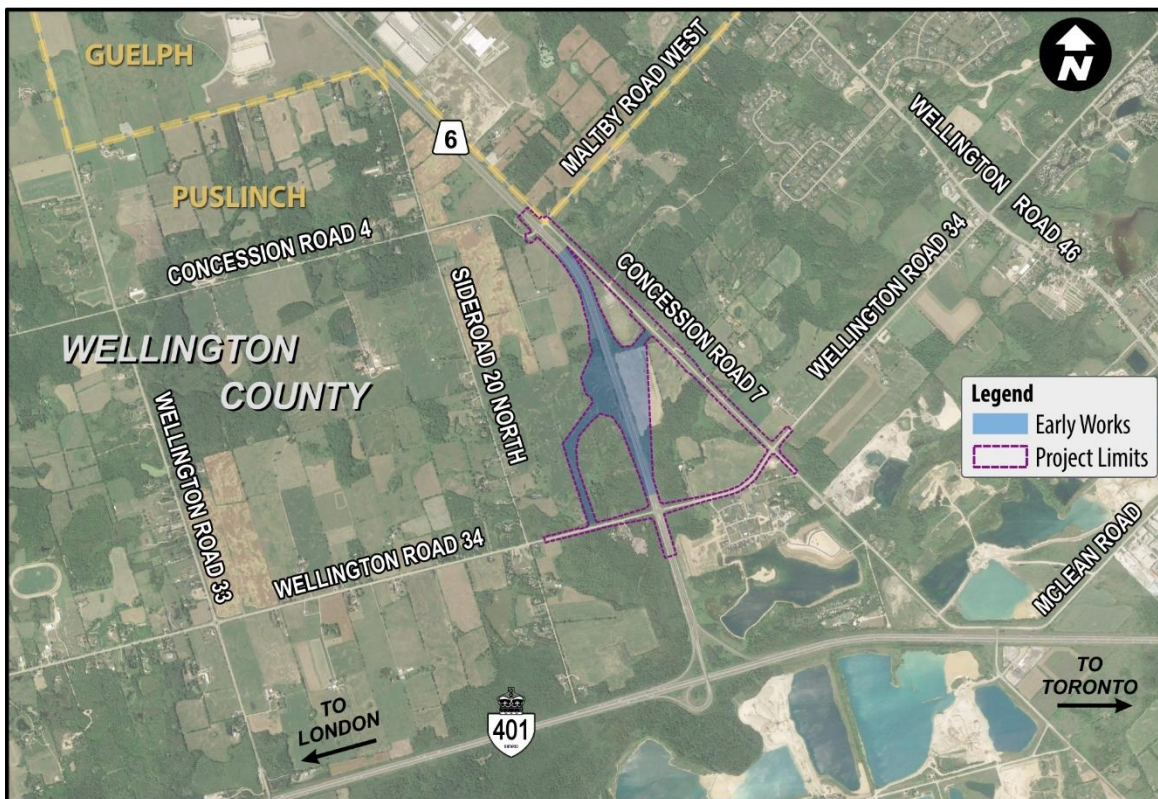


Design and Construction Report #1

Highway 6/Hanlon Expressway Midblock Interchange – Early Works

Township of Puslinch and City of Guelph,
within the County of Wellington, Ontario




G.W.P. 3059-20-00
DB Contract Number: 2021-3004



September 2022
Final



ISSUANCE APPROVAL

Prepared By	Reviewed By	Approved By
		
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Environmental Planner	Consultant Lead Environmental Planner	Consultant Senior Project Manager

DISCLAIMER

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All Confidential Information shall remain the sole property of the applicable Sponsor or the Prime Contractor and shall treat it as confidential. Confidential Information shall not be used by for any purpose other than for performing their respective duties on the Highway 6 Hanlon Expressway.

The Public Record

This Design and Construction Report has been prepared under the Ontario Ministry of Transportation's *Class Environmental Assessment for Provincial Transportation Facilities* (2000), in compliance with the requirements of the *Ontario Environmental Assessment Act*. This Design and Construction Report has been prepared to document the recommended improvements, consultation undertaken, and potential environmental issues and mitigation measures associated with the Design-Build and Group "A" Class Environmental Assessment process for the Early Works of the Highway 6/Hanlon Expressway Midblock Interchange project.

A copy of this document has been submitted to the following office of the Ministry of the Environment, Conservation and Parks:

Ministry of the Environment, Conservation and Parks
West Central Region – Guelph District Office
1 Stone Road West, 4th Floor
Guelph, ON N1G 4Y2

A copy of this Design and Construction Report is available for review online at <https://highway6midblock.ca/reports/> for a 30-day public and agency review period. If you wish to review the Report and require an alternate format, you may email the Project Team at ProjectTeam@Highway6midblock.ca to discuss review options.

Comments are being collected to provide and obtain information, and to identify concerns in accordance with the *Ontario Environmental Assessment Act*. This material will be maintained on file for use during the study and may be included in project documentation.

Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

If you have any accessibility requirements in order to participate in this project, please contact the Project Team at ProjectTeam@Highway6midblock.ca.



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(Early Works), G.W.P. 3059-20-00
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1.0 PROJECT OVERVIEW

1.1 Project Location and Background

The Highways 6 and 401 Improvements from Hamilton north limits to Guelph south limits (“The Overall Project”, G.W.P. 3042-14-00) are being undertaken by the Ontario Ministry of Transportation (MTO) in a phased approach.

- Phase 1, which was completed in 2020, included the replacement of the Concession Road 7 Bridge over Highway 401.
- Phase 2 includes the Class Environmental Assessment (Class EA), detail design and construction (i.e., Design-Build) of the Highway 6 / Hanlon Expressway Midblock Interchange, just north of Highway 401 (the Project, G.W.P. 3059-20-00).
- MTO is currently reviewing opportunities for the next phases of the Highways 6 & 401 Improvements Project. Once that has been confirmed, the timelines and details will be announced. The ministry is continuing all necessary field work and design in order to complete this project.

In 2022, the Design-Build contract for Phase 2 was awarded to Dufferin Construction, in which WSP Canada Inc. was acquired as the Designer. Phase 2 is located within the Township of Puslinch and City of Guelph, within the County of Wellington (refer to **Figure 1**).

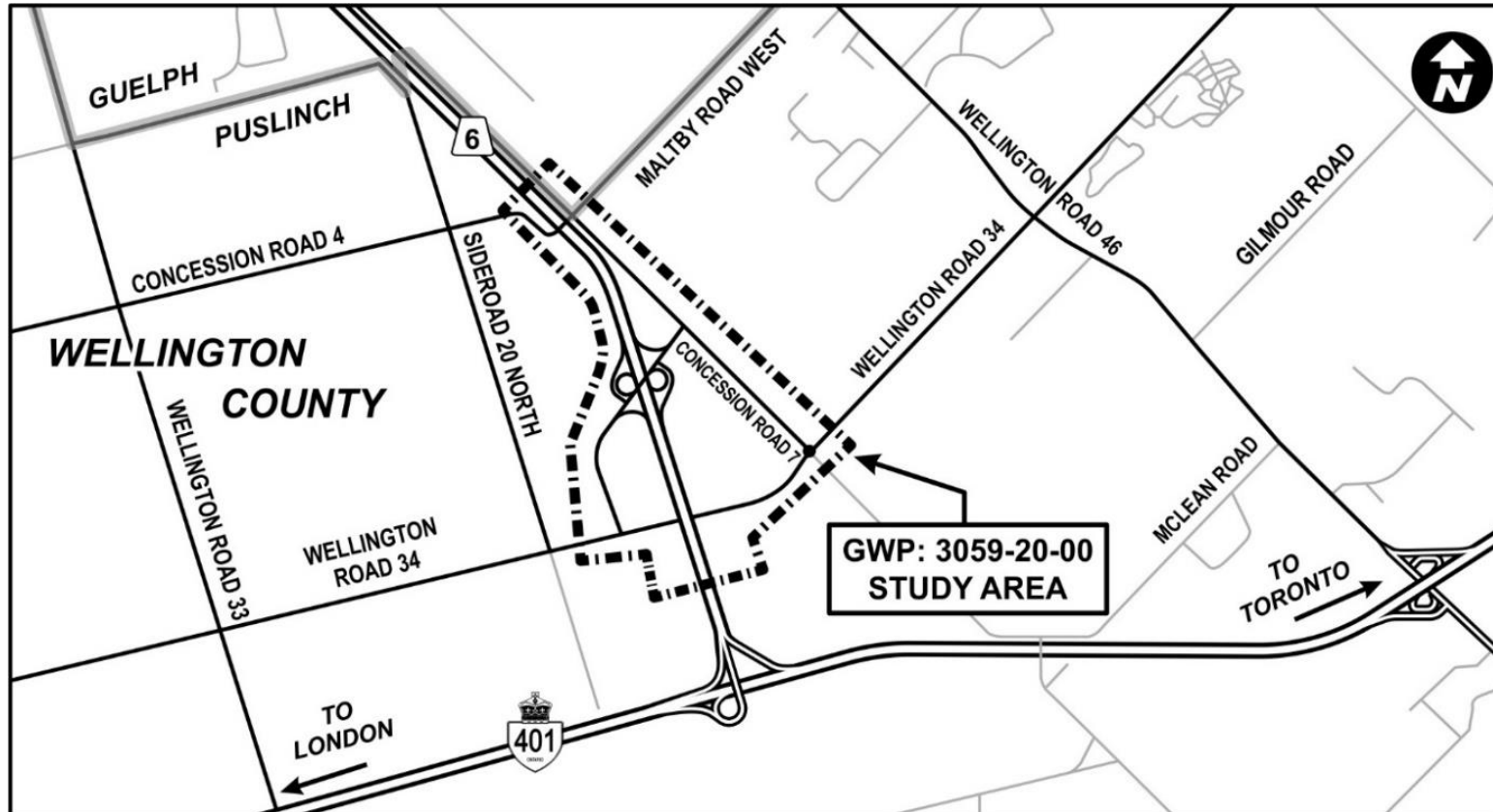


Figure 1: Study Area for the Highway 6 / Hanlon Expressway Midblock Interchange Project (G.W.P. 3059-20-00)

1.2 Proposed Works

The proposed works for Phase 2 have been split into two (2) separate design packages (referred to as “Early Works” and “Remaining Works”). This split was undertaken to clear and commence the construction of the Midblock Bridge and Interchange (i.e., the Early Works), prior to the commencement of work at Wellington Road 34, Concession Road 7 and Maltby Road West (i.e., the Remaining Works). Therefore, two (2) Design and Construction Reports (DCRs) will be produced for Phase 2. This report (i.e., DCR #1) focuses solely on the Early Works for the Midblock Bridge and Interchange. DCR #2 will outline the Remaining Works and will be produced under a separate cover, at a later date.

1.2.1 Early Works

The Early Works (DCR #1) scope of work includes:

- ▶ Construction of a new Midblock Interchange on Highway 6 / Hanlon Expressway, north of Wellington Road 34;
- ▶ Construction of a new road to connect the Midblock Interchange to Concession Road 7 and to Wellington Road 34; and,
- ▶ Drainage improvements, such as infiltration ponds for stormwater management.

1.2.2 Remaining Works

The Remaining Works (DCR #2) scope of work will include:

- ▶ Removal of the signalized intersection on the Highway 6 / Hanlon Expressway at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway;
- ▶ Reconstruction of Concession Road 7, between Wellington Road 34 and Maltby Road;
- ▶ Closure of the Maltby Road / Concession Road 4 intersection;
- ▶ A new roundabout at the Wellington Road 34 / Concession Road 7 intersection;
- ▶ Installation of new overhead sign structures, traffic signals and partial illumination; and,
- ▶ Emergency and maintenance vehicle turnarounds along the Hanlon Expressway (one north of Maltby Road and one south of Wellington Road 34).

Figure 2 depicts the overall limits of Phase 2 and delineation of the Early Works.

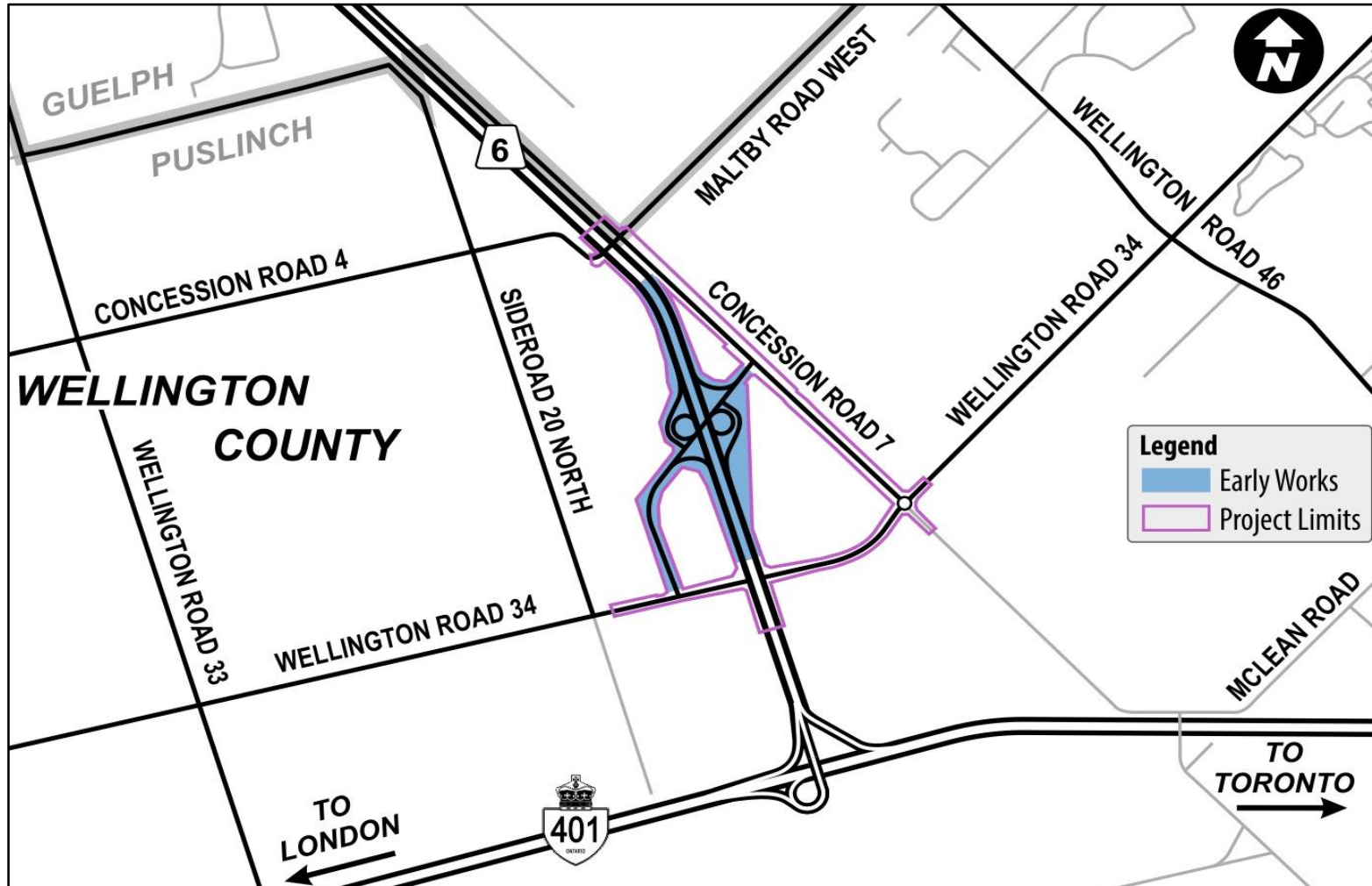


Figure 2: Limits of the Early Works

2.0 ENVIRONMENTAL ASSESSMENT PROCESS

2.1 Federal Impact Assessment Act

The proposed improvements associated with this project are not listed as a “designated project” under the Federal *Impact Assessment Act (2019)*, and the work being proposed is not taking place on Federal lands. Therefore, approval from the Impact Assessment Agency of Canada is not required for this undertaking.

2.2 Ontario Environmental Assessment Act

This project is subject to the Ontario *Environmental Assessment Act (EA Act)*. The EA Act provides the protection, conservation, and management of the environment in the province of Ontario. The purpose of the EA Act is to help protect and conserve Ontario’s environment by requiring that projects subject to the Act follow a planning process leading to environmentally sound decision-making.

The Class EA process is a planning process approved under the provincial EA Act. A Class EA provides a streamlined process that must be followed for projects within a defined class. The purpose of the Class EA process is to ensure that governments and public bodies consider potential environmental effects before an infrastructure project begins. The *MTO’s Class EA for Provincial Transportation Facilities (2000)* is an approved planning process under the EA Act that establishes the appropriate Class EA process to be completed for groups of projects and activities.

The Design-Build and Class EA for Phase 2 (G.W.P. 3059-20-00) is following the approved planning process for a Group “A” undertaking under the *MTO Class EA for Provincial Transportation Facilities (2000)*. As part of the Class EA process for Group “A” projects there are opportunities for public input throughout the study (refer to **Section 3.0** for further details on **Consultation and Engagement**).

2.2.1 Historical Environmental Assessment Work

In 1995, the EA and Preliminary Design was completed for the transportation system improvements to the Highway 6 corridor between Freelon and Guelph (W.P. 65-76-05). Following the completion of the EA, the Ministry of Natural Resources and Forestry (MNR) (formerly known as the Ministry of Natural Resources), Environment Canada, and the Hamilton Region Conservation Authority, raised concerns with respect to potential impacts to Henslow's Sparrow habitat within the project study area.

Agency concerns escalated with the change in designation of the Henslow Sparrow species from "Threatened" to "Endangered" under Ontario's *Endangered Species Act* (2007). To address these concerns, MTO issued an addendum to the EA in 1997.

In 2007, the Ministry of Environment, Conservation and Parks (MECP) (formerly known as the Ministry of the Environment) completed a review on the 1995 EA and 1997 addendum under the EA Act. A Notice of Approval to Proceed with the Undertaking was subsequently granted by Order in Council on January 22, 2009. A portion of the Preliminary Design along Highway 401 was amended by a Transportation Environmental Study Report (TESR) in 2012 for the Preliminary Design and Class EA for Highway 401, from West of Hespeler Road to the Wellington/Halton Boundary (G.W.P 8-00-00).

The approved EA Plan for the Highways 6 and 401 Improvements from Hamilton north limits to Guelph south limits (G.W.P. 3042-14-00) included:

- A new controlled access four-lane alignment of Highway 6 west of the existing highway, from Highway 6 at Maddaugh Road northerly to Highway 401;
- Improvements to the Highway 6 / Maddaugh Road intersection;
- Structures to carry CP Rail, Calfass Road, Concession Road 1 and Fielding Lane across the new Highway 6 alignment;
- A new two-lane connection road north of the community of Morriston, linking the existing and new alignments of Highway 6;
- Reconfiguration of the Highway 401 interchanges at Highway 6 / Wellington Road 46 (Brock Road), and at Highway 6 (Hanlon Expressway);
- Widening of approximately 3 km of Highway 401 to 10 lanes including High Occupancy Vehicle (HOV) lanes between the two Highway 6 interchanges;
- Replacement of the Hanlon Expressway intersection at Wellington Road 34 with a bridge (no connection to the highway);
- Closure of the Hanlon Expressway intersection at Maltby Road / Concession Road 4;



- A new Hanlon Expressway interchange approximately mid-way between Wellington Road 34 and Maltby Road / Concession Road 4 linking Wellington Road 34 on the west side of the Hanlon Expressway to Concession Road 7 on the east side of the Hanlon Expressway;
- Reconstruction of the section of Concession Road 7 between the new interchange and Wellington Road 34;
- Replacement of the Puslinch Concession Road 7 Bridge over Highway 401 (Phase 1, completed in 2020 as part of an advanced construction project, G.W.P. 3224-15-00); and
- Reconfiguration and expansion of the Wellington Road 46 (Brock Road) commuter parking lot.

As previously noted in **Section 1.0**, Phase 1 of the approved EA Plan was completed in 2020 under a separate Class EA and Detail Design process. Phase 2 (i.e., this Project) includes the Class EA and Design-Build of the Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00).

The Class EA for this Project (G.W.P. 3059-20-00) has built on the work completed during the Preliminary Design and Class EA as documented in the 2012 Transportation Environmental Study Report and in the Detail Design and construction for Phase 1 of the approved EA Plan. The study process has been illustrated in **Figure 3**.

2.1 Purpose of Design and Construction Report #1

A Design and Construction Report (DCR) is prepared per the MTO Class EA to document a project's final design and construction staging. This DCR #1 has been prepared to document the recommended improvements, consultation undertaken, and potential environmental issues and mitigation measures associated with the Design-Build and Group "A" Class EA process for the Early Works of the Highway 6/Hanlon Expressway Midblock Interchange project (G.W.P. 3059-20-00).

In accordance with the MTO Group "A" Class EA process, this DCR #1 will be made available on the project website at www.highway6midblock.ca/reports/ for a 30-day public and agency review period. Interested parties that wish to review DCR #1 in an alternate format may email the Project Team at ProjectTeam@Highway6midblock.ca to discuss review options.



Figure 3: Class EA Process Timeline for the Early Works

All interested parties are encouraged to review the project details and provide input on DCR #1. Comments can be submitted to the following members of the Project Team through hard copy mail or by emailing ProjectTeam@Highway6midblock.ca.

Olga Khuskivadze, P.Eng.
 Project Engineer
 Ministry of Transportation West Region,
 Planning & Design
 659 Exeter Road, London, ON N6E 1L3

Peter Bamforth, P.Eng., CEng, MICE
 Consultant Senior Project Manager
 Dufferin / WSP
 610 Chartwell Road
 Oakville, ON L6J 4A5

Finalization of the contract drawings and documentation will proceed after this DCR #1 is filed. There is the potential that design plans are revised to reflect minor design changes or refinements that may occur as the Design-Build progresses. However, any modifications are not anticipated to affect the EA commitments documented within this DCR #1.

3.0 CONSULTATION AND ENGAGEMENT

Consultation is a key element of the Class EA process. The following section summarizes the consultation undertaken as part of the Detail-Build stage for the Early Works portion of the overall project.

3.1 Project Contact List

At the commencement of Detail Design for Phase 2, a Contact List was established using the 200 person Contact List from the Preliminary Design stage of the Highways 6 and 401 Improvements (G.W.P. 3042-14-00). The list includes Members of Provincial Parliament (MPP), regulatory agencies, municipalities, emergency services, local interest groups, utility companies, Indigenous communities, and members of the public who requested to be added to the contact list during the project. The project contact list has been updated throughout the project to include any new contacts connecting with the Project Team through telephone, email or webform inquiries.

3.2 Notification of Study Update (Commencement)

A Notice of Study Update was published in local newspapers to inform the public of the initiation of Phase 2 of the Highways 6 and 401 Improvements (G.W.P. 3042-14-00). The Notice of Study Update provided an overview of the project, the project background, information on the Class EA process, details on consultation and links to the project website and the Project Team Email to contact a member of the Project Team for further information or to be added to the project mailing list.

The Notice was published in the following local newspapers:

- Turtle Island News on Wednesday, April 27, 2022
- Two Row Times on Wednesday, April 27, 2022
- The Guelph Mercury Tribune on Thursday, April 28, 2022
- The Wellington Advertiser on Thursday, April 28, 2022

Advertising in these newspapers ensured maximum coverage of the project area.

Notification letters advising of the Study Update were mailed to those on the Project Contact List the week of April 25, 2022. The letters to external agencies also included a Stakeholder Contact Information Form. Copies of the Notice of Study Update and letters can be viewed in **Appendix B**.

3.3 Project Website

A project website (<https://highway6midblock.ca/>) was launched in conjunction with the Notice of Study Update. The website is an effective tool to share information with stakeholders and Indigenous communities, and to obtain feedback from interested parties. Throughout the project (i.e., for both Early Works and Remaining Works), the website will be updated to include information on the project schedule, EA process, project overview, notices, consultation and engagement, reports (e.g., DCR #1 and #2 for public comment), Frequently-Asked-Questions (FAQs), contact information, links, daily traffic restrictions and/or detour routes and construction progress updates. Comments and inquiries submitted via the website are delivered to the Project Team email account (ProjectTeam@Highway6midblock.ca).

The website was designed to be user-friendly, using features compliant with the Accessibility for Ontarians with Disabilities Act (AODA). This includes features such as:

- ALT tags for all images – permitting visually impaired users using a screen reader to hear the text (e.g., “map showing the study area”) rather than see the image
- The ability to increase/decrease text size with one click
- The ability to adjust contrast of text/page with one click
- “Naming” text links appropriately to allow for ease of use by screen readers
- “Skip links” for users who may use a screen reader allowing them to skip directly to the content of the page rather than the website header and, perhaps, sidebar links

The project website will remain active throughout the duration of design and construction for both the Early Works and Remaining Works. During construction, the project website will be updated on a regular basis to identify any scheduled closures and provide summaries of construction operations taking place. These updates will also include photographs of construction progress.

3.4 External Agency and Municipal Consultation

The following external agencies were consulted at key milestones of Phase 2, the Design-Build project (i.e., *Study Update* and *Notice of Completion for DCR #1*) to obtain information on project area features, exchange project information and obtain input on any project issues:

- Ministry of Municipal Affairs and Housing
- Ministry of Northern Development, Mines, Natural Resources and Forestry
- Ministry of the Environment, Conservation, and Parks
- Ministry of Heritage, Sport, Tourism and Culture Industries
- Ministry of Citizenship and Immigration
- Infrastructure Ontario
- Fisheries and Oceans Canada
- Environment and Climate Change Canada
- Grand River Conservation Authority
- Hamilton Conservation Authority
- Upper Grand District School Board
- Wellington Catholic District School Board
- Ontario Heritage Trust
- Ontario Federation of Agriculture
- Ontario Stone, Sand & Gravel Association
- Architectural Conservancy Ontario
- Transport Canada

The following municipalities were consulted during the study process:

- County of Wellington
- City of Hamilton
- City of Guelph
- Township of Puslinch

The following Transit Service Providers were consulted:

- Canadian Pacific Railway
- Guelph Transit
- Go Transit
- Via Rail
- Greyhound

The following emergency service providers were consulted:

- Ontario Provincial Police (OPP) – Wellington District
- Emergency Management – County of Wellington
- Guelph-Wellington Emergency Medical Service
- Guelph Police Service



- Guelph Fire Services
- Fire and Rescue Services-Township of Puslinch
- Hamilton Fire Department & Paramedic Services

The following Utility companies were consulted as part of this study:

- Hydro One (Transmission)
- Hydro One (Distribution)
- Bell
- Enbridge
- Rogers Communications
- Telus
- Alectra

A teleconference meeting was held on June 8, 2022 to discuss an overview of Phase 2 and Early Works scope with municipalities. Staff from the City of Guelph, County of Wellington, and Township of Puslinch attended the meeting via Microsoft Teams.

On September 13, 2022, the Project Team presented to the Wellington Township County Roads Committee in person. On September 14, 2022, a second teleconference meeting was held with Township of Puslinch and their emergency services team, as requested by the Township. The meetings included discussions on the project overview, information on the environmental assessment and consultation process, as well as anticipated construction timelines and traffic management (detour routes). In addition to these meetings, municipal staff and external agencies have provided written comments and questions via emails to the Project Team for consideration. A summary of the meetings held, comments received, as well as the responses from the Project Team are provided in **Table 1**.



Table 1: External Agency and Municipal Comments & Project Team Resolutions and Responses

Topics / Comments Received	Resolution / Project Team Response
<p>On April 29, 2022, the Halton Region Conservation Authority (Conservation Halton) noted Phase 2 of the Highways 6 and 401 Improvements (i.e., the Project) is located outside of Conservation Halton’s jurisdiction. As such, their staff will not be providing comments on the project. It was suggested that the Grand River Conservation Authority should be contacted, as the limits of the Project fall within their jurisdiction.</p>	<p>On April 29, 2022, the Project Team responded and noted that the Grand River Conservation Authority was included on the project contact list and that they have received the Notice of Study Update. Conservation Halton was removed from the contact list.</p>
<p>On May 16, 2022, the Township of Wellington provided a Stakeholder Information Form in response to the Notice of Study Update. It was noted that the following locations and designs were of interest to the Township:</p> <ul style="list-style-type: none"> • Midblock connection to Concession Road 7 and Wellington Road 34 • Round-a-bout design Concession Road 7 at Wellington Road 34 • Potential for truck turnaround at Concession Road 7 and Maltby Road 	<p>A combined Municipal Meeting was held on June 8, 2022, in which the Township of Wellington attended. The meeting provided a project overview, information on next steps and consultation process, as well as an opportunity for municipal staff to ask questions and provide input to the study.</p>



Topics / Comments Received	Resolution / Project Team Response
<p>On May 19, 2022, the Manager of Transportation and Planning for the City of Guelph expressed that Concession Road 7 will continue to serve as a key corridor to carry traffic to/from the City, in particular from the future adjacent Clair-Maltby Secondary Plan and Southgate Business Park expansion. The level of truck volumes is expected to be high on Concession 7, as many of these trucks originate from or are destined to Highway 401, just south of the study area. It was requested that the geometric features, such as the vertical gradient and pavement condition, be modified to be conducive for all vehicles for safety and efficiency. By making Concession 7 an attractive alternative for north-south traffic, it would alleviate the pressure on Gordon Street and Brock Road (i.e., Wellington Road 46).</p> <p>In addition, City of Guelph staff recommended illumination at the intersection of Maltby Road / Crawley Road / Concession 7. In review of Form 3, staff believe some parameters in Form 3 should be modified and the modification may render the illumination warranted. These parameters include:</p> <p>a) the intersection is located in a predominantly industrial area not a residential area;</p>	<p>On September 9, 2022, the MTO responded noting that the geometric features identified by the City of Guelph should be conducive for all vehicles. The Project Team clarified that the re-aligned Concession Road 7 will consist of a 3.50 m lane and 2.50 m shoulder in each direction. The proposed design geometry meets or exceeds a design speed of 80 km/h.</p> <p>The MTO also noted that it was their understanding that the new industrial developments are to be located along Crawley Road, north of the Maltby Road intersection. The existing Highway 6/Maltby Road intersection will be closed; therefore, trucks from Highway 401 would access the new Midblock interchange before using the Midblock Connection Road /Concession 7 intersection. These roadways will be designed to accommodate trucks turning movements. It was also noted that, trucks can alternately use the existing Laird Road interchange, located further north of the project limits, to access the industrial areas.</p> <p>It was noted for the south approach, the proposed intersection sight distance exceeds the design speed of 80km/h for Concession Road 7. For the east approach, the existing intersection sight distance exceeds the posted speed of 60 km/h on Maltby Road West.</p>



Topics / Comments Received	Resolution / Project Team Response
<p>b) in the absence of dedicated turning lanes, the approach lane width could be wider (up to 3.75m) to facilitate truck turning movements; and</p> <p>c) there is a substantial grade change in the south approach and east approach that impedes sightlines.</p> <p>Staff also provided comments on existing traffic volumes. It was noted that following the construction completion at the midblock interchange, the intersection at Maltby Road / Concession Road 4 / Hanlon Expressway will be closed. Staff has reviewed a recent traffic impact study noting that the existing traffic volumes already fulfil traffic signalization criteria today. Therefore, it was noted the additional diverted traffic due to construction at the midblock interchange further supports the need for signal control at this intersection. Staff requested that the intersection should be temporarily signalized now and remain signalized until its full closure.</p>	<p>With regards to the illumination requested at the intersection of Maltby Road/Crawley Road/Concession 7, the Project Team confirmed that an illumination warrant is not met. It was noted that if the City of Guelph is interested in installing illumination at their cost, a cost-sharing agreement could be explored.</p> <p>The MTO reviewed the signal warrant at the intersection of Highway 6/Maltby Road that was included in the Traffic Impact Study. It was noted that although a signal is warranted based on the volumes provided in the report, this improvement will need to be provincially prioritized. It is likely that by the time construction of this improvement is scheduled, the intersection will be closed.</p> <p>A combined Municipal Meeting was held on June 8, 2022, in which the City of Guelph staff attended. The meeting provided a project overview, information on next steps and consultation process, as well as an opportunity for municipal staff to ask questions and provide input to the study.</p>



Topics / Comments Received	Resolution / Project Team Response
<p>On June 13, 2022, Wellington Township requested representatives from the Project Team to present at the Wellington Township County Roads Committee on September 13, 2022.</p>	<p>On September 13, 2022, the Project Team presented to the Wellington Township County Roads Committee in person. The presentation included a project overview, information on the environmental assessment and consultation process, as well as anticipated construction timelines and traffic management (detour routes). The presentation was followed by a question-and-answer period. A question was raised regarding the signalization controls of new intersections, in which the Project Team provided the following response following the meeting:</p> <p>The intersections will be controlled as follows:</p> <ul style="list-style-type: none"> • S-E/W Ramp Terminal – MTO Signals • N-E/W Ramp Terminal – MTO Signals • Midblock Connection Road & Concession Road 7 – Priority Controlled (however, provisions for future municipal traffic signals, including conduits, underground pavement crossings & encasements, handholes and ground rods will be provided) • Midblock Connection Road & Wellington County Road 34 – Priority Controlled • Concession Road 7 and Wellington County Road 34 - Roundabout



Topics / Comments Received	Resolution / Project Team Response
<p>On June 14, 2022, the Township of Puslinch submitted an email to the Project Team regarding comments and concerns from Phase 1 of the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3041-14-00). The comments were previously sent to AECOM and MTO on March 19, 2021 and November 23, 2021. The Township also requested a meeting to discuss their concerns.</p> <p>The comments and concerns included requests to remain a stakeholder on the project, copies of technical reports, a request for MTO to fund a peer review of the Township of items of importance, additional public engagement during detail design (including a presentation by MTO at the Puslinch Council), and a request for a schedule that outlines consultation and construction timelines.</p> <p>The following specific comments and questions were also made in the email:</p> <ul style="list-style-type: none"> • Confirmation as to who the connector road (Concession 7) maintenance responsibility will be assigned to. • A formal request that the MTO indicate what steps will be necessary and what supporting documentation will be required to determine if and where access can be 	<p>A Municipal Meeting was held on June 8, 2022, in which staff from the Township of Puslinch attended. The meeting provided a project overview, information on next steps and consultation process, as well as an opportunity for municipal staff to ask questions and provide input to the study.</p> <p>On August 15, 2022, the Phase 2 Project Team thanked the Township of Puslinch for forwarding comments which were originally submitted on March 19, 2021 to the Phase 1 Highways 6 and 401 Improvements (G.W.P. 3224-15-00) Project Team.</p> <p>As noted above, on September 14 2022, a separate meeting with Township of Puslinch staff and Puslinch Fire and Rescue Services was held to further discuss the optimized design of Concession Road 7 and the Midblock Connection Road profile. The proposed detour routes, emergency turnaround locations and the anticipated schedule of Early Works construction were also presented at the meeting for discussion. The Township of Puslinch requested an additional meeting with their Public Works staff to review the presentation materials and provide open discussion with the Project Team. The meeting is currently being scheduled. The MTO also offered a separate meeting with Puslinch Fire and Rescue Services to</p>



Topics / Comments Received	Resolution / Project Team Response
<p>provided for each of the designated parcels of designated Employment/Industrial Lands.</p> <ul style="list-style-type: none"> • Request to address noise impacts for 6-7 local properties. • Request for the MTO to respond to the Township as to how each of the identified Emergency Services comments or concerns submitted during Phase 1 of the Highway 6 and 401 Improvements project (G.W.P. 3224-15-00) will be addressed. 	<p>discuss comments that were originally distributed to the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3041-14-00) Project Team.</p>

3.5 Engagement with Indigenous Communities

As identified in the Preliminary Design phase of the study, the following Indigenous communities have been engaged on this project:

- Six Nations of the Grand River;
- Mississauga's of the Credit First Nation; and,
- Haudenosaunee Confederacy Chiefs Council (HCCC) / Haudenosaunee Development Institute (HDI)

Meetings with Indigenous communities will continue to be arranged throughout the design and construction, as required.

Should the design be revised resulting in an increased footprint impact to previously undisturbed lands, additional archaeology investigations will be required. Any additional Stage 2-4 investigations will include the hiring of local First Nation Community Field Liaisons in consultation with MTO. Refer to **Section 5.3.1** for further information on Archaeological Assessments that have been undertaken as part of the overall project.

3.6 Consultation with Members of the Public

A virtual Public Information Centre for Phase 2 was held December 6-12, 2021.

Consultation with stakeholders and members of the public has taken place throughout the Early Works portion of this project. Stakeholders and members of the public were notified of the Study Update (see **Section 3.2**), as well as the Notice of Completion for this DCR #1 (see **Section 3.7**).

Stakeholders and members of the public were encouraged to visit the Project Website to view project details and were encouraged to submit comments to the Project Team at any time throughout the Early Works portion of the project. All comments received by the Project Team have been responded to and resolved accordingly. Refer to **Appendix C** for relevant correspondence.

3.7 Submission of Design and Construction Report #1

A Notice of Completion was published in local newspapers to inform the public and Indigenous communities of the DCR #1 submission and the start of the 30-day public comment period. The Notice was published in the following newspapers on the dates listed:

- Turtle Island News on Wednesday, September 21, 2022
- Two Row Times on Wednesday, September 21, 2022
- The Guelph Mercury Tribune on Thursday, September 22, 2022
- The Wellington Advertiser on Thursday, September 22, 2022

The Notice advertised that this DCR #1 had been placed on the project website for public record for a 30-day public comment period commencing on September 21, 2022 and ending on October 20, 2022. In addition, notification letters dated September 14, 2022 were mailed and/or emailed to local MPs and MPPs. On September 21, 2022, addressed notification letters were mailed and/or emailed to the public members, external agencies, and remaining interested stakeholders on the Project Contact List.

The letters and the newspaper notice provided information on where to access DCR #1 on the project website, as well as contact information for individuals wishing to comment on DCR #1. Interested parties that wish to review DCR #1 in an alternate format can email the Project Team at ProjectTeam@Highway6midblock.ca to discuss review options.

3.8 Construction Consultation and Engagement Plan

A Construction Consultation and Engagement Plan has been prepared to provide a framework for consultation efforts to be completed by Dufferin Construction for the construction of the Early Works portion of Phase 2. Construction of the project is anticipated to commence in November 2022.

The Plan outlines a preliminary strategy to ensure the public, interested stakeholders and Indigenous communities are fully aware of the Early Works construction staging plan, timing, and any construction updates following the completion of the Class EA Study, and during construction. The Plan provides a detailed outline of the consultation and engagement methods that should be implemented prior to and during the construction period. This Plan shall be finalized by Dufferin Construction and approved by MTO, prior to implementation.

4.0 DESCRIPTION OF THE RECOMMENDED DETAIL DESIGN

This section of DCR #1 describes the major features of the Early Works portion of Phase 2 (G.W.P. 3059-20-00). Refer to **Appendix A** to view the Recommended Plan for Phase 2.

4.1 Design Details

4.1.1 Highway

Highway 6 / Hanlon Expressway is classified as a divided rural freeway with a design speed of 120 km/h. The existing Hanlon Expressway four-lane cross section will be widened at the Midblock Interchange ramp to accommodate speed change lanes.

The Midblock Connection Road is classified as an undivided rural collector with a design speed of 80 km/h. It is a new, 2-lane road for the Midblock Interchange which will connect Wellington Road 34 (west of Hanlon Expressway) to Concession Road 7 (east of Hanlon Expressway).

4.1.2 Structural

A new grade separation is proposed as part of the works for the Midblock Connection Road Underpass. The proposed Midblock Connection Road Underpass is a two-span structure spanning the ultimate 8-lane cross-section of Hanlon Expressway, plus on-ramp lanes. A 15 m wide median is proposed with the pier protected by a suitable vehicle restraint system for the current construction. The preferred structure type is a slab-on-girder bridge. The substructure will consist of semi-integral abutments supported on steel H-Piles driven to bedrock with concrete wingwalls at all four corners of the structure. The pier will consist of four (4) columns. The pier is supported on H-Piles. The Midblock Connection Road Underpass will be located approximately 2 km north of Highway 401.

4.1.3 Pavement

A geotechnical/foundation investigation was carried out for the overall project between 2017 and 2021 by Peto MacCallum Ltd. (PML) as part of the Procurement-Ready Design. PML's investigations included more than 400 boreholes, which were supplemented with additional boreholes and test pits in 2022.

The boreholes indicate that the subsurface conditions generally consist of the existing pavement structures or topsoil and localized fill overlying an extensive silty sand to sandy silt till deposit that contains varying proportions of gravel, cobbles, and boulders. Areas of peat and muck are present, generally northwest of the Highway 6 / Hanlon Expressway and Wellington Road 34 intersection, near the south limit of the Early Works contract.

The existing Highway 6 / Hanlon Expressway pavements will be rehabilitated by a combination of milling and asphalt overlaying. Highway 6 / Hanlon Expressway will also be widened adjacent to the new Midblock interchange to create new speed change lanes associated with the new interchange ramps. New construction will include the Midblock interchange ramps and the Midblock Connection Road. All pavement designs have been completed in accordance with current MTO policies, practices, and directives.

4.1.4 Geotechnical / Foundation Engineering

As noted in **Section 4.1.3**, a geotechnical/foundation investigation was carried out at the Midblock Connection Road Underpass and interchange site in 2017 and 2021 by PML as part of the Procurement-Ready Design. PML's investigations included more than 30 boreholes in the Midblock Interchange area, which were supplemented with additional boreholes and test pits in 2022.

Based on the borehole results, the subsurface conditions in the Midblock Interchange area consists of topsoil and localized fill overlying an extensive silty sand to sandy silt till deposit that contains varying proportions of gravel, cobbles and boulders. Dolostone bedrock was encountered beneath the till deposit, between approximately Elevation 302 m and 296 m (at a depth of approximately 20 m to 25 m below the Highway 6 / Hanlon Expressway grade) at the proposed Midblock Connection Road Underpass site. The bedrock consists of strong dolostone of the Guelph Formation. The groundwater level was measured in monitoring wells installed throughout the Midblock Interchange area between approximately elevation 310 m and 315 m, typically between 5 m and more than 10 m below the existing ground surface in this area.

The abutments and center pier for the Midblock Connection Road underpass will be supported on steel H-piles that are driven to found on the strong dolostone bedrock. The geotechnical aspects of foundation design are in accordance with Canadian Highway Bridge Design Code (CHBDC, 2019).

Construction of the Midblock Interchange will require placement of fill and construction of cuts for the Connection Road and interchange ramps, and excavations for the stormwater management ponds. The high fill embankments and road cuts will be constructed with maximum (steepest) side slopes at 2 horizontal to 1 vertical to obtain the required factors of safety for global stability.

All excavations for the Midblock Connection Road underpass foundations as well as cuts for the Connection Road and ramps associated with the Early Works will be maintained above the regional groundwater level at the site. Localized zones of perched groundwater may be encountered above this level during excavation, but such zones will be of limited thickness and lateral extent.

4.1.5 Drainage

Drainage will be provided by roadside ditching and grassed medians with storm sewer outlets towards roadside ditches, ultimately discharging into adjacent watercourses. At the new Midblock Interchange structure, drainage will be addressed through culverts at the interchange and culverts on the Midblock Connector Road with stormwater management being handled by two infiltration basins located in the Highway 6 / Hanlon Expressway ramps.

4.1.6 Electrical / Illumination

As part of the Early Works, underground provisions such as underground ducts and handwells will be constructed within the interchange and along the Midblock Connection Road. The embedded electrical works within the Midblock Connection Road bridge will be installed. A Traffic Counting Station at each ramp, including one for the Highway 6 / Hanlon Expressway mainline, will be installed. Shielding on illumination, as appropriate, will be implemented to restrict light bypass on adjacent properties.

4.1.7 Advanced Traffic Management System (ATMS)

As part of the Early Works, underground provisions for a closed-circuit television (CCTV) site will be constructed within the north-east quadrant of the Midblock Interchange at Midblock Road and Highway 6 / Hanlon Expressway. The provisions will include:

- Underground ducts;
- Handwells;
- A concrete pad for a cabinet;
- Concrete footing for a communication pedestal; and,
- A concrete pole for the CCTV camera.

Embedded ducts for the Intelligent Transportation System (ITS) within the Midblock Bridge will be constructed and incorporated into embedded electrical works (refer to **Section 4.1.6?**). A maintenance site for the CCTV equipment will be constructed at the CCTV site. A Bucket-Truck Survey was undertaken to verify the coverage of the CCTV camera. Further information on the survey findings are located in the *ITS Bucket-Truck Survey Report (WSP, 2022)*, which is available for public viewing by request.

4.1.8 Property

Property for this work has been acquired by the MTO based on the previously approved Environmental Assessments for Highway 6 from Freelon Northerly to Guelph, WP 65-76-05. No additional property requirements have been identified.

4.1.9 Utilities

As noted in **Section 3.4**, the following Utility companies were consulted as part of this study:

- Hydro One (Transmission)
- Hydro One (Distribution)
- Enbridge
- Bell
- Rogers Communications
- Telus
- Alectra

Utility relocations are not required as part of the Early Works scope.

4.2 Construction Staging

The Contractor (Dufferin Construction) may revise the proposed construction staging plan; therefore, the staging described below is subject to change. Construction will commence at the Midblock Connection Road bridge abutments. The work zone will be suitably protected by measures placed away from Highway 6 / Hanlon Expressway, thereby not impacting the existing configuration.

Widening of Highway 6 / Hanlon Expressway will be constructed to allow traffic to be shifted towards the outside of the highway, creating a work zone for construction of the median pier. The work zone will be protected by appropriate vehicle restraint systems.

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Prepared for the Ministry of Transportation, West Region



Bridge girders will be installed during full closures of Highway 6 / Hanlon Expressway. It is anticipated that the full closures will take place over two (2) nights. During the closures suitable signing will direct traffic along Wellington Road 34 to Brock Road and along Maltby Road to rejoin Highway 6. Refer to **Figure 4** for a map of the detour route.

Pavement rehabilitation of Highway 6 / Hanlon Expressway will be undertaken with off-peak lane closures. Interchange grading and associated works will not impact the configuration of Highway 6 / Hanlon Expressway, except for construction access points and the use of narrow lanes to create a safe working zone.

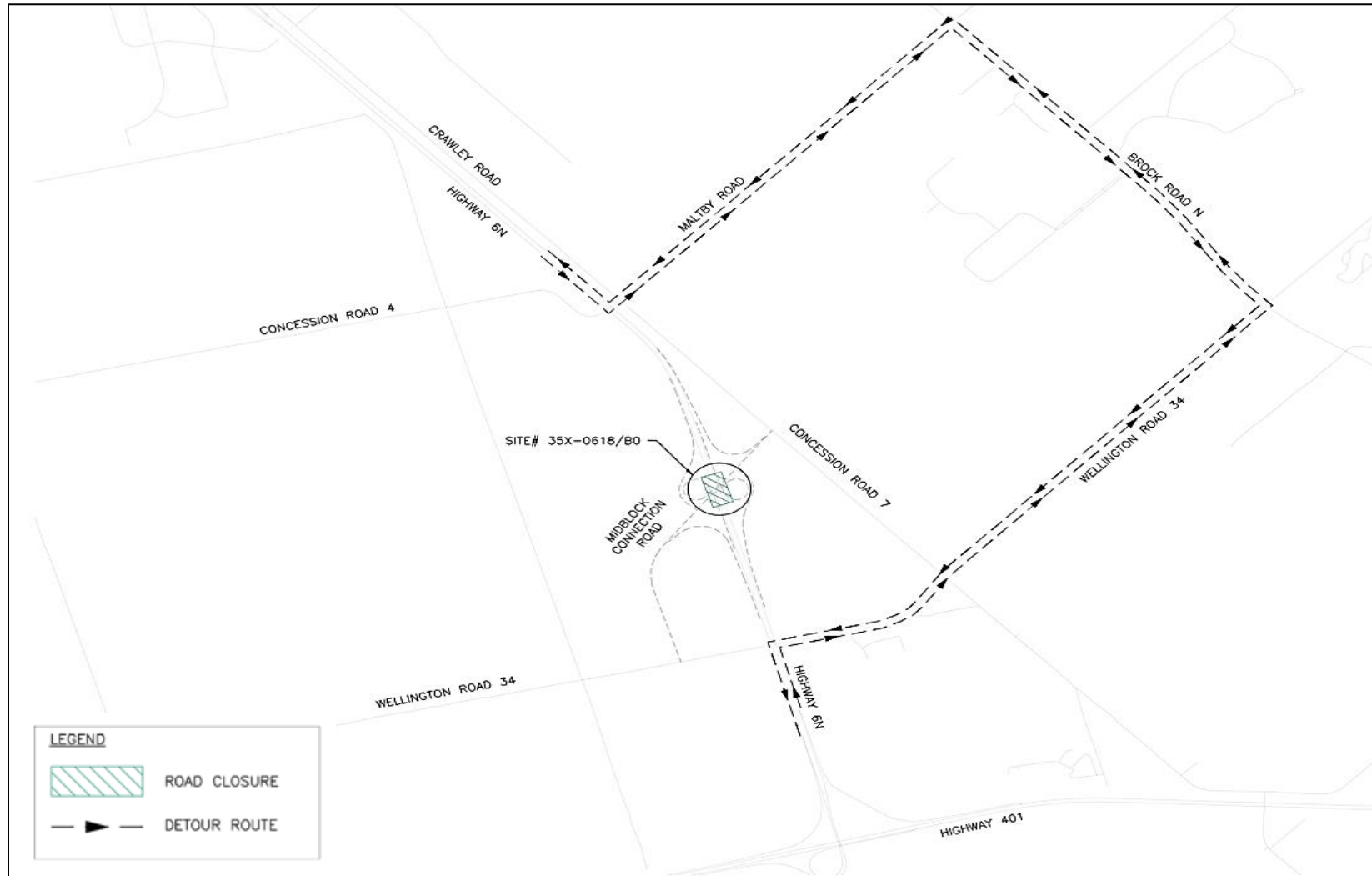


Figure 4: Detour Route for the Installment of Girders on the Midblock Connection Road Bridge (Early Works)

4.3 Timing and Duration of Construction

Subject to approvals, construction for the Early Works portion of the project is anticipated to begin in November of 2022 and is anticipated to be finished by early 2024.

The detour route for the girder placement during the Early Works (shown in **Figure 4**) will be implemented during off-peak hours and the closure will avoid long weekends and/or holidays. The detour route will be in place over two (2) nights.

The timing and duration of construction for the Remaining Works (refer to **Figure 2** for the delineation of work areas) will be presented in DCR #2.

As noted in **Section 3.3**, the project website will be updated on a regular basis during construction to identify any upcoming scheduled closures and provide summaries of construction operations taking place. These updates will also include photographs of the construction progress.

5.0 ENVIRONMENTAL ISSUES AND COMMITMENTS

This section presents an overview of the potential impacts to the natural, socio-economic, and cultural environments, as well as transportation effects associated with the design and construction of the Early Works Recommended Plan. This section also presents a summary of the environmental mitigation measures proposed to avoid or minimize the impacts associated with the Early Works Recommended Plan.

It is noted that environmental effects can be mitigated through implementation of Best Construction Management Practices, as provided in the Ontario Provincial Standard Specifications (OPSS), and Standard and Non-Standard Special Provisions (SSP, NSSP) contained in the Contract Package, and the implementation of the prescribed Construction Monitoring Program.

The environmental protection measures outline in this DCR #1 will be built into the Contract Package to provide the necessary guidance and direction regarding project commitments and mitigation measures to be employed during construction. A summary of mitigation, protection, and future commitments is presented in **Table 4**.

5.1 Natural Environment

5.1.1 Fish and Fish Habitat

In 2017 and 2018, Ecologists working on the AECOM Project Team conducted aquatic field investigations to complete detailed fish and fish habitat assessments of the watercourses within the Study Area (*Fish and Fish Habitat Existing Conditions and Impact Assessment Report: Hanlon Expressway / Wellington Road 34 Midblock Interchange GWP No. 3059-20-00, AECOM 2021*). Fisheries assessments were conducted in accordance with the requirements under the 2016 Protocol; however, the Protocol and Guide was updated in 2020, and as such the data collected was re-assessed under the new Protocol by AECOM, as directed by MTO. AECOM Ecologists visited the sites to document existing habitat conditions in order to facilitate making a determination on whether or not the proposed works would result in a harmful alteration, disruption or destruction (HADD) of fish habitat, or the death of fish, and therefore would require a Fisheries Act Authorization. There are no identified watercourses or watercourse crossings within the Early Works lands; however, drainage flows toward fish habitat downstream at Wellington Road 34, and this contribution to fish habitat must be assessed to confirm the conclusions of no HADD from the proposed Early Works.



On June 7, 2022, field surveys were completed by WSP Ecologists to assess suitable fisheries habitat within the Early Works lands, as well as confirm AECOM's previous findings. The surveys included photo documentation, field notes, as well as electro-fishing to determine direct fish use specifically in the drainage ditch in the Early Works lands as the previous report, and correspondence from MNRF contained conflicting information on fish habitat in the ditch. The drainage ditch along the west side of the highway, running north to south, is conveyed through a corrugated steel pipe (CSP) at Wellington Road 34. There is a 1 m high berm running parallel with the ditch that isolates flow from the Tributary of Aberfoyle Creek, flowing parallel to the west of the ditch. At the time of field investigations, there were only areas of standing water within the drainage ditch, and no continuous flow was observed. Most areas did not contain enough water to conduct electrofishing, and where sampling was possible, no fish were captured or observed. It was determined that the ditch providing drainage along Highway 6 / Hanlon Expressway is not suitable fish habitat.

Given the confirmation of fish habitat conditions and results of the WSP 2022 field investigation, the conclusion from the *Existing Conditions and Impact Assessment Report (AECOM, 2021)* that no harm to fish or HADD will occur is upheld, assuming application of all specified mitigation measures. No additional review by DFO or Authorization under the Fisheries Act is required for the Early Works.

No aquatic Species at Risk (SAR) were identified within the limits of the Early Works. Consequently, permits under the Provincial Endangered Species Act (ESA) and/or the Federal Species at Risk Act (SARA) are not required for the Early Works.

Recommended Mitigation Measures

Provided the following mitigation measures are properly implemented, monitored, and maintained, it is anticipated that serious harm to fish within nearby waterbodies will be avoided:

- Limit access to any nearby waterbodies and banks to protect riparian vegetation and to minimize bank disturbance.
- A sediment and erosion control plan should be designed and implemented to contain/isolate exposed soils, stockpiled materials and unstable areas in the work zone. Prevent the release of sediment to a waterbody and ensure the work site is stabilized prior to removal following construction.
- Design and implement a work area containment plan to isolate all above-water work to prevent the release of sediment or other contaminants to a waterbody. The design should include regular inspection, repair, removal, and disposal of isolation measures.



- Materials used or generated during construction (i.e., organics, soil, woody debris, construction debris) must be stored and managed in a way that will prevent the release of these materials into a waterbody.
- Dewatering operations should be managed to prevent erosion or the release of sediment-laden water into nearby waterbodies.
- Ensure a Spills Management Plan including materials, instructions, education and emergency numbers is developed, kept on site at all times, is communicated to work crews and is properly implemented in the event of an accidental spill.
- Operate, store and maintain equipment and associated materials in a manner and at a distance that prevents the entry of any deleterious substance from entering nearby waterbodies.
- Limit riparian vegetation removal and use proper cleaning techniques. Herbicides should not be used on site.
- Use only specified amount and types of fertilizer in areas that drain into waterbodies.
- Re-stabilize banks that have been disturbed during construction to pre-construction conditions or better. This could include vegetation or stone material.
- Re-stabilize and re-vegetate soils exposed or disturbed during construction, including new or cleaned-out ditches.
- Near-water works should be monitored to ensure mitigation measures are properly implemented, functioning, maintained, and repaired, as needed. Measures should also be removed following construction.

5.1.2 Terrestrial Ecosystems

From 2017 to 2022, Terrestrial Ecologists working on the AECOM Project Team conducted a review of background information and up-to-date field investigations, as well as a preliminary assessment of potential impacts associated with the project (*Terrestrial Ecosystem Existing Conditions and Impact Assessment Report for the Hanlon Expressway / Wellington Road 34 Midblock Interchange, G.W.P. 3059-20-00, AECOM 2021*). The following sections provide summaries of the findings and commitments from these investigations.

5.1.2.1 Designated Natural Areas

The Preliminary Design Report (G.W.P. 3042-14-00) identified five (5) Environmentally Sensitive Areas, including:

- Beverly Swamp – A Regional Area of Natural and Scientific Interest (ANSI) and a Provincially Significant Wetland (PSW)
- Fletchers Creek Swamp Forest – Regional ANSI and PSW
- Crieff Old Field Complex – Municipality designated Environmentally Significant Area (ESA)
- Galt Creek and Forest – A Regional ANSI and PSW
- Aberfoyle Wood – PSW

AECOM's field investigations identified one (1) Designated Natural Heritage feature within the Early Works limits (AECOM, 2021):

- The Mill Creek Puslinch PSW

During grading of the site, fill and sediment runoff from the active construction area may enter vegetation communities and/or watercourses associated with the Mill Creek Puslinch PSW. Dust may also be generated by the movement of vehicles and other construction activities, which could negatively impact adjacent vegetation communities, wetlands and watercourses associated with the Mill Creek Puslinch PSW (AECOM, 2021).

Oil, gasoline, grease and other materials from construction equipment, materials, onsite storage and onsite handling may enter vegetation communities and/or watercourses associated with the Mill Creek Puslinch PSW (AECOM, 2021).

Of the 321 plants recorded during AECOM's investigations, a total of 102 (32%) are non-native, which includes highly invasive species such as common reed, glossy buckthorn, and common buckthorn. These species can easily spread into a variety of habitat types and outcompete native species for required resources. As a result, these species degrade the vegetative quality of natural areas (AECOM, 2021).

Recommended Mitigation Measures

To assist in mitigating potential impacts to Designated Natural Areas, the following mitigation measures and MTO Provisions and operational constraints should be utilized, at a minimum:

- Ontario Provincial Standard Specification (OPSS) 180: General Specification for the Management of Excess Materials

- OPSS 201: Construction Specification for Clearing, Close Cut Clearing, Grubbing and Removal of Surface and Piled Boulders
- OPSS. MUNI.506 Construction Specifications for Dust Suppression
- OPSS. PROV 801 Construction Specification the Protection of Trees
- OPSS. PROV 803 Construction Specification for Vegetative Cover
- OPSS. PROV 804 Construction Specification for Temporary Erosion Control
- OPSS. PROV 805 Construction Specification for Temporary Sediment Control
- OPSS. PROV 100 General Conditions of Contract
- Non-Standard Special Provision (NSSP) CMOOC001 – Operational Constraint (OC) (Environmental) – Hazardous Plants Special Provision
- Special Provision No. ENVR0011 – Invasive and Noxious Vegetation Spraying, Invasive and Noxious Vegetation Cutting
- NSSP Invasive Species Prevention
- SP 199F12 Environmentally Sensitive Areas OC (Environmental) Control measures during Removal of Concrete/Structure, Structure Repair/Construction, and Concrete Saw cutting
- NSSP Equipment Refuelling, Maintenance and Washing
- SP 199S56 Control of Emissions During Structural Work SP 110F10 Use of AirCooled Blast Furnace Slag as Granular Material
- OC Spill Prevention and Response Contingency Plan

The MTO Specifications, Special Provisions and Operational Constraints noted above will, at a minimum, ensure the following mitigation measures are implemented and followed to avoid impacts to Designated Natural Areas:

- Vegetation removal will be kept within the Limits of work
- An emergency spills plan should be developed and implemented
- Best management practices are used to prevent spills to the environment, including:
 - Re-fuelling stations should be constructed to prevent soil and/or surface and groundwater contamination from any leaks or spills
 - An emergency response kit should be made available at each refuelling station in case of a spill
 - All onsite crew members operating construction vehicles should be appropriately trained in handling a potential spill
 - All chemical transfer/maintenance should be conducted within the refuelling station areas.

- Temporarily disturbed areas should be restored as soon as possible following construction.
- Entry of heavy equipment into designated natural areas within the limits of work shall be limited to the extent possible (per NSSP Designated Natural Areas):
 - Where entry must occur, the use of swamp mats is recommended to reduce potential damage to the feature.
- Where feasible, the Limits of Work shall be delineated with tree protection fencing outside the dripline of trees, prior to the initiation of construction activities; (per OPSS.PROV 801).
- The Design Build Contractor shall delineate the boundary of any impacted PSWs. Delineation will be completed by an Ontario Wetland Evaluation System (OWES) certified Ecologist and must be completed prior to the initiation of vegetation removal (per OPSS.PROV 801).
- Install Erosion and Sediment Control (ESC) measures along the Limits of Work prior to the initiation of construction activities, to reduce potential sediment release and reduced the potential of accidental intrusion.
- All ESC measures should remain in place until restoration is complete and disturbed areas are stabilized.
- Excess ESC material should be maintained onsite, prior to the commencement of grading operations and throughout the duration of the construction, so it is readily available in the case of an emergency or repair.
- Protect all exposed surfaces and control all runoff during construction
- Runoffs should be directed away from Designated Natural Areas and naturalized vegetation communities; (per OPSS 805).
- Watercourse banks disturbed by construction activities should be immediately stabilized by any activity associated with the project to prevent erosion and/or sedimentation, through re-vegetation with native species suitable for the site
- Any accidentally damaged trees shall be pruned in accordance with accepted arboricultural practices; (OPSS.PROV 801).
- Disturbed portions of PSWs within the Limits of Work shall be restored to a wetland community in order to reduce overall impacts on PSWs in the Study Area; (per NSSP 'Designated Natural Areas').
- To avoid the spread of invasive species, the Design Build Contractor should follow the Clean Equipment Protocol for Industry (Halloran et.al, 2013).
- Impacts to Designated Natural Areas inside the Limits of Work shall be reduced where feasible

5.1.2.2 Breeding Birds

As part of the Terrestrial Ecosystem field investigations undertaken by AECOM, breeding bird surveys were conducted at 49-point count stations within the study area (AECOM, 2021). A total of 56 species were observed during AECOM's field investigations. Species included the following migratory birds which are listed as Threatened under the Endangered Species Act (ESA) and/or Schedule 1 of the SARA: Barn Swallow, Bobolink, and Eastern Meadowlark. Eastern wood-pewee, a Species of Conservation Concern (SOCC), was also observed within the Study Area (AECOM, 2021).

Under the ESA (2007), MTO initiated the Notice of Activity (NOA) process and entered into an agreement with the Upper Thames River Conservation Authority (UTRCA) to create 4 ha of habitat within the UTRCA watershed as compensation lands for Eastern Meadowlark and Bobolink. This agreement also includes the monitoring of compensation lands for the species for twenty (20) years. Further information on the recommended mitigation measures for these species can be found under **Section 5.1.2.5 Terrestrial Species at Risk**.

The AECOM field investigations confirmed that the culverts on site were corrugated steel pipes (CSPs). CSPs do not typically support barn swallow nesting habitat as the species cannot affix their nests to this material type and shape. As well, no other nesting birds were noted at any of the culverts assessed (AECOM, 2021).

Recommended Mitigation Measures

To avoid possible contravention of the Migratory Birds Convention Act, 1994 (MBCA) the following provisions are to be included in the contract:

- Nssp Monitoring of Existing Structure for Barn Swallow Nests; and
- Nssp Operational Constraints (Environmental) - Migratory Bird Protection

The above provisions will require the contractor to adhere to the following mitigation:

- All vegetation removal shall occur outside breeding bird season (April 1 to August 31);
- If vegetation removal cannot be scheduled outside of the breeding bird season; an Avian Biologist will be deployed to conduct a nest survey in the area to be cleared in 'simple habitats':
 - If the active nests of migratory birds are located, then the nest will be noted using handheld GPS and vegetation clearing will be delayed allowing for fledging;

- To avoid potential nest abandonment and/or predation, nests shall only be physically flagged if they are located close to an active construction zone and are a risk of accidental damage; and,
- The Design Build Contractor shall consult and follow the MBCA (1994).

5.1.2.3 Amphibian Surveys: Vernal Pool Assessment and Amphibian Calling Surveys

As part of the Terrestrial Ecosystem field investigations undertaken by AECOM, a total of six (6) locations were identified as potential amphibian breeding habitats based on aerial photo interpretation and the Significant Wildlife Habitat (SWH) assessment. Five (5) sites were confirmed potentially suitable breeding habitat, either containing permanent or possibly seasonal standing water, during a daytime site visit in early 2018. Amphibian night call surveys were performed at the five (5) monitoring stations.

Spring peeper (*Pseudacris crucifer*), wood frog (*Lithobates sylvaticus*), gray treefrog (*Hyla versicolor*), northern leopard frog (*Lithobates pipiens*), green frog (*Rana clamitans*) and American toad (*Anaxyrus americanus*) were heard calling during at least one (1) round of survey. However, the monitoring station located within the Early Works limits did not exhibit a sufficient number and abundance of indicator species to meet the 'significant amphibian breeding habitat' criteria as defined in the Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E (MNRF, 2015).

5.1.2.4 Significant Wildlife Habitat

Several candidate and confirmed SWH types were identified within the Early Works areas during AECOM's desktop review and field investigations (AECOM, 2021):

- Seasonal Concentration Areas of Animals Bat Maternity Colonies
- Seasonal Concentration Areas of Animals Reptile Hibernacula
- Habitats for Species of Conservation Concern Marsh Breeding Bird Habitat
- Habitats for Species of Conservation Concern Terrestrial Crayfish
- Special Concern and Rare Wildlife Species Eastern Ribbonsnake
- Special Concern and Rare Wildlife Species Monarch
- Special Concern and Rare Wildlife Species West Virginia White
- Special Concern and Rare Wildlife Species Canada Warbler
- Special Concern and Rare Wildlife Species Golden-Winged Warbler
- Special Concern and Rare Wildlife Species Eastern WoodPewee

Recommended Mitigation Measures

To address impacts to SWH and Wildlife the following provisions should be followed:

- OC(Environmental) – Wildlife and Wildlife Habitat are recommended
- OC (Environmental) SP ENVR0007: Protection of Species at Risk
- OC (Environmental) – General Environmental Protection

The above provisions will require the contractor to adhere to the following mitigation:

- Where candidate or confirmed SWH features will be affected, the Limits of Work shall be delineated outside the dripline of trees, prior to the initiation of any vegetation removal or construction activities, (per OPSS. PROV 801)
 - Retained portions of these features will be protected, using Erosion and Sediment Control (ESC) measures and/or tree protection fence (installed at or beyond the drip-line of trees).
- If, during construction, any wildlife are observed within the Limits Work (per NSSP-General Environmental Protection, and NSSP 001A860 Operational Constraint (Environmental)-Prevention of Wildlife Harassment):
 - Under no circumstances will any wildlife be knowingly harmed, harassed, or otherwise disturbed. If an animal is encountered, it will be permitted to move away on its own
 - If wildlife is observed within the work area, a qualified biologist or environmental monitor will determine if there is a concern about the significance of the species observed
 - If the species is identified as SAR, do not handle the individual unless it is in immediate danger. A qualified Biologist shall contact the Contracting Authority and MECP immediately. In accordance with the ESA, no threatened or endangered species can be handled or relocated without the proper approvals / permitting and authorization from MNR
 - If the species is not identified as SAR, direct the species away from the construction zone into the nearest natural area (i.e., woodland, wetland, etc.)
 - if unsure of where to move the species, contact a Qualified Biologist for guidance
- Should an injured or orphaned animal be encountered, a Qualified Biologist will transport the animal to a wildlife rehabilitation centre that is considered to be an approved Wildlife Custodian by the MNR or a member of the College of Veterinarians of Ontario

- Any injured wildlife will be immediately transported to a suitable wildlife rehabilitation centre.
- Any amphibians or reptiles unearthed during their hibernation will also be immediately transported to a suitable wildlife rehabilitation centre.
- Should any snakes be disturbed during winter hibernation, or found injured at any time of the year, a Qualified Biologist or Environmental Monitor will transport the animal to a wildlife a rehabilitation centre that is considered to be an approved Wildlife Custodian by the MNR or a member of the College of Veterinarians of Ontario
- Where project works will impact confirmed Insect SOCC, the following mitigation measures are recommended:
 - Avoid the use of insecticides within monarch and west Virginia white SWH
 - Vegetation removal will be limited to the extent feasible within monarch and west Virginia white SWH
 - It is recommended that any vegetation removal within monarch SWH occur outside the window when the species may be present as eggs or larvae on milkweeds (May 25 – August 15)
- Where project works will impact confirmed amphibian SWH, the following mitigation measures are recommended:
 - Avoid driving within construction zones in proximity to amphibian breeding habitats at night between April 1 and June 30, and any rainy nights from spring to early autumn, wherever possible
 - Conduct construction activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night, wherever possible
- Provide training to all onsite personnel and ensure that they are familiar with wildlife that may be present onsite as well as their responsibility to report wildlife and potential SAR observations to the qualified biologist or environmental monitor
- Obtain any necessary permits / approvals in a timely manner and undertake such activities (i.e., handling of wildlife encounters). Permits and approvals which may be required include the Wildlife Scientific Collector's Authorization from MNR and the Wildlife Animal Care Committee Authorization. Consultation with the respective regulating agencies will be required to determine the appropriate permits and approvals



- Develop site-specific Wildlife Salvage and Relocation Plan based on the species that may be found within the Study Area. This plan will document the location of suitable relocation sites within the surrounding environment and include the contact information for a wildlife rehabilitation centre that is considered to be an approved Wildlife Custodian by the MNRF or a member of the College of Veterinarians of Ontario
- The contractor is responsible for reporting / handling any encounters with injured or deceased SAR; this is to be done in accordance with the Ontario Species at Risk Handling Manual: For Endangered Species Act Authorization Holders as prepared by the MNRF
- To the extent feasible, candidate and confirmed bat maternity colony SWH will be reforested and edge management plantings shall be applied along the newly exposed woodland edges
- To the extent feasible, candidate reptile hibernacula and habitats of SOCC (eastern ribbonsnake) shall be re-seeded and re-vegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed
- To the extent feasible, disturbed avian SWH shall be re-seeded and re-vegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed. For woodland features, edge management plantings will be installed upon the newly exposed edges
- To the extent feasible, disturbed terrestrial crayfish SWH shall be re-seeded and revegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed
- To the extent feasible, disturbed Insect SOCC SWH shall be re-seeded and revegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed that includes and abundance of common milkweed (*Asclepias syriaca*), swamp milkweed (*Asclepias incarnata*) and/or two-leaved toothwort (*Cardamine diphylla*)
- The final highway design should take into consideration potential light impacts on amphibian and amphibian breeding habitats; and, where feasible, any disturbed amphibian SWH shall be re-seeded and re-vegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed. For woodland features, edge management plantings will be installed upon the newly exposed edges

5.1.2.5 Terrestrial Species at Risk

At the request of MNRF Guelph District, and as identified throughout the Notice of Approval to Proceed with the Undertaking (2009), AECOM completed species specific surveys for the following SAR and SOCC:

- Bat SAR (little brown myotis, northern myotis, eastern small-footed myotis and tri-colored bat)
- Butternut
- Eastern Whip-poor-will
- Bobolink and Eastern Meadowlark
- Henslow's Sparrow
- Jefferson salamander and the unisexual ambystoma (Jefferson salamander dependant population)

AECOM confirmed the following five (5) SAR during their field investigations in 2017, 2018, 2019 and 2021: (bobolink, eastern meadowlark, little brown myotis, eastern small-footed myotis, and tri-colored bat) (AECOM, 2021). AECOM staff also observed Barn swallows foraging within the Study Area; however, it was noted that observations of foraging do not confirm nesting habitat (i.e., that which is protected under the ESA) given that the species may forage widely from its nesting habitat (AECOM, 2021). AECOM confirmed the following SAR were absent during the field investigations conducted from 2018-2021: butternut, eastern whip-poor-will, common nighthawk, Henslow's sparrow, Jefferson salamander and unisexual ambystoma (Jefferson salamander dependant population) (AECOM, 2021).

AECOM confirmed SAR habitat for two (2) grassland bird SAR (bobolink and eastern meadowlark) and three (3) bat SAR (little brown myotis, eastern small-footed myotis and tri-colored bat) were identified within the Study Area. Habitat for bat SAR was confirmed at 18 properties and consisted of deciduous forest, cultural plantation, coniferous swamp and mixed swamp. Bobolink and eastern meadowlark were both observed calling within suitable habitat (CUM1-1). Bobolink was also observed calling in a mown agricultural field in 2018. While at the time of survey, the meadow was mowed; due to crop rotation and/or changes to mowing frequency, the species may nest in this location in the future (AECOM, 2021).



5.1.2.5.1 Henslow’s Sparrow

A Notice of Approval to Proceed with the Undertaking was granted on January 22, 2009 (refer to **Section 2.2.1** for further information). The notice included various conditions to be addressed during design and construction as it relates to the potential presence of Henslow’s sparrow (AECOM, 2021).

Table 2 lists the specific conditions of approval and how the study addresses them. During AECOM’s 2017 and 2018 field investigations, Henslow’s Sparrow was not encountered, and it was determined no appropriate habitat areas of sufficient size were observed (AECOM, 2021). Therefore, this species is highly unlikely to be present within the Early Works limits of the project. AECOM informed the MNRG Guelph District of the Condition 5 and the confirmation that neither Henslow’s Sparrow nor suitable habitat was observed during the field investigations (AECOM, 2021).

Table 2: Status of Requirements under the Notice of Approval to Proceed with the Undertaking for Henslow's Sparrow (AECOM, 2021)

#	Condition of Approval	Status
5.1	The proponent shall update and verify the Henslow’s sparrow (<i>Ammodramus henslowii</i>) habitat investigations documented in the Addendum issued November 1997 to confirm that the proposed highway ROW continues to have no potential impacts on the habitat for Henslow’s Sparrow.	Completed. No habitat areas of sufficient size were found during the field investigations. Refer to AECOM’s Hanlon Expressway / Wellington Road 34 Midblock Interchange (G.W.P. 3059-20-00) Terrestrial Ecosystem Existing Conditions and Impact Assessment Report (2021) for further information.
5.2	The proponent shall update the investigations described in Condition 5.1 by conducting additional investigations within appropriate time periods (i.e., during nesting and breeding season) during the detailed design phase. If the above investigation is undertaken within one year of construction, an additional investigation would not be required immediately prior to construction.	Completed. No habitat areas of sufficient size were found during field investigations. No additional investigations immediately prior to construction for Henslow’s sparrow are required given that no habitat was found for this species. Henslow’s sparrow is highly unlikely to occur. Refer to AECOM’s Hanlon Expressway / Wellington Road 34 Midblock Interchange (G.W.P. 3059-20-00) Terrestrial Ecosystem Existing Conditions and Impact Assessment Report (2021) for further information.



<p>5.3</p>	<p>In the event that the investigations do demonstrate potential impacts, the proponent shall notify the MNRF and Environment Canada and consider all direction provided by the MNRF and Environment Canada.</p>	<p>Completed. MNRF was informed of the condition and that the species and habitat are not present. Refer to AECOM's Hanlon Expressway / Wellington Road 34 Midblock Interchange (G.W.P. 3059-20-00) Terrestrial Ecosystem Existing Conditions and Impact Assessment Report (2021) for further information.</p>
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Recommended Mitigation Measures

To address impacts to SAR and SAR Habitat the following provisions are to be applied:

- OC(Environmental) – Wildlife and Wildlife Habitat are recommended
- OC (Environmental) SP ENVR0007: Protection of Species at Risk
- OC (Environmental) – General Environmental Protection
- NSSP Monitoring of Existing Structure for Barn Swallow Nests
- NSSP Operational Constraints (Environmental) - Migratory Bird Protection

5.1.2.5.2 Bats

Under the ESA (2007), activities that harm or harass protected species or their habitat are prohibited. In some cases, the MECP can grant different types of permits or other authorizations for activities that would not be allowed. The Overall Benefit Permit authorizes an organization to perform the activity, as long as an overall benefit to the species is provided. An application has been filed with MECP for an Overall Benefit Permit under clause 17(2)(c) of the ESA. As part of the application, MTO will restore and create 10.82 ha of bat SAR habitat on an MTO owned property outside of the project limits, within the same ecoregion. The restoration site is currently composed of agricultural fields, deciduous forests and hedgerows, cultural meadows, a cultural thicket, and a meadow marsh. Native deciduous tree and shrub species will also be planted on the restoration site. Bat boxes will also be installed within the enhanced dry meadow communities to provide interim maternity bat habitat during the maturation process of the created deciduous forest. Rock piles will also be placed throughout the property to provide additional habitat for eastern small-footed myotis bats. Once matured, this site will provide a new maternity roosting and foraging habitat for bat SAR. This roosting and foraging habitat creation enhancement will be undertaken under a separate MTO contract.

Recommended Mitigation Measures

To assist in mitigating potential impacts to bat SAR, the following mitigation measures should be applied:

- Adhere to the bat SAR requirements and mitigations identified in MECP SAR C-Permit, including the property and work restrictions within the Early Works limits.
 - MECP's agreement with the Bat SAR ESA Contravention Avoidance Strategy (AECOM, 2021) and achievement of an Overall Benefit Permit under the Section 17 (2) (c) of the ESA (currently under review by MECP).
- The avoidance and mitigation measures prescribed in Section 5.1.3 for Vegetation Communities also apply to bat SAR and bat SAR habitat.
- Any construction activities within 30 m of known maternity roost trees will be restricted to daylight hours, when possible.
- Vegetation removal within confirmed and candidate bat SAR habitat will occur outside of the SAR bat maternity roosting window (April 1 – September 30); (Per ENVR0007).
- Construction activities will be limited to the Limits of Work; (Per ENVR0007).
- Limit the number of lights immediately adjacent to woodlands to the extent possible
- Avoid the use of high-pressure sodium and LED lights immediately adjacent to woodlands as these types of lighting affect activity
- If feasible, turn off lighting or reduce the number of active lights immediately adjacent to woodlands during sensitive timing windows (i.e., April 1 – September 30)
- Where feasible, any disturbed bat SAR habitat will be re-forested and edge management plantings shall be applied along the newly exposed woodland edges
- Removal of rock piles within confirmed bat SAR habitat will be prohibited during the active season for eastern small footed myotis (March 15 – November 30). Removal of rock piles within bat SAR habitats will only proceed between December 1 – March 14. The application of this timing restriction will avoid direct mortality of bat SAR.
- Mandatory immediate (within 24 hours) reporting of all encounters with species at risk to MECP and NHIC.

5.1.2.5.3 Bobolink and Eastern Meadowlark

A Notice of Activity (NOA) process has been undertaken for the Bobolink and Eastern Meadowlark species, as the sum of habitat to be impacted by the works is 30 ha or less in size. A Habitat Management Plan detailing the existing habitat and creation / enhancement of compensation habitat was prepared by WSP in August 2021. MTO is working with the Upper Thames River Conservation Authority (UTRCA) to create 4 ha of habitat within the UTRCA watershed as compensation lands for Eastern Meadowlark and Bobolink. Following the habitat creation and enhancement, the lands will continue to be managed and maintained for twenty (20) years. Monitoring will include reporting and record keeping. The Bobolink and Eastern Meadowlark Habitat Management Plan (2021) has been developed to satisfy, and is fully compliant with, the specifications outlined in Section 23.6 of O. Reg. 242/08. From the date the NOA registration is completed, MTO will comply with the provisions outlined within this Habitat Management Plan as required by O. Reg. 242/08, including the manner in which the activity is carried out and the manner in which the habitat will be created/enhanced, managed and monitored.

Recommended Mitigation Measures

To assist in mitigating potential impacts to Bobolink and Eastern Meadowlark, the following mitigation measures should be applied:

- The avoidance and mitigation measures prescribed in **Section 5.1.3 Vegetation Communities** also apply to bobolink and eastern meadowlark and their habitats
- The avoidance and mitigation measures prescribed in **Section 5.1.2.2 Breeding Birds** also apply to bobolink and eastern meadowlark and their habitats
- Under the NOA process, the commitments presented within the Bobolink and Eastern Meadowlark Habitat Management Plan (2021) shall be applied by MTO.
- To ensure compliance with the Migratory Birds Convention Act (MBCA) (1994), limit vegetation removal to be outside of the active season for birds (April 1 – August 31)

5.1.2.5.4 Red-headed Woodpecker

At the time of AECOM's field investigations and publishing of the Terrestrial Ecosystem Existing Conditions and Impact Assessment Report (G.W.P. 3059-20-00), the Red-Headed Woodpecker (*Melanerpes erythrocephalus*) was listed as a 'Special Concern and Rare Wildlife Species' in Ontario. AECOM documented potential Candidate Red-headed Woodpecker SWH through a comparison of their Ecological Land Classification (ELC) site investigations to criterion listed within the Wildlife Habitat Ecoregion Criteria Schedule 6E (MNR, 2015a).

The Red-headed Woodpecker has since been classified as Endangered in Ontario based on meeting criterion C1 - Small and Declining Number of Mature Individuals, with less than 2,500 mature individuals and an estimated continuing decline in total number of mature individuals of at least 20% within 5 years or two generations, whichever is longer (MECP, 2022). During AECOM's 2017, 2018, 2019, 2021 and 2022 field investigations and breeding bird surveys, the Red-headed woodpecker was not encountered on site and habitat areas of sufficient size were not confirmed (AECOM, 2021). Therefore, the species is highly unlikely to be present within the Early Works limits of the project.

Recommended Mitigation Measures

To assist in mitigating potential impacts to Red-headed Woodpecker, the following mitigation measures should be applied:

- The avoidance and mitigation measures prescribed in **Section 5.1.3 Vegetation Communities** also apply to Red-headed Woodpecker and their habitats
- The avoidance and mitigation measures prescribed in **Section 5.1.2.2 Breeding Birds** also apply to Red-headed Woodpecker and their habitats
- To ensure compliance with the Migratory Birds Convention Act (MBCA) (1994), limit vegetation removal to be outside of the active season for birds (April 1 – August 31)

5.1.3 Vegetation Communities

Field investigations undertaken by AECOM in 2020 confirmed the following vegetation communities within the study area:

- Deciduous Forests;
- Deciduous, coniferous, mixed and thicket swamps;
- Cultural plantations, woodlands, thickets and meadows; and,
- Marshes and open water communities (AECOM, 2021).

A total of 321 plant species were observed by AECOM Terrestrial Ecologists throughout the entire Study Area, of which 68% are considered native. A detailed plant inventory list for the Study Area can be found under *Appendix C2 of AECOM's Terrestrial Ecosystem Existing Conditions and Impact Assessment Report for the Hanlon Expressway / Wellington Road 34 Midblock Interchange, G.W.P. 3059-20-00 (2021)*.

Of the 321 plant species observed within the Study Area, no SAR plants were observed during the AECOM field investigations (AECOM, 2021). However, three (3) plant SOCC were recorded by the AECOM Terrestrial Ecologists. These included: honey locust (*Gleditsia triacanthos*), hispid buttercup (*Ranunculus hispidus* var. *hispidus*) and field sedge (*Carex conoidea*). These species are ranked either as S2 or S3, but are not designated as Special Concern, Threatened or Endangered on the Species at Risk in Ontario (SARO) list. A total of 13 plant species considered regionally rare in Wellington County were also observed in the Study Area during the AECOM field investigations (AECOM, 2021).

5.1.3.1 Vegetation Species at Risk

No vegetation SAR were observed within the limits of the Early Works during the WSP field investigations. Therefore, no impacts or negative effects are anticipated to vegetation SAR species or their habitat by the proposed works.

Recommended Mitigation Measures

To assist in mitigating potential impacts, the MTO Provisions and operational constraints should be utilized, at a minimum:

- Ontario Provincial Standard Specification (OPSS) 180: General Specification for the Management of Excess Materials
- OPSS 201: Construction Specification for Clearing, Close Cut Clearing, Grubbing and Removal of Surface and Piled Boulders
- OPSS.MUNI.506 Construction Specifications for Dust Suppression
- OPSS. PROV 801 Construction Specification the Protection of Trees
- OPSS. PROV 803 Construction Specification for Vegetative Cover
- OPSS. PROV 804 Construction Specification for Temporary Erosion Control
- OPSS. PROV 805 Construction Specification for Temporary Sediment Control
- OPSS 100 General Conditions of Contract
- Non-Standard Special Provision (NSSP) CMOOC001 – Operational Constraint (OC) (Environmental) – Hazardous Plants Special Provision
- Special Provision No. ENVR0011 – Invasive and Noxious Vegetation Spraying, Invasive and Noxious Vegetation Cutting



- NSSP Invasive Species Prevention
- SP 199F12 Environmentally Sensitive Areas OC (Environmental) Control measures during Removal of Concrete/Structure, Structure Repair/Construction, and Concrete Saw cutting
- NSSP Equipment Refuelling, Maintenance and Washing
- SP 199S56 Control of Emissions During Structural Work SP 110F10 Use of Air Cooled Blast Furnace Slag as Granular Material
- OC Spill Prevention and Response Contingency Plan
- NSSP Operational Constraints (Environmental) - Migratory Bird Protection

The MTO Specifications, Special Provisions and Operational Constraints noted above will, at a minimum, ensure the following mitigation measures are implemented and followed to avoid impacts to Vegetation Communities and Plants:

- Vegetation removal will be limited to within the Limits of Work
- The Limits of Work should be delineated outside the dripline of trees, prior to the initiation of construction activities;(per OPSS.PROV.801).
- Vegetation beyond the Limits of Work should be retained and protected, using ESC measures and/or tree protection fence (installed at or beyond the dripline of trees).
 - The location of ESC measures, tree protection fences should be shown on the ESC design drawings and the Landscape Plan, receptively. These drawings will be submitted to the Contracting Authority.
- Install ESC measures along the Limits of Work prior to the initiation of construction activities, to reduce potential sediment release and reduced the potential of accidental intrusion
- All ESC measures should remain in place until restoration is complete and disturbed areas are stabilized.
- Excess ESC material should be maintained onsite, prior to the commencement of grading operations and throughout the duration of the construction, so it is readily available in the case of an emergency or repair.
- Protect all exposed surfaces and control all runoff during construction.
- Runoffs shall be directed away from Designated Natural Areas and naturalized vegetation communities.
- Watercourse banks disturbed by construction activities should be immediately stabilized by any activity associated with the project to prevent erosion and/or sedimentation, through re-vegetation with native species suitable for the site.

- Vegetation removal shall occur outside of sensitive wildlife timing windows (i.e., breeding bird season April 1 – August 31, bat maternity roosting season (April 1 – September 30)); per NSSP ‘Operational Constraints (Environmental) - Migratory Bird Protection’, and ;(per Operation Constraint (Environmental) NSSP General Environmental Protection; unless otherwise advised by the MECP.
- Use of heavy equipment be limited to the Limits of Work; (per Operation Constraint (Environmental) NSSP General Environmental Protection.
- Any accidentally damaged trees should be pruned in accordance with accepted arboricultural practices.
- Any trees/shrubs that are felled within areas where active construction is being undertaken shall be mulched as soon as possible, especially during the breeding bird season in order to prevent birds from nesting; (per NSSP ‘Operational Constraints (Environmental) - Migratory Bird Protection’
- Earth movement immediately adjacent to woodlands should be restricted during periods of high dust generation (i.e., high winds). The Design Build Contractor should apply dust suppressants during dry periods to those areas which generate large amounts of dust.
- To the extent feasible, affected areas shall be re-seeded and re-vegetated and restored to pre-disturbance conditions, using native species appropriate for the community type disturbed:
 - Trees and shrubs should be planted in a naturalized manner, in a random configuration and in groups rather than in rows.
 - Generally, trees should be planted at 5 m on centre and shrubs at 1.0 m on centre. The precise spacing may be adjusted to suit species selected and area available.
 - Seed mixes should be applied using the manufacturers recommended application rate.
 - To avoid the spread of invasive species, the Design Build Contractor should follow the Clean Equipment Protocol for Industry (Halloran et.al, 2013).
- In advance of vegetation removals and/or other construction activities, a Tree Protection Plan shall be prepared and implemented. Design Build Contractor shall determine area that can be restored based upon the final highway design.
- Design Build Contractor shall retain a sufficient amount of topsoil onsite for use in in restoration, if possible. If retaining topsoil is not feasible, clean topsoil which is free of invasive species can be used to facilitate planting activities.
- Where possible edge management plantings shall be considered along the newly exposed forest edges:

- native tree and shrub species shall be used, those selected shall be similar to native species already present in the area
- clearing shall only be undertaken near areas identified for edge management and incorporate narrow ‘no-grubbing’ zones (in order to stimulate suckering and edge creation) and edge plantings to help buffer exposed forest interiors from wind, sun and salt spray.
- Undertake pre-construction field investigations (by a Qualified Ecologist / Botanist) to confirm the locations of rare plant species within the Study Area and determine if protection is feasible. Where the species cannot be protected, the specimens should be relocated to a suitable vegetation community within a restoration area in the Study Area at the discretion of the Qualified Ecologist / Botanist. Alternatively, seeds or vegetative cuttings, dependent on each specimen’s reproductive biology, shall be collected for relocation. Should relocation be unfeasible (i.e., construction activities during the winter season), the Design Build Contractor should make efforts to source the same species from a local nursery to include in a suitable restoration area (refer to **Section 5.1.3.2** below for further information).

5.1.3.2 Rare Plant Salvage and Relocation

During the weeks of June 26 and July 4, 2022, field surveys were completed by WSP Ecologists to locate rare plant species within the Early Works lands. These investigations were undertaken to inform the need for salvage and transplant of provincially and/or regionally rare plant species. The surveys included photo documentation, collecting GPS coordinates of rare plant species, as well as flagging any of the identified plants on site. A Rare Plant Salvage and Relocation Plan will be prepared with Dufferin Construction for implementation during construction.

In preparation for field surveys, WSP Ecologists reviewed the rare plant species previously documented by AECOM in their study area. This included the three (3) provincially rare plant species and 13 regionally rare plant species noted above. It should be noted that AECOM’s study area included 200 m beyond the limits of work, therefore it was anticipated that some of the rare species identified would not be located within the limits of work, and therefore would not require specific mitigation (e.g., salvage and transplant).

For the Early Works lands, there were 13 species identified by AECOM within the associated Early Works properties. This included the three (3) provincially rare plant species, as well as ten (10) regionally rare plant species. These species are listed in **Table 3**, including the results of WSP’s 2022 surveys.



Table 3: Provincially and Regionally Rare Plant Species with Potential to Occur in the Early Works Lands

Common Name	Scientific Name	WSP Field Results
Provincially Rare Species		
Honey locust	<i>Gleditsia Triacanthos</i>	Not observed. Only the landscape / horticultural variety of this species was located. No mitigation measures required.
Hispid buttercup	<i>Ranunculus hispidus var. hispidus</i>	Not observed within the limits of work.
Field sedge	<i>Carex conoidea</i>	Not observed within the limits of work.
Regionally Rare Species – Wellington County		
Meadow horsetail	<i>Equisetum pratense</i>	Not observed within the limits of work.
Wood horsetail	<i>Equisetum sylvaticum</i>	Not observed within the limits of work.
Blue cohosh	<i>Caulophyllum giganteum</i>	Observed. Two populations and one individual plant were observed. Locations were flagged and UTM coordinates are on file with WSP. This information will be included in the Rare Plant Salvage and Relocation plan.
Wild coffee	<i>Triosteum aurantiacum</i>	Not observed within the limits of work. .
One-sided shinleaf	<i>Orthilia secunda</i>	Observed. Two individuals observed. The Locations were flagged and UTM coordinates are on file with WSP. Will be included in the Rare Plant Salvage and Relocation plan.
Ninebark	<i>Physocarpus opulifolius</i>	Not observed within the limits of work.
Northern bedstraw	<i>Galium boreale</i>	Not observed within the limits of work..
Hairy beard-tongue	<i>Penstemon hirsutus</i>	Not observed within the limits of work.
Silvery sedge	<i>Carex canescens ssp canescens</i>	Not observed within the limits of work. .



Common Name	Scientific Name	WSP Field Results
Provincially Rare Species		
Pointed broom sedge	<i>Carex scoparia</i>	Not observed within the limits of work. .
Butterfly Milkweed	<i>Asclepias tuberosa</i>	Observed. One small population observed in. The Location was flagged and UTM coordinates are on file with WSP. Will be included in the Rare Plant Salvage and Relocation plan. This species was not previously documented by AECOM.

One (1) small population of Butterfly Milkweed (*Asclepias tuberosa*) was also found in a meadow location. Butterfly Milkweed is considered rare in Wellington County and will be included in the Rare Plant Salvage and Relocation Plan. This species was not previously documented by AECOM.

5.1.4 Groundwater

WSP completed private well surveys at seven (7) properties in the vicinity of the project. The Hydrogeology Team met each resident in-person and left a well survey form for review. Templates of the Water Well Survey Forms can be found under **Appendix D**. The survey is used to identify properties with water supply wells that are in close proximity to the work areas and to gather information about the wells. The information is then used to determine if the project may have any effect on private well water systems in the area. The survey was voluntary, and included questions regarding water well location, depth and water levels, locations of septic systems or fuel storage, water well quality, etc. One (1) resident chose to complete the form and return it to the Project Team. In addition to the survey received, WSP collected manual water levels at the existing monitoring wells on site and also deployed dataloggers in four (4) of the monitoring wells.

The Hydrogeology Team has completed a review of the proposed new Highway 6 / Hanlon Expressway Midblock Connection Road Underpass, particularly the abutment and pier excavations (i.e., the Early Works). The Team understands the abutments and piers will be excavated to a shallow depth of approximately 4.2 m (west abutment), 1.9 m (pier) and 2.5 m (east abutment) with H-piles driven to bedrock.

The closest existing monitoring wells to the proposed underpass included MW21-12, MW21-27, MW21-50, MW21-51, MW35-618-02, MW35-618-06 and MW35-618-08. The depths of the monitoring wells on site ranged from 6.7 m to 34.8 m and had water levels ranging from 6.73 m to 17.8 m, along with a number of dry readings. Geology in the area generally consists of a thin layer of topsoil and sandy silt fill, followed by a thick silty sand / sandy silt till unit.

Based on this information, it is not anticipated that any dewatering will be required for the proposed new Highway 6 Hanlon Expressway Midblock Connection Road Underpass abutment and pier excavations. Minor dewatering may be required due to stormwater; however, this is anticipated to be below 50,000L/day. Therefore, no water taking Environmental Activity and Sector Registry (EASR) or Category 3 Permit to Take Water is required.

Recommended Mitigation Measures

To minimize the potential for groundwater impacts, the following mitigation measures are recommended:

- OPSS 805 – Construction Specification for Temporary Erosion and Sediment Control Measures
- Operational Constraint - Equipment Refueling, Maintenance and Washing
- OPSS 180 – General Specification for the Management of Excess Materials
- OPSS 100 General Conditions of Contract, Section GC 7.13.02 Environmental Incident Management - Requirements for containment, notification and cleanup.

5.1.5 Landscaping

No impacts are anticipated within the City of Guelph limits for the Early Works; therefore, a detailed Arborist Report is not required for DCR #1. To the extent feasible, affected areas shall be re-seeded and re-vegetated and restored to pre-disturbance conditions, using native species appropriate for the community type disturbed. Refer to **Section 5.1.3 Vegetation Communities** for further information on proposed mitigation measures for the Early Works limits. A landscaping plan is included in **Appendix E**.

5.1.6 Erosion and Sediment Control

Soil disturbance associated with construction activities may result in erosion. Erosion and sediment control practices will focus on minimizing site erosion and keeping any eroded material on site. Effective erosion and sedimentation control will be achieved throughout the project with stringent construction supervision, monitoring of the site, and maintenance of control works throughout their operational life.

Recommended Mitigation Measures

Provided the following mitigation measures are properly implemented, monitored, and maintained, it is anticipated that erosion and sedimentation control can be achieved:

- Limit access to any nearby waterbodies and banks to protect riparian vegetation and to minimize bank disturbance.
- A sediment and erosion control plan should be designed and implemented to contain/isolate exposed soils, stockpiled materials and unstable areas in the work zone. Prevent the release of sediment to a waterbody and ensure the work site is stabilized prior to removal following construction.
- Materials used or generated during construction



- Materials used or generated during construction (i.e., organics, soil, woody debris, construction debris) must be stored and managed in a way that will prevent the release of these materials into a waterbody.
- Dewatering operations should be managed to prevent erosion or the release of sediment-laden water into nearby waterbodies.
- Ensure a Spills Management Plan including materials, instructions, education and emergency numbers is developed, kept on site at all times, is communicated to work crews and is properly implemented in the event of an accidental spill.
- Operate, store and maintain equipment and associated materials in a manner and at a distance that prevents the entry of any deleterious substance from entering nearby waterbodies.
- Limit riparian vegetation removal and use proper cleaning techniques. Herbicides should not be used on site.
- Use only specified amount and types of fertilizer in areas that drain into waterbodies.
- Re-stabilize banks that have been distributed during construction to pre-construction conditions or better. This could include vegetation or stone material.
- Re-stabilize and re-vegetate soils exposed or disturbed during construction, including new or cleaned-out ditches.
- Near-water works should be monitored to ensure mitigation measures are properly implemented, functioning, maintained, and repaired, as needed. Measures should also be removed following construction.

5.2 Socio-Economic Environment

5.2.1 Land Use

A high-level overview of the land use factors was completed in order to identify the current land use conditions and the potential impacts of the Early Works on the existing and planned/future land uses within the study limits. The study limits of the Early Works are represented by a combination of Rural Employment Area, Secondary Agricultural, Core Greenlands systems, as well as disturbed MTO and county road right-of-way (Schedule A7, Puslinch Official Plan Map, 2021). Rural Employment Area is the primary land use within the Early Works limits.

Traffic volumes and associated safety and operational concerns along Highway 6 / Hanlon Expressway are anticipated to grow, given the current population, employment, and traffic projections. MTO has initiated this project to address current and future transportation needs for the Highway 6 / Hanlon Expressway corridor within the Study Area. Completion of the planned improvements provides opportunity to develop

appropriate rehabilitation or replacement strategies to maintain the safe operation of the highway corridor for current and future traffic volumes. Identifying the future interchange configurations will also help to manage adjacent development and highway corridor access.

Recommended Mitigation Measures

The following mitigation measures are recommended to ensure reduced impacts on the existing and planned land use within the study limits:

- Consultation with potentially impacted business owners shall be undertaken throughout construction via notification and website updates to ensure they are informed of the project plans, construction staging, detour routes, access restrictions, etc.
- The Project contract shall include traffic control requirements for protection of public traffic during construction.
- Emergency services, residents, school bus companies and the municipal stakeholders shall be consulted and notified of traffic staging, detours and other temporary impacts to traffic throughout construction.

5.2.2 Noise

A Traffic Noise Assessment was completed by AECOM in 2021 under separate cover (*Hanlon Expressway / Wellington Road 34 Midblock Interchange, GWP 3059-20-00, Traffic Noise Report, December 2021*). The assessment captured the limits of the Early Works area. During the assessment, it was determined that the areas surrounding the Early Works limits are zoned for agricultural and green land purposes. There are scattered residential buildings with a residential sub-division southeast of the Hanlon Expressway and Wellington Road 34 intersection. A seasonal campground is also located northeast of the Hanlon Expressway interchange with the Highway 401. Since the roadways adjacent to the campground are part of an existing freeway/highway corridor, it was not considered as a Noise Sensitive Area (NSA) in the assessment (AECOM, 2021).

The results of the assessment indicated that noise increases due to the improvements along Hanlon Expressway will have a minor to low perceived significance at the majority of noise sensitive receptors (AECOM, 2021). Some locations exceeded the MTO's criteria for requiring noise mitigation investigation. Results of the noise mitigation investigation show that noise mitigation is not feasible to address traffic noise impacts at these locations and are thus not recommended (AECOM, 2021).

5.2.2.1 Construction Noise

Construction noise impacts are temporary in nature, and largely unavoidable. In addition, the timing of construction activities is such that they will vary by activity and location within the limits of the Early Works as construction progresses. Therefore, noise levels from construction activities will vary.

It is not anticipated that noise sensitive areas would be exposed to constant construction noise. Noise producing construction operations will take place within the daytime hours specified in the Township of Puslinch and Centre Wellington's Noise By-Law No. 5001-05, when possible.

Anticipated construction activities for the project include the use of typical construction equipment to facilitate the Early Works. The noise impacts associated with transportation projects are assessed based on the policies as documented in the *MTO Environmental Guide for Noise (2022)*. Potential noise impacts from typical construction equipment may include:

- Temporary construction noise generated as a result of construction operations
- Potential temporary pile driving activities during construction
- Reconstruction and/or repair of pavement, and the removal of infrastructure
- Replacement and/or repair to structures, replacement of approach slabs
- Placement of temporary concrete barriers for protection of work areas, paving operations, etc.

These construction activities may involve the use of the following noise producing machinery:

- Construction vehicles such as dump trucks, concrete trucks, drill rigs, crane trucks, material delivery trucks, etc.
- Front end loader and excavator
- Paving units
- Use of power tools
- Compaction equipment, backhoes and other small excavation equipment.

Recommended Mitigation Measures

To minimize the potential for construction noise impacts, the following mitigation measures will be implemented:

- MTO and MTO agents are not subject to municipal By-laws and are therefore not required to obtain exemption permits from the Township of Puslinch and/or County of Wellington (By Law No. 5001-05).

However, MTO recognizes the impact noise can have on a community, and all reasonable attempts will be made to work within local noise By-laws. Where this is not feasible, MTO will work within the spirit of the local By-law and continue to provide clear and consistent communication with the municipality.

- Dufferin Construction will provide a Notice of Construction to all residents within a 500-metre radius of the Early Works limits, prior to construction. The Notice will include contact information for the Project Team, if a resident requires further construction information. Notification will also be provided to local Councillors within the project area.
- Equipment shall be maintained in an operating condition that prevents unnecessary noise, including, but not limited to non-defective muffler systems, properly secured components, and the lubrication of moving parts.
- Duration of construction equipment idling is to be restricted to the minimum time necessary to complete the specified task.

5.2.3 Air Quality

An Air Quality Impact Assessment was completed by AECOM in June 2021 under separate cover (*Air Quality Impact Assessment, Hanlon Expressway / Wellington Road 34 Midblock Interchange, GWP 3059-20-00, June 2021*). The results of the assessment show that the addition of the proposed infrastructure will have a decreased impact on the sensitive receptors identified within the study area, when compared to the existing conditions. However, the infrastructure will have an increased impact on air quality in comparison to future no-build conditions that were assessed (AECOM, 2021). It was noted that the majority of the criteria air contaminants are anticipated to be below the respective provincial and federal air quality criteria.

Air quality during construction may be affected with dust impacts from construction equipment. These impacts will be limited to the construction period and are not considered a recurring activity. Contract provisions will be implemented to minimize impacts to the adjacent properties during construction. Therefore, impacts from construction on air quality are not considered significant for this Project.

Recommended Mitigation Measures

Provisions to minimize potential air quality impacts during construction include the following best management practices:

- No unnecessary idling of vehicles
- Covering stockpiles of soil, sand, and aggregate

- Regular cleaning of construction sites and access roads to remove debris and dust caused by construction and
- Application of dust suppressants to control dust generated by construction activities (as required).

5.2.4 Waste and Contamination

Based on available information, a Contamination Overview Study (COS) was previously completed by AECOM in June 2021 during the preliminary design review to identify and review properties / areas within the Project Area with actual or potential site contamination that may impact future highway design. The COS was also completed to identify appropriate future environmental work and mitigation measures to be implemented during the detail design and construction phases of the project.

Based on the findings presented in the COS, there was a total of 27 properties identified; with two (2) parcels identified as having a “high” potential for environmental contamination; two (2) parcels were identified as having a “medium” potential for environmental contamination; 23 parcels were identified as having “low” potential for environmental contamination and ten (10) significant spill locations were also identified within the Project Area.

AECOM also prepared a summary of the soil sampling program completed by AECOM for the excess soil management component of the Midblock Interchange Project (GWP 3059-20-00). The scope included the advancement of ten (10) shallow boreholes in areas previously identified in the COS to be either high or medium risk for environmental contamination. Of the twenty-two (22) soil samples collected and analyzed, one (1) soil sample exceeded the applicable Ministry of Environment, Conservation and Parks (MECP) Table 2.1 Excess Soil Quality Standards (ESQS) for industrial/commercial/community (ICC) property uses (Table 2.1) in borehole BH 2-23, advanced along Concession Road 7 between 0.7 and 1.0 metres below ground surface (mbgs).

It should be noted however, that the COS identified a property along Concession Road 7 as a property with a high risk for possible soil contamination due to the use of fertilizers and pesticides. Information reported in the above-mentioned AECOM report suggests that organochlorine pesticides were not analyzed as part of the sampling program in the boreholes surrounding this property. Refer to **Section 5.2.5 Excess Materials** for further information on the excess soil quality assessment for the limits of the Early Works.

Recommended Mitigation Measures

The following measures shall be implemented to address General Waste Management:

- Surplus and waste materials shall be managed in compliance with the following provisions included in the MTO construction tender documents:
 - OPSS 180, 'General Specification for Management of Waste Materials' specifies:
 - Waste classification of key excess materials generated by the work.
 - Conditions for management of each waste classification generated by the work, including management by re-use, as disposable fill, as non-hazardous solid industrial or commercial waste, by stockpiling and by disposal as subject waste.
 - Distance separations from any waterbodies, groundwater water wells and residences for management by re-use, as disposable fill and by stockpiling.
 - Completion and signature of stipulated forms by owners of property that may be used for management of stockpiling for re-use or as disposable fill.
- General environmental protection shall be in compliance with the following provisions included in the MTO construction tender documents:
 - OPSS 100 'General Conditions of Contract', GC 3.03 specifies:
 - Requirement to alter operations per direction of the contract administrator (i.e., Dufferin Construction) is determined to be damaging to the environment
 - OPSS 100 'General Conditions of Contract', GC 7.07 specifies:
 - Requirement to control dust so that it does not affect traffic, enter surface waters, or escape beyond the right-of-way to cause a nuisance to residents, business or utilities.
 - OPSS 100 'General Conditions of Contract', GC 7.13.02 specifies:
 - Requirements for containment, notification and clean-up following an environmental incident.
 - MTO non-standard special provision 'Operational Constraint (Environmental) - General Environmental Protection' specifies:
 - Requirement that environmental protection comply with the conditions of approvals and permits exemptions, agreements, reports and clearances provided by the owner or obtained by the contractor; and,



- Requirement to control material, equipment and construction operations to avoid and minimize direct physical damage; sediment, noise, vibration, dust, chemical, and other emissions; and interference with local use, access and passage.
- The following protocols shall be implemented to address **Hazardous Materials and Handling and Storage**:
 - All potentially hazardous products shall be stored in a pre-designated, safe and secure product storage location on the Site, set back at least 30 m from all water bodies or watercourses, in accordance with provincial legislation.
 - All products shall be properly labelled according to Workplace Hazardous Materials Information System (WHMIS).
 - Products should only be handled by personnel who are WHMIS trained and qualified in handling the specific product. All personnel shall wear the proper personal protective equipment (PPE) when handling hazardous or flammable materials.
 - Greasy or oily rags or materials subject to spontaneous combustion shall be deposited and stored in appropriate receptacles in the material storage pad and staging area. This material shall be removed from the Site on a regular basis (i.e., at least monthly) and shall be collected by an approved subject waste hauler or cleaned for re-use.
 - Waste products associated with equipment maintenance will be disposed of off- site in accordance with applicable regulations.
 - A written inventory of materials stored onsite by Dufferin shall be maintained and updated weekly to reflect materials used onsite by other contractors, vendors or subcontractors as necessary.
 - Any spilled product shall be contained and cleaned up and reported in accordance applicable regulations.
 - All material storage shall comply with Technical Standards and Safety Authority (TSSA) regulations and local fire codes.
 - The condition of storage sites will be inspected daily by the inspector and documented for evaluation of compliance with regulatory requirements. Any deficiencies in material storage will be reported and Dufferin shall complete an Incident Follow-up Form to confirm that the deficiency was addressed.
- The following measures shall be implemented to address **Spill Prevention**:



- Spill response shall comply with OPSS 100 'General Conditions of Contract', GC 7.13.02 Environmental Incident Management, which specifies the requirements for containment, notification and cleanup.
- Be prepared to intercept, clean up, and dispose of spills or releases that may occur whether on land or water. Maintain materials and equipment required for cleanup of spills or releases readily accessible on the Site.
- Provide training to Site personnel in how to prevent, mitigate the impacts, and respond quickly to spills.
- Maintain as small quantities as possible of any potentially harmful materials to the natural environment.
- Ensure that there are no direct routes between material storage areas and water bodies or drainage pathways thereto.
- Provide secondary containment for wastewater collection tanks and liquid material storage areas where appropriate and feasible.
- Outfit all jerry cans with automatic closures.
- Ensure all equipment is maintained regularly and that all fluid lines (i.e., brakes, hydraulic, fuel) are in good condition and are not leaking. Inspections, maintenance, and repairs shall be completed by qualified professionals and documented by the contractor who owns or is leasing the equipment.
- Provide waste receptacles to prevent the generation of litter on the Site.
- Include litter-prevention training as part of the overall environmental training provided to Project personnel.
- To reduce the likelihood of an event involving a spill or leak, the following procedures shall be followed:
 - All water control devices and hoses shall be inspected daily and monitored to ensure proper working order.
 - All hoses and connections on equipment will be inspected routinely by truck operators for leaks and drips.
 - All equipment and vehicle leaks must be reported immediately and repaired prior to continued use.
 - All material storage areas shall be inspected daily for signs of spills, general housekeeping, state of spill containment units and features, and availability of appropriate spill control supplies.
 - Fuel storage, vehicles and equipment will be stored at designated areas a minimum of 30 m from a watercourse.
 - Vehicle maintenance will be enhanced and good housekeeping practices will be implemented.

- Watertight trucks or lined truck beds will be used to transport wet excavated material and debris that may otherwise leak.

5.2.5 Excess Materials

There is the potential for excess materials (i.e., old pavement, concrete, asphalt, and earth) to be generated during the construction of the Early Works. In August 2021, WSP prepared and implemented an excess soil quality assessment program to support the management of excess soil that is anticipated to be generated during the proposed Highway 6 Hanlon Expressway / Wellington Road 34 Midblock Interchange. The reporting for the excess soil also addresses the data gaps with respect to the analysis of organochlorine pesticides at the previously mentioned Concession Road 7 property.

The partially completed excess soil quality assessment program included a subsurface investigation to assess the subsurface soil conditions at one of the properties that was accessible and was identified in the COS as a “high” environmental concern for potential environmental impacts.

The reported parameters were compared to the Full Depth Background Site Condition Standards (SCS) as presented in Table 1 of the Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, published by the MECP in 2011 for residential/parkland/institutional/industrial/commercial/community (RPIICC) use (Table 1 SCS), and to the Full Depth Excess Soil Quality Standards in a Potable and non-Potable Groundwater Conditions for industrial/commercial/community (ICC) property uses as presented in Table 2.1 and Table 3.1 (referred to as Table 2.1 ESQS and Table 3.1 ESQS, respectively). Table 1 standards under O. Reg. 406/19 are identical to Table 1 standards under O. Reg. 153/04 and represent naturally occurring or “background” parameter concentrations within Ontario soils.

A total of seven (7) boreholes and five (5) shallow test pits were advanced during this sampling program. A total of twenty-six (26) bulk soil samples and three (3) duplicate soil samples were collected. The samples were analyzed for metals, including hydride forming metals, salt related parameters such as EC and SAR, PHCs, BTEX, pH and organochloride pesticides.

Within the Early Works limits, soil samples submitted for analysis of metals met the MECP Table 1 SCS, Table 2.1 ICC ESQS, and Table 3.1 ICC ESQS under O. Reg. 406/19. Soil samples submitted for analysis of EC and SAR met the MECP Table 1 SCS, Table 2.1 ESQS, and Table 3.1 ESQS standards under O. Reg. 406/19. The soil samples had pH levels inside the acceptable pH range of 5.0 to 9.0 (for surface soil) and 5.0 to 11.0 (for subsurface). Soil samples submitted for analysis of PHCs, and

BTEX met the MECP Table 1 SCS, Table 2.1 ESQS, and Table 3.1 ESQS under O. Reg. 406/19. Soil samples submitted for analysis of OC Pesticides met the MECP Table 1 SCS, Table 2.1 ESQS, and Table 3.1 ESQS under O. Reg. 406/19. Soil samples submitted for analysis for the Project Area met the MECP Leachate Table 2.1 ICC, and Table 3.1 ICC ESQS under O. Reg. 406/19.

It should be noted that the sampling frequency of this program is based on O.Reg.406/19 and summarizes the soil analytical data collected to-date. Additional excess soil samples will be collected within the allowable drilling timeframes, based access restrictions associated with the species at risk habitat in forested areas (refer to Section 5.1.2.5 Terrestrial Species at Risk for further information). Once the sampling in this area is complete, the findings will be documented in a memo, which will be appended to DCR #2.

Recommended Mitigation Measures

- Disposal/reuse of soils at any receiving facility is subject to acceptance and approval of the materials by the receiver. Excess soil meeting Table 1 SCS and Table 2.1 ESQS may be reused within the Project Area. Excess soil meeting Table 3.1 ESQS may be reused at alternative sites accepting Table 3.1 ESQS soil.
- Excess material will require proper management (removal, storage and disposal). Materials will be managed in accordance with *Ontario Standard Specification (OPSS) 180 – General Specification for the Management of Excess Materials*;
- Where Dufferin Construction manages excess earth as disposable fill, they shall ensure the material is managed responsibly and in an environmentally appropriate manner; and,
- Should any contaminated materials be encountered during the Early Works construction, caution will be exercised while handling and disposing of contaminated materials in accordance with provincial regulations and MTO approved practiced (as governed by OPSS 180).

5.3 Cultural Environment

5.3.1 Archaeology

A Stage 1 and Stage 2 Archaeology Assessment was completed by AECOM for the *Hanlon Expressway / Wellington Road 34 Mid-Block Interchange Project* (G.W.P. 3059-20-00) (AECOM, 2021). This assessment included the limits for the Early Works to be undertaken for this Project.

The Stage 1 and 2 Assessments were undertaken from August 22, 2017 to June 04, 2021 (AECOM, 2021). AECOM noted that the Study Area consisted of paved roads, low lying and wet area, slope and agricultural fields. Those areas not deemed to be low lying and wet, sloped, or disturbed were subject to Stage 2 Assessment, through either pedestrian survey or test pit survey. No archaeological sites were found within the limits of the Early Works.

Recommended Mitigation Measures

Given the results of the Stage 1-2 Archaeological Assessment, the following mitigation measures were recommended:

- Areas of deep and extensive disturbance, severe slope, and low-lying permanently wet areas, and where no archaeological resources were found during the Stage 2 assessment, are cleared of further archaeological concerns.

The following general mitigation measures are also recommended in order to comply with applicable legislation during construction:

- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such a time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore, subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- The *Cemeteries Act*, R.S.O. 1990, c.C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

5.3.2 Cultural and Built Heritage

A Cultural Heritage Report was completed by AECOM for the *Hanlon Expressway / Wellington Road 34 Mid-Block Interchange Project (G.W.P. 3059-20-00)* (AECOM, 2021). The background review and site investigations confirmed that no Built Heritage or Cultural Heritage Landscapes exist within or adjacent to the limits of work. Impacts to cultural or built heritage features are therefore not anticipated.

5.4 Summary of Environmental Concerns, Mitigating Measures and Commitments

Table 4 summarizes the identified environmental concerns, proposed mitigation measures and commitments to future works as outlined in this Design-Build project for the Early Works.

Legend:

- MTO: Ministry of Transportation of Ontario
- MNRF: Ministry of Natural Resources and Forestry
- MECP: Ministry of the Environment, Conservation and Parks
- MTCS: Ministry of Tourism, Culture and Sport
- DFO: Department of Fisheries and Oceans Canada
- Mun: Municipal (County of Wellington, City of Guelph, Township of Puslinch)
- Public: Residents and / or business owners
- EMS: Emergency Management Services
- GRCA: Grand River Conservation Authority



Table 4: Summary of Environmental Concerns, Mitigating Measures and Commitments

I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
Natural Environment				
1.0	Fish & Fish Habitat	MTO / MNRF / DFO / GRCA	1.1	Limit access to waterbodies and banks to protect riparian vegetation and to minimize bank disturbance.
			1.2	A Sediment and Erosion Control Plan shall be designed and implemented to contain/isolate exposed soils, stockpiled materials and unstable areas in the work zone and to prevent the release of sediment to all waterbodies and ensure the work site is stabilized prior to removal of ESC measures following construction (per OPSS 805).
			1.3	Design and implement an in-water work area isolation plan to maintain clean flow around the work area at any watercourse locations (as per OPSS 805 and 517). The design shall: -Manage flow withdrawal and discharge to prevent erosion and the release of sediment to a waterbody; and -Ensure work zones are stabilized against high flows at the end of each workday.
			1.4	As per OPSS 182 any fish that may become isolated in the work area shall be transferred (using appropriate capture, handling and release techniques to prevent harm and minimize stress) downstream or away from the construction area.
			1.5	Design and implement a work area containment plan to isolate all above-water work to prevent the release of sediment or other contaminants to a waterbody (as per OPSS 517). The design shall include regular inspection, repair, removal and disposal of isolation measures and materials. Work



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
				zones should be clearly delineated prior to works to avoid the unintentional intrusions into nearby natural area
			1.6	Where possible, organic material barriers (i.e. fiber roll barrier, sediment log, coir rolls etc.) shall be used in the drainage ditches to mitigate sediment transport.
			1.7	Materials used or generated during construction (i.e. organics, soil, woody debris, temporary stockpiles, construction debris, etc.) shall be stored and managed in a way that prevents the release of these materials to a waterbody. This shall include storing materials a safe distance from a waterbody (i.e., greater than 30 metres from any watercourse) and/or isolation measures (as per OPSS 182).
			1.8	Dewatering operations should be managed to prevent erosion or the release of sediment-laden water into nearby waterbodies (per OPSS 805).
			1.9	A Spills Management Plan shall be prepared and shall include materials, instructions, education, and emergency numbers. The plan shall be kept onsite at all times, communicated to work crews and be properly implemented in the event of accidental spills (OC – Spill Prevention and Response Contingency Plan).
			1.10	Operate, store and maintain equipment and associated materials in a manner and at a distance that prevents the entry of any deleterious substance from entering a waterbody (as per OPSS 182). Any part of equipment entering the waterbody or operating from the bank shall be cleaned, free of fluid leaks and in good working condition.
			1.11	Limit riparian vegetation removal and use proper cleaning techniques. Herbicides should not be used on site.
			1.12	Use only specified amount and types of fertilizer in areas that drain into waterbodies.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			1.13	Re-stabilize banks that have been distributed during construction to pre-construction conditions or better. This could include vegetation or stone material.
			1.14	Re-stabilize and re-vegetate soils exposed or disturbed during construction, including new or cleaned-out ditches.
			1.15	Monitoring – Near-water work shall be monitored daily to ensure mitigation measures are properly implemented, functioning, maintained and repaired as needed, and removed following construction (as per OPSS 182); and, –Erosion and Sediment Control in accordance with MTO NSSP (OPSS 805 and SP805F01).
2.0	Terrestrial Ecosystems (Designated Natural Areas)	MTO / MNRF / GRCA / Mun	2.1	Ontario Provincial Standard Specification (OPSS) 180: General Specification for the Management of Excess Materials
			2.2	OPSS 201: Construction Specification for Clearing, Close Cut Clearing, Grubbing and Removal of Surface and Piled Boulders
			2.3	OPSS. MUNI.506 Construction Specifications for Dust Suppression
			2.4	OPSS. PROV 801 Construction Specification the Protection of Trees
			2.5	OPSS. PROV 803 Construction Specification for Vegetative Cover
			2.6	OPSS. PROV 804 Construction Specification for Temporary Erosion Control
			2.7	OPSS. PROV 805 Construction Specification for Temporary Sediment Control
			2.8	OPSS. PROV 100 General Conditions of Contract
			2.9	Non-Standard Special Provision (NSSP) CMOOC001 – Operational Constraint (OC) (Environmental) – Hazardous Plants Special Provision



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			2.10	Special Provision No. ENVR0011 – Invasive and Noxious Vegetation Spraying, Invasive and Noxious Vegetation Cutting
			2.11	NSSP Invasive Species Prevention
			2.12	SP 199F12 Environmentally Sensitive Areas OC (Environmental) Control measures during Removal of Concrete/Structure, Structure Repair/Construction, and Concrete Saw cutting
			2.13	NSSP Equipment Refuelling, Maintenance and Washing
			2.14	SP 199S56 Control of Emissions During Structural Work SP 110F10 Use of Air Cooled Blast Furnace Slag as Granular Material
			2.15	OC Spill Prevention and Response Contingency Plan
3.0	Terrestrial Ecosystems (Breeding Birds, SWH)	MTO / MNRF / GRCA / MECP	3.1	NSSP Monitoring of Existing Structure for Barn Swallow Nests
			3.2	NSSP Operational Constraints (Environmental) - Migratory Bird Protection
			3.3	All vegetation removal shall occur outside breeding bird season (April 1 to August 31)
			3.4	If vegetation removal cannot be scheduled outside of the breeding bird season; an Avian Biologist will be deployed to conduct a nest survey in the area to be cleared in 'simple habitats': - If the active nests of migratory birds are located, then the nest will be noted using handheld GPS and vegetation clearing will be delayed allowing for fledging; - To avoid potential nest abandonment and/or predation, nests shall only be physically flagged if they are located close to an active construction zone and are a risk of accidental damage; and,



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
				- Consult and follow the MBCA (1994).
			3.5	OC (Environmental) – Wildlife and Wildlife Habitat
			3.6	OC (Environmental) SP ENVR0007: Protection of Species at Risk
			3.7	OC (Environmental) – General Environmental Protection
			3.8	Develop a site-specific Wildlife Salvage and Relocation Plan based on the species that may be found within the Study Area. The plan shall document the location of suitable relocation sites within the surrounding environment and include the contact information for a wildlife rehabilitation centre that is considered to be an approved Wildlife Custodian by the MNRF or a member of the College of Veterinarians of Ontario
			3.9	Under no circumstances will any wildlife be knowingly harmed, harassed, or otherwise disturbed. If an animal is encountered, it will be permitted to move away on its own
			3.10	If wildlife is observed within the work area, a qualified biologist or environmental monitor will determine if there is a concern about the significance of the species observed
			3.11	If the species is identified as SAR, do not handle the individual unless it is in immediate danger. A qualified Biologist shall contact the Contracting Authority and MECP immediately. In accordance with the ESA, no threatened or endangered species can be handled or relocated without the proper approvals / permitting and authorization from MNRF. If the species is not identified as SAR, direct the species away from the construction zone into the nearest natural area (i.e., woodland, wetland, etc.). If unsure of where to move the species, contact a Qualified Biologist for guidance
			3.12	Should an injured or orphaned animal be encountered, a Qualified Biologist will transport the animal to a wildlife rehabilitation centre that is considered to be an



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
				approved Wildlife Custodian by the MNRF or a member of the College of Veterinarians of Ontario
			3.13	Should any snakes be disturbed during winter hibernation, or found injured at any time of the year, a Qualified Biologist or Environmental Monitor will transport the animal to a wildlife a rehabilitation centre that is considered to be an approved Wildlife Custodian by the MNRF or a member of the College of Veterinarians of Ontario
			3.14	Avoid the use of insecticides within monarch and west Virginia white SWH
			3.15	Vegetation removal will be limited to the extent feasible within monarch and west Virginia white SWH
			3.16	It is recommended that any vegetation removal within monarch SWH occur outside the window when the species may be present as eggs or larvae on milkweeds (May 25 – August 15)
			3.17	Avoid driving within construction zones in proximity to amphibian breeding habitats at night between April 1 and June 30, and any rainy nights from spring to early autumn, wherever possible
			3.18	Conduct construction activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night, wherever possible
			3.19	Provide training to all onsite personnel and ensure that they are familiar with wildlife that may be present onsite as well as their responsibility to report wildlife and potential SAR observations to the qualified biologist or environmental monitor
			3.20	Obtain any necessary permits / approvals in a timely manner and undertake such activities (i.e., handling of wildlife encounters). Permits and approvals which may be



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
				required include the Wildlife Scientific Collector's Authorization from MNRF and the Wildlife Animal Care Committee Authorization. Consultation with the respective regulating agencies will be required to determine the appropriate permits and approvals
			3.21	The contractor is responsible for reporting / handling any encounters with injured or deceased SAR; this is to be done in accordance with the Ontario Species at Risk Handling Manual: For Endangered Species Act Authorization Holders as prepared by the MNRF
			3.22	To the extent feasible, candidate and confirmed bat maternity colony SWH will be reforested and edge management plantings shall be applied along the newly exposed woodland edges
			3.23	To the extent feasible, candidate reptile hibernacula and habitats of SOCC (eastern ribbonsnake) shall be re-seeded and re-vegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed
			3.24	To the extent feasible, disturbed avian SWH shall be re-seeded and re-vegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed. For woodland features, edge management plantings will be installed upon the newly exposed edges
			3.25	To the extent feasible, disturbed terrestrial crayfish SWH shall be re-seeded and revegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed
			3.26	To the extent feasible, disturbed Insect SOCC SWH shall be re-seeded and revegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed that includes and abundance of common milkweed



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
				(Asclepias syriaca), swamp milkweed (Asclepias incarnata) and/or two-leaved toothwort (Cardamine diphylla)
			3.27	The final highway design should take into consideration potential light impacts on amphibian and amphibian breeding habitats; and, where feasible, any disturbed amphibian SWH shall be re-seeded and re-vegetated to restore to pre-disturbance conditions, using native species appropriate for the community type disturbed. For woodland features, edge management plantings will be installed upon the newly exposed edges
4.0	Terrestrial Ecosystems (Species at Risk)	MTO / MNRF / GRCA / MECP	4.1	OC(Environmental) – Wildlife and Wildlife Habitat are recommended
			4.2	OC (Environmental) SP ENVR0007: Protection of Species at Risk
			4.3	OC (Environmental) – General Environmental Protection
			4.4	NSSP Monitoring of Existing Structure for Barn Swallow Nests
			4.5	NSSP Operational Constraints (Environmental) - Migratory Bird Protection
			4.6	Adhere to the BAT SAR requirements and mitigations identified in MECP SAR C-Permit, including the property and work restrictions within the Early Works limits. Vegetation removals can only occur with the achievement of an Overall Benefit Permit under the Section 17 (2) (c) of the ESA (currently under review and awaiting approval by MECP).
			4.7	The avoidance and mitigation measures prescribed for Vegetation Communities also apply to bat SAR and bat SAR habitat.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			4.8	Any construction activities within 30 m of known maternity roost trees will be restricted to daylight hours, when possible.
			4.9	Vegetation removal within confirmed and candidate bat SAR habitat will occur outside of the SAR bat maternity roosting window (April 1 – September 30); (Per ENVR0007).
			4.10	Construction activities will be limited to the Limits of Work; (Per ENVR0007).
			4.11	Limit the number of lights immediately adjacent to woodlands to the extent possible
			4.12	Avoid the use of high-pressure sodium and LED lights immediately adjacent to woodlands as these types of lighting affect activity
			4.13	If feasible, turn off lighting or reduce the number of active lights immediately adjacent to woodlands during sensitive timing windows (i.e., April 1 – September 30)
			4.14	Where feasible, any disturbed bat SAR habitat will be re-forested and edge management plantings shall be applied along the newly exposed woodland edges
			4.15	The avoidance and mitigation measures prescribed under Vegetation Communities also apply to bobolink and eastern meadowlark and their habitats.
			4.16	The avoidance and mitigation measures prescribed under Breeding Birds also apply to bobolink and eastern meadowlark and their habitats.
			4.17	Legislative Requirement: Vegetation removals can only occur upon MECP's agreement with the Bobolink and Eastern Meadowlark ESA Contravention Avoidance Strategy
			4.18	To ensure compliance with the Migratory Birds Convention Act (MBCA) (1994), limit vegetation removal to be outside of the active season for birds (April 1 – August 31)



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
5.0	Terrestrial Ecosystems (Vegetation Communities)	MTO / MNRF / GRCA / Mun	5.1	OPSS-180: General Specification for the Management of Excess Materials
			5.2	OPSS-201: Construction Specification for the Clearing, Close Cut Clearing, Grubbing and Removal of Surface and Piled Boulders –Vegetation removal, grading and soil compaction should be kept to a minimum
			5.3	OPSS.MUNI.506 Construction Specifications for Dust Suppression
			5.4	OPSS. PROV 801 Construction Specification the Protection of Trees
			5.5	OPSS. PROV 803 Construction Specification for Vegetative Cover
			5.6	OPSS. PROV 804 Construction Specification for Temporary Erosion Control
			5.7	OPSS. PROV 805 Construction Specification for Temporary Sediment Control
			5.8	OPSS 100 General Conditions of Contract
			5.9	Non-Standard Special Provision (NSSP) CMOOC001 – Operational Constraint (OC) (Environmental) – Hazardous Plants Special Provision
			5.10	Special Provision No. ENVR0011 – Invasive and Noxious Vegetation Spraying, Invasive and Noxious Vegetation Cutting
			5.11	NSSP Invasive Species Prevention
			5.12	SP 199F12 Environmentally Sensitive Areas OC (Environmental) Control measures during Removal of Concrete/Structure, Structure Repair/Construction, and Concrete Saw cutting
			5.13	NSSP Equipment Refuelling, Maintenance and Washing



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			5.14	SP 199S56 Control of Emissions During Structural Work SP 110F10 Use of Air Cooled Blast Furnace Slag as Granular Material
			5.15	OC Spill Prevention and Response Contingency Plan
			5.16	NSSP Operational Constraints (Environmental) - Migratory Bird Protection
			5.17	Implement a Rare Plant Salvage and Relocation Plan prior to the commencement of construction.
			5.18	Environmental inspection will be undertaken during construction to ensure that protection measures are implemented, maintained and repaired and remedial measures are initiated when warranted.
6.0	Groundwater	MTO / MECP	6.1	OPSS 805 – Construction Specification for Temporary Erosion and Sediment Control Measures
			6.2	Operational Constraint - Equipment Refueling, Maintenance and Washing
			6.3	OPSS 180 – General Specification for the Management of Excess Materials
			6.4	OPSS 100 General Conditions of Contract, Section GC 7.13.02 Environmental Incident Management - Requirements for containment, notification and cleanup.
7.0	Landscaping	MTO / Public	7.1	A Landscape Plan will be implemented during construction.
8.0	Erosion and Sediment Control	MTO / MECP / MNRF / GRCA	8.1	OPSS 805 Construction Specification for Temporary Erosion and Sediment Control Measures
			8.2	Operational Constraint - Erosion and Sediment Control
			8.3	Operational Constraint – General Erosion and Sedimentation Control



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			8.4	OPSS 802 – Construction Specification for Topsoil
			8.5	OPSS 804 - Construction Specification for Seed Cover – Any woody vegetation removed during the proposed works will be replaced with a similar native species; –Seeded mixes that include common milkweed and native flowering plants should be used to rehabilitate or restore areas of herbaceous vegetation temporarily disturbed during proposed works.
			8.6	SSP 805F01 – Light Duty Silt Fence Barriers
			8.7	Erosion and sediment controls will isolate areas of exposed soils and provide protection to limit potential impacts from erosion and sedimentation in areas adjacent to the culvert ends. All areas of exposed soils with the potential to impact adjacent watercourses / wetlands will be stabilized with topsoil and seed immediately following construction.
			8.8	Erosion and sediment control structures will be designed, installed, maintained, and removed according to the latest OPSS Guidelines.
			8.9	The extent and duration that disturbed soils are exposed to the elements shall be minimized;
			8.10	Seed mix and / or mulch, and topsoil shall be placed in areas of soil disturbance to provide adequate slope protection and long-term slope stabilization.
			8.11	Delineate storage, stockpiling and staging areas prior to construction and inspect them in accordance with the Ontario Ministry of Transportation Construction Administration and Inspection Task Manual.
			8.12	Ensure that material generated during maintenance of sediment control measures (i.e., filter socks, straw bales, silt fence, etc.) will be taken off-site for disposal.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			8.13	Following construction, once disturbed areas have stabilized, all temporary erosion and sedimentation controls will be removed.
			8.14	Erosion and sediment control structures will be routinely inspected as well as checked after storms and repaired as required.
Socio-Economic Environment				
9.0	Noise	MTO / MECP / Mun / Public	9.1	Equipment shall be maintained in an operating condition that prevents unnecessary noise, including but not limited to non-defective muffler systems, properly secured components, and the lubrication of moving parts.
			9.2	Duration of construction equipment idling is to be restricted to the minimum time necessary to complete the specified task.
			9.3	The Contract Administrator will provide a Notice of Construction to all residents within a 500-metre radius of the contract limits, prior to construction. The Notice will include contact information for the Contract Administrator if you require further construction information. Notification will also be provided to the local Councillors within the project area.
			9.4	The Contract Administrator will be required to address any concerns that may arise with respect to noise during construction.
10.0	Air Quality	MTO / MECP	10.1	Minimize the extent and duration that disturbed soils are exposed to the elements.
			10.2	Seed mix and / or mulch, and topsoil will be placed in areas of soil disturbance to provide adequate slope protection and long-term slope stabilization.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			10.3	Filter socks, rock-check dams, straw bale flow check dams (or equivalent flow checks) will be placed as necessary at appropriate intervals in roadside ditches down gradient from areas of soil disturbance to trap suspended sediments and reduce the erosive force of runoff.
			10.4	Delineate storage, stockpiling and staging areas prior to construction and inspect them in accordance with the Ontario Ministry of Transportation Construction Administration and Inspection Task Manual.
			10.5	Ensure that material generated during maintenance of sediment control measures (i.e., filter socks, straw bales, silt fence, etc.) will be taken off-site for disposal.
			10.6	Following construction, once disturbed areas have stabilized, all temporary erosion and sedimentation controls will be removed.
			10.7	Erosion and sediment control structures will be routinely inspected as well as checked after storms and repaired as required.
11.0	Waste and Contamination	MTO / MECP / Public	11.1	A qualified Contractor must control construction activities to minimize worker exposure to silica in accordance with The Occupational Health and Safety Act and associated regulations. Recycling of silica-based materials removed from any work areas should be conducted in accordance with the Environmental Protection Act and associated regulations.
			11.2	All potentially hazardous products shall be stored in a pre-designated, safe and secure product storage location on the Site, set back at least 30 m from all water bodies or watercourses, in accordance with provincial legislation.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			11.3	All products shall be properly labelled according to Workplace Hazardous Materials Information System (WHMIS). SDS will be kept on-site in the material storage pad and staging area, clearly marked and accessible to on-site personnel.
			11.4	Products should only be handled by personnel who are WHMIS trained and qualified in handling the specific product. All personnel shall wear the proper personal protective equipment (PPE) when handling hazardous or flammable materials.
			11.5	Greasy or oily rags or materials subject to spontaneous combustion shall be deposited and stored in appropriate receptacles in the material storage pad and staging area. This material shall be removed from the Site on a regular basis (i.e., at least monthly) and shall be collected by an approved subject waste hauler or cleaned for re-use.
			11.6	Waste products associated with equipment maintenance will be disposed of off-site in accordance with applicable regulations.
			11.7	A written inventory of materials stored onsite by the Contractor shall be maintained and updated weekly to reflect materials used onsite by other contractors, vendors or subcontractors as necessary.
			11.8	Any spilled product shall be contained and cleaned up and reported in accordance applicable regulations.
			11.9	All material storage shall comply with Technical Standards and Safety Authority (TSSA) regulations and local fire codes.
			11.10	The condition of storage sites will be inspected daily by the inspector and documented for evaluation of compliance with regulatory requirements. Any deficiencies in material



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
				storage will be reported and the Contractor shall complete an Incident Follow-up Form to confirm that the deficiency was addressed.
			11.11	Be prepared to intercept, clean up, and dispose of spills or releases that may occur whether on land or water. Maintain materials and equipment required for cleanup of spills or releases readily accessible on the Site.
			11.12	Provide training to Site personnel in how to prevent, mitigate the impacts, and respond quickly to spills.
			11.13	Maintain as small quantities as possible of any potentially harmful materials to the natural environment.
			11.14	Ensure that there are no direct routes between material storage areas and water bodies or drainage pathways thereto.
			11.15	Provide secondary containment for waste water collection tanks and liquid material storage areas where appropriate and feasible.
			11.16	Outfit all jerry cans with automatic closures.
			11.17	Ensure all equipment is maintained regularly and that all fluid lines (i.e., brakes, hydraulic, fuel) are in good condition and are not leaking. Inspections, maintenance, and repairs shall be completed by qualified professionals and documented by the contractor who owns or is leasing the equipment.
			11.18	Provide waste receptacles to prevent the generation of litter on the Site.
			11.19	Include litter-prevention training as part of the overall environmental training provided to Project personnel.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			11.20	All water control devices and hoses shall be inspected daily and monitored to ensure proper working order.
			11.21	All hoses and connections on equipment will be inspected routinely by truck operators for leaks and drips.
			11.22	All equipment and vehicle leaks must be reported immediately and repaired prior to continued use.
			11.23	All material storage areas shall be inspected daily for signs of spills, general housekeeping, state of spill containment units and features, and availability of appropriate spill control supplies.
			11.24	Fuel storage, vehicles and equipment will be stored at designated areas a minimum of 30 m from a watercourse.
			11.25	Vehicle maintenance will be enhanced and good housekeeping practices will be implemented.
			11.26	Watertight trucks or lined truck beds will be used to transport wet excavated material and debris that may otherwise leak.
12.0	Excess Materials	MTO / MECP	12.1	Excess material will require proper management (removal, storage and disposal).
			12.2	Where the Contractor manages excess earth as disposable fill, the Contractor shall ensure the material is managed responsibly and in an environmentally appropriate manner.



I.D. #	Environmental Element / Concern and Potential Impact	Concerned Agencies / Organizations	I.D. #	Mitigation / Protection / Monitoring / Future Commitments
			12.3	Should any contaminated materials be encountered during the undertaking, caution will be exercised while handling and disposing of contaminated materials in accordance with provincial regulations, and MTO practices.
			12.4	Disposal/reuse of soils at any receiving facility is subject to acceptance and approval of the materials by the receiver. Excess soil meeting Table 1 SCS and Table 2.1 ESQS may be reused within the Project Area. Excess soil meeting Table 3.1 ESQS may be reused at alternative sites accepting Table 3.1 ESQS soil.
Cultural Heritage Environment				
13.0	Archaeology	MTO / MTCS	13.1	Should previously undocumented resources be discovered, there may be a new archaeological site that is subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological fieldwork in compliance with Section 48 (1) of the Ontario Heritage Act. The Heritage Operations unit of the Ministry of Heritage, Sport, Tourism and Culture Industries must be immediately notified.
			13.2	In the event that human remains are encountered during construction, the contractor shall immediately notify the Contract Administrator. Work shall remain suspended within the subject area until otherwise directed by the Contract Administrator in writing, according to subsection GC 7.11, Suspension of Work. The CA will contact the MTO representative who will notify the police, coroner and the Registrar of the Bereavement Authority of Ontario.
14.0	Built Heritage Resources	MTO / MTCS	14.1	As there are no cultural heritage resources within the Early Works limits, no mitigation is required.

6.0 MONITORING

6.1 Project Specific Technical Monitoring

During the completion of Detail Design, the contract drawings and specifications were developed to allow the project to be issued for construction. There is the chance that minor design modifications or refinements might be required due to the recommendations made by Dufferin Construction, that could result in environmental benefits or impacts that may not have been anticipated or identified in this document. If this occurs, the modifications are not anticipated to change the primary intent of the undertaking. Relevant changes resulting from major design modifications/refinements will be discussed with appropriate external agencies prior to construction and deemed necessary. During construction, Dufferin Construction will see that the implementation of mitigation measures and key design features are consistent with the contract, external commitments, and permit requirements. Additionally, the effectiveness of the environmental mitigation measures will be assessed to ensure that:

1. Individual mitigation measures are providing the expected control and/or protection;
2. Composite control and/or protection provided by the mitigation measures is adequate;
3. Mitigation measures are maintained, and any necessary repairs will be completed quickly; and,
4. Extra mitigation measure is provided, as needed, for any unanticipated environmental issues that may develop during construction.

An Environmental Inspector will ensure that the environmental protection measures outlined in this report and in the following contract document/specifications are carried out. If problems develop, appropriate MTO and external agency representatives will be contacted to provide additional input and to address specific notification requirements as may be required under specific legislation.

The Environmental Inspector will operate under the direction of Dufferin Construction, in compliance with the MTO Construction Administration and Inspection Task Manual (Mau, 2010) (CAIT Manual). The CAIT Manual task descriptions provide guidance to those involved in inspection on MTO construction contracts, to ensure that the quality and quantity of the work is in accordance with Ministry specifications, standards, drawings, policies, and procedures. If the impacts of construction are different from those anticipated, or the method of construction is such that there are greater and

anticipated impacts, Dufferin Construction's methods of operation will be changed or modified to reduce those impacts.

6.2 Project Specific Class EA Monitoring

During construction, it will be ensured that external notification and consultations are consistent with any commitments that may have been made earlier. Following construction, monitoring will be carried out to ensure that follow-up information is distributed to external agencies following any outstanding environmental commitments.

6.3 Contract Monitoring

Effective translation of measures to protect environmental sensitivities will be prepared for this project. It is noted that environmental effects can be mitigated through implementation of Best Construction Management Practices, as provided in the OPSSs, and SSPs and NSSPs contained in the Contract Package, and implementation of the prescribed Construction Monitoring Program.

6.4 Project Monitoring

6.4.1 Inspection by Construction Staff

Construction is subject to daily general on-site inspection to ensure the execution of the environmental component of the work and to deal with environmental problems that may develop during construction. This is the primary method for compliance monitoring.

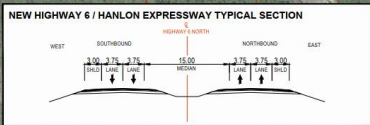
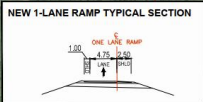
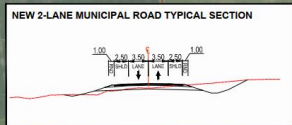
6.4.2 Site Visits by Environmental Staff

Construction projects with significant mitigating measures/concerns are subject to periodic site visits by Construction Administration environmental staff. The timing and frequency of such visits are determined by the schedule of construction operations, the sensitivity of environmental concerns and the development of any unanticipated environmental problems during construction. Staff will use the inspection tasks in the *Construction Administration and Inspection Task Manual*, Contract Special Provisions and Ontario Provincial Standard Specifications as a guide for the monitoring of all aspects of the work. MTO staff will be available should difficulties arise.

DCR #1: Highway 6/Hanlon Expressway Midblock Interchange
(Early Works), G.W.P. 3059-20-00
DB Contract Number: 2021-3004
Prepared for the Ministry of Transportation, West Region



APPENDIX A – RECOMMENDED PLAN



LEGEND

- MTO RIGHT-OF-WAY
- LOT LINE
- PROPOSED MTO RIGHT-OF-WAY
- ROADWAY DESIGN
- X REMOVALS
- + TRAFFIC SIGNAL
- HYDRO TOWER

DCR #1: Highway 6/Hanlon Expressway Midblock Interchange
(Early Works), G.W.P. 3059-20-00
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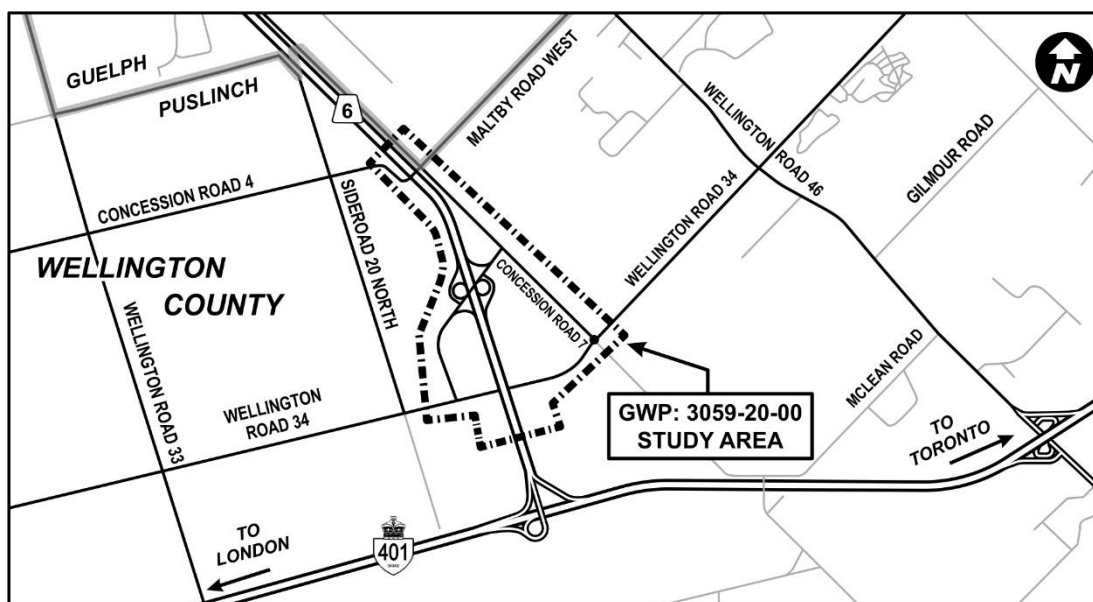


APPENDIX B – NOTIFICATION MATERIALS

NOTICE OF PROJECT UPDATE
HIGHWAY 6 / HANLON EXPRESSWAY MIDBLOCK INTERCHANGE
(Contract 2021-3004)
DETAIL DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT

The Ontario **Ministry of Transportation (MTO)** has awarded Phase 2 of the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3042-14-00) to **Dufferin Construction** and **WSP Canada Inc.** to complete the Class Environmental Assessment, Detail Design and Construction of the new interchange on Highway 6 (Hanlon Expressway), north of Highway 401 (the Project, G.W.P. 3059-20-00), as shown in the key plan below.

Subject to approvals, utility relocations are anticipated to begin in 2022, followed by construction of the Project after the Detail Design is complete. It is expected that construction will be finished by late 2025. Additional information can be found on the new Project website at: highway6midblock.ca.



The Project includes:

- A new interchange on the Hanlon Expressway north of Wellington Road 34, including a new road to connect the new interchange to Concession Road 7 and to Wellington Road 34;
- Removal of the signalized intersection on the Hanlon Expressway at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway for Wellington Road 34 traffic;
- Reconstruction of Concession Road 7 between Wellington Road 34 and Maltby Road;
- Closure of the Maltby Road / Concession Road 4 intersection with the Hanlon Expressway;
- A new roundabout at the Wellington Road 34 and Concession Road 7 intersection;
- Installation of new overhead sign structures, traffic signals and partial illumination;
- Emergency and maintenance vehicle turnarounds along the Hanlon Expressway (one north of Maltby Road and one south of Wellington Road 34);
- Drainage improvements such as infiltration ponds for stormwater management; and
- Relocation of utilities.

THE PROCESS

Building on the approved Individual Environmental Assessment, this study is being completed in accordance with the requirements of a Group 'A' project under the MTO *Class Environmental Assessment for Provincial Transportation Facilities* (2000). It is anticipated that two Design and Construction Reports (DCRs) will be prepared and made available for 30-day comment periods, with public notices advising of the start of the comment periods.

COMMENTS

We are interested in hearing your comments regarding the Project. If you would like to have your name added to the mailing list or to provide comments, please contact the Construction Project Team below, or by emailing ProjectTeam@Highway6midblock.ca.

Olga Khuskivadze, P.Eng.
MTO Project Engineer
Ministry of Transportation - West Region
659 Exeter Road
London, ON N6E 1L3

Peter Bamforth, P.Eng., C.Eng., MICE
Consultant Senior Project Manager
Dufferin / WSP Canada Group Limited
610 Chartwell Road,
Oakville, ON L6J 4A5

If you have accessibility requirements to participate in this study, please contact the Construction Project Team. Comments are being collected to assist MTO in meeting the requirements of the Ontario Environmental Assessment Act. Information collected will be used in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

Ministry of Transportation

Engineering Office
Planning and Design
West Region

659 Exeter Road, 3rd Floor
London, ON N6E 1L3
Telephone: 226-219-8042
Email: olga.khuskivadze@ontario.ca

Ministère des Transports

Bureau du génie
Planification et conception
Région Ouest

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London (Ontario) N6E 1L3
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Courriel: olga.khuskivadze@ontario.ca



April 19, 2022

«Company» «Branch»
«Address_1»
«Address_2»
«City», «Province» «Postal_Code»

Attention: «Title» «Last_Name»

**RE: Highway 6 / Hanlon Expressway Midblock Interchange
Detail Design, Class Environmental Assessment Study and Construction
Notice of Project Update (G.W.P. 3059-20-00) (Indigenous Community Letter)**

The Ontario Ministry of Transportation (MTO) has awarded Phase 2 of the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3042-14-00) to Dufferin Construction and WSP Canada Inc. Phase 2 of the improvements includes the Class Environmental Assessment, Detail Design and Construction of a new interchange on Highway 6 (Hanlon Expressway) in Wellington County (the Project, G.W.P. 3059-20-00). The location of the work to be completed is shown on the attached key plan.

The Project includes:

- A new interchange on the Hanlon Expressway north of Wellington Road 34, including a new road to connect the new interchange to Concession Road 7 and to Wellington Road 34;
- Removal of the signalized intersection on the Hanlon Expressway at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway for Wellington Road 34 traffic;
- Reconstruction of Concession Road 7 between Wellington Road 34 and Maltby Road;
- Closure of the Maltby Road / Concession Road 4 intersection with the Hanlon Expressway;
- A new roundabout at the Wellington Road 34 and Concession Road 7 intersection;
- Installation of new overhead sign structures, traffic signals and partial illumination;
- Emergency and maintenance vehicle turnarounds along the Hanlon Expressway (one north of Maltby Road and one south of Wellington Road 34);
- Drainage improvements such as infiltration ponds for stormwater management; and relocation of utilities.

The project will be proceeding as a Group 'A' project under the MTO's *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. The Individual Environmental Assessment and Preliminary Design One Stage Submission (*Highway 6 from Freelon northerly 16.9 km to Guelph, W.P. 65-76-05, September 1995*) was approved with Conditions by Order in Council on January 22, 2009.

It is anticipated that two Design and Construction Reports (DCRs) will be prepared to accelerate the approval and construction of certain project elements. The DCRs will fully document the consultation undertaken, potential environmental impacts of the proposed works, proposed mitigation measures, and will identify the necessary permits, approvals and clearances that have been / will be obtained prior to construction. The DCRs will be made available for a 30-day comment period with a public notice advising of the start of the comment period.

Comments and information will be collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.

If you would like to provide comments, or if you require further information regarding this project, please feel free to contact me via telephone at 226-219-8042 or by email at olga.khuskivadze@ontario.ca. In addition, if you are interested in meeting after having received this letter, please contact me to arrange a meeting at your earliest convenience.

Sincerely,

Olga Khuskivadze, P.Eng.

Project Engineer, Ministry of Transportation, West Region

cc: Susan Wagter, Senior Environmental Planner, MTO
Leslie Currie, Indigenous Community Liaison Specialist, MTO
Peter Bamforth, P.Eng., CEng, MICE, Consultant Senior Project Manager
Catherine Gentile, Senior Environmental Planner WSP

Attachments: Ontario Government Notice



April 19, 2022

«Company»«Branch»

«Address_1»

«City», «Province» «Postal_Code»

Attention: «Title»«Last_Name»

**RE: Highway 6 / Hanlon Expressway Midblock Interchange
Detail Design, Class Environmental Assessment Study and Construction
Notice of Project Update (G.W.P. 3059-20-00) (MP/MPP Letter)**

The Ontario Ministry of Transportation (MTO) has awarded Phase 2 of the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3042-14-00) to Dufferin Construction and WSP Canada Inc. Phase 2 of the improvements includes the Class Environmental Assessment, Detail Design and Construction of a new interchange on Highway 6 (Hanlon Expressway) in Wellington County (the Project, G.W.P. 3059-20-00). The location of the work to be completed is shown on the attached key plan.

The Project includes:

- A new interchange on the Hanlon Expressway north of Wellington Road 34, including a new road to connect the new interchange to Concession Road 7 and to Wellington Road 34;
- Removal of the signalized intersection on the Hanlon Expressway at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway for Wellington Road 34 traffic;
- Reconstruction of Concession Road 7 between Wellington Road 34 and Maltby Road;
- Closure of the Maltby Road / Concession Road 4 intersection with the Hanlon Expressway;
- A new roundabout at the Wellington Road 34 and Concession Road 7 intersection;
- Installation of new overhead sign structures, traffic signals and partial illumination;
- Emergency and maintenance vehicle turnarounds along the Hanlon Expressway (one north of Maltby Road and one south of Wellington Road 34);
- Drainage improvements such as infiltration ponds for stormwater management; and
- Relocation of utilities.



The project will be proceeding as a Group 'A' project under the MTO's *Class Environmental Assessment for Provincial Transportation Facilities (2000)*. The Individual Environmental Assessment and Preliminary Design One Stage Submission (*Highway 6 from Freelon northerly 16.9 km to Guelph, W.P. 65-76-05, September 1995*) was approved with Conditions by Order in Council on January 22, 2009.

It is anticipated that two Design and Construction Reports (DCRs) will be prepared to accelerate the approval and construction of certain project elements. The DCRs will fully document the consultation undertaken, potential environmental impacts of the proposed works, proposed mitigation measures, and will identify the necessary permits, approvals and clearances that have been / will be obtained prior to construction. The DCRs will be made available for a 30-day comment period with a public notice advising of the start of the comment period.

Comments and information will be collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.

The start of construction is subject to the completion of the study, environmental approvals, and availability of funding. Subject to approvals, utility relocations are anticipated to begin in 2022, followed by construction of the Project after the detail design is complete. Construction is anticipated to be finished by late 2025.

Please be advised that the attached Ontario Government Notice (OGN) advertising the Project Update will be published in the Turtle Island News and Two Row Times on Wednesday, April 27, 2022, and The Guelph Mercy Tribune and The Wellington Advertiser on Thursday, April 28, 2022. A notice will also be delivered to potentially affected residents and businesses within the study area to inform them directly of the project update.

If you have information that may assist us in the completion of the project or would like to discuss the project, please contact me via telephone at 416 388-9452 or by email at Peter.Bamforth@wsp.com.

Sincerely,

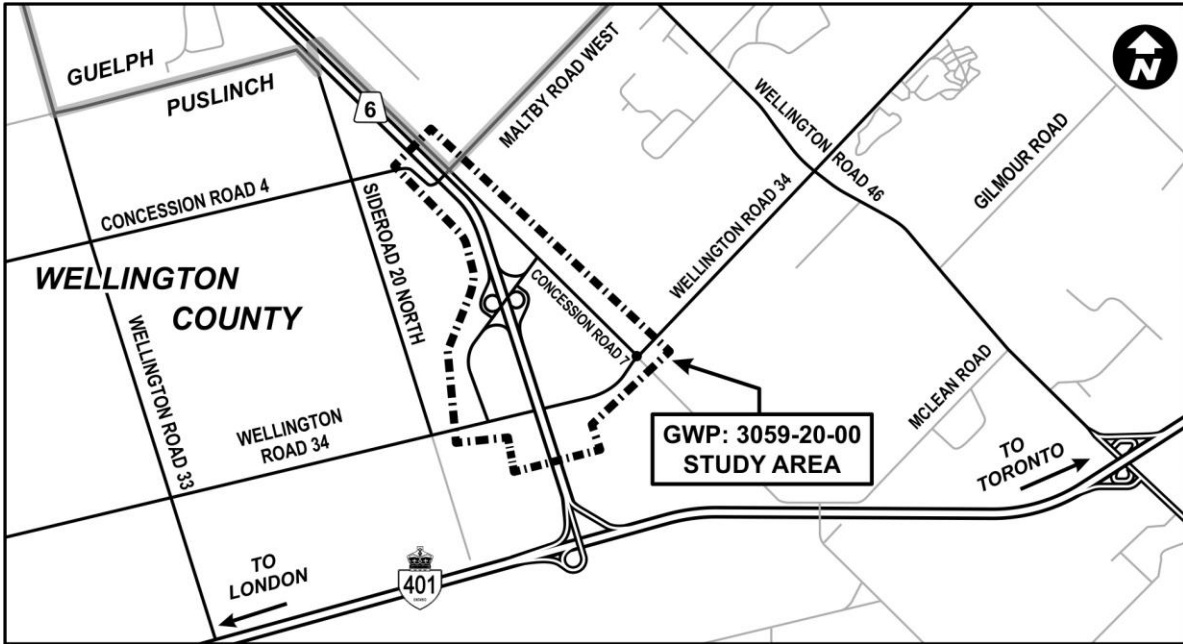
Peter Bamforth, P.Eng., CEng, MICE
Consultant Project Manager, WSP

cc: Olga Khuskivadze, Project Engineer, MTO
Susan Wagter, Senior Environmental Planner, MTO
Catherine Gentile, Senior Environmental Planner WSP

Attachments: Key Plan, Ontario Government Notice



Key Plan:





April 25, 2022

«Title» «FirstName» «LastName»
«JobTitle»
«Address1»
«Address2»
«City», «Province» «PostalCode»

**Re: Highway 6 / Hanlon Expressway Midblock Interchange
Detail Design, Class Environmental Assessment Study and Construction
Notice of Project Update (G.W.P. 3059-20-00) (Agency Letter)**

Dear «Title» «LastName»:

The Ontario Ministry of Transportation (MTO) has awarded Phase 2 of the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3042-14-00) to Dufferin Construction and WSP Canada Inc. Phase 2 of the improvements includes the Class Environmental Assessment, Detail Design and Construction of a new interchange on Highway 6 (Hanlon Expressway) in Wellington County (the Project, G.W.P. 3059-20-00). The location of the work to be completed is shown on the attached key plan.

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The start of construction is subject to the completion of the study, environmental approvals, and availability of funding. Subject to approvals, utility relocations are anticipated to begin in 2022, followed by construction of the Project after the detail design is complete. Construction is anticipated to be finished by late 2025.

The purpose of this letter is to notify you of the project update and provide an opportunity for your input. Please assist us in identifying issues and available background information by providing initial comments using the attached comment form or in a separate letter or email. We would appreciate receiving your comments by May 23, 2022.

If you have any accessibility requirements to participate in this project, please contact one of the individuals listed below or via the Project Team email at ProjectTeam@Highway6Midblock.ca. Comments and information will be collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.

Should you require further information regarding this study or to provide input at any point during the study, please contact one of the individuals noted below. *Des renseignements sont disponibles en français en composant (905) 829-6262 (Jad Murtada).*

Olga Khuskivadze, P.Eng.
MTO Project Engineer
Ministry of Transportation - West Region
659 Exeter Road
London, ON N6E 1L3
Telephone: 226-219-8042
olga.khuskivadze@ontario.ca

Peter Bamforth, P.Eng., CEng, MICE
Consultant Senior Project Manager
Dufferin / WSP Canada Group Limited
610 Chartwell Road,
Oakville, ON L6J 4A5
Telephone: 289 835-2435
Peter.Bamforth@wsp.com



Sincerely,
WSP

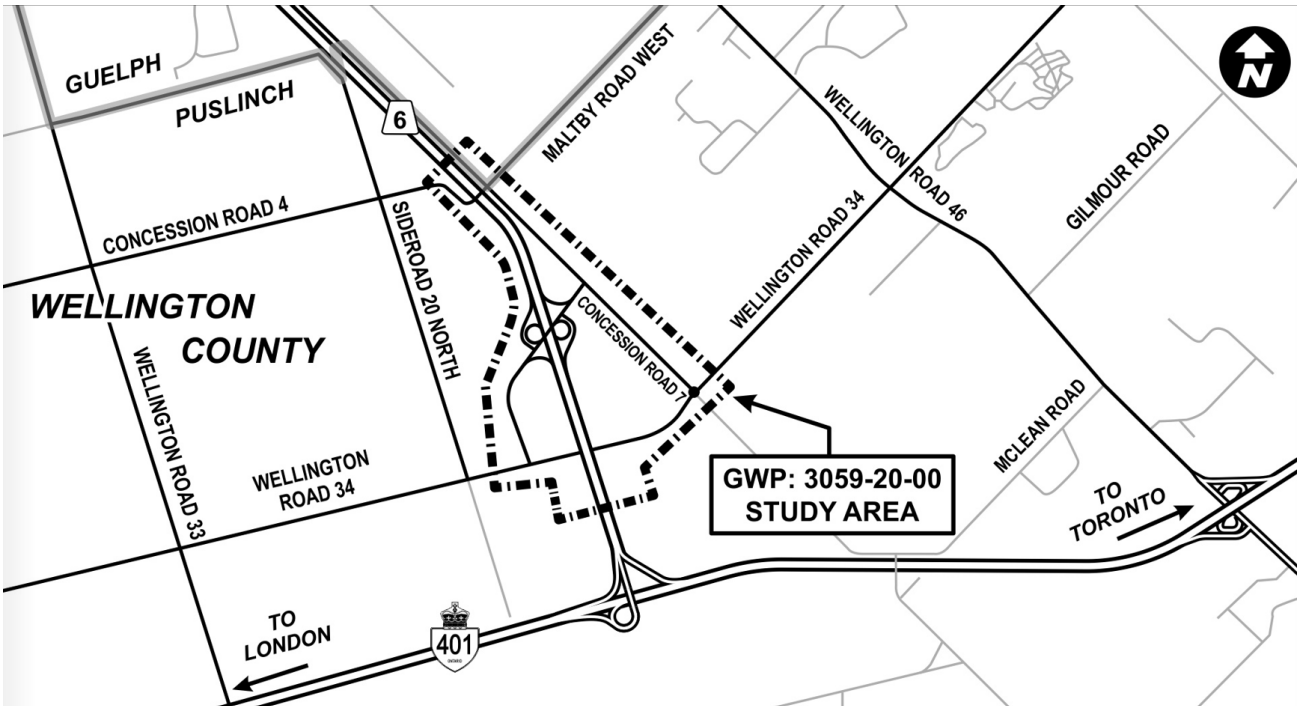
Peter Bamforth, P.Eng., C.Eng., MICE
Consultant Project Manager

cc: Olga Khuskivadze, Project Engineer, MTO
Susan Wagter, Senior Environmental Planner, MTO
Catherine Gentile, Senior Environmental Planner WSP

Attachments: Key Plan, Comment Form



Key Plan:



**Highway 6 / Hanlon Expressway Midblock Interchange
Detailed Design, Class Environmental Assessment Study and Construction
G.W.P. 3059-20-00**

AGENCY COMMENT FORM

Type of Project: Detailed Design, Class Environmental Assessment Study and Construction

Environmental Assessment Type: Group 'A', Class EA for Provincial Transportation Facilities.

Project Location: Hanlon Expressway, just north of Wellington Road 34, Wellington County (see enclosed Key Map)

Agency Name & Division/Branch:	
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COMMENTS:

1. Does your organization wish to participate in this project? YES NO

2. If yes to the above, please provide the contact's name, telephone #, address and e-mail for future correspondence:

Contact Name:	
Telephone #:	
Address:	
E-mail:	

3. Please identify any concerns/comments your agency may have at this time.

For further information regarding this project, please contact the WSP Consultant Project Manager, Peter Bamforth, by phone at (289) 835-2435 or by e-mail at Peter.Bamforth@wsp.com.

PLEASE MAIL, FAX OR EMAIL THIS FORM BACK BY MAY 23, 2022.

ATTN: Catherine Gentile
Senior Environmental Planner
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville, ON L6J 4A5
Email: Catherine.Gentile@wsp.com
Fax: (905) 823-8503



April 25, 2022

«Title» «FirstName» «LastName»
«JobTitle»
«Address1»
«Address2»
«City», «Province» «PostalCode»

**Re: Highway 6 / Hanlon Expressway Midblock Interchange
Detail Design, Class Environmental Assessment Study and Construction
Notice of Project Update (G.W.P. 3059-20-00) (Public Letter)**

Dear «Title» «LastName»:

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The purpose of this letter is to notify you of the project update and provide an opportunity for your input.

If you have any accessibility requirements to participate in this project, please contact one of the individuals listed below or email the Project Team at ProjectTeam@Highway6midblock.ca. Comments and information will be collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.

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Olga Khuskivadze, P.Eng.
MTO Project Engineer
Ministry of Transportation - West Region
659 Exeter Road
London, ON N6E 1L3
Olga.Khuskivadze@ontario.ca

Peter Bamforth, P.Eng., C. Eng., MICE
Consultant Senior Project Manager
Dufferin / WSP Canada Group Limited
610 Chartwell Road,
Oakville, ON L6J 4A5
Peter.Bamforth@wsp.com



Sincerely,

WSP

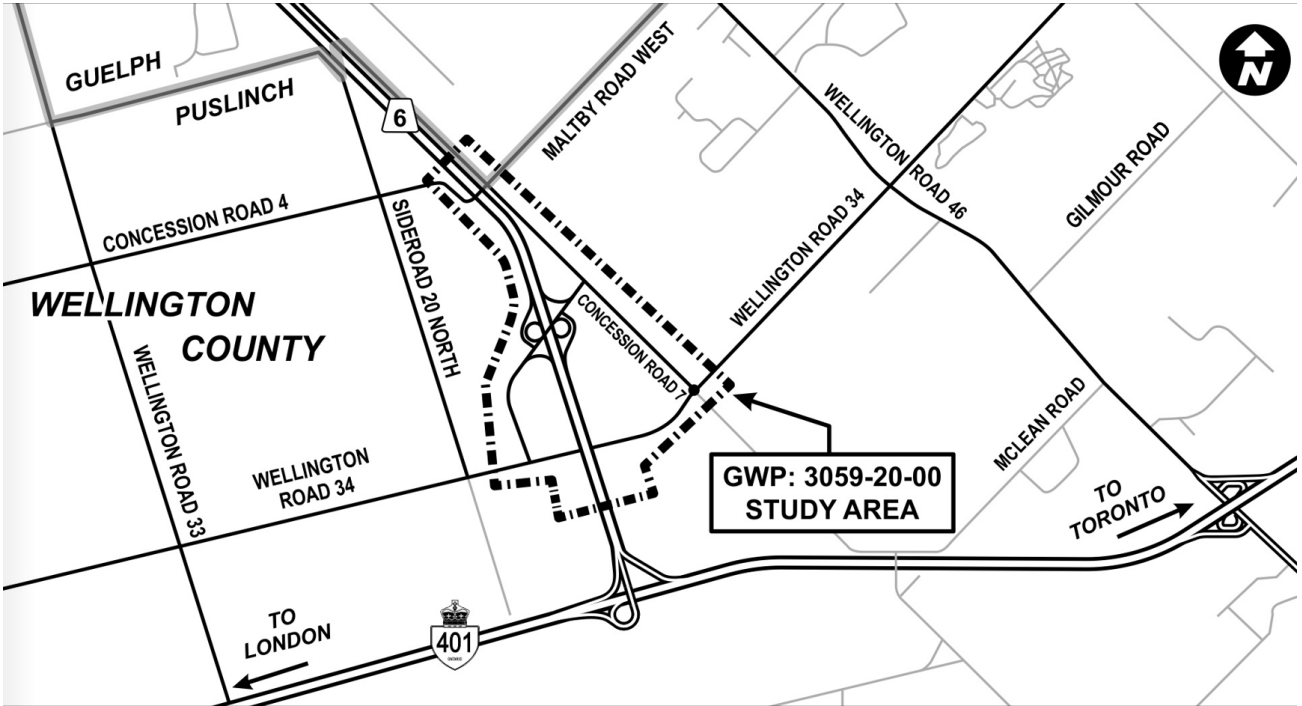
Peter Bamforth, P.Eng., CEng, MICE
Consultant Project Manager

cc: Olga Khuskivadze, Project Engineer, MTO
Susan Wagter, Senior Environmental Planner, MTO
Catherine Gentile, Senior Environmental Planner WSP

Attachments: Key Plan



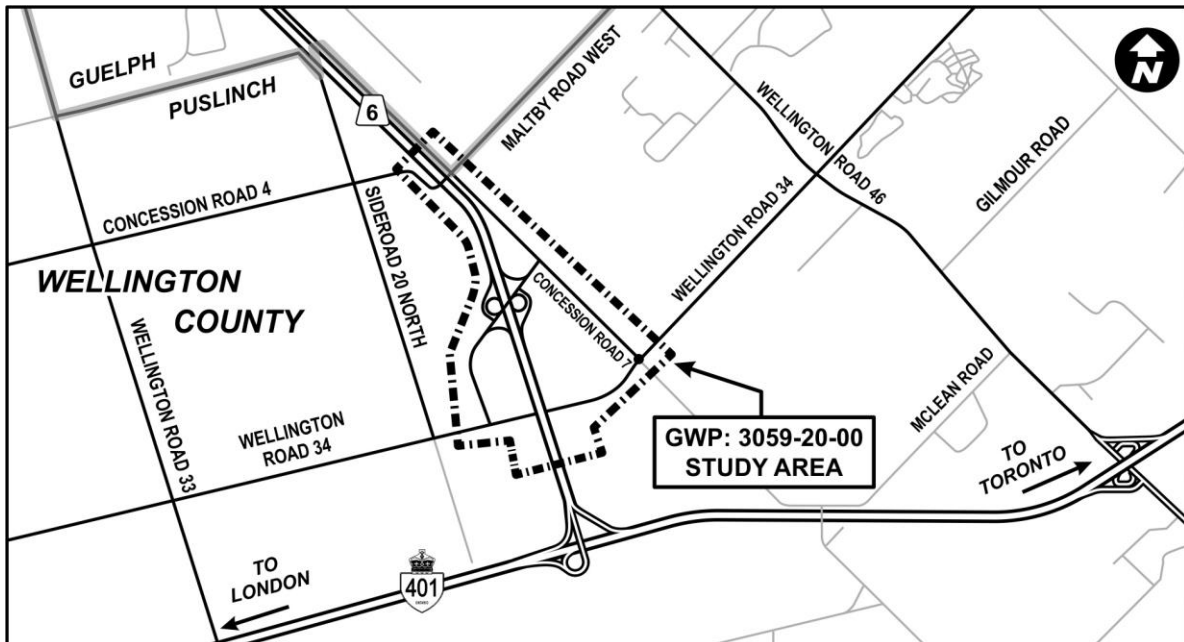
Key Plan:



Notice of Completion – Design and Construction Report #1 HIGHWAY 6 / HANLON EXPRESSWAY MIDBLOCK INTERCHANGE (Contract 2021-3004) DETAIL DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT

The Project

The Ontario Ministry of Transportation (MTO) is moving forward with Phase 2 of the Highways 6 and 401 Improvements Project (G.W.P 3042-14-00). Phase 2 includes the new Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00), north of Wellington Road 34, as shown on the key plan below. Construction of the early works is planned to begin in Fall 2022, subject to approvals.



The early work includes:

- Constructing the Midblock Connection Road Bridge abutments and piers;
- Widening along Highway 6 for the speed change lanes and staging; and
- Implementing environmental protection measures (e.g., erosion control, fencing).

Traffic on the Hanlon Expressway will be maintained for the majority of construction, with some temporary lane closures required. It is expected that construction of Phase 2 - Midblock Interchange Remaining Works will be completed by late 2025. Additional details can be found on the project website at www.Highway6Midblock.ca.

The Process

Building on the approved Individual Environmental Assessment, this project followed the *MTO Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000)* for a Group 'A' project. It is anticipated that two (2) Design and Construction Reports (DCR) will be made available for review, documenting the detail design. DCR #1 for the early works will be available on the project website at www.highway6midblock.ca/reports/ for a 30-day comment period from **September 21, 2022** to **October 20, 2022**. A hard copy of DCR #1 will not be provided at public review locations. If you wish to review DCR #1 and require an alternate format, you may email the Project Team to discuss review options.

Comments

Interested persons are encouraged to review the report on the project website and provide comments by **October 20, 2022** to the Project Team by emailing ProjectTeam@Highway6midblock.ca. Additional information can be found at www.Highway6Midblock.ca.

Olga Khuskivadze, P.Eng.
Project Engineer
Ministry of Transportation West Region,
Planning & Design
659 Exeter Road, London, ON N6E 1L3

Peter Bamforth, P.Eng., CEng, MICE
Consultant Senior Project Manager
Dufferin / WSP
610 Chartwell Road
Oakville, ON L6J 4A5

All stakeholders and members of the public who are on the project contact list will receive notification of future consultation opportunities as part of the Highways 6 and 401 Improvements Study. If you are interested in being added to the project contact list, please register on the website or contact the Project Team members at any time. Your comments are always welcome.

This Notice was issued on September 21, 2022.

We are committed to providing accessible government information and services for all Ontarians. For communication support or to request project material in an alternate format, please contact one of the project team members listed above. Comments and information will be collected to assist MTO in meeting the requirements of the *Ontario Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.



September 14, 2022

«Company»«Branch»
«Address_1»
«Address_2»
«City», «Province» «Postal_Code»

Attention: «Title»«Last_Name»

**RE: Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00)
Detail Design, Class Environmental Assessment Study and Construction
Notice of Completion (MPP Letter Template)**

The Ontario Ministry of Transportation is moving forward with Phase 2 of the Highways 6 and 401 Improvements Project (G.W.P 3042-14-00). Phase 2 includes the new Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00) north of Wellington Road 34, as shown in the attached notice. Construction of the Early Works is planned to begin in Fall 2022, subject to approvals.

The Early Works include:

- Constructing the Midblock Connection Road Bridge abutments and piers;
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Traffic on the Hanlon Expressway will be maintained for the majority of construction with some temporary lane closures required. It is expected that construction of Phase 2 - Midblock Interchange will be completed by late 2025.

Building on the approved Individual Environmental Assessment, this project followed the *MTO Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000)* for a Group 'A' project. It is anticipated that two (2) Design and Construction Reports (DCR) will be made available for review, documenting the detail design. The first DCR for the Early Works will be available on the project website at www.highway6midblock.ca/reports/ for a 30-day comment period from **September 21, 2022 to October 20, 2022**. A hard copy of DCR #1 will not be provided at public review locations. If an individual wishes to review DCR #1 and/or requires an alternate format, they may email the Project Team to discuss review options.

A Notice of Completion of DCR #1 will be placed in area newspapers as follows:

- The *Turtle Island News* on September 21, 2022
- The *Two Row Times* on September 21, 2022
- The *Guelph Tribune* on September 22, 2022
- The *Wellington Advertiser* on September 22, 2022



610 Chartwell Road,
Oakville, ON L6J 4A5
wsp.com

The Project Team welcomes your input. If you have any comments, questions, or concerns, please contact the undersigned at Peter.Bamforth@wsp.com or by phone at 289-835-2435.

Yours truly,

Peter Bamforth, P.Eng., C.Eng., MICE
Consultant Senior Project Manager, WSP

Cc: Olga Khuskivadze, P.Eng., Project Engineer, MTO
Kelly Jansen, Senior Environmental Planner, MTO
Catherine Gentile, Senior Environmental Planner, WSP

Attachments: Ontario Government Notice

Ministry of Transportation

Engineering Office
Planning and Design
West Region

659 Exeter Road, 3rd Floor
London, ON N6E 1L3
Telephone: 226-219-8042
Email: olga.khuskivadze@ontario.ca

Ministère des Transports

Bureau du génie
Planification et conception
Région Ouest

659, chemin Exeter, 3e étage
London (Ontario) N6E 1L3
Téléphone: 226-219-8042
Courriel: olga.khuskivadze@ontario.ca



September 21, 2022

Name
Address
Email

Attention:

**RE: Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00)
Detail Design, Class Environmental Assessment Study and Construction
Notice of Completion (Indigenous Community Letter Template)**

The Ontario Ministry of Transportation is moving forward with Phase 2 of the Highways 6 and 401 Improvements Project (G.W.P 3042-14-00). Phase 2 includes the new Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00), north of Wellington Road 34, as shown in the attached notice. Construction of the Early Works is planned to begin in Fall 2022, subject to approvals.

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Building on the approved Individual Environmental Assessment, this study is being completed in accordance with the requirements of a Group 'A' project under the *MTO Class Environmental Assessment for Provincial Transportation Facilities (2000)*. Additional details can be found on the project website at www.Highway6Midblock.ca.

The first Design and Construction Report (DCR #1) has been prepared to document the process completed and is being made available for a 30-day public review period starting on **September 21, 2022**. Interested persons are invited to review the report and provide comment by **October 20, 2022**. The DCR is available for review on the project website at www.highway6midblock.ca/reports/.

Comments and information will be collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.

If you would like to provide comments, or if you require further information regarding this project, please feel free to contact me via telephone at 226-927-6293 or by email at Chris.Evans@ontario.ca. In addition, if you are interested in meeting after having received this letter, please contact me to arrange a meeting at your earliest convenience.

Sincerely,

Chris Evans

Head (A), Environmental Delivery, Ministry of Transportation, West Region

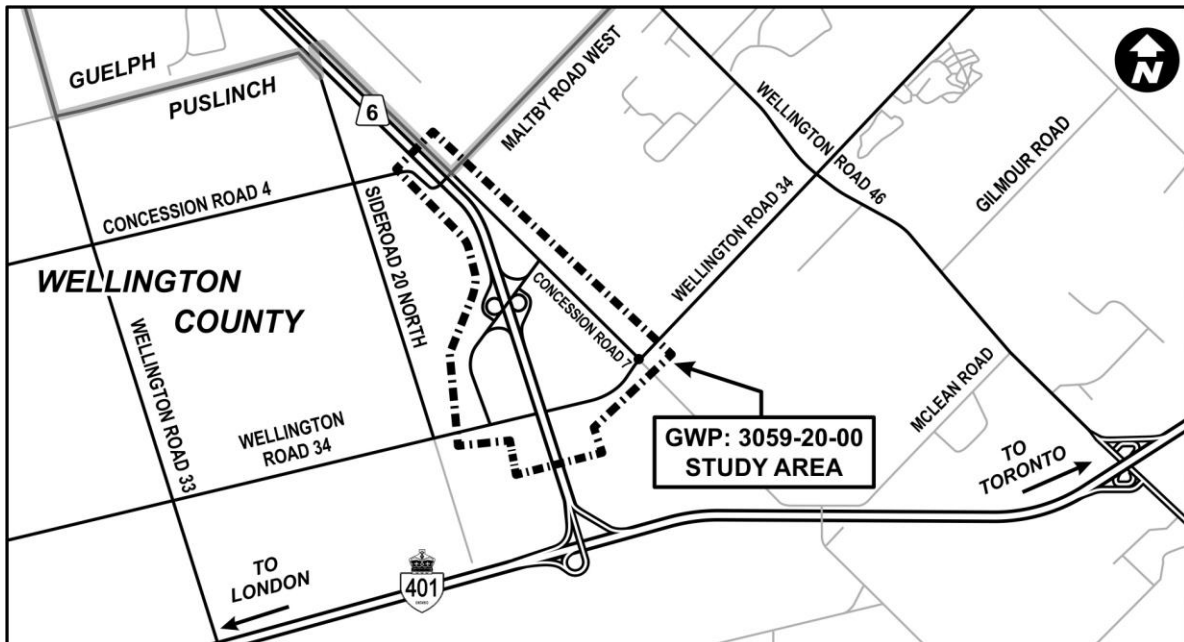
cc: Kelly Jansen, Senior Environmental Planner, MTO
Liane Fisher Bloxam, Indigenous Liaison Specialist, MTO
Peter Bamforth, P.Eng., CEng, MICE, Consultant Senior Project Manager
Catherine Gentile, Senior Environmental Planner WSP
Sarah Jewell, Senior Project Engineer, MTO
Olga Khuskivadze, Project Engineer, MTO

Attachments: Ontario Government Notice

Notice of Completion – Design and Construction Report #1 HIGHWAY 6 / HANLON EXPRESSWAY MIDBLOCK INTERCHANGE (Contract 2021-3004) DETAIL DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT

The Project

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Olga Khuskivadze, P.Eng.
Project Engineer
Ministry of Transportation West Region,
Planning & Design
659 Exeter Road, London, ON N6E 1L3

Peter Bamforth, P.Eng., CEng, MICE
Consultant Senior Project Manager
Dufferin / WSP
610 Chartwell Road
Oakville, ON L6J 4A5

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September 21, 2022

«Title» «FirstName» «LastName»
«JobTitle»
«Address1»
«Address2»
«City», «Province» «PostalCode»

**Re: Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00)
Detail Design, Class Environmental Assessment Study and Construction
Notice of Completion (Municipal Letter Template)**

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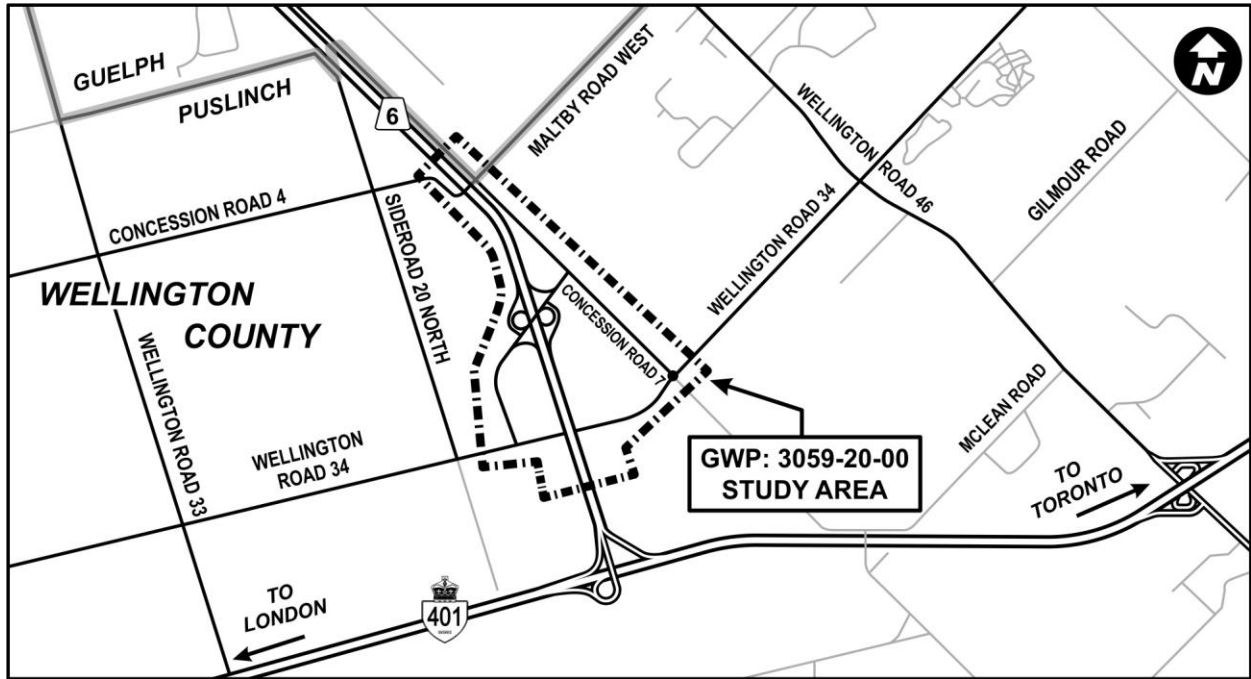
WSP

Peter Bamforth, P.Eng., CEng, MICE
Consultant Project Manager

cc: Olga Khuskivadze, Project Engineer, MTO
Kelly Jansen, Senior Environmental Planner, MTO
Catherine Gentile, Senior Environmental Planner WSP

*Attachments: Key Plan, Notice of Completion,
Design and Construction Report #1*

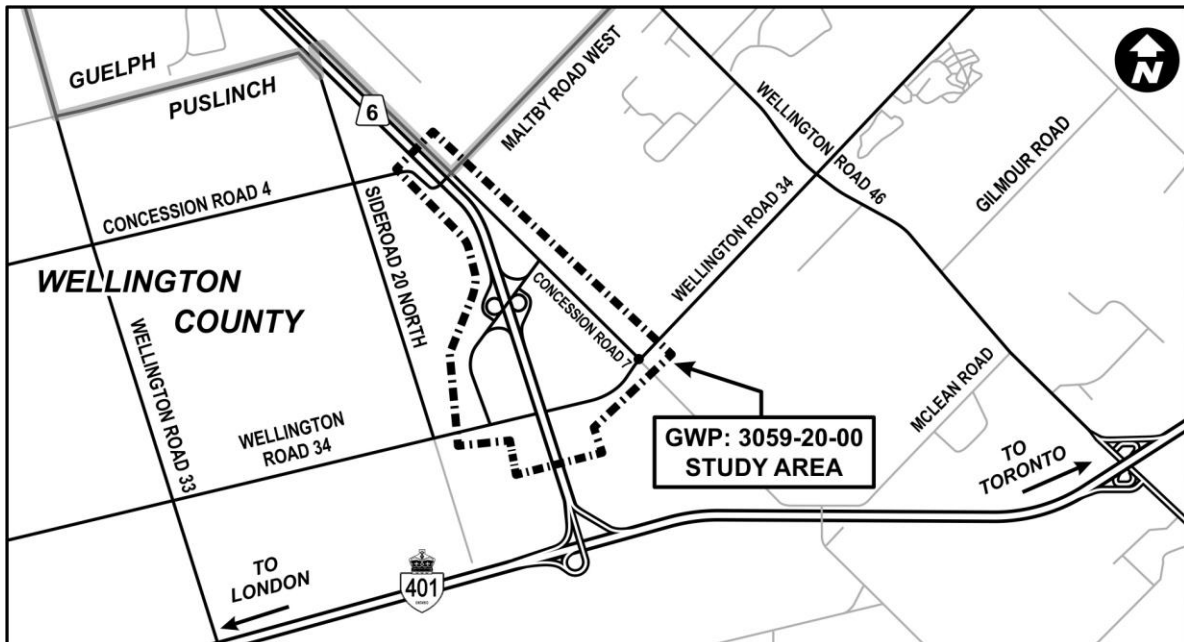
Key Plan:



Notice of Completion – Design and Construction Report #1 HIGHWAY 6 / HANLON EXPRESSWAY MIDBLOCK INTERCHANGE (Contract 2021-3004) DETAIL DESIGN AND CLASS ENVIRONMENTAL ASSESSMENT

The Project

The Ontario Ministry of Transportation (MTO) is moving forward with Phase 2 of the Highways 6 and 401 Improvements Project (G.W.P 3042-14-00). Phase 2 includes the new Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00), north of Wellington Road 34, as shown on the key plan below. Construction of the early works is planned to begin in Fall 2022, subject to approvals.



The early work includes:

- Constructing the Midblock Connection Road Bridge abutments and piers;
- Widening along Highway 6 for the speed change lanes and staging; and
- Implementing environmental protection measures (e.g., erosion control, fencing).

Traffic on the Hanlon Expressway will be maintained for the majority of construction, with some temporary lane closures required. It is expected that construction of Phase 2 - Midblock Interchange Remaining Works will be completed by late 2025. Additional details can be found on the project website at www.Highway6Midblock.ca.

The Process

Building on the approved Individual Environmental Assessment, this project followed the *MTO Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000)* for a Group 'A' project. It is anticipated that two (2) Design and Construction Reports (DCR) will be made available for review, documenting the detail design. DCR #1 for the early works will be available on the project website at www.highway6midblock.ca/reports/ for a 30-day comment period from **September 21, 2022** to **October 20, 2022**. A hard copy of DCR #1 will not be provided at public review locations. If you wish to review DCR #1 and require an alternate format, you may email the Project Team to discuss review options.

Comments

Interested persons are encouraged to review the report on the project website and provide comments by **October 20, 2022** to the Project Team by emailing ProjectTeam@Highway6midblock.ca. Additional information can be found at www.Highway6Midblock.ca.

Olga Khuskivadze, P.Eng.

Project Engineer
Ministry of Transportation West Region,
Planning & Design
659 Exeter Road, London, ON N6E 1L3

Peter Bamforth, P.Eng., CEng, MICE

Consultant Senior Project Manager
Dufferin / WSP
610 Chartwell Road
Oakville, ON L6J 4A5

All stakeholders and members of the public who are on the project contact list will receive notification of future consultation opportunities as part of the Highways 6 and 401 Improvements Study. If you are interested in being added to the project contact list, please register on the website or contact the Project Team members at any time. Your comments are always welcome.

This Notice was issued on September 21, 2022.

We are committed to providing accessible government information and services for all Ontarians. For communication support or to request project material in an alternate format, please contact one of the project team members listed above. Comments and information will be collected to assist MTO in meeting the requirements of the *Ontario Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.



September 21, 2022

«Title» «FirstName» «LastName»
«JobTitle»
«Address1»
«Address2»
«City», «Province» «PostalCode»

**Re: Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00)
Detail Design, Class Environmental Assessment Study and Construction
Notice of Completion (External Agencies / Public Letter Template)**

Dear «Title» «LastName»:

The Ontario Ministry of Transportation is moving forward with Phase 2 of the Highways 6 and 401 Improvements Project (G.W.P 3042-14-00). Phase 2 includes the new Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00) north of Wellington Road 34, as shown in the attached key plan. Construction of the Early Works is planned to begin in Fall 2022, subject to approvals.

The Early Works include:

- Constructing the Midblock Connection Road Bridge abutments and piers;
- Widening along Highway 6 for the speed change lanes and staging; and
- Implementing environmental protection measures (e.g., erosion control, fencing).

Traffic on the Hanlon Expressway will be maintained for the majority of construction with some temporary lane closures required. It is expected that construction of Phase 2 - Midblock Interchange will be completed by late 2025.

Building on the approved Individual Environmental Assessment, this study is being completed in accordance with the requirements of a Group 'A' project under the *MTO Class Environmental Assessment for Provincial Transportation Facilities (2000)*.

Additional details can be found on the project website at www.Highway6Midblock.ca.

The first Design and Construction Report (DCR #1) has been prepared to document the process completed and is being made available for a 30-day public review period starting on **September 21, 2022**. Interested persons are invited to review the report and provide comment by **October 20, 2022**. The DCR #1 is available for review on the project website at www.highway6midblock.ca/reports/.



If you have any accessibility requirements to participate in this project, please contact one of the individuals listed below or email the Project Team at ProjectTeam@Highway6midblock.ca. Comments and information will be collected to assist the MTO in meeting the requirements of the Ontario *Environmental Assessment Act*. With the exception of personal information, all comments will become part of the public record in accordance with the *Freedom of Information and Protection of Privacy Act*.

Des renseignements sont disponibles en français en composant (905) 829-6262 (Jad Murtada).

Olga Khuskivadze, P.Eng.
MTO Project Engineer
Ministry of Transportation - West Region
659 Exeter Road
London, ON N6E 1L3

Peter Bamforth, P.Eng., C. Eng., MICE
Consultant Senior Project Manager
Dufferin / WSP Canada Group Limited
610 Chartwell Road,
Oakville, ON L6J 4A5

Sincerely,

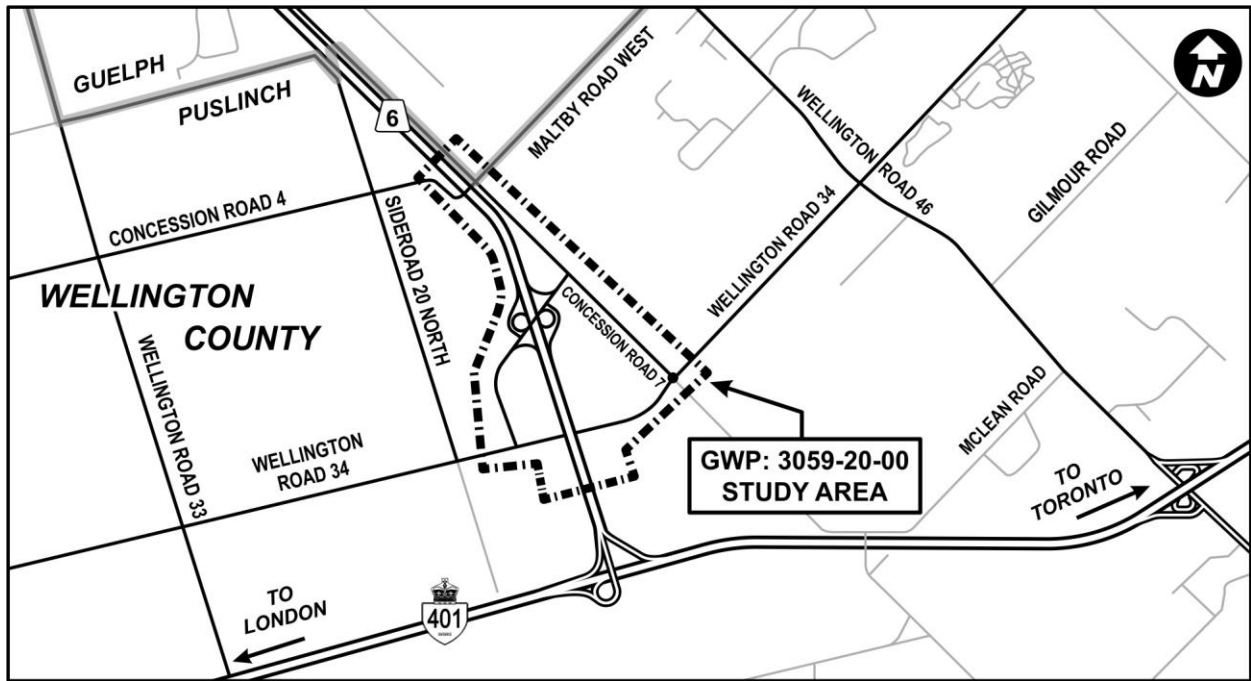
WSP

Peter Bamforth, P.Eng., CEng, MICE
Consultant Project Manager

cc: Olga Khuskivadze, Project Engineer, MTO
Kelly Jansen, Senior Environmental Planner, MTO
Catherine Gentile, Senior Environmental Planner WSP

Attachments: Key Plan

Key Plan:



DCR #1: Highway 6/Hanlon Expressway Midblock Interchange
(Early Works), G.W.P. 3059-20-00
DB Contract Number: 2021-3004
Prepared for the Ministry of Transportation, West Region



APPENDIX C – RELEVANT CORRESPONDENCE

Highway 6 / Hanlon Expressway Midblock Interchange Project
H6-ENV-MasterCommentTrackingTable-2022

Reference #	Date	To	From	Subject	Comment	Response
CT1	April 19, 2022	Project Team	██████████ ██████████	Web Contact Form	Name (First, Last): ██████████ ██████████ ██████████ ██████████ Comment or Message: Please provide updates. Thank you. Would you like to receive project updates? Yes, by email	Good morning ██████████ Thank you for submitting a Web Form. Your information has been added to the Highway 6/Hanlon Expressway Midblock Interchange project contact list. You will receive notifications via email at key project milestones. Thank you, Christine G. <i>(Sent on behalf of the Project Team)</i>
CT2	April 19, 2022	To: jocko@sixnationsns.com Cc: mistyhdi@gmail.com; info@hdi.land; Wagter, Susan (MTO) <susan.wagter@ontario.ca>; Fisher Bloxam, Liane (MTO) <Liane.FisherBloxam@ontario.ca>; Jewell, Sarah (MTO) <Sarah.Jewell@ontario.ca>; Khuskivadze, Olga (MTO) <olga.khuskivadze@ontario.ca>; Bamforth, Peter <Peter.Bamforth@wsp.com>; Gentile, Catherine <Catherine.Gentile@wsp.com>	Evans, Chris (MTO) <Chris.Evans@ontario.ca>	MTO Notice of Project Update: Highway 6 / Hanlon Expressway Midblock Interchange	Dear Leroy Hill, Please find attached a letter and Notice of Project Update for Highway 6 / Hanlon Expressway Midblock Interchange. Sincerely, Chris Evans Head (A) Environmental Delivery West Ontario Ministry of Transportation 226-927-6293 chris.evans@ontario.ca	n/a
CT3	April 19, 2022	To: markhill@sixnations.ca Cc: lonnybomberry@sixnations.ca; dawnrussell@sixnations.ca; Wagter, Susan (MTO) <susan.wagter@ontario.ca>; Fisher Bloxam, Liane (MTO) <Liane.FisherBloxam@ontario.ca>; Jewell, Sarah (MTO) <Sarah.Jewell@ontario.ca>; Khuskivadze, Olga (MTO) <olga.khuskivadze@ontario.ca>; Bamforth, Peter <Peter.Bamforth@wsp.com>; Gentile, Catherine <Catherine.Gentile@wsp.com>	Evans, Chris (MTO) <Chris.Evans@ontario.ca>	MTO Notice of Project Update: Highway 6 / Hanlon Expressway Midblock Interchange	Dear Chief Hill, Please find attached a letter and Notice of Project Update for Highway 6 / Hanlon Expressway Midblock Interchange. Sincerely, Chris Evans Head (A) Environmental Delivery West Ontario Ministry of Transportation 226-927-6293 chris.evans@ontario.ca	n/a

Highway 6 / Hanlon Expressway Midblock Interchange Project
H6-ENV-MasterCommentTrackingTable-2022

Reference #	Date	To	From	Subject	Comment	Response
CT4	April 19, 2022	To: stacey.laforme@mncfn.ca Cc: Mark.Laforme@mncfn.ca ; DOCA.Admin@mncfn.ca ; Wagter, Susan (MTO) < susan.wagter@ontario.ca >; Fisher Bloxam, Liane (MTO) < Liane.FisherBloxam@ontario.ca >; Jewell, Sarah (MTO) < Sarah.Jewell@ontario.ca >; Khuskivadze, Olga (MTO) < olga.khuskivadze@ontario.ca >; Bamforth, Peter < Peter.Bamforth@wsp.com >; Gentile, Catherine < Catherine.Gentile@wsp.com >	Evans, Chris (MTO) < Chris.Evans@ontario.ca >	MTO Notice of Project Update: Highway 6 / Hanlon Expressway Midblock Interchange	Dear Chief LaForme, Please find attached a letter and Notice of Project Update for Highway 6 / Hanlon Expressway Midblock Interchange. Sincerely, Chris Evans Head (A) Environmental Delivery West Ontario Ministry of Transportation 226-927-6293 chris.evans@ontario.ca	n/a
CT5	April 26, 2022	< projectteam@highway6midblock.ca >	[REDACTED]	REMOVE EMAIL ADDRESS FROM MAILING LIST	Thanks please remove my email from the mailing list. I have moved, Regards [REDACTED]	<i>No response required. Contact was removed on April 26, 2022.</i>
CT6	April 26, 2022	< projectteam@highway6midblock.ca >	[REDACTED]	RE: Highway 6 / Hanlon Expressway Midblock Interchange Detail Design, Class EA Study - Notice of Project Update	Good afternoon, Please remove me from this list as well as mail. [REDACTED] Thank you, [REDACTED]	Good afternoon [REDACTED] Your contact information has been removed from the contact list and you will no longer receive updates related to the Project. You may still receive a hardcopy of the Notice, as it was mailed out yesterday morning via Canada Post. Please disregard. Thank you Christine G. <i>(Sent on behalf of the Project Team)</i>
CT7	April 27, 2022	Gentile, Catherine < Catherine.Gentile@wsp.com >	Samantha Osborn < Samantha.Osborn@guelph.ca >	Mail Received - WPS Highway 6 Midblock Interchange	Hello, This note is to inform that City Clerk's Office received the request for feedback form for the Highway 6/Hanlon Expressway Midblock Interchange, Phase 2. It has been forwarded to the proper authority in Engineering and Transportation Services. Best Regards, Sammy Osborn (she/her), Administrative Coordinator City Clerk's Office, Corporate Services City of Guelph 519-822-1260 ext 3941 samantha.osborn@guelph.ca	<i>Noted. No response required at this time.</i>

Reference #	Date	To	From	Subject	Comment	Response
CT8	April 27, 2022	Bamforth, Peter < Peter.Bamforth@wsp.com >	[REDACTED]	[REDACTED]	<p>Hello.</p> <p>I recently received a project update on(gwp.3059-20-00). Please add email [REDACTED]</p> <p>Thank you for these changes and for the continued updates.</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	See CT1 for response. Contact list updated. No further response required at this time.
CT9	April 28, 2022	projectteam@highway6midblock.ca	<p>NPP ONT / PPN ONT NPPONT-PPNONT@tc.gc.ca</p> <p>Courtney Bice Officer Agent Navigation Protection Program Programme de protection de la navigation Transport Canada Transports Canada 100 Front St. S., Sarnia ON N7T 2M4 Government of Canada Gouvernement du Canada</p>	Highway 6 / Hanlon Expressway Midblock Interchange Detail Design, Class EA Study - Notice of Project Update	<p>Good morning,</p> <p>The Navigation Protection Program (NPP) is responsible for the administration of the <i>Canadian Navigable Waters Act</i> (CNWA), which prohibits the construction or placement of any “works” in a navigable waterway without complying with the requirements of the Act.</p> <p>The Navigation Protection program also maintains responsibility for provisions of the Wrecked Abandoned or Hazardous Vessels Act (WAHVA) and the Private Buoy Regulations under the Canada Shipping Act, 2001.</p> <p>If the project proposes any work in, on, under, over, through or across a navigable water, it is subject to the Act. The obligations vary depending on what waterbody the work is proposed on.</p> <p>If the work is proposed on a waterbody not found on the Schedule (link to the Schedule here- Canadian Navigable Waters Act (justice.gc.ca)), then the owner has the following two options:</p> <ul style="list-style-type: none"> • apply for approval of the works under the <i>Canadian Navigable Waters Act</i> (CNWA section 10(1)(a)) (note: any future construction activities related to these works would continue to be regulated under the <i>Canadian Navigable Waters Act</i> (CNWA approval would be required)); or 	As this project does not include work in, on, under, over, through or across a navigable water, no further action is required at this time.

Reference #	Date	To	From	Subject	Comment	Response
					<ul style="list-style-type: none"> follow the public resolution process by publishing a notice and depositing the work in the online registry for public comment (CNWA section 10(1)(b)). <p>If the work is proposed on a waterbody found on the Schedule, then the owner must submit an application for approval.</p> <p>To start the public resolution process and publish a notification for the works, you will have to create an account through the external submission site and follow the prompts and instructions provided. I would recommend using the Project Review Tool (left side of the screen once you have logged in). It will walk you through the details. Once you have published your notification for the works- it can be found on our Common Project Search Registry.</p> <p>To apply online:</p> <ol style="list-style-type: none"> Follow the prompts to create an account on the NPP external submission site, or login if you already have an account. Complete the application for an approval form. Upload the supporting documents to complete your application. After creating your submission, use your online account to edit, or view your application before it is submitted. Once your application is submitted it can only be viewed. <p>If you have any other questions, please let me know.</p>	

Highway 6 / Hanlon Expressway Midblock Interchange Project
H6-ENV-MasterCommentTrackingTable-2022

Reference #	Date	To	From	Subject	Comment	Response
CT10	April 29, 2022	Bamforth, Peter < Peter.Bamforth@wsp.com >	Ola Panczyk < opanczyk@hrca.on.ca >	Highway 6 / Hanlon Expressway Midblock Interchnage - Detail Design - Class EA Study and Construction - Notice of Project Update (G.W.P. 3059-20-00)	<p>Good morning,</p> <p>Thank you for providing a Project Update.</p> <p>Phase 2 of the Highways 6 and 401 Improvements (Hanlon Expressway Midblock Interchange and associated works) is located outside of CH's jurisdiction. As such, CH staff will not be providing comments on the recent notice. Contact with the Grand River Conservation Authority is recommended as the limits of Phase 2 fall within their jurisdiction.</p> <p>Kind regards, Ola</p>	<p>Good afternoon Ola,</p> <p>Thank you for email. The Grand River Conservation Authority have been included on our project contact list and they have received the Notice of Study Update.</p> <p>As Phase 2 of our project is located outside of Conservation Halton's jurisdiction, we will remove your contact information from our circulation list. Project notifications and updates will continue to be posted on the project website at: https://highway6midblock.ca/. Feel free to contact us at any time if you have further questions or concerns.</p> <p>Thank you, Christine Green (Sent on behalf of the Project Team)</p>
CT11	May 3, 2022	projectteam@highway6midblock.ca	<p>Sally Drew Administrative Assistant Infrastructure, Development and Enterprise Services, Environmental Services City of Guelph 519-822-1260 extension 3600 TTY 519-826-9771 sally.drew@guelph.ca guelph.ca</p>	<p>Jennifer Rose is now the General Manager of Environmental Services in Guelph</p>	<p>Good afternoon Peter.</p> <p>Today in the mail I received your letter regarding the Highway 6-Hanlon Expressway Midblock Interchange Detail Design, Class EA Study and Construction Notice of Project Update.</p> <p>I'm writing to let you know that Peter Busatto is no longer the General Manager of Environmental Services with the City of Guelph; Jennifer Rose is now in this role. jennifer.rose@guelph.ca</p> <p>I'm letting you know so you can update your records accordingly.</p> <p>Sent with hope that you're having a good day, Sally.</p>	<p>Contact list updated. No further response required.</p>
CT12	May 5, 2022	<p>Khuskivadze, Olga (MTO) <olga.khuskivadze@ontario.ca>; Bamforth, Peter <Peter.Bamforth@wsp.com></p>	<p>[REDACTED]</p>	G.W.P. 3059-20-00	<p>Please be advised that my address was changed by Canada Post and is now [REDACTED]. My email has also been arbitrarily changed by Bell and now is [REDACTED].</p> <p>Thank you [REDACTED]</p>	<p>Contact list updated. No further response required.</p>

Reference #	Date	To	From	Subject	Comment	Response
CT13	May 8, 2022	projectteam@highway6midblock.ca	[REDACTED]	Web Contact	<p>I have messaged in the past and I am still dismayed by the requirement of a midblock exchange. Yes, it may avoid some significant wetlands, but it creates an island effect around those avoided wetlands that you are trying to protect. Animals that are supported by these wetlands will not be able to access it without moving through an interchange. Would it not be more beneficial to destroy habitat near the interchange and compensate for the loss, so to not create a massive island wetland from the mid-block interchange?</p> <p>Additionally, this interchange should not be the first step of the bypass highway around Morriston. There is little concern at this interchange and if you wanted to keep traffic moving, a round-a-bout would suffice for the next 20 years, as they attempt to figure out the timing of the extended highway. Needless paving for a 'one-day' highway seems like a large waste of taxpayers money.</p> <p>Please provide some clarity.</p> <p>[REDACTED]</p>	<p>Hello [REDACTED],</p> <p>Thank you for your feedback regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00).</p> <p>The new Highway 6 / Hanlon Expressway Midblock Interchange is needed to alleviate congestion on local roads, enhance safety and capacity of the Highway 6 / Hanlon Expressway, and provide an improved link between the Guelph area and Highway 401.</p> <p>In addition to these updates needed to enhance safety and capacity, this project is also being undertaken to align with ongoing provincial and municipal plans, including the Greater Golder Horseshoe Transportation Plan (2022), Growth Plan for the Greater Golden Horseshoe (2020), Greenbelt Plan (2017), Guelph-Wellington Transportation Study (2005) and Wellington County Official Plan (2021).</p> <p><i>A Terrestrial Ecosystem Existing Conditions and Impact Assessment Report</i> was prepared for the Highways 6 and 401 Improvements Detail Design and Class Environmental Assessment (G.W.P. 3042-14-00) in July 2021. The findings of the report can be found on the Highways 6 and 401 Improvements project website at: https://highways6and401hamiltontoguelph.ca/reports/. For specific information on the Impact Assessment and Mitigation of the Terrestrial Ecosystems, please refer to the following link: https://highways6and401hamiltontoguelph.ca/wp-content/uploads/2021/11/Terrestrial-IA_Report-only_Part5.pdf. As noted in the report, maintaining habitat connectivity is important for the preservation of local wildlife. Specific culvert design and placement considerations can be used to mitigate these potential risks.</p> <p>Building off the Impact Assessment that was undertaken for the aforementioned project, our environmental specialists will be completing further field investigations for the Hanlon Expressway Midblock Interchange study area to ensure a strong Environmental Management</p>

Reference #	Date	To	From	Subject	Comment	Response
						<p>Plan is in place for the construction phase of the interchange. Through the implementation of these mitigation measures, it is anticipated that low net effects will result from the Project.</p> <p>You have been included on the project contact list and will be notified during project milestones and updates.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment <i>(Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</i></p>
CT14	May 7, 2022	projectteam@highway6midblock.ca	[REDACTED]	Web Contact	<p>Comment or Message Simply, an interested South Guelph resident. Would you like to receive project updates? Yes, by regular mail</p>	<p><i>No response required; info already included on project contact list.</i></p>
CT15	May 16, 2022	Gentile, Catherine < Catherine.Gentile@wsp.com >	<p>From: Erin Runciman <erinr@wellington.ca> on behalf of Joe de Koning <joedk@wellington.ca> The County of Wellington Engineering Services</p> <p>Joe DeKoning 519-400-4319 74 Woolwich St, Guelph N1h 3T9</p>	Agency Comment Form - HWY 6/Hanlon Expressway Midblock Interchange	<p>Good morning, Catherine</p> <p>Please see attached Agency Comment Form regarding Highway 6 / Hanlon Expressway Midblock Interchange.</p> <p><i>Sent on behalf of Joe de Koning</i> Joe de Koning, P.Eng. <i>Manager of Roads</i> County of Wellington Phone (519) 837-2601 x2270</p> <p>Comment form:</p> <ul style="list-style-type: none"> - Mid block connection to Con 7 and WR 34 - Round-a-bout design Con 7 @ WR34 - Potential for truck turn around @ Con 7 and Maltby Road. 	<p>Good afternoon Joe,</p> <p>Thank you for providing a comment form regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00) and for attending the Municipal Meeting on Wednesday, June 8, 2022. We look forward to our continued collaboration with the County of Wellington on this Design-Build Project.</p> <p>We would like to schedule a meeting with you to further discuss the items outlined in your comment form. Please provide your availability for a virtual meeting and we can circulate an invite to the appropriate Project Team members.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment <i>(Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</i></p>

Reference #	Date	To	From	Subject	Comment	Response
CT16	May 17, 2022	Khuskivadze, Olga (MTO) < olga.khuskivadze@ontario.ca >; Bamforth, Peter < Peter.Bamforth@wsp.com >	Chris Lorenz, M.Sc. Resource Planner Grand River Conservation Authority 400 Clyde Road, PO Box 729 Cambridge, ON N1R 5W6 Office: 519-621-2763 ext. 2236 Toll-free: 1-866-900-4722 Fax: 519-621-4844 < clorenz@grandriver.ca >	Hwy 6/Hanlon Expressway Midblock Interchange Class EA (G.W.P. 3059-20-00) - GRCA Comments	<p>Good afternoon,</p> <p>Please find attached GRCA comments for the subject Class EA.</p> <p>Regards,</p> <p>Chris Lorenz, M.Sc. Resource Planner Grand River Conservation Authority 400 Clyde Road, PO Box 729 Cambridge, ON N1R 5W6 Office: 519-621-2763 ext. 2236 Toll-free: 1-866-900-4722 Fax: 519-621-4844</p> <p>Attachment: Thank-you for circulating the Grand River Conservation Authority on the above-noted Class Environmental Assessment. Natural Heritage and Natural Hazard Features in the area which may be impacted are as follows:</p> <ul style="list-style-type: none"> - Mill Creek and tributaries, a designated cold water watercourse - Floodplain Associated with Mill Creek and its tributaries - Mill Creek Puslinch Provincially Significant Wetland (PSW) Complex <p>The Class EA may propose measures that have the potential to impact these regulated features. As such, the GRCA wishes to stay involved as the EA process moves forward.</p> <p>Please include the GRCA on the Project mailing list. Should you have any questions or require additional information, please feel free to contact Chris Lorenz at 519-621-2763 ext. 2236 or clorenz@grandriver.ca.</p>	<p>Good afternoon Chris,</p> <p>Thank you for your email regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00). Your comments have been documented and circulated to our Project Team and Environmental Specialists for consideration.</p> <p>You have been included on the project contact list and will be notified during project updates or milestones. We look forward to working with the Grand River Conservation Authority throughout this Design-Build Project.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment (Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</p>

Reference #	Date	To	From	Subject	Comment	Response
CT17	May 19, 2022	To: Olga.Khuskivdze@ontario.ca ; Bamforth, Peter < Peter.Bamforth@wsp.com >	Jennifer Juste (she/her) Manager, Transportation Planning City of Guelph 519-822-1260 extension 2791 Jennifer.juste@guelph.ca	MTO Consultation: highway 6 and 401 midblock interchange (G.W.P. 3059-20-00)	<p>Good afternoon Ms. Khuskivdze, Please find comments from the City of Guelph on the noted project attached. Thank you for your ongoing consultation efforts with us and other impacted municipalities. The engagement on this project is appreciated.</p> <p>Sincerely, Jennifer Juste (she/her) Manager, Transportation Planning City of Guelph 519-822-1260 extension 2791 Jennifer.juste@guelph.ca</p> <p>Attachment: City of Guelph staff have received the letter on the project update, dated April 25, 2022. Staff appreciate the opportunity to offer additional background information and identify local challenges.</p> <p>Staff acknowledge that MTO included the improvement on Concession 7 as part of the project after having heard concerns raised from local municipalities. As a direct connection to the future midblock interchange, Concession 7 serves and will continue to serve as a key corridor to carry traffic to/from City, in particular from the future adjacent Clair-Maltby Secondary Plan (up to 25,000 people) and Southgate Business Park expansion, as well as new industrial developments within the township jurisdiction. The level of truck volumes is expected to be high as many of these trucks originate from or are destined to Highway 401 to the south. The geometric features such as the vertical gradient and pavement condition should be modified to be conducive for all vehicles for safety and efficiency. By making Concession 7 an attractive alternative for north-south traffic, it would alleviate the pressure on Gordon Street and Brock Road (WR 46).</p> <p>In addition, staff continue to recommend illumination at the intersection of Maltby Road / Crawley Road / Concession 7. This intersection</p>	<p>Hi Jennifer,</p> <p>Thank you for providing the City of Guelph's feedback and additional background information regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00). Regarding your comment that the geometric features should be conducive for all vehicles, the Project Team would like to note that the re-aligned Concession Road 7 will consist of a 3.50 m paved lane and 2.50 m paved shoulder in each direction. The proposed design geometry meets or exceeds a design speed of 80 km/h. It is our understanding that the new industrial developments are located along Crawley Road, north of the Maltby Road intersection. The existing Highway6/Maltby Road intersection will be closed; therefore, trucks from Highway 401 would access the new Midblock interchange before using the Midblock Connection Road /Concession 7 intersection. These roadways will be designed to accommodate trucks turning movements. Alternatively, trucks can use the existing Laird Road interchange, located further north of the project limits, to access the industrial areas.</p> <p>For the south approach, the proposed intersection sight distance exceeds the design speed of 80km/h for Concession Road 7. For the east approach, the existing intersection sight distance exceeds the posted speed of 60 km/h on Maltby Road West.</p> <p>With regards to the illumination requested at the intersection of Maltby Road/Crawley Road/Concession 7, the Project Team can confirm that an illumination warrant is not met (see attached updated Form 3). If the City of Guelph is interested in installing illumination at their cost, a cost-sharing agreement could be explored.</p> <p>The Ministry has reviewed the signal warrant at the intersection of Highway 6/Maltby Rd that was included in the Traffic Impact Study. Although a signal is warranted based on the volumes provided in the report, this improvement will need to be provincially prioritized. It is likely that by the time construction of</p>

Reference #	Date	To	From	Subject	Comment	Response
					<p>will become busy due to the above-mentioned development potentials. MTO used "Form 3 Non-Freeway Intersection Illumination" to assess the illumination criteria and found illumination was not warranted. In review of Form 3, staff believe some parameters in the Form 3 should be modified and the modification may render the illumination warranted.</p> <p>These parameters include:</p> <ul style="list-style-type: none"> a) the intersection is located in a predominantly industrial area not a residential area; b) in the absence of dedicated turning lanes, the approach lane width could be wider (up to 3.75m) to facilitate truck turning movements; and c) there is a substantial grade change in the south approach and east approach that impedes sightlines. <p>It is staff's understanding that following the construction completion at the midblock interchange, the intersection at Maltby Road / Concession Road 4 / Hanlon Expressway will be closed. Staff was made aware via a recent traffic impact study that the existing traffic volumes already fulfil traffic signalization criteria today. The additional diverted traffic due to construction at the midblock interchange further supports the need for signal control at this intersection. Staff is of the opinion that this intersection should be temporarily signalized now and remain signalized until its full closure.</p> <p>Staff look forward to providing further input on other construction issues such as phasing, timing and detour plan. This will help the City and MTO work collaboratively and better communicate with residents, communities, and various stakeholders. We very much appreciate the good communication on this project to-date. Please continue to notify staff of any upcoming public meetings and advisory group meetings. Should you have any questions about the above comments, please feel free to contact us.</p>	<p>this improvement is scheduled, the intersection will be closed.</p> <p>We appreciate the City of Guelph's attendance at our Municipal Meeting held on Wednesday, June 8, 2022. We look forward to our continued collaboration with the City of Guelph on this Design-Build Project.</p>

Reference #	Date	To	From	Subject	Comment	Response
CT18	May 26, 2022	To: ProjectTeam@Highway6Midblock.ca ; peter.bamworth@wsp.com ; Khuskivadze, Olga (MTO) < Olga.Khuskivadze@ontario.ca > Cc: McCloskey, Amanda (NDMNRF) < Amanda.McCloskey@ontario.ca >	Pauline Capelle (she/her), Regional Planner Land Use Planning and Strategic Issues Section Southern Region Ministry of Northern Development, Mines, Natural Resources and Forestry Pauline.Capelle@Ontario.ca 705-761-5633	Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00)	<p>Good Afternoon,</p> <p>MNDMNRF has received your attached Notice of Project Update (G.W.P. 3059-20-00) and appreciates the opportunity to participate in this project.</p> <p>MNDMNRF has an interest in continued involvement in this EA. Please add Pauline Capelle as your NDMNRF contact on further communications and submissions: Pauline Capelle, Regional Planner Land Use Planning and Strategic Issues Section Ministry of Northern Development, Mines, Natural Resources and Forestry (705) 761-5633 Pauline.Capelle@Ontario.ca</p> <p>Understanding that the current comment deadline has passed, we would still appreciate the opportunity to review and provide any comments on our interests to inform preparation of the DCRs. To help aid in our review, could you please provide a shapefile of the project alignment / footprint?</p>	<p>Good afternoon Pauline,</p> <p>Thank you for your email regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00).</p> <p>A shapefile of the project footprint has been attached to this email for your reference. Although the comment period for the Notice of Study Commencement has passed, the Project Team welcomes comments or questions at anytime throughout the lifetime of this project. All comments will be documented in the Design and Construction Reports (DCRs). Two DCRs are planned for this project.</p> <p>You have been included on the project contact list and will be notified during project updates or milestones. We look forward to working with the MNDMNRF throughout this Design-Build Project.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment <i>(Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</i></p>
	June 9, 2022	To: ProjectTeam@Highway6Midblock.ca ; peter.bamforth@wsp.com ; Khuskivadze, Olga (MTO) < Olga.Khuskivadze@ontario.ca > Cc: McCloskey, Amanda (NDMNRF) < Amanda.McCloskey@ontario.ca >	From: Capelle, Pauline (NDMNRF) < Pauline.Capelle@ontario.ca >	RE: Highway 6 / Hanlon Expressway Midblock Interchange (G.W.P. 3059-20-00)	<p>Hello,</p> <p>Following up on this request.</p> <p>Many Thanks,</p> <p>Pauline Capelle (she/her) Regional Planner 705-761-5633</p>	See response above.


Reference #	Date	To	From	Subject	Comment	Response
CT19	May 28, 2022	ProjectTeam@highway6midblock.ca	[REDACTED]	Web Contact	<p>Comment or Message</p> <p>Hello, I am curious if this project has begun and when to expect to start to see construction crews. Is there any ETA of when access from Maltby rd and the other at grade intersections are going to be removed from HWY 6. Basically I am curious when I can no longer merge from Hwy 6 to Maltby rd and such, if there is an eta for that stage of construction, if the roads will be closed early on in the project or not until the end near 2025</p> <p>Thanks for your time</p> <p>Would you like to receive project updates?</p> <p>Yes, by email</p>	<p>Good afternoon [REDACTED],</p> <p>We have received your question regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00).</p> <p>Field investigations are currently underway within the study area to collect information that will assist us with the design and construction of the works.</p> <p>Construction is anticipated to begin in Fall 2022 and end in 2025. The existing intersections between Highway 6 / Maltby Road and Highway 6 / Concession 4 are not scheduled to be closed until the Midblock Interchange and Concession 7 are open to traffic. This is expected in the final year of construction in 2025.</p> <p>This schedule may change based on the timing of environmental clearances and permits. Road closure notification signage will be placed 1 to 2 weeks in advance of any road closures to inform the travelling public.</p> <p>As we move further along in our project, the 'Construction Progress Updates' page on the project website will be updated on a weekly basis with proposed traffic restrictions and detour routes, as well as photographs of the site. The webpage can be accessed by clicking the following link: Highway 6 / Hanlon Expressway Midblock Interchange » Construction Progress Updates (highway6midblock.ca)</p> <p>You have been included on the project contact list and will be notified during project updates or milestones.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment <i>(Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</i></p>

Highway 6 / Hanlon Expressway Midblock Interchange Project
H6-ENV-MasterCommentTrackingTable-2022


Reference #	Date	To	From	Subject	Comment	Response
CT20	May 19, 2022	Richard.Bolliger@rci.rogers.com Cc: Michele.Luker@ontario.ca ; Bamforth, Peter < Peter.Bamforth@wsp.com >; Karki, Suvash < Suvash.Karki@wsp.com >; h.dewal@mcintoshperry.com ; Terence.Mitchell@ontario.ca ; Jackson, Geoff (CRH Canada Group Inc.) < g.jackson@ca.crh.com >; Mach, Minh < Minh.Mach@wsp.com >	Lawson, Julien (CRH Canada Group Inc.) < Julien.Lawson@ca.crh.com >	MTO 2021-3004 (Hanlon Midblock, Wellington 34 & Concession 7) Composite Utility Relocation Meeting	<p>Good Afternoon.</p> <p>Dufferin Construction Company and WSP have been awarded MTO 2021-3004 design-build project which includes the requirement to coordinate relocations for the proposed work. 3rd party utility relocations are expected on Hanlon Expressway, Wellington Road 34 and Concession 7.</p> <p>Attached are the Utility Tracking Table and Service Provider Notice provided by MTO.</p> <p>I would like to schedule a meeting to discuss the utility relocations.</p> <p>Please confirm your availability.</p> <p>Regards,</p> <p>Julien Lawson, C.Tech., rcsi Sr. Quality Control Administrator</p> <p>Dufferin Construction Company A CRH Company A division of CRH Canada Group Inc. Q.C. Office, 731 Third Line Oakville, Ontario L6L 4B2 julien.lawson@ca.crh.com M 416-258-8636 www.dufferinconstruction.com</p>	<i>Waiting on response from Rogers</i>
CT21	May 19, 2022	ian.bolton@alectrautilities.com Cc: Michele.Luker@ontario.ca ; Bamforth, Peter < Peter.Bamforth@wsp.com >; Karki, Suvash < Suvash.Karki@wsp.com >; h.dewal@mcintoshperry.com ; Terence.Mitchell@ontario.ca ; Jackson, Geoff (CRH Canada Group Inc.) < g.jackson@ca.crh.com >; Mach, Minh < Minh.Mach@wsp.com >	Lawson, Julien (CRH Canada Group Inc.) < Julien.Lawson@ca.crh.com >	MTO 2021-3004 (Hanlon Midblock, Wellington 34 & Concession 7) Composite Utility Relocation Meeting	<p>Good Afternoon.</p> <p>Dufferin Construction Company and WSP have been awarded MTO 2021-3004 design-build project which includes the requirement to coordinate relocations for the proposed work. 3rd party utility relocations are expected on Hanlon Expressway, Wellington Road 34 and Concession 7.</p> <p>Attached are the Utility Tracking Table and Service Provider Notice provided by MTO.</p>	<i>Waiting on response from Alectra</i>

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					<p>I would like to schedule a meeting to discuss the utility relocations.</p> <p>Please confirm your availability.</p> <p>Regards,</p> <p>Julien Lawson, C.Tech., rcsi Sr. Quality Control Administrator</p> <p>Dufferin Construction Company A CRH Company A division of CRH Canada Group Inc. Q.C. Office, 731 Third Line Oakville, Ontario L6L 4B2 julien.lawson@ca.crh.com M 416-258-8636</p> <p>www.dufferinconstruction.com</p>	
CT22	May 19, 2022	<p>Joan.Zhao@HydroOne.com, Lavan.Veerasingam@hydroone.com, southernFBCPlanning@HydroOne.com</p> <p>Cc: Michele.Luker@ontario.ca; Bamforth, Peter <Peter.Bamforth@wsp.com>; Karki, Suvash <Suvash.Karki@wsp.com>; h.dewal@mcintoshperry.com; Terence.Mitchell@ontario.ca; Jackson, Geoff (CRH Canada Group Inc.) <g.jackson@ca.crh.com>; Mach, Minh <Minh.Mach@wsp.com></p>	Lawson, Julien (CRH Canada Group Inc.) < Julien.Lawson@ca.crh.com >	MTO 2021-3004 (Hanlon Midblock, Wellington 34 & Concession 7) Composite Utility Relocation Meeting	<p>Good Afternoon.</p> <p>Dufferin Construction Company and WSP have been awarded MTO 2021-3004 design-build project which includes the requirement to coordinate relocations for the proposed work. 3rd party utility relocations are expected on Hanlon Expressway, Wellington Road 34 and Concession 7.</p> <p>Attached are the Utility Tracking Table and Service Provider Notice provided by MTO.</p> <p>I would like to schedule a meeting to discuss the utility relocations.</p> <p>Please confirm your availability.</p> <p>Regards,</p> <p>Julien Lawson, C.Tech., rcsi Sr. Quality Control Administrator</p> <p>Dufferin Construction Company A CRH Company</p>	<i>Waiting on response from Hydro One</i>

Reference #	Date	To	From	Subject	Comment	Response
					<p>A division of CRH Canada Group Inc. Q.C. Office, 731 Third Line Oakville, Ontario L6L 4B2 julien.lawson@ca.crh.com M 416-258-8636</p> <p>www.dufferinconstruction.com</p>	
CT23	May 19, 2022	<p>To: Kevin Schimus <Kevin.Schimus@enbridge.com> Cc: Michele.Luker@ontario.ca; Bamforth, Peter <Peter.Bamforth@wsp.com>; Suvash.Karki@wsp.com; h.dewal@mcintoshperry.com; Terence.Mitchell@ontario.ca; Jackson, Geoff (CRH Canada Group Inc.) <g.jackson@ca.crh.com>; Mach, Minh <Minh.Mach@wsp.com></p>	<p>Lawson, Julien (CRH Canada Group Inc.) <Julien.Lawson@ca.crh.com></p>	<p>RE: MTO 2021-3004 (Hanlon Midblock, Wellington 34 & Concession 7) Composite Utility Relocation Meeting</p>	<p>Dufferin Construction Company and WSP have been awarded MTO 2021-3004 design-build project which includes the requirement to coordinate relocations for the proposed work. 3rd party utility relocations are expected on Hanlon Expressway, Wellington Road 34 and Concession 7.</p> <p>Attached are the Utility Tracking Table and Service Provider Notice provided by MTO.</p> <p>I would like to schedule a meeting to discuss the utility relocations.</p> <p>Please confirm your availability.</p> <p>Regards,</p> <p>Julien Lawson, C.Tech., rcsi Sr. Quality Control Administrator</p> <p>Dufferin Construction Company A CRH Company A division of CRH Canada Group Inc. Q.C. Office, 731 Third Line Oakville, Ontario L6L 4B2 julien.lawson@ca.crh.com M 416-258-8636</p>	<p>Hi Julien,</p> <p>I'm available next Monday May 30 (AM), Tuesday May 31 (AM) or Wed June 1 (AM) or June 6th AM/PM or June 10th AM</p> <p>I attached previous email re: conflict locations and follow up information from MTO re: cost share and depths – FYI</p> <p>I'm still waiting on autocad dwg showing proposed new interchange and any other proposed widened property lines along Conc Rd 7 @ Wellington Rd 34 and Maltby Rd so I can have Enbridge GIS updated to allow completion of gas relocation plan. I followed up with Felipe from Aecom and he advised that information should be ready to share sometime this week.</p> <p>Regards, Kevin</p> <p>Attachment: Hi Geoff, Based on test pit information and discussions to date the notes in comment 1) below are inaccurate, due to conflicts identified with the NPS 8 ST Distribution 420kPa main after test pits, prelim gas relocation strategy has been developed from approx. 12+100 to 9+775 new gas main will be relocated to other side of road away from hydro towers approx. 1.0m off east P/L from 12+100 to 9+775 and will be upsized to NPS 12 ST Distribution 420kPa main. Majority of pipe relocation will be outside proposed ditching/grading limits and installed to a depth of 1.2m with exception of area where grading/ditching/culverts are proposed between 10+500-10+700 due to narrowing of the right of way. We'll need additional information and cross</p>

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						<p>sections in this area to confirm location of ditch/culvert/grading to ensure final cover overtop of proposed NPS 12 ST main is 1.2m</p>  <p>I also need confirmation on cost sharing, MTO cost sharing for Highways is based on Public service works on Highway Act (50% labour and labour saving devices) Since Concession Road 7 isn't officially an MTO Highway will Enbridge Gas typical franchise agreement cost sharing apply in this case? (35% of all costs + 22.5% overheads/admin)</p> <p>Due to the current long lead times for steel fittings/steel pipe and coating of steel pipe, I'd like to have prelim design completed and approved asap to allow procurement to be initiated. Contingent on timing of pipe and permits, current tentative schedule is to start gas relocations sometime late 2022 with completion end of Q1/early Q2 2023.</p> <p>Regards,</p> <p>Kevin Schimus Sr. Advisor, Construction and Project Management Southeast Region Construction and Growth</p> <p>Enbridge Gas Inc Cell: 519-635-9488 Kevin.Schimus@enbridge.com 603 Kumpf Drive, Waterloo, Ontario, N2V 1K3</p>

Reference #	Date	To	From	Subject	Comment	Response
CT24	May 19, 2022	<p>To: chris.gill@bell.ca</p> <p>Cc: Michele.Luker@ontario.ca; Bamforth, Peter <Peter.Bamforth@wsp.com>; Suvash.Karki@wsp.com; h.dewal@mcintoshperry.com; Terence.Mitchell@ontario.ca; Jackson, Geoff (CRH Canada Group Inc.) <g.jackson@ca.crh.com>; Mach, Minh <Minh.Mach@wsp.com></p>	<p>Lawson, Julien (CRH Canada Group Inc.) <Julien.Lawson@ca.crh.com></p>	<p>RE: MTO 2021-3004 (Hanlon Midblock, Wellington 34 & Concession 7) Composite Utility Relocation Meeting</p>	<p>Dufferin Construction Company and WSP have been awarded MTO 2021-3004 design-build project which includes the requirement to coordinate relocations for the proposed work. 3rd party utility relocations are expected on Hanlon Expressway, Wellington Road 34 and Concession 7.</p> <p>Attached are the Utility Tracking Table and Service Provider Notice provided by MTO.</p> <p>I would like to schedule a meeting to discuss the utility relocations.</p> <p>Please confirm your availability.</p> <p>Regards,</p> <p>Julien Lawson, C.Tech., rcsi Sr. Quality Control Administrator</p> <p>Dufferin Construction Company A CRH Company A division of CRH Canada Group Inc. Q.C. Office, 731 Third Line Oakville, Ontario L6L 4B2 julien.lawson@ca.crh.com M 416-258-8636</p>	<p><i>Waiting on response from Bell</i></p>
CT25	June 6, 2022	<p>ProjectTeam@highway6midblock.ca</p>	<p>[REDACTED]</p>	<p>Web Contact Form</p>	<p>I'd like to be kept up to date on the bypass project. I really wish this wasn't a "phased" approach because the daily congestion, accidents, deaths, and volume of traffic demand an expedited solution.</p>	<p>Good morning [REDACTED]</p> <p>Thank you for your feedback regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00). Your comments have been documented and circulated to our Project Team for consideration.</p> <p>Field investigations are currently underway within the study area to collect information that will assist us with the design and construction of the works. As we move further along in our project, the 'Construction Progress Updates' page on the project website will be updated on a weekly basis with proposed traffic restrictions and detour routes, as well as photographs of the site. The webpage can be accessed by clicking the following</p>

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						<p>link: https://highway6midblock.ca/construction-progress-updates/</p> <p>You have been included on the project contact list and will be notified during project updates or milestones.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment (Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</p>
CT26	June 14, 2022	Glenn Schwendinger Chief Admin Officer Township of Puslinch <gschwendinger@puslinch.ca>	Jewell, Sarah (MTO) <Sarah.Jewell@ontario.ca>; Khuskivadze, Olga (MTO) <olga.khuskivadze@ontario.ca>; Hwy 6 Hanlon Expwy Hwy6HanlonExpwy@wsp.com ; DeDecker, Julia <Julia.DeDecker@aecom.com>; Courtenay Hoytfox <choytfox@puslinch.ca>	follow up from our meeting last week - Midblock	<p>Good morning</p> <p>I am following up on our meeting last week to discuss the midblock project. I had asked during the meeting for comments from Puslinch to the MTO be reflected in the record as well. Attached please find the following:</p> <ol style="list-style-type: none"> 1. Comments/concerns submitted March 19 2021 2. Response from MTO 3. Emailed response sent Nov 23 2021 to MTO with remaining concerns and request for a meeting <p>Please ensure that the records reflect that comments were received from Puslinch as well. As I indicated in the meeting, please ensure that you meet with Puslinch Fire and Rescue as they are the first responders in the location of the project.</p>  <p>Glenn Schwendinger Chief Administrative Officer Township of Puslinch 7404 Wellington Rd. 34, Puslinch, ON N0B 2J0 P: 519-763-1226 ext. 214/Fax: 519-763-5846 www.puslinch.ca</p> <p>Attachment 1: General Comments 1. The Township requests to remain a stakeholder in this project o The Township of Puslinch formally requests to be listed/named as a stakeholder on this project as the project moves forward into next phases, right through to completion of construction. 2. That copies of technical reports be provided to the Township during the detailed design stages.</p>	<p>From: Green, Christine Sent: August 15, 2022 4:04 PM To: Glenn Schwendinger <gschwendinger@puslinch.ca> Cc: Courtenay Hoytfox <choytfox@puslinch.ca>; Jewell, Sarah (MTO) <Sarah.Jewell@ontario.ca>; Mitchell, Terence (MTO) <Terence.Mitchell@ontario.ca>; Khuskivadze, Olga (MTO) <olga.khuskivadze@ontario.ca>; Jansen, Kelly (MTO) <Kelly.Jansen@ontario.ca>; Karki, Suvash <Suvash.Karki@wsp.com>; Bamforth, Peter <Peter.Bamforth@wsp.com>; Mach, Minh <Minh.Mach@wsp.com>; Hwy 6 Hanlon Expwy <Hwy6HanlonExpwy@wsp.com>; Gentile, Catherine <Catherine.Gentile@wsp.com>; Jackson, Geoff (CRH Canada Group Inc.) <g.jackson@ca.crh.com>; Hotze de Wal <h.dewal@mcintoshperry.com> Subject: RE: Highway 6 / Hanlon Expressway Midblock Interchange Design-Build and Class Environmental Assessment Study (G.W.P. 3059-20-00) CT26</p> <p>Good afternoon Glenn,</p> <p>Thank you for forwarding the Township of Puslinch's comments and concerns, which were originally submitted to the <i>Highways 6 and 401 Improvements</i> Project Team on March 19, 2021. We have reviewed and tracked the feedback appropriately to ensure that the Township's comments are captured in the Highway 6 / Hanlon Expressway Midblock Interchange Design-Build and Class Environmental Assessment Study (G.W.P. 3059-20-00). We appreciate your patience during this time.</p>

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					<p>o The Township formally requests that as the project proceeds through detailed design that copies of all relevant studies be provided for review and comment. This is imperative to our community due to the extensive direct impacts this undertaking will have on our community. These studies would include but would not be limited to noise, traffic, environmental, hydrogeological, etc.</p> <p>3. That the Ministry fund a peer review by the Township of items of importance</p> <p>o The Township formally requests that as the project proceeds through various stages of design, that the Ministry provide peer review funding for the critical reports as referenced above.</p> <p>4. That additional public engagement related to the progress of design take place</p> <p>o As the project proceeds through additional stages of detailed design, it will be important to keep the public informed about the details and status of the design and the Project.</p> <p>o The Township formally requests that additional PIC's be held as necessary through the design and construction phases of this project.</p> <p>5. That a schedule which outlines design consultation and construction timelines be provided</p> <p>o A key question/concern within our community is when will this project start and when will it be completed. Clearly the Township understands that the Ministry is not in a position to provide dates at this time for these various milestones. o As such, in an effort to help our community the Township requests that the Ministry prepare an approximate timeline without reference to specific dates, but with respect to months. For example: Month 1 – Prepare RFP; Month 3 Retain Design Build Firm; Months 4-8 Detailed design; etc.</p> <p>6. That the MTO deliver a presentation to Puslinch Council before the next Public Information Centre</p> <p>o Given the sensitivity and profile of this project, Council feels it important to maintain a good</p>	<p>We appreciate the Township of Puslinch's attendance at our Municipal Meeting held on Wednesday, June 8, 2022. We look forward to our continued collaboration with you on this Design-Build Project. In response to your meeting request, we can schedule a combined meeting with your staff and Puslinch Fire & Rescue Services to further discuss the items outlined in your comment forms. Please provide your availability for a virtual meeting and we can circulate an invite to the appropriate Project Team members.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment <i>(Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</i></p> <p>██████████</p>

Reference #	Date	To	From	Subject	Comment	Response
					<p>connection with the project and issues as they develop and for council to have the opportunity to ask questions and receive clarification from the Project team.</p> <p>Specific Comments</p> <p>1. Confirmation as to who the connector road maintenance responsibility will be assigned to</p> <ul style="list-style-type: none"> o Based on the information presented, Concession 7 will now be rebuilt from Maltby to County Road 34. Given that this will be a high-volume road as it leads to the access points of the new interchange, it is imperative the ownership and maintenance responsibility be established as it appears to be beyond what the Township will be able to provide. <p>2. Future property entrances/access to designated Employment/Industrial Lands</p> <ul style="list-style-type: none"> o In April 2017 Puslinch Council passed a resolution regarding concerns relating to access to already designated Industrial/Employment lands which are located at and adjacent to where the mid-block interchange is planned on Highway 6. This resolution was provided to the MTO at that time and a number of discussions involving the Township, the County, and the Ministry took place at that time with respect to this issue. o On February 17, 2021 the Ministry presented the project to staff prior to the Online Public Information Centre 1 going live. During that call, it was noted by County staff that the requested access to these previously designated lands was not indicated. Subsequently, a call was set up March 10, 2021 to discuss the issue further. o It is noted that there are currently no plans before the municipality from the property owners with respect to development or traffic studies. That being said, these lands have been designated as Industrial/Employment lands for decades. 	

Reference #	Date	To	From	Subject	Comment	Response
					<p>o The proposed layout for the mid-block interchange will have significant affect on these Industrial/Employment lands in terms of access. Given the road network in the immediate area, the logical access point for traffic associated with these lands would have been primarily at the Maltby interchange. This interchange will now be removed as part of the proposed layout thereby eliminating this access which is very problematic.</p> <p>o During discussions on March 10, 2021 the Ministry indicated that since there were no plans or traffic studies to review and comment on, it was not possible to determine if access to these lands could be granted. It is staff's understanding that further discussions suggested that the proposed highway configuration would not result in the elimination of any potential for future access, but it may be difficult. A number of physical and technical challenges would need to be addressed and overcome to enable access, and the feasibility of those measures would need to be assessed by the developer(s) and the Ministry.</p> <p>o As such, the Township formally requests that Ministry formalizes the information indicated at the March 10th meeting, and further that the Ministry clearly indicate what steps will be necessary and what supporting documentation will be required to determine if and where access can be provided for each of the designated parcels.</p> <p>3. Noise impacts</p> <p>o Based on the stage of design and the information presented to this point, the Ministry has indicated that there are approximately 6-7 properties that will have noise impacts that won't be able to be resolved through engineering means but the impacts won't exceed thresholds till the projected 2041 traffic volumes are reached. The Township requests that those properties be addressed now, not wait until 2041 and that the Ministry acquire ownership now. These properties will be negatively impacted but the extent of the impact won't</p>	

Reference #	Date	To	From	Subject	Comment	Response
					<p>technically occur until the future. Therefore, the Township feels it is more appropriate to resolve the situation with these property owners at this time.</p> <p>4. Emergency Services concerns</p> <ul style="list-style-type: none"> o In 2017 meetings took place between the Ministry and local emergency services including: Wellington OPP; Cambridge OPP; Guelph Wellington Paramedic Services; Township of Puslinch Fire; City of Guelph Fire; and Wellington and City of Guelph Emergency Management. o Following those meetings, these services collectively prepared and submitted a number of comments and concerns associated with the layout proposed by the Ministry at that time. o Review of the current proposal as outlined in the Online Public information Centre 1 (PIC 1) for the Highway 6 and 401 Improvements do not appear to have addressed these comments or concerns previously submitted o As such, the Township formally requests the Ministry to respond to the Township as to how each of the identified Emergency Services comments or concerns submitted will be addressed o the Township formally requests the Ministry to indicate how the Ministry intends to ensure that appropriate response times to be provided <p>The Township of Puslinch is aware that some local residents have indicated that they have had discussions with your project team or have requested discussions with your project team. Additionally, the Township is also aware that some local residents have made submissions regarding this project. Clearly its the Township's request that the Ministry respond to and address all comments received.</p> <p>Again, in summary, the Township of Puslinch would like to thank the Province and the Ministry for the continued dedication of this important project to this point and for continuing to move the project forward. We</p>	

Highway 6 / Hanlon Expressway Midblock Interchange Project
H6-ENV-MasterCommentTrackingTable-2022

Reference #	Date	To	From	Subject	Comment	Response
					cannot overstate the critical nature of this project to our community, our region, and the province and the importance of completing it appropriately. Sincerely Glenn Schwendinger, CAO Cc Ted Arnott, MPP Council	
	Aug. 16, 2022	C. Green (WSP)	G. Schwendinger	RE: Highway 6 / Hanlon Expressway Midblock Interchange Design-Build and Class Environmental Assessment Study (G.W.P. 3059-20-00) CT26	Hi Christine We have a new Fire Chief who is reviewing the material regarding this project. If you could provide some potential dates/times for the first week in September that would be a great start. Glenn S.	Good afternoon Glenn, Our Project Team is available to meet on Wednesday, September 14 from 1:00 – 2:30pm. I will circulate a Microsoft Teams meeting now. Thank you, Christine G.
CT27	June 13, 2022	Hwy 6 Hanlon Expwy < Hwy6HanlonExpwy@wsp.com >	Don Kudo < donk@wellington.ca >	RE: T0013 - Slides from June 8, 2022 Municipal Meeting regarding Highway 6/Hanlon Expressway Midblock Interchange for Information	From: Don Kudo < donk@wellington.ca > Sent: Monday, June 13, 2022 7:48 PM To: Hwy 6 Hanlon Expwy < Hwy6HanlonExpwy@wsp.com > Cc: Joe de Koning < joedk@wellington.ca > Subject: RE: T0013 - Slides from June 8, 2022 Municipal Meeting regarding Highway 6/Hanlon Expressway Midblock Interchange for Information Hello, Thank you for this presentation. We would like to invite representatives from the Project Team to present this presentation to our County Roads Committee in September. The meeting date and time would be Tuesday September 13 between 10 am and noon. Please advise if an in person presentation is possible. Thanks, Don Kudo, P. Eng. County Engineer Engineering Services Department County of Wellington 74 Woolwich Street	From: Green, Christine Sent: August 15, 2022 3:30 PM To: 'donk@wellington.ca' < donk@wellington.ca > Cc: Jewell, Sarah (MTO) < Sarah.Jewell@ontario.ca >; Mitchell, Terence (MTO) < Terence.Mitchell@ontario.ca >; Khuskivadze, Olga (MTO) < olga.khuskivadze@ontario.ca >; 'Jansen, Kelly (MTO)' Good afternoon Don, We have received your request for a presentation to the County Roads Committee regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00). Thank you for your patience. We are responding to confirm our attendance on September 13 th at 10 am. Could you please provide the meeting invite and/or meeting details, once they are available? We appreciate the County of Wellington's attendance at our Municipal Meeting held on Wednesday, June 8, 2022. We look forward to our continued collaboration with you on this Design-Build Project. Sincerely, Christine G., Environmental Planner

Reference #	Date	To	From	Subject	Comment	Response
	August 18, 2022	Christine G (WSP)	Don K < donk@wellington.ca >	RE: T0013 - Slides from June 8, 2022 Municipal Meeting regarding Highway 6/Hanlon Expressway Midblock Interchange for Information	<p>Christine, Do you mind sending me a copy of the presentation? We would like to review it prior to confirming it for our agenda.</p> <p>Thanks,</p> <p>Don Kudo, P. Eng. County Engineer Engineering Services Department County of Wellington 74 Woolwich Street Guelph ON N1H 3T9 T 519.837.2601 x2280 C 226.962.3015 E donk@wellington.ca W www.wellington.ca</p>	<p>Don</p> <p>We can prepare a presentation to address issues of interest or concern to the Committee members for example, proposed works, construction schedule, traffic management proposals etc. please could you indicate which issues you would like us to discuss.</p> <p>Thanks</p> <p>Peter</p> <hr/> <p>Good afternoon Don,</p> <p>To follow-up on Peter's email from last week, I've attached the presentation that was provided by the Project Team at our meeting on June 8th. We can provide an update on the topics covered at our June 8th meeting and modify the presentation as necessary to suit the committee's agenda.</p> <p>Thank you, Christine</p>
	Aug. 24, 2022	Christine G (WSP)	Don K < donk@wellington.ca >	RE: T0013 - Slides from June 8, 2022 Municipal Meeting regarding Highway 6/Hanlon Expressway Midblock Interchange for Information	<p>Christine, I do not have any suggestions to modify the presentation for the Roads Committee. I do know that Puslinch Mayor Seeley who is on the Roads Committee has expressed concern with the closure of Concession 4 so though that decision has long been made, it might come up as a question to justify it and the impacts for other Township roads. Mayor Seeley may reiterate other concerns previously expressed by Puslinch.</p> <p>I believe the main intent of the presentation is to inform the committee on the expected timelines and impacts to the travelling public and impacts on those who live on area roads that might be impacted by changes in traffic patterns due to the construction (ie. what will constituents be calling Councillors about). Communications as far as who to contact at MTO or WSP if there are issues may also be a question. For most</p>	<p>Good afternoon Don,</p> <p>Thank you for your email regarding the Highway 6 / Hanlon Expressway Midblock Interchange Project Team's presentation to the County of Wellington Roads Committee. We appreciate the prompt on Mayor Seeley's concerns and will ensure this item is covered within the discussions. We have reviewed the Draft Staff Report and have no further comments.</p> <p>We have prepared a presentation that will inform the Roads Committee of the project overview, the environmental assessment and consultation process, as well as anticipated construction timelines and traffic management (detour routes). We will ensure a copy of the presentation is provided to you prior to September 5, 2022, along with the names and contact information of the presenting Project Team members. At this time, we can confirm the following staff members will be in attendance:</p>

Reference #	Date	To	From	Subject	Comment	Response
					<p>Committee members, they may not know the background on how we have got to this design and construction stage.</p> <p>The Roads Committee meeting is scheduled for Tuesday September 13, 2022 at 10 am. The meeting will be held in the Keith Room, County of Wellington Administration Centre, 74 Woolwich Street in Guelph. Please let me know who will be attending the meeting from your team. I will need a copy of the presentation by September 5, 2022 to include it on the agenda. I may write a brief staff report for the Committee's information with respect to the presentation and project.</p> <p>I will advise our Clerks as to who will be attending the meeting and a meeting invite will be sent out to the attendees.</p> <p>Please contact me should you have questions</p> <p>Don Kudo, P. Eng. County Engineer County of Wellington</p> <hr/> <p>Christine, Here is a copy of my draft staff report for your information and comments</p> <p>Thanks, Don Kudo, P. Eng. County Engineer County of Wellington</p> <p>Draft Staff Report: COMMITTEE REPORT To: Chair and Members of the Roads Committee From: Don Kudo, County Engineer Date: Tuesday, September 13, 2022 Subject: Highway 6 / Hanlon Expressway Midblock Interchange Background:</p>	<ul style="list-style-type: none"> • Geoff Jackson, Dufferin Construction Project Manager, g.jackson@ca.crh.com • Peter Bamforth, WSP Senior Design Manager, Peter.Bamforth@wsp.com <p>Thank you & have a great weekend. Christine</p>

Reference #	Date	To	From	Subject	Comment	Response
					<p>The Ministry of Transportation (MTO) has awarded Phase 2 of the Highways 6 and 401 Improvements between Hamilton and Guelph to Dufferin Construction and WSP Canada Inc. to complete the Class Environmental Assessment, Detail Design and Construction of a new interchange on Highway 6 (Hanlon Expressway). The main components of the project impacting County roads includes:</p> <ul style="list-style-type: none"> • A new interchange on the Hanlon Expressway north of Wellington Road 34, including a new road to connect the new interchange to Concession Road 7 and to Wellington Road 34; • Removal of the signalized intersection on the Hanlon Expressway at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway for Wellington Road 34 traffic; • Reconstruction of Concession Road 7 between Wellington Road 34 and Maltby Road; • Closure of the Maltby Road / Concession Road 4 intersection with the Hanlon Expressway; • A new roundabout at the Wellington Road 34 and Concession Road 7 intersection; <p>Construction on this project is planned to start this Fall, 2022. The MTO's project team will be presenting the attached presentation to the Committee.</p> <p>Recommendation: That the report entitled Highway 6 / Hanlon Expressway Midblock Interchange be received for information.</p> <p>Respectfully submitted, Don Kudo, P. Eng. County Engineer</p> <p>Attachment: Presentation - Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment</p>	

Reference #	Date	To	From	Subject	Comment	Response
CT28	July 22, 2022	To: Gentile, Catherine <Catherine.Gentile@wsp.com> Cc: Bobby De Hetre < bobbydh@wellington.ca >	From: Hurania Melgar < huraniam@wellington.ca >	RE: Highway 6/Hanlon Expressway Midblock Interchange Distribution List	<p>Good Afternoon Catherine,</p> <p>I'm hoping you can please add Bobby De Hetre (bobbydh@wellington.ca) to your distribution for this project as he will be covering my maternity leave as the Emergency Manager for the County of Wellington.</p> <p>Warm Regards,</p> <p>Hurania (ooo-rah-nee-ah) Melgar, MDEM Emergency Manager/CEMC County of Wellington 0536 Wellington Road 18 RR1 Fergus, ON N1M 2W3 T 519.837.2600 Ext. 3322 C 226.962.6803 Pronouns: her, hers, she E huraniam@wellington.ca W www.wellington.ca</p>	<p>Thanks for your email Hurania and many congratulations!</p> <p>We will update the project contact list accordingly.</p> <p>Best wishes,</p> <p>Catherine</p>
CT29	Aug 7, 2022	ProjectTeam@highway6midblock.ca	[REDACTED]	Web Contact Form	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>Comment or Message Hello, Has the construction phase of this project been started as of yet?</p> <p>Would you like to receive project updates? Yes, by regular mail</p>	<p>Good afternoon [REDACTED],</p> <p>We have received your question regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00).</p> <p>Field investigations are currently underway within the study area to collect information that will assist us with the design and construction of the works.</p> <p>Construction is anticipated to begin in Fall 2022 and end in 2025. The existing intersections between Highway 6 / Maltby Road and Highway 6 / Concession 4 are not scheduled to be closed until the Midblock Interchange and Concession 7 are open to traffic. This is expected in the final year of construction in 2025. This schedule may change based on the timing of environmental clearances and permits. Road closure notification signage will be placed 1 to 2 weeks in advance of any road closures to inform the travelling public.</p> <p>As we move further along in our project, the 'Construction Progress Updates' page on the project website will be updated on a weekly basis with</p>

Reference #	Date	To	From	Subject	Comment	Response
						<p>proposed traffic restrictions and detour routes, as well as photographs of the site. The webpage can be accessed by clicking the following link: Highway 6 / Hanlon Expressway Midblock Interchange » Construction Progress Updates (highway6midblock.ca)</p> <p>You have been included on the project contact list and will be notified during project updates or milestones.</p> <p>Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment <i>(Sent on behalf of the Highway 6 / Midblock Interchange Project Team)</i></p>
CT30	Aug. 17, 2022	ProjectTeam@highway6midblock.ca	██████████	Web Contact Form	<p>Name (First, Last) ██████████ ██████████ ██ ██████████ ██ </p> <p>Comment or Message Why is this project moving so slowly? It's almost as if there's no real concern for getting this done as there is for appeasing the people who want to see it done every election cycle. At the current rate of progress, perhaps this would be better branded as an intergalactic alien bypass through Morriston, as everyone on earth will be long dead by completion. But that of course would be contingent on some manufactured phased approach where progress is masked as considering construction, evaluating bidders and contracts, and building websites where "project schedule" tabs only outline what has already been completed, without any timeline for the future. All delay tactics.</p> <p>Would you like to receive project updates? Yes, by email</p>	<p>Good afternoon ██████████</p> <p>We have received your comments regarding the Highway 6 / Hanlon Expressway Midblock Interchange Detail Design and Class Environmental Assessment Study (G.W.P. 3059-20-00). The Project Team would like to clarify that a phased approach is being used to implement the Highway 6 and 401 Improvements between Hamilton and Guelph. The first phase of the project was the replacement of the Concession Road 7 Bridge over Highway 401, which was completed in 2020. We are currently undertaking Phase 2 of the improvements, which includes the following scope of work:</p> <ul style="list-style-type: none"> ○ A new interchange on the Hanlon Expressway, including a new road to connect the new interchange to Concession Road 7 and to Wellington Road 34; ○ Removal of the signalized intersection at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway for Wellington Road 34 traffic; ○ Reconstruction of Concession Road 7 between Wellington Road 34 and Maltby Road; ○ Closure of the Maltby Road / Concession Road 4 intersection with the Hanlon Expressway; ○ A new roundabout at the Wellington Road 34 and Concession Road 7 intersection; ○ Installation of new overhead sign structures, traffic signals and partial illumination; ○ Emergency and maintenance vehicle turnarounds along the Hanlon Expressway;

Reference #	Date	To	From	Subject	Comment	Response
						<ul style="list-style-type: none"> ○ Drainage improvements; ○ Relocation of utilities; ○ Foundation Engineering; ○ Pavement Design; and, ○ ATMS Design. <p>The community of Morriston falls outside of our study limits. For further information on the larger Highway 6 and 401 Improvements between Hamilton and Guelph, please visit https://highways6and401hamiltontoguelph.ca/.</p> <p>In order to advance work at the Midblock Bridge and Interchange, the project has been split into two (2) separate design and construction packages. This will permit construction to start on the Midblock Interchange as early as this fall. This work will be followed by the construction at Wellington Road 34, Concession Road 7, Maltby Road West, as well as the illumination, and ATMS. The Project Team would like to note that construction timing may change based on environmental clearance and other scheduling factors that may arise as we move through the Environmental Assessment process.</p> <p>As we move further along in our project, the 'Construction Progress Updates' page on the project website will be updated frequently with proposed traffic restrictions and detour routes, as well as photographs of the site. The webpage can be accessed by clicking the following link: Highway 6 / Hanlon Expressway Midblock Interchange » Construction Progress Updates (highway6midblock.ca). The 'Schedule' page (https://highway6midblock.ca/schedule/) will also be undergoing revisions shortly as we finalize our construction scheduling.</p> <p>Per your webform submission on June 6, 2022, you have been included on the project contact list and will be notified during project updates or milestones. Sincerely, Christine G., Environmental Planner WSP, Environmental Planning, Earth & Environment</p>

DCR #1: Highway 6/Hanlon Expressway Midblock Interchange
(Early Works), G.W.P. 3059-20-00
DB Contract Number: 2021-3004
Prepared for the Ministry of Transportation, West Region



APPENDIX D – WATER WELL SURVEY TEMPLATES



PRIVATE WATER WELL SURVEY

July 22, 2022

Confidential

**Subject: Private Water Well Survey
Ministry of Transportation Highway 6 / Hanlon Expressway Midblock Interchange
Project**

Dear Resident / Property Owner:

The Ontario Ministry of Transportation (MTO) has awarded Phase 2 of the Highways 6 and 401 Improvements between Hamilton and Guelph (G.W.P. 3042-14-00) to Dufferin Construction and WSP Canada Inc. to complete the Class Environmental Assessment, Detail Design and Construction of a new interchange on Highway 6 (Hanlon Expressway) (the Project, G.W.P. 3059-20-00). The proposed work is anticipated to include the following:

- A new interchange on the Hanlon Expressway north of Wellington Road 34, including a new road to connect the new interchange to Concession Road 7 and to Wellington Road 34;
- Removal of the signalized intersection on the Hanlon Expressway at Wellington Road 34 and the addition of a new bridge over the Hanlon Expressway for Wellington Road 34 traffic;
- Reconstruction of Concession Road 7 between Wellington Road 34 and Maltby Road;
- Closure of the Maltby Road / Concession Road 4 intersection with the Hanlon Expressway;
- A new roundabout at the Wellington Road 34 and Concession Road 7 intersection;
- Installation of new overhead sign structures, traffic signals and partial illumination;
- Emergency and maintenance vehicle turnarounds along the Hanlon Expressway (one north of Maltby Road and one south of Wellington Road 34);
- Drainage improvements such as infiltration ponds for stormwater management; and
- Relocation of utilities.

582 Lancaster Street West
Kitchener, ON
Canada N2K 1M3
T: +1 519 743-8778

T: Wsp.com
wsp.com
WSP Ref. 211-04277

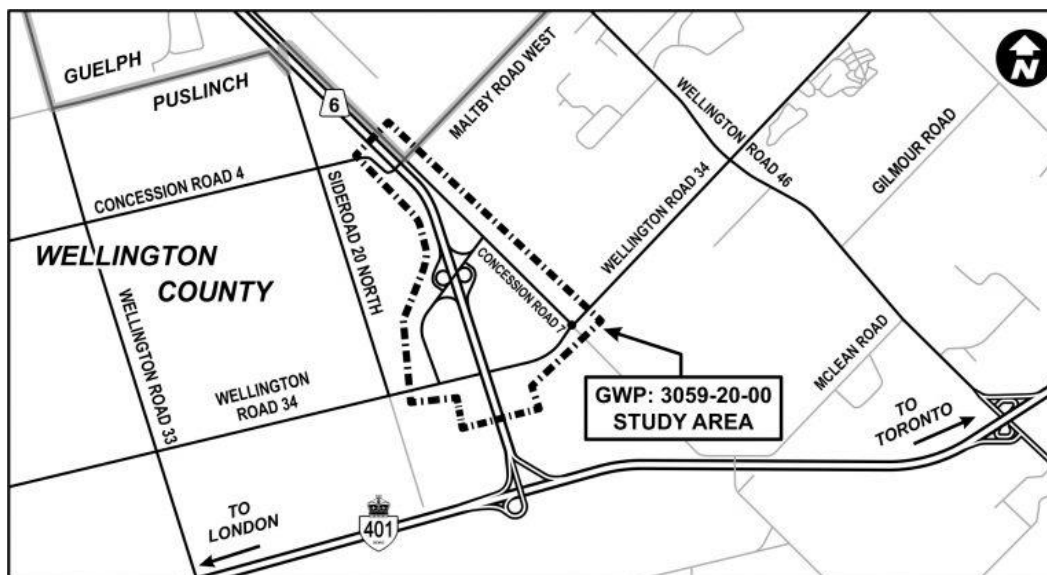


Figure A: Site Location

The site location is shown in **Figure A** above.

WSP is conducting a well water survey at properties in close proximity to the work area to identify properties with water supply wells and gather information about these water supply wells. This information will be used to determine if the project may have any effect on private well water systems.

If you have a water well, this survey is voluntary, however this survey will ensure that WSP and the MTO accurately document the current condition of your water well and well water supply and quality. The survey can be scheduled at a time convenient to you and is free of cost to you. Pending your permission, the survey will include the following aspects, and you are free to authorize or decline each of these aspects:

- 1) Asking you to provide basic facts about your water well (location, depth, and water level, if you know);
- 2) Inquiring about the locations of other features on your property which could affect groundwater quality (septic system, fuel storage, land uses)
- 3) Asking if you have a copy of the Ontario Ministry of the Environment, Conservation, and Parks water well record for your well;
- 4) Inquiring about your well water supply, including well yield and well water quality, currently and your historical recollections;



- 5) Conducting a property visit to observe the location and condition of the water well, and WSP field staff may ask to also measure the current well water level and well depth. In such case, WSP will be supported by a licensed water well driller to open and close your well, make sure your well is not damaged while taking measurements, shock (chlorinate) your well after taking measurements, and ensure the well is properly sealed after completing this work.
- 6) WSP field staff may also ask to / you may request for collection of an untreated well water sample for laboratory analysis, for a comprehensive list of water quality parameters, including microbiology, total metals and inorganic parameters, and volatile organic compounds. The water sample will be preferably collected from a tap which is upstream of any household water treatment, after letting the tap run for 10 minutes, to draw fresh well water.
- 7) In the event that WSP field staff collect a well water sample, you will be notified immediately of any adverse well water quality results as related to human health, as well as a full letter report with all observations, measurements, and results, once the full laboratory results are available.

The information that is collected will be used to assess current conditions to better evaluate any potential impacts to the private wells during the construction of the proposed infrastructure. The information will be shared with the WSP environmental management team for the MTO Highway 6 / Hanlon Expressway Midblock Interchange Project and the Wellington-Dufferin-Guelph Public Health Department.

Given the current constraints related to the COVID-19 pandemic, the surveys are being administered by scheduled appointment or over the phone, along with an arranged time when WSP field staff can visit the property to observe the well and collect the well water sample. The water samples will be collected from an outdoor tap, if possible. WSP may also reduce the scope of the survey in accordance to your preferences, if you are not comfortable with the process noted above.



To participate in the private well survey, please fill out and sign the private well survey included with this letter and mail the completed survey to WSP in the provided self-addressed stamped envelope, or please contact Carolina Loboeki or Fereshteh Ranjbar as follows:

Carolina Loboeki, B.Sc.

Environmental Scientist / Project Coordinator

WSP Canada Inc.

Carolina.Loboeki@wsp.com

(519) 904-1817

Fereshteh Ranjbar, M.Sc.

Environmental Scientist

WSP Canada Inc.

Fereshteh.Ranjbar@wsp.com

(548) 255-0098

If you do not wish to participate in the private well survey or monitoring program for this Project, we ask that you fill out and sign the **Form to Decline Well Survey** included with this letter and mail it to WSP in the provided self-addressed stamped envelope. Alternatively, you may contact Carolina Loboeki or Fereshteh Ranjbar as per the contact information provided. **If we do not hear from you after one month has passed, WSP will consider that you have declined the survey.**

For more information on well construction, maintenance, and water quality, please refer to the Well Aware Guide created by Green Communities Canada in partnership with the Ontario Groundwater Association. This guide can be found at: <https://greencommunitiescanada.org/programs/well-aware/>.

For further information, questions, comments or concerns regarding the Highway 6 / Hanlon Expressway Midblock Interchange Project, please contact Olga Khuskivadze (MTO) or Peter Bamforth (WSP):

Olga Khuskivadze, P. Eng.

MTO Project Engineer

Ministry of Transportation, West Region

olga.khuskivadze@ontario.ca

Peter Bamforth, P. Eng., CEng., MICE

Consultant Senior Project Manager

WSP

Peter.Bamforth@wsp.com



July 22, 2022

Declining to Participate in the Private Well Survey and Monitoring Program –

Highway 6 / Hanlon Expressway Midblock Interchange Project

Ministry of Transportation, (G.W.P. 3059-20-00)

We at _____ (*insert property address*) do not wish to participate in the private well survey or monitoring program related to the Ministry of Transportation's Highway 6 / Hanlon Expressway Midblock Interchange Project.

Signature _____

Mail:	WSP Canada Inc. 582 Lancaster Street West Kitchener, ON N2K 1M3
Attention:	Carolina Lobocki
Email:	Carolina.Lobocki@wsp.com
Phone:	519-904-1817



100 Commerce Valley Dr. West
 Thornhill, Ontario L3T 0A1
 Tel:(905) 882-1100
 Fax:(905) 882-0055

ID #

WATER WELL SURVEY FORM

Project Number: _____
 Project Name: _____
 Field Personnel: _____

Owner available? _____ Notification Letter Left? _____
 Date of Visit: _____ Y or N _____
 Follow-Up Visit: _____
 Follow-Up Visit: _____

Personal Information

Interviewee Name(s): _____ (complete this section if interviewee is not property owner)
 Primary Phone #: _____ Owner Name(s): _____
 Secondary Phone #: _____ Owner Phone #: _____
 Interviewee is: _____ Owner or Tenant/Resident Has owner provided permission to conduct well survey?: _____ Yes or No
(circle one) (do not proceed unless owner permission is granted)
 Survey Results Notification Preference: Regular Mail Electronic (Email)
 If electronic, provide email address: _____

Property Information

Property Address: _____ Notification Mailing Address: _____
(check if same as property address)
 House age: _____ # of wells on property: _____ Property Use: Residential Agriculture
 # of occupants: _____ # of wells in use: _____ (Check all that apply) Commercial/Industrial Government/Public
 Livestock Vacant Lot/Abandoned
 Other water sources or natural features (e.g., cistern, pond, creek, etc.): _____
 Septic system: _____ Property Notes: _____
 Fuel/chemical storage (e.g., heating oil tank, natural gas / propane tank, etc.): _____
 Tile drains: _____

Well 1

Well 2

Water Usage and Quantity

Well Use: Residential (Drinking) Residential (Non-Drinking) Livestock
(Check all that apply) Irrigation Commercial/Industrial Well Not in Use
 Has well ever run dry?: _____ Satisfied with current water supply?: _____
 Comments on Water Supply Quantity: (e.g., loss of water, interference from other users, etc.)
 Can WSP Monitor the Well - YES NO

Water Quality

Has your water well ever been tested for water quality?: _____
 Date of last test: _____ Parameters tested: bacteria nitrate
 Any problems Identified?: _____ other:
 Is well ever chlorinated, if so when and how often?: _____
 Comments on Water Quality: (e.g., appearance (clear, cloudy), taste / odour (sulphurous), hardness, staining on fixtures (scale, rust), etc.)

Well Construction Details (based on interviewee's knowledge)

Does owner have a copy of the Well Record? _____
 if yes, MOE Well #: _____ Date Constructed: _____
 Well type: Drilled Bored Dug Drive-Point Other:
 Well completed into: Overburden Bedrock Unknown
 Well depth: Known Estimated Unknown
 Typical water level (range): Known Estimated Unknown
Water Treatment, Pump, and Distribution System
 Treatment: Water Softener UV Filter Reverse Osmosis Iron Filter
 Activated Carbon Sediment Filter No Treatment Other:
 Treatment notes: _____
 Pump type: Submersible Jet pump with one pipe (Shallow)
 Jet pump with two pipes (Deep) Piston Other:
 Pumping rate (gpm): _____ Depth of intake: _____
 Pressure Tank capacity (gal / liter): _____ or No Pressure Tank

Field Measurements and Well Condition Survey

Do not attempt to access well if located in confined space, in precarious terrain, or other danger is present.
 UTM - E: _____ Zone: _____ Datum: _____ GPS Coordinates _____ Datum: _____
 UTM - N: _____ Elevation (m): _____ UTM - E: _____ UTM - N: _____ Elevation (m): _____
 Stick-Up (m ags): _____ Static Water Level (m btoc): _____ Stick-Up (m ags): _____ Static Water Level (m btoc): _____
 Well Diameter (m): _____ Well Bottom (m btoc): _____ Well Diameter (m): _____ Well Bottom (m btoc): _____
 Photo Inventory (list jpg file names): _____ Photo Inventory (list jpg file names): _____
 Condition of Well: Cracked/Damaged Casing or Cap No Well Cap/Cover Loose Cap/Bolts
 Not Vermin Proof Contamination Source Near Well Exposed Electrical Corrosion
 Poor Ground Drainage/Ponding Biofilm/Slime Mineral Scale/Incrustation Inaccessible
 Poor Ground Drainage/Ponding Biofilm/Slime Mineral Scale/Incrustation Inaccessible
 Notes on Well Condition: _____ Notes on Well Condition: _____
 Interviewee informed of well condition: Yes No Interviewee informed of well condition: Yes No

Water Sample

Remove aerator and disinfect tap. Purge cold water for at least 5 minutes. Continuously measure temperature, pH, and EC until stable, then sample. SAMPLE UPSTREAM OF WATER TREATMENT when possible.
 Sample location: _____ Sample location: _____
 Sample Type: Raw (Direct from Well) Pre-Treatment Post-Treatment Sample Type: Raw (Direct from Well) Pre-Treatment Post-Treatment
 Temp (°C): _____ pH: _____ EC (µS/cm): _____ TDS (ppm): _____ Temp (°C): _____ pH: _____ EC (µS/cm): _____ TDS (ppm): _____
 Sample ID (as labeled on sample bottles): _____ Sample ID (as labeled on sample bottles): _____
 Sample Notes: _____ Sample Notes: _____



100 Commerce Valley Dr. West
 Thornhill, Ontario L3T 0A1
 Tel:(905) 882-1100
 Fax:(905) 882-0055

ID #

WATER WELL SURVEY FORM

Diagram (sketch locations of wells, roads, structures, surface water features, septic systems, fuel storage tanks, tile drains, and north direction)

measure or estimate distance of septic system and fuel storage tank(s) to well(s)

indicate north direction



Survey Notes

Water Quality Notification Record (to be completed after the initial well survey, upon receipt of adverse water quality results from laboratory)

Parameter	Concentration	Units	Notification Date	Communication Method	Name of Resident Contacted	WSP Staff Name	Conversation Notes

Terms of Use

The information recorded on this survey form by WSP Canada Group Limited (WSP) on behalf of their client, is used to identify water well users near a location of proposed or ongoing work, activities, or land uses that have the potential to affect groundwater quantity (levels) and quality. This information may assist to prevent or resolve potential water supply interruptions or quality concerns arising from the works.

Contact information, address, and well survey results may be shared with WSP project staff, the WSP client, and government agencies, including but not limited to municipalities, environmental regulatory authorities, or public health units.

Acknowledgement

The Undersigned acknowledges that the services ("Water Well Survey") provided by WSP Canada Group Limited (WSP) on behalf of their client are not intended to replace conventional water well safeguards such as regular water quality testing and well/treatment system maintenance. Information provided by WSP to the Undersigned, or to any third party (including but not limited to information related to well condition, treatment system condition, or notification of water quality results) is not a guarantee of safe water quality.

Signature

The information on this form is correct and complete to the best of my knowledge and I understand that the information will be managed in accordance with the Terms of Use and Acknowledgment.

 Interviewee Signature Date

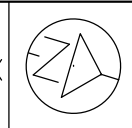
 WSP Representative Signature Date

DCR #1: Highway 6/Hanlon Expressway Midblock Interchange
(Early Works), G.W.P. 3059-20-00
DB Contract Number: 2021-3004
Prepared for the Ministry of Transportation, West Region



APPENDIX E – CONCEPTUAL LANDSCAPE PLAN

PLATE No	PLATE
CONT No	XXXX-XXXX
WP No	3133-20-01
RESTORATION PLAN HIGHWAY 6 N	
STA 10+800	TO STA 11+500
Survey	Revised



SHEET
NC01



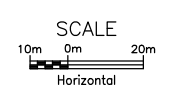
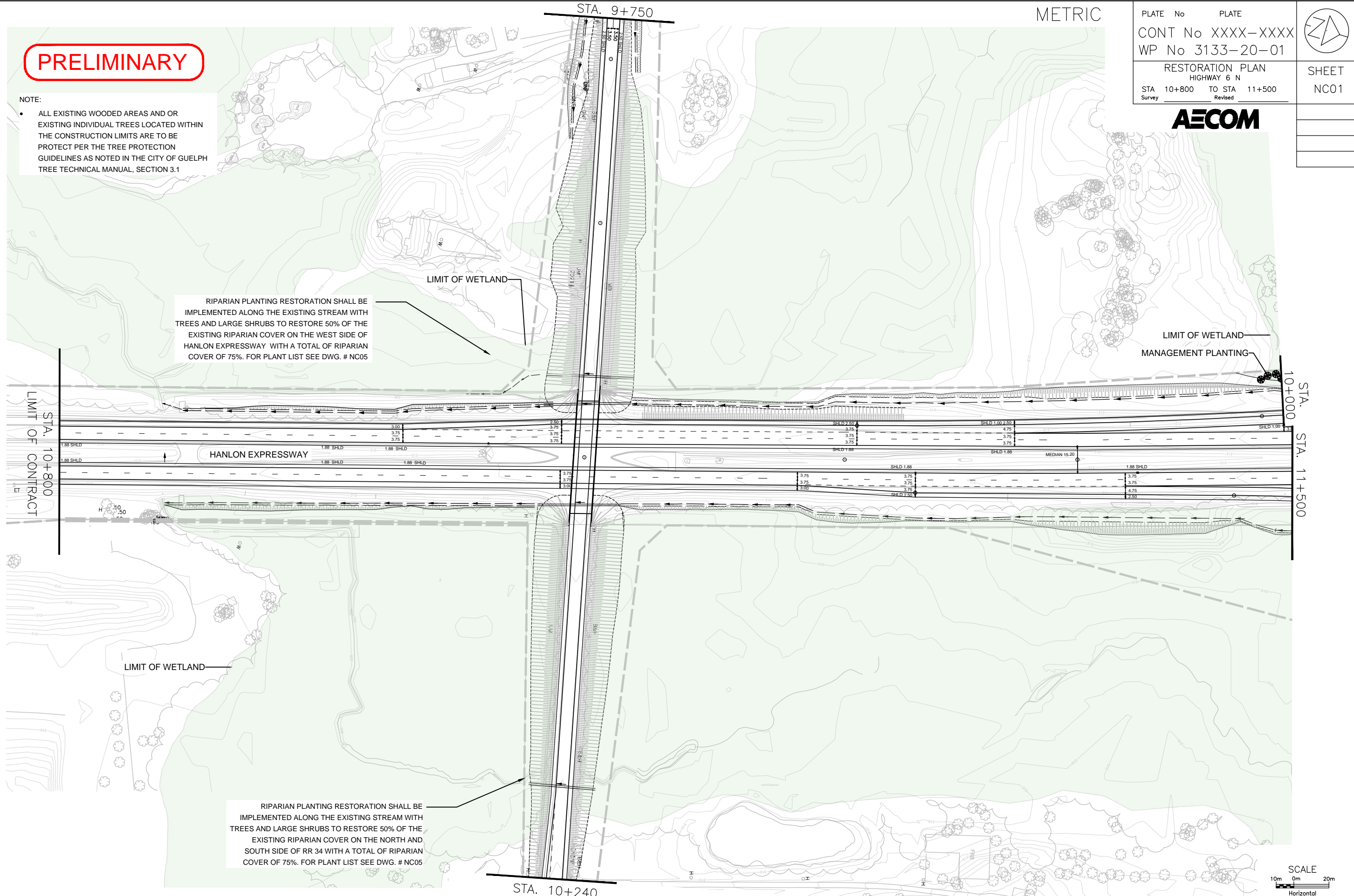
METRIC

PRELIMINARY

NOTE:
 • ALL EXISTING WOODED AREAS AND OR EXISTING INDIVIDUAL TREES LOCATED WITHIN THE CONSTRUCTION LIMITS ARE TO BE PROTECT PER THE TREE PROTECTION GUIDELINES AS NOTED IN THE CITY OF GUELPH TREE TECHNICAL MANUAL, SECTION 3.1

RIPARIAN PLANTING RESTORATION SHALL BE IMPLEMENTED ALONG THE EXISTING STREAM WITH TREES AND LARGE SHRUBS TO RESTORE 50% OF THE EXISTING RIPARIAN COVER ON THE WEST SIDE OF HANLON EXPRESSWAY WITH A TOTAL OF RIPARIAN COVER OF 75%. FOR PLANT LIST SEE DWG. # NC05

RIPARIAN PLANTING RESTORATION SHALL BE IMPLEMENTED ALONG THE EXISTING STREAM WITH TREES AND LARGE SHRUBS TO RESTORE 50% OF THE EXISTING RIPARIAN COVER ON THE NORTH AND SOUTH SIDE OF RR 34 WITH A TOTAL OF RIPARIAN COVER OF 75%. FOR PLANT LIST SEE DWG. # NC05



MINISTRY OF TRANSPORTATION, ONTARIO

MODTIME

DRAWING NAME: 00_nc_midblock_pln.dwg
 CREATED: MARCH 2021
 MODIFIED:

METRIC

PLATE No	PLATE
CONT No XXXX-XXXX	
WP No 3133-20-01	
RESTORATION PLAN HIGHWAY 6 N	
STA 11+500	TO STA 12+200
Survey	Revised



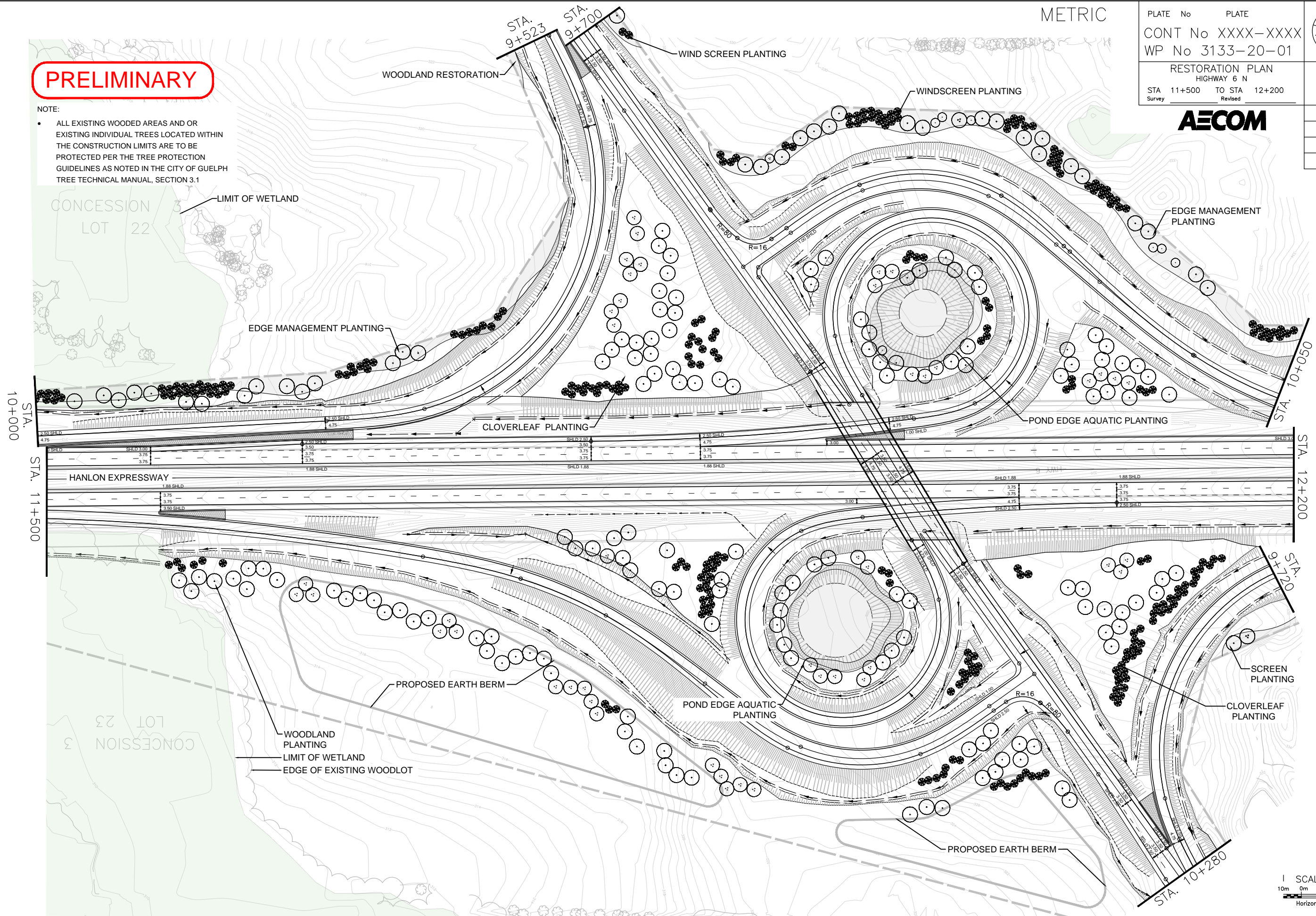
SHEET
NC02

AECOM

PRELIMINARY

NOTE:

- ALL EXISTING WOODED AREAS AND OR EXISTING INDIVIDUAL TREES LOCATED WITHIN THE CONSTRUCTION LIMITS ARE TO BE PROTECTED PER THE TREE PROTECTION GUIDELINES AS NOTED IN THE CITY OF GUELPH TREE TECHNICAL MANUAL, SECTION 3.1



MINISTRY OF TRANSPORTATION, ONTARIO
PR-D-707
88-05

MODTIME

DRAWING NAME: 00_nc_midblock_Plan.dwg
CREATED: MARCH 2021
MODIFIED:



METRIC

PLATE No PLATE
CONT No XXXX-XXXX
WP No 3133-20-01



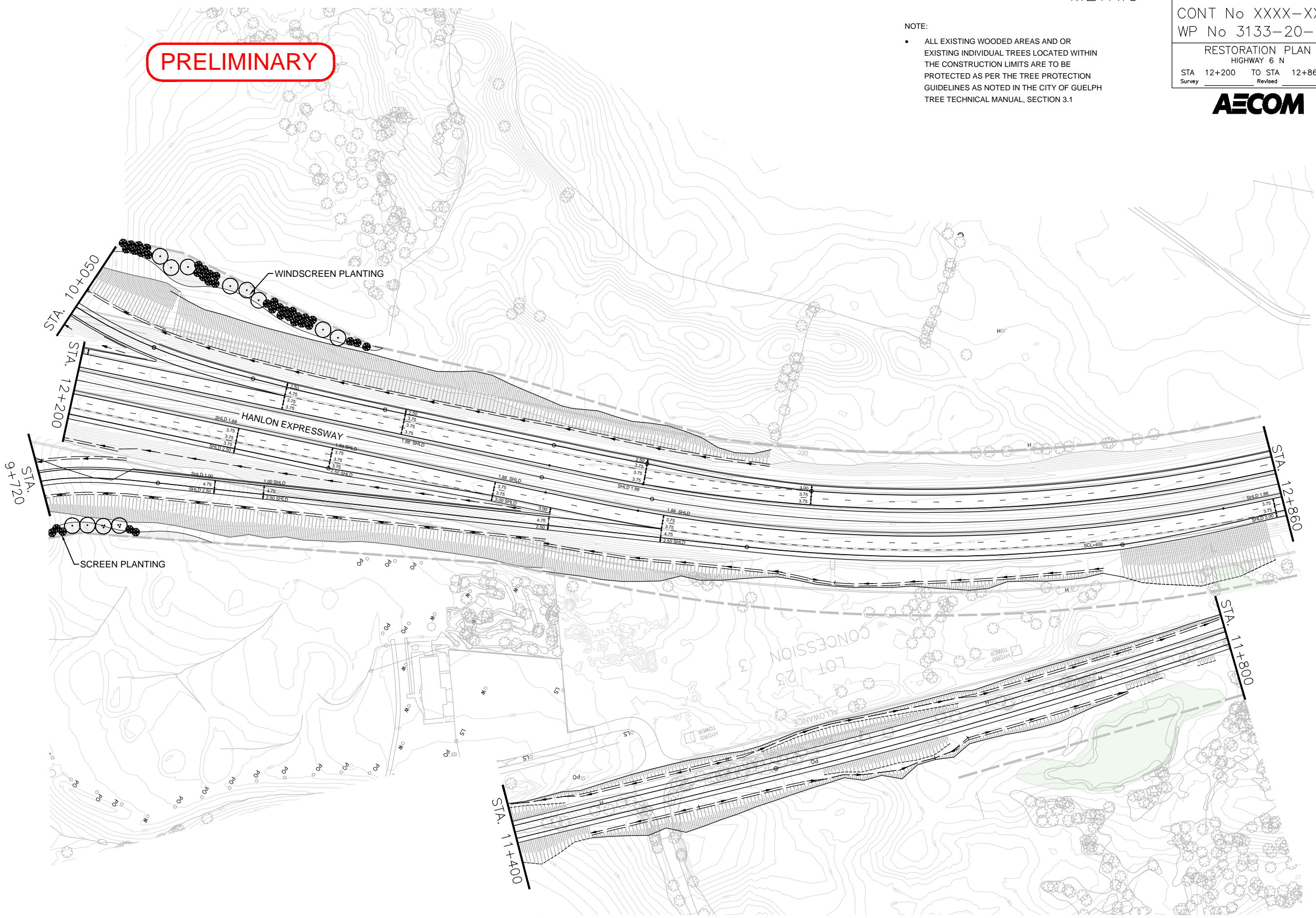
RESTORATION PLAN
HIGHWAY 6 N
STA 12+200 TO STA 12+860
Survey Revised

SHEET
NC03



NOTE:
• ALL EXISTING WOODED AREAS AND OR EXISTING INDIVIDUAL TREES LOCATED WITHIN THE CONSTRUCTION LIMITS ARE TO BE PROTECTED AS PER THE TREE PROTECTION GUIDELINES AS NOTED IN THE CITY OF GUELPH TREE TECHNICAL MANUAL, SECTION 3.1

PRELIMINARY



MINISTRY OF TRANSPORTATION, ONTARIO
PR-D-707
88-05
MODTIME
DRAWING NAME: CO_10_Midblock_Plan.dwg
CREATED: MARCH 2021
MODIFIED:

STA. 9+280.14

PRELIMINARY

METRIC

PLATE No	PLATE
CONT No	XXXX-XXXX
WP No	3133-20-01



RESTORATION PLAN	
WELLINGTON ROAD 34	
STA 9+280	TO STA 9+750
Survey	Revised

SHEET
NC04



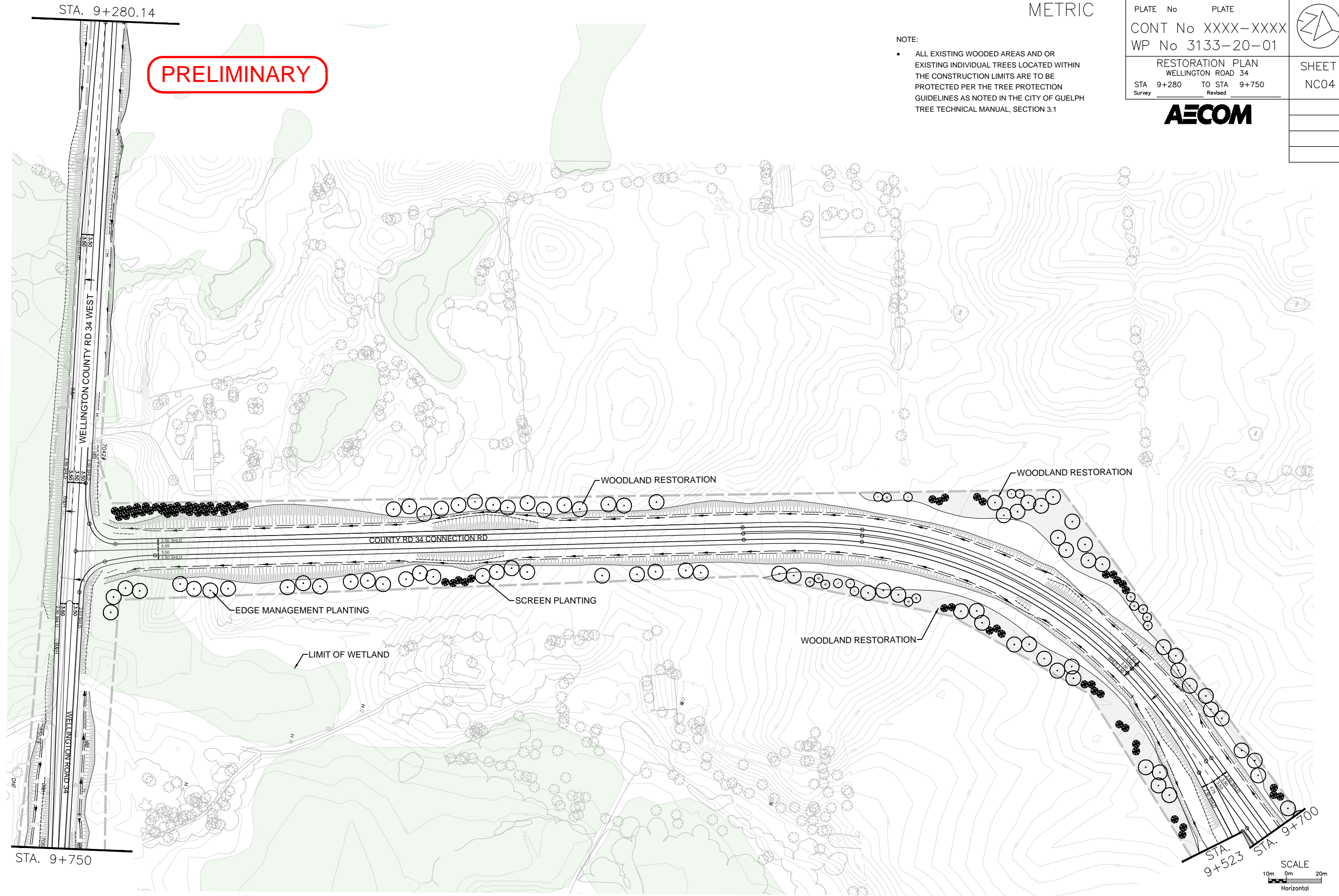
NOTE:

- ALL EXISTING WOODED AREAS AND OR EXISTING INDIVIDUAL TREES LOCATED WITHIN THE CONSTRUCTION LIMITS ARE TO BE PROTECTED PER THE TREE PROTECTION GUIDELINES AS NOTED IN THE CITY OF GUELPH TREE TECHNICAL MANUAL, SECTION 3.1

MINISTRY OF TRANSPORTATION, ONTARIO
PR-D-707 88-05

MODTIME

DRAWING NAME: CO_NC_Midblock_Plan.dwg
CREATED: MARCH 2021
MODIFIED:



SCALE
10m 0m 20m
Horizontal

PRELIMINARY

METRIC

PLATE No PLATE
 CONT No XXXX-XXXX
 WP No 3133-20-01

LANDSCAPE DETAILS
 XXXXXXXXXXXX
 STA XX TO STA XXXX
 Survey Revised

SHEET
 NC05



PLANT LIST

RESTORATION AREA - EDGE MANAGEMENT			
BOTANICAL NAME	COMMON NAME	SIZE	SPACING
Acer rubrum	Red Maple	60mm cal	5.0m O.C. MIN.
Acer saccharum	Sugar Maple	60mm cal	5.0m O.C. MIN.
Acer saccharinum	Silver Maple	60mm cal	5.0m O.C. MIN.
Betula papyrifera	White Birch	60mm cal	5.0m O.C. MIN.
Larix laricina	Tamarack	60mm cal	5.0m O.C. MIN.
Populus tremuloides	Trembling Aspen	60mm cal	5.0m O.C. MIN.
Quercus rubra	Red Oak	60mm cal	5.0m O.C. MIN.
Tilia americana	Basswood	60mm cal	5.0m O.C. MIN.
Ulmus americana	White Elm	60mm cal	5.0m O.C. MIN.
Abies balsamea	Balsam Fir	180cm ht.	3.0m O.C. MIN.
Picea glauca	White Spruce	180cm ht.	3.0m O.C. MIN.
Pinus strobus	White Pine	180cm ht.	3.0m O.C. MIN.
Thuja occidentalis	Eastern white cedar	180cm ht.	3.0m O.C. MIN.
Cornus racemosa	Grey Dogwood	60cm ht.	5.0m O.C. MIN.
Cornus sericea	Red Osier Dogwood	60cm ht.	5.0m O.C. MIN.
Rhus typhina	Staghorn Sumac	60cm ht.	5.0m O.C. MIN.
Viburnum trilobum	Highbush Cranberry	60cm ht.	5.0m O.C. MIN.

RESTORATION AREA - WOODLAND RESTORATION			
BOTANICAL NAME	COMMON NAME	SIZE	SPACING
Acer rubrum	Red Maple	60mm cal	5.0m O.C. MIN.
Acer saccharum	Sugar Maple	60mm cal	5.0m O.C. MIN.
Acer saccharinum	Silver Maple	60mm cal	5.0m O.C. MIN.
Juglans nigra	Black Walnut	60mm cal	5.0m O.C. MIN.
Larix laricina	Tamarack	60mm cal	5.0m O.C. MIN.
Populus tremuloides	Trembling Aspen	60mm cal	5.0m O.C. MIN.
Quercus rubra	Red Oak	60mm cal	5.0m O.C. MIN.
Tilia americana	Basswood	60mm cal	5.0m O.C. MIN.
Abies balsamea	Balsam Fir	180cm ht.	3.0m O.C. MIN.
Picea glauca	White Spruce	180cm ht.	3.0m O.C. MIN.
Thuja occidentalis	Eastern white cedar	180cm ht.	3.0m O.C. MIN.
Rhus aromatica	Fragrant Sumac	60cm ht.	2.0m O.C. MIN.
Salix discolor	Pussy Willow	60cm ht.	1.5m O.C. MIN.
Viburnum cassinoides	Withered	60cm ht.	1.5m O.C. MIN.
Viburnum dentatum	Arrowwood	60cm ht.	2.0m O.C. MIN.

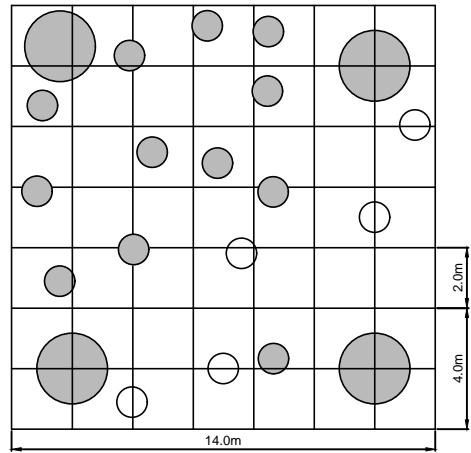
RESTORATION AREA - POND EDGE AQUATIC PLANTING			
BOTANICAL NAME	COMMON NAME	SIZE	SPACING
Acer rubra	Red Maple	60mm cal	5.0m O.C. MIN.
Acer saccharinum	Silver Maple	60mm cal	5.0m O.C. MIN.
Populus tremuloides	Trembling Aspen	60mm cal	5.0m O.C. MIN.
Amelanchier laevis	Smooth Serviceberry	60mm ht.	4.0m O.C.
Cephalanthus occidentalis	Common Buttonbush	60cm ht.	2.0m O.C.
Cornus racemosa	Grey Dogwood	60cm ht.	3.0m O.C.
Cornus sericea	Red Osier Dogwood	60cm ht.	2.5m O.C.
Hamamelis virginiana	Witch Hazel	60cm ht.	5.0m O.C.
Larix laricina	Tamarack	180mm ht.	3.0m O.C.
Rhus typhina	Staghorn Sumac	60cm ht.	2.0m O.C.
Salix amygdaloides	Peachleaf Willow	60cm ht.	4.0m O.C.
Salix bebbiana	Bebb's Willow	60cm ht.	5.0m O.C.
Symphoricarpos albus	Snowberry	60cm ht.	1.25m O.C.
Typha latifolia	Common Cattail	plug	0.60m O.C.

RESTORATION AREA - CLOVERLEAF PLANTING			
BOTANICAL NAME	COMMON NAME	SIZE	SPACING
Acer rubrum	Red Maple	60mm cal	5.0m O.C. MIN.
Juglans nigra	Black Walnut	60mm cal	5.0m O.C. MIN.
Larix laricina	Tamarack	60mm cal	5.0m O.C. MIN.
Populus tremuloides	Trembling Aspen	60mm cal	5.0m O.C. MIN.
Quercus rubra	Red Oak	60mm cal	5.0m O.C. MIN.
Tilia americana	Basswood	60mm cal	5.0m O.C. MIN.
Abies balsamea	Balsam Fir	180cm ht.	3.0m O.C. MIN.
Picea glauca	White Spruce	180cm ht.	3.0m O.C. MIN.
Ulmus americana	White elm	60mm cal	5.0m O.C. MIN.

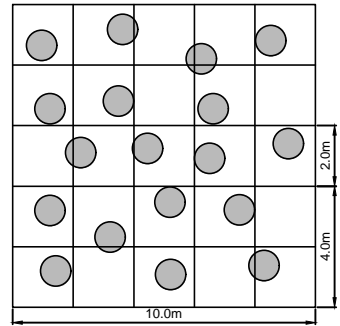
RESTORATION AREA - WINDSCREEN AND SNOW SCREEN PLANTING			
BOTANICAL NAME	COMMON NAME	SIZE	SPACING
Acer rubrum	Red Maple	60mm cal	5.0m O.C. MIN.
Acer saccharum	Sugar Maple	60mm cal	5.0m O.C. MIN.
Acer saccharinum	Silver Maple	60mm cal	5.0m O.C. MIN.
Juglans nigra	Black Walnut	60mm cal	5.0m O.C. MIN.
Juniperus virginiana	Eastern red cedar	180cm ht.	3.0m O.C. MIN.
Larix laricina	Tamarack	60mm cal	5.0m O.C. MIN.
Quercus rubra	Red Oak	60mm cal	5.0m O.C. MIN.
Picea glauca	White Spruce	180cm ht.	3.0m O.C. MIN.
Pinus strobus	White Pine	180cm ht.	3.0m O.C. MIN.
Thuja occidentalis	Eastern white cedar	180cm ht.	3.0m O.C. MIN.
Salix discolor	Pussy Willow	60cm ht.	1.5m O.C. MIN.
Viburnum cassinoides	Withered	60cm ht.	1.5m O.C. MIN.
Viburnum lentago	Nannyberry	60cm ht.	2.0m O.C. MIN.

ROADSIDE SEED MIX		
LATIN NAME	COMMON NAME	PERCENTAGE OF SEED MIX
Grasses		
Andropogon gerardii	Big Bluestem	20%
Elymus canadensis	Canada Wild Rye	19%
Elymus virginicus	Virginia Wild Rye	21%
Schizachyrium scoparium	Little Bluestem	12%
Sorghastrum nutans	Indian Grass	20%
Small Seed		
Desmodium canadense	Showy Tick Trefoil	1.67%
Monarda fistulosa	Wild Bergamot	1.00%
Panicum virgatum	Switch Grass	1.00%
Penstemon digitalis	Foxglove Beardtongue	0.33%
Pycnanthemum virginianum	Virginia Mountain Mint	0.33%
Ratibida pinnata	Gray-headed Coneflower	0.33%
Rudbeckia hirta	Black Eyed Susan	2.00%
Sporobolus cryptandrus	Sand Dropseed	0.34%
Verbena hastata	Blue Vervain	1.00%
TOTAL		100%

RIPARIAN PLANTING			
BOTANICAL NAME	COMMON NAME	SIZE	SPACING
Acer rubrum	Red Maple	60mm cal	5.0m O.C. MIN.
Acer saccharinum	Silver Maple	60mm cal	5.0m O.C. MIN.
Larix laricina	Tamarack	60mm cal	5.0m O.C. MIN.
Populus balsamifera	Balsam poplar	60mm cal	5.0m O.C. MIN.
Populus deltoides	Eastern Cottonwood	60mm cal	5.0m O.C. MIN.
Populus tremuloides	Trembling Aspen	60mm cal	5.0m O.C. MIN.
Tilia americana	Basswood	60mm cal	5.0m O.C. MIN.
Thuja occidentalis	Eastern white cedar	180cm ht.	3.0m O.C. MIN.
Salix discolor	Pussy Willow	60cm ht.	1.5m O.C. MIN.
Cornus sericea	Red Osier Dogwood	60cm ht.	2.5m O.C. MIN.
Viburnum lentago	Nannyberry	60cm ht.	1.5m O.C. MIN.



D1 DECIDUOUS TREE & SHRUB PLANTING MODULE
 NC05 SCALE 1:20 (APPROXIMATELY 10.0m O.C. / 2.0m O.C.)



D2 DECIDUOUS SHRUB PLANTING MODULE
 NC05 SCALE 1:20 (APPROXIMATELY 10.0m O.C. / 2.0m O.C.)

Apply to areas all disturbed areas
 Specification: Custom Mix.
 Description: Native, salt tolerant. Grasses.
 Height: up to 1.0m
 Application Rate: 15Kg/ha, use nurse crop.
 Nurse Crop: Apply Annual Oats (Avena sativa) at 22Kg/ha prior to ECB
 Erosion Control: Install straw erosion control blanket (ECB) over new seed bed to all disturbed areas and secure with small wood pegs (use no metal staples) at minimum 5/m2

PR-10-707

MINISTRY OF TRANSPORTATION, ONTARIO

MODTIME

DRAWING NAME: 00_nc_midblock_plm.dwg
 CREATED: MARCH 2021
 MODIFIED:

METRIC

PLATE No PLATE
CONT No XXXX-XXXX
WP No 3133-20-01

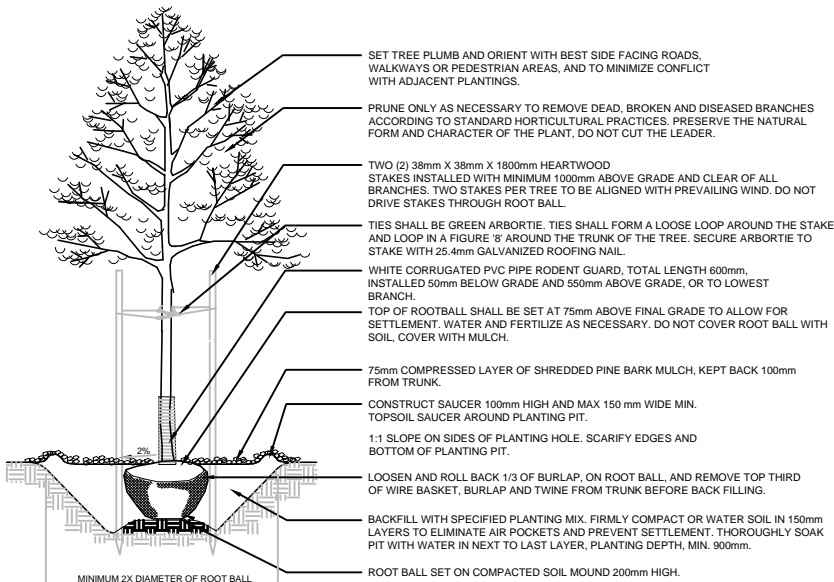
LANDSCAPE DETAILS
XXXXXXXXXX

SHEET
NC06

STA XX TO STA XXXX
Survey Revised

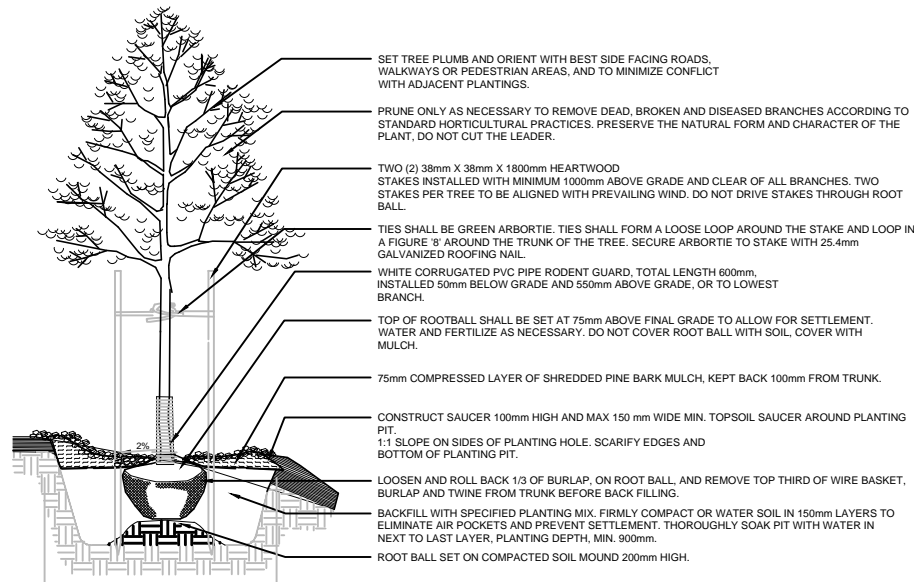
AECOM

PRELIMINARY



- SET TREE PLUMB AND ORIENT WITH BEST SIDE FACING ROADS, WALKWAYS OR PEDESTRIAN AREAS, AND TO MINIMIZE CONFLICT WITH ADJACENT PLANTINGS.
- PRUNE ONLY AS NECESSARY TO REMOVE DEAD, BROKEN AND DISEASED BRANCHES ACCORDING TO STANDARD HORTICULTURAL PRACTICES. PRESERVE THE NATURAL FORM AND CHARACTER OF THE PLANT, DO NOT CUT THE LEADER.
- TWO (2) 38mm X 38mm X 1800mm HEARTWOOD STAKES INSTALLED WITH MINIMUM 1000mm ABOVE GRADE AND CLEAR OF ALL BRANCHES. TWO STAKES PER TREE TO BE ALIGNED WITH PREVAILING WIND. DO NOT DRIVE STAKES THROUGH ROOT BALL.
- TIES SHALL BE GREEN ARBORTIE. TIES SHALL FORM A LOOSE LOOP AROUND THE STAKE AND LOOP IN A FIGURE '8' AROUND THE TRUNK OF THE TREE. SECURE ARBORTIE TO STAKE WITH 25.4mm GALVANIZED ROOFING NAIL.
- WHITE CORRUGATED PVC PIPE RODENT GUARD, TOTAL LENGTH 600mm. INSTALLED 50mm BELOW GRADE AND 550mm ABOVE GRADE, OR TO LOWEST BRANCH.
- TOP OF ROOTBALL SHALL BE SET AT 75mm ABOVE FINAL GRADE TO ALLOW FOR SETTLEMENT. WATER AND FERTILIZE AS NECESSARY. DO NOT COVER ROOT BALL WITH SOIL, COVER WITH MULCH.
- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, KEPT BACK 100mm FROM TRUNK.
- CONSTRUCT SAUCER 100mm HIGH AND MAX 150 mm WIDE MIN. TOPSOIL SAUCER AROUND PLANTING PIT.
- 1:1 SLOPE ON SIDES OF PLANTING HOLE. SCARIFY EDGES AND BOTTOM OF PLANTING PIT.
- LOOSEN AND ROLL BACK 1/3 OF BURLAP, ON ROOT BALL, AND REMOVE TOP THIRD OF WIRE BASKET, BURLAP AND TWINE FROM TRUNK BEFORE BACK FILLING.
- BACKFILL WITH SPECIFIED PLANTING MIX. FIRMLY COMPACT OR WATER SOIL IN 150mm LAYERS TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT. THOROUGHLY SOAK PIT WITH WATER IN NEXT TO LAST LAYER, PLANTING DEPTH, MIN. 900mm.
- ROOT BALL SET ON COMPACTED SOIL MOUND 200mm HIGH.

- NOTE:
- CONTRACTOR SHALL WATER THOROUGHLY AFTER PLANTING. DO NOT CUT OR DAMAGE LEADER. PRUNE ONLY INJURED OR DEAD BRANCHES.
 - CONTRACTOR SHALL CHECK RODENT GUARD IN COMPARISON TO TREE DIAMETER. IF DIAMETER IS GREATER THAN 50mm, CHANGE RODENT GUARD TO 100mm DIAMETER.
 - CONTRACTOR SHALL REMOVE TREE STAKES AND TIES ONE YEAR AFTER PLANTING, OR AT THE END OF THE WARRANTY PERIOD IF STAKES ARE STILL REQUIRED.



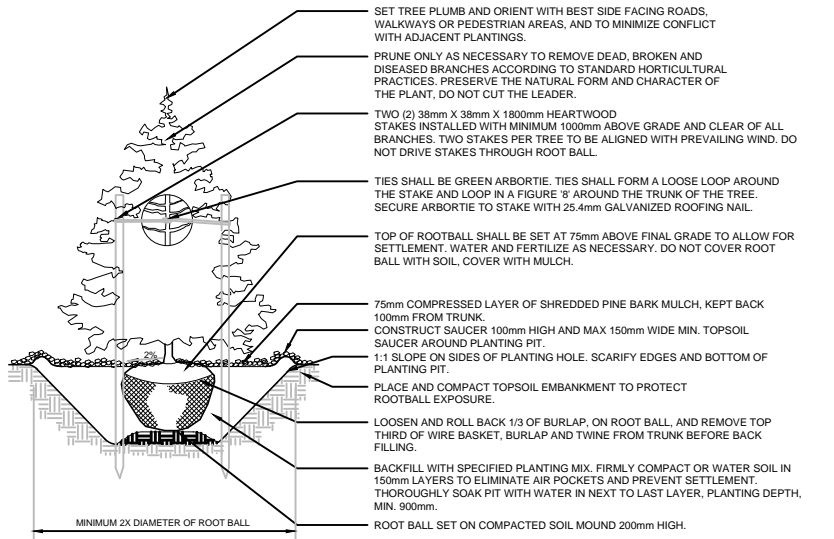
- SET TREE PLUMB AND ORIENT WITH BEST SIDE FACING ROADS, WALKWAYS OR PEDESTRIAN AREAS, AND TO MINIMIZE CONFLICT WITH ADJACENT PLANTINGS.
- PRUNE ONLY AS NECESSARY TO REMOVE DEAD, BROKEN AND DISEASED BRANCHES ACCORDING TO STANDARD HORTICULTURAL PRACTICES. PRESERVE THE NATURAL FORM AND CHARACTER OF THE PLANT, DO NOT CUT THE LEADER.
- TWO (2) 38mm X 38mm X 1800mm HEARTWOOD STAKES INSTALLED WITH MINIMUM 1000mm ABOVE GRADE AND CLEAR OF ALL BRANCHES. TWO STAKES PER TREE TO BE ALIGNED WITH PREVAILING WIND. DO NOT DRIVE STAKES THROUGH ROOT BALL.
- TIES SHALL BE GREEN ARBORTIE. TIES SHALL FORM A LOOSE LOOP AROUND THE STAKE AND LOOP IN A FIGURE '8' AROUND THE TRUNK OF THE TREE. SECURE ARBORTIE TO STAKE WITH 25.4mm GALVANIZED ROOFING NAIL.
- WHITE CORRUGATED PVC PIPE RODENT GUARD, TOTAL LENGTH 600mm. INSTALLED 50mm BELOW GRADE AND 550mm ABOVE GRADE, OR TO LOWEST BRANCH.
- TOP OF ROOTBALL SHALL BE SET AT 75mm ABOVE FINAL GRADE TO ALLOW FOR SETTLEMENT. WATER AND FERTILIZE AS NECESSARY. DO NOT COVER ROOT BALL WITH SOIL, COVER WITH MULCH.
- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, KEPT BACK 100mm FROM TRUNK.
- CONSTRUCT SAUCER 100mm HIGH AND MAX 150 mm WIDE MIN. TOPSOIL SAUCER AROUND PLANTING PIT.
- 1:1 SLOPE ON SIDES OF PLANTING HOLE. SCARIFY EDGES AND BOTTOM OF PLANTING PIT.
- LOOSEN AND ROLL BACK 1/3 OF BURLAP, ON ROOT BALL, AND REMOVE TOP THIRD OF WIRE BASKET, BURLAP AND TWINE FROM TRUNK BEFORE BACK FILLING.
- BACKFILL WITH SPECIFIED PLANTING MIX. FIRMLY COMPACT OR WATER SOIL IN 150mm LAYERS TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT. THOROUGHLY SOAK PIT WITH WATER IN NEXT TO LAST LAYER, PLANTING DEPTH, MIN. 900mm.
- ROOT BALL SET ON COMPACTED SOIL MOUND 200mm HIGH.

- NOTE:
- CONTRACTOR SHALL WATER THOROUGHLY AFTER PLANTING. DO NOT CUT OR DAMAGE LEADER. PRUNE ONLY INJURED OR DEAD BRANCHES.
 - CONTRACTOR SHALL CHECK RODENT GUARD IN COMPARISON TO TREE DIAMETER. IF DIAMETER IS GREATER THAN 50mm, CHANGE RODENT GUARD TO 100mm DIAMETER.
 - CONTRACTOR SHALL REMOVE TREE STAKES AND TIES ONE YEAR AFTER PLANTING, OR AT THE END OF THE WARRANTY PERIOD IF STAKES ARE STILL REQUIRED.

- GENERAL NOTES:
- THE CANADIAN STANDARDS FOR NURSERY STOCK, 8TH EDITION (CANADIAN NURSERY LANDSCAPE ASSOCIATION, 2006) SHALL BE USED FOR ALL SPECIFICATIONS NOMENCLATURE, INCLUDING MINIMUM STANDARDS FOR PLANTING MATERIAL, AND DESCRIPTIVE TERMS USED IN THE PLANTING PLANS.
 - ALL EXPOSED SUB-GRADE SOIL AND FILL MATERIAL TO BE COVERED WITH TOPSOIL TO FINAL ELEVATIONS, PRIOR TO RECEIVING SEED OR PLANTING TREATMENT. REFER TO SURFACE GRADING DRAWINGS FOR FINISH GRADES. REFER TO LANDSCAPE DETAILS FOR TOPSOIL/ SUB-SOIL DEPTH.
 - EXCAVATION AND PREPARATION OF PLANTING BEDS AND INDIVIDUAL TREE PLANTING PITS; SEEDING, AND MULCHING SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE PLANTING DETAILS ON THIS SHEET. PLANTING PITS FOR TREES SHALL NOT BE DUG WITH AN AUGER OF ANY TYPE.

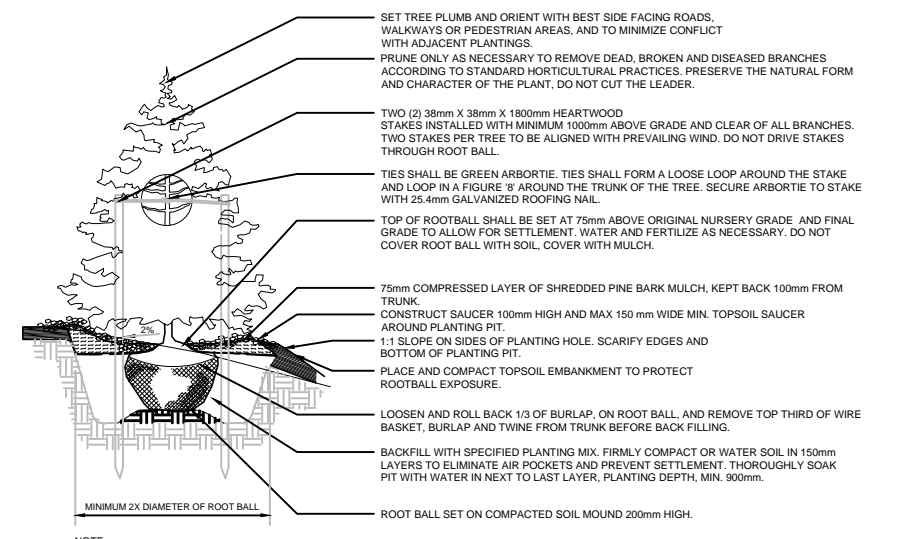
D1 DECIDUOUS TREE PLANTING DETAIL
SCALE 1:20

D2 DECIDUOUS TREE PLANTING ON A SLOPE DETAIL
SCALE 1:20



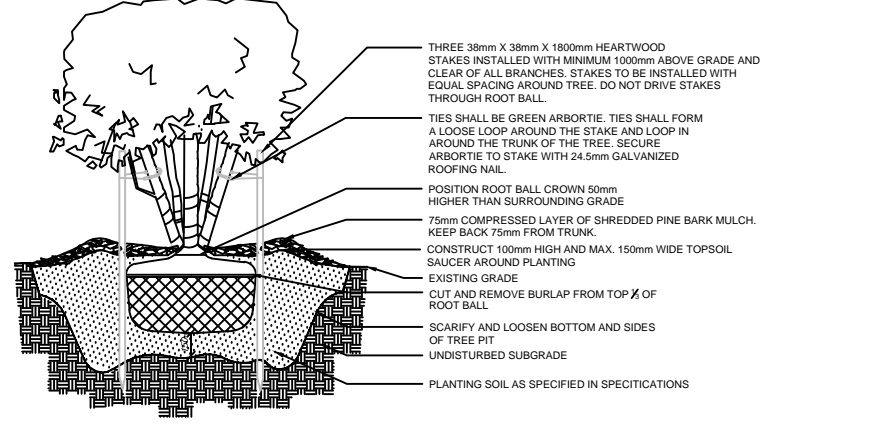
- SET TREE PLUMB AND ORIENT WITH BEST SIDE FACING ROADS, WALKWAYS OR PEDESTRIAN AREAS, AND TO MINIMIZE CONFLICT WITH ADJACENT PLANTINGS.
- PRUNE ONLY AS NECESSARY TO REMOVE DEAD, BROKEN AND DISEASED BRANCHES ACCORDING TO STANDARD HORTICULTURAL PRACTICES. PRESERVE THE NATURAL FORM AND CHARACTER OF THE PLANT, DO NOT CUT THE LEADER.
- TWO (2) 38mm X 38mm X 1800mm HEARTWOOD STAKES INSTALLED WITH MINIMUM 1000mm ABOVE GRADE AND CLEAR OF ALL BRANCHES. TWO STAKES PER TREE TO BE ALIGNED WITH PREVAILING WIND. DO NOT DRIVE STAKES THROUGH ROOT BALL.
- TIES SHALL BE GREEN ARBORTIE. TIES SHALL FORM A LOOSE LOOP AROUND THE STAKE AND LOOP IN A FIGURE '8' AROUND THE TRUNK OF THE TREE. SECURE ARBORTIE TO STAKE WITH 25.4mm GALVANIZED ROOFING NAIL.
- TOP OF ROOTBALL SHALL BE SET AT 75mm ABOVE FINAL GRADE TO ALLOW FOR SETTLEMENT. WATER AND FERTILIZE AS NECESSARY. DO NOT COVER ROOT BALL WITH SOIL, COVER WITH MULCH.
- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, KEPT BACK 100mm FROM TRUNK.
- CONSTRUCT SAUCER 100mm HIGH AND MAX 150mm WIDE MIN. TOPSOIL SAUCER AROUND PLANTING PIT.
- 1:1 SLOPE ON SIDES OF PLANTING HOLE. SCARIFY EDGES AND BOTTOM OF PLANTING PIT.
- PLACE AND COMPACT TOPSOIL EMBANKMENT TO PROTECT ROOTBALL EXPOSURE.
- LOOSEN AND ROLL BACK 1/3 OF BURLAP, ON ROOT BALL, AND REMOVE TOP THIRD OF WIRE BASKET, BURLAP AND TWINE FROM TRUNK BEFORE BACK FILLING.
- BACKFILL WITH SPECIFIED PLANTING MIX. FIRMLY COMPACT OR WATER SOIL IN 150mm LAYERS TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT. THOROUGHLY SOAK PIT WITH WATER IN NEXT TO LAST LAYER, PLANTING DEPTH, MIN. 900mm.
- ROOT BALL SET ON COMPACTED SOIL MOUND 200mm HIGH.

- NOTE:
- CONTRACTOR SHALL WATER THOROUGHLY AFTER PLANTING. DO NOT CUT OR DAMAGE LEADER. PRUNE ONLY INJURED OR DEAD BRANCHES.
 - CONTRACTOR SHALL CHECK RODENT GUARD IN COMPARISON TO TREE DIAMETER. IF DIAMETER IS GREATER THAN 50mm, CHANGE RODENT GUARD TO 100mm DIAMETER.
 - CONTRACTOR SHALL REMOVE TREE STAKES AND TIES ONE YEAR AFTER PLANTING, OR AT THE END OF THE WARRANTY PERIOD IF STAKES ARE STILL REQUIRED.

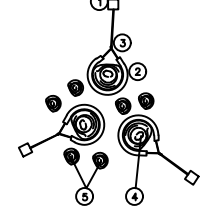


- SET TREE PLUMB AND ORIENT WITH BEST SIDE FACING ROADS, WALKWAYS OR PEDESTRIAN AREAS, AND TO MINIMIZE CONFLICT WITH ADJACENT PLANTINGS.
- PRUNE ONLY AS NECESSARY TO REMOVE DEAD, BROKEN AND DISEASED BRANCHES ACCORDING TO STANDARD HORTICULTURAL PRACTICES. PRESERVE THE NATURAL FORM AND CHARACTER OF THE PLANT, DO NOT CUT THE LEADER.
- TWO (2) 38mm X 38mm X 1800mm HEARTWOOD STAKES INSTALLED WITH MINIMUM 1000mm ABOVE GRADE AND CLEAR OF ALL BRANCHES. TWO STAKES PER TREE TO BE ALIGNED WITH PREVAILING WIND. DO NOT DRIVE STAKES THROUGH ROOT BALL.
- TIES SHALL BE GREEN ARBORTIE. TIES SHALL FORM A LOOSE LOOP AROUND THE STAKE AND LOOP IN A FIGURE '8' AROUND THE TRUNK OF THE TREE. SECURE ARBORTIE TO STAKE WITH 25.4mm GALVANIZED ROOFING NAIL.
- TOP OF ROOTBALL SHALL BE SET AT 75mm ABOVE ORIGINAL NURSERY GRADE AND FINAL GRADE TO ALLOW FOR SETTLEMENT. WATER AND FERTILIZE AS NECESSARY. DO NOT COVER ROOT BALL WITH SOIL, COVER WITH MULCH.
- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, KEPT BACK 100mm FROM TRUNK.
- CONSTRUCT SAUCER 100mm HIGH AND MAX 150mm WIDE MIN. TOPSOIL SAUCER AROUND PLANTING PIT.
- 1:1 SLOPE ON SIDES OF PLANTING HOLE. SCARIFY EDGES AND BOTTOM OF PLANTING PIT.
- PLACE AND COMPACT TOPSOIL EMBANKMENT TO PROTECT ROOTBALL EXPOSURE.
- LOOSEN AND ROLL BACK 1/3 OF BURLAP, ON ROOT BALL, AND REMOVE TOP THIRD OF WIRE BASKET, BURLAP AND TWINE FROM TRUNK BEFORE BACK FILLING.
- BACKFILL WITH SPECIFIED PLANTING MIX. FIRMLY COMPACT OR WATER SOIL IN 150mm LAYERS TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT. THOROUGHLY SOAK PIT WITH WATER IN NEXT TO LAST LAYER, PLANTING DEPTH, MIN. 900mm.
- ROOT BALL SET ON COMPACTED SOIL MOUND 200mm HIGH.

- NOTE:
- CONTRACTOR SHALL WATER THOROUGHLY AFTER PLANTING. DO NOT CUT OR DAMAGE LEADER. PRUNE ONLY INJURED OR DEAD BRANCHES.
 - CONTRACTOR SHALL CHECK RODENT GUARD IN COMPARISON TO TREE DIAMETER. IF DIAMETER IS GREATER THAN 50mm, CHANGE RODENT GUARD TO 100mm DIAMETER.
 - CONTRACTOR SHALL REMOVE TREE STAKES AND TIES ONE YEAR AFTER PLANTING, OR AT THE END OF THE WARRANTY PERIOD IF STAKES ARE STILL REQUIRED.



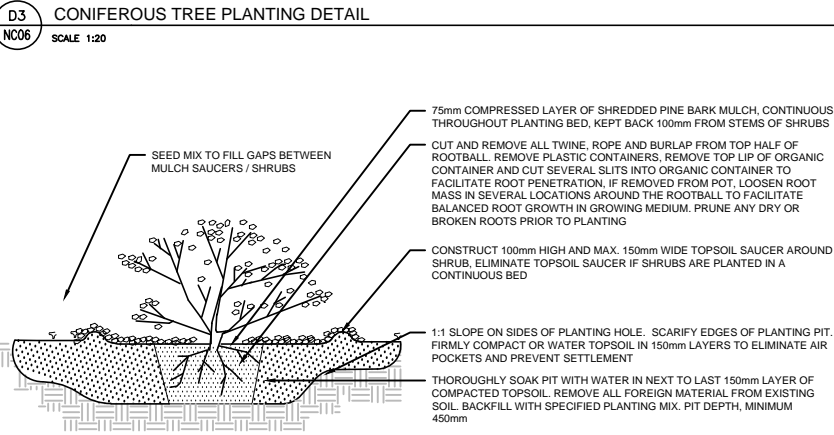
- THREE 38mm X 38mm X 1800mm HEARTWOOD STAKES INSTALLED WITH MINIMUM 1000mm ABOVE GRADE AND CLEAR OF ALL BRANCHES. STAKES TO BE INSTALLED WITH EQUAL SPACING AROUND TREE. DO NOT DRIVE STAKES THROUGH ROOT BALL.
- TIES SHALL BE GREEN ARBORTIE. TIES SHALL FORM A LOOSE LOOP AROUND THE STAKE AND LOOP IN AROUND THE TRUNK OF THE TREE. SECURE ARBORTIE TO STAKE WITH 25.4mm GALVANIZED ROOFING NAIL.
- POSITION ROOT BALL CROWN 50mm HIGHER THAN SURROUNDING GRADE.
- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, KEPT BACK 100mm FROM TRUNK.
- CONSTRUCT 100mm HIGH AND MAX. 150mm WIDE TOPSOIL SAUCER AROUND PLANTING PIT.
- EXISTING GRADE
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL
- SCARIFY AND LOOSEN BOTTOM AND SIDES OF TREE PIT
- UNDISTURBED SUBGRADE
- PLANTING SOIL AS SPECIFIED IN SPECIFICATIONS



- 1 STAKE
- 2 GREEN ARBORTIE
- 3 GUYING CABLE
- 4 LARGE LEADER TO BE STAKED (MINIMUM 3 LEADERS PER TREE)
- 5 SMALL LEADER NOT TO BE STAKED

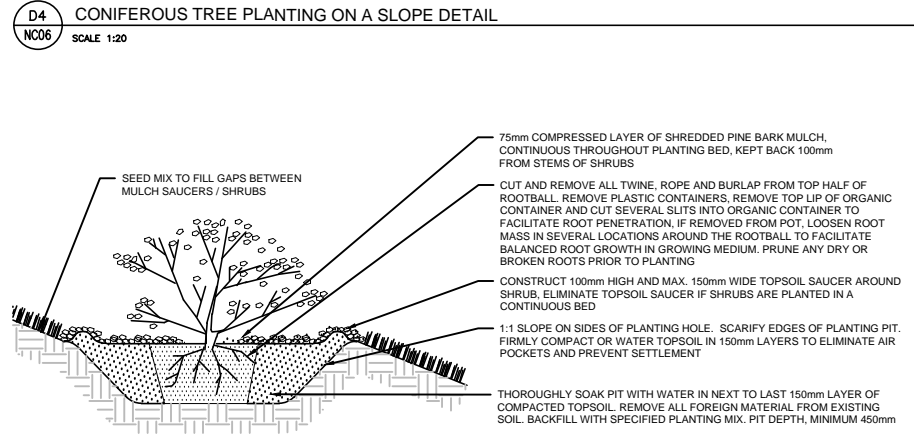
- NOTES:
- CONTRACTOR TO SELECT 3 LARGEST STEMS ON EACH MULTISTEM TREE TO STAKE AS PER DETAIL.
 - TIE BACK BRANCHES AS REQUESTED TO AVOID DAMAGE. REMOVE TIES IMMEDIATELY AFTER INSTALLATION.
 - GUYING TO BE SET ABOVE FIRST BRANCH.
 - IMMEDIATELY AFTER PLANTING SATURATE ROOT BALL WITH WATER.
 - FILL AND TAMP VOIDS AROUND BALL WITH TOPSOIL.
 - WATER AGAIN AND REPEAT.

D5 MULTI-STEM SHRUB PLANTING DETAIL
SCALE 1:20



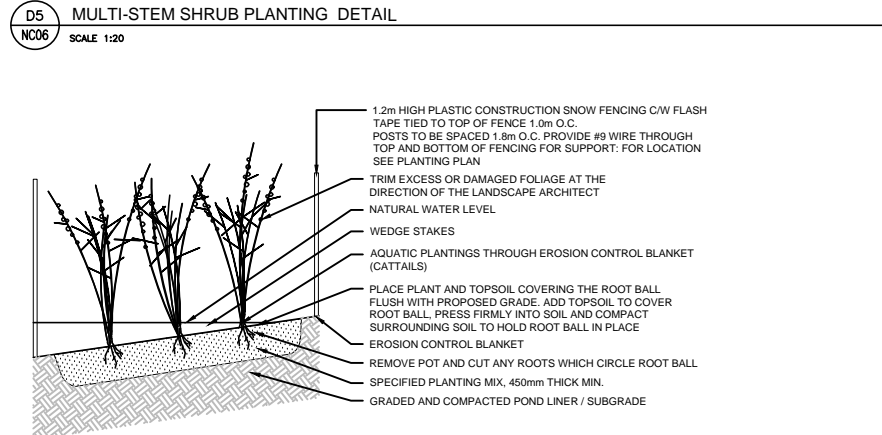
- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, CONTINUOUS THROUGHOUT PLANTING BED, KEPT BACK 100mm FROM STEMS OF SHRUBS
- CUT AND REMOVE ALL TWINE, ROPE AND BURLAP FROM TOP HALF OF ROOTBALL. REMOVE PLASTIC CONTAINERS. REMOVE TOP LIP OF ORGANIC CONTAINER AND CUT SEVERAL SLITS INTO ORGANIC CONTAINER TO FACILITATE ROOT PENETRATION. IF REMOVED FROM POT, LOOSEN ROOT MASS IN SEVERAL LOCATIONS AROUND THE ROOTBALL TO FACILITATE BALANCED ROOT GROWTH IN GROWING MEDIUM. PRUNE ANY DRY OR BROKEN ROOTS PRIOR TO PLANTING
- CONSTRUCT 100mm HIGH AND MAX. 150mm WIDE TOPSOIL SAUCER AROUND SHRUB. ELIMINATE TOPSOIL SAUCER IF SHRUBS ARE PLANTED IN A CONTINUOUS BED
- 1:1 SLOPE ON SIDES OF PLANTING HOLE. SCARIFY EDGES OF PLANTING PIT. FIRMLY COMPACT OR WATER TOPSOIL IN 150mm LAYERS TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT
- THOROUGHLY SOAK PIT WITH WATER IN NEXT TO LAST 150mm LAYER OF COMPACTED TOPSOIL. REMOVE ALL FOREIGN MATERIAL FROM EXISTING SOIL. BACKFILL WITH SPECIFIED PLANTING MIX. PIT DEPTH, MINIMUM 450mm

D6 DECIDUOUS SHRUB PLANTING DETAIL - INDIVIDUAL MULCH SAUCERS
SCALE 1:20



- 75mm COMPRESSED LAYER OF SHREDDED PINE BARK MULCH, CONTINUOUS THROUGHOUT PLANTING BED, KEPT BACK 100mm FROM STEMS OF SHRUBS
- CUT AND REMOVE ALL TWINE, ROPE AND BURLAP FROM TOP HALF OF ROOTBALL. REMOVE PLASTIC CONTAINERS. REMOVE TOP LIP OF ORGANIC CONTAINER AND CUT SEVERAL SLITS INTO ORGANIC CONTAINER TO FACILITATE ROOT PENETRATION. IF REMOVED FROM POT, LOOSEN ROOT MASS IN SEVERAL LOCATIONS AROUND THE ROOTBALL TO FACILITATE BALANCED ROOT GROWTH IN GROWING MEDIUM. PRUNE ANY DRY OR BROKEN ROOTS PRIOR TO PLANTING
- CONSTRUCT 100mm HIGH AND MAX. 150mm WIDE TOPSOIL SAUCER AROUND SHRUB. ELIMINATE TOPSOIL SAUCER IF SHRUBS ARE PLANTED IN A CONTINUOUS BED
- 1:1 SLOPE ON SIDES OF PLANTING HOLE. SCARIFY EDGES OF PLANTING PIT. FIRMLY COMPACT OR WATER TOPSOIL IN 150mm LAYERS TO ELIMINATE AIR POCKETS AND PREVENT SETTLEMENT
- THOROUGHLY SOAK PIT WITH WATER IN NEXT TO LAST 150mm LAYER OF COMPACTED TOPSOIL. REMOVE ALL FOREIGN MATERIAL FROM EXISTING SOIL. BACKFILL WITH SPECIFIED PLANTING MIX. PIT DEPTH, MINIMUM 450mm

D7 DECIDUOUS SHRUB PLANTING ON A SLOPE DETAIL - INDIVIDUAL MULCH SAUCERS
SCALE 1:20



- 1.2m HIGH PLASTIC CONSTRUCTION SNOW FENCING C/W FLASH TAPE TIED TO TOP OF FENCE 1.0m O.C.
- POSTS TO BE SPACED 1.8m O.C. PROVIDE #9 WIRE THROUGH TOP AND BOTTOM OF FENCING FOR SUPPORT. FOR LOCATION SEE PLANTING PLAN
- TRIM EXCESS OR DAMAGED FOLIAGE AT THE DIRECTION OF THE LANDSCAPE ARCHITECT
- NATURAL WATER LEVEL
- WEDGE STAKES
- AQUATIC PLANTINGS THROUGH EROSION CONTROL BLANKET (CATTAILS)
- PLACE PLANT AND TOPSOIL COVERING THE ROOT BALL FLUSH WITH PROPOSED GRADE. ADD TOPSOIL TO COVER ROOT BALL. PRESS FIRMLY INTO SOIL AND COMPACT SURROUNDING SOIL TO HOLD ROOT BALL IN PLACE
- EROSION CONTROL BLANKET
- REMOVE POT AND CUT ANY ROOTS WHICH CIRCLE ROOT BALL
- SPECIFIED PLANTING MIX, 450mm THICK MIN.
- GRADED AND COMPACTED POND LINER / SUBGRADE

D8 FLOOD FRINGE AQUATIC PLANTING DETAIL
SCALE 1:20

DRAWING NAME: DO, INC. - HEDBACK - PLO.dwg
CREATED: MARCH 2021
MODIFIED:

DCR #1: Highway 6/Hanlon Expressway Midblock Interchange
(Early Works), G.W.P. 3059-20-00
DB Contract Number: 2021-3004
Prepared for the Ministry of Transportation, West Region



APPENDIX F – ENVIRONMENTAL ASSESSMENT ACT, NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING

ENVIRONMENTAL ASSESSMENT ACT

SECTION 9

**NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING
(AND ORDER UNDER SUBSECTION 12.4(3))**

RE: An Environmental Assessment for Highway 6: Freelon Northerly 16.9 kilometres to Guelph

Proponent: Ministry of Transportation

EA File No.: TC-CE-02

TAKE NOTICE that the period for requiring a hearing, provided for in the Notice of Completion of the Review for the above-noted undertaking, expired on July 30, 2007. I received one request for a hearing before the expiration date. The public had been advised that the Minister was considering applying section 9 of the *Environmental Assessment Act* with respect to the Environmental Assessment (which has the effect of eliminating the acceptance decision which was necessary prior to January 1, 1997) and were invited to make submissions on that proposal. None did.

Pursuant to subsection 12.4(3) of the amended *Environmental Assessment Act*, I order that the provisions of section 9 (other than paragraph 9(2)2 and other than the reference to subsection 6.4(2) in paragraph 9(2)(5) and 9.3 apply with respect to the Environmental Assessment.

I do not consider it advisable or necessary to hold a hearing. Having considered the purpose of the Act, the Environmental Assessment, the Review and submissions received, I hereby give approval to proceed with the undertaking, subject to conditions set out below.

REASONS

My reasons for giving approval are:

- (1) On the basis of the proponent's Environmental Assessment and the ministry Review, the proponent's conclusion that, on balance, the advantages of this undertaking outweigh its disadvantages appears to be valid.
- (2) No other beneficial alternative method of implementing the undertaking was identified.
- (3) Issues raised during the review of the Environmental Assessment have been resolved or are best addressed by conditions of approval.
- (4) On the basis of the proponent's Environmental Assessment, the ministry Review and the conditions of approval, the construction, operation and maintenance of the undertaking will be consistent with the purpose of the *Environmental Assessment Act* (section 2).

- (5) The Government Review Team has indicated no outstanding concerns that cannot be addressed through conditions of approval. The public review of the EA did not identify any outstanding concerns which cannot be addressed through conditions of approval.
- (6) The submissions received after the Notice of Completion of the Review was published are being dealt with through conditions where appropriate. I am not aware of any outstanding issues with respect to this undertaking which suggest that a hearing should be required.

CONDITIONS

The approval is subject to the following conditions:

1. Definitions

For the purposes of these conditions:

"Director" means the Director of the Environmental Assessment and Approvals Branch.

"EAAB" means the Environmental Assessment and Approvals Branch of the Ministry of the Environment.

"Environmental Assessment (EA)" means the document entitled "Environmental Assessment for Highway 6, Freelon Northerly 16.9 km to Guelph", dated September 1995, the Addendum issued November 1997, and the document entitled Highway 6 North – Freelon to Guelph (W.P. 65-76-05): *Connection Road at Morrilton, - Stakeholder Consultation Process (Technical Paper, May 2004)*.

"MOE" means the Ministry of the Environment.

"Natural Heritage System" has the same meaning as in the Greenbelt Plan, 2005.

"program" means compliance monitoring program.

"proponent" means the Ontario Ministry of Transportation.

"Regional Director" means the Director of the MOE's West Central Regional Office.

2. General Requirements

2.1 The proponent shall comply with the provisions in the Environmental Assessment which are hereby incorporated in this approval by reference except as provided in these conditions and as provided in any other approval or permit that may be issued.

2.2 These conditions do not prevent more restrictive conditions being imposed under other statutes.

3. Public Record

- 3.1 Where a document is required for the public record, the proponent shall provide two copies of the document to the Director: a copy for filing within the specific public record file maintained for the undertaking and a copy for staff use.
- 3.2 The proponent shall provide additional copies of the documents described in Condition 3.1 to the:
- a) Regional Director (as required); and
 - b) Clerk's offices of the City of Guelph, City of Hamilton, County of Wellington, and the Township of Puslinch.
- 3.3 The EAAB file number TC-CE-02 shall be quoted on the documents.
- 3.4 These documents may also be provided through other means as considered appropriate by the proponent.

4. Consultation During Detailed Design Phase

- 4.1 The proponent shall consult with Six Nations of the Grand River Territory during the detailed design phase, as outlined in its December 14, 2006 letter to Six Nations of the Grand River Territory Elected Council. The proponent shall also make reasonable efforts to develop a work plan in consultation with Six Nations of the Grand River Territory during the detailed design phase of the undertaking.
- 4.2 The proponent shall make reasonable efforts to consult with other Aboriginal communities that express an interest in participating in the detailed design phase.
- 4.3 In addition to other interested stakeholders the proponent considers appropriate, the proponent shall ensure the following ministries/agencies are consulted during the detailed design phase:
- The MOE's West Central Regional Office;
 - Ministry of Natural Resources;
 - Ministry of Agriculture and Rural Affairs;
 - Ministry of Municipal Affairs and Housing;
 - All affected utilities, including Hydro One;
 - Grand River Conservation Authority;
 - Morriston Tract Conservation Association;
 - Fisheries and Oceans Canada;
 - Environment Canada; and,
 - Transport Canada.

5. **Henslow's Sparrow**

- 5.1 The proponent shall update and verify the Henslow's Sparrow habitat investigations documented in the Addendum issued November 1997 to confirm that the proposed highway right-of-way continues to have no potential impacts on the habitat for Henslow's Sparrow.
- 5.2 The proponent shall update the investigations described in Condition 5.1 by conducting additional investigations within appropriate time periods (i.e., during nesting and breeding season) during the detailed design phase. If the above investigation is undertaken within one year of construction, an additional investigation would not be required immediately prior to construction.
- 5.3 In the event that the investigations do demonstrate potential impacts, the proponent shall notify the Ministry of Natural Resources and Environment Canada and consider all direction provided by the Ministry of Natural Resources and Environment Canada.

6. **Stormwater Management**

Preparation of Conceptual Stormwater Management Plan:

- 6.1 During the detailed design phase of the undertaking, the proponent shall prepare a Conceptual Stormwater Management Plan.

Submission of Conceptual Stormwater Management Plan:

- 6.2 The proponent shall submit the Conceptual Stormwater Management Plan to the Regional Director for review at least nine months prior to tendering. The proponent shall consider all comments resulting from the MOE's review.

Requirements of Conceptual Stormwater Management Plan

- 6.3 The Conceptual Stormwater Management Plan shall, at a minimum, include the following:
- a) Achieve the treatment levels for soluble pollutants required as per Ministry of Natural Resources and MOE policy and practice, using methods advocated by the MOE and Ministry of Transportation in their respective manuals on stormwater management;
 - b) An assessment of water quality controls where possible (i.e. sequenced and/or combined linear facilities) for the protection of sensitive receivers, in addition to grassed ditches for quality control purposes;
 - c) An assessment of the long term life, efficiency and effectiveness of any proposed infiltration basins;
 - d) An evaluation of the depth between the bottom of the stormwater facilities and the seasonally high water table;
 - e) A general assessment of the need for an overflow weir/channel for the stormwater management facilities. The proponent shall submit the details of

this assessment to EAAB technical staff for their review prior to submitting the Conceptual Stormwater Management Plan;

- f) An assessment of the feasibility of wetland vegetative plantings within the roadside ditches/ponds;
- g) A maintenance program for the stormwater management facilities;
- h) An assessment of the potential measures to respond to accidental/spill releases; and,
- i) An erosion and sedimentation control plan to protect sensitive receivers during construction.

6.4 In preparing the Conceptual Stormwater Management Plan the proponent shall consider the policies in section 4.2.3 of the Greenbelt Plan (2005), where applicable, to avoid, minimize and/or mitigate stormwater volume, contaminant loads and impacts to receiving water courses in order to:

- Maintain groundwater quality and flow and stream baseflow;
- Protect water quality;
- Minimize the disruption of pre-existing natural drainage patterns wherever possible;
- Prevent increases in stream channel erosion;
- Prevent any increase in flood risk; and
- Protect aquatic species and their habitat.

7. Hydrogeological Studies

Preparation of Hydrogeological Studies:

- 7.1 During the detailed design phase of the undertaking, the proponent shall conduct additional hydrogeological studies.

Submission of Hydrogeological Studies:

- 7.2 The proponent shall submit the hydrogeological studies described in Condition 7.3 to the Regional Director for review at least 150 days prior to tendering. The proponent shall consider all comments resulting from the MOE's review.

Hydrogeological Studies Required:

- 7.3 The proponent shall, at a minimum, prepare the following hydrogeological studies:
- a) One hydrogeological cross-section along the entire length of the recommended route, and shorter cross-sections placed perpendicular to the recommended route at sensitive areas (e.g. recharge/discharge zones). The

cross-sections should show depth to bedrock, stratification within the overburden, water table and/or potentiometric surface, and referenced wells;

- b) On the basis of a pre-construction well owner field survey, a map identifying the location of the wells within 300 metres (m) of the highway right of way will be prepared. Based on the owner survey and a review of the MOE Water Well Record database information wells should be categorized as overburden or bedrock wells, and the owners and status of the wells should be identified;
- c) After having completed the studies described in Conditions 7.3 (a) and (b), the proponent shall assess the potential impact of road salt and other contaminants on the identified wells and identify possible mitigation measures that could be implemented in the event that those impacts occur;
- d) A pre-construction survey of all potable water wells with 300 m of the highway right of way, to serve as a baseline for comparison to future monitoring data;
- e) An assessment of seasonal variation of water level. Boreholes should be drilled at proposed stormwater management facilities to determine the site-specific stratigraphy to the bedrock. Alternative best management practices should be considered if a direct hydraulic connection to bedrock aquifer is identified upon drilling;
- f) An explanation of the expected temporary and long-term implications of deep road cuts defined in this project as from 75 m north of Crieff Road northerly for 350 m and from 350 m south of Calfass Rd., northerly for 1 kilometre, to 250 m north of the Connection Road at Morriston on surface water and groundwater interaction;
- g) A map identifying the location of the deep road cuts described in Condition 7.3(f);
- h) An identification of mitigation options for the impacts of the deep road cuts described in Condition 7.3(f);
- i) An assessment of the dewatering impacts of the preferred alternative;
- j) Achieve the treatment levels for soluble pollutants required as per current Ministry of Natural Resources and MOE policy and practice, using methods advocated by the MOE and the Ministry of Transportation in their respective manuals on hydrogeology;
- k) An assessment of the potential groundwater impacts on lands having existing development rights, and which are located adjacent to the highway project.

Water Quality Monitoring Program:

- 7.4 The proponent shall conduct a Water Quality Monitoring Program using wells established in or immediately adjacent to the highway construction zone. The Water Quality Monitoring Program shall use as baseline data the data obtained pursuant to Condition 7.3(d).

Provision of Missing Pages in the EA

- 7.5 The proponent shall provide Figures 5.2 and 5.3 in Appendix M of the EA to the West Central Regional Office along with the submission of the hydrogeological studies described in Condition 7.2.

8. Noise Assessment

Preparation of Noise Assessment

- 8.1 During the detailed design phase of the undertaking, the proponent shall reassess the noise impacts and the potential for mitigation at all noise sensitive locations along the recommended route which may be subject to increases in noise levels of greater than 5 decibels. The new report will follow the study methods and policy described in the new Environmental Guide for Noise, Ministry of Transportation, October 2006.

Submission of Noise Assessment

- 8.2 The proponent shall submit a report containing the results of the Noise Assessment to the Director for review and shall consider all comments resulting from the Director's review. The report shall be submitted at least 90 days prior to construction.

9. Conservation Halton

- 9.1 The proponent shall ensure that the limits of Conservation Halton's fill regulated areas are identified on all relevant design drawings.
- 9.2 During the detailed design phase of the undertaking, the proponent shall provide any additional details regarding runoff calculations and supporting documentation to Conservation Halton for review.

10. Compliance Monitoring Program

Purpose of Program:

- 10.1 The proponent shall prepare an EA compliance monitoring program. The program shall be prepared for the monitoring of the proponent's fulfilment of the provisions of the EA for mitigation measures, public consultation, and additional studies and work to be carried out, and of all other commitments made during the preparation of the EA and the subsequent review of the EA for mitigation measures, public consultation, and additional studies and work to be carried out.

Submission of Program:

- 10.2 The proponent shall submit the program to the Director for placement on the public record at least 60 days before the commencement of construction.

Requirements of Program:

- 10.3 The program must contain an implementation schedule.
- 10.4 A statement must accompany the program when submitted to the Director, indicating that the program is intended to fulfil this condition.
- 10.5 The proponent shall carry out the program, as reasonably amended by the Director.
- 10.6 The proponent shall make the program documentation available to the MOE or its designate upon request in a timely manner when so requested by the MOE during an on-site inspection, audit, or response to a pollution incident report or when information concerning compliance is requested by the MOE.

11. Compliance Reporting

- 11.1 The proponent shall prepare an annual compliance report which describes compliance with the conditions of approval set out in this notice and which describes the results of the proponent's program.
- 11.2 The proponent shall issue the first compliance report no later than one year following the commencement of the detailed design phase, and on the date that is the anniversary of this commencement thereafter, for which the compliance report shall cover the previous year to that date.
- 11.3 The proponent shall submit the annual compliance report to the Director for placement on the public record.
- 11.4 The proponent shall submit annual compliance reports until all conditions are satisfied.
- 11.5 When all conditions have been satisfied, the proponent shall indicate in the annual compliance report that this is its final submission.
- 11.6 The proponent shall retain either on site or in another location approved by the Director, copies of the annual compliance reports for each reporting year and any associated documentation of compliance monitoring activities.
- 11.7 The proponent shall make the documentation available to the MOE or its designate upon request in a timely manner when so requested by the MOE during an on-site inspection, audit, or in response to a pollution incident report or when information concerning compliance is requested by the MOE.

12. Greenbelt Lands

- 12.1 The proponent shall consider the policies in section 4.2.1 of the Greenbelt Plan (2005), where applicable, with respect to detailed design and construction activities, including:

- Construction practices shall minimize, wherever possible, the amount of Greenbelt lands, and particularly Natural Heritage Systems, traversed and/or occupied by infrastructure;
- Construction practices shall minimize, wherever possible, the negative impacts and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt; and
- Where the undertaking does cross a Natural Heritage System or intrude into or result in the loss of a key natural heritage feature or key hydrologic feature, including related landform features, construction practices shall minimize negative impacts and disturbance on the features or their related functions, and where reasonable, maintain or improve connectivity.

13. Agricultural Lands

- 13.1 For prime agricultural lands which are not permanently required for the undertaking, the proponent shall ensure that any work required for the undertaking is conducted according to appropriate construction standards so that the lands can be returned to productive agricultural uses.
- 13.2 The proponent shall construct the undertaking in such a way as to avoid disruptions to agricultural infrastructure such as field tiles, drainage ditches, culverts, and field entrances. Should such disruptions be unavoidable, the proponent shall minimize and repair the disruptions to the greatest extent possible.

Dated the 19th day of December 2008 at TORONTO.



Minister of the Environment
135 St. Clair Avenue West, 12th Floor
Toronto, Ontario
M4V 1P5

Approved by O.C. No. 13/2007

Date O.C. Approved Jan 22 2007