow the direction in the conservation and management documents for the National Historic Site or UNESCO World Heritage Site. Proceed to Part C.

NO to all of the above questions, continue to Part B2

Sample Projects



B1.1 NO

B1.2 NO

B1.3a YES HIA/CHER



B1.1 NO

B1.2 NO

B1.3 NO



B1.1 NO

B1.2 NO

B1.3 NO



Part B2: Screening for potential Cultural Heritage Value or Interest

4. Will the proposed project involve a bridge structure that was:
- constructed less than 40 years ago? (currently 1983)
 - constructed after 1956 with a plain concrete substructure, and the superstructure construction is with common steel and/or concrete products involving one of the following four bridge types?
 - Rigid Frame
 - Precast with Concrete Deck
 - Simple Span
 - Steel Girders/Concrete Deck

YES to 4 (a) or (b), continue to question 5.

NO to both 4 (a) and (b), the bridge has potential CHVI. Proceed to Part B3 to screen for potential impacts.

5. Will the project involve replacement of a bridge's substructure, or any alteration of adjacent lands?

YES continue this Part to screen for potential CHVI of the property/location.

NO proceed to Part C



Rigid Frame Examples





Rigid Frame Examples





Rigid Frame Examples





Precast with Concrete Deck



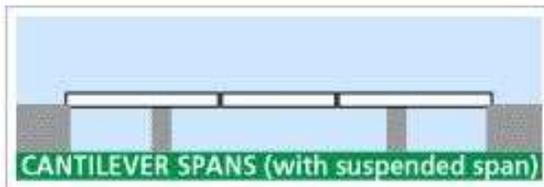


Precast with Concrete Deck





Simple Span





Steel Girders/Concrete Deck





Steel Girders/Concrete Deck





Part B2: Screening for potential Cultural Heritage Value or Interest

4. Will the proposed project involve a bridge structure that was:
- constructed less than 40 years ago?
 - constructed after 1956 with a plain concrete substructure, and the superstructure construction is with common steel and/or concrete products involving one of the following four bridge types?
 - Rigid Frame
 - Precast with Concrete Deck
 - Culvert or Simple Span
 - Steel Girders/Concrete Deck

YES to 4 (a) or (b), continue to question 5.

NO to both 4 (a) and (b), the bridge has potential CHVI. Proceed to Part B3 to screen for potential impacts.

5. Will the project involve replacement of a bridge's substructure, or any alteration of adjacent lands?

YES continue this Part to screen for potential CHVI of the property/location.

NO proceed to Part C

Sample Projects



B2.4a) NO B2.4b) NO Skip to B3
(No Heritage Building)



B2.4a) YES B2.4b) YES B2.5 NO skip Part C



B2.4a) NO B2.4b) YES B2.5 YES continue



Part B2: Screening for potential Cultural Heritage Value or Interest

6. Is the bridge or project area described by an on-site municipal, provincial or federal commemorative or interpretive plaque?

Plaque locations can be found from the following sources:

Municipal heritage committees or local heritage organizations

Ontario Heritage Trust: <https://www.heritagetrust.on.ca/en/online-plaque-guide>

Historic Sites and Monuments Board of Canada:

http://www.pc.gc.ca/apps/dfhd/default_eng.aspx



Part B2: Screening for potential Cultural Heritage Value or Interest

7. Does the project area contain a parcel of land that has or is adjacent to a known burial site or cemetery?

Cemeteries can be located through the Bereavement Authority of Ontario's Public Register of licensed cemeteries:

<https://licensees.bereavementauthorityontario.ca/public-register>

If cemetery limits are unclear, an Investigation Authorization issued by the Bereavement Authority of Ontario may be required.

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

8. Does the proposed project involve a crossing of a Canadian Heritage River?

A list of the Canadian Heritage Rivers in Ontario can be found at <http://chrs.ca/the-rivers-ontario/>.



Part B2: Screening for potential Cultural Heritage Value or Interest

9. Is there local or Indigenous knowledge or accessible documentation suggesting that the property (or project area) is situated on a parcel of land that:

- a. Is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area? (For example: buildings or landscape features accessible to the public or readily noticeable and widely known, complexes of buildings, monuments, ruins)
- b. Has a special association with a community, person or historical event? (For example: Indigenous sacred site, traditional-use area, battlefield, birthplace of an individual of importance to the community, etc.)
- c. Contains or is part of a cultural heritage landscape (for example, an Indigenous trail, historic road or rail corridor, park, designed garden, unique landform, or any other area in which multiple features are valued together for their interrelationship, meaning or association)?



Part B2: Screening for potential Cultural Heritage Value or Interest

9. Is there local or Indigenous knowledge or accessible documentation suggesting that the property (or project area) is situated on a parcel of land that:

For information, contact:

- Elders in Indigenous Communities or community researchers who may have information on potential cultural heritage resources. Please note that Indigenous traditional knowledge may be considered sensitive.
- municipal heritage committees or local heritage organizations
- Ontario Historical Society's "Heritage Directory" - for a list of historical societies and heritage organizations in the province:

<https://ontariohistoricalsociety.ca/directory-and-map/>

Information specific to trails may be obtained through Ontario Trails at

<https://www.ontariotrails.on.ca/index.php?url=trails>

YES to one or more of questions 6, 7, 8 or 9, there is potential for built heritage resources and/or cultural heritage landscapes in the study area. Continue to Part B3 to screen for potential impacts.

NO, there is a low potential for built heritage resources and/or cultural heritage landscapes to be impacted. Proceed to Part C.



Sample Projects



Skipped to B3



Skipped to Part C



B2.6 to 9 NO Skip to C



Part B3: Screening for potential Cultural Heritage Impacts to the Bridge Structure

10. a) Will the proposed project leave the substructure of the bridge unchanged?
b) Is the substructure of the bridge constructed with plain concrete with no untypical elements?

YES to either 10 (a) or (b),
proceed to question 11
NO to both 10 (a) and (b),
there is potential for cultural
heritage impacts on the
bridge structure. You need
to hire a qualified person(s)
to undertake a CHER for
the existing bridge area.
Continue to Part C.



Sample Projects



B3.10a) YES

B3.10b) NO



CHER - Skipped to C



CHER - Skipped to C



Part B3: Screening for potential Cultural Heritage Impacts to the Bridge Structure

11. a) Is the superstructure of the bridge constructed with common steel and/or concrete products involving one of the following four bridge types?

Rigid Frame

Precast with Concrete Deck

Simple Span

Steel Girders/Concrete Deck

b) Will the finished product replicate the existing superstructure?

YES to both 11 (a) and (b), continue to 12.

NO to either 11 (a) or (b), there is potential for cultural heritage impacts on the bridge structure. You need to hire a qualified person(s) to undertake a CHER for the existing bridge area. Proceed to Part C.



Sample Projects



B3.11a) YES

B3.11b) YES



Skipped to C



Skipped to C



Part B3: Screening for potential Cultural Heritage Impacts to the Bridge Structure

12. a) Is work proposed on the parapet walls/railings of the bridge?
b) If YES to (a), are the parapet walls/railings contain materials other than plain concrete and steel, or any untypical elements?

YES to both 12 (a) and (b),
continue to question 12 (c).
NO to either 12 (a) or (b)
there is low potential for cultural
heritage impacts on the bridge
structure. Proceed to Part C.





Part B3: Screening for potential Cultural Heritage Impacts to the Bridge Structure

12. c) Is the purpose of the work being done on the parapet walls/railings to upgrade them to meet current crash test standards?

YES, proceed with reconstructing the parapet walls/railings to a **sympathetic design**; see guidance in the Appendix. Hire a qualified person(s) to undertake a CHER if this is not practicable.

NO, there is potential for cultural heritage impacts on the bridge structure. You need to hire a Qualified person(s) to undertake a CHER for the existing bridge area. Continue to Part C





Sample Projects



B3.12a) YES

B3.12b) YES

B3.12c) YES



Skipped to C



Skipped to C



To develop a **sympathetic design** for railings, the proponent should first consider retaining the existing railing. If the existing railing is tall enough for pedestrian safety, consider providing a new barrier wall between road and sidewalk if adequate space and bridge capacity is available, and snow clearing operations can continue. If inadequate space and structural capacity exists, or snow clearing cannot be accommodated, or pedestrian Ontario Building Code safety requirements are not met, then the existing railings should be removed and replaced with a new Canadian Highway Bridge Design Code and OBC (if applicable) compliant barrier with a design that, as much as possible, uses the same materials and elements (vertical steel posts) as the original railing.





Part B3: Screening for potential Cultural Heritage Impacts to the Bridge Structure

For questions 10, 11 and 12, if the checklist indicates the need to hire a qualified person to undertake a Cultural Heritage Evaluation Report (CHER), do this during the EA study and follow its recommendations, which may include completing a Heritage Impact Assessment (HIA) if the structure or property is found to have cultural heritage value or interest (CHVI) and may be impacted by the project. Both the CHER and the HIA should be included in EA documentation and inform the decision-making in the EA process.



Sample Project 1

Steel Girders/Concrete Deck

Constructed 1928

Rehabilitated 1983

Poor structural condition

Steel Girders need to be replaced

Railing does not meet crash test

Stone piers and walls to be rehabilitate

Historical Town Hall adjacent

Proceed as Schedule A+

Implements the recommendations
of the technical cultural heritage studies

Rehabilitate substructure, reconstruct
super structure with sympathetic railing.

Highlight findings of Heritage Checklist in Public
Engagement





Sample Project 2

Steel Girders/Concrete Deck

Plain Concrete Substructure
needs repairs

Constructed 1984

Widen Bridge to two lanes and
add sidewalk

Proceed as Schedule A+

Highlight findings of Heritage
Checklist in Public Engagement





Sample Project 3

Ridge Frame
Constructed 1960
Deck/Substructure poor
condition - Replace
Include cycle lane

Proceed as Schedule A+



Highlight findings of Heritage Checklist in Public Engagement



Questions?



Part C: Screening for Archaeological Resources

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a licensed archaeologist to undertake an archaeological assessment. See description of this process in the Appendix.

1. Will the proposed project involve disturbance to the bed of a waterbody, including a river or creek?

YES, complete MCM's [Criteria for Evaluating Marine Archaeological Potential](#) to determine whether it is necessary to complete a marine archaeological assessment. Continue with this Part to determine whether it is necessary to complete a terrestrial archaeological assessment.

NO, continue to 2



Part C: Screening for Archaeological Resources

1. Will the proposed project involve disturbance to the bed of a waterbody, including a river or creek?

If this Part indicates the need for an archaeological assessment, you will need to hire an archaeologist licensed under the Ontario Heritage Act. This licensee will follow the archaeological assessment process laid out in the *Standards and Guidelines for Consultant Archaeologists* and submit archaeological assessment reports directly to MCM for technical review. Archaeological assessment follows a phased approach that begins with evaluation of archaeological potential and proceeds as necessary to a field survey, an assessment of any sites identified, and mitigation measures such as excavation, with each phase resulting in recommendations as to whether the next is necessary. MCM will inform the client/proponent when review of and any necessary revisions to archaeological assessment reports have been completed. Archaeological assessment reports should be included in EA documentation.

You can find information on archaeological assessments, and a list of licensed Archaeologists in Ontario, on MCM's website at http://www.mtc.gov.on.ca/en/archaeology/archaeology_assessments.shtml and http://www.mtc.gov.on.ca/en/archaeology/licensed_archaeologists.shtml



Part C: Screening for Archaeological Resources

2. Has an archaeological assessment been prepared for this proposed study area that recommends that there are no further concerns about impacts and that has been entered into the Ontario Public Register of Archaeological Reports maintained by MCM?

Information can be obtained from MCM by emailing archaeology@ontario.ca

YES, then it is not necessary to complete the remaining questions in the checklist. The proponent will summarize this conclusion and include this checklist with the appropriate documentation (e.g. MCM letter indicating that the report has been entered into the Register) to the project file. The summary and appropriate documentation will be maintained by the proponent.

NO, continue to question 3.



Part C: Screening for Archaeological Resources

3. Are there known archaeological sites within 300 metres of the proposed project?

Information can be obtained from MCM by emailing archaeology@ontario.ca . The municipality may be able to answer Question 3 if it has a data sharing agreement with MCM.

YES, an archaeological assessment is required. It is not necessary to complete the remaining questions in the checklist

NO, continue to question 4. Include the information used to answer question 3 (e.g. a response from MCM or the municipality to an inquiry on this topic) with EA documentation.



Part C: Screening for Archaeological Resources

4. Will the proposed project, decision or activity result in significant ground disturbance?

Significant ground disturbance means to interfere with or alter the existing condition of the ground, whether it is above or below water, through human actions that have potential to affect cultural heritage resources, and includes, but not limited to altering the existing grade of land, compacting, excavating or removing topsoil, power spraying, dredging, placing or dumping fill, removing vegetation, allowing heavy vehicle traffic, trenching (e.g. for services), drainage ditch construction, trail construction, scarification and soil mechanics studies

A ground disturbance does not include normal, regular farming practices such as ploughing or tilling, gardening

YES, continue to question 5. Documentation to support an answer of YES is not required.

NO, an archaeological assessment is NOT required and it is not necessary to fill out the remainder of the checklist. The proponent will summarize this conclusion and include appropriate documentation demonstrating that no ground disturbance will take place to the project file.



Part C: Screening for Archaeological Resources

5. Have all areas to be impacted by ground disturbing activities been subjected to recent extensive and intensive disturbances and to depths greater than the depths of the proposed activities?

Recent means since 1960

Extensive means over all or most of the area

Intensive means thorough or complete disturbance

YES, an archaeological assessment is NOT required. The checklist and any supporting documentation demonstrating that no activities will go deeper than past ground disturbances or will occur in previously undisturbed lands is to be included in the summary.

NO, then there is potential for archaeological resources and an archaeological assessment is required.



MCEA Section A.1.4 – Transition (Example Project)

Bridge Replacement

Existing Bridge Constructed 1915

Concrete substructure (piers and abutment walls), rigid frame steel and concrete superstructure, and plain steel barrier walls/railings.

Single lane wide

Proposed Project

Replace bridge with new two lane bridge

Two lane bridge may operate as a single lane with cycling lanes and access controlled with traffic signals

Estimated Cost <\$2.4 m



MCEA Section A.1.4 – Transition (Example Project)

CHER

Constructed 1915

The current bridge has a concrete substructure (piers and abutment walls), rigid frame steel and concrete superstructure, and plain steel barrier walls/railings. A review of federal, provincial, and municipal registers, inventories, and databases for the CHER revealed that there are no formally designated built heritage or cultural heritage landscape

However, Bridge is a Built Heritage Resource of cultural heritage value.

MCEA Section A.1.4 – Transition (Example Project)

MCEA Schedule Classification (2017)

- 25 Reconstruction of a water crossing where the reconstructed facility will not be for the same purpose, use, capacity or at the same location. (Capacity refers to either hydraulic or road capacity but does not include alterations to include or remove facilities for cycling, pedestrians or to support utilities.)
This includes ferry docks
Or
- 30 Reconstruction or alteration of a structure or the grading adjacent to it when the structure is over 40 years old, which after appropriate evaluation is found to have cultural heritage value

Schedule B < \$2.4 m Schedule C > \$2.4 m for both #25 and #30



MCEA Section A.1.4 – Transition (Example Project)

Fall 2022

Notice of Commencement – MCEA Schedule B

Opportunity for Stakeholder Input

Selected preferred solution – replace with new two lane bridge in same location

Discuss design options – cross section operational details

Work towards satisfying CA requirements for permit (biological investigation, flow characteristics)

Updated cost estimate > \$3.0 m



MCEA Section A.1.4 – Transition (Example Project)

Winter 2023

HIR

Recognizing that Bridge will be replaced by a new structure, recommends that:

- A full photographic record of the bridge prior to its dismantling should be undertaken for deposit with Archives Lanark.
- Historic interpretation panels could be added to Blakeney Park to tell the story of the history of Blakeney Bridge.
- Modeling should be used to test the proposed guiderail design to determine whether a consistent approach along the entire length of the crossing might be a more aesthetically pleasing alternative than the proposed design.
- The rock faces of the island/rock outcropping in the Mississippi River should be cleared of debris from the bridge removal.



MCEA Section A.1.4 – Transition (Example Project)

Winter 2023

Stage 2 archaeological assessment all areas were determined to be of low archaeological potential due to being exposed bedrock, exposed bedrock in the river course, disturbed from road/bridge creation, or are steeply sloped

. No further archaeological study is required for the subject property as delineated in Map

MCEA Section A.1.4 – Transition (Example Project)

March 3, 2023 – MECP approved new MCEA

Glossary - BRIDGE CAPACITY means the number of through travel lanes for vehicles on the bridge. Adjusting lane width to current standards that do not increase the number of travel lanes and cycling, parking or turning lanes are not through travel lanes. Increasing the width of a narrow bridge (one lane with two way traffic) to the current standard to accommodate two way traffic (two lane) is not considered an increase in capacity.

31b Reconstruction of, or alteration to a structure or the grading adjacent to it when the structure is over 40 years old, the structure is found to have cultural heritage value or interest, and the heritage attributes will be conserved in accordance with the recommendations of a Heritage Impact Assessment
To determine whether a bridge has “cultural heritage value”, refer to the MEA’s municipal heritage bridge checklist developed with the Ministry of Citizenship and Multiculturalism and posted on the MEA website

Schedule B or ASP to Exempt



MCEA Section A.1.4 – Transition (Example Project)

Proponent now must choose to;

- I)** Proceed following Schedule C process of MCEA
 - 2nd opportunity for stakeholder input (confirm Schedule in Notice)
 - select design details (cross section and operation)

Compile ESR

Notice of Completion

30 day review + 30 day MECP review



MCEA Section A.1.4 – Transition (Example Project)

Proponent now must choose to;

II) Proceed following Schedule B process of MCEA

Organize project file – approval of preferred solution

Notice of Completion - (confirm Schedule in Notice)

Host opportunity for stakeholder input and select design details (cross section and operation) outside the MCEA process. Include notice for opportunity along with Notice of Completion

30 day review + 30 day MECP review



MCEA Section A.1.4 – Transition (Example Project)

Proponent now must choose to;

- III) Proceed to classify the project as exempt
Complete ASP (archaeological info to Indigenous)
2 Notices – 60 days

Commit to implement HIA recommendations
Advise stakeholders transitioning to Exempt

Host opportunity for stakeholder input and select design details (cross section and operation) outside the MCEA process. Include notice for opportunity along with transition notice.



WEBINAR

MCEA 2023 Appendix 1 – Roads	May 12 2023
MCEA 2023 Appendix 1 – W/WW	May 15 2023
MCEA 2023 Appendix 1 – Transit	TBD
Heritage Bridge Checklist	May 16 2023
Archeology Screening Process (ASP)	TBD
MCEA 2023 Part A	TBD
Intro to MCEA Workshop	June 19-21
Collector Road Screening Process	Fall 2023
Project List and New Regulation	TBD



Questions?

**MUNICIPAL
ENGINEERS
ASSOCIATION**



Questions

www.MunicipalEngineers.on.ca/Resources/Ask-An-Expert

**A Recording of this Presentation and a Copy of the
Slideshow will be Posted on the MCEA Web Site**

www.municipalclassea.ca