DILLON CONSULTING

MINISTRY OF TRANSPORTATION

Transportation Environmental Study Report Addendum (Final)

Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes, United Counties of Leeds and Grenville
(GWP 4315-06-00)

February 2023 – 21-1203

RECORD OF QUALITY CONTROL CHECK

Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes, United Counties of Leeds and Grenville
(GWP 4315-06-00)

Document: Transportation Environmental Study Report Addendum

Status: Final

Date: February 2023

	Name, Title	Signature	Date
Prepared By:	Adele Mochrie Environmental Team Lead		March 3, 2023
Reviewed By:	Susan Wagter Environmental Planner		March 6, 2023
	Dennis Regan Project Manager		March 1, 2023

Table of Contents

Figures

Tables

Appendices

Public Record

The study is subject to the Ontario *Environmental Assessment (EA) Act* and was carried out in accordance with the requirements of the *Class EA for Provincial Transportation Facilities* (2000) as a Group 'B' project. The Class EA process requires a number of alternatives be evaluated to identify the Technically Preferred Alternative. The evaluation process involves the collection and integration of input from engineering and environmental studies, as well as public and agency consultation.

This Transportation Environmental Study Report (TESR) Addendum documents the update to the Preliminary Design and Class EA Study that received Environmental Clearance in January 2018 to identify the technically preferred long-term alternative for the intersection improvements at Highway 15 and County Road 42. The study was completed by Dillon Consulting Limited (Dillon) on behalf of the Ministry of Transportation, Ontario (MTO). The TESR Addendum is being published for a 30-day public review.

Comments

Interested persons are encouraged to review this document and provide comments by **April 11, 2023**, to any of the project team members identified below. Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act* and the *Access to Information Act*. With the exception of personal information, all comments will become part of the public record.

Colton Horan, P.Eng.
MTO Project Engineer
MTO, Project Delivery West
659 Exeter Road
London, ON N6E 1L3
Tel.: 1-519-860-3787
Email: colton.horan@ontario.ca

Dennis Regan, LEL
Consultant Project Manager
Dillon Consulting Limited
177 Colonnade Road
Nepean, ON, K2E 7J4
Tel: 1-877-934-5566 Ext. 1315
E-mail: Hwy15Crosby@dillon.ca

If you have any accessibility requirements to participate in this study, please contact one of the individuals listed above.

Ce document hautement spécialisé n'est disponible qu'en anglais en vertu du *Règlement 411/97*, qui exempte l'application de la Loi sur les services en français. Pour des renseignments en français, veuillez communiquer avec Sydney Tasfi au 1-888-345-5668, poste 1005.

Section 16 Order (Aboriginal and Treaty Rights)

Outstanding concerns are to be directed to the proponents listed above for a response, unless the outstanding concerns are regarding potential adverse impacts to constitutionally protected Aboriginal and treaty rights, in which case Section 16 Order requests on these matters should be addressed in writing or by email to the following contacts, and copied to the project team members listed above, no later than **April 11, 2023**.

Minister of the Environment, Conservation and Parks
Ministry of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

All personal information included in your request – such as name, address, telephone number, and property location – is collected under the authority of Section 30 of the EA Act and maintained for the purpose of creating a record that is available to the general public. As this information is collected for the purpose of a public record, the protection of personal information provided in the *Freedom of Information and Protection of Privacy Act* does not apply (Section 37). Personal information you submit will become part of a public record available to the general public unless you request that your personal information remain confidential.

If there are no outstanding concerns, and subject to receiving all other required approvals, the project will be considered to have met the requirements of the Class EA and may proceed to the Detail Design phase.

Executive Summary

In 2017, the Ministry of Transportation, Ontario (MTO) completed the Preliminary Design (PD) and Class Environmental Assessment (EA) study for the short, medium and long-term improvements for the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville. The PD and Class EA was documented in a Transportation Environmental Study Report (TESR, July 2017) that received Environmental Clearance in January 2018 following a 30-day public review period.

As documented in the 2017 TESR, the technically preferred alternative focused predominantly on short-term improvements for this intersection and noted a long-term solution would be completed when warranted. The MTO has retained Dillon Consulting Limited (Dillon) to update the PD and Class EA study to identify and evaluate the preferred long-term intersection improvements, including the previously identified Preferred Alternative carried forward from the 2017 TESR. This study is being completed as a Group 'B' project under the MTO Class EA, which is the applicable class for construction of major intersection improvements on provincial highways. As part of this update, the study includes a review and update of existing traffic operations, highway engineering requirements and environmental conditions to develop and evaluate a range of long-term design alternatives and identify the Technically Preferred Alternative (TPA) for intersection improvements.

The Study Area is primarily farmland, with residential and commercial development at the intersection and natural habitats at the outer limits, which is consistent with the 2017 TESR. A former gas station is located in the southwest quadrant of the intersection. The Ministry of the Environment, Conservation and Parks (MECP) has remediated the site to the extent feasible and MTO will continue to work with MECP during the Detail Design phase to address residual contamination that may be encountered during construction. Additional Stage II archaeological assessments are underway in areas beyond those assessed in 2009 to confirm there are no areas of archaeological potential that may be impacted by the proposed improvements.

Consultation is an integral part of the Class EA process and has been ongoing throughout the study, including the use of a project-specific website and dedicated project team email. The Notice of Study Update was issued in February 2022 and published in local newspapers. Through an initial screening process and consultation with the Municipal Advisory Committee (MAC), three alternative long-term intersection improvements were identified**.** The three intersection alternatives were subsequently evaluated based on 20 criteria across five factor areas: transportation, natural environment, socio-economic environment, cultural resources, and cost. Through this evaluation, a Roundabout was identified as the TPA and presented at an in-person Public Information Centre (PIC) on September 13, 2022.

Following selection of the TPA, the Preliminary Design Update of the intersection design was completed, including identification of potential impacts and development of preliminary mitigation measures. Overall, impacts of the project are expected to be minimal if mitigation measures are implemented.

As a Group 'B' project, this TESR Addendum has been prepared to document the study update and is being made available for a 30-day public and agency comment period. Future project phases include Detail Design and construction.

1.0 Overview of the Undertaking

The Ministry of Transportation, Ontario (MTO) retained Dillon Consulting Limited (Dillon) to update the Preliminary Design (PD) and Class Environmental Assessment (EA) study for improvements to the intersection of Highway 15 and County Road 42 located at the Village of Crosby, within the Township of Rideau Lakes and United Counties of Leeds and Grenville (the project).

The purpose of this update to the PD and Class EA Study is to identify and evaluate the preferred long-term intersection improvements. This study includes a review and update of existing traffic operations, highway engineering requirements and environmental conditions to develop and evaluate a range of long-term design alternatives and identify the Technically Preferred Alternative (TPA) for intersection improvements.

1.1 Background

In 2017, the MTO completed the PD and Class EA study for the short, medium and long-term improvements for the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville (G.W.P. 4315-06-00). The PD and Class EA was documented in a Transportation Environmental Study Report (TESR), prepared by HDR Corporation and LGL Limited (HDR and LGL, July 2017) that received Environmental Clearance in January 2018 following a 30-day public review period. A copy of the TESR can be viewed on the project website at www.Hwy15Crosby.com.

As documented in the 2017 TESR, the technically preferred alternative focused predominantly on short-term improvements for this intersection and noted a long-term solution would be completed when warranted. The MTO has decided to update the PD and reassess the long-term intersection improvements, including the previously identified Preferred Alternative carried forward from the 2017 TESR.

1.2 Summary Description of the Undertaking

The Study Area is located in the Village of Crosby, Ontario, at the intersection of Highway 15 and County Road 42, in the Township of Rideau Lakes, United Counties of Leeds and Grenville, as shown on **Figure 1**. This Study Area was used to generate intersection design alternatives, which were then evaluated to select the Technically Preferred Alternative (TPA), as documented in **Section 4**. Further investigations were subsequently completed to advance the Preliminary Design of the TPA, as documented in **Section 5**.

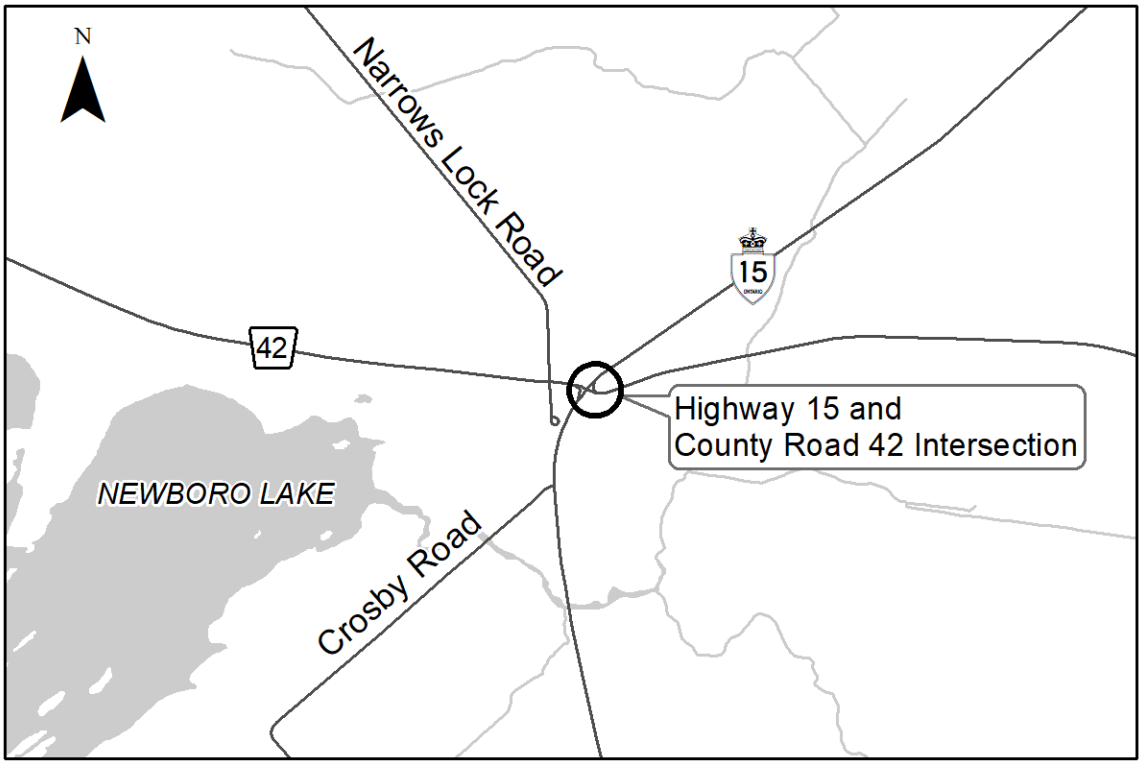


Figure 1: Study Area

1.3 General Description of the Technically Preferred Alternative

Through the update to the PD and Class EA Study, an analysis and evaluation of the three long-term alternatives was completed, considering traffic operations and safety, highway engineering requirements, natural environment, socio-economic environment, cultural resources and cost, along with public and agency input. A roundabout was selected as the TPA (**Figure 2**) and will include:

- Realignment of County Road 42 in the immediate vicinity of the intersection to provide suitable entry angles entering the roundabout;
- Partial realignment of Highway 15 in the immediate vicinity of the intersection to provide appropriate entry angles and speeds entering and exiting the roundabout;
- Illumination improvements; and,
- Drainage improvements.

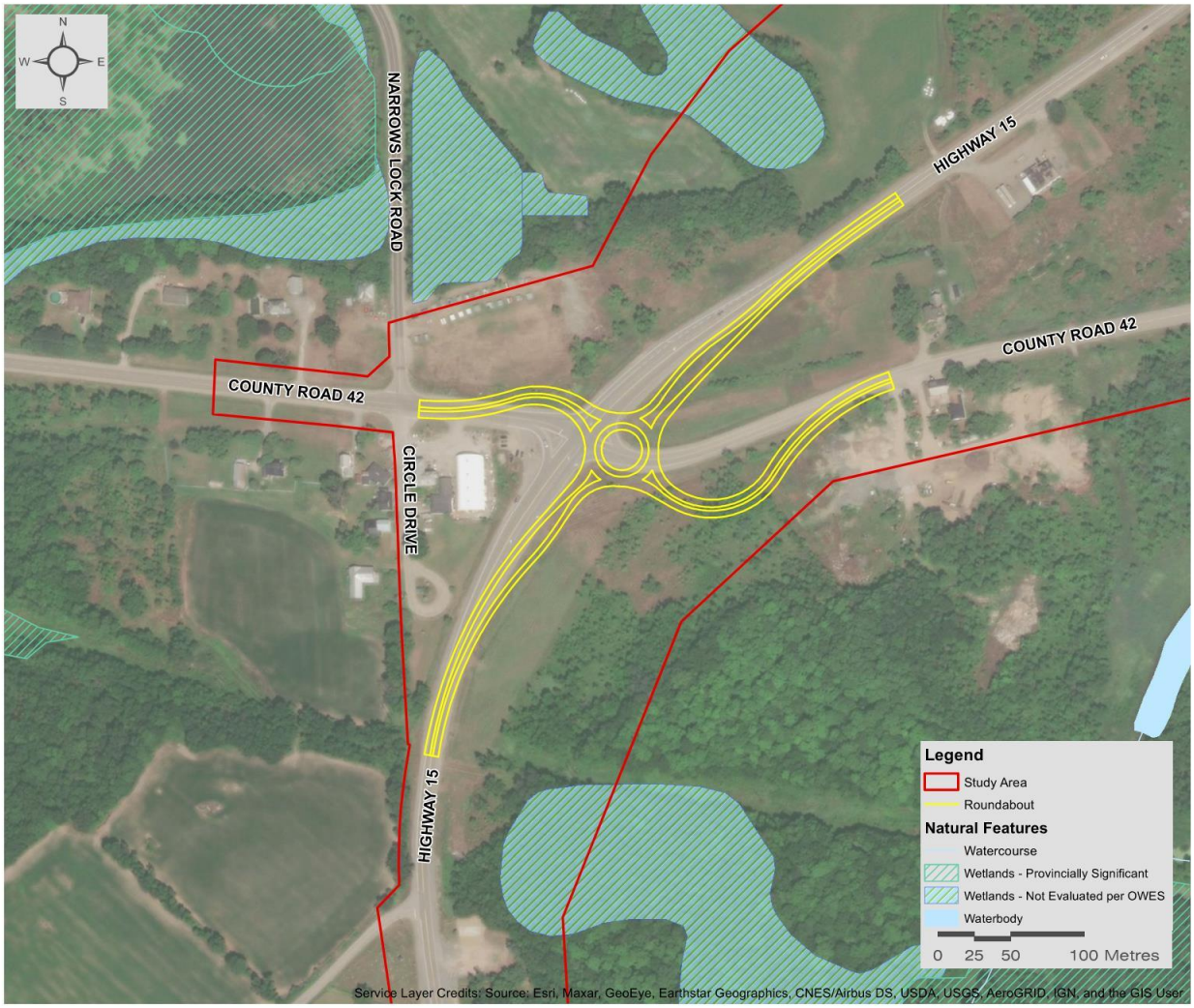


Figure 2: Preliminary Roundabout Configuration

1.4 Purpose of the Transportation Environmental Study Report Addendum

The purpose of this report is to document the study that was completed to select the long-term TPA and develop the PD for the intersection improvements, including consultation completed. This TESR Addendum was prepared in accordance with the requirements of the MTO *Class EA for Provincial Transportation Facilities* (2000), which has been approved under the Ontario *EA Act*. As required by the Class EA, the TESR Addendum is being published for a period of 30 calendar days to provide an opportunity for public, agency, and Indigenous community comments.

2.0 Environmental Assessment Process

The Class EA planning process in Ontario provides a streamlined process that for projects or activities within a defined "Class" to satisfy the requirements of the *EA Act* without completing an Individual EA. Projects and activities within a class are generally ones that are recurring, carried out routinely, and have predictable and mitigatable environmental effects. The word "environment" is broadly defined to include the cultural, natural, social, and economic environments. When a project meets the requirements of the applicable Class EA document, the requirements of the *EA Act* are fulfilled. The requirements of the Class EA document must be met before the project can be implemented.
The MTO *Class EA for Provincial Transportation Facilities* (2000) follows a principle-based approach. The following principles must be addressed during the course of a study:

- **Transportation Engineering Principles** require that the project meets current engineering design standards for the safe and efficient movement of people and goods across Ontario;
- **Environmental Protection Principles** call for protection of natural, socio-economic, and cultural environments through avoiding/limiting impacts and developing mitigation measures;
- **Consultation Principles** encourage meaningful engagement with stakeholders such as the public, agencies, and Indigenous communities;
- **Evaluation Principles** provide for an evaluation of alternatives that balances engineering requirements and environmental protection, and is open and transparent; and,
- **Documentation Principles** provide an opportunity for stakeholders to review the design, potential impacts, and proposed mitigation measures.

The MTO Class EA outlines the process to be followed for specific groups of provincial transportation projects. The Class EA groups different types of projects for the purposes of consultation, documentation, and formal EA challenge (Section 16 Order). Major improvements to existing provincial transportation facilities, including intersection improvements, are classified as Group 'B' projects.
A TESR Addendum is triggered if changes to the design are required that make significant changes to the commitments outlined in the TESR or change the concept of portions of the project.

The MTO Class EA recognizes there will be some design and/or implementation changes during the Detail Design phase, as the design builds on an approved Preliminary Design. The design refinements leading up to and during construction are part of MTO's approved design process and are anticipated in every project. At the completion of the Detail Design phase, a Design and Construction Report (DCR) is prepared to document the design, focusing on construction staging and traffic management during construction, and fully develop environmental mitigation measures to be included in the construction contract.

2.1 Section 16 Order (Aboriginal and Treaty Rights)

For concerns regarding adverse impacts to constitutionally protected Aboriginal and treaty rights, a request may be made to the MECP for an order under Section 16 of the *EA Act* requiring:

- A higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed); or,
- That conditions be imposed (e.g., requiring further studies).

A Section 16 Order can be made only on the grounds that the requested order may prevent, mitigate, or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered.

Section 16 Order requests should be sent in writing or by email to the individuals identified below, and be copied to the project team members identified on page i of this report copied. To help MECP efficiently begin reviewing the request, the following information is required:

- What kind of order is being requested (request for a higher level of study or request for conditions to be imposed);
- How an order may prevent, mitigate, or remedy potential adverse impacts on Aboriginal and treaty rights; and,
- Any information in support of the statements in the request.

Minister of the Environment, Conservation and Parks
Ministry of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
Minister.MECP@ontario.ca

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

Further information on requests for Section 16 Orders is available on the MECP website at:
https://www.ontario.ca/page/class-environmental-assessments-section-16-order.

All personal information included in your request (e.g., name, address, telephone number and property location) is collected under the authority of Section 30 of the *EA Act* and maintained for the purpose of creating a record that is available to the general public. Consequently, the protection of personal information provided in the *Freedom of Information and Protection of Privacy Act* does not apply

(Section 37). Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential.

2.2 Project-Specific Study Process

This study is being completed as a Group 'B' project under the MTO Class EA, which is the applicable class for construction of major intersection improvements on provincial highways. A summary of the project-specific study process and opportunities for public input is presented in **Figure 3**. Details on the study process and findings are provided throughout the latter sections of this report.

The Notice of Study Update for the update to the PD and Class EA Study was issued in February 2022. Through an initial screening process and consultation with the MAC, three alternative long-term intersection improvements were identified**.** The three intersection alternatives were subsequently evaluated based on 20 criteria across five factor areas: transportation, natural environment, socio-economic environment, cultural resources, and cost. Through this evaluation, a Roundabout was identified as the TPA and presented at an in-person Public Information Centre (PIC) on September 13, 2022.

Following the selection of the TPA, the Preliminary Design Update of the intersection design was completed, including identification of potential impacts and development of preliminary mitigation measures.

As a Group 'B' project, this TESR Addendum has been prepared to document the study update and is being made available for a 30-day public and agency comment period. Future project phases include Detail Design and construction.

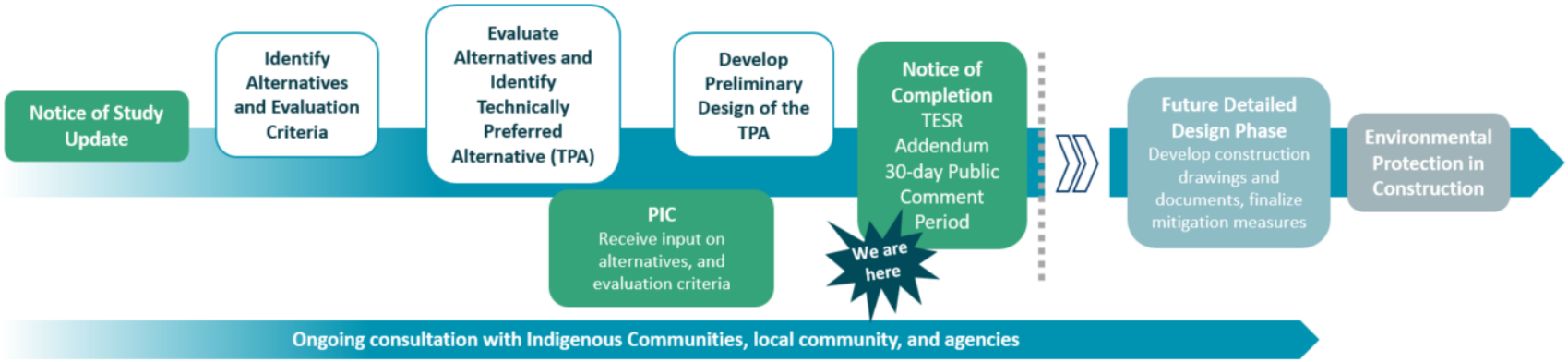


Figure 3: Study Process

2.3 Public and Agency Consultation

This section documents consultation that was completed with agencies, Indigenous communities, and the public throughout the study. Input was considered by the project team and, where applicable, incorporated into the design. Copies of consultation materials are included in **Appendix A**.

2.3.1 Project Contact List

The project contact list has been updated from the previous study, and includes potentially interested/affected provincial ministries, Township of Rideau Lakes, United Counties of Leeds & Grenville, potentially interested Indigenous communities (identified by MTO), Cataraqui Region Conservation Authority, local interest groups, utilities and property owners within the Study Area. The project contact list was updated throughout the project and used to circulate project notices, public meeting invitations and provide information updates to interested and affected stakeholders.

2.3.2 Project Website and Email Address

A project-specific website (www.hwy15crosby.com) and project email (hwy15crosby@dillon.ca) were developed for this study. The website features an overview of the study, information on the Class EA process, copies of the consultation and PIC materials, this TESR Addendum, and contact information for project team members. Website content was updated throughout the study.

2.3.3 Notice of Study Update

A Notice of Study Update was prepared and distributed to provide information about the PD and Class EA Study update to members of the public, Indigenous communities, and other relevant stakeholders included on the contact list.

The Notice was distributed as follows:

- February 22, 2022 – Dillon emailed the Notice to the local MPP under cover letter;
- February 24, 2022 – MTO's Indigenous Liaison Specialist emailed the Notice to Indigenous communities under cover letter;
- February 24, 2022 – Dillon issued the Notice to those on the contact list via email and mail where email addresses weren't provided; and,
- February 24, 2022 – The Notice was published in the Smiths Falls Record News and the Westport Review Mirror newspapers.

Three agency responses, along with four responses from members of the public were received in response to the Notice of Study Update. Comments and project team responses are summarized in **Table 1**.

Table 1: Summary of Notice of Study Commencement Comments and Responses

Contact	Summary of Comment	Project Team Response
Ministry of Environment, Conservation and Parks	Provided an "Areas of Interest" document that outlined the ministry's interests with respect to the Class EA process as appropriate for this project. The contact from MECP requested to be sent a copy of the final report.	No response required.
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Expressed that proponents are required to identify existing environmental conditions and sensitivities, identify potential environmental impacts, and describe proposed measures to mitigate potential negative impacts. The contact at the ministry mentioned that a previous TESR indicated that there are no potential archaeological sites within the study limits of the proposed project, however archaeological assessments may be required if the study limits have been altered.	No response required.
Leeds County Federation of Agriculture	Requested that the roundabout be large enough to handle large modern farm equipment and non-articulated trucks.	Acknowledged that if the roundabout is the preferred alternative, it would be designed with consideration for large farm equipment.
Member of the Public	Preferred the roundabout due to evidence that they are safer and more cost effective than a controlled intersection (traffic lights).	Confirmed receipt of comment into the record for consideration. Invited participation at the PIC to gain further insight towards the technically preferred design. Added to the project contact list to receive project updates.
Member of the Public	Prefers lights over roundabouts for safety reasons. Noted that navigation of roundabouts would be difficult in low-visibility weather conditions and may be challenging for the older demographic of the area to learn.	Confirmed receipt of comment into the record for consideration. Invited participation at the PIC to gain further insight towards the technically preferred design. Added to the project contact list to receive project updates.
Member of the Public	Concerned about the speeds of Highway 15 and suggested a short-paved exit section on Highway 15 southbound that would allow vehicles to slow and turn safely without creating road congestion.	Confirmed receipt of comment into the record for consideration. Invited participation at the PIC to gain further insight towards the technically preferred design. Added to the project contact list to receive project updates.
Member of the Public	Noted that pedestrians and cyclists may have difficulty crossing.	Confirmed the team is considering pedestrian and cyclist movement for all intersection improvement alternatives being considered.

2.3.4 Public Information Centre

On September 13, 2022, Dillon and MTO held a PIC at the Newboro Community Hall in Newboro, Ontario. The purpose of the PIC was to provide an update of the project, present the criteria used to evaluate the alternatives, present and seek input on the TPA, and outline the preliminary construction staging and traffic management approach. The event was an informal drop-in session with information panel displays and a roundabout brochure, as well as an instructional video showing how to use a roundabout.

The Notice of PIC was distributed as follows:

- August 29, 2022 – Dillon emailed the Notice to the local MPP under cover letter;
- September 1, 2022 – MTO's Indigenous Liaison Specialist emailed the Notice to Indigenous communities under cover letter;
- September 1, 2022 – Dillon issued the Notice to those on the contact list via email and mail where email addresses weren't provided;
- September 1, 2022 – The Notice was published in the Smiths Falls Record News and the Westport Review Mirror newspapers; and,
- September 14, 2022 – The PIC display boards were uploaded to the project website (www.hwy15crosby.com).

In total, 43 individuals attended the PIC, including members of the public, the MPP, four Councillors, a representative from the United Counties of Leeds and Grenville, a representative from the Community Enhancement Committee and a representative from Friends of Crosby. One written response was received from the United Counties of Leeds and Grenville. Eight written responses were received from members of the public. Comments and project team responses are summarized in **Table 2**.

Table 2: Summary of PIC Comments and Responses

Contact	Summary of Comment	Project Team Response
United Counties of Leeds and Grenville, Public Works	Snow clearing of the roundabout and the snow clearing limits and illumination measures; Impacts of detour; requested that the paved shoulders of the roundabout continue to the property line; Landscape plan and impacts to sightlines; concerned about northwest corner flooding; suggested rehabilitation measures.	Explained that the MTO would be responsible for clearing snow; the roundabout will be fully illuminated, and will not interfere with plowing operations; the Project Team will take construction staging and temporary closures into consideration during the next phase of design, aiming to avoid or minimize delays and detours; the centre island will be landscaped in a manner that will not affect sightlines; and that the Project Team will take into consideration the northwest corner's drainage concerns when completing the drainage design for the roundabout.

Contact	Summary of Comment	Project Team Response
Member of the Public	Concerns regarding how to navigate the roundabout.	Public education is essential for successful roundabout implementation. A brochure and a video have been developed to educate the public on how to drive safely through a roundabout.
Member of the Public	Concerns about oversized truck loads and farm machinery navigating the roundabout.	The roundabout has been designed to include a truck apron to provide additional width for oversized vehicles, such as large farm equipment, to transverse on to the truck apron while circulating through the roundabout.
Member of the Public	Concerns about speed approaching the intersection.	Roundabouts are designed to maximize safety by decreasing the number and severity of collisions and by reducing vehicle speeds at the intersection. Features such as the curves approaching a roundabout, the shape of the roundabout, and the need for vehicles to yield to others already in the roundabout all work together to reduce speeds. Although the Ministry determines the posted speed limits on provincial highways, the speed limits are enforced by the Ontario Provincial Police (OPP).
Member of the Public	Concerns about adequate signage and illumination of intersection.	This roundabout will be fully illuminated and advanced signing will be provided on all approaches. As a result of these features and their impact, a speed reduction is not recommended.
Member of the Public	Concerns about pedestrian crossings and how cyclists should navigate the roundabout.	The splitter islands have a depressed area approximately 6 metres back from the front of the splitter island that provides a pedestrian refuge, thereby allowing the pedestrian to cross one direction of traffic at a time. Cyclists have options when encountering a roundabout, depending on their experience. Experienced cyclists may ride through the roundabout as if they were a vehicle, whereas less experienced cyclists should dismount and walk their bicycle following the same rules that apply for pedestrians.

In general, the comments received at the September 13, 2022, PIC were in support of the roundabout as the TPA, with concerns raised regarding the navigation of the roundabout, the speed approaching the intersection, and pedestrian safety. Since the Project Team had prepared for such concerns based on initial feedback received in response to the Notice of Study Update, a roundabout brochure and instructional video were shared to answer questions and provide instructions for safely navigating a roundabout for vehicles, cyclists and pedestrians.

2.3.5 Municipal Consultation

At the beginning of the original PD study, a MAC was established as an advisory committee (not a decision-making body) whose purpose was to review environmental documents and provide advice to the Study Team. MAC members were based on previous involvement and updated by the MTO based on the next phase of this project. Consultation with the MAC continued throughout the update to the PD and Class EA Study.

Three MAC meetings were held during this update study, which included representatives of the United Counties of Leeds and Grenville and Township of Rideau Lakes. Minutes of these meetings are provided in **Appendix A**.

MAC Meeting #1 was held on April 4, 2022, to introduce the project, present the preliminary short list of long-term alternatives and evaluation criteria, and request preliminary feedback. MAC members provided local knowledge and experiences regarding driving through the Study Area, including concerns with vehicle speeds and overlap between the tourist and construction season. MAC members supported the list of alternatives and recommended that the upcoming Public Information Centre be held in-person.

MAC Meeting #2 was held on August 31, 2022, to provide members an update and preview of the information to be presented at the PIC scheduled for September 13, 2022. MAC members provided additional information on comments they have received to date to ensure the project team had information available on typical construction costs, construction timing, and illumination.

MAC Meeting #3 was held on September 27, 2022, to provide an update on the PIC and the next steps for the study. MAC members inquired on how pedestrians, cyclists and the older demographic should be utilizing the roundabout, as well as local business impacts.

Overall, MAC members have been supportive of the Project and were a key resource for providing local knowledge, identifying issues, and sharing feedback that ultimately shaped the decision making of the Project Team.

2.3.6 Consultation with Indigenous Communities

Representatives from the following Indigenous communities were identified by MTO and included in the contact list:

- Métis Nation of Ontario;
- Algonquins of Ontario Consultation Office; and,
- Algonquins of Pikwàkanagàn First Nation.

The Indigenous communities on the contact list received all project notices, including letters from the Ministry's Indigenous Liaison Specialist. No comments or responses were received by any of the Indigenous communities to date.

3.0 Existing Conditions Update

This section provides an overview and update of the existing environmental conditions in the Study Area and summarizes the field investigations completed as part of the current project.

Environmental studies were undertaken in accordance with Section 3 of the MTO *Environmental Reference for Highway Design* (ERD, 2013). The primary method of identifying existing conditions was desktop review, with site visits completed as required to ground-truth the desktop review as noted in the following sections.

The Study Area contains primarily farmland, with residential and commercial development at the intersection. A former gas station was located in the southwest quadrant of the intersection. Beyond the developed areas, there are a variety of rural, agricultural and natural habitats.

3.1 Existing Highway Conditions

The existing highway conditions are documented in the Preliminary Design Report (Dillon 2023) prepared under separate cover and summarized below.

The intersection of Highway 15 and County Road 42 is a four-leg skewed intersection (72 degrees) with two-way stop control on County Road 42. Left and right turn lanes are present on Highway 15. Single lane approaches are provided on County Road 42, with right turn directional islands in both the eastbound and westbound directions.

3.1.1 Geometrics

Highway 15 has a horizontal curve through the intersection of County Road 42 with a variable superelevation ranging from 4.7% to 6.5%. Within the project limits, County Road 42 has three horizontal curves with normal cross fall of 2% both east and west of the intersection. The grade differential between Highway 15 (6.5%) and County Road 42 (2%) combined with less than desirable sight lines on County Road 42, limit the intersection design options.

3.1.2 Traffic Volumes

Highway 15 in the vicinity of County Road 42 carries both commuter and a large portion of tourist and recreational traffic. Highway 15 historical traffic volumes for the years 1988 through 2016 indicate that Annual Average Daily Traffic (AADT) has been on the decline since 1992. The Summer Average Daily Traffic (SADT) has also declined since 1997. Winter Average Daily Traffic (WADT) has remained relatively stable over the past two decades. From 2013 through 2016, the directional split on Highway 15 has been nearly even at 52%/48%. Heavy vehicles account for approximately 15% of traffic volumes.

3.1.3 Collision History

MTO provided five years of collision data for the period between January 2016 and December 2020. The collision records indicate that there have been 33 collisions over the five-year period in the vicinity of the intersection. The following summarizes the collision breakdown:

- Twenty-six collisions occurred during daylight conditions; three collisions occurred at dusk, four in the dark and one at dawn;
- Twenty-eight collisions occurred in dry conditions, two in snow, and three in wet conditions;
- Ten collisions involved a single motor vehicle, 21 collisions were angle impacts, and two were turning movement collisions;
- Twenty-two collisions occurred in the intersection, seven in the thru lane; other collisions occurred on the shoulder or off the roadway;
- Fifteen collisions were reported with driver action as “driving properly”; 11 collisions were a result of failing to yield the right of way, four collisions involved motorists that lost control, and three were a result of driving too fast for conditions; and,
- There were ten collisions resulting in non-fatal injuries; the remaining collisions resulted in property damage only.

Over the past three years, a total of 23 collisions have occurred in proximity to the intersection, 19 were either angle or turning movement collisions, and nine of the collisions were a result of drivers failing to yield the right-of-way.

3.1.4 Cycling Network

MTO’s cycling network, developed as part of Ontario’s cycling strategy, does not identify routes within the project limits. However, there is an existing off-road route identified that crosses Highway 15 to the south and County Road 42 east of the intersection which will not be impacted by construction.

3.1.5 Utilities

The following utilities are present within the vicinity of the Highway 15 and County Road 42 intersection:

- Bell Canada underground conduit is present on the east side of Highway 15 from the intersection, southerly for approximately 150 m, where it crosses Highway 15 and terminates on the west side of the highway. Underground conduit is also present for approximately 100 m on the east side of Highway 15 within the vicinity of the old car dealership property. On County Road 42, aerial communication lines are present at the intersection of Circle Street and County Road 42;
- Aerial Hydro One distribution lines are located along the east side of Highway 15 from the south limits of the project to approximately 100 m north of the intersection, and on the north side of County Road 42 throughout the project limits; and,
- WTC Communications has underground plant located along County Road 42 within the limits of project. The plant is located on the south side of the road from the west limits of project to Circle Street, where it crosses to the north side. The plant continues on the north side of County Road 42 from Circle Street, crosses Highway 15 and continues to the east limits of project.

Bell Canada and aerial Hydro One utilities were identified in the 2017 TESR, while WTC Communications is a new addition to consider during construction.

3.1.6 Illumination

There is no continuous lighting along Highway 15 or County Road 42 in the vicinity of the Highway 15 and County Road 42 intersection. There is partial lighting consisting of base mounted sectional steel poles with high pressure sodium luminaires on elliptical brackets.

3.2 Natural Environment

The description of existing environmental conditions provided a baseline for the assessment of the updated preliminary design alternatives and any effects on significant environmental features, and for the determination of appropriate environmental protection/mitigation measures, including avoidance. The existing conditions in the Study Area were updated using a variety of information sources including available background information and several site visits by project team members. Data for the environmental investigations was obtained from published data sources and unpublished information made available by relevant stakeholders. This data was then reviewed to identify data gaps and deficiencies, and to scope the type, location and level of detail for field investigations.

3.2.1 Terrestrial Ecosystems

A Terrestrial Ecosystems Impact Assessment Report (Dillon, 2023) has been prepared to document the update to the existing conditions in the area, and is summarized below. In general, the terrestrial ecosystem is consistent with the 2017 TESR.

The Study Area is primarily farmland, with residential and commercial development at the intersection. Beyond the developed areas, there are a variety of rural, agricultural and natural habitats. Field investigations were conducted by Dillon over three days in late summer and autumn 2022 to confirm changes from the 2015 and 2016 terrestrial surveys, including any changes in the vegetation communities and wildlife species at risk. The investigations were initiated following receipt of permission to enter some properties within the Study Area; however, permission was not provided for all properties. Investigations for such properties were conducted from the property boundary of the nearest accessible property.

The surveys included the following:

- An Ecological Land Classification (ELC) survey of vegetation communities using the protocol for ELC for Southern Ontario, second approximation (Lee *et al.*, 1998) and a concurrent vegetation survey;
- Concurrent with the ELC surveys, general site reconnaissance was conducted to assess the potential for habitat and evidence of individuals of the SAR for which records were identified in the background data review. Incidental wildlife observations were also noted; and,
- Three survey visits to search for Gray Ratsnake and assess the potential presence of habitat for this SAR, following the methods outlined in Survey Protocol for Ontario's Species at Risk Snakes (OMNRF, 2016), including Visual Encounter Surveys (VES) and road surveys. Additional surveys are scheduled for spring 2023.

No SAR or Species of Conservation Concern (SCC) botanical species were observed.

Wildlife habitat within the study area is variable and range from high-quality, contiguous forest to wetlands and areas with high cultural influence. The forested area west of Highway 15 and east of the Highway 15 and County Rd 42 intersection provides the highest quality habitat for wildlife. This forest community consists of both lowland moist forest and deciduous swamp and covers an area of almost 200 ha, providing interior habitat (as defined by the SWHTG (MNRF, 2000)) for area sensitive birds. This community retains much of its natural character, providing habitat for shelter, roosting and breeding opportunities for many species of birds, mammals, amphibians and reptiles.

Due to the convergence of several roads at the point of the intersection and a rail line south of the intersection, wildlife movement between communities on the north and south side of the intersection would be limited. Wildlife movement is likely to occur through Sucker Creek, which connects portions of the Bog Wetland bisected by Highway 15. The watercourse and associated riparian habitat may act as a corridor for terrestrial, semi-aquatic, and aquatic species. The right-of-way (ROW) of the roads may also provide some linkages for movement to adjacent habitats.

Habitat screening was completed for each wildlife SAR and SCC identified in the background review by comparing its habitat requirements to the ecological communities in the Study Area to identify whether there is potential suitable habitat. SAR and SCC whose habitat requirements are not present in the Study

Area are considered to have low potential to be present in the Study Area or to have suitable habitat, and have not been considered further. There were 13 SAR and 13 SCC identified that have ecological communities in the Study Area that provide potential suitable habitat. Targeted surveys are scheduled to be completed in 2023 to confirm presence of these species and associated significant wildlife habitat.

3.2.2 Fisheries and Aquatic Ecosystems

The Study Area is located within the jurisdiction of the Cataraqui Region Conservation Authority (CRCA) and the Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District.

No watercourses occur within the immediate vicinity of the Highway 15 and County Road 42 intersection. However, Sucker Creek is a cold-water stream located approximately 500 m to the east and supports fish and fish habitat.

3.2.3 Drainage and Hydrology

The Study Area is located within the Great Cataraqui River subwatershed, within the jurisdiction of the CRCA. Highway 15 has a superelevated cross-section through the intersection. Runoff from Highway 15 and County Road 42 is conveyed to roadside ditches and outlet to either Sucker Creek to the east or a wetland to the west of the Study Area. Both the wetland and Sucker Creek outlet into Newboro Lake. The ultimate receiving body is Great Cataraqui River.

Surface drainage near the intersection is conveyed by ditches and through a number of corrugated steel pipe (CSP) culverts. There are two culverts that traverse County Road 42 and 10 entrance culverts are located within the Study Area.

Through the consultation process, Dillon was informed that the northwest corner of the Rideau Lakes Building Centre is known to have significant ponded water in the roadside ditch, which has resulted in flooding of the building centre's gravel parking lot.

3.2.4 Source Water Protection

As outlined in the Cataraqui Source Protection Plan (2014), the Study Area is located within the Cataraqui Source Protection Area. The primary objective of the Source Protection Plan, as provided for in the *Clean Water Act*, is to protect existing and future drinking water sources. This protection area, located above the St. Lawrence River and the east end of Lake Ontario, provides approximately 210,000 people rely on the water within this protection area through surface water, ground water, private intakes, or wells (Clean Water Cataraqui, n.d.).

As shown in the Cataraqui Source Protection Plan, the Study Area is located within a Highly Vulnerable Aquifer (HVA) and Significant Groundwater Recharge Area. Threats to source water protection in the HVA area are considered moderate-low. Liquid fuel spills and road salt application are examples of

common activities on roadways that can pose medium risk to water quality, but spills of more serious nature during construction activities have the potential to affect the surrounding surface and groundwater in the Cataraqui Source Protection Area (Cataraqui Source Protection Committtee, 2014). The contractor shall have a robust Spill Management Plan in place during construction, and the spill kit on-site should contain a supply of absorbent products, such as booms, pads, and socks.

3.3 Socio-Economic Environment

Existing land uses within the study area are predominantly rural in character, consisting of a range of residential, commercial, tourism, business, and farm land uses. Planned land uses within the Study Area are defined in the Official Plans of the United Counties of Leeds and Grenville and the Township of Rideau Lakes.

The Crosby Flea Market is a seasonal local market located in the north-west quadrant of the intersection. Since the 2017 TESR was issued, Ferg's Cook House, a fast food take-out restaurant has also opened in the north-west quadrant of the intersection.

3.3.1 Student Transportation Services

Local school bus transportation services were contacted regarding their bus routes within the Study Area. It has been confirmed by the Student Transportation of Eastern Ontario (STEO) and Consortium de transport scolaire d'Ottawa that there have been no changes to bus routes since the 2017 TESR was published; a total of 16 buses using Highway 15 and County Road 42 within the hours of 7:30 a.m. to 9:00 a.m. and 2:15 p.m. to 4:00 p.m.

3.3.2 Land Use

The Study Area is located within the Township of Rideau Lakes in the United Counties of Leeds and Grenville. Existing land uses documented in the 2017 TESR remain consistent.

3.3.2.1 United Counties of Leeds and Grenville Official Plan

The United Counties of Leeds and Greenville Official Plan was adopted by Counties Council in July 2015 and approved on February 19, 2016. The land use and Official Plan policies specific to the Study Area have not changed since the previous TESR.

3.3.2.2 Rideau Lakes Official Plan

The Study Area is located within the jurisdiction of the Township of Rideau Lakes and is subject to the Rideau Lakes Official Plan. This Official Plan was updated in July 2022 and has redefined some of the land use designations and their uses. According to the 2022 Official Plan, existing land use designations within the Study Area include 'Settlement Areas', 'Rural', and 'Natural Heritage A'. The 'Settlement Areas' land use was updated from the 2004 Official Plan that was previously defined as 'Village /Hamlet'

and still permits residential, commercial, and limited industrial uses. The 'Rural' and 'Natural Heritage A' designations remain unchanged.

3.3.3 Property Waste and Contamination

A former gas station is located in the southwest quadrant of the intersection. The MECP is currently leading remediation and delineation efforts to address this contaminated site. MECP has remediated the site to the extent feasible through the removal of contaminated soil in 2020. The MTO will continue to work with MECP during Detail Design to address residual contamination that may be encountered during construction.

3.4 Cultural Resources

3.4.1 Archaeological

A Stage I and II Archaeological Assessment of the Study Area was undertaken by Central Archaeology Group in 2009, confirming there were no known and/or potential areas of archaeological concern. Additional Stage II archaeological assessments are underway to confirm there are no areas of archaeological potential in areas that were not previously assessed and may be impacted by the roundabout.

As of November 2022, three parcels have been assessed, the results of which determined that there is nothing of significance located on those properties. The last property will be assessed once access is gained. Should any archaeological resources be found, additional archaeological investigations will be carried out in order to clear the area prior to construction.

3.4.2 Built Heritage Resources

A Built Heritage Resource and Cultural Heritage Landscape Assessment was completed by the Central Archaeology Group (October 2009) to identify any known and/or potential historic heritage features within the study limits.

Built heritage resources previously identified within the current Study Area include a two and a half storey building located at 7719B County Road 42 (BHR7, occupied by Aunt Molly's Antiques) and the former car dealership building located at 3719 Highway 15 (BHR15). There are no additional built heritage resources identified within the Study Area.

4.0 Intersection Alternatives and Evaluation

4.1 Development of Intersection Alternatives

The PD and Class EA study that was initiated in 2015 identified short, medium and long-term improvements for the intersection of Highway 15 and County Road 42. The TESR documented the identification and evaluation of numerous alternatives, with the focus on short-term improvements. As part of this update PD and Class EA study, additional long-term solutions were evaluated and are discussed in the following sections.

4.1.1 2017 TESR Alternatives

The 2017 TESR noted long-term improvements would be completed when warranted. The previously identified long-term Preferred Alternative is carried forward in this PD Update as Alternative 2 – Offset T-intersection.

4.1.2 Traffic Signals at Existing Intersection

There have been ongoing discussions regarding the installation of traffic signals at the existing intersection with improvements. An alternative with traffic signals and intersection improvements could not feasibly be carried forward in the development of alternatives as it would require significant reconstruction of Highway 15 and County Road 42 to meet current design standards. Due to the request from the local community for this traffic signal option, an independent design consultant was retained to review the feasibility of the alternative. The independent review resulted in the same conclusion; traffic signals alone, without significant Highway 15 and County Road 42 reconstruction, should not be carried forward as an alternative as it does not meet current design standards, and raises operational and safety concerns.

Alternative 1 noted below, is an alternative which includes the significant reconstruction of Highway 15 and County Road 42 without the installation of traffic signals at the existing intersection

4.2 Evaluation of Long-term Preliminary Design Alternatives

The Project team worked closely with the MAC to identify three viable alternatives, including the Offset T-intersection identified during the 2017 TESR as the preferred long-term solution. A brief description of each alternative is provided below:

- **Alternative 1 – Realignment of Highway 15**
  Alternative 1 includes a significant alignment shift of Highway 15 to the west with improvements to County Road 42 (**Figure 4**). In addition, the intersection would be shifted from its existing location,

the existing superelevation (curve through the intersection) is removed and the angle at which County Road 42 crosses Highway 15 would be improved.

Key features of this alternative include:

- Major improvements to sight lines;
- Easily accommodates multi-modal users (e.g., cyclists, pedestrians and motorists);
- Traffic can be maintained on Highway 15 and County Road 42 for the majority of construction;
- Utility relocations expected for utility poles and telecommunications; and,
- Significant property and environmental impacts.

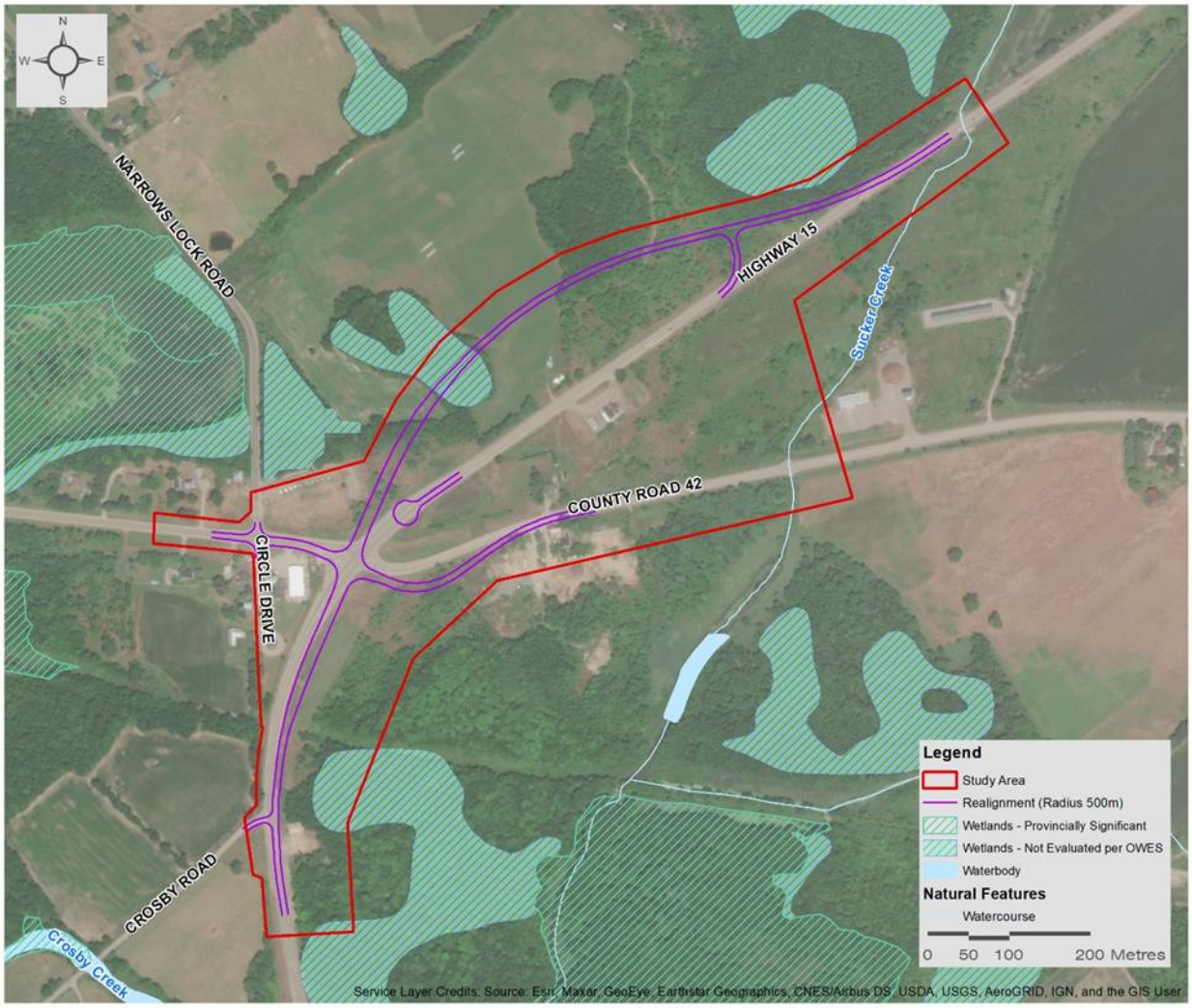


Figure 4: Alternative 1 – Realignment (Radius 500 m)

- **Alternative 2 – Offset T-intersection**
  This alternative was identified as Alternative 3-2 in the 2017 TESR and brought forward with refinements to the original design. It provides two separate T-intersections of County Road 42 with Highway 15 (**Figure 5**). (Previously, this alternative was shown in the 2017 TESR as impacting the culvert crossing of Sucker Creek on County Road 42, east of the intersection.) The alternative has been refined to avoid impacts to the culvert and associated fish and fish habitat.

  Key features of this alternative include:
  - No improvements to sight lines at existing intersection;
  - Able to easily accommodate multi-modal users;
  - Traffic can be maintained on Highway 15 and County Road 42 for the majority of construction;
  - Utility relocations expected for utility poles and telecommunications; and,
  - Increases travel distance and additional intersection for east-west traffic movements.

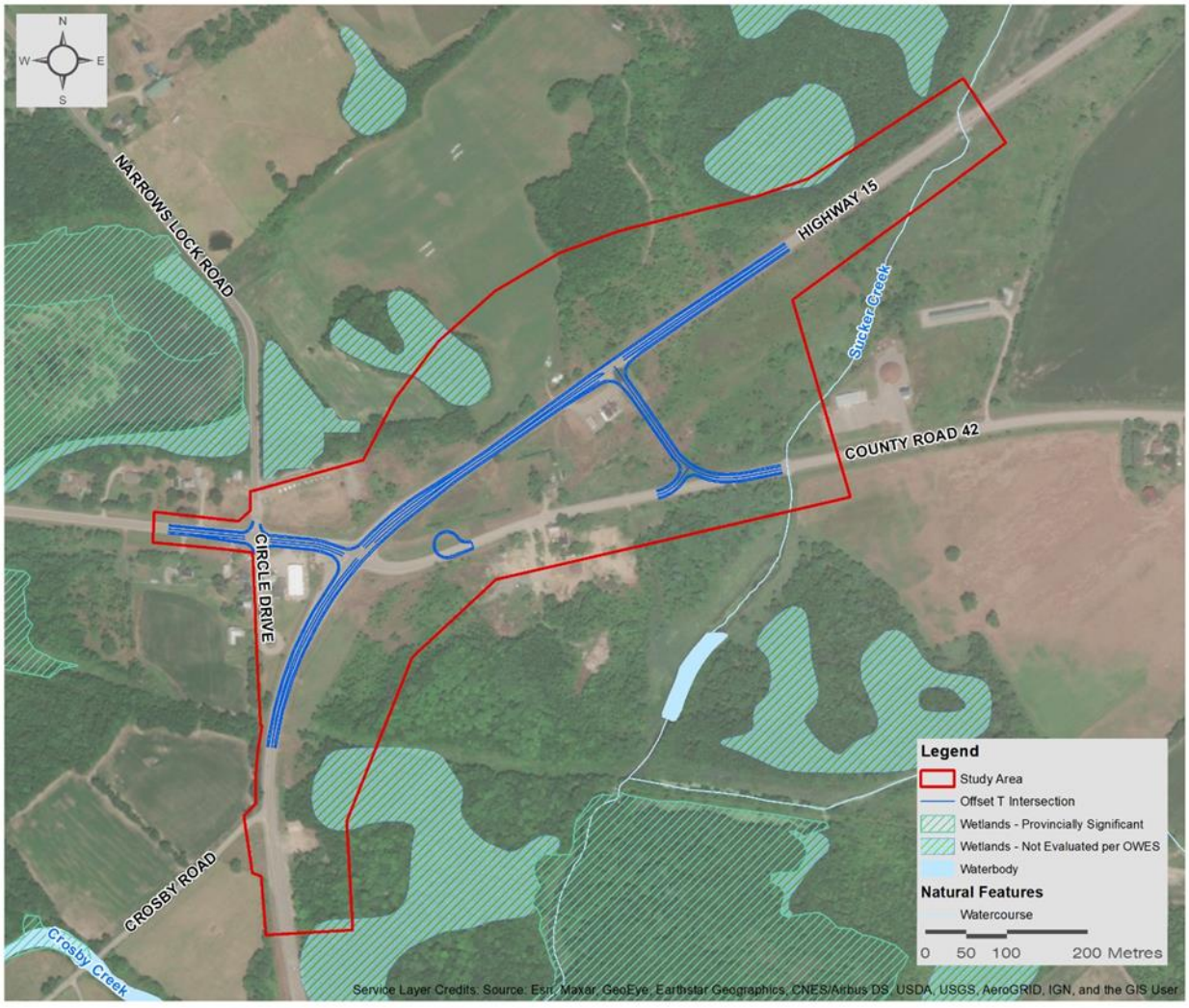


Figure 5: Alternative 2 – Offset T-intersection

- **Alternative 3 – Roundabout**
  Roundabouts are a type of intersection at which all traffic circulates in a counter-clockwise direction, to the right of a central island. All entering vehicles must yield to traffic already in the roundabout.

  Benefits of roundabouts can include:
  - Fewer injury collisions;
  - Reduction in collision severity;
  - Improved traffic flows;
  - Fewer stops and reduced delays; and,
  - Less idling and air pollution.

  This alternative requires a minor realignment of Highway 15 and County Road 42 to accommodate a roundabout design (**Figure 6**). This alternative was developed with the potential to minimize environmental impacts, including property requirements, improve sight lines, and improve the horizontal curve through the intersection.

  Key features of this alternative include:
  - Moderate improvements to sight lines;
  - Provides efficient flow of traffic;
  - Able to accommodate multi-modals users;
  - Likely able to maintain traffic on Highway 15 during construction, with detours of County Road 42 traffic during construction;
  - Utility relocations expected for utility poles and telecommunications; and,
  - Has the least property and environmental impacts compared to the other alternatives.

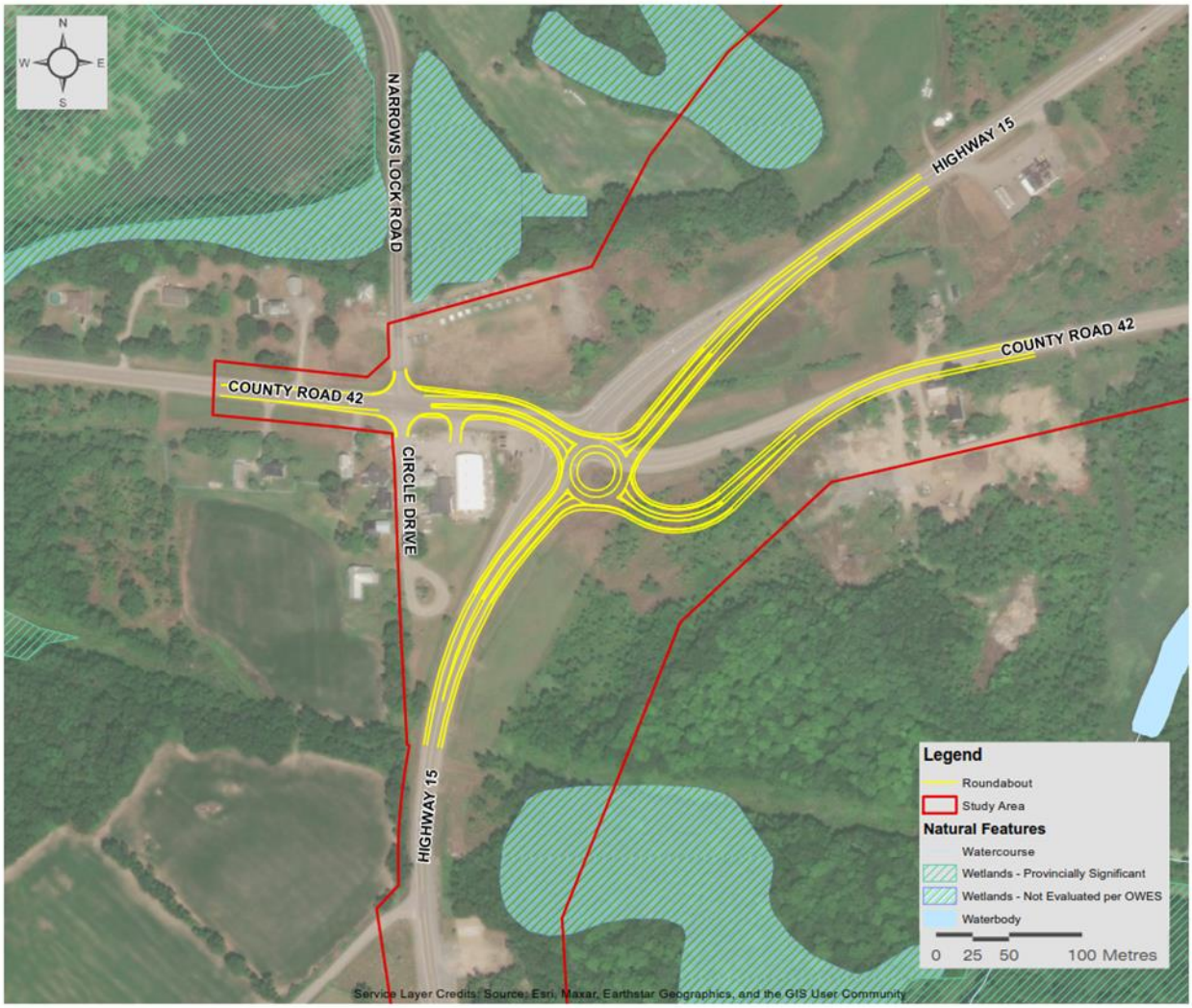


Figure 6: Alternative 3 –Roundabout

4.3 Evaluation of Alternatives

A comparative evaluation was completed to identify the level of preference for each alternative in comparison to the other alternatives based on 20 criteria across five factor areas as summarized in **Table 3** below.

Table 3: Evaluation Criteria

	Evaluation Criteria	Measure
Transportation		
Criteria 1.1	Traffic Operations, Capacity and Safety	Ability to meet existing and future (2041) traffic needs and provide safe infrastructure
Criteria 1.2	Highway and Side Road Geometric Improvements	Improvements to intersection, highway and side road geometry. (i.e., vertical grades and horizontal curves)
Criteria 1.3	Pedestrian and Cycling Environment	Future ability to accommodate overall pedestrian and/or cycling environment
Criteria 1.4	Impacts on Existing Infrastructure	Potential impacts to existing infrastructure (e.g., culverts, drainage structures) in the Study Area
Criteria 1.5	Potential Utility Conflicts	Potential conflicts with existing utilities in the Study Area
Criteria 1.6	Access Management Requirements	Ability to meet existing and future access requirements
Criteria 1.7	Excess Earth Management	Ability to manage excess soil within MTO owned property
Criteria 1.8	Constructability, Traffic Management, Construction Duration	Ability to have minimal impacts to traffic during construction and reduced construction duration
Natural Environment		
Criteria 2.1	Impacts to Natural Heritage Features	Potential impacts on terrestrial natural heritage features (e.g., woodlands, ANSI, etc.)
Criteria 2.2	Impacts to Wetlands	Potential impacts to wetland(s) *Note: There are Provincially Significant Wetlands (PSWs) within 750 m of unevaluated wetlands and therefore for the purposes of this evaluation, we are assuming these unevaluated wetlands may be complexed into the PSW*
Criteria 2.3	Impacts to Species at Risk (SAR) and SAR Habitat	Potential impacts to SAR and their habitat.
Criteria 2.4	Impacts to Fish and Fish Habitat	Potential impacts to fish and fish habitat.
Socio-Economic Environment		
Criteria 3.1	Impacts to Land Use	Potential impacts to land uses as identified in local municipal Official Plan[1] *[1] Land use designations identified using Rideau Lakes Official Plan and Schedule A2. It is noted that Rideau Lakes is currently undertaking an Official Plan Update.*
Criteria 3.2	Permanent Property requirements	Property acquisition required for alternative

	Evaluation Criteria	Measure
Criteria 3.3	Potential to encounter Contaminated Soils	Potential to encounter contaminated soils during construction Note the former gas station in the southwest quadrant of the existing intersection has been remediated to the extent feasible. MTO will continue to work with MECP during the Detail Design phase of the project to address residual contamination that may be encountered during construction.
Criteria 3.4	Impacts on nearby Noise Receptors	Potential traffic noise impacts on nearby noise sensitive receptors (i.e., residential dwellings)
Criteria 3.5	Traffic Impacts during construction	Potential impacts to traffic during construction, including access to local businesses, detour routes, etc.
Cultural Resources		
Criteria 4.1	Impacts on Archaeological Resources	Potential impacts to Archaeological Resources
Criteria 4.2	Impacts on Built Heritage and Cultural Landscapes	Potential impacts to Built Heritage and Cultural Landscapes
Cost		
Criteria 5.1	Capital Cost	High-level capital costs, including construction and property acquisition, were identified for comparison purposes. Construction costs were estimated based on recent project experience. Property values were estimated based on current land use and zoning. Full property appraisal(s) would be completed during the land acquisition process as required to determine fair market value(s).

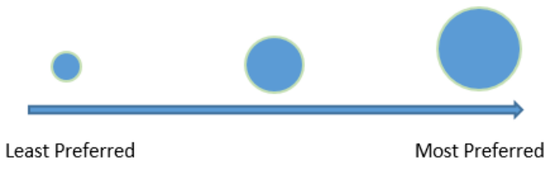
4.3.1 Comparative Evaluation Results

The comparative evaluation is provided in **Table 4** below. As noted in the table legend, the larger circles are most preferred with the smaller circles least preferred.

As a comparative evaluation, weightings were not assigned to each of the criteria. A reasoned argument was employed to assess the relative importance of the various criteria, capturing magnitude of anticipated impacts and opportunity to mitigate residual impacts.

Table 4: Highway 15/County Road 42, Village of Crosby, Comparative Evaluation

Evaluation Criteria	Measure	Alternative 1 Realignment (Radius 500 m)	Alternative 2 Offset T-Intersection	Alternative 3 Roundabout
Factor: Transportation				
Criteria 1.1 **Traffic Operations, Capacity and Safety**	Ability to meet existing and future (2041) traffic needs and provide safe infrastructure	Major improvement to sight lines at the Highway 15/CR 42 intersection. The realigned Highway 15 and realigned CR 42 intersect at a 90 degree angle on tangent. The realignment can accommodate traffic signals (when warranted) to manage future traffic demands.	The new intersection location (North intersection) will improve sight lines as CR 42 connects at a 90 degree angle on tangent section of Highway 15. The north intersection can accommodate traffic signals (when warranted) to manage future traffic demands. The existing intersection location (South intersection) will not have Improvements to sight lines as the existing skew angle of the intersection is maintained. The stop condition on CR 42 will be maintained. Traffic signals are not feasible at this location due to the increased operating speed on the green phase with respect to rollover requirements and existing crossfall on Highway 15.	Moderate improvement to sight lines with minor modifications to each approach. The roundabout configuration will manage existing and future traffic demands. This option would result in fewer conflict points and reduced high severity collisions.
Criteria 1.2 **Highway and Side Road Geometric Improvements**	Improvements to intersection, highway and side road geometry. (i.e. vertical grades and horizontal curves)	Highway 15 will be realigned to provide a 90 degree tangent intersection, resulting in improved operation of the intersection for all movements. Horizontal curves of 500m improve upon the existing horizontal radius (~420m). Significant adjustments to the vertical alignment will be required due to offline realignment.	No improvements to the existing horizontal/vertical alignment for Highway 15. The south intersection crossfall will be maintained. The north intersection provides a 90 degree tangent intersection resulting in improved operation for these movements.	Realignments are required for some legs of the intersection to improve entry angles. Due to yield conditions for all movements, the crossfall will be reduced within the roundabout and approach limits to encourage lower speeds.
Criteria 1.3 **Pedestrian & Cycling Environment**	Future ability to accommodate overall pedestrian and/or cycling environment	Able to easily accommodate multi-modal users.	Able to easily accommodate multi-modal users.	Able to accommodate multi-modal users; however, additional signage and education may be required. Visually impaired pedestrians may be more vulnerable as there could be less obvious gaps for crossing.

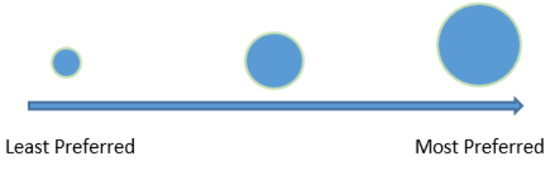


Evaluation Criteria	Measure	Alternative 1 Realignment (Radius 500 m)	Alternative 2 Offset T-Intersection	Alternative 3 Roundabout
Criteria 1.4 **Impacts on Existing Infrastructure**	Potential impacts to existing infrastructure (e.g. culverts, drainage structures) in the study area	Sucker Creek and Crosby Creek culverts would not be impacted; major roadway culvert replacements and realignment of ditches and additional crossing culverts will be required.	Sucker Creek and Crosby Creek culverts would not be impacted; moderate roadway culvert replacements and realignment of ditches will be required.	Sucker Creek and Crosby Creek culverts would not be impacted; minor roadway culvert replacements and realignment of ditches will be required.
Criteria 1.5 **Potential Utility Conflicts**	Potential conflicts with existing utilities in the study area	Utility relocation will be required. Impacts expected to telecommunication (WTC Communication and Bell Canada) plant.	Utility relocation will be required. Impacts expected to telecommunication (Bell Canada) and hydro (Hydro One) plant.	Utility relocation will be required. Impacts expected to telecommunciation (WTC Communication) plant.
Criteria 1.6 **Access Management Requirements**	Ability to meet existing and future access requirements	Meets Access Management Guidelines with respect to intersection spacing. Access to existing properties will be maintained on CR 42. Access to the former car dealership property will be relocated to the remnant portion of Highway 15.	Does not meet Access Management Guidelines with respect to intersection spacing. The proximity of the existing entrance of the former car dealership to the north intersection does not meet access management guidelines. The property is recommended for purchase to remove traffic conflict point close to new intersection.	Meets Access Management Guidelines with respect to intersection spacing. Access to existing properties will be maintained.
Criteria 1.7 **Excess Earth Management**	Ability to manage excess soil within MTO owned property	Excess earth will be generated and it is anticipated that it can be managed within MTO ROW.	Excess earth will be generated and it is anticipated that it can be managed within MTO ROW.	Excess earth will be generated and it is anticipated that it can be managed within MTO ROW.
Criteria 1.8 **Constructability, Traffic Management, Construction Duration**	Ability to have minimal impacts to traffic during construction and reduced construction duration	Traffic can be maintained on Highway 15 and County Road 42 for the majority of construction, with short-term delays to shift traffic from old alignment to new. Construction duration of 2 construction seasons.	Traffic can be maintained on Highway 15 and County Road 42 for the majority of construction, with short-term delays to shift traffic from old alignment to new. Construction duration of 1 construction season.	Likely able to maintain traffic on Highway 15. Signed detours will be required to facilitate movement of traffic during construction on County Road 42; alternative access will be provided. Construction duration of 1 construction season.
Transportation Results	Alternative 3 is preferred as it requires only minor realignments of Highway 15 and County Road 42 and maintains access to existing properties with minimal impacts to existing infrastructure. The Roundabout also provides fewer conflict points and reduced high severity collisions. While the proposed detour of County Road 42 traffic is less desirable than managing traffic on-site, the impacts are temporary and are offset by the aforementioned benefits.			

Evaluation Criteria	Measure	Alternative 1 Realignment (Radius 500 m)	Alternative 2 Offset T-Intersection	Alternative 3 Roundabout
Factor 2: Natural Environment				
Criteria 2.1 **Impacts to Natural Heritage Features**	Potential impacts on terrestrial natural heritage features (e.g., woodlands, ANSI, etc.)	The Realignment transects two large woodland areas and a large field, which likely provide high quality wildlife habitat and have high potential to be one or more types of Significant Wildlife Habitat (SWH).	The realignment of County Road 42 transects a small field and thicket area that may provide wildlife habitat, but habitat quality and potential to be SWH is likely low.	The Roundabout encroaches into a very small area of road-side field that may provide wildlife habitat, but habitat quality and potential to be SWH is likely very low.
Criteria 2.2 **Impacts to Wetlands**	Potential impacts to wetland(s) *Note: There are Provincially Significant Wetlands (PSWs) within 750 m of unevaluated wetlands and therefore for the purposes of this evaluation, we are assuming these unevaluated wetlands may be complexed into the PSW*	The Realignment transects one unevaluated wetland unit and is within approximately 40 m of another unevaluated wetland unit near the north end of the realignment.	The realignment of County Road 42 does not have any direct impacts to wetlands and is more than 50 m from an unevaluated wetland.	The Roundabout does not have any direct impacts to wetlands and is more than 100 m from an unevaluated wetland.
Criteria 2.3 **Impacts to Species at Risk and Species at Risk Habitat**	Potential impacts to Species at Risk (SAR) and SAR Habitat. *Note the entire Study Area is within Regulated Habitat for Gray Ratsnake*	The Realignment transects large areas of forests and fields that are potential habitat for terrestrial SAR and particularly for Gray Ratsnake. The Realignment would result in fragmentation of these habitats. The Realignment provides opportunities for habitat enhancement and creation.	The Offset T-Intersection transects a small field and thicket area that may provide terrestrial SAR and Gray Ratsnake habitat, but habitat quality and potential in this area is likely low.	The Roundabout encroaches into a very small area of road-side field that may provide terrestrial SAR and Gray Ratsnake habitat, but habitat quality and potential in this area is likely very low.
Criteria 2.4 **Impacts to Fish and Fish Habitat**	Potential impacts to fish and fish habitat.	The north end of the Realignment is within approximately 20 m of known fish habitat at the existing Sucker Creek crossing. No in-water works or works on the existing crossing are anticipated. Therefore, potential for new direct impacts to fish and fish habitat is low, and potential impacts would likely be limited to temporary indirect impacts (e.g. runoff from construction works, etc.).	The north end of the Offset T-Intersection at its tie-in with existing County Road 42 is within approximately 5 m of known fish habitat at the existing Sucker Creek crossing. No in-water works or works on the existing crossing are anticipated. Therefore, potential for new direct impacts to fish and fish habitat is low, and potential impacts would likely be limited to temporary indirect impacts (e.g. runoff from construction works, etc.).	The Roundabout is not within any area of known fish habitat or within 30 m of any known fish habitat.
Natural Environment Results	Alternative 3 is preferred as it has minimal impacts to low quality terrestrial habitat, avoids potential impacts to fish and fish habitat and has minor encroachment into marginal SAR habitat.			

Evaluation Criteria	Measure	Alternative 1 Realignment (Radius 500 m)	Alternative 2 Offset T-Intersection	Alternative 3 Roundabout
Factor 3: Socio-Economic Environment				
Criteria 3.1 **Impacts to Land Use**	Potential impacts to land uses as identified in local municipal Official Plan[1]	The Realignment goes through the Village and Hamlet and Rural land use designations. The Realignment has the potential to bisect the southern portion of a property, which appears (based on aerial interpretation) to have agricultural uses. Opportunities to maintain access to the property will need to be determined. There are currently no known active planning applications. 	The Offset T-Intersection goes through the Village and Hamlet and Rural land use designations. The Offset T-intersection bisects land near the former car dealership and access to this property will need to be considered. There are currently no known active planning applications. 	The Roundabout is primarily contained within the existing right-of-way and is located primarily within the Village and Hamlet land use designation, and partially into the Rural land use designation. No properties are bisected by the Roundabout. There are currently no known active planning applications. 
Criteria 3.2 **Permanent Property requirements**	Property acquisition required for alternative	Approximately 2.8 hectares of property will be required north of Highway 15 to complete the Realignment. 	The Offset T-intersection will require approximately 1.0 hectares of land for the realignment of County Road 42. 	The Roundabout is primarily located within the existing right-of-way however property acquisition (approximately 0.7 hectares) will be required. 
Criteria 3.3 **Potential to encounter Contaminated Soils**	Potential to encounter contaminated soils during construction *Note the former gas station in the southwest quadrant of the existing intersection has been remediated, however residual contamination remains within the road rights-of-way*	The Realignment will likely encounter the residual contaminated soil in the SW quadrant of the intersection. 	Improvements at the current intersection will likely encounter residual contaminated soil. In addition, there is potential to encounter additional contaminated soil at the former car dealership at the proposed T-intersection. 	The Roundabout will likely encounter the residual contaminated soil in the SW quadrant of the intersection. 
Criteria 3.4 **Impacts on nearby Noise Receptors**	Potential traffic noise impacts on nearby noise sensitive receptors (i.e. residential dwellings)	This alternative would likely result in the greatest change in receptor noise levels, with the receptor north of the new alignment experiencing an increase in ambient noise levels due to vehicular traffic. 	This alternative may result in minor change in receptor noise levels due to vehicular traffic. The cul-de-sac at the Offset T-Intersection is anticipated to reduce traffic noise for two receptors in the cul-de-sac. 	This alternative would likely result in little to no change in receptor noise levels due to vehicular traffic. 

[1] Land use designations identified using Rideau Lakes Official Plan and Schedule A2. It is noted that Rideau Lakes is currently undertaking an Official Plan Update.



Evaluation Criteria	Measure	Alternative 1 Realignment (Radius 500 m)	Alternative 2 Offset T-Intersection	Alternative 3 Roundabout
Criteria 3.5 **Traffic Impacts during construction**	Potential impacts to traffic during construction, including access to local businesses, detour routes, etc.	It is anticipated traffic will be maintained during construction. Access to local businesses and properties in the Study Area will be maintained.	It is anticipated traffic will be maintained during construction. Access to local businesses and properties in the Study Area will be maintained.	It is anticipated traffic will be maintained on Highway 15 during construction. County Road 42 traffic will need to be detoured to construct the roundabout. Access to local businesses and properties will be maintained.
Socio-Economic Environment Results	Alternative 3 is preferred as it has the least impacts to adjacent land uses, however does require a detour of County Road 42 traffic during construction.			
Factor 4: Cultural Resources				
Criteria 4.1 **Impacts on Archaeological Resources**	Potential impacts to Archaeological Resources in study area	Requires lands that are previously undisturbed that have a high potential for archaeological resources.	The realignment of County Road 42 will go through lands that are likely undisturbed and have potential to retain archaeological resources.	The Roundabout will go through lands that are likely undisturbed and have potential to retain archaeological resources.
Criteria 4.2 **Impacts on Built Heritage and Cultural Landscapes**	Potential impacts to Built Heritage and Cultural Landscapes in study area	The Realignment has the potential to encroach on the northern limits of Crosby Corners Cemetery. No impacts are anticipated to the Crosby Brick School north of County Road 42.	This alternative is set back from potential Built Heritage and Cultural Landscapes therefore it is not anticipated to impact cultural resources.	This alternative is set back from potential Built Heritage and Cultural Landscapes therefore it is not anticipated to impact cultural resources.
Cultural Resources Results	Alternative 3 is preferred as it has no impacts to built heritage features or cultural landscapes, although does have potential for archaeological impacts.			

Evaluation Criteria	Measure	Alternative 1 Realignment (Radius 500 m)	Alternative 2 Offset T-Intersection	Alternative 3 Roundabout
Factor 5: Cost				
Criteria 5.1 **Capital Cost**		The Realignment has significant infrastructure costs due to the long section of Highway 15 requiring realignment and the CR 42 realignment at the intersection. Minor additional costs required for signal maintenance. Significant property costs as the Realignment requires approximately 2.8 ha of property will be acquired (impacting 7 private properties).	The Offset T-Intersection has a minor infrastructure cost for Highway 15 to remove turning lanes at the south intersection and addition of turning lanes at the north intersection. Moderate infrastructure costs for realignment of CR 42 at North intersection will be required. Minor additional costs required for signal maintenance. Moderate property costs required as approximately 1.0 ha of property will be acquired (impacting 2 private properties).	The Roundabout has moderate infrastructure costs at the intersection and for approaches on Highway 15 and CR 42. Minor additional maintenance costs for ongoing landscaping will be required. There is potential increased difficulty for snow plough operators; however, an increased area for snow storage within the centre island will be available. Moderate property costs required as approximately 0.7 ha of municipal road allowance will be acquired (impacting 2 private properties).
Cost Results	Alternative 3 is preferred as it is anticipated to be the lowest overall cost.			
SUMMARY				
1. Transportation				
2. Natural Environment				
3. Socio-Economic Environment				
4. Cultural Resources				
5. Cost				
OVERALL SUMMARY				

Based on the comparative evaluation, Alternative 3 – Roundabout, is the Technically Preferred Alternative (TPA) for long term intersection improvements. A summary for each factor group is provided below.

4.3.2 Transportation and Engineering

Alternative 3 is preferred as it requires only minor realignments of Highway 15 and County Road 42 and maintains access to existing properties with minimal impacts to existing infrastructure. The roundabout also provides fewer conflict points and reduced high severity collisions. While a detour of County Road 42 traffic is less desirable than managing traffic on-site, the impacts are temporary and are offset by the aforementioned benefits.

4.3.3 Natural Features

Alternative 3 is preferred as it has minimal impacts to low quality terrestrial habitat, avoids potential impacts to fish and fish habitat and has minor encroachment into marginal Species at Risk habitat.

4.3.4 Socio-Economic Environment

Alternative 3 is preferred as it has the least impacts to adjacent land uses and requires the least amount of property; however, will require a temporary detour of County Road 42 traffic during construction. The roundabout has been designed to accommodate large transport trucks and large pieces of farm equipment.

4.3.5 Cultural Environment

Alternative 3 is preferred as it has no impacts to built heritage features or cultural landscapes. The roundabout has potential for archaeological impacts, the area of impact is significantly smaller than the other two alternatives.

4.3.6 Cost

Alternative 3 is preferred as it is anticipated to be the lowest overall cost.

5.0 Preliminary Design

This section summarizes key features of the updated PD for the roundabout. Only the changes outlined in this Addendum are subject to a Part II Order (Bump-Up). Highway 15 descriptions and engineering details of the recommended plan are provided in the Preliminary Design Report (Dillon, draft November 2022).

5.1 Highway Engineering

Preliminary Design Drawings of the recommended plan are provided in **Appendix B**. **Figure 7** below provides an illustration of the roundabout design and key features.

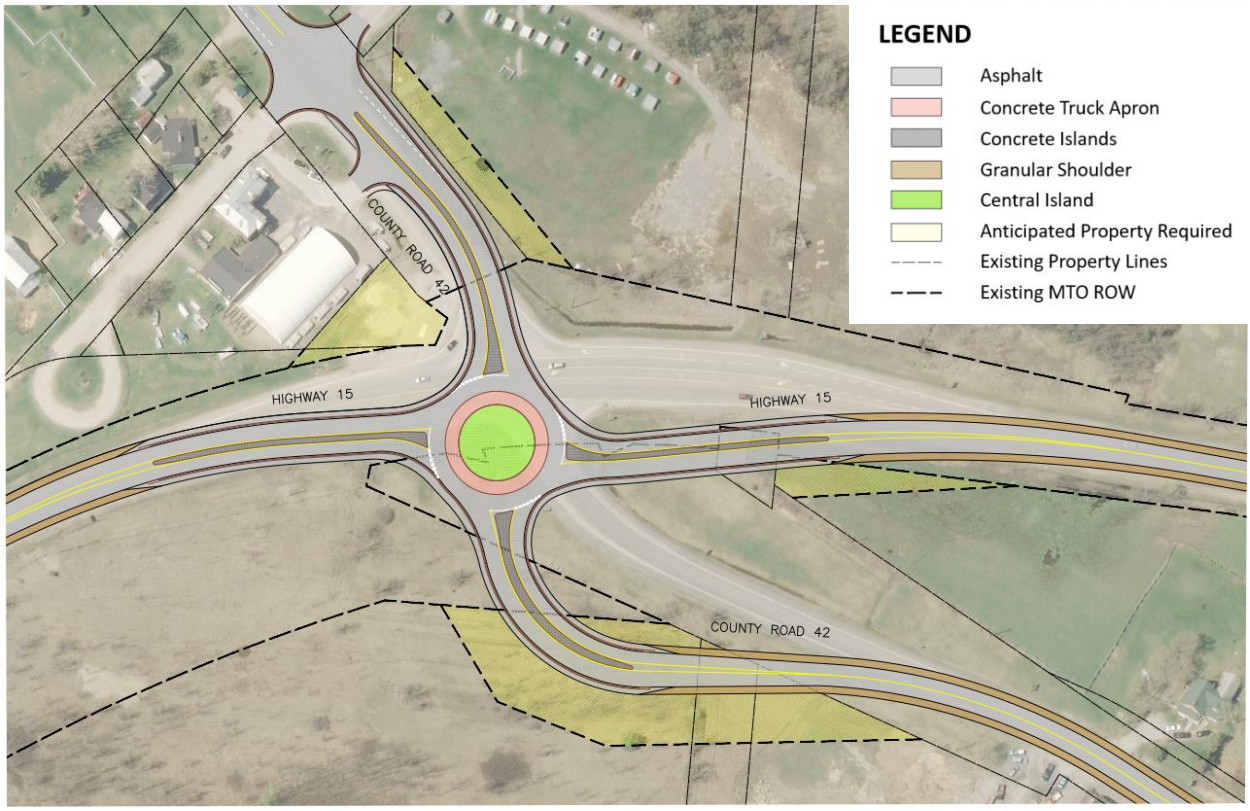


Figure 7: Roundabout Features

5.1.1 Geometry

All four approaches outside of the roundabout and splitter island limits will maintain the existing design speeds of 100 km/h (posted speed of 80 km/h) for Highway 15 and 70 km/h (posted speed of 60 km/h) for County Road 42. To encourage the appropriate slower operating speed of the roundabout and yield conditions of the entries, lower speed curves will be introduced on the roundabout approach legs.

5.1.2 Design Vehicle and Agricultural Vehicles

The design vehicle for the roundabout is a tractor semi-trailer (WB-20.5). A truck apron has been included to accommodate the design vehicle, as well as agricultural vehicles. A truck apron is a slightly raised ring around the outside of the centre island that facilitates wheel tracking of large vehicles. The apron is designed to support the weight of large vehicles and provide sufficient room to safely navigate the roundabout. Paved shoulders have also been provided within the vicinity of the roundabout and on approach and departure legs to accommodate off-tracking of larger vehicles.

5.1.3 Pedestrian and Cyclist Accommodations

MTO's cycling network, developed as part of Ontario's cycling strategy, does not identify routes within the project limits. However, there is an existing off-road route identified that crosses Highway 15 to the south and County Road 42 east of the intersection. Cyclists utilizing the proposed roundabout will have the option to act as a vehicle, by utilizing the lane, or to dismount and cross as a pedestrian.

Crosswalks at roundabouts in rural areas like this with low pedestrian counts and low speeds are typically not accommodated at approach crossing locations. Splitter islands on each of the four approach legs have been included to provide a pedestrian refuge area with a depressed curb (curb height reduced to match pavement) allowing pedestrians to cross one lane of traffic at a time. The need for crosswalks will be confirmed during the Detail Design phase.

5.1.4 Utilities

Potential utility conflicts have been identified as follows:

- Hydro One – relocation of hydro poles and aerial lines on Highway 15 from approximately 150 m south to 100 m north of the intersection of County Road 42. Along County Road 42, hydro poles and aerial lines will require relocation from the intersection of Narrows Lock Road to the intersection of Highway 15;
- Bell Canada – may require an extension of the underground conduit crossing at County Road 42 and Circle Street. The existing conduit will need to be relocated at the existing intersection of Highway 15 and County Road 42 for construction of the roundabout as well as on Highway 15 at the existing crossing south of the intersection; and,
- WTC Communications – grading impacts to the vault structures on the north side of County Road 42 and in the northeast quadrant of the intersection will likely require relocation of the underground line on County Road 42 from Narrows Lock Road to 50 m east of the intersection at Highway 15 and County Road 42.

5.1.5 Property

Permanent property acquisitions are required for horizontal realignment of County Road 42, realignment of Highway 15 and for the construction of the roundabout. Property Impacts include four privately owned properties, as well as properties owned by the United Counties of Leeds and Grenville and the Township of Rideau Lakes. The parcel on the southwest quadrant of the intersection, which is a former gas station site, is currently in tax sale status.

Following the 30-day public comment period of the TESR Addendum, Environmental Clearance will be provided for property expropriation to allow for property acquisition in advance of highway construction.

5.1.6 Landscaping

Detailed landscape plans will be developed during the next Detail Design phase of the project.

5.1.7 Illumination

Illumination upgrades are necessary to accommodate the improved roundabout layout. Poles with LED conventional luminaires will be placed outside of the shoulders of the approaching legs of the roundabout in order to provide the required lighting levels.

With the proposed improvements and change in the alignment of Highway 15 and County Road 42, temporary lighting will be required in order to maintain light levels during construction. Temporary lighting shall be reviewed during the Detail Design phase.

5.1.8 Stormwater Management

The recommended intersection stormwater management strategy includes roadside ditches, and replacement of culverts that are not performing to minimum design standards.

During Detail Design, further field work to determine the current condition of the culverts located within the construction limits is recommended. Any culverts deemed to be in poor physical condition should be replaced as part of the proposed design. Any of the existing ditches that will be retained in the proposed conditions will need to be cleaned out and graded to positively drain and convey flows to the Study Area's outlets.

5.1.9 Erosion Potential Assessment

Where ditch regrading is required, flat bottom ditches in lieu of 'v' ditches are considered in the design to reduce velocities and erosion potential, promote peak flow attenuation, and provide short term stormwater storage. In addition, the use of flat bottom ditches will provide quality enhancements to stormwater runoff.

Grading and other construction activities will potentially cause increased erosion and sedimentation. An erosion and sediment control plan will be developed during Detail Design. General guidelines for the control of sedimentation and erosion within the construction limits includes the use of erosion control blanket, rip-rap, temporary straw bales, permanent and temporary rock flow checks in areas of susceptible soil conditions, high longitudinal gradient, or storm outfalls to sensitive receiving watercourses.

5.1.10 Traffic Management During Construction

The proposed Highway 15 and County Road 42 intersection improvements are anticipated to be completed in three stages within one construction season. Disruptions to traffic during construction are unavoidable, but will be mitigated to the extent possible.

Throughout construction, regular progress meetings will be held with MTO, the Contractor, Emergency Service Providers and the municipality to review the project progress and revise the staging plan if required. Traffic management and construction staging will be confirmed during Detail Design and documented in the DCR. The following provides an overview of anticipated traffic impacts.

5.1.10.1 Highway 15

It is currently anticipated that traffic on Highway 15 will be maintained at all times during construction.

5.1.10.2 County Road 42

During the first stage of construction, County Road 42 east of the Highway 15 intersection will be closed to traffic, with a local road detour in place for westbound traffic. It is also anticipated that local traffic will utilize alternative routes to access Highway 15.

During the second stage of construction, County Road 42 west of the Highway 15 intersection will have a temporary detour at the intersection for eastbound traffic.

During the third and final stage of construction, work will be completed on the remaining portion of County Road 42, east of the intersection. County Road 42 westbound traffic will have access using the detour. Remaining traffic will utilize the roundabout.

All traffic management plans and traffic control devices shall conform to Ontario Traffic Manual (OTM) Book 7, other OTM books or MTO standards/policies as may be applicable, unless otherwise specified.

6.0 Impact Assessment and Mitigation

As part of the Class EA process, an impact assessment of the proposed improvements was completed and preliminary mitigation measures developed to avoid/mitigate adverse impacts, as documented in the following sections.

The extent of anticipated impacts and proposed mitigation measures should be reviewed during the future Detail Design phase and refined as required. As required by the MTO Class EA, all permits, approvals and exemptions required for the project must be obtained prior to Environmental Clearance – Construction Start being issued.

In general, there are minimal negative impacts on adjacent lands as well as to the travelling public. The impacts are primarily short term disruptions typical of highway construction projects and can be mitigated to a significant extent by standard provisions in the Contract. Mitigation measures will be further developed during Detail Design and documented in the DCR.

6.1 Transportation

6.1.1 Traffic Operations and Safety

The TPA meets existing and future provincial traffic needs and provides efficient flow of traffic while being able to accommodate multi-modal users. The design provides improvements to sightlines that increases visibility and improves safety at this intersection. Roundabouts also result in fewer conflict points resulting in a reduction in collision severity.

6.1.2 Traffic Staging During Construction

Disruptions to traffic during construction are unavoidable, but will be mitigated to the extent possible. It is anticipated that Highway 15 traffic will be maintained during construction. Access to properties/businesses will be also maintained, and construction will be staged to avoid or minimize detours to the extent possible. Construction staging and traffic management will be confirmed during Detail Design and documented in a DCR.

6.1.3 Emergency Service Providers

Construction of the TPA has potential to impact emergency service vehicles responding to incidents on Highway 15 and local roads in the project Study Area. Emergency service providers will be consulted during Detail Design to provide input to construction staging and traffic management plans.

6.1.4 Utilities

The TPA has impacts to existing utilities within the provincial and municipal road ROW. Relocation of utilities will be co-ordinated with the affected utilities during the Detail Design stage of the project

6.1.5 Drainage and Hydrology

All drainage modifications will be designed to meet MTO drainage design criteria. The recommended intersection drainage strategy was developed to provide stormwater quantity control for surface runoff directed to Newboro Lake. The strategy is designed to limit the impact the proposed condition peak flows have on the outlets through roadside ditches, and replacement of culverts that are not performing to minimum design standards. The TPA recommends trapezoid (flat-bottom) ditches to reduce velocities and erosion potential, promote peak flow attenuation, and provide short term stormwater storage. In addition, the use of flat bottom ditches will provide quality enhancements to stormwater runoff.

In regards to the observed ditch ponding and parking lot flooding occurring at the Rideau Lakes Building Centre, Culvert 1 is proposed to be removed and the roadside ditch along Highway 15 and County Road 42 will be regraded to flow south, away from the building centre.

During Detail Design, further field work to determine the current condition of the culverts located within the construction limits is recommended. Any culverts deemed to be in poor physical condition should be replaced as part of the proposed design. Any of the existing ditches that will be retained in the proposed conditions will need to be cleaned out and graded to positively drain and convey flows to the Study Area's outlets.

Grading and other construction activities will potentially cause increased erosion and sedimentation. General guidelines for the control of sedimentation and erosion within the construction limits includes the use of erosion control blanket, rip-rap, silt fence barrier and fibre rolls. Site specific erosion and sedimentation control measures will be developed during the Detail Design stage following MTO's *Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects* (MTO 2007).

6.1.6 Contamination

MTO will continue to work with MECP as they address the known soil and groundwater contamination associated with the former gas station in the southwest quadrant of the intersection. Contaminated soil and/or groundwater encountered during construction will be managed in accordance with *O.Reg. 153/04* and *O.Reg. 406/19*.

6.1.7 Excess Soil Management

Construction of the intersection improvements is not expected to generate any excess material as the roundabout will require fill material. Determination of the quantity of excess material will be completed during Detail Design. If any excess material is generated, it will be managed on-site. An Excess Soil Management Plan should be developed during Detail Design to confirm compliance with the new On-Site and Excess Soil Management Regulation (*O.Reg. 406/19*).

6.2 Natural Environment

6.2.1 Terrestrial Ecosystem

This section summarizes the potential impacts to wildlife and vegetation within the Study Area that could result if mitigation measures are not implemented. In general, the works associated with construction of the intersection improvements have the potential to:

- Increase erosion and sedimentation of lands adjacent to the construction area;
- Increase vulnerability of areas cleared of vegetation to invasion by non-native species; and,
- Result in a loss and/or disruption to wildlife and/or wildlife habitat. Potential examples include:
  - Temporary disruption of use of the migratory bird nesting habitat in areas cleared of vegetation along the ROW;
  - Temporary disruption to wildlife movement and wildlife avoidance of habitats adjacent to the ROW due to disturbance associated with construction activities; and,
  - Harm or temporarily harass potential SAR that could be using the surrounding areas as a movement corridor.

Due to the presence of SAR turtles and birds in the area, targeted surveys are planned in spring 2023 to confirm the presence or absence of these and other SAR within the anticipated area of impact. Consultation with the MECP will be necessary to confirm permitting/registration requirements under the *Endangered Species Act*.

Overall, the TPA has limited impacts on the terrestrial natural environment. In addition to any requirements under the Endangered Species Act, mitigation measures will include minimizing vegetation clearing, vegetation removal timing windows, delineating tree protection zones, erosion and sedimentation control measures, stabilization of cleared areas, and re-vegetation of disturbed areas. To mitigate potential impacts associated with SAR in the area, wildlife exclusionary fencing is recommended to isolate the work area and prevent incidental exposure to SAR. A contractor awareness package should be prepared during Detail Design for potential SAR in the area. A Wildlife Scientific Collectors Authorization issued by the MNRF under the *Fish and Wildlife Conservation Act, 1997* should be obtained prior to the salvage of any species that enter and persist in the work area. Updates to natural environment studies are required if field data exceeds five years in age, or if there are changes to requirements under the *Endangered Species Act* to address impact to SAR.

6.2.2 Groundwater

Numerous drinking water wells are located in close proximity of the intersection and MECP Water Well records indicated groundwater is found at relatively deep depths. Overall, the proposed construction works are not anticipated to cause significant impacts on the existing hydrogeological conditions in the Study Area. The nature of the proposed construction works will require little to no construction dewatering and therefore no impacts on the groundwater regime are expected.

The Study Area is located within a Highly Vulnerable Aquifer (HVA) and Significant Groundwater Recharge Area, which indicates the potential for relatively large volumes of water from the ground surface to make its way down to the underlying aquifer. It is recommended that proper chemical and fuel management is implemented by the Contractor during construction, including secondary containments and a robust emergency spill response plan to protect groundwater resources.

Ancillary project activities (application of road salt, handling and storage of fuel, etc.) pose a low risk to local groundwater and surface water quality. To minimize threats from these activities, MTO will apply current best management practices (e.g., MTO's Salt Management Plan), adhere to established Ministry plans and policies and implement special contract provisions.

6.2.3 Climate Change

In general, roundabouts reduce vehicle speeds at the intersection and provide efficient traffic flow with fewer stops and delays. This intersection design mitigates impacts to climate change by reducing idling time, vehicle emissions and fuel consumption.

Drainage infrastructure performance has been investigated for future events, corresponding to the design service life (DSL) of the proposed infrastructure. Using the MTO Intensity-Duration-Frequency (IDF) tool, the rainfall intensities were projected 75 years into the future, to 2097. These rainfall intensities were used to verify that the stormwater infrastructure perform adequately under climate change. Calculations show that the stormwater management measures are adequately sized to meet the design criteria even with the climate change intensities.

6.3 Land-Use and Socio-Economic Environment

Socio-economic impacts include impacts to adjacent property owners, businesses and the travelling public. Impacts are primarily related to the construction stage of the project and will be short-term in duration. These include construction noise, increase in dust and vehicle emissions and traffic disruptions during each stage of construction. Minor property taking is also required.

6.3.1 Land Use

Construction of the roundabout will require the acquisition of property in the immediate vicinity of the intersection. It is anticipated that permanent property acquisition will be required from the Township of Rideau Lakes and four private property owners. For private property, MTO will have the lands appraised and will negotiate with the property owner to try and reach an amicable settlement for the lands.

6.3.2 Noise and Air Quality

Noise, vibrations and air quality (fugitive dust) are anticipated to be typical of any highway construction project. It is anticipated that impacts can be mitigated by construction best practices for noise, vibrations and dust control. During construction, noise impacts to surrounding sensitive land uses can be limited by adherence to best practices for noise mitigation. Air quality impacts can be limited by contractor compliance with general conditions to minimize dust and other air quality impacts. Impacts and suitable mitigation measures should be confirmed during Detail Design.

6.4 Cultural Resources

The TPA affects land that was not previously assessed and may contain archaeological potential. Based on this, there is potential to cause disturbance/destruction of archaeological resources during construction. These potential impacts can be mitigated by completing additional Archaeological Assessments and obtaining acceptance of the reports into the Ontario Public Register of Archaeological Reports (OPRAR) from the Ministry of Citizenship and Multiculturalism (MCM) prior to construction.

The construction contract for the project shall include provisions regarding the discovery of deeply buried archaeological material during construction. The provisions shall require that the contractor immediately cease work and engage a licensed consultant archaeologist to complete an assessment in compliance with the *Ontario Heritage Act*.

There are no impacts anticipated to built heritage resources.

7.0 Summary of Environmental Concerns and Commitments

The summary of environmental concerns/potential effects, associated environmental protection/mitigation and monitoring requirements identified during this PD update are presented in **Table 5**. The improvements to the intersection of Highway 15 and County Road 42 are not anticipated to have significant impacts on the natural, socio-economic or cultural environment in close proximity to the study area. To the extent possible, adverse impacts can be avoided or mitigated by the measures and provisions summarized in **Table 5**.

During Detail Design, the environmental protection/mitigation measures will be confirmed and revised as necessary. Specific details regarding environmental monitoring will also be identified during Detail Design as required. During construction, monitoring will be carried out in accordance with the MTO Construction Administration and Inspection Task Manual.

To assist the Project Team through Detail Design, the following sections highlight key consultation commitments, additional design studies and anticipated permits, approvals and exemptions which may be required prior to construction start. As required by the MTO Class EA, all permits, approvals, and exemptions required for the project must be obtained prior to Environmental Clearance – Construction Start being issued.

7.1 Additional Consultation

The following future consultation activities are recommended as this project advances into Detail Design:

- Consultation with local emergency service providers as construction staging and traffic management plans are being developed;
- Consultation with affected utility companies when utility impacts are confirmed; and,
- Development of an education plan when the roundabout opens to traffic to assist the local community in learning how to navigate the roundabout by vehicle, as well as by pedestrians and cyclists.

7.2 Recommended Additional Design Studies

- Additional surveys to confirm the presence or absence of species at risk;
- Archaeology Assessment of one remaining property for previously undisturbed lands impacted by the technically preferred alternative;
- Preparation of an Excess Soil Management Plan in accordance with *O.Reg. 406/19*; and,

- Preparation of a DCR documenting the Detail Design plans, including construction staging and traffic management. The DCR shall also document additional consultation efforts with impacted stakeholders. The DCR shall be published for a 30-day public comment period prior to Environmental Clearance – Construction Start being issued.

7.3 Anticipated Permits, Approvals, and Exemptions

- All outstanding permits, approvals and exemptions required to complete construction activities;
- MCM Acceptance of required Archaeology Assessment Report(s);
- Wildlife Scientific Collectors Authorization for species salvage, if necessary;
- *Endangered Species Act* Overall Benefit permit; and,
- Confirm the need for an Environmental Activity and Sector Registry (EASR) or Permit to Take Water (PTTW).

Table 5: Summary of Environmental Concerns and Commitments

I.D. #	I.D. # Sub-issues	Issues/Concern Potential Effects	Potentially Interested Agencies/Stakeholders	Mitigation/Protection/Monitoring
1. Transportation and Utilities	1.1.Traffic Impacts	Disruptions to traffic/out of the way travel	Student transportation providers, traveling public, and local residents/businesses	Construction staging and Traffic Management Plan to be developed during Detail Design to minimize disruptions and reduce durations of local road detours. It is anticipated that traffic can be maintained on Highway 15 during construction. Signed detours will be required during construction on County Road 42. Provide advance signage to inform travellers.
	1.2 Construction Traffic	Potential disruptions caused by construction traffic	Student transportation providers, traveling public, and local residents/businesses	Disruption minimized by following Ontario Traffic Manual Book 7 Temporary Conditions.
	1.3 Emergency Services Access	Potential emergency vehicle delays to incident locations during construction	Emergency Services Providers	Potential delays minimized by regular communication with Emergency Service Providers during Detail Design and construction.
	1.4 Travelling Public	Navigating the new roundabout	Local residents, travelling public	Continue to provide education to the local community on navigating roundabouts, including working with the County to develop an education plan during Detail Design to assist the local community in learning how to navigate the roundabout by vehicle. Provide full illumination at the roundabout.
	1.5 Pedestrians and Cyclists	Navigating the new roundabout	Multi-modal users	Confirm the need for crosswalks during detailed design. Continue to provide education to local multi-modal users on navigating roundabouts, including working with the County to develop an education plan during Detail Design to assist the local community in learning how to navigate the roundabout by pedestrians and cyclists.
	1.6 Utilities	Utility relocation may be required	Affected utility companies	Consultation with impacted utility companies is ongoing and relocations will be completed, where possible, in advance of the construction activities planned at each conflict location.
2. Natural Environment	2.1 Natural Features and Vegetation	Increased erosion and sedimentation of lands adjacent to the construction area Increased vulnerability of the areas cleared of vegetation to invasion by non-native species	MECP, MNDMNRF, CRCA	Minimal vegetation removal required to complete the proposed works. It is anticipated that impacts to vegetation can be minimized by the following measures: • Minimize vegetation removal to the extent possible; • Follow tree felling and grubbing procedures as outlined in OPSS 201, Construction Specification for Clearing, Close Cut Clearing, and Grubbing; and, • Areas temporarily cleared of vegetation to facilitate road works should be stabilized (e.g., vegetated/seeded) prior to removal of erosion and sedimentation control (ESC) measures: ○ Protect natural features with silt fence. These measures should remain in place until exposed soils are stabilized; ○ ESC measures shall be monitored regularly and/or after every 10 mm or greater rainfall event as they could require periodic cleaning, maintenance and/or re-construction. If deficiencies are found, they should be repaired and/or replaced promptly; ○ Grading, placement of topsoil and seeding specifications will be implemented to decrease erosion potential and promote suitable vegetation regeneration; and, ○ The site shall be stabilized prior to removal of ESC measures. Temporarily disturbed vegetated areas will be restored and/or re-vegetated to minimize invasion and colonization by non-native species, increase shade/cover for wildlife and mitigate edge disturbance effects.
	2.2 Wildlife and Wildlife Habitat	Temporary disruption to wildlife movement and wildlife avoidance of habitat areas due to disturbance associated with construction activity	MECP, MNDMNRF, CRCA	• Minimize vegetation removal to the extent possible; • If wildlife is encountered in the construction area, work should be temporarily suspended until the animal is out of harm's way. If the species persists in the work area, a person qualified to handle wildlife should be contacted to relocate the animal; and, • Workers should be vigilant and check work areas and machinery for the presence of wildlife prior to each day of construction.

I.D. #	I.D. # Sub-issues	Issues/Concern Potential Effects	Potentially Interested Agencies/Stakeholders	Mitigation/Protection/Monitoring
2. Natural Environment (cont.)	2.3 Migratory Nesting Birds	Temporary disruption of use of the migratory bird nesting habitat in areas cleared of vegetation along the ROW	Environment and Climate Change Canada, MECP, MNDMNRF, CRCA,	Tree/vegetation removal should be completed outside of the breeding bird season (i.e., April 1 to August 31). Additional
	2.4 Species at Risk and Species at Risk Habitat	Harm or temporarily harass potential SAR species	Environment and Climate Change Canada, MECP, CRCA,	SAR habitat for several species exists within the Study Area. Additional surveys are required to determine the presence/absence of SAR species and identify appropriate permitting requirements and protection measures in accordance with the Endangered Species Act.
	2.5 Spills Handling	Potential adverse impacts of spills on environment and natural features	MECP, MNDMNRF	General Conditions should be included in Contract to specify incident management requirements following relevant legislation including, *Environmental Protection Act, Fisheries Act, Gasoline Handling Act,* Ontario *Pesticides Act,* Ontario *Water Resources Act* and *Transportation of Dangerous Goods Act.* The Contractor shall develop a Spill Prevention and Response Contingency Plan.
	2.6 Surface Water and Groundwater	• Increase in impervious surface area of site • Potential water quality impacts caused by runoff from site. Potential impact on groundwater levels during dewatering activities (if required)	MECP, CRCA	• A residential well survey should be completed to confirm the presence potable water wells within 50 m of the grading limits; • General Conditions in the Contract outline incident management requirements for protecting the environment and natural features in the event of a spill. MTO General Conditions of Contract and OC (Spill Prevention and Response Contingency Plan) should be included in the Contract; and, • Confirm is an EASR is required prior to construction for dewatering activities for any consumptive surface water uses required for road construction (i.e., dust suppression). Develop an Erosion and Sediment Control Plan to protect the quality of surface water features during construction.
	2.7 Erosion and Sediment Control	On-site erosion and deposition of sediment into natural areas/watercourses	MECP, MNDMNRF, Municipality, CRCA	A site specific Erosion and Sedimentation Control Plan shall be developed by the contractor following MTO's *Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects* (MTO 2007). The Contract should include, at a minimum, the following measures and provisions to minimize potential erosion and capture any sedimentation: • Minimize the disturbance of existing well-vegetated ditches and grassed slopes; • Place erosion control blanket or equivalent on 3:1 or greater slopes where height warrants its use; • ESC measures will be placed 10 m from the edge of the Excess Material Management Areas to contain materials and remain in place until materials are stabilized. The slopes of the material piles shall be no steeper than 3:1; • Place appropriately sized rip rap and geotextile at new and existing culverts; • The erosion and sediment control plan includes topsoil, seeding, mulching and hydroseeding-hydromulching throughout the project limits; and, • Temporary erosion and sediment control measures shall be placed 48 hours prior to any forecasted precipitation and less than 48 hours after the removal of any portion of the existing vegetative or other earth cover. Additional ESC measures may be identified during the Detail Design stage and should be included in the contract.
	2.8 Contaminated Soils	Moderate to high potential to encounter soil and groundwater contamination during construction	MECP	Contaminated soils associated with the former gas station in the southwest quadrant of the intersection shall be managed in accordance with *O.Reg. 153/04* and *O.Reg. 406/19.* MTO General Conditions of Contract and provisions included in MTO Contracts for Construction dictate procedures for notification and handling of contaminated materials not previously identified.
	2.9 Excess Soils	Potential to generate excess soils that require management either on or off-site	MECP	An Excess Materials Management Plan shall be developed during Detail Design to confirm compliance with the new On-Site and Excess Soil Management Regulation (*O.Reg. 406/19*). It is anticipated that excess soil can be managed on-site.

I.D. #	I.D. # Sub-issues	Issues/Concern Potential Effects	Potentially Interested Agencies/Stakeholders	Mitigation/Protection/Monitoring
3. Land Uses and Socio-Economic Environment	3.1 Construction Noise	Potential noise impacts during construction	MECP, local residents	To minimize impacts on adjacent residents, the following best practices related to noise should be in place during construction: • All equipment shall be maintained in an operating condition that prevents unnecessary noise, including non-defective muffler systems, properly secured components and the lubrication of moving parts; and, • Idling of equipment will be restricted to the minimum necessary to perform the specified work.
	3.2 Construction Dust and Air Quality	Emissions from movement, storage, and processing of aggregate materials and use of heavy-duty diesel equipment	Adjacent property owners and businesses, MECP	Impacts minimized by Contractor compliance with MTO General Conditions of Contract to minimize dust and other air quality impacts. Standard construction practices including: • Use well-maintained heavy equipment and machinery and comply with operating specifications; • Minimize operation and idling of gas-powered equipment and vehicles, especially during smog advisories; • Minimize vehicular traffic on exposed soils and stabilize high traffic areas with suitable cover material; • Avoid excavation and other construction activities with potential to release airborne particulates during windy and prolonged dry periods; • Stabilize stockpiled excavated soils in areas upwind of sensitive receptors; • Cover or otherwise contain loose construction materials with potential to release airborne particulates during transport, installation or removal; and, • Restore disturbed areas as soon as possible to minimize the duration of soil exposure. Contract provision for control of emissions during construction to ensure that dust and other debris does not enter any surface water or escape beyond the ROW. Measures may include termination of operations during high winds, use of low dust generating technologies, vacuuming of surfaces and use of temporary barrier walls or enclosures.
	3.3 Impacts to businesses	Loss of business due to construction	Adjacent business owners	Maintain access to businesses during construction to the extent feasible.
	3.4 Private Property Acquisition	Permanent acquisition of private property	Adjacent property owners	MTO will have property appraised and will negotiate with property owner(s) to try and reach an amicable settlement for the lands.
4. Cultural Resources	4.1 Archaeology	Potential destruction/ disturbance to deeply buried archaeological resources and/or unmarked human remains during construction.	MCM	• Complete Stage2 Archaeological Assessment of 1 remaining property. If areas with archaeological potential noted within the Stage 2 Archaeological Assessment are to be impacted by construction, they will require further assessments prior to any disturbance. MTO General Conditions in the Contract that requires the Contractor to suspend work immediately and notify the Contract Administrator in the event that archaeological resources or human remains are identified.

References

Environmental Policy Office. (2013). *Environmental Reference for Highway Design.* St. Catharines, Ontario: Queens Printer for Ontario.

Ministry of Transportation Provincial and Environmental Planning Office. (2009). *Environmental Guide for Fish and Fish Habitat.* St. Catharines, Ontario: Queens Printer for Ontario.

Queens Printer for Ontario. (2013). MTO/DFO/MNRF Protocol for Protecting Fish and Fish Habitat on Provincial Transportation Undertakings. 2013: Queens Printer for Ontario.

The Ministry of Transportation, Ontario. (2000). *Class Environmental Assessment for Provincial Transportation Facilities.* The Queens Printer for Ontario.

Appendix A

Consultation Material

Meeting Minutes

Project:	Mega 16 – East Region Retainer – Agreement No. 4019-E-0019 Highway 15 and County Road 42 Intersection Improvements Preliminary Design Update GWP 4315-06-00
Subject:	MAC Meeting 01
Date and Time:	Monday April 4, 2022, 1:30– 3:00 pm
Location:	Online – MS Teams
Our File:	21-1203
Distribution:	Attendees and Regrets

Distribution

Arie Hoogenboom – R	Municipal Advisory Committee (MAC) Members – Township of Rideau Lakes, Mayor
Mike Dwyer – R	MAC – Township of Rideau Lakes, CAO
Ann Weir	MAC – UCLG, Economic Development Manager
Rick Kester –R	MAC – UCLG Director of Public Works
Claire Smith	MAC – Township of Rideau Lakes, Councillor
Joan Delaney	MAC – Township of Rideau Lakes, Councillor
Colton Holton	Ministry of Transportation, Ontario (MTO) – Project Manager
Rob Bakalarczyk	MTO – Area Manager, Highway Engineering Area East (Acting)
Dennis Regan	Dillon Consulting Limited (Dillon) – Project Manager
Elizabeth Bonucchi	Dillon – Project Coordinator
Natalie Blancher	Dillon – Highway Lead
Adele Mochrie	Dillon – Environmental Team Lead
Ish Chowdhury	Dillon – Environmental Planner

Regrets (R)

Notes

Item	Discussion	Action by
1.	**General**	
1.1.	The purpose of the Municipal Advisory Committee (MAC) meeting was to provide members an update and overview of the Highway 15 and County Road 42 Intersection Improvements study.	Info

Item	Discussion	Action by
1.2.	Introduction of attendees: a. Municipal Advisory Committee (MAC) Members b. Ministry of Transportation (MTO) c. Dillon Consulting Limited (Dillon)	Info
1.3.	Purpose of the MAC (advisory committee with local knowledge) was reviewed. Members were encouraged to share and exchange information.	Info
2.	**Project Update**	
2.1.	Dillon reviewed the Class Environmental Process which this study will follow and noted the preparation of a Transportation Environment Study Report (TESR) Addendum.	Info
2.2.	Project background including the 2017 TESR and Alternative 3-2 Offset-T intersection was reviewed.	Info
2.3.	Existing conditions and environmental constraints associated with the study area were discussed including regulated habitat for Gray Ratsnake.	Info
3.	**Review of Preliminary Alternatives**	
3.1.	Dillon summarized the alternatives for intersection improvements: a. 2017 TESR Alternative 3-2 b. Alternative 1: Realignment of Highway 15 (radius 500 m) c. Alternative 2: Modern Roundabout	Info
4.	**Overview of Evaluation Criteria**	
4.1.	The alternatives will be evaluated based on the following factor areas, each with a subset of detailed criteria, in order to determine the preferred alternative: a. Transportation b. Natural Environment c. Socio-Economic Environment d. Cultural Resources e. Cost	Info
4.2.	The comparative evaluation is based on a qualitative approach noting advantages and disadvantages comparing each alternative.	

Item	Discussion	Action by
5.	**Next Steps**	
5.1.	The anticipated project schedule will include the following: a. MAC Meeting 02 will be scheduled in advance of the Public Information Centre (PIC) b. Virtual PIC – to be scheduled during later Summer 2022 c. TESR Addendum 30-day Review Period – Fall / Winter 2022 d. Detail Design – 2023 e. Construction Award – As early as 2023 subject to utility relocations and property acquisitions and permits / approvals)	Info
6.	**MAC Comments / Discussion**	
6.1.	Discussion regarding personal experiences driving through the study area, concerns with sight lines.	Info
6.2.	Councillor Delaney noted her support of the roundabout alternative. She noted familiarity with using roundabouts in UCLG and was also aware of other members of the community who were in favour of this alternative. Councillor Delaney commented that the severity of accidents is also less severe with a roundabout than with traffic signals.	Info
6.3.	The question was asked as to why the alternative with the roundabout could not be replaced with traffic signals since the impacts on Highway 15 and County Road 42 were not as significant as the realignment option. Dillon noted that the geometric modifications shown on the realignment alternative would be necessary in order to safely introduce traffic signals. Vehicles travelling on County Road 42 under existing stop-controlled conditions cross the intersection at a low speed. The superelevation of Highway 15 and the crossfall of County Road 42 create a large grade differential at the intersection. Under low operating speeds vehicles are able to negotiate through the intersection safely, however under a green light scenario and therefore faster speed, an unsafe condition is introduced for vehicles travelling east/ west on County Road 42.	Info
6.4.	The question was asked as to why the offset-T alternative from the TESR was not advanced. Dillon noted that the TESR recommended short-term improvements whereas this study will be focused on implementing a long-term solution.	Info

Item	Discussion	Action by
6.5.	The question was asked as to why the speed limit on Highway 15 could not be reduced as it is in other locations along Highway 15, such as Morton. The MTO noted that motorists will tend to drive at the speed which they are comfortable and based on visual cues / peripheral vision. Since this intersection is not located in a densely built-up environment, motorists will likely continue to drive the speed for which the roadway was designed, ~ 80 – 100 km/h, regardless of posted signage. Increased enforcement would be required in order to encourage motorists to slow down.	Info
6.6.	It was suggested that information be shared via the Township newsletter which is issued via email and can be done at anytime.	Dillon
6.7.	It was suggested that the Village of Westport may be impacted during construction. The CAO was invited to participate with the MAC, Dillon to follow up regarding construction timelines / coordination.	Dillon
6.8.	It was suggested that consideration be made for limiting construction work during peak tourist season.	Dillon

Errors and/or Omissions

These minutes were prepared by Elizabeth Bonucchi, who should be notified of any errors and/or omissions.

Meeting Minutes

Project:	Mega 16 – East Region Retainer – Agreement No. 4019-E-0019 Highway 15 and County Road 42 Intersection Improvements Preliminary Design Update GWP 4315-06-00
Subject:	MAC Meeting 02
Date and Time:	Wednesday August 31, 2022, 1:30– 3:00 pm
Location:	Online – MS Teams
Our File:	21-1203
Distribution:	Attendees and Regrets

Distribution

Arie Hoogenboom	Municipal Advisory Committee (MAC) Members – Township of Rideau Lakes, Mayor
Mike Dwyer	MAC – Township of Rideau Lakes, CAO
Claire Smith - R	MAC – Township of Rideau Lakes, Councillor
Joan Delaney	MAC – Township of Rideau Lakes, Councillor
Ann Weir	MAC – UCLG, Economic Development Manager
Rick Kester – R	MAC – UCLG, Director of Public Works
Colton Holton	Ministry of Transportation, Ontario (MTO) – Project Manager
Kelly Jansen	MTO – Environmental Planner
Dennis Regan	Dillon Consulting Limited (Dillon) – Project Manager
Elizabeth Bonucchi	Dillon – Project Coordinator
Natalie Blancher	Dillon – Highway Lead
Adele Mochrie	Dillon – Environmental Team Lead
Ish Chowdhury	Dillon – Environmental Planner

Regrets (R)

Notes

Item	Discussion	Action by
1.	**General**	
1.1.	The purpose of Municipal Advisory Committee (MAC) Meeting 02 was to provide members an update and preview of the information to be presented at the Public Information Centre scheduled for Tuesday September 13, 2022.	Info

Item	Discussion	Action by
1.2.	Introduction of attendees: a. Municipal Advisory Committee (MAC) Members b. Ministry of Transportation (MTO) c. Dillon Consulting Limited (Dillon)	Info
2.	**Review of Previous MAC Minutes**	
2.1.	Dillon reviewed actionable items the MAC Meeting 01 Minutes held on April 4, 2022; there were no additional comments.	Info
3.	**Public Information Centre (PIC) Boards**	
3.1.	Dillon reviewed the boards which will be on display at the in-person PIC scheduled for Tuesday September 13, 2022 at the Newboro Community Centre.	Info
3.2.	MAC members had the following comments / questions: a. Who will be responsible for the maintenance of the dead-ended portion of Highway 15 (Alternative 1) and County Road 42 (Alternative 2)? - MTO noted they will confirm and have the information available for the PIC. b. Could a range of construction costs be provided for each of the alternatives? - Dillon noted that a range will be available at the PIC if anyone asks. c. The public will likely be interested in how a transport will navigate through the roundabout. - Dillon noted that a video and brochure will be available at the PIC. d. Will the roundabout be illuminated? - Dillon noted that the design will include illumination. e. Will the section of Highway 15 surrounding this intersection (from the bridge to Young's Hill Road) be reconstructed in the future? - MTO noted they will look into any future work within the corridor. f. Will construction commence in 2023? - Dillon noted that due to the required property, environmental permits and utility relocations, construction in 2023 was unlikely, however utility relocation will start in 2023.	MTO Dillon MTO

Item	Discussion	Action by
	g. What is the expected duration of construction? - Dillon noted that Alternative 1 (Realignment) is expected to take 2 construction seasons and Alternative 2 (Offset T-Intersections) and Alternative 3 (Roundabout) are expected to take 1 construction season.	
4.	**Next Steps**	
4.1.	The anticipated project schedule will include the following: a. In-Person PIC – Tuesday September 13, 2022 b. TESR Addendum 30-day Review Period – Fall / Winter 2022 c. Detail Design – 2023 d. Construction Award – As early as 2023 subject to utility relocations and property acquisitions and permits / approvals)	Info

Errors and/or Omissions

These minutes were prepared by Elizabeth Bonucchi, who should be notified of any errors and/or omissions.

Meeting Minutes

Project:	Mega 16 – East Region Retainer – Agreement No. 4019-E-0019 Highway 15 and County Road 42 Intersection Improvements Preliminary Design Update GWP 4315-06-00
Subject:	MAC Meeting 03
Date and Time:	Tuesday September 27, 2022, 4:00 – 5:00 pm
Location:	Online – MS Teams
Our File:	21-1203
Distribution:	Attendees and Regrets

Distribution

Arie Hoogenboom – R	Municipal Advisory Committee (MAC) Members – Township of Rideau Lakes, Mayor
Mike Dwyer – R	MAC – Township of Rideau Lakes, CAO
Claire Smith - R	MAC – Township of Rideau Lakes, Councillor
Joan Delaney	MAC – Township of Rideau Lakes, Councillor
Ann Weir	MAC – UCLG, Economic Development Manager
Rick Kester – R	MAC – UCLG, Director of Public Works
Colton Holton	Ministry of Transportation, Ontario (MTO) – Project Manager
Kelly Jansen	MTO – Environmental Planner
Dennis Regan – R	Dillon Consulting Limited (Dillon) – Project Manager
Elizabeth Bonucchi	Dillon – Project Coordinator
Natalie Blancher	Dillon – Highway Lead
Adele Mochrie	Dillon – Environmental Team Lead
Ish Chowdhury	Dillon – Environmental Planner

Regrets (R)

Notes

Item	Discussion	Action by
1.	**General**	
1.1.	The purpose of Municipal Advisory Committee (MAC) Meeting 03 was to provide members an update with respect to the Public Information Centre which was held on Tuesday September 13, 2022.	Info

Item	Discussion	Action by
1.2.	Introduction of attendees: a. Municipal Advisory Committee (MAC) Members b. Ministry of Transportation (MTO) c. Dillon Consulting Limited (Dillon)	Info
2.	**Review of Previous MAC Minutes**	
2.1.	Dillon reviewed actionable items the MAC Meeting 02 Minutes held on August 31, 2022. It was noted that there are actionable items (by MTO / Dillon) which are outstanding. This information will be relayed to MAC members in the near future via email.	Info MTO / Dillon
3.	**Review of Public Information Centre (PIC)**	
3.1.	The PIC was well attended: • 43 attendees, with 37 sign-ins, as follows: • Hon. Steve Clark, MPP • Mayor and 4 Councillors • 1 Representative United Counties of Leeds and Grenville • 1 Representative from Community Enhancement Committee • 1 Representative from Friends of Crosby • Public from Portland, Elgin, Westport, Newboro, Morton and Crosby	Info
3.2.	Six (6) written comments were received at the PIC. The following is a summary of the main comments / concerns: • Highway speeds; request for speed reduction • Pedestrian and cyclists use of roundabout • Confirmation that roundabout design can accommodate trucks and farm equipment • Older demographic, and their use of the roundabout; a need for education • Can roundabout accommodate wind turbine being transported • Illumination, concerns related to fog • Splitter islands; can they accommodate cyclists that have dismounted • Request for Village of Crosby signage • Potential impacts to Ferg's Cook House and setback requirements	Info

Item	Discussion	Action by
3.3.	MAC members had the following comments / questions: a. How do pedestrians cross the roundabout? - Dillon noted that similar to the existing condition, pedestrians will be required to find a gap in traffic in order to safely cross the road. The inclusion of the splitter islands on each leg will include a depressed area which provides pedestrian refuge, allowing pedestrians to cross one direction of traffic at a time. b. How do cyclists navigate the roundabout? - Dillon noted that the way a cyclist navigates a roundabout is often based on user ability. There will not be a dedicated bicycle lane within the limits of the roundabout. Cyclists can chose to navigate similar to a vehicle within the lanes or dismount and cross similar to a pedestrian. c. The older demographic of the community is concerned with not knowing how to use a roundabout - Public education forms an important role in implementing any roundabout. A Roundabout brochure was available at the PIC and the video presented at the PIC is available for viewing on the website. Understanding how the vehicles on Highway 15 will be reduced in speed by the time they enter the roundabout should also alleviate some concern. Residents will be encouraged to stand roadside and watch how the roundabout functions before using it for the first time. d. How will access to businesses and side streets be impacted by the roundabout? - Dillon noted that the roundabout shown is only conceptual in nature. Maintaining current access to properties will be part of the design process. In locations where the splitter island is shown, sections can be depressed if necessary in order to provide of all turning movements. e. Will there be crosswalks at the roundabout? - Formal pedestrian facilities (i.e. pavement markings for crosswalks) are based on warrants related to pedestrian use and not currently met. It was noted that depending on when traffic counts were completed, peak pedestrian volume may not have been captured. MTO noted that warrant to accommodate pedestrians will be further reviewed during design.	Info

Item	Discussion	Action by
4.	**Next Steps**	
4.1.	The anticipated project schedule will include the following: a. Responses will be prepared for comments which were requested by September 27, 2022 b. TESR Addendum 30-day Review Period – Fall / Winter 2022 c. Detail Design – 2023 d. Construction Award – As early as 2023 subject to utility relocations and property acquisitions and permits / approvals)	Info

Errors and/or Omissions

These minutes were prepared by Elizabeth Bonucchi, who should be notified of any errors and/or omissions.

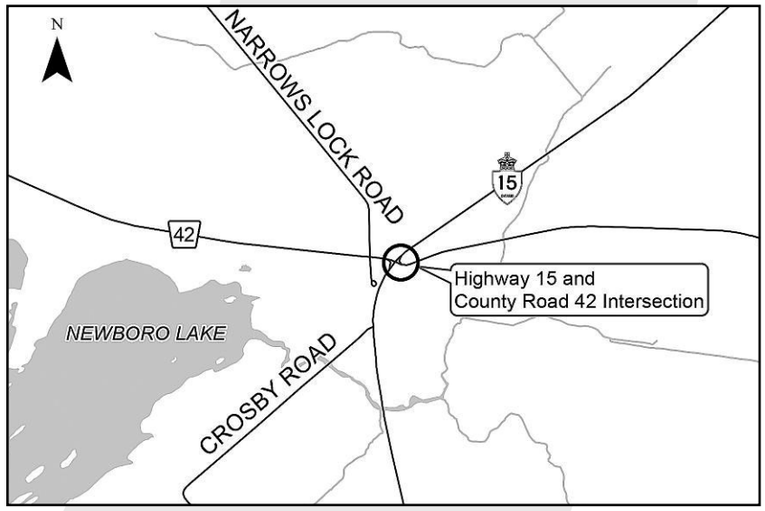
Notice of Study Update

Highway 15 and County Road 42 Intersection Improvements, Township of Rideau Lakes
Preliminary Design and Class Environmental Assessment Study Update (GWP 4315-06-00)

The **Ministry of Transportation, Ontario (MTO)** has retained **Dillon Consulting Limited** to update a Preliminary Design and Class Environmental Assessment (EA) Study that was completed in 2017 for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

The Preliminary Design and Class EA for this project was completed and documented in a Transportation Environmental Study Report (TESR) which received Environmental Clearance in January 2018. The MTO is updating the Preliminary Design to evaluate long-term intersection improvements that may include:

- Modifications to the approaches on Highway 15 and County Road 42 which would accommodate a modern roundabout.
- Realignment of Highway 15 and County Road 42 which would accommodate installation of traffic signals at the intersection.



Other options may also be developed and evaluated as part of this update.

The project is being completed in accordance with the MTO Class EA for *Provincial Transportation Facilities (2000)* as a Group "B" undertaking. Group "B" projects are considered approved, subject to compliance with the Class EA.

An online Public Information Centre (PIC) will be held to present the intersection improvement alternatives and obtain public input into the design. The PIC will be advertised in the local newspaper and a letter sent to stakeholders, agencies and Indigenous Communities on the project contact list. A TESR Addendum will be prepared at the end of this study to document the changes to the preliminary intersection improvements design and will be made available for a 30-day public comment period.

Project information including the Class EA process, design alternatives and project team contact details will be posted on the project website at **www.hwy15crosby.com.** The website will include an interactive map and will be updated as the project progresses.

COMMENTS

The Project Team is interested in receiving any comments or concerns that you have regarding this project. The website includes a "Contact Us' page for you to request to be added to the project Contact List and a link to submit your comments to the project team. If you would like to speak with a project team member directly, please contact one of the team members listed below.

Colton Horan, P.Eng., Project Engineer
Ministry of Transportation – Program Delivery West
659 Exeter Road
London, ON N6E 1L3
tel: 1-519-860-3787
e-mail: colton.horan@ontario.ca

Dennis Regan, LEL, Project Manager
Dillon Consulting Limited
177 Colonnade Road
Nepean, ON K2E 7J4
tel:1-877-934-5566 ext. 1315
e-mail: Hwy15Crosby@dillon.ca

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information collected during the study will be used in accordance with the *Freedom of Information and Protection of Privacy Act* and *Access to Information Act.* With the exception of personal information, all comments will be part of the public record.

Ontario

OUR CHANGED WORLD

Johnny Racine photo

"The pandemic has hit my business pretty hard. With the 2021 lockdowns people weren't putting much mileage on their motorcycles. The parts shortage added to this already difficult situation. Every day is touch and go. I have to adapt as fast as I can as this evolves and changes all business landscapes. Every day is a new challenge I have to navigate, making it stressful and very exhausting."

Johnny Racine,
Owner of Canadian Gears, Carleton Place

Ashley Kulp/Metroland

"The past two years have been challenging and anxious for the museum between full-lockdowns, not having staff and volunteers on-site, and having to grow accustomed to video-calls, and ever-changing regulations. But the silver lining of all this has been that we have been able to revitalize our programming, enjoy the smiles of people walking by the museum, make much needed changes and upgrades to the building and exhibition, and new virtual connections made from museums across the globe."

Michael Rikley-Lancaster
Curator/executive director, Mississippi Valley Textile Museum

myON platform offers CDSBEO students Indigenous education and other resources

In response to the Province's focus on early reading and gap closing in literacy, the myON reading license was purchased for all students in the Catholic District School Board of Eastern Ontario (CDSBEO).

This program gives students access to over 6,000 rich digital texts and books which can be matched to each student's reading level, interests, and grade level. myON contains fiction and non-fiction texts, and throughout the year, resources in areas of Black History, Indigenous Education, as well as anti-bullying are highlighted.

"Using a tool like myON helps to ensure that our synchronous students in our Virtual Learning Elementary School continue to access the same resources available in our brick-and-mortar schools," Principal of Curriculum Tracy O'Brien told trustees at their latest meeting.

"Likewise, myON provides support for our students with special needs in a variety of ways. myON features include text-to-speech functions, and note-taking. Additionally, myON provides low vocabulary/high interest language and appeals to all students, as it supports students at various grade levels and different reading abilities," she said.

Another benefit to the program, is that it supports educators in lesson planning. Embedded within the myON platform, teachers in grades 1 through 8, are able to locate curriculum expectations and specific strands in Language Arts, Mathematics, Science, and Social Studies, and myON will make recommendations of digital resources that can be used to support the learning.

"With close to 1,000 books that directly connect with curriculum expectations at their fingertips, teachers can assign books to students in their classroom to support learning of concepts. Teachers have access to books that are not typically housed within a school library, and this allows for more diversity of reading material for our students all through the board," said Curriculum Consultant Melissa Bingley.

In addition, a dashboard is available to educators to track statistics on student reading patterns. Since September, CDSBEO students (K-12) have read 32,700 books, spent 246,000 minutes reading, and have read 577,000 pages in total, from both fiction and non-fiction texts.

"There are valuable resources to support our CDSBEO Indigenous Learning in the myON digital resource," said Indigenous Education Consultant Melissa Mader-Tardiff. "The 'Under One Sun' and 'Circle of Life' collections offer our students an authentic Indigenous perspective, and support the work being done in our CDSBEO schools and in conjunction with our community partners."

Under One Sun is a Kindergarten to grade 8 resource which offers 52 different titles featuring authentic, modern content and illustrations, focused on the culture of contemporary Indigenous communities. The Circle of Life series contains 192 levelled books for grades K–6, that build knowledge and understanding of Indigenous culture and traditions. To support our educators, the Circle of Life resource also offers access to professional development videos and supports.

"For the International Day of Human Rights and The Return of the Sun, the Indigenous Education team created resources that highlighted materials which are readily available throughout the board," she continued. "For International Day of Human Rights, the focus was the Water Crisis in Indigenous Communities. myON's The Gift of Water, was recommended to educators as a resource to support the theme. The Gift of Water explores the fact that the women's role in Anishinaabe culture is to protect the water."

The Indigenous Education team also provides ongoing training to CDSBEO staff and moving forward, NTIP teachers will also receive Indigenous Education professional development where myON will be featured.

Robin Cooper of the Gananoque Kinsmen made a series of donations to mark the Day of Kindness including $3,000 for St. Edward Catholic School, accepted by Principal Dan Lesser, for a new sound system in the gym. Other recipients included South Crosby Public School and Rideau Vista Public. School. They also shared $19,000 among five food banks: Partners In Mission, the R.O.L.L. Aid Centre, Gananoque, Westport and Sharbot Lake. Funds funds are raised through Kinsmen TV Bingo.

TLTI making sandbags available

With fluctuating temperatures and continued precipitation in the forecast, sand and sandbags are being made available to Township of Leeds and Thousand Islands residents.

Visitors to the filling areas, are asked to exercise caution in the public works yard as crews operate heavy equipment and machinery.

Sandbags are intended to be filled on site. If possible, bring a shovel and practice social distancing. Pickup locations are at the public works yards at 312 Lyndhurst Road and at Prince Street in Lansdowne.

During changing seasons, homeowners are reminded to keep driveway culverts clear of snow and ice. If motorists encounter roadway ponding or flooding on township roads, proceed with caution and report it to staff. For more information on flooding, visit www.leeds1000islands.ca.

February 17, 2022

Honourable Steve Clark
MPP - Leeds—Grenville—Thousand Islands and Rideau Lakes
Constituency Office
Suite 101 - 100 Strowger Blvd.
Brockville, ON K6V 5J9
Sent via email: steve.clark@pc.ola.org

Ministry of Transportation, Ontario
Notice of Study Update
Preliminary Design and Class Environmental Assessment Study Update
Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes
(GWP 4315-06-00)

Dear Honourable Steve Clark:

The Ministry of Transportation, Ontario has retained Dillon Consulting Limited to complete an update to the Preliminary Design and Class Environmental Assessment for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville. Additional project details are included in the enclosed notice. The notice will be published on February 24, 2022 in the Smiths Falls Record News and the Westport Review Mirror.

Please contact the undersigned if you have any questions regarding the project, or would like information regarding next steps.

Sincerely,

DILLON CONSULTING LIMITED

A. Mochrie

Adele Mochrie, B.Sc.
for Dennis Regan
Design Project Manager

ANM:hkr
Enclosure

Our file: 21-1203

DILLON CONSULTING

177 Colonnade Road
Suite 101
Ottawa, Ontario
Canada
K2E 7J4
Telephone
613.745.2213
Fax
613.745.3491

Dillon Consulting Limited

Notice of Study Update

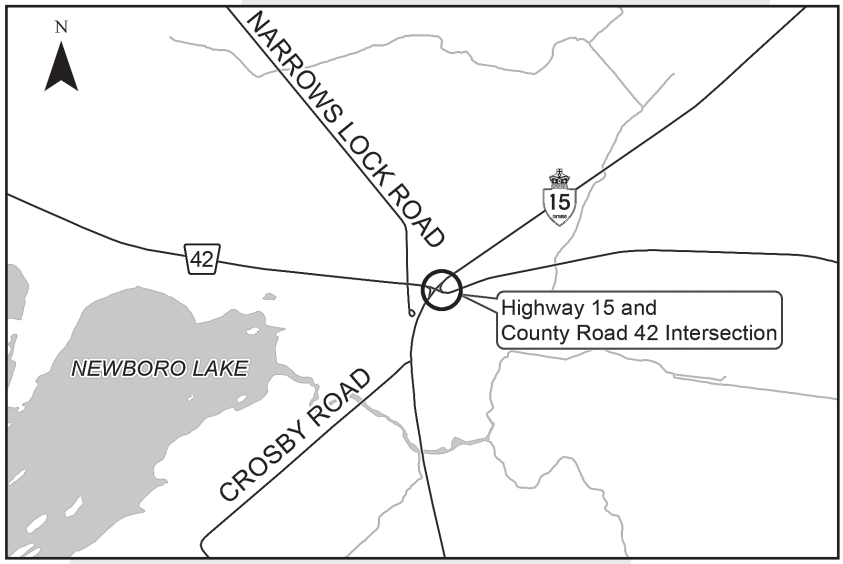
Highway 15 and County Road 42 Intersection Improvements, Township of Rideau Lakes
Preliminary Design and Class Environmental Assessment Study Update (GWP 4315-06-00)

The **Ministry of Transportation, Ontario (MTO)** has retained **Dillon Consulting Limited** to update a Preliminary Design and Class Environmental Assessment (EA) Study that was completed in 2017 for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

The Preliminary Design and Class EA for this project was completed and documented in a Transportation Environmental Study Report (TESR) which received Environmental Clearance in January 2018. The MTO is updating the Preliminary Design to evaluate long-term intersection improvements that may include:

- Modifications to the approaches on Highway 15 and County Road 42 which would accommodate a modern roundabout.
- Realignment of Highway 15 and County Road 42 which would accommodate installation of traffic signals at the intersection.

Other options may also be developed and evaluated as part of this update.



The project is being completed in accordance with the MTO Class EA for *Provincial Transportation Facilities (2000)* as a Group "B" undertaking. Group "B" projects are considered approved, subject to compliance with the Class EA.

An online Public Information Centre (PIC) will be held to present the intersection improvement alternatives and obtain public input into the design. The PIC will be advertised in the local newspaper and a letter sent to stakeholders, agencies and Indigenous Communities on the project contact list. A TESR Addendum will be prepared at the end of this study to document the changes to the preliminary intersection improvements design and will be made available for a 30-day public comment period.

Project information including the Class EA process, design alternatives and project team contact details will be posted on the project website at **www.hwy15crosby.com.** The website will include an interactive map and will be updated as the project progresses.

COMMENTS

The Project Team is interested in receiving any comments or concerns that you have regarding this project. The website includes a "Contact Us' page for you to request to be added to the project Contact List and a link to submit your comments to the project team. If you would like to speak with a project team member directly, please contact one of the team members listed below.

Colton Horan, P.Eng., Project Engineer
Ministry of Transportation – Program Delivery West
659 Exeter Road
London, ON N6E 1L3
tel: 1-519-860-3787
e-mail: colton.horan@ontario.ca

Dennis Regan, LEL, Project Manager
Dillon Consulting Limited
177 Colonnade Road
Nepean, ON K2E 7J4
tel:1-877-934-5566 ext. 1315
e-mail: Hwy15Crosby@dillon.ca

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information collected during the study will be used in accordance with the *Freedom of Information and Protection of Privacy Act* and *Access to Information Act.* With the exception of personal information, all comments will be part of the public record.

Ontario

Agency/Stakeholder Letter

February 17, 2022

177 Colonnade Road
Suite 101
Ottawa, Ontario
Canada
K2E 7J4
Telephone
613.745.2213
Fax
613.745.3491

Name
Organization
City, Postal Code

Ministry of Transportation, Ontario
Notice of Study Update
Preliminary Design and Class Environmental Assessment Study Update
Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes
(GWP 4315-06-00)

Dear Name:

The Ministry of Transportation, Ontario has retained Dillon Consulting Limited to complete an update to the Preliminary Design and Class Environmental Assessment for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

Additional project details are included in the enclosed notice and we encourage you to visit the project website at www.Hwy15Crosby.com for updates as the study progresses.

Please contact the undersigned if you have any questions regarding the project, or would like information regarding next steps.

Sincerely,

DILLON CONSULTING LIMITED

Adele Mochrie, B.Sc.
for Dennis Regan
Design Project Manager

SET:xxx
Enclosure

Our file: 21-1203

Dillon Consulting Limited

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
Tel.: 1-613-545-4600

Ministère des Transports

Direction des opérations de l'Est
1355, boulevard John Counter
Case postale 4000
Kingston, Ontario K7L 5A3
Tél.: 1-613-545-4600

Ontario

February 24, 2022

Indigenous Community Letter

Chief, First Name, Surname
Indigenous Community
Address
City, Province, Postal Code

Subject: Notice of Study Update
Preliminary Design and Class Environmental Assessment Study
Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes (GWP 4315-06-00)

Dear «Title» «First_Name» «Surname»,

The Ontario Ministry of Transportation has retained Dillon Consulting Limited (Dillon) to complete an update to the Preliminary Design and Class Environmental Assessment for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

The MTO is updating the Preliminary Design to evaluate the alternatives listed below in greater detail. Other feasible options may also be developed and evaluated as part of this update.

- Modifications to the approaches on Highway 15 and County Road 42 which would accommodate a modern roundabout.

- Realignment of Highway 15 and County Road 42 which would accommodate installation of traffic signals at the intersection.

The purpose of this letter is to provide you with the opportunity to meet with the project team virtually to learn more about the updated project and the alternative designs being examined and provide input into the process. If you would like to arrange a meeting, or wish to obtain additional information, please contact me by email at **Peter.A.Copping@Ontario.ca** or by phone at **613-539-3148**.

The initial Preliminary Design and Class EA for this project was completed in 2017 and documented in a Transportation Environmental Study Report (TESR) which received Environmental Clearance in January 2018. The Ontario Ministry of Transportation is more than willing to share information with our Indigenous Partners. If [Indigenous Partner] is interested in receiving additional information related to this document, please contact me.

This study follows the approved planning process for a Group "B" project under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000). Project information including the Class EA process, design alternatives and project team contact details will be posted on the project website at **www.hwy15crosby.com**. The website will include an interactive map and will be updated as the project progresses.

Information collected during this study will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. All information and comments, with the exception of personal information and other protected information, will become part of the public record. Please contact me if you have accessibility requirements in order to participate in this project.

The MTO recognizes that your community is likely prioritizing a COVID-19 response to protect the health and well-being of your community, and as a result, this may impact your ability to respond to ministry projects.

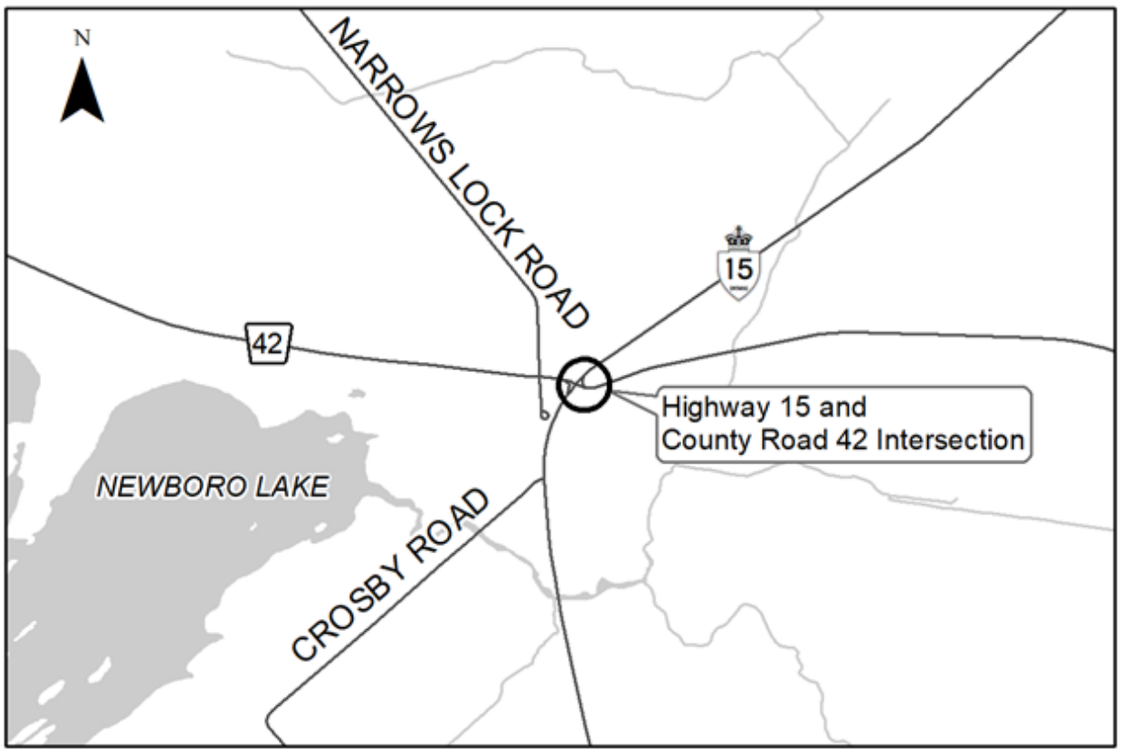
Should [Indigenous Partner] have any comments, questions or concerns on the updated study, or would like to schedule a virtual meeting, please do not hesitate to contact me. The MTO will continue to engage with [Indigenous Partner] as this project progresses.

Sincerely,

Peter Copping
Indigenous Liaison Specialist
East Region Operations
Ministry of Transportation
1355 John Counter Blvd, PO Box 4000
Kingston, ON, K7L 5A3

cc: Colton Horan, MTO Project Manager
Kelly Jansen, MTO Environmental Planner
Dennis Regan, Dillon Project Manager
Adele Mochrie, Dillon Environmental Planner

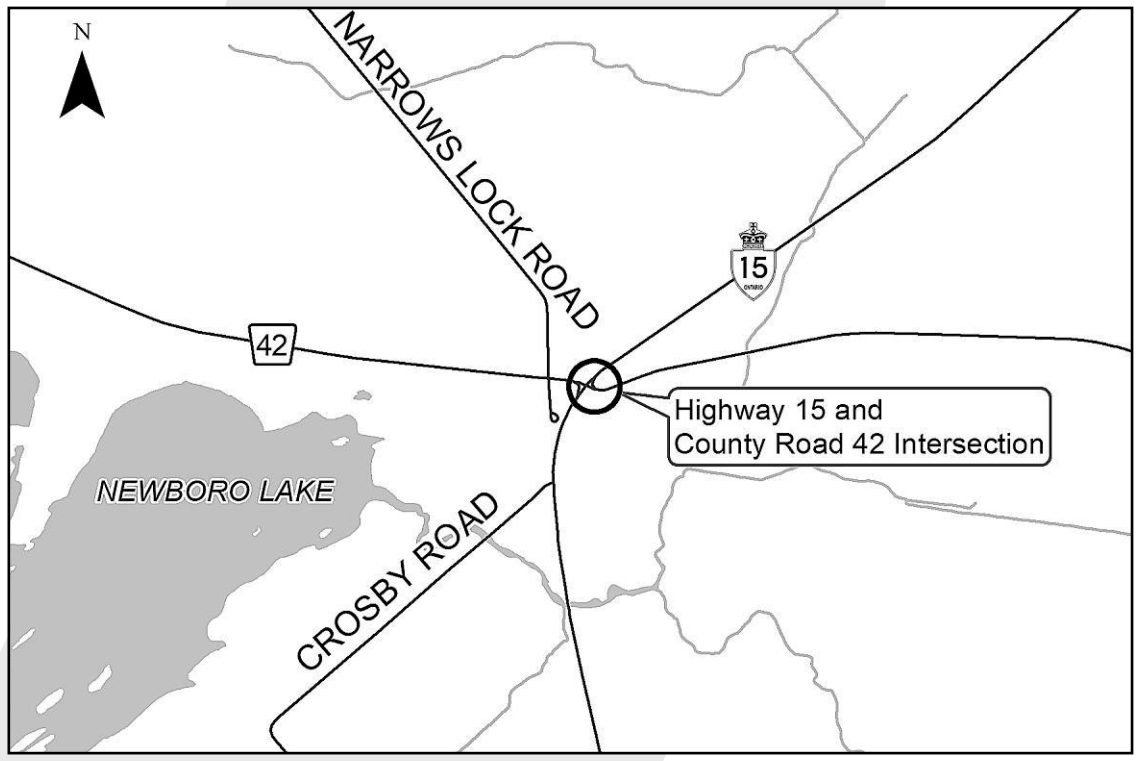
Study Area Key Map:
Highway 15 and County Road 42 Intersection, Township of Rideau Lakes



Notice of Public Information Centre

Highway 15 and County Road 42 Intersection Improvements, Township of Rideau Lakes Preliminary Design and Class Environmental Assessment Study Update (GWP 4315-06-00)

The Ministry of Transportation, Ontario (MTO) has retained Dillon Consulting Limited to update a Preliminary Design and Class Environmental Assessment (EA) Study that was completed in 2017 for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.



PUBLIC INFORMATION CENTRE

The MTO has developed long-term intersection alternatives for consideration. A Public Information Centre (PIC) is being held to:

- Provide an update on the project
- Present the criteria used to evaluate the alternatives
- Present and seek input into the comparative evaluation
- Present and seek input on the Technically Preferred Alternative
- Outline the preliminary construction staging and traffic management approach.

The PIC will be a drop-in format with MTO and Dillon staff available to discuss the study and answer questions. Project information, including the Class EA process, design alternatives, how the alternatives were evaluated, the technically preferred alternative and project team contact details will be posted on the project website at **www.hwy15crosby.com.**

The PIC will be held on:

Date: **September 13, 2022**
Time: **4:00 p.m. to 8:00 p.m.**
Location: **Newboro Community Hall, 15 Drummond Street, Newboro, ON**

THE PROCESS

The project is being completed in accordance with the MTO *Class EA for Provincial Transportation Facilities (2000)* as a Group "B" undertaking. Group "B" projects are considered approved, subject to compliance with the Class EA. A TESR Addendum will be prepared at the end of this study to document the changes to the preliminary intersection improvements design and will be made available for a 30-day public comment period.

COMMENTS

The Project Team is interested in receiving any comments or concerns that you have regarding this project. The website includes a "Contact Us' page for you to request to be added to the project Contact List and a link to submit your comments to the project team. Your comments are requested by **September 27, 2022.** If you would like to speak with a project team member directly, please contact one of the team members listed below.

Colton Horan, P.Eng., Project Engineer
Ministry of Transportation –
Program Delivery West
659 Exeter Road, London, ON N6E 1L3
tel.: 1-519-860-3787
e-mail: colton.horan@ontario.ca

Dennis Regan, LEL, Project Manager
Dillon Consulting Limited
177 Colonnade Road
Nepean, ON K2E 7J4
tel.: 1-877-934-5566 ext. 1315
e-mail: Hwy15Crosby@dillon.ca

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information collected during the study will be used in accordance with the *Freedom of Information and Protection of Privacy Act and Access to Information Act.* With the exception of personal information, all comments will be part of the public record.

Ontario

Earlier this month, 18 volunteers and Watersheds Canada staff were together on Farren Lake to build 29 new fish homes made of branches and root balls. These brush piles were deployed at 10 locations on the lake.

Farren Lake project creates fish habitat

Members of the Farren Lake Property Owners Association and their families knew fish homes were disappearing on their lake and that they had to take action.

"Over the years, residents on the lake have witnessed an increase in shoreline development. Many cottagers have removed woody debris from their shoreline area not understanding the long-term impacts this has on the lake.

"Compared to the past, the lake's water quality has deteriorated, resulting in lower dissolved oxygen levels, higher phosphorous levels, and warmer water temperatures," said Monica Seidel, Communications and Fundraising Manager for Watersheds Canada.

A lake resident approached Watershed about a possible fish habitat enhancement project. After learning more about the species, through a series of webinars hosted by Watershed, as well as a consultation with staff, it was determined Farren Lake, north of Westport, could benefit from this project.

Earlier this month, 18 volunteers and Watersheds Canada staff build 29 new fish homes made of branches and root balls. These brush piles were deployed at 10 locations on the lake where they will become underwater woody debris areas that provide habitat for fish like smallmouth bass, largemouth bass, northern pike, sunfish, and yellow perch, and other wildlife including turtles, birds, and invertebrates. These natural areas provide protection from predators and the sun, as well as a spot to rest, spawn, and feed.

These shoreline areas include the first 30 meters of land around lakes and rivers. This is considered "Ribbon Of Life", said Seidel.

"Ribbon Of Life" supports 70 per cent of land-based wildlife and 90 per cent of aquatic species at some point in their lives.

August 29, 2022

623 Fortune Crescent
Suite 100
Kingston, Ontario
Canada
K7P 0L5
Telephone
613.745.2213
Fax
416.229.4692

Thousand Islands and Rideau Lakes
Constituency Office
Suite 101 – 100 Strowger Blvd.
Brockville, Ontario
K6V 5J9
Sent via email: steve.clark@pc.ola.org

Attention: Honourable Steve Clark
MPP – Leeds – Grenville

Ministry of Transportation, Ontario
Notice of Public Information Centre
Preliminary Design and Class Environmental Assessment Study Update
Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes
(GWP 4315-06-00)

Dear Honourable Steve Clark:

The Ministry of Transportation, Ontario has retained Dillon Consulting Limited to complete an update to the Preliminary Design and Class Environmental Assessment for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

A Public Information Centre (PIC) will take place on **September 13, 2022**, at the Newboro Community Hall from 4:00 p.m. to 8:00 p.m. An Agency drop-in session will be held from 3:00 p.m. to 4:00 p.m. The purpose of this PIC is to provide an update on the project, the criteria used in the evaluation of these alternatives and present the Technically Preferred Alternative. Additional details about the PIC are included in the enclosed notice.

The notice will be published on September 1, 2022, in the Smiths Falls Record News and the Westport Review Mirror.

Please contact the undersigned at hwy15Crosby@dillon.ca, if you have any questions regarding the project, or would like information regarding next steps.

Sincerely,

DILLON CONSULTING LIMITED

Adele Mochrie, B.Sc.
for Dennis Regan
Design Project Manager

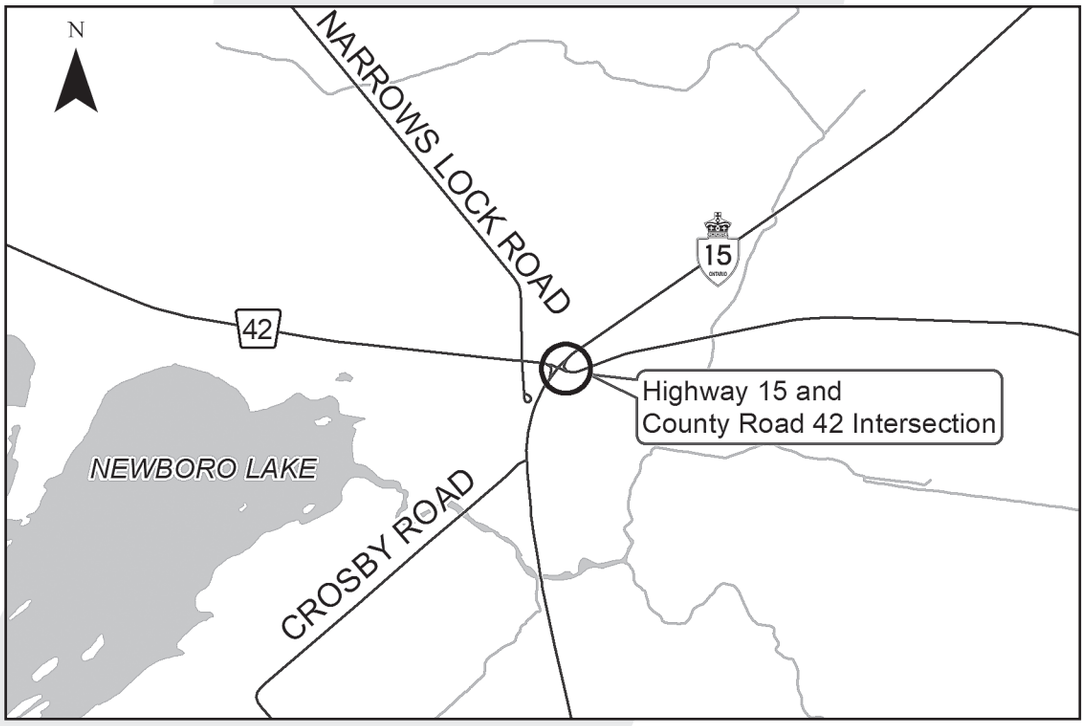
ANM:rrk
Enclosure

Our file: 21-1203

Notice of Public Information Centre

Highway 15 and County Road 42 Intersection Improvements, Township of Rideau Lakes Preliminary Design and Class Environmental Assessment Study Update (GWP 4315-06-00)

The Ministry of Transportation, Ontario (MTO) has retained Dillon Consulting Limited to update a Preliminary Design and Class Environmental Assessment (EA) Study that was completed in 2017 for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.



PUBLIC INFORMATION CENTRE

The MTO has developed long-term intersection alternatives for consideration. A Public Information Centre (PIC) is being held to:

- Provide an update on the project
- Present the criteria used to evaluate the alternatives
- Present and seek input into the comparative evaluation
- Present and seek input on the Technically Preferred Alternative
- Outline the preliminary construction staging and traffic management approach.

The PIC will be a drop-in format with MTO and Dillon staff available to discuss the study and answer questions. Project information, including the Class EA process, design alternatives, how the alternatives were evaluated, the technically preferred alternative and project team contact details will be posted on the project website at **www.hwy15crosby.com.**

The PIC will be held on:

Date: **September 13, 2022**
Time: **4:00 p.m. to 8:00 p.m.**
Location: **Newboro Community Hall, 15 Drummond Street, Newboro, ON**

THE PROCESS

The project is being completed in accordance with the MTO *Class EA for Provincial Transportation Facilities (2000)* as a Group "B" undertaking. Group "B" projects are considered approved, subject to compliance with the Class EA. A TESR Addendum will be prepared at the end of this study to document the changes to the preliminary intersection improvements design and will be made available for a 30-day public comment period.

COMMENTS

The Project Team is interested in receiving any comments or concerns that you have regarding this project. The website includes a "Contact Us' page for you to request to be added to the project Contact List and a link to submit your comments to the project team. Your comments are requested by **September 27, 2022.** If you would like to speak with a project team member directly, please contact one of the team members listed below.

Colton Horan, P.Eng., Project Engineer
Ministry of Transportation –
Program Delivery West
659 Exeter Road, London, ON N6E 1L3
tel.: 1-519-860-3787
e-mail: colton.horan@ontario.ca

Dennis Regan, LEL, Project Manager
Dillon Consulting Limited
177 Colonnade Road
Nepean, ON K2E 7J4
tel.: 1-877-934-5566 ext. 1315
e-mail: Hwy15Crosby@dillon.ca

If you have any accessibility requirements in order to participate in this project, please contact one of the Project Team members listed above. Comments and information collected during the study will be used in accordance with the *Freedom of Information and Protection of Privacy Act and Access to Information Act.* With the exception of personal information, all comments will be part of the public record.

Ontario

Agency/Stakeholder Letter

September 1, 2022

623 Fortune Crescent
Suite 100
Kingston, Ontario
Canada
K7P 0L5
Telephone
613.745.2213
Fax
416.229.4692

«Organization»
«Title» «First_Name» «Surname»
«Address»
«City», «Prov»
«Postal_Code»

Ministry of Transportation, Ontario
Notice of Public Information Centre
Preliminary Design and Class Environmental Assessment Study Update
Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes
(GWP 4315-06-00)

Dear «Title» «Surname»:

The Ministry of Transportation (MTO), Ontario has retained Dillon Consulting Limited to complete an update to the Preliminary Design and Class Environmental Assessment for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

A Public Information Centre (PIC) will take place on **September 13, 2022**, at the Newboro Community Hall from 4:00 p.m. to 8:00 p.m. The purpose of this PIC is to provide an update on the project, the criteria used in the evaluation of the alternatives and present the Technically Preferred Alternative. Additional details about the PIC are included in the enclosed notice.

Please contact the undersigned at Hwy15Crosby@dillon.ca, if you have any questions regarding the project, or would like information regarding next steps.

Sincerely,

DILLON CONSULTING LIMITED

Adele Mochrie, B.Sc.
for Dennis Regan
Design Project Manager

ANM:rrk
Enclosure

Our file: 21-1203

Ministry of Transportation

East Operations Branch
1355 John Counter Boulevard
Postal Box 4000
Kingston, Ontario K7L 5A3
Tel.: 1-613-545-4600

Ministère des Transports

Direction des opérations de l'Est
1355, boulevard John Counter
Case postale 4000
Kingston, Ontario K7L 5A3
Tél.: 1-613-545-4600

Ontario

September 1, 2022

Indigenous Community Letter

Chief, First Name, Surname
Indigenous Community
Address
City, Province, Postal Code

Subject: **Ministry of Transportation, Ontario**
Notice of Public Information Centre
Preliminary Design and Class Environmental Assessment Study Update
Highway 15 and County Road 42 Intersection Improvements
Township of Rideau Lakes
(GWP 4315-06-00)

Dear «Title» «First_Name» «Surname»,

The Ministry of Transportation (MTO), Ontario has retained Dillon Consulting Limited to complete an update to the Preliminary Design and Class Environmental Assessment for improvements to the intersection of Highway 15 and County Road 42, located at the Village of Crosby in the Township of Rideau Lakes, United Counties of Leeds and Grenville.

A Public Information Centre (PIC) will take place on **September 13, 2022**, at the Newboro Community Hall from 4:00 p.m. to 8:00 p.m. The purpose of this PIC is to provide an update on the project, the criteria used in the evaluation of the alternatives and present the Technically Preferred Alternative. Additional details about the PIC are included in the enclosed notice.

The MTO recognizes that your community is likely prioritizing a COVID-19 response to protect the health and well-being of your community, and as a result, this may impact your ability to attend the PIC in person. The display boards will be posted to the project website on September 14, 2022 for viewing in case you are unable to attend. Project information including the Class EA process, design alternatives and project team contact details will be posted on the project website at www.hwy15crosby.com.

Should [Indigenous Partner] have any comments, questions or concerns on the updated study, or would like to schedule a virtual meeting, please do not hesitate to contact me. The MTO will continue to engage with [Indigenous Partner] as this project progresses.

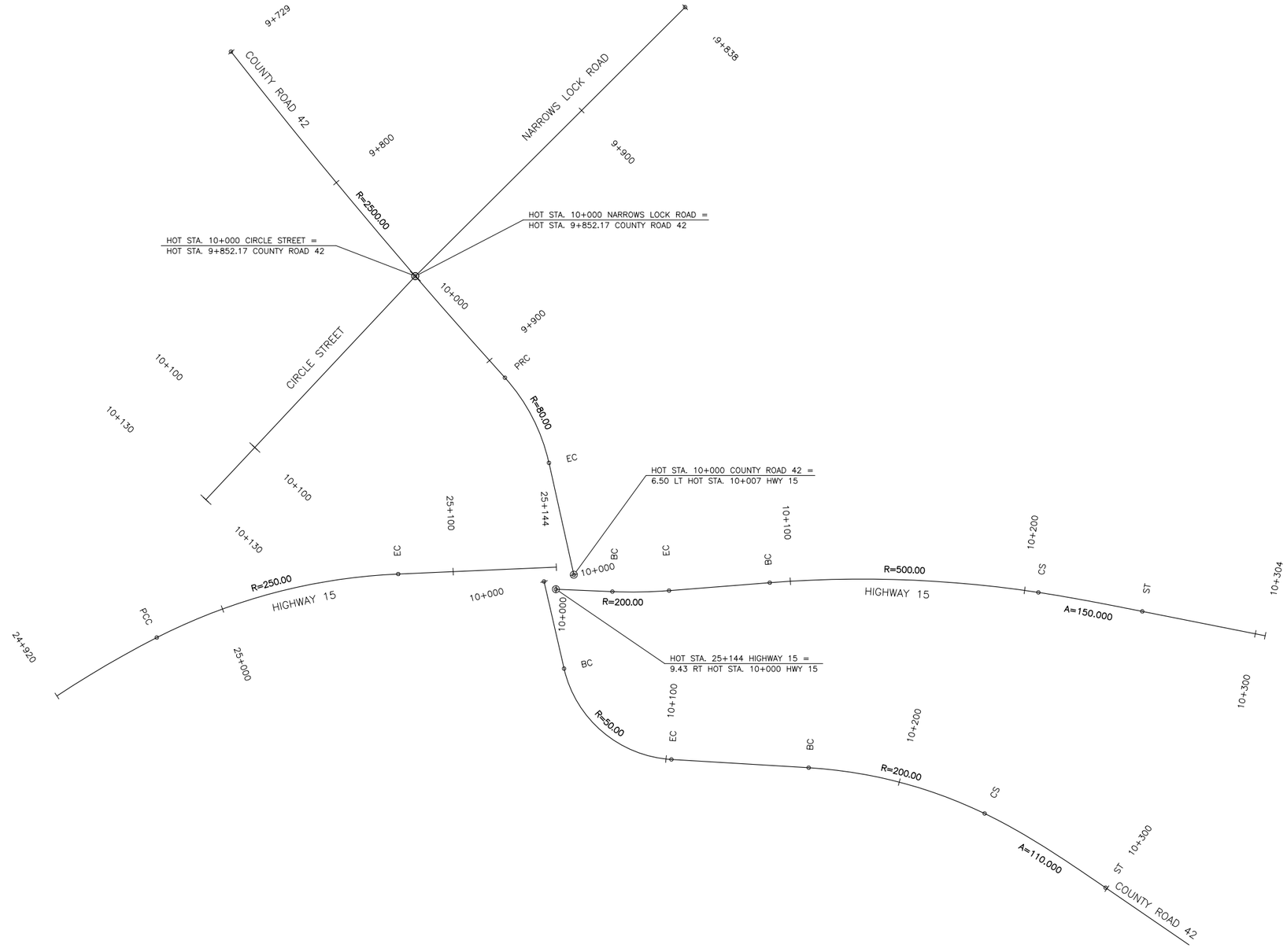
Sincerely,

Peter Copping
Indigenous Liaison Specialist
East Region Operations
Ministry of Transportation
1355 John Counter Blvd, PO Box 4000
Kingston, ON, K7L 5A3

cc: Colton Horan, MTO Project Manager
Kelly Jansen, MTO Environmental Planner
Dennis Regan, Dillon Project Manager
Adele Mochrie, Dillon Environmental Planner

Appendix B

Preliminary Design Drawings



DATE PLOTTED: 11/18/2022 11:33:35 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-Alignments.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

10m 0 20m
Horizontal

CREATED BY: HKV
CHECKED BY: NDB

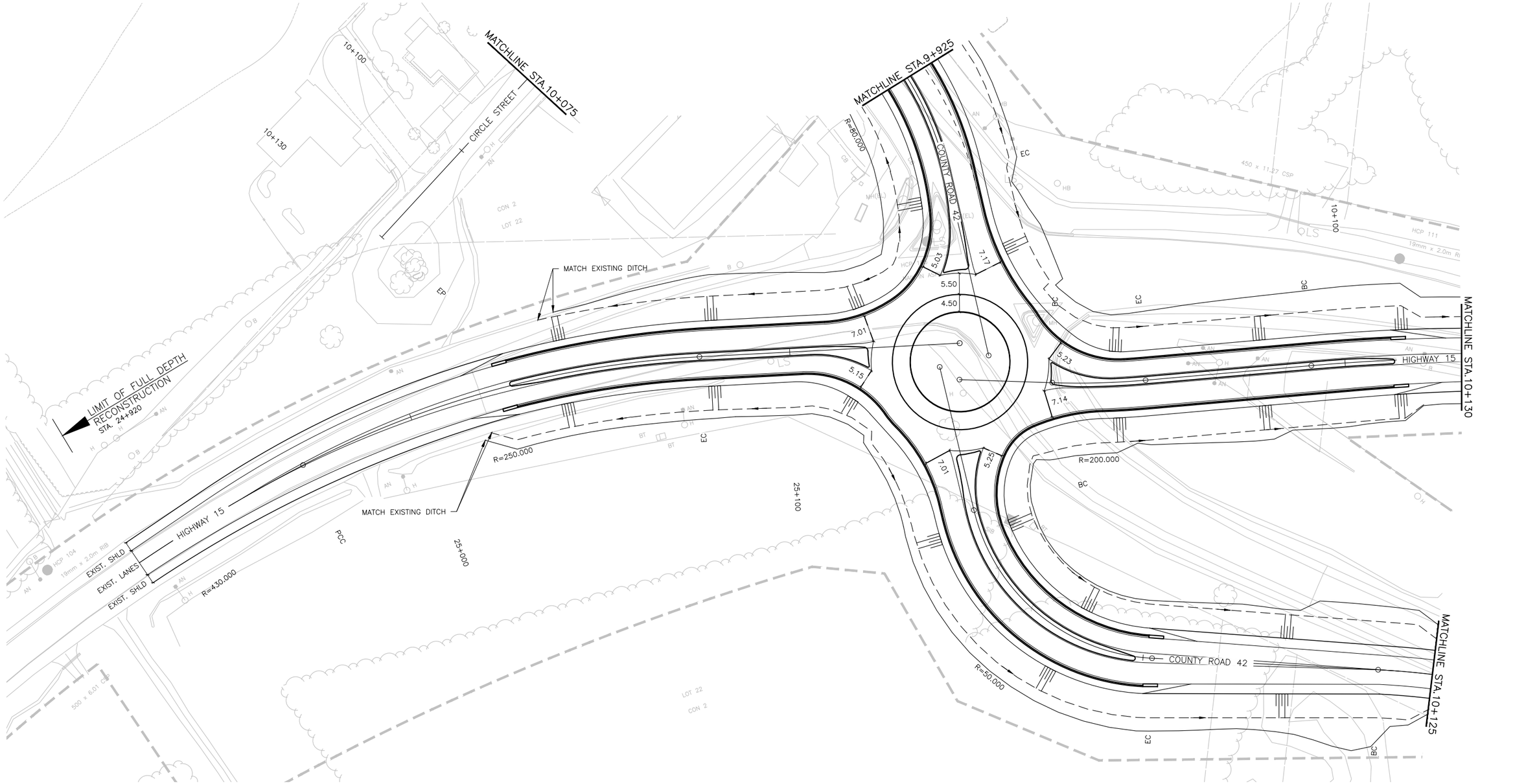
PROJECT No. 21-1203
DATE: NOVEMBER 2022

DILLON CONSULTING

HIGHWAY 15 AND COUNTY ROAD 42

ALIGNMENT DATA

01



DATE PLOTTED: 11/18/2022 11:33:52 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-New Construction.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

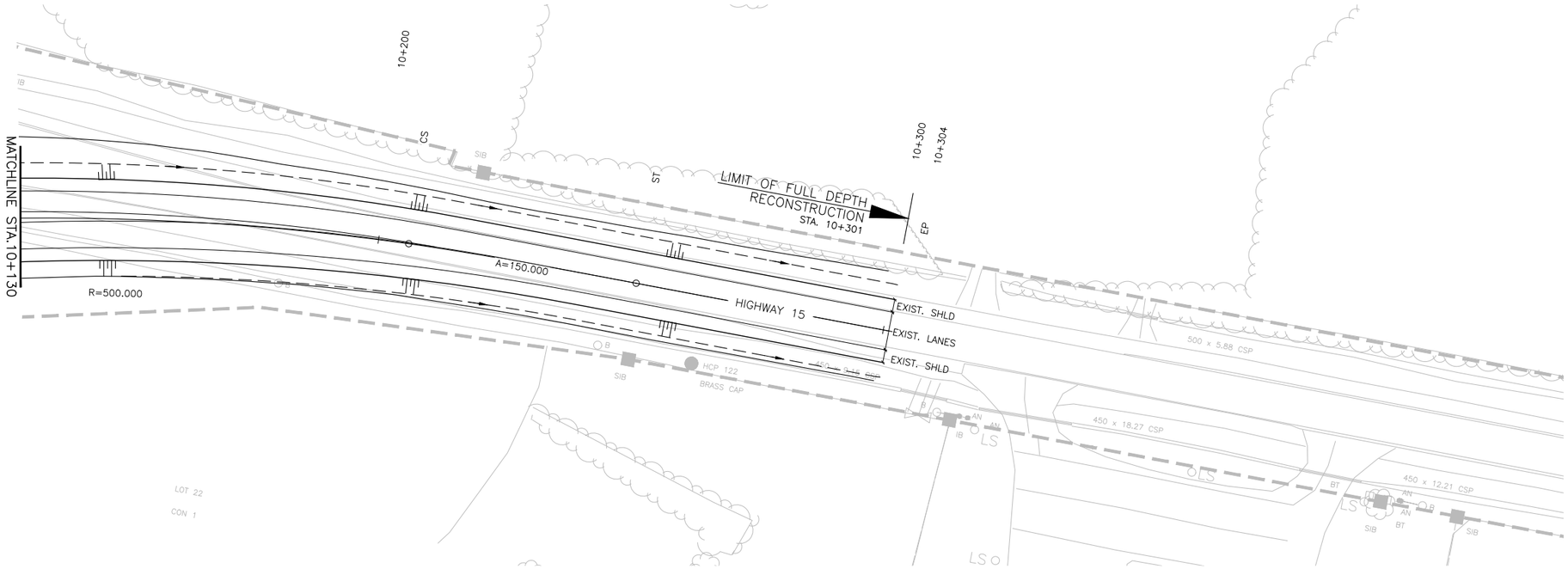
5m 0 10m
Horizontal

CREATED BY: HKV
CHECKED BY: NDB
PROJECT No. 21-1203
DATE: NOVEMBER 2022

DILLON CONSULTING

HIGHWAY 15
NEW CONSTRUCTION

02



DATE PLOTTED: 11/18/2022 11:34:24 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-New Construction.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

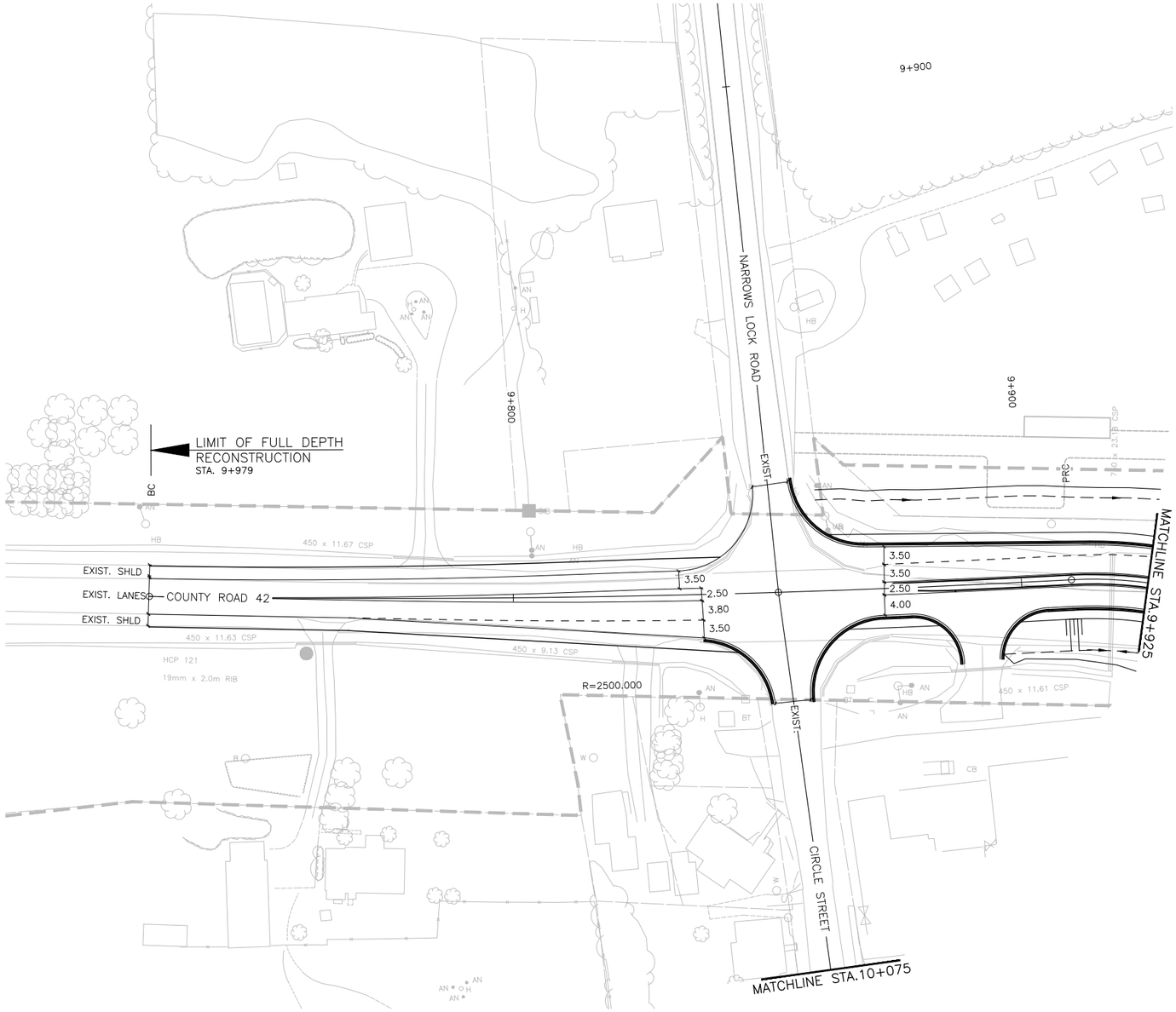
THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

5m 0 10m
Horizontal

CREATED BY: HKV
CHECKED BY: NDB
PROJECT No. 21-1203
DATE: NOVEMBER 2022

DILLON CONSULTING

HIGHWAY 15
NEW CONSTRUCTION



DATE PLOTTED: 11/18/2022 11:34:09 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-New Construction.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

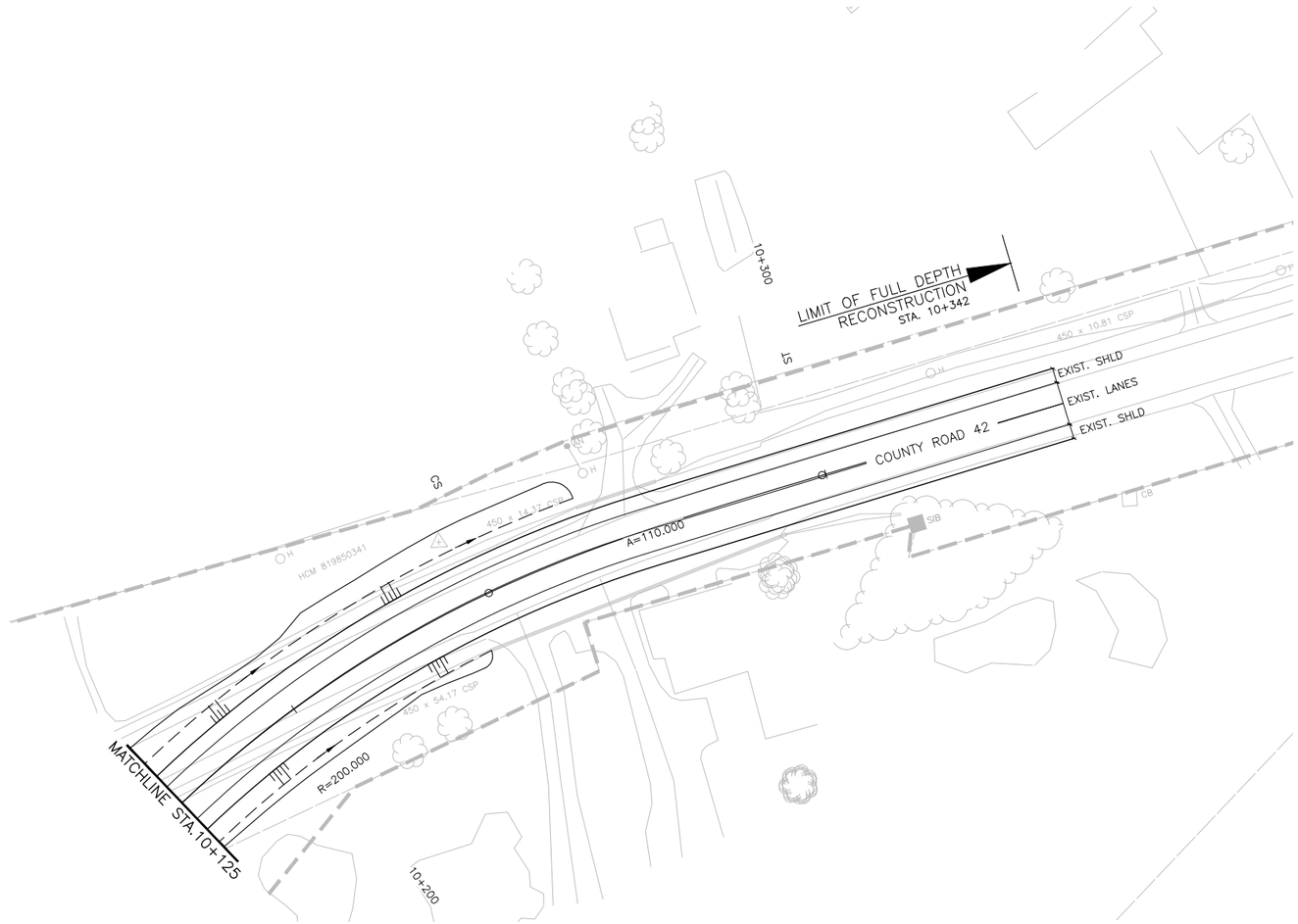
THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

5m 0 10m
Horizontal

CREATED BY: HKV
CHECKED BY: NDB
PROJECT No. 21-1203
DATE: NOVEMBER 2022

DILLON CONSULTING

COUNTY ROAD 42
NEW CONSTRUCTION



DATE PLOTTED: 11/18/2022 11:34:39 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-New Construction.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

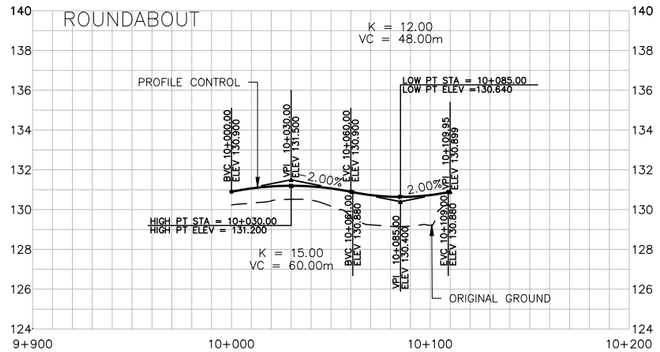
THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

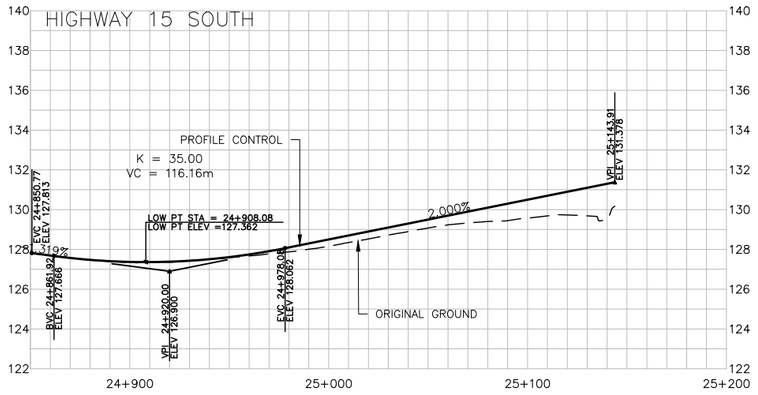
5m 0 10m
Horizontal

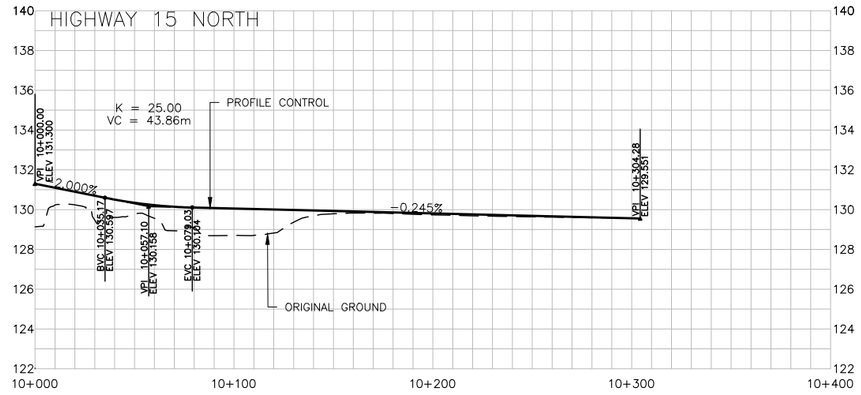
CREATED BY: HKV
CHECKED BY: NDB
PROJECT No. 21-1203
DATE: NOVEMBER 2022

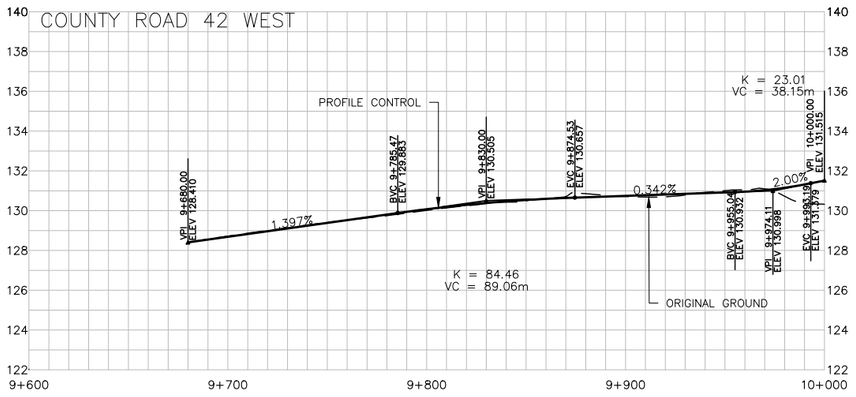
DILLON CONSULTING

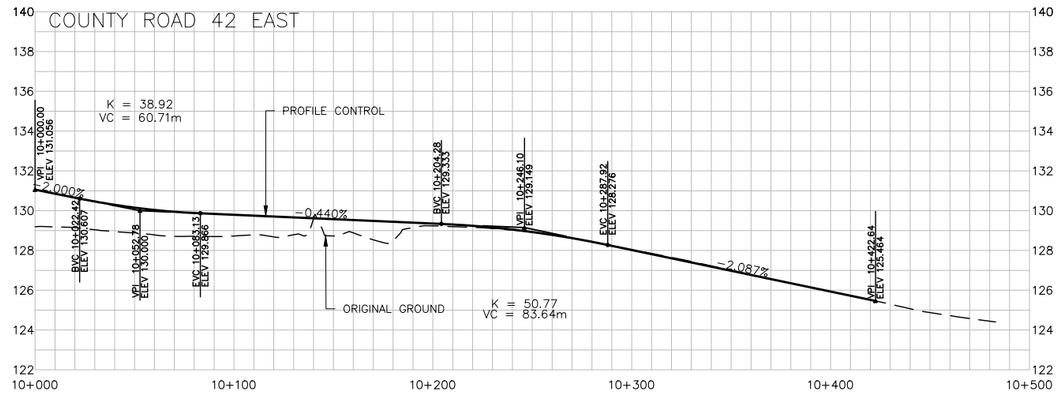
COUNTY ROAD 42
NEW CONSTRUCTION











DATE PLOTTED: 11/18/2022 11:34:43 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-Profiles.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

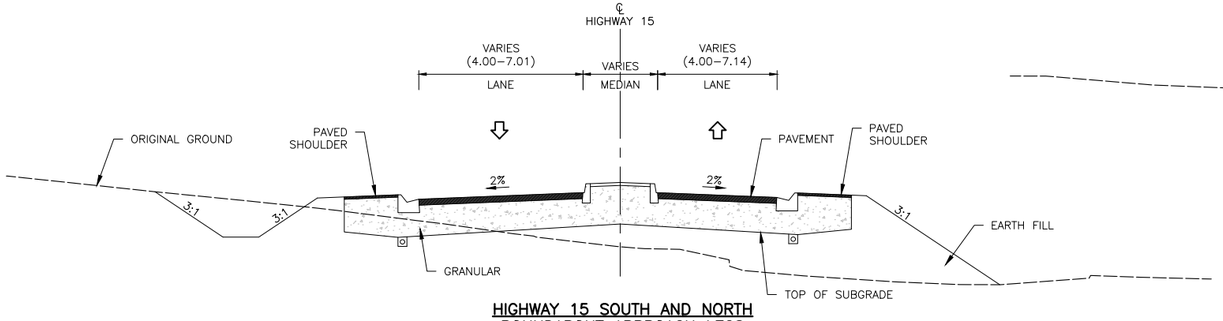
15m 0 30m
Horizontal
1.5m 0 3m
Vertical

CREATED BY: HKV
CHECKED BY: NDB
PROJECT No. 21-1203
DATE: NOVEMBER 2022

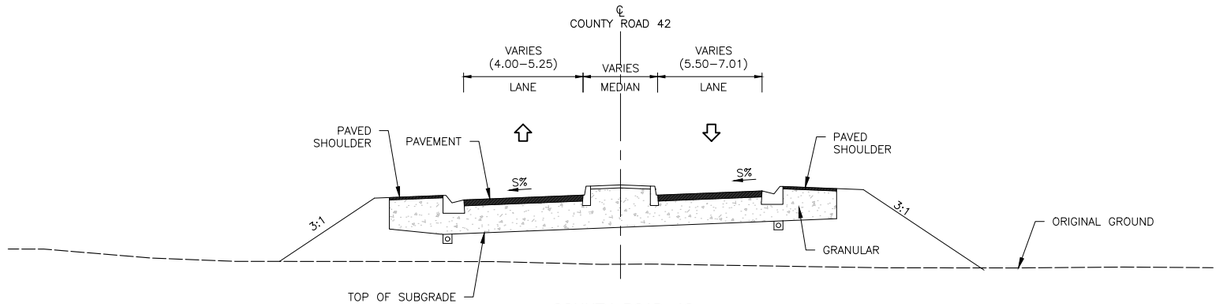
DILLON CONSULTING

HIGHWAY 15 AND
COUNTY ROAD 42
PROFILES

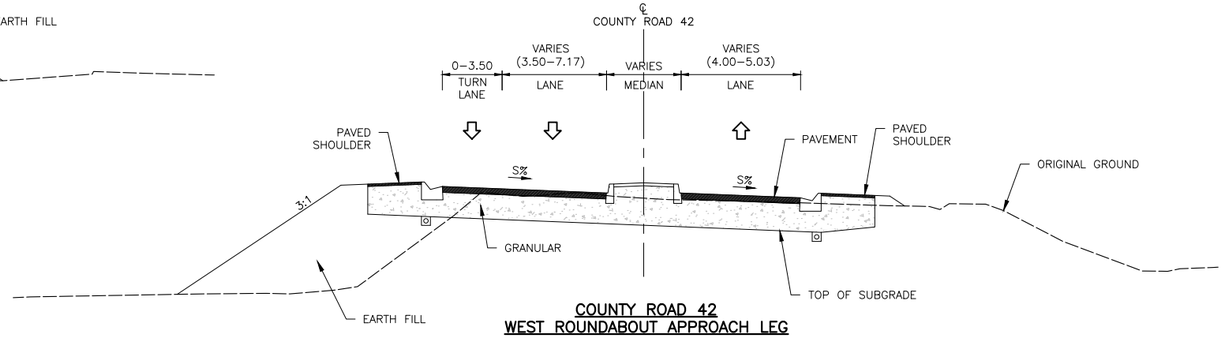
06



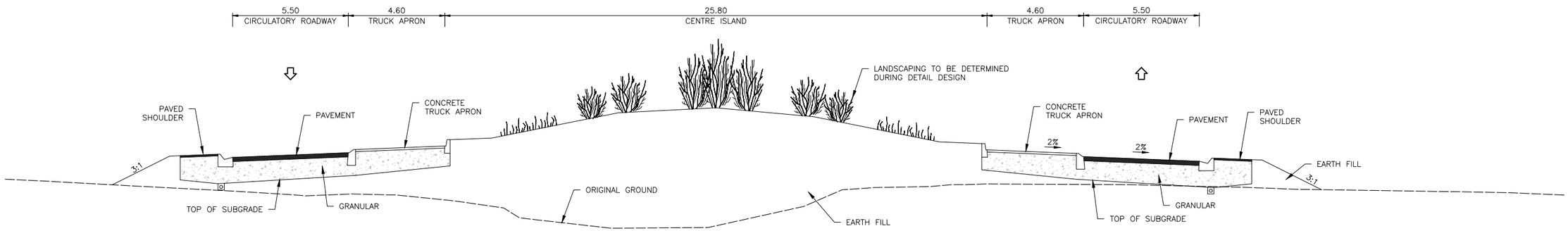
HIGHWAY 15 SOUTH AND NORTH
ROUNDABOUT APPROACH LEGS



COUNTY ROAD 42
EAST ROUNDABOUT APPROACH LEG



COUNTY ROAD 42
WEST ROUNDABOUT APPROACH LEG



ROUNDABOUT

DATE PLOTTED: 11/18/2022 11:34:48 AM
FILE LOCATION: c:\pw working directory\projects 2021\10hkv\dms14746\4315-typicals.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

NOT TO SCALE

CREATED BY: HKV
CHECKED BY: NDB
PROJECT No. 21-1203
DATE: NOVEMBER 2022

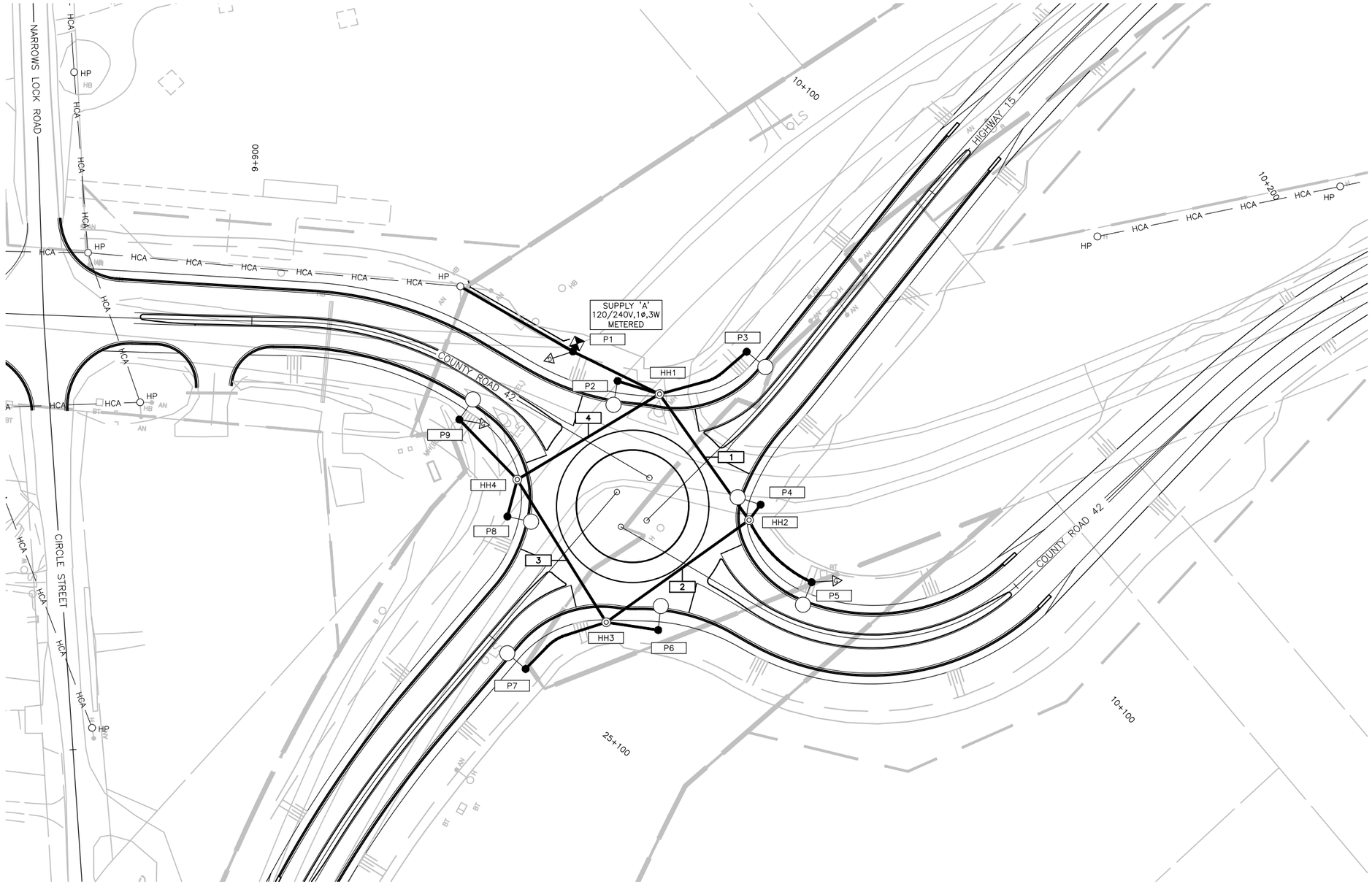
DILLON CONSULTING

HIGHWAY 15 AND
COUNTY ROAD 42
TYPICALS

07

ELECTRICAL LEGEND

- PROPOSED POLE
- PROPOSED L.E.D. LUMINAIRE
- PROPOSED HANDHOLE
- PROPOSED GROUND RODS
- PROPOSED POWER SUPPLY EQUIPMENT, POLE MOUNTED
- HP — HYDRO POLE
- HCA — HCA — HYDRO CABLE AERIAL
- PROPOSED RIGID DUCT, DIRECT BURIED
- PROPOSED UNDER PAVEMENT CROSSING — XX



DATE PLOTTED: 11/18/2022 11:31:08 AM
FILE LOCATION: C:\pw working directory\projects 2021\1Dillon\dms19329\211203-04-ELEC-LTG.dwg

MINISTRY OF TRANSPORTATION
HIGHWAY 15 AND COUNTY ROAD 42
INTERSECTION IMPROVEMENTS

GWP 4315-06-00

Ontario

THE DETAILS SHOWN ON THIS DRAWING ARE PRELIMINARY AND ARE PROVIDED FOR INFORMATION ONLY

10m 0 20m
Horizontal

CREATED BY: KVL
CHECKED BY: SPW
PROJECT No. 21-1203
DATE: NOVEMBER 2022

DILLON CONSULTING

HIGHWAY 15 / CR 42
PRELIMINARY
LIGHTING LAYOUT

08