City of Peterborough
Television Road Bridge Replacement
Municipal Class Environmental Assessment

Draft Study Design Report

May 28, 2019
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1.0 Study Introduction

The City of Peterborough has initiated this Municipal Class Environmental Assessment (EA) for the partial or complete replacement of the Television Road Bridge over South Meade Creek. The Television Road Bridge had an OSIM inspection in late 2016, through, which determined that the bridge was undergoing significant deterioration. The Study will consider a range of alternatives including: structural alternatives; roadway detour and alignment alternatives; and traffic staging alternatives. The EA Study will culminate in an Environmental Study Report (ESR) which will present the recommended preferred bridge management strategy considering the traffic demand on the bridge in the 20-year planning horizon.

This report, the initial public document for the Municipal Class EA, presents a description of the work plan, alternatives, consultation plan and overall study process. It will define the key activities required to complete the study and outline the EA planning process. The draft Study Design will be circulated at the initiation of the study to various agencies and to the Technical Advisory Committee (TAC), and will be available to the general public on the City’s website.

1.1 Study Area

The Study Area is located in the City of Peterborough, as illustrated in Figure 1. Environmental inventories will be undertaken within this Study Area.
Figure 1: Study Area
2.0 Study Approach

This Study will be completed as a Municipal Schedule C EA Study which will be documented in an ESR. This project will address all requirements under the Municipal Class EA by establishing the need and justification for the project, considering all reasonable alternatives with acceptable effects on the natural, social and cultural environments, proactively involving the public and actively engaging with Indigenous Peoples in defining a Recommended Plan. Should the project trigger federal approvals, the documentation will include the planning process and recommended mitigation measures to satisfy federal requirements in principle.

2.1 Guiding Principles

The study approach will involve the following Ministry of the Environment, Conservation and Parks (MECP) guiding principles for EA studies:

- Consider all reasonable alternatives;
- Provide a comprehensive assessment of the environment;
- Utilize a systematic and traceable evaluation of net effects;
- Undertake a comprehensive public consultation program; and
- Provide a clear and concise documentation of the decision-making process and the public consultation program.

2.2 Environmental Assessment Act Requirements

The Study will follow the Class EA process meeting the requirements of the Municipal Class EA (MEA October 2000 as amended in 2007, 2011 and 2015). The study is being initiated as a Municipal Schedule C Class EA Study, based on the range of anticipated effects and capital cost of the study.

This project will include two Public Information Centres (PIC’s) during the EA phase and conclude with the preparation of an ESR. The public will be provided with a 30-day review period of the ESR at the Study conclusion. This Study Design is being made available to the public as a discretionary Step 1.2 of the Municipal Class EA process, as illustrated in Figure 2. The public and agencies will have this early opportunity to comment on the proposed approach.
**Figure 2: Municipal Class EA Process**

1. **Phase 1: Problem or Opportunity**
   - 1. Identify problem or opportunity
   - 2. Discretionary public consultation to review problem or opportunity (study commencement notice - study design availability)

2. **Phase 2: Consideration of Alternative Solutions to Problem or Opportunity**
   - 1. Identify alternative solutions to problem or opportunity
   - 2. Select schedule (Appendix 1)
   - 3. Inventory natural, social, economic environment
   - 4. Identify impact of alternative solutions on the environment and mitigation measures
   - 5. Evaluate alternative solutions, identify recommended solutions
   - 6. Consult review agencies & previously interested & directly affected public
   - 7. Select preferred solution & project

3. **Phase 3: Alternative Design Concepts for Preferred Solution**
   - 1. Identify alternative design concepts for preferred solution
   - 2. Detail inventory of natural, social and economic environment
   - 3. Inventory impact of alternative designs on the environment and mitigation measures
   - 4. Evaluate alternative designs, identify recommended design
   - 5. Consult review agencies & previously interested & directly affected public
   - 6. Select preferred design

4. **Phase 4: Environmental Study Report**
   - 1. Complete environmental study report (ESR)
   - 2. Environmental study report placed on public record
   - 3. Opportunity for Part 2 Order request to provincial minister within 30 days of notification
   - 4. Review environmental significant & choice of schedule
   - 5. Environmental study report to review agencies & public

5. **Phase 5: Implementation**
   - 1. Complete contract drawings and tender
   - 2. Proceed to construction and operation
   - 3. Monitor for environmental provisions and commitments

**Legend**
- Indicates possible events
- Indicates mandatory events
- Indicates mandatory public contact points
- Indicates probable events
- Indicates probable events
- Optional
- We are here
2.3 EA Phases

The Municipal Class EA Process is illustrated in Figure 2.

The following is the breakdown of tasks, by phase, for a Municipal Schedule C project:

**Phase 1: Identify the Problem**
- Step 1: Identification and description of the problem or opportunity.
- Step 2: Discretionary public consultation (Draft Study Design available on the City’s website).

**Phase 2: Alternative Solutions**
- Step 1: Identification of alternative solutions to the problem.
- Step 2: Identify the study area and a general inventory of the natural, social and cultural environments.
- Step 3: Identification of the net positive and negative effects of each alternative solution.
- Step 4: Review and validation of alternative solutions.
- Step 5: Identification of reasonable design alternatives for the preferred solution.
- Step 6: Public consultation at PIC No. 1.
- Step 7: Confirmation of design alternatives, finalization of Study Design for work program, and refinements to or addition of design alternatives to be carried forward to Phase 3.
- Step 8: Selection of the preferred solution, following the public and agency review.

**Phase 3: Alternative Design Concepts for the Preferred Solution**
- Step 1: Identification of alternative designs.
- Step 2: Preparation of a detailed inventory of the natural, social and economic environments.
- Step 3: Identification of the potential impacts of the alternative designs.
- Step 4: Evaluation of the alternative designs.
- Step 5: Selection of preferred design.
- Step 6: Public consultation at PIC No. 2.

**Phase 4: Environmental Study Report (ESR)**
- Step 1: Completion of the ESR.
- Step 2: 30-day public review period.
- Step 3: Filing of the ESR and Notice of Completion.
3.0 Study Process

3.1 Public Consultation Approach

The study will use several techniques to proactively involve the public including two Public Information Centres (PICs) during the EA phase as well as meetings with external agencies. Meetings will be organized with the stakeholders and may include adjacent land owners, MECP, Ministry of Tourism, Culture and Sport (MTCS), Ministry of Natural Resources and Forestry (MNRF), Otonabee Region Conservation Authority (ORCA), and other affected agencies. Meetings, if required, will also be held with Indigenous Peoples communities (including Curve Lake First Nation, Kawartha Nishnawbe First Nation, Williams Treaty First Nation, Mississaugas of Scugog Island First Nation, Alderville First Nation, Hiawatha First Nation and Metis Nation of Ontario) who are rights holders. These meetings will be in addition to the progress meetings with the Technical Advisory Committee (TAC). These meetings will include representatives from the City of Peterborough.

The use of separate meetings with interest groups will ensure a high level of communication with the community, about potential issues and alternatives assessed.

Two PIC’s will be held. The first PIC will be held early on in order for the public and stakeholders to comment on the alternatives to be considered. This first PIC event will be present the Draft Study Design, study goals, problem and opportunity statement, preliminary environmental inventories, traffic analysis and assessment of Planning Solutions. The second PIC will present the evaluation of alternatives and the Technically Preferred Alternatives for improvements. The PICs will be an integral component of the study - seeking input and comments from the public, stakeholders and Indigenous Peoples.

With respect to public involvement, the work program will have the following key elements:

- Study commencement notice and PIC notices presented in the local newspaper(s).
- Maintaining and updating study mailing lists.
- Submission and review of a Draft and Final Study Design Report (Scoping Document), available on the City’s website for public review.
- The PICs will present the project Problem and Opportunity Statement, Draft Study Design (Work Plan), environmental inventories, assessment of Planning Solutions and the Technically Preferred Alternative (TPA) for the corridor improvements. The consultant and City will be available to answer any questions or concerns during each PIC.
- Public 30-day review of the study findings.

3.2 Work Program

The major elements of the technical work program include the following:
Task 1: Project Start-Up: The TAC will provide guidance into the technical elements of the study including the study issues, data collection, and analysis of alternatives. A study mailing list will be maintained throughout the project for agencies, stakeholders, Indigenous Peoples and the public. The Notice of Study Commencement will be prepared for the City to place in the local newspaper and on their website.

Task 2: Information Gathering: The collection and organization of the data necessary for the analysis, evaluation and design activities will include:

- Assembly and review of study materials;
- Field reviews to assess aquatic and terrestrial habitat, general SAR inventories, and the collection of photographs to maintain a visual record of existing conditions;
- Collect reports and modelling data/output from the City’s TMP;
- Review the Official Plan, relevant Official Plan Amendments and Secondary Plans;
- Gather existing natural/social environmental inventories and stormwater reports; and,
- Review of existing and projected traffic volumes and collision data as identified in any area traffic studies and the TMP.

Task 3: Consultation Program: The Study Design (Scoping Document) describes, at the start of the study, the intended approach in completing this EA assignment. It will present: description of the Municipal Class EA Schedule; public consultation plan; Indigenous Peoples (First Nations) consultation plan; detailed project schedule; and scope of the study’s technical requirements (related to traffic and construction traffic management, highway engineering, drainage / stormwater management, illumination, traffic signals), design standards and proposed evaluation criteria.

The Draft Study Design document will help establish the foundation for all of the remaining environmental planning and public consultation processes. This document will be posted on the City website and sent to external agencies for public review and comment. The Draft Study Design allows the early identification of the major issues and concerns, and in addition, recognizes areas of consensus or agreement. It will define the Problem Statement. The preliminary identification and assessment of Planning Solutions/Alternatives to the Undertaking in the Study Area will be presented in the Draft Study Design for public/agency review and comment. The Draft Study Design will describe the Municipal Class Schedule of the project as a Schedule C project, open to comments from agencies, and will be finalized following the first PIC.

With respect to public involvement, the work program proposes the following key elements:

- Study commencement notice and PIC notices in the local papers – Peterborough Examiner and Peterborough This Week.
- Maintaining and updating a study mailing list.
- Submission and review of a draft and final Study Design (Consultation and Work Plan).
• Two PICs to present the draft Study Design, alternative planning solutions, preliminary design alternatives, environmental inventories, technical investigations evaluation methodology and Technically Preferred Alternative(s).

• The PICs will include coloured graphics and text boards to describe the process and opportunities for the public to provide comment. In addition, an initial viewing and briefing of the materials for elected officials and external agencies (afternoon) before opening the meeting to the public (evening). A notice for the PICs will be prepared for the City to place in the local newspaper and on their website. The Consultant will be responsible for mailing letters to the mailing list.

• It is essential that there be involvement and interaction with the following major agencies and groups including: Public, DFO (Federal Fisheries Act), ORCA, Ministry of Natural Resources and Forestry (MNRF), Ministry of the Environment, Conservation and Parks (MECP), Ministry of Tourism, Culture and Sport (MTCS), Utility Companies, and Canadian Environmental Assessment Agency (CEAA).

With respect to Indigenous Peoples involvement, the work program proposes an initial contact letter to each Indigenous Peoples community to engage with the community and receive input on the consultation plan and scope of work.

Task 4: Indigenous Peoples Consultation Program: A comprehensive consultation program for engaging with Indigenous Peoples is included as a section in the Draft Study Design. The Draft Study Design will be circulated to Indigenous Peoples communities to elicit comments on the approach and initiate a dialogue early in the study. Individual letters will be sent at the Study Commencement, prior to each PIC, at Study Completion and following completion of the Stage 1 archaeology assessment to offer to meet in person to discuss the study and recommendations.

Task 5: Study Design and Value Planning Workshop: This Study Design document will help establish the foundation for all of the remaining environmental planning and public consultation processes. The Study Design allows the early identification of the major issues and concerns, recognizes areas of consensus or agreement, and defines the Problem Statement. The preliminary identification and assessment of Planning Solutions in the Study Area will be presented in this report for public/agency review and comment. Included in this Study Design is the documentation of a broad coarse screening analysis. This analysis is preliminary documentation of the scoping of reasonable and feasible alternatives.

An early Value Planning (VP) Workshop will be organized for the TAC to attend. This early workshop will allow open discussion with stakeholders as an event before the study presents any conclusions. A preliminary presentation by the Project Manager on the Problem Statement, study history and draft Study Design will precede the workshop roundtable discussions. In addition, this VP
workshop will present alternatives considering performance and value for money. A subsequent TAC meeting will discuss the results of the VP workshop and integration with the alternatives. This will be used as input to finalize the Study Design.

**Task 6: Transportation Analysis:** The transportation analysis will involve the following key tasks:

- An initial review of the existing traffic demands and any previous traffic modelling activities. Development and analysis of 20 year traffic volume projections considering background growth and planned area development to determine the need for 4 lanes during the planning horizon identified in the 2012 TMP
- Development of traffic staging alternatives and analysis of required construction traffic management
- Examination of any constraints the existing roadway profile may have on sight lines to temporary traffic signals
- Review and evaluation of potential detour alternatives. These could include:
  - No detour (traffic staging on site)
  - Closing the road and detouring both directions of traffic
  - Detouring one direction of traffic while a single lane of one way traffic is maintained across the structure
  - Closing the road and designating separate detours for cars and truck traffic
- Preparation of a traffic operations report to document the analysis and recommendations
- Develop design criteria that will establish the traffic design demand for a 20 year planning horizon, truck percentage of traffic, design speed of the road and the associated roadway cross section (potentially 4 lanes).

**Task 7: PIC No. 1:** The first PIC will be held early on in order for the public and stakeholders to attend. This PIC will present the Problem Statement, Draft Study Design, preliminary analysis of Planning Alternatives, draft property acquisition policy and interim improvements to the public, followed by the workshop roundtable discussions. This will be used as input to finalize the Study Design. Preliminary recommendations for a list of preliminary planning solutions will be presented.

A Notice for each PIC will be prepared for the City to place in the local newspaper(s) and on their website, and letters will be mailed.

**Task 8: Inventory of Natural, Social and Cultural Environments:**

**Social Environment:** Areas of investigation will include existing and proposed land uses, land use policies and regulations, aesthetics, recreation facilities, and links with pedestrian and cycling facilities. The community plan of the existing and future land uses will be documented and form the baseline from which alternatives will be measured.
**Cultural Heritage:** The work will comply with the requirements for heritage impact assessments set out by the MTCS as described in Info Sheet 5 of the Ontario Heritage Tool Kit. The cultural heritage update will include: historical research; field work to complete a site analysis and evaluation of the extant cultural heritage resources including structures; identification of significant and heritage attributes; description of the proposed site alterations; schedule and reporting; and an overall statement for the Recommended Plan, considering comments from the MTCS.

**Natural Habitat Assessment:** A desktop review of the natural habitat will be conducted and documented in the ESR that will include a review of any background studies in the Provincially Significant Wetland. An inventory of Species at Risk (SAR) and their habitat will also be completed to supplement any previous studies. The local terrestrial and aquatic environments will be assessed, and fish sampling undertaken if required.

**Aquatic Resource Assessment:** General: Online resources and previous studies related to the aquatic environment in the area will be reviewed from secondary sources, including but not limited to:

- All agency management plans encompassing the study area;
- Natural Heritage and Information Centre (NHIC) GIS tool;
- Toporama watercourse mapping;
- DFO Critical Habitat mapping; and
- Fish ONLINE GIS Tool.

No aquatic Species at Risk (SAR) have been identified for this reach of South Meade Creek (Whitlaw Creek).

Consultation will be conducted, including but not limited to:

- MNRF
- DFO
- ORCA
- Indigenous Peoples

It is anticipated that the following permits and approvals may need to be acquired for this project:

- MNRF License to Collect Fish for Scientific Purposes;
- ORCA Work Permit; and
- DFO Request for Review (Letter of Advice).

Two (2) in-field assessments of aquatic habitat and function and fish community surveys will be undertaken at the bridge site, both upstream and downstream. These assessments will be performed as per current MTO/DFO/MNRF Protocol, taking place in both the spring and summer of 2019. Critical habitat such as areas of groundwater upwelling will be identified in order to preserve and protect habitat important to various life-history stages of aquatic species.
Information obtained from in-field investigations, previous documentation and regulatory agencies will be used to prepare an Aquatic Existing Conditions/Impact Assessment Report for inclusion in the ESR. This report will include documentation of the existing aquatic communities and habitat present, agency consultation, identification of constraints and opportunities, evaluation of habitat sensitivity, potential impacts of the proposed works and general and site-specific mitigation measures. Should DFO determine that the work will result in serious harm to fish and fish habitat a Minister’s Authorization will be required.

**Archaeology Stage 1 Background Study:** The objectives of a Stage 1 archaeological background study are to develop an inventory of archaeological resources in the proposed area; to determine the presence of any archaeological sites in the area; and, to recommend appropriate strategies for future planning consideration. This will be accomplished by conducting detailed documentary research of the land use, archaeological history, and present condition of the property. This information will be gathered by reviewing the National Archaeological Site Registration Database. The data gathered will advise of the location, type, and significance of registered archaeological sites for a typical radius of one kilometre around the subject property. Reviewing the registered archaeological site database will identify significant heritage resources on or adjacent to the study area, and will summarize the form and extent of previous cultural heritage investigations undertaken within the general project vicinity.

**Task 9: Technical Investigations:**

**Drainage and Hydrology:** A hydraulic analysis will be completed for this project which will involve the determination of a suitable waterway opening size for the replacement bridge and clearance to the bridge soffit from the design storm high water level, that will address the following hydraulic design concerns:

- Convey an appropriate design flow through the structure opening;
- Ensure there are no adverse changes in floodwater levels for the selected bridge size for the Regulatory Flood; and
- Safeguard the environment.

**Geomorphology:** A fluvial geomorphologic assessment will be completed of the Study Area so as to finalize the geomorphic conditions of the river, the future widths of any proposed crossing, possible impacts and mitigation for footings and abutments and any necessary watercourse improvement works associated with the proposed crossing. The work plan reflects these assumptions assessment including:

- Background Review: Assemble all available information and data for the project, including watershed reports, relevant topographic survey data, reports and aerial photography (old and new). An initial evaluation of the information will be completed in order to prepare for the fieldwork. This would include initial planform characteristics and reach limits.
• Geomorphic Field Work: A geomorphic examination of channel and valley morphological characteristics (sinuosity, meander wavelength, valley and channel profiles, bed material) and fluvial processes (bedload transport, hydraulic properties of flow, energy properties of flow, bed and bank stability, location of erosion and deposition sites).

• Meander Beltwidth Assessment: At proposed crossings, a confirmation of the meander beltwidth will be completed. The purpose of the assessment would be to provide input to the crossing structure sizing as well as to determine trends in the watercourse alignments and to identify potential setbacks or buffers for work in the vicinity of these channels. The assessments will include desktop analyses and field investigations of the various creeks through the study area as well as a 100 Year Erosion Assessment including evaluation of a series of air photos over time.

Utility Coordination: The design will be coordinated with utility companies to determine location and if relocation will be required. A utility composite plan will be created for any relocations, if necessary.

Geotechnical Investigation: Two (2) boreholes will be completed at the Site, one behind each abutment. The boreholes will be advanced to a depth of 6.0 m below the creek bed or until competent soil is encountered to support the new bridge. All soil samples will be recovered and retained in moisture-preserving labelled containers for subsequent review and possible laboratory testing.

All boreholes will be checked for groundwater and caving prior to backfilling. Where applicable, the depth to groundwater and caving will be recorded. All boreholes will be backfilled in accordance with O.Reg. 903, as amended, and the property will be reinstated to pre-existing conditions, including cold patch asphalt at the surface. The borehole locations as well as the water level in the creek will be surveyed relative to a City provided benchmark. Dependent on actual Site conditions, it is assumed that the test pit investigation may be modified, subject to approval from the City.

During the borehole investigation described above, soil samples will be collected to the depths identified above. Each sample will be handled solely by the field technician using dedicated nitrile gloves to minimize the potential for cross-contamination. Samples to be submitted for analysis of volatiles will be sampled using the required techniques (Terracore® samplers), as per O. Reg. 153/04, as amended. Soil samples will be logged for soil type, moisture content, presence of odour, and signs of impacts such as staining, in accordance with standard geotechnical soil descriptions and nomenclature. Soil samples will be screened for combustible soil vapours using an Eagle 2 Hydrocarbon Surveyor and for organic compounds soil vapours using a photo-ionization detector (PID). All field screening meters will be calibrated as per the manufacturer’s specifications and instrument records will be maintained.

Constructability Review: The project will include a constructability review of the issues and timelines of the alternatives for the construction of the project.
Task 10: Structural Investigation: The key aspect of the Structural Engineering under the Class EA will be to develop clear, feasible alternatives for the crossing that are meshed with the transportation and environmental requirements along with the costs for each to inform the decision about the type of structure, and then develop the preferred alternative to provide a strong basis for any subsequent detailed design. The Class EA will allow for future detailed design of any bridge alternative in terms of bridge selection (type) and architectural details.

The available condition survey information indicates that the foundations are in poor condition and severely undermined, and that the steel beam superstructure elements are severely corroded at the bearings. On this basis any rehabilitation options would have to included extensive work both on the substructure and deck, and also stabilize and re-support the founding materials. The Bridge alternatives include:

- Do Nothing (not expected to be viable given the current information on the bridge condition).
- Rehabilitation including refacing the abutments and underpinning and major girder repairs.
- Replacement with the original span with re-facing the abutment and underpinning if the abutments are kept, or full demolition.
- Replacement with a longer span which would permit simplified demolition of the existing structure and erosion protection.

Staging alternatives include:

- Conventional staged removal and replacement using signals to maintain one lane of traffic with either the original span maintained or an increased span.
- Conventional staged replacement limiting the duration of the required single-laning of Television Road to one stage by building a minimal width two span structure in the first phase, facilitating the multi-use path in the completed structure.
- Jack and Slide with a single slide, with the new superstructure used as a detour during new substructure construction.
- Bridge replacement in a single stage with the use of a temporary bridge.
- Bridge replacement in a single stage with the use of a detour.

The alternative of overbuilding the width of the new structure to maintain 2 traffic lanes during construction would consider the anticipated timing of the future widening. The structure could potentially be constructed to ultimately accommodate the widened (4-lane) corridor with the addition of a separate structure for pedestrians and cyclists when the roadway is widened.

The initial expectation is that the structure will require full replacement based on the previous inspection reports. This expectation will be validated.

Task 11: Development, Analysis and Evaluation of Alternatives: The consideration of all reasonable alternatives is a guiding principle for EA studies. Planning alternatives will initially be reviewed by the
City and a preliminary analysis will be presented in the Study Design. This analysis considers alternative planning solutions including the “Do Nothing” alternative. The analysis and evaluation will review rehabilitation and replacement alternatives for existing and widened conditions.

**Evaluation of Alternatives:** The consideration of all reasonable alternatives is a guiding principle for EA studies.

The possible bridge management planning alternatives include:

- **Do Nothing**
- **Rehabilitation:**
  - Staged rehabilitation requiring at least one stage of single lane traffic and in-water work
- **Replacement:**
  - Full bridge replacement using a temporary detour at the site
  - Full bridge replacement with an off-site detour
  - The construction of a new superstructure offset on temporary abutments and slid into place on a weekend (rapid bridge replacement) would have low traffic and environmental impacts.
  - Full bridge construction (2-lane bridge) on new alignments (no detour) with provision for future 4-laning using existing alignment.

This analysis will be followed by the generation of preliminary design alternatives prior to the environmental investigations. The alignment, cross section and structural alternatives will be generated through discussions with the City, TAC members, agencies and the general public during the preparation of the Study Design.

The study will include a systematic, traceable analysis and evaluation process to evaluate alternatives. Additionally, this assignment will include a comprehensive public consultation program which will assist in the development of a recommended plan for staged implementation of the project.

**Task 12: PIC No. 2:** The second PIC will present the evaluation and ranking of alternatives and the preliminary Technically Preferred Alternative (TPA) to the public to elicit input on the recommendations.

**Task 13: Preparation of ESR:** The preparation of the draft and final report will follow the format and content for an ESR for a Schedule C Municipal Class EA to be accepted by MECP. The ESR will document the study methodology, findings, public involvement and recommendations.

**Task 14: Public Review of ESR:** A Notice of Study Completion will be prepared for the City to place in the local newspaper and on their website. The Consultant will be responsible for mailing letters to the mailing list. The public will be notified of the availability of the ESR for review. Individual letters (or
emails) will be sent to persons/organizations on the contact lists maintained throughout the course of the studies. The ESR will be made available at several convenient locations for the public review.
3.3 Study Schedule

A draft schedule for this Study is shown below in Table 1.

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start-Up Meeting</td>
<td>April 2019</td>
</tr>
<tr>
<td>Study Commencement Notice</td>
<td>May 2019</td>
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<tr>
<td>Indigenous Peoples Consultation Program</td>
<td>April – May 2019</td>
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<tr>
<td>Information Gathering</td>
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<tr>
<td>Environmental Review</td>
<td>April – July 2019</td>
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<tr>
<td>Study Design and Value Planning Workshop (TAC Meeting)</td>
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</tr>
<tr>
<td>Stakeholder Meeting</td>
<td>May 2019</td>
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<tr>
<td>Transportation Analysis</td>
<td>May 2019</td>
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<td>PIC No. 1</td>
<td>June 19, 2019</td>
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<tr>
<td>Analysis and Evaluation of Alternatives</td>
<td>Summer 2019</td>
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<td>Evaluation of Alternatives (TAC Meeting)</td>
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<tr>
<td>Public Review of ESR</td>
<td>Spring 2020</td>
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</tbody>
</table>
## Glossary of Terms

- **AADT**
  Annual Average Daily Traffic – the average 24-hour, two-way traffic per day for the period from January 1st to December 31st.

- **Alignment**
  The vertical and horizontal position of a road.

- **Alternative**
  Well-defined and distinct course of action that fulfils a given set of requirements. The EA Act distinguishes between alternatives to the undertaking and alternative methods of carrying out the undertaking.

- **Alternative Planning Solutions**
  Alternative ways of solving problems or meeting demand (Alternatives to the Undertaking).

- **Alternative Design Concepts**
  Alternative ways of solving a documented transportation deficiency or taking advantage of an opportunity. (Alternative methods of carrying out the undertaking).

- **Alternative Project**
  Alternative Planning Solution, see above.

- **Bump-Up**
  The act of requesting that an environmental assessment initiated as a class EA be required to follow the individual EA process. The change is a result of a decision by the proponent or by the Minister of Environment to require that an individual environmental assessment be conducted.

- **Canadian Environmental Assessment Act (CEAA)**
  The CEAA applies to projects for which the federal government holds decision-making authority. It is legislation that identifies the responsibilities and procedures for the environmental assessment.
• **Class Environmental Assessment Document**
  An individual environmental report documenting a planning process which is formally submitted under the EA Act. Once the Class EA document is approved, projects covered by the class can be implemented without having to seek further approvals under the EA Act provided the Class EA process is followed.

• **Class Environmental Assessment Process**
  A planning process established for a group of projects in order to ensure compliance with the Environmental Assessment (EA) Act. The EA Act, in Section 13 makes provision for the establishment of Class Environmental Assessments.

• **Corridor**
  A band of variable width between two locations. In transportation studies a corridor is a defined area where a new or improved transportation facility might be located.

• **Criterion**
  Explicit feature or consideration used for comparison of alternatives.

• **Cumulative Effects Assessment**
  Cumulative Effects Assessment assesses the interaction and combination of the residual environmental effects of the project during its construction and operational phases on measures to prevent or lessen the predicted impacts with the same environmental effects from other past, present, and reasonably foreseeable future projects and activities.

• **Detail Design**
  The final stage in the design process in which the engineering and environmental components of preliminary design are refined and details concerning, for example, property, drainage, utility relocations and quantity estimate requirements are prepared, and contract documents and drawings are produced.

• **DFO**
  Department of Fisheries and Oceans.

• **EA**
  Environmental Assessment

• **EA Act**
| **Environment** | - Air, land or water,
- Plant and animal life, including human life,
- The social, economic and cultural conditions that influence the life of humans or a community,
- Any building structure, machine or other device or thing made by humans,
- Any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
- Any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario. |
<p>| <strong>Environmental Effect</strong> | A change in the existing conditions of the environment which may have either beneficial (positive) or detrimental (negative) effects. |
| <strong>ESR</strong> | Environmental Study Report. The final documentation for Schedule C project, defining the project, consultation process, preferred solution and mitigation measures. |
| <strong>Evaluation</strong> | The outcome of a process that appraises the advantages and disadvantages of alternatives. |
| <strong>Evaluation Process</strong> | The process involving the identification of criteria, rating of predicted impacts, assignment of weights to criteria, and aggregation of weights, rates and criteria to produce an ordering of alternatives. |
| <strong>External Agencies</strong> | Include Federal departments and agencies, Provincial ministries and agencies, conservation authorities, municipalities, Crown corporations or other agencies other than MTO. |
| <strong>Factor</strong> | A category of sub-factors. |
| <strong>General Arrangement</strong> | Structural plan of the bridge and proposed works including elevations and cross-sectional views of the bridge. |</p>
<table>
<thead>
<tr>
<th><strong>Individual Environmental Assessment</strong></th>
<th>An environmental Assessment requiring the submission of a document for approval by the Minister, pursuant to the EA Act and which is neither exempt from the EA Act nor covered by a Class EA approval.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MECP</strong></td>
<td>Ministry of the Environment, Conservation and Parks.</td>
</tr>
<tr>
<td><strong>Mitigating Measure</strong></td>
<td>A measure that is incorporated into a project to reduce, eliminate or ameliorate detrimental environmental effects.</td>
</tr>
<tr>
<td><strong>Mitigation</strong></td>
<td>Taking actions that either remove or alleviate to some degree the negative impacts associated with the implementation of alternatives.</td>
</tr>
<tr>
<td><strong>MNRF</strong></td>
<td>Ministry of Natural Resources and Forestry.</td>
</tr>
<tr>
<td><strong>MTCS</strong></td>
<td>Ministry of Culture, Tourism and Sport.</td>
</tr>
<tr>
<td><strong>MTO</strong></td>
<td>Ministry of Transportation Ontario.</td>
</tr>
<tr>
<td><strong>PIC</strong></td>
<td>Public Information Centre.</td>
</tr>
<tr>
<td><strong>Planning Alternatives</strong></td>
<td>Planning alternatives are “alternative methods” under the EA Act. Identification of significant transportation engineering opportunities while protecting significant environmental features as much as possible.</td>
</tr>
<tr>
<td><strong>Planning Solutions</strong></td>
<td>That part of the planning and design process where alternatives to the undertaking and alternative routes are identified and assessed. Also described as “Alternative Project” under the federal EA Act.</td>
</tr>
<tr>
<td><strong>Project</strong></td>
<td>A specific undertaking planned and implemented in accordance with the Class EA including all those activities necessary to solve a specific problem.</td>
</tr>
<tr>
<td><strong>Proponent</strong></td>
<td>A person or agency that carries or proposes to carry out an undertaking, or is the owner or person having charge, management, or control of an undertaking.</td>
</tr>
<tr>
<td><strong>Public</strong></td>
<td>Includes the general public, interest groups, associates, community groups, and individuals, including property owners.</td>
</tr>
</tbody>
</table>
• **Realignment**
Replacement or upgrading of an existing roadway on a new or revised alignment.

• **Recommended Plan**
That part of the planning and design process, during which various alternative solutions are examined and evaluated including consideration of environmental effects and mitigation; the recommended design solution is then developed in sufficient detail to ensure that the horizontal and vertical controls are physically compatible with the proposed site, that the requirements of lands and rights-of-way are satisfactorily identified, and that the basic design criteria or features to be contained in the design, have been fully recognized and documented in sufficient graphic detail to ensure their feasibility.

• **Screening**
Process of eliminating alternatives from further consideration, which do not meet minimum conditions or categorical requirements.

• **Sub-factor**
A single criterion used for the evaluation. Each sub-factor is grouped under one of the factors.

• **Technical Advisory Committee**
The Advisory Committee will include the City and Consultant. It will act as the decision-making body for the study recommendations.

• **TMP**
Transportation Master Plan

• **Traceability**
Characteristics of an evaluation process which enables its development and implementation to be followed with ease.

• **Undertaking**
In keeping with the definition of the Environmental Assessment Act, a project or activity subject to an Environmental Assessment.