

Appendix C

PIC and PIC Update Material



ONLINE PUBLIC INFORMATION CENTRE

County Road 17 Bridge Replacements
Detail Design and Environmental Assessment
GWP 4203-15-00

The Ministry of Transportation Ontario (MTO) has retained CH2M Hill and Dillon Consulting to complete a Detail Design and Environmental Assessment Study for the replacement of the CNR/Hawkesbury Creek Overhead Bridge and the Highway 34 Underpass on County Road 17 in the Town of Hawkesbury/Champlain Township and the United Counties of Prescott and Russell.

Through this Online PIC, you will have an opportunity to review the following information:

Project
Description

EA Process

Existing
Conditions

Summary
of Alternatives

Recommended
Plan

Environmental
Impacts &
Mitigation

Next Steps

We encourage you to review this material and provide any questions, comments or concerns via the contact page [here](#) by **Friday April 27, 2018**. A member of the project team will respond to you directly.

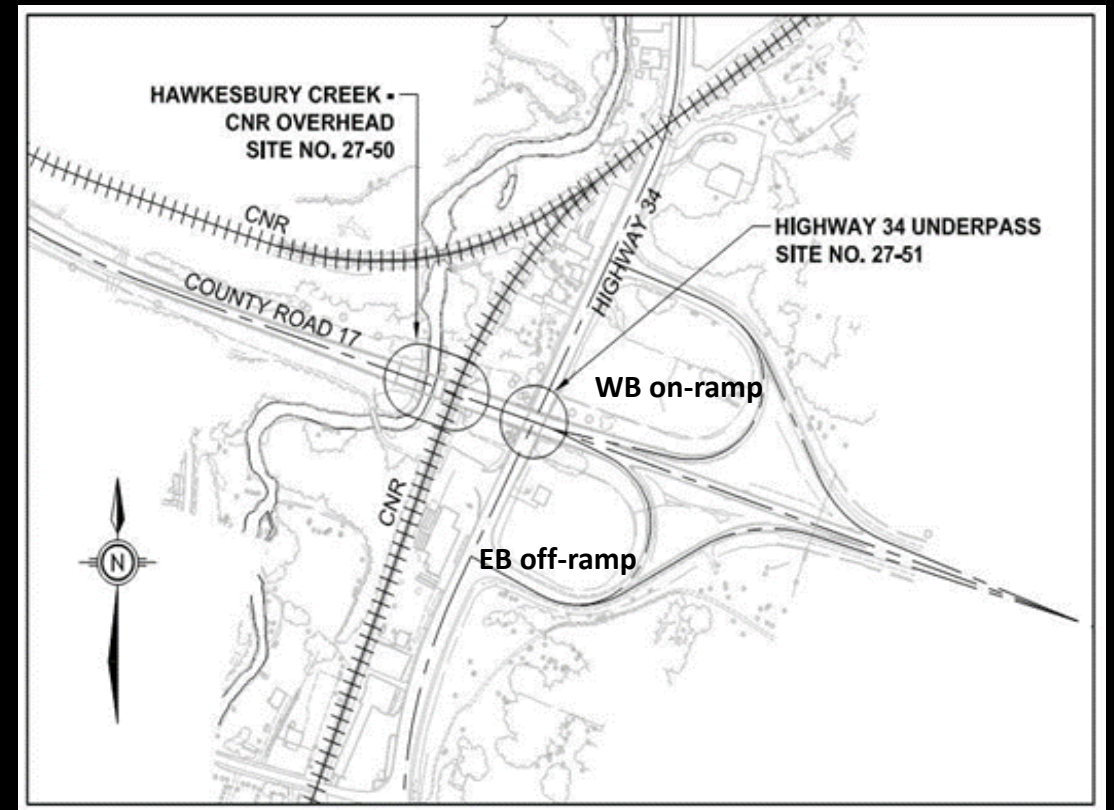


PROJECT DESCRIPTION

The CNR/Hawkesbury Creek Overhead Bridge is a three-span bridge carrying two lanes of traffic and two speed change lanes (for the interchange ramps) on County Road 17 over Hawkesbury Creek and the CN rail line. The Highway 34 Underpass is located approximately 50m to the east of the CN rail line and also carries two lanes of traffic and two speed change lanes over Highway 34. Both bridges are nearing the end of their useful service life and require replacement.

The replacement bridges will be reduced from four to two lanes (eliminating the existing speed change lanes) as recent traffic analysis has shown that these are no longer required to accommodate projected future traffic volumes. This will result in modifications to the EB off-ramp and WB on-ramp.

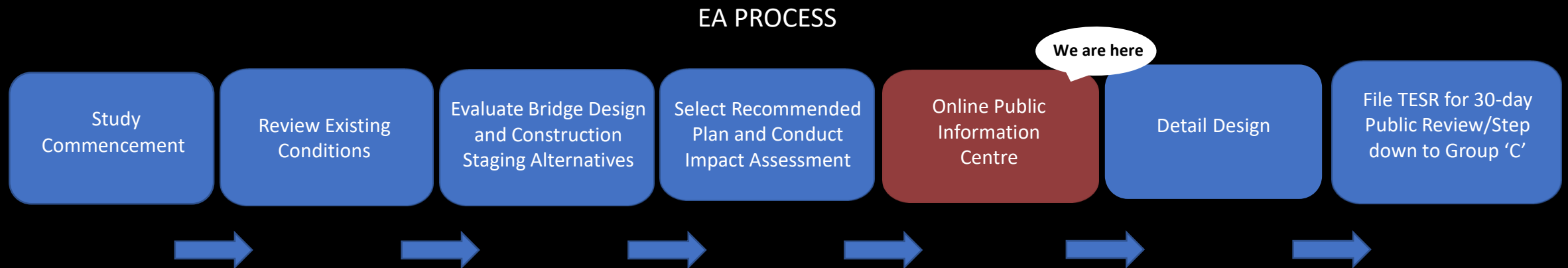
The bridges will be replaced using accelerated bridge replacement construction (lateral slide) and will require short duration road closures on Highway 34 and County Road 17. Construction is expected to begin in 2018 and take two years to complete.



ENVIRONMENTAL ASSESSMENT PROCESS

The study is following the approved environmental planning process for Group 'B' undertakings (major improvements to existing facilities) under the Ministry of Transportation's Class Environmental Assessment (Class EA) for Provincial Transportation Facilities (2000). When complete, the Recommended Plan will be documented in a Transportation Environmental Study Report (TESR) and filed for a 30-day public review period. The TERS will include:

- A project summary
- The EA process
- Environmental and transportation engineering issues and solutions
- Stakeholder consultation summary
- Recommended plan and mitigation strategy



Following online consultation and further development of the design, should the anticipated impacts of the Recommended Plan be deemed minor in nature, the MTO may elect to 'step down' this project to a Group C undertaking (minor improvements to existing facilities). At that time, a separate 'step down' notice will be published to advise members of the public of the associated review and approval requirements.



STRUCTURAL EXISTING CONDITIONS

Both bridges were built in 1955 and have undergone multiple rehabilitations, the latest occurring in 2008. Currently the structures are in fair condition overall, with localized areas of poor condition. Common issues include cracks, corrosion, scaling and spalling.



ENVIRONMENTAL EXISTING CONDITIONS

FISH AND FISH HABITAT

Hawkesbury Creek exhibits a cool water thermal regime with moderate fish habitat sensitivity. Observed species on site include:

- Common Shiner
- Longnose Dace
- Fat Mucket and Giant Floater Mussels

The Tributary of Hawkesbury Creek supports direct fish habitat upstream from the project area. Observed species on site include Young of the Year (YOY)

VEGETATION

Four (4) Butternut Species At Risk (SAR) trees were observed in the study area. After following protocols with the Ministry of Natural Resources and Forestry (MNR), they were evaluated and deemed non-retainable

WILDLIFE

Hawkesbury creek and surrounding vegetation offers habitat for many wildlife species, however the proximity of urban development limits these species to ones tolerant of disturbed environments.

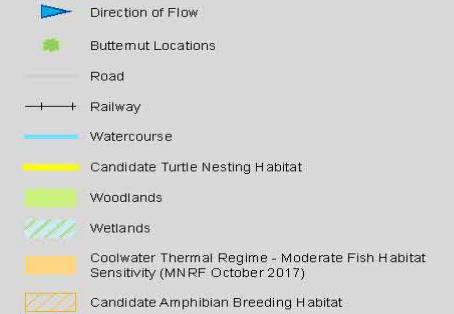
Observed species include:

- Migratory, forest edge, thicket, and marsh birds;
- American Toad
- Green Frog
- Red Fox
- A Snapping Turtle was observed 90 meters upstream of the CNR/Hawkesbury Creek Overhead

MTO LARGE VALUE RETAINER - EAST REGION

ASSIGNMENT No. 5 - HAWKESBURY

KEY ENVIRONMENTAL FEATURES FIGURE 2



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

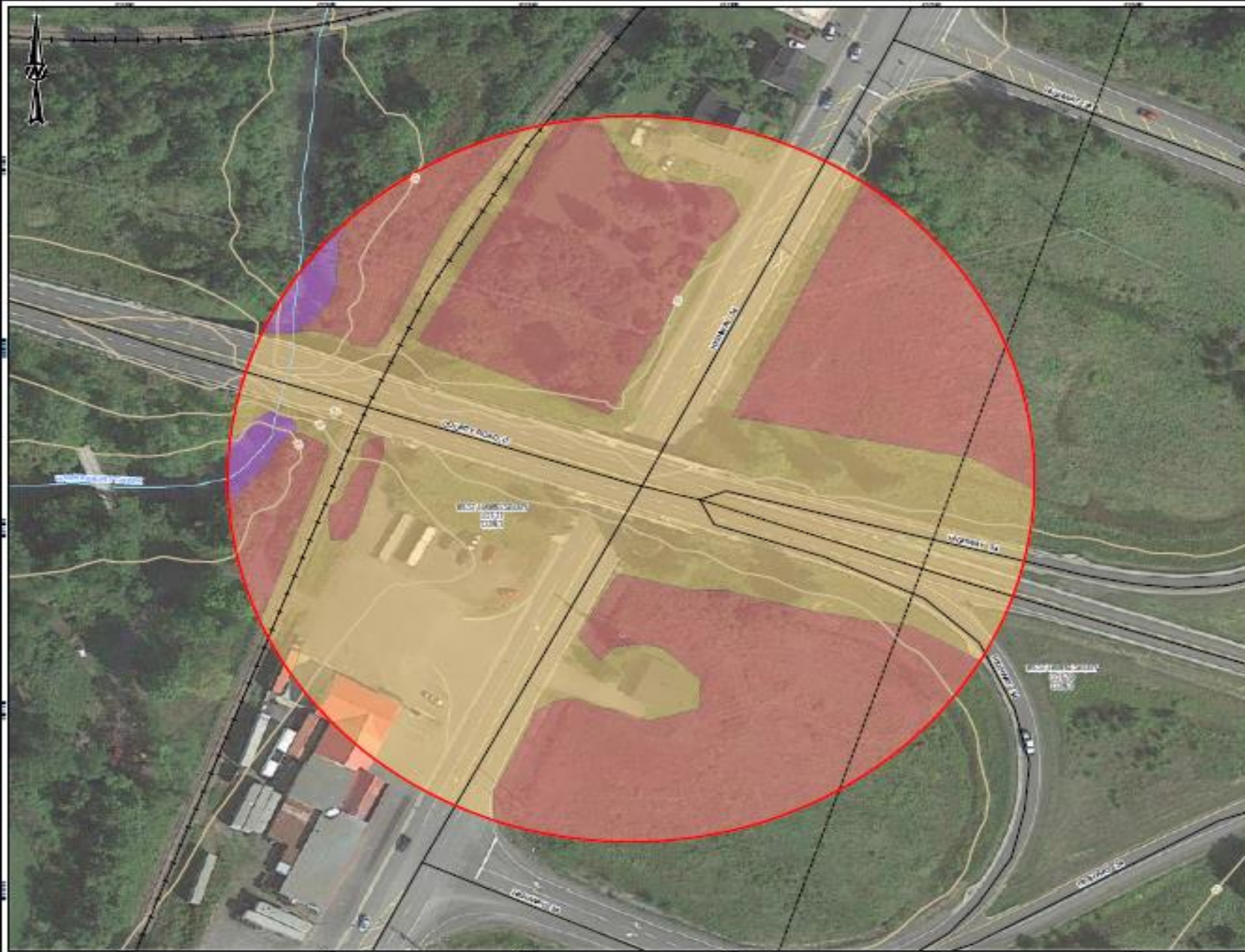
MAP CREATED BY: LK
MAP CHECKED BY: JW
MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 17-6180
STATUS: DRAFT
DATE: 2017-11-24

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

ENVIRONMENTAL EXISTING CONDITIONS



LEGEND

- Study Area
- Archaeological Potential
- Assessment Site
- Disturbed
- Wet
- Roadway
- Railway
- Watercourse
- Topographic contour
- Lot Fabric



ARCHAEOLOGY

A Stage 1 Archaeological Assessment of the project area determined:

Archaeological potential is present within 100 meters from historic transportation corridors, including roads and railways, however, the majority of land in the immediate study area has likely been disturbed by the original construction of County Road 17 and the Overpass in 1955.

CULTURAL HERITAGE

A Cultural Heritage Evaluation Report (CHER) concluded that neither structures nor the surrounding landscape are considered significant from a cultural or built heritage perspective.

RECOMMENDED BRIDGE DESIGN

The preliminary bridge design and interchange modifications were developed based on an analysis of:

Environment

Traffic

Safety

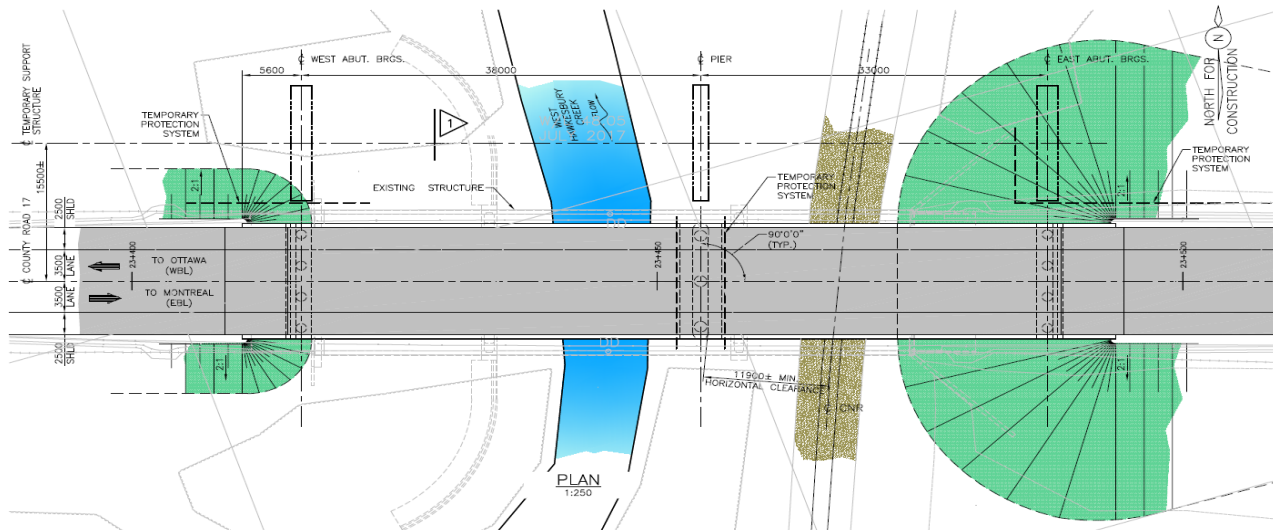
Constructability

Functionality

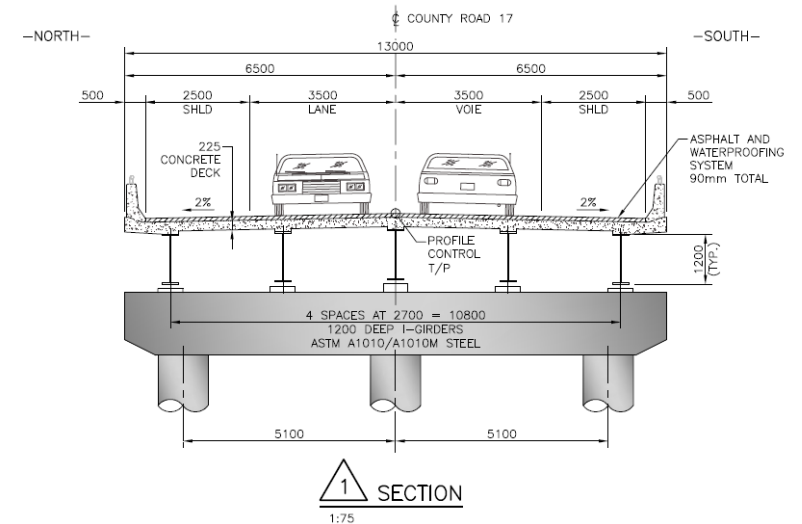
Durability

Economy

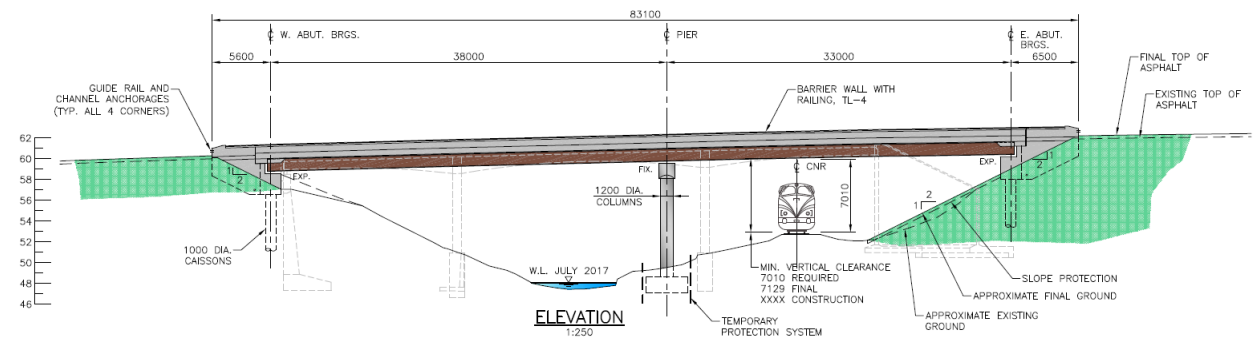
Aerial View



Cross Section Profile



Elevation Profile

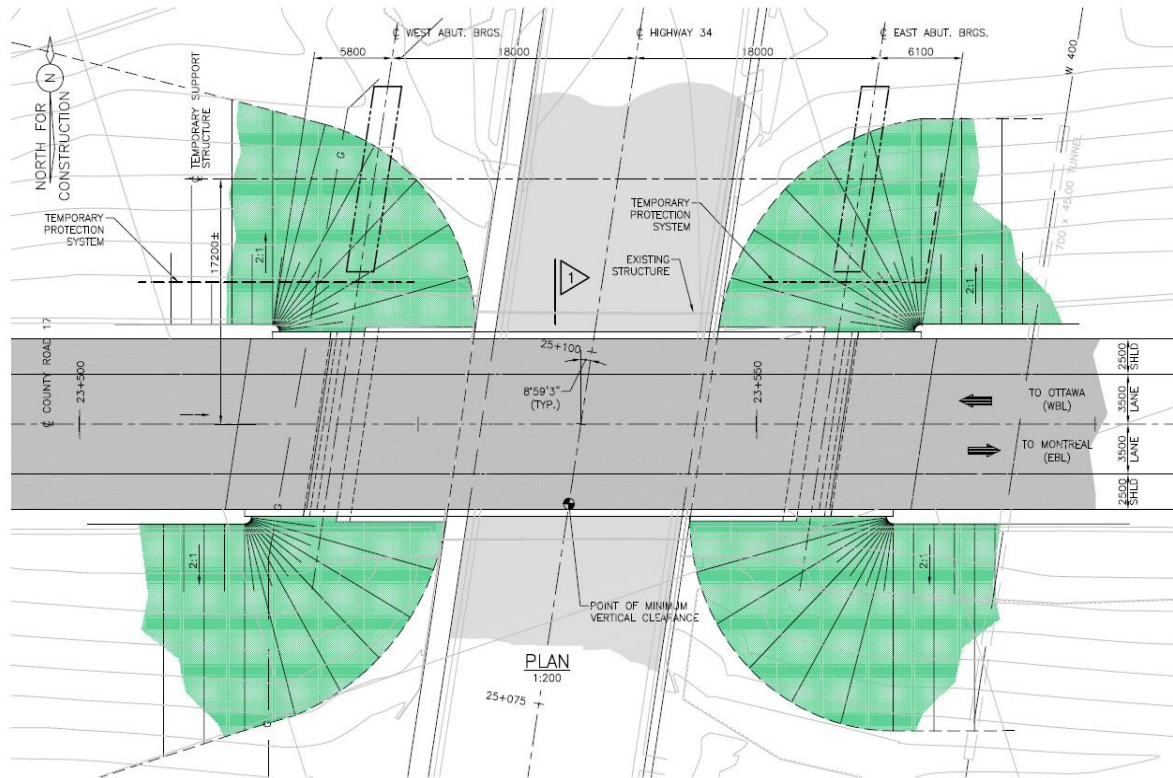


The Recommended Replacement Design for the new **Hawkesbury Creek & CNR Overhead Bridge** is to replace the existing structure with a 71 meter long two-span slab-on-steel I-girder bridge that has a 13 m cross-section reduced to two lanes.

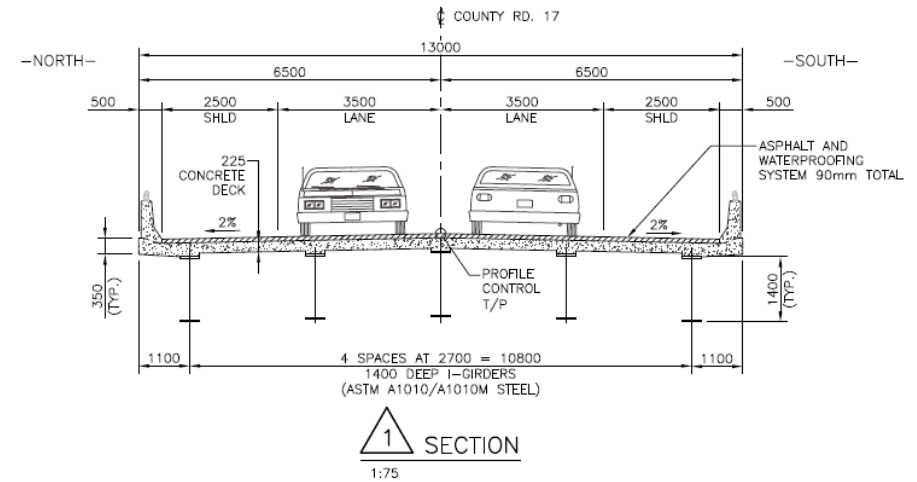
RECOMMENDED BRIDGE DESIGN

The Recommended Replacement Design for the **Highway 34 Overpass** is a 36 meter long single-span slab-on-steel I-girder bridge that has a 13 m cross-section reduced to two lanes. The cross-section of Highway 34 will remain unchanged, however, the bridge will incorporate sloped abutments increasing openness and improving sight lines under the bridge.

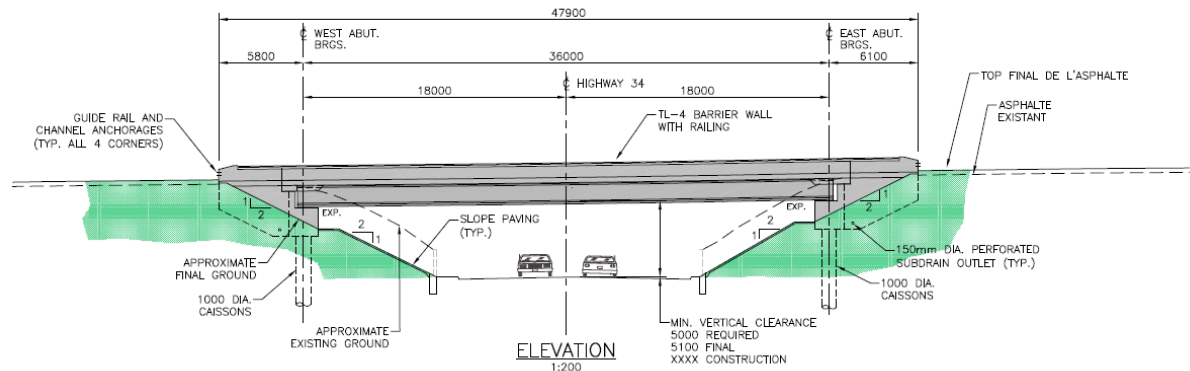
Aerial View



Cross Section Profile



Elevation Profile



RECOMMENDED INTERCHANGE CONFIGURATION

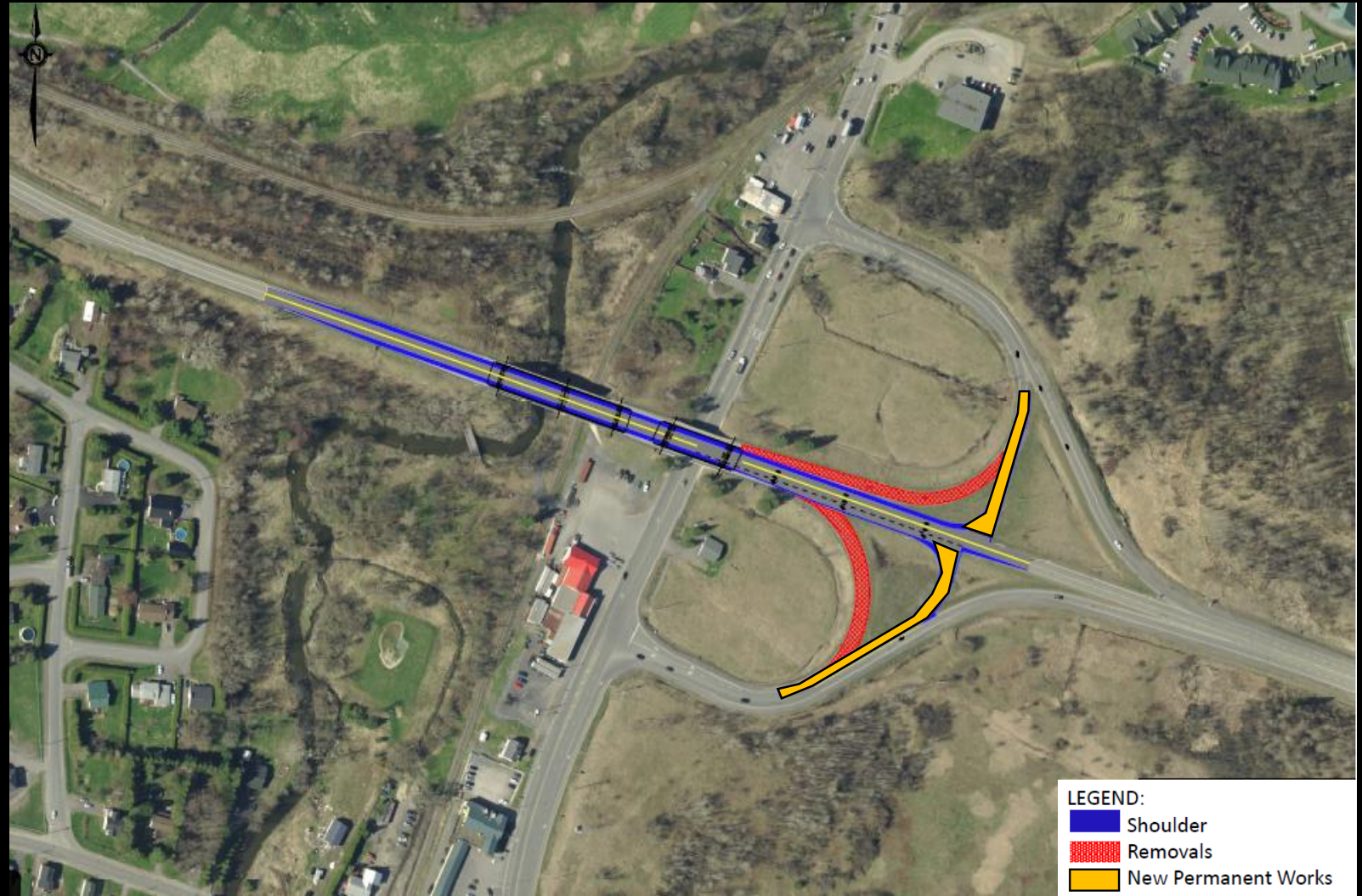
The proposed elimination of speed change lanes on County Road 17 requires modifications to the EB off-ramp and WB on-ramp.

Modifications at the WB on-ramp:

- A T-intersection will be designed for a stop condition; and
- The ramp speed will be reduced from 50km/h to 40km/h.

Modifications at the EB off-ramp:

- A right turn lane will be added by reducing the length of the speed change lane; and
- The ramp speed will be reduced from 50km/h to 40km/h.



COUNTY ROAD 17 AND HIGHWAY 34 INTERCHANGE MODIFICATIONS

CONSTRUCTION STAGING ALTERNATIVES

Two construction staging alternatives were evaluated based on anticipated impacts to:
SOCIAL/ CULTURAL ENVIRONMENT | NATURAL ENVIRONMENT | TECHNICAL CONSIDERATIONS| COST

Alternative 1: Conventional Staged Construction

The existing bridges are replaced by two new structures with a reduced two (2) lane cross section along a tangent roadway alignment that is permanently shifted 8.2 m to the north from the existing alignment.

The total length of Country Road 17 that will be impacted by the horizontal alignment permanent shift is approximately 1.0 ± km.

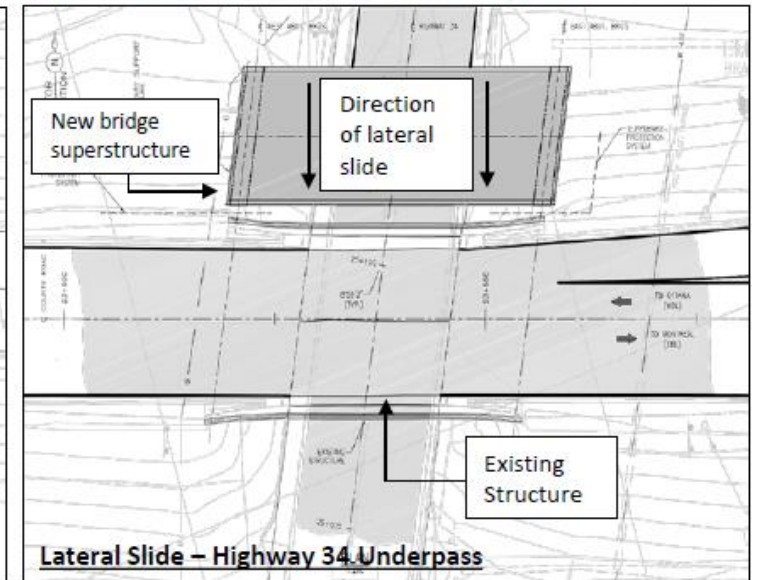
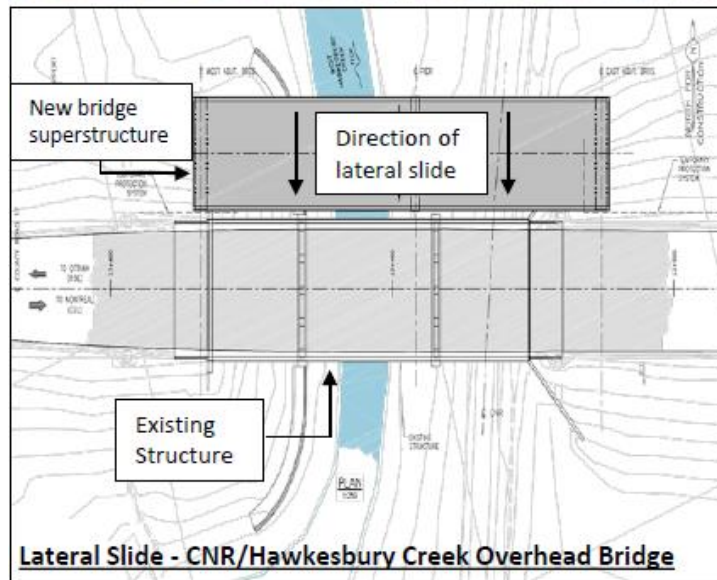


Alternative 2: Lateral Slide

This alternative uses an accelerated bridge construction technique whereby the new bridge decks are constructed on temporary supports adjacent to (and north of) the existing bridges.

When the foundations are constructed and new bridge decks are complete, the existing bridges are demolished and the new bridges are slid into place.

The lateral slide maintains the existing bridge alignment.



SUMMARY EVALUATION OF STAGING ALTERNATIVES

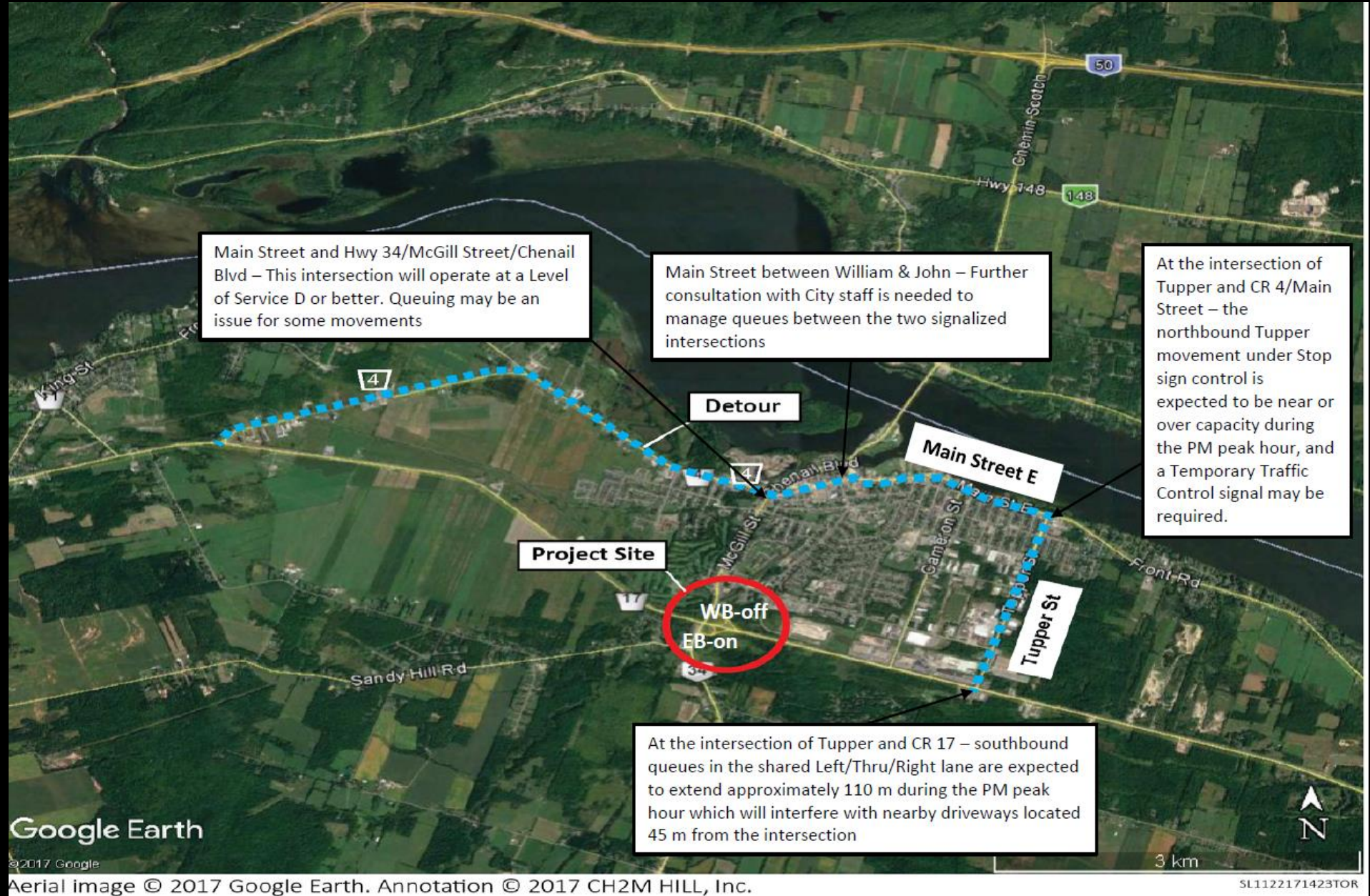
Impacts	Alternative 1: Conventional Staged Construction	Alternative 2: Lateral Slide
<p><u>Social/Cultural Environment</u></p> <ul style="list-style-type: none"> Traffic Property Safety Archaeology/Heritage Noise 	<ul style="list-style-type: none"> Requires longer term single lane closures on CR17 ❌ Avoids 2 week full closure of CR17 ✔️ Alignment shift requires additional property to the north and permanent right-of-way (ROW) over CN tracks ❌ Original drawings for Highway 34 do not exist and capacity/stability for construction staging cannot be determined ❌ Longer construction duration increases potential noise impacts ❌ 	<ul style="list-style-type: none"> Minimizes overall duration of single lane closures ✔️ Requires two-week full closure of CR17 and two weekend closures of Hwy 34 ❌ Maintaining the existing alignment avoids property impacts to the north and only requires a temporary right-of-way (ROW) easement for construction over CN tracks ✔️ Construction off-line (of CR17) enhances safety for vehicles and construction workers ✔️ Shorter overall construction duration decreases noise impacts ✔️
<p><u>Natural Environment</u></p> <ul style="list-style-type: none"> Aquatic and terrestrial ecosystem Contaminated materials 	<ul style="list-style-type: none"> Alignment shift to the north permanently impacts the surrounding environment and requires extensive stripping to accommodate embankment widening ❌ 	<ul style="list-style-type: none"> Maintaining the existing alignment reduces the overall footprint of construction and the associated impacts to the natural environmental ✔️
<p><u>Technical Considerations:</u></p> <ul style="list-style-type: none"> Construction Demolition Geology Utilities 	<ul style="list-style-type: none"> Staged construction will result in construction joints in the new structures – reducing long term durability ❌ The construction industry has significant experience with this conventional construction technique ✔️ With staged demolition, there are greater risks to damaging the portion of the structure that is to remain ❌ The alignment shift introduces potential for unanticipated utility impacts ❌ 	<ul style="list-style-type: none"> Off-line construction and use of prefabricated components will result in improved quality of final structures ✔️ Lateral slide is a complex technique with which the construction industry has less experience than conventional staged construction ❌ There is less risk associated with accelerated demolition as this will be completed under full closure) ✔️ Maintaining the existing alignment minimizes the risk of unanticipated utility impacts ✔️
<p><u>Cost:</u></p>	<ul style="list-style-type: none"> Potential for slightly lower total costs than Alternative 2 ✔️ 	<ul style="list-style-type: none"> Potential for slightly higher total costs than Alternative 1 ❌
<p><u>Summary:</u></p>	<p>While the overall duration of construction (and associated traffic impacts) is increased, this option does avoid full closure of CR17 and Hwy 34 during construction. However, the permanent shift of CR17 requires significant embankment widening and results in greater property impacts. The absence of original drawings also increases the risk associated with staged demolition.</p>	<p>The lateral slide is a more complex technique and involves full road closures of both CR17 and Hwy 34. However, building the new bridges off-line reduces the duration of traffic disruptions and avoids safety and technical risks associated with staged demolition. Preservation of the existing alignment also decreases overall impacts to the environment and adjacent property owners – including CN.</p>
<p><u>Recommendation:</u></p>	<p>NOT PREFERRED</p>	<p>PREFERRED</p>

TRAFFIC DETOURS

To accommodate the lateral slide, County Road 17 will be closed completely for 2 to 4 weeks.

During the closure, CR17 traffic will be detoured along County Road 4 heading east-west through Hawkesbury Main Street and heading north-south along Tupper Street.

Traffic Impacts along the detour routes are displayed on the map. These impacts are subject to further analysis and will be finalized in the TESR.



TRAFFIC DETOURS

During the full closure of County Road 17, Highway 34 will also be closed for 2 weekends to accommodate the rapid demolition and lateral slide.

During the full closure of Highway 34, a temporary bypass will be constructed to permit north-south traffic movements around the construction zone along Highway 34 during weekend closures. The on and off ramps to Highway 34 will remain open during construction. Signage will be in place to direct traffic accordingly.



ENVIRONMENTAL IMPACTS AND MITIGATION

Environment	Impacts	Mitigation
Vegetation and Wildlife	<ul style="list-style-type: none"> • Increased vulnerability of areas cleared of vegetation to invasion by non-native species • Loss and/or disruption to wildlife and/or wildlife habitat including migratory birds and Species at Risk. 	<ul style="list-style-type: none"> • Vegetation removals will be completed outside the breeding bird period (April 1 to August 31) • Temporarily disturbed vegetated areas will be re-vegetated using native seed mix • Exclusion fencing will be installed in select areas and the Contractor will be provided a fact sheet and encounter protocol to protect sensitive wildlife species
Fish and Fish Habitat	<ul style="list-style-type: none"> • Disturbance to fish during sensitive life stages (spawning etc.) • Potential mortality, entrapment or entrainment • Disruption of fish passage • Contamination of the watercourse 	<ul style="list-style-type: none"> • Fish passage will be maintained and, if temporary flow passage is required, a fish salvage plan will be implemented • Effective sediment and erosion control measures will be implemented and maintained • Handling of fuel, excess materials and debris will be properly managed in accordance with best practices • Temporary protection system will be created to avoid in water works for construction of pier foundations
Archaeology	<ul style="list-style-type: none"> • Possible disturbance of sites containing archaeological potential 	<ul style="list-style-type: none"> • A Stage 2 assessment will be undertaken to determine the presence of sub surface archaeology
Noise	<ul style="list-style-type: none"> • Temporary disturbance to nearby residents/businesses during construction 	<ul style="list-style-type: none"> • The contractor will be required to adhere to the local noise control by-laws. If work is required outside of permitted periods, a noise bylaw exemption will be obtained. • Town of Hawkesbury noise by-law 59-2010 permits the operation of construction equipment from: Monday - Friday 7am-9pm, Saturday 8am-6pm, Sunday 9am-6pm • The Contractor will be required to maintain equipment in good operating condition and avoid unnecessary idling.
Traffic	<ul style="list-style-type: none"> • Single lane and complete road closures will result in temporary disruptions to local traffic (including EMS). 	<ul style="list-style-type: none"> • Short duration road closures will occur during off-peak periods. • Full closures will be timed to avoid major community events. • All closures and associated detours will be advertised in advance and include appropriate signage. • Notification of road closures and associated detours will go directly to EMS



NEXT STEPS

Following this online PIC, the Ministry will:

- Review and respond to comments received from this Online Public Information Centre;
- Refine the Detail Design and Mitigation Plan based on the feedback gathered;
- Prepare the Transportation Environmental Study Report (TESR) for a 30-day public review; or issue a “Step-Down” Notice;
- Finalize the Detail Design and prepare the contract package; and
- Submit the project for tender.

Thank you for participating in the Online Public Information Centre. Please submit any questions, comments or concerns via the contact page [here](#) and a member of the project team will respond to you directly.

Under the *Freedom of Information and Protection of Privacy Act (FOIPPA)*, comments and information regarding this project, with the exception of personal information, will become part of the public record. If you have any accessibility requirements in order to participate in this project, please let us know.

Des renseignements sont disponibles en français auprès de Michael Matthews (613 723-8700, poste 73517).

For more information please contact:

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Ministry of Transportation

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Consultant Project Manager

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Project Update - Online Public Information Centre

Hawkesbury Bridge Replacements

The Ministry of Transportation Ontario (MTO) has retained Jacobs and Dillon Consulting Limited to complete a Detail Design and Environmental Assessment Study for the replacement of the Hawkesbury Creek & CNR Overhead Bridge and the Highway 34 Overpass on County Road 17 in the Town of Hawkesbury/Champlain Township and the United Counties of Prescott and Russell. As a number of project milestones have been reached, including key details regarding traffic management, we are providing you with an update to the online Public Information Centre (PIC) to share new information including:

Comments received from the PIC and how they were addressed

Detailed bridge design

Traffic Management Plan Details

Anticipated environmental impacts and detailed mitigation

We encourage you to review this material and provide any comments via the contact page [HERE](#) by **Monday May 27th, 2019**. A member of the project team will respond to you directly. If you have any accessibility requirements in order to participate in this project, please let us know.



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Project Overview

The Hawkesbury Creek & CNR Overhead Bridge and Highway 34 Overpass carry two lanes of traffic and two speed change lanes on County Road 17 over Hawkesbury Creek, the CN rail line and Highway 34. Both bridges are nearing the end of their useful service life and require replacement. Major project components include:

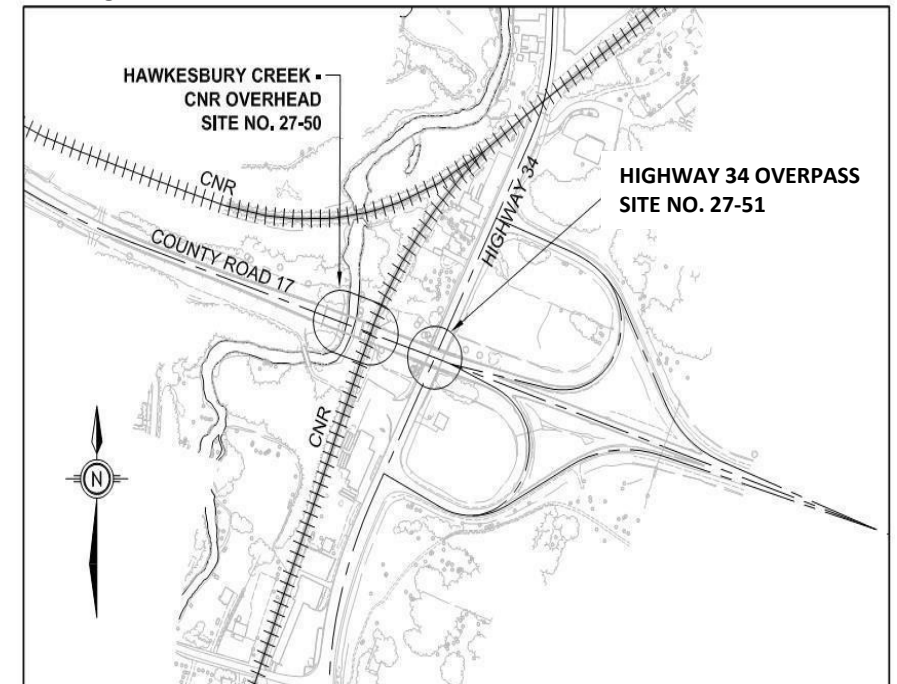
- Replacing both bridges using an accelerated bridge construction methodology
 - Rapid demolition
 - Jack and slide
- Reconfiguring the ramps at the County Road 17 and Highway 34 interchange
- Traffic management during construction

While the proposed accelerated construction methodology results in significantly reduced traffic impacts compared to conventional staged construction, some traffic disruptions are anticipated, including:

- Full closure of Country Road 17 for up to 4 weeks (in the vicinity of the bridges)
- Closure of Highway 34 (in the vicinity of the bridges) for 3 weekends

To minimize traffic impacts during the full closure of County Road 17, a detour route along County Road 4, Main Street and Tupper Street is proposed. To facilitate this, numerous improvements to intersections (permanent and temporary) along the detour route are also proposed to achieve satisfactory levels of service

Existing Conditions

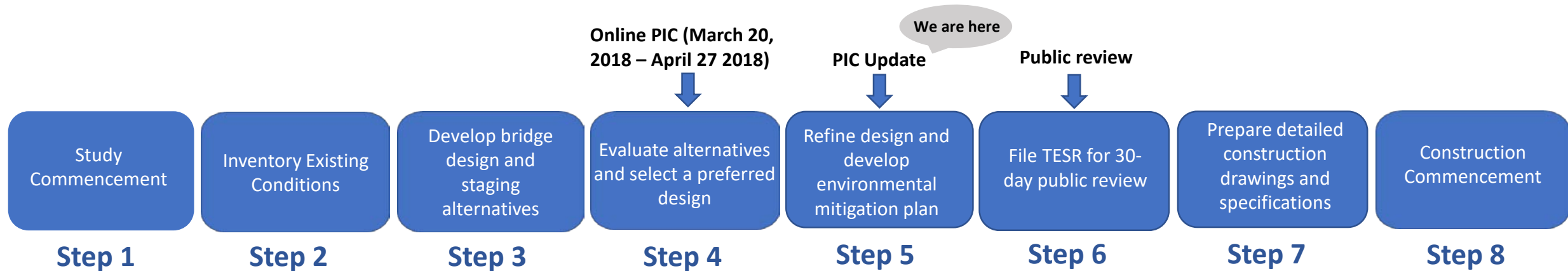


Study Process

This study is following the approved environmental planning process for Group 'B' undertakings (major improvements to existing facilities) under the MTO's Class EA for Provincial Transportation Facilities (2000). When complete, the Recommended Plan will be documented in a Transportation Environmental Study Report (TESR) and filed for a 30-day public review period. The study process involves:

- Review of existing conditions
- Assessment and evaluation of bridge design and construction staging alternatives
- Selection of recommended plan
- Development of Environmental Mitigation Strategy
- Preparation of detailed construction drawings and specifications

Stakeholder input is being gathered at key project milestones through the Online PIC, this PIC update and during the TESR's 30-day public review period



Engagement to Date

Online Public Information Centre March 20, 2018 to April 27, 2018

A dedicated bilingual project website was developed during preliminary design to provide a forum for the online Public Information Centre (PIC) display materials that provide detailed information about the project including:

- An general overview of the project;
- An introduction to the Environmental Assessment process;
- A review of existing structural and environmental conditions;
- A summary of the construction staging alternatives that were evaluated;
- A presentation of the recommended bridge design and interchange configuration;
- A review of the preliminary traffic management (detour) plan;
- A review of the preliminary environmental impacts and proposed mitigation; and
- A look at the next steps.

To notify you of this event, Ontario Government Notices (OGN) were published in both *The Review* and *Le Regional* and notification letters were mailed out to stakeholders. Municipal Technical Advisory Committee (MTAC) meetings were also held with key staff from the Town, Township and County at project milestones.

During the PIC, 116 people visited the website, 342 page views were generated and 14 comments were received. You can review the first PIC [HERE](#)

In general, comments pertained to the functionality of both the proposed detour route and changes to the eastbound on-ramp and westbound off-ramp. Responses were provided directly by the project team and additional information regarding these issues is presented in this update.

ONLINE PUBLIC INFORMATION CENTRE
County Road 17 Bridge Replacements
Detail Design and Environmental Assessment
GWP 4203-15-00

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- Project Description
- EA Process
- Existing Conditions
- Summary of Alternatives
- Recommended Plan
- Environmental Impacts & Mitigation
- Next Steps

We encourage you to review this material and provide any questions, comments or concerns via the contact page [here](#) by **Friday April 27, 2018**. A member of the project team will respond to you directly.

Presentations to Council	
Audience	Date
Town of Hawkesbury	February 11, 2019
Township of Champlain	March 5, 2019
United Counties of Prescott & Russell	March 13, 2019

Municipal Technical Advisory Committee Meetings	
Meetings	Date
Meeting 1a	May 24, 2017
Meeting 1b	July 24, 2017
Meeting 2	November 30, 2017
Meeting 3	September 20, 2018

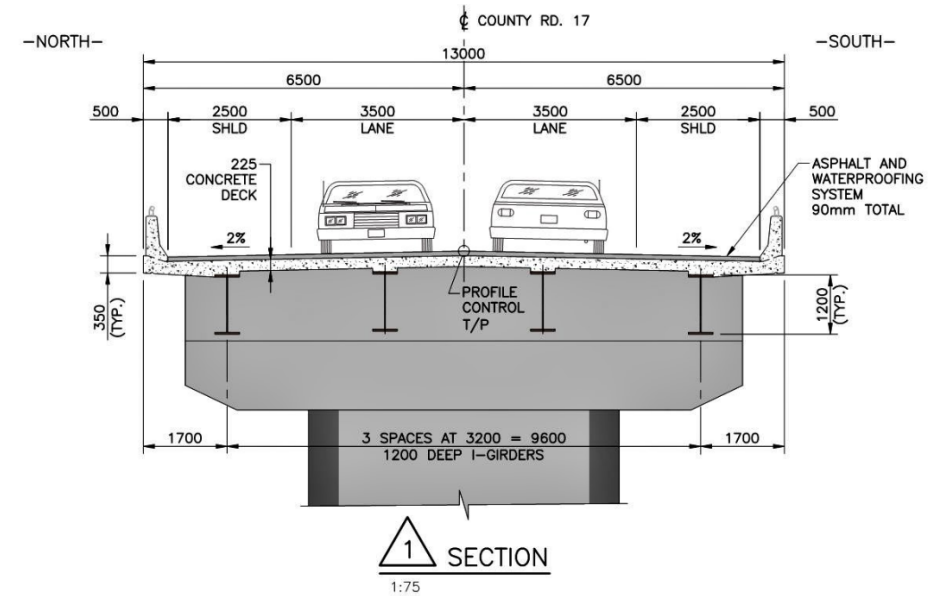
Public Input To Date

Main Concerns	Project Team Responses
Whether there will be lights or simply stop signs when exiting CR 17 from the west or entering it going west bound. Concerned with the removal of the merging lanes with going westbound or coming from the westbound and exiting on Highway 34.	Traffic lights will not be provided at the County Road 17 and Highway 34 interchange. Illumination of the interchange is under review. Conversion of the N/S-W Ramp (on-ramp) from an acceleration lane to a stop condition with a right turn onto County Rd 17 (westbound) meets the current roadway geometric design standards for the observed traffic volumes, sight distance and design speed along County Road 17. The stop condition with a right turn onto County Road 17 also eliminates an additional lane that would otherwise be required on the Highway 34 Overpass at County Road 17 which would increase the cost of construction and possibly have environmental and property impacts.
The safety of vehicles slowing down to access the ramp in combination with the visibility of the movement due to the horizontal and vertical curve of the approaching road.	The existing W-N/S Ramp (off-ramp) speed change lane, which includes a taper and deceleration lane, will be re-configured with a right turn lane with a total length of 145 m which meets the current roadway geometric design standards. The County Road 17 vertical curve is being improved (compared to existing conditions) and adequate signage to inform traffic of the upcoming W-N/S Ramp (off-ramp) will be provided.
The posted ramp speed reduction will not be effective	The existing W-N/S Ramp (off-ramp) speed change lane, which includes a taper and deceleration lane, will be re-configured with a right turn lane with a total length of 145 m which meets the current roadway geometric design standards. A posted ramp speed lower than present conditions is required for the proposed radius of the re-configured W-N/S Ramp in order to meet current standards.
The detour route through Main Street of Hawkesbury being chaotic given the narrow Main Street and 3 traffic lights.	Yes, the proposed detour route of County Rd 17 eastbound/westbound traffic is along County Rd 4 (Main St) and Tupper St which will be operational for up to 4 weeks during bridge replacement. Half of the Highway 34 interchange will remain in operation, maintaining traffic flow to/from the east, to/from McGill Street. The Hwy 34 “diversion loop” is being used over two or three weekends only, and will re-route traffic around the Highway 34 Overpass bridge structure at County Road 17 during girder/diaphragm erection and formwork/falsework installation, rapid demolition of existing bridges, and lateral slide of new bridges into final position. Operation of the proposed detour route along Main St and Tupper St will require some traffic signal modifications and a temporary traffic control signal at Main St/Tupper St to operate efficiently.
The proposed detour route will not be suitable for the volume of transport trucks.	Traffic data was collected and analyzed along the proposed detour route and at the County Road 17 and Highway 34 interchange. The level of service was concluded to be satisfactory for the duration of the full closure of County Road 17, which is between two and four weeks. Other options reviewed for the detour route could not accommodate observed commercial traffic volumes or truck turning movements without significant improvements to intersections.
The disruption to rail service	Disruptions to rail traffic will be avoided, where/when possible. All works are being coordinated with CN throughout the detail design phase which include track protection schemes, rail flagging services and instrumentation/monitoring during construction. The rapid demolition of existing structures and lateral slide of new structures into final position, which will occur over two separate weekends, may impact rail traffic.

Recommended Bridge Design – Typical Cross-Sections

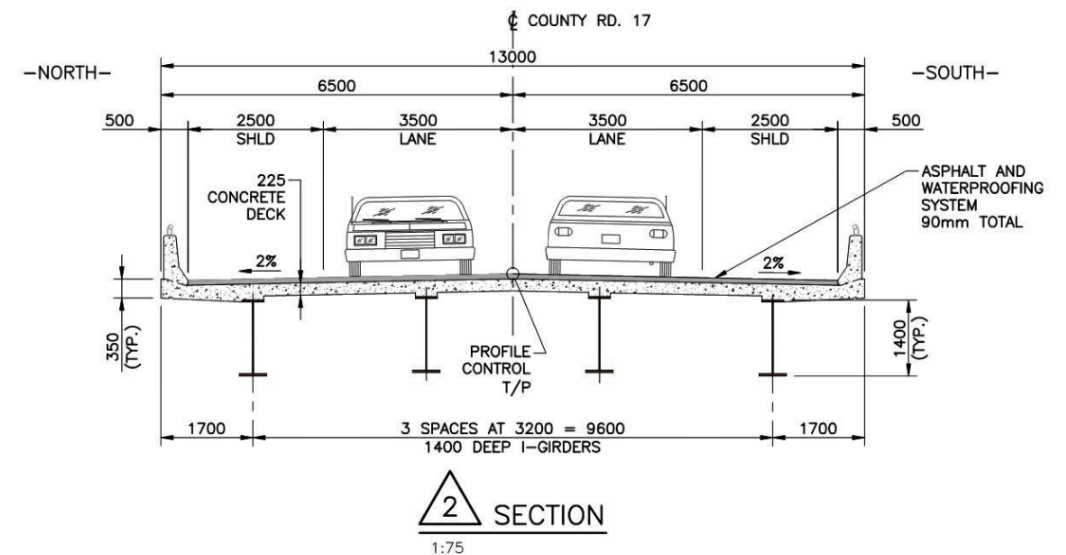
New Hawkesbury Creek & CNR Overhead Bridge

- Concrete slab on steel I-girder bridge
- Two-spans, 71 m long (38 m over Hawkesbury Creek; 33 m over CNR tracks)
 - Bridge pier located between the Hawkesbury Creek and CNR tracks
- Carries two lanes of traffic along County Road 17 (eastbound and westbound) with 2.5 m wide shoulders on the north and south
- Total bridge width is 13 m



New Highway 34 Overpass at County Road 17 Bridge

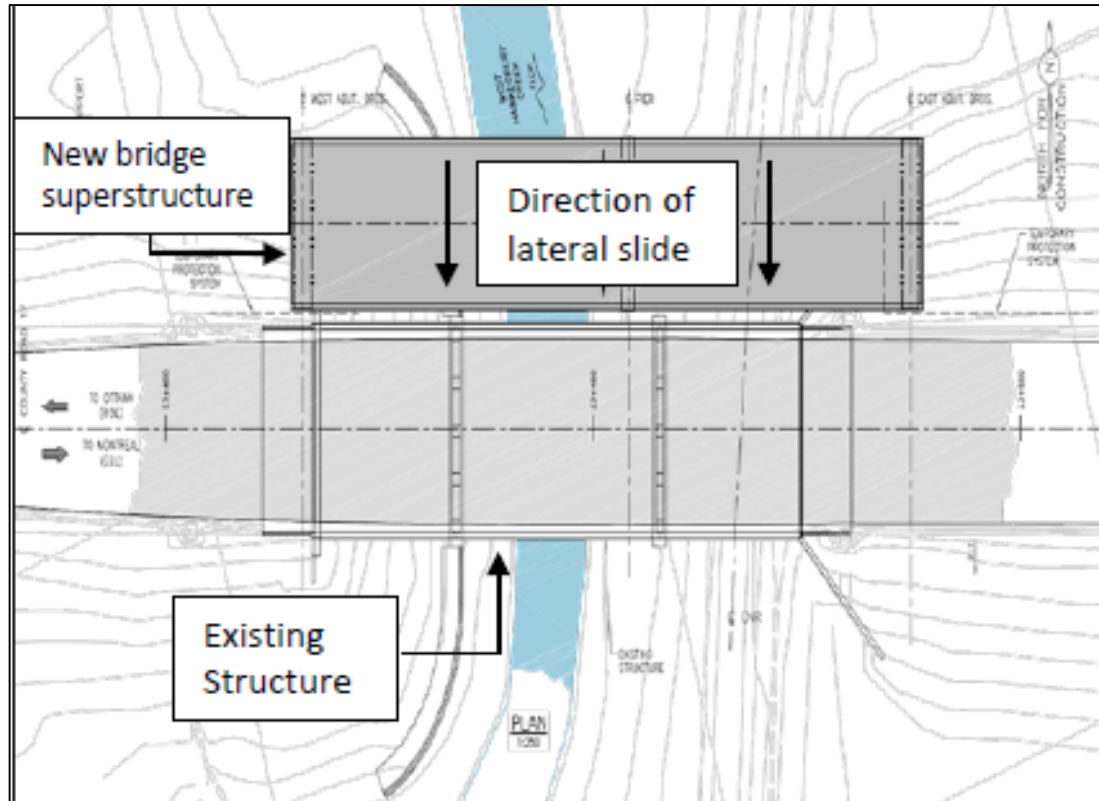
- Concrete slab on steel I-girder bridge
- Single-span, 36 m long (over Highway 34)
 - New bridge span is longer than existing, resulting in improved sight lines for motorists travelling north/south
- Carries two lanes of traffic along County Road 17 (eastbound and westbound) with 2.5 m wide shoulders on the north and south
- Total bridge width is 13 m



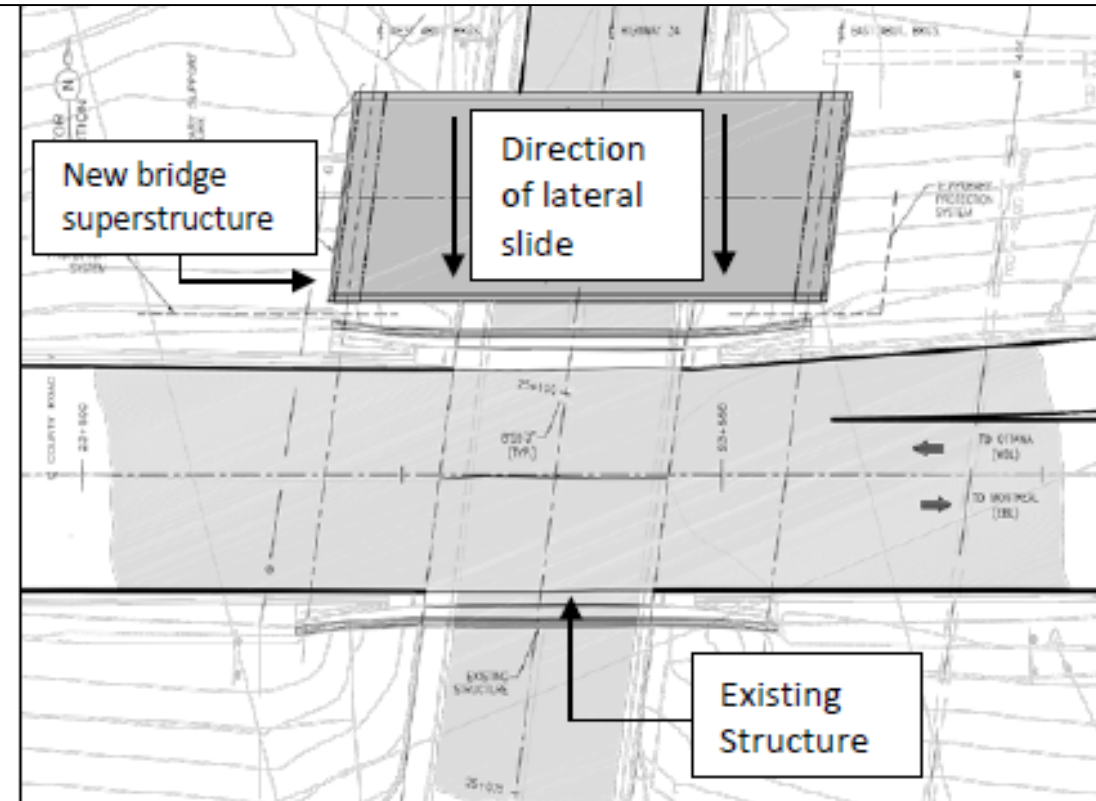
Note: The new bridges are designed in accordance with CSA-S6-14 Canadian Highway Bridge Design Code and other relevant codes, standards & guidelines.

Construction Methodology – Rapid Demolition and Lateral Slide

Hawkesbury Creek & CNR Overhead Bridge



Highway 34 Overpass at County Road 17 Bridge



The bridges are proposed to be replaced using an accelerated bridge construction technique whereby the new bridge decks are constructed on temporary supports adjacent to (and north of) the existing bridges. When the foundations are constructed and new bridge decks are complete, the existing bridges are rapidly demolished and the new bridges are slid into place.

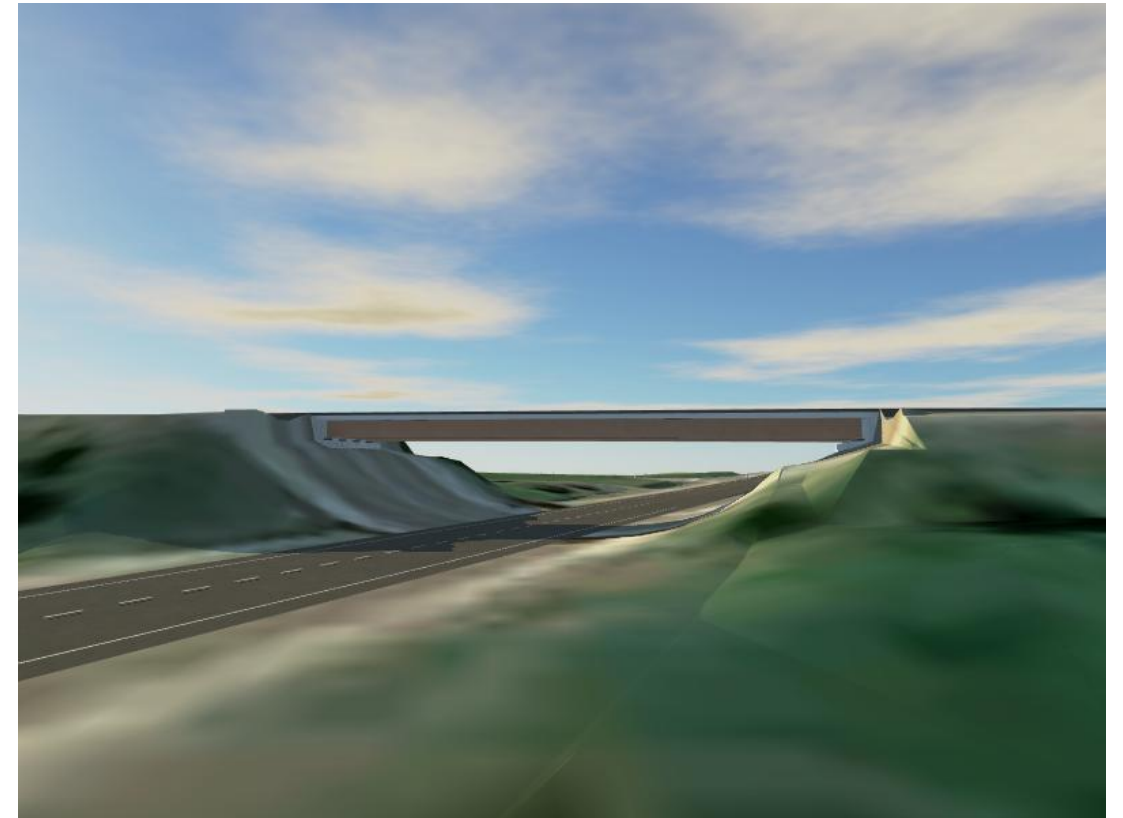
The proposed construction methodology will result in an overall reduced impact to traffic, increase worker and motorist safety, improve sight lines on Hwy 34 (due to the increased span), and prevent the need to re-align County Road 17.

3D Rendering of New Bridges

New Hawkesbury Creek & CNR Overhead Bridge



New Highway 34 Overpass at County Road 17 Bridge



Existing Interchange Configuration

- The existing interchange operates as a grade separated, free flow interchange.
- This current configuration is not technically warranted based on the road classification and traffic volumes of County Road 17.

Existing Free Flow Interchange at County Road 17 and Highway 34



Consideration of Alternatives for the Interchange

Consideration of Alternatives for County Road 17 and Highway 34 Interchange



Maintain Existing Free Flow Interchange

This option was ruled out since it is not technically warranted and would require a four lane bridge. This would add over \$3M to the project cost, increase the environmental impact, and could require additional property.



Provide a Conventional Intersection Design for On / Off Ramps

This type of design would only require a two lane bridge. This option is preferred.

Once it was concluded that a conventional intersection would be provided, the eastbound off-ramp and westbound on-ramp were evaluated independently of one another.

One option was considered for the off-ramp and two options were considered for the on-ramp, as shown.

Eastbound Off-Ramp (W-N/S Ramp)

Conventional Right Turn Lane




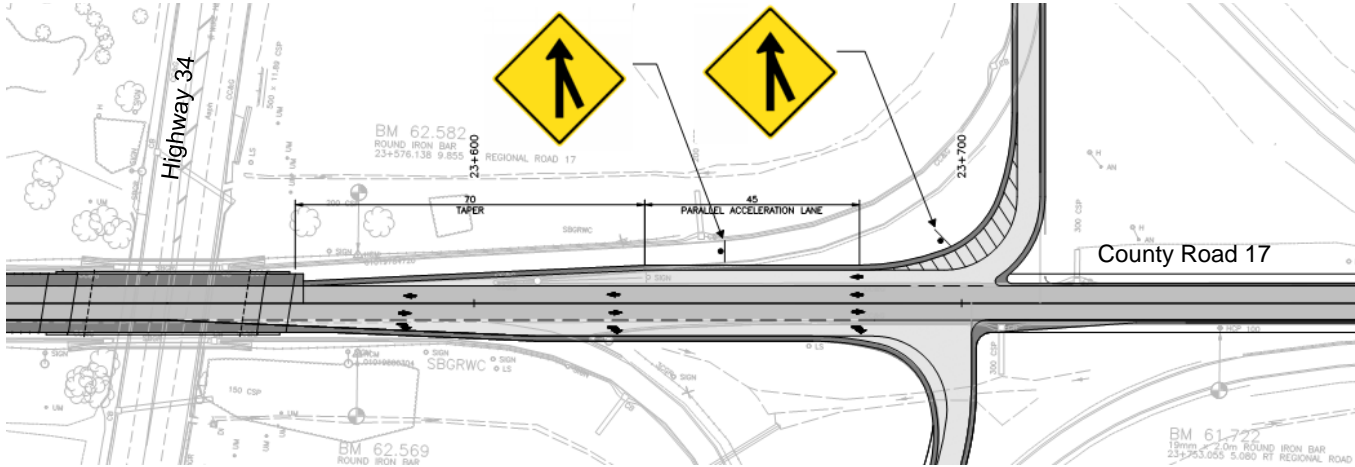


Westbound On-Ramp (N/S-W Ramp)

Merge Control with Acceleration Lane





Stop Control

= preferred
 = not preferred

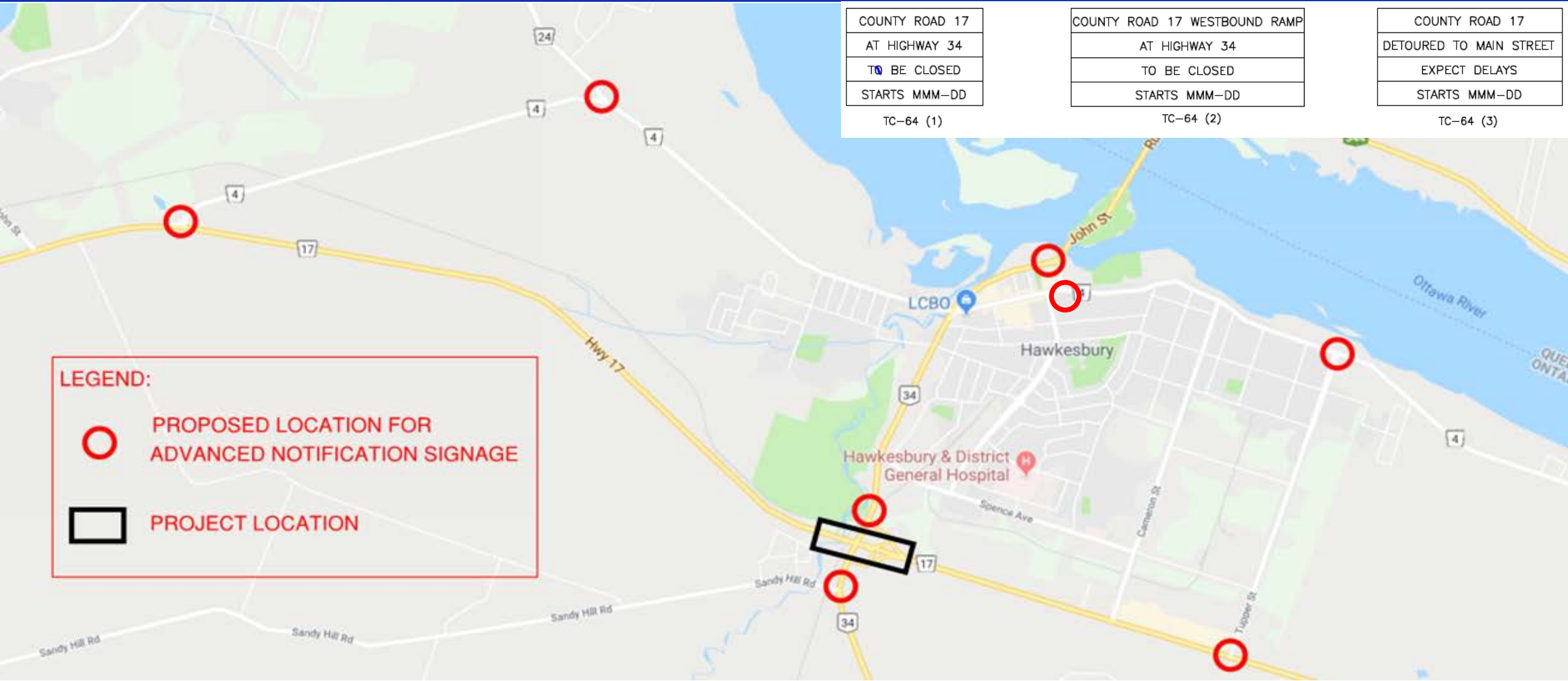
Alternatives for the Westbound On-Ramp (N/S-W Ramp)

Alternatives	Description	Sign Control	Acceleration Lane Characteristics	Schematic
Option A	Merge Control with Acceleration Lane		Provides 115 m of taper + acceleration lane length	
Option B	Stop Control		Provides no taper or acceleration lane length	

Evaluation of Alternatives for the Westbound On-Ramp (N/S-W Ramp)

		Option A – Merge Control with Acceleration Lane		Option B – Stop Control
<u>Social, Environmental, Financial Impacts</u>	<ul style="list-style-type: none"> Minimal difference between Option A and Option B 		<ul style="list-style-type: none"> Minimal difference between Option A and Option B 	
<u>Geometric Design</u>	<ul style="list-style-type: none"> Meets minimum sight distance requirements Provides minimum required acceleration lane length for the MERGE sign, but does not provide minimum required length of acceleration lane to allow for a free flow (unsigned) acceleration lane 		<ul style="list-style-type: none"> Meets minimum sight distance requirements Does not require an acceleration lane 	
<u>Traffic Operational Characteristics</u>	<ul style="list-style-type: none"> Provides adequate Level of Service The MERGE sign alerts drivers that vehicles from the other roadway may soon be entering the lane in which they are travelling, and they must exert caution and adjust their position to accommodate the ingress of vehicles. MERGE signs are also used to provide warning to traffic entering the roadway that they do not have the right of way and must prepare to merge with the through traffic. 		<ul style="list-style-type: none"> Provides adequate Level of Service The STOP sign requires the driver to stop the vehicle before entering the intersection, yield to any traffic in or approaching the intersection and then proceed when safe to do so 	
<u>Preferred:</u>	NOT PREFERRED 		PREFERRED 	

Traffic Management Plan – Advanced Notification Signage



Bilingual Advanced Notification Signage will be installed near the County Road 17 and Highway 34 interchanges at least two (2) weeks in advance of construction to notify motorists/commercial vehicles of the road closures. They will also be installed at strategic locations, such as along Highway 417, to maximize the number of motorists that receive the message. The signs will notify motorists of expected delays due to construction, as well as to provide advanced notice of the detour so that motorists can adjust their travel routes and times accordingly.

Temporary Intersection Modifications along the Detour Route



Tupper and Main Street

To accommodate projected traffic volumes along the County Road 17 detour route, temporary intersection modifications are required

Tupper and Main Street

- Temporary traffic signals

William / John and Main Street

- Temporary modifications to pavement markings at John Street intersection to improve traffic operation during the detour (may require temporary removal of on-street parking spaces on Main street)
- William Street traffic signals will be temporarily bagged and a stop sign will be installed facing northbound traffic on William Street



William / John and Main Street



McGill and Main Street

McGill and Main Street

- Temporary modifications to pavement markings at McGill Street to improve traffic operation at the intersection during the detour (may require temporary removal of on-street parking spaces on Main Street)

Environmental Impacts and Mitigation

Environment	Impacts	Mitigation
Traffic	<ul style="list-style-type: none"> • Single lane and complete road closures will result in temporary disruptions to local traffic and residents of L'original 	<ul style="list-style-type: none"> • Short duration road closures will occur during off-peak periods • Full closures will be timed to avoid major community events and Main Street festivals • All closures and associated detours will be advertised using Advanced Notification Signage at strategic locations • Permanent and temporary intersection improvements will be implemented along detour route • Notification of road closures and associated detours will go directly to EMS • Coordination with MTQ to discourage Quebec truck traffic while the detour route is in effect
Noise	<ul style="list-style-type: none"> • Temporary disturbance to nearby residents/businesses during construction 	<ul style="list-style-type: none"> • A noise by-law exemption is being requested from the Town of Hawkesbury for any overnight work that will need to be conducted, specifically during the full-closure of County Road 17 • The contractor will be required to maintain equipment in good operating condition • Idling of equipment will be restricted to the minimum necessary to perform the specified work • Construction activities will be scheduled to reduce impacts on adjacent residential land uses
Archaeology	<ul style="list-style-type: none"> • Possible disturbance of sites containing archaeological potential 	<ul style="list-style-type: none"> • A Stage 2 assessment determined that there was no presence of sub surface archeological features in the study area. • In accordance with the Ontario Heritage Act, should any deeply buried archaeological deposits or human remains be discovered in the course of construction, the Ministry of Tourism, Culture and Sport, and/or the Cemeteries Regulation Unit of the Ministry of Consumer Service will be notified immediately and a licensed consultant archeologist will be engaged to carry out a determination of their significance before proceeding with construction.
Vegetation and Wildlife	<ul style="list-style-type: none"> • Vulnerability of areas cleared of vegetation to invasion by non-native species • Loss and/or disruption to wildlife/wildlife habitat including migratory birds and Species at Risk 	<ul style="list-style-type: none"> • Vegetation removals will be completed outside the breeding bird period (April 1 to August 31) • Temporarily disturbed vegetated areas will be re-vegetated using native seed mix • Exclusion fencing will be installed in select areas and the Contractor will be provided a fact sheet and encounter protocol to protect sensitive wildlife species
Fish and Fish Habitat	<ul style="list-style-type: none"> • Disturbance to fish during sensitive life stages • Potential mortality, entrapment or entrainment • Contamination of the watercourse • Loss of aquatic habitat 	<ul style="list-style-type: none"> • Effective sediment and erosion control measures will be implemented and maintained • Handling of fuel, excess materials and debris will be properly managed in accordance with best practices • Temporary protection system will be created to avoid in water works for construction of pier foundations



Next Steps

Following this online PIC update, the Ministry will:

- Review and respond to comments received
- Refine the Detail Design and Mitigation Plan based on the feedback gathered;
- File the Transportation Environmental Study Report (TESR) for a 30-day public review;
- Finalize the construction and contract package; and
- Submit the project for tender (Project schedule is contingent on funding, permits, environmental clearance and property agreements)

Thank you for participating in the Online Public Information Centre update. Please submit any questions, comments or concerns via the contact page [HERE](#) and a member of the project team will respond to you directly. Under the *Freedom of Information and Protection of Privacy Act (FOIPPA)*, comments and information regarding this project, with the exception of personal information, will become part of the public record.

Des renseignements sont disponibles en français auprès de Michael Matthews (613) 723-8700, poste 73157.

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