ONLINE PUBLIC INFORMATION CENTRE (PIC)
Highway 401 Overpass Replacements at Pitt Street
Detail Design and Environmental Assessment Study
(WP 4085-13-01 & WP 4383-01-01)

The purpose of this online PIC is to provide stakeholders and the public with an introduction to the study and an opportunity to review and comment on the proposed works, anticipated environmental effects and proposed mitigation measures for the replacement of the overpasses.

The Ministry of Transportation (MTO) has retained WSP (formerly MMM Group Limited) to undertake this study.

As part of this online PIC, you will have a chance to review:

- A description of the project
- The steps in the Environmental Assessment (Class EA) process
- Existing conditions in the study area
- A summary of the alternatives considered
- A description of the Recommended Plan, including proposed detour routes
- Measures to mitigate environmental impacts in the study area
- Next steps

Please share your opinions with us and submit any questions or comments via the project website Contact page. A member of the Project Team will respond to you directly.
The purpose of the current Ministry of Transportation (MTO) Detail Design and Environmental Assessment (EA) Study is to prepare the Recommended Plan for the replacement of the Highway 401 overpasses at Pitt Street. The overpasses are twin three-span structures that each carry two lanes of Highway 401 traffic over Pitt Street in the City of Cornwall. They are approaching the end of their service life and require replacement.

There are several components associated with this project, including:
- Replacement of each overpass with a single-span overpass,
- Minor relocation of the existing noise barriers on each overpass; and
- Reconstruction of Pitt Street in the area of the overpasses.

A temporary median crossover and lane reductions on Highway 401 are required to accommodate staged construction. Occasional short-term closures of Pitt Street will be required for the demolition of the existing overpasses and erection of falsework. A temporary long-term detour of truck traffic on Pitt Street will also be required. Traffic detour routes will use adjacent local roads.

No impacts to private property are anticipated as a result of the proposed works.
ENVIRONMENTAL ASSESSMENT PROCESS

This project is being carried out in accordance with the approved environmental planning process for Group 'B' projects under the MTO *Class Environmental Assessment* (Class EA) for Provincial Transportation Facilities (2000).

The purpose of this study is to determine the Recommended Plan for the replacement of the overpasses.

At the completion of the study, a Transportation Environmental Study Report (TESR) will be prepared and will include:

- An outline of the EA process;
- A description of significant transportation engineering and environmental issues and how they have been addressed;
- A description of the Recommended Plan;
- A summary of stakeholder and public consultation; and
- A detailed description of anticipated environmental effects and recommended mitigation measures that will be incorporated into contract documents.

Upon completion of the EA Study, the TESR will be submitted for a 30-day public review period.
EXISTING STRUCTURAL CONDITIONS

There are delaminations and spalling of concrete on the pier columns.

There are severe delaminations, spalling and disintegration of concrete on the abutment ballast walls.

The steel superstructures are generally in good condition. Excessive vertical deflections in the center span (over Pitt Street) were noted at both structures.

The asphalt wearing surface is in fair to good condition on both structures with areas of severe cracking and wheel track rutting.

The abutments are in poor to fair condition with deterioration consisting of delaminations, wide cracks and spalling.

Overall, the Pitt Street Overpasses are in fair condition, but are approaching the end of their intended service life and do not meet current seismic requirements.
EXISTING ENVIRONMENTAL CONDITIONS

Vegetation
- The study area has been heavily disturbed by urban development. Vegetation consists primarily of meadow with non-native species.
- No rare plant species or vegetation communities have been found in the area.

Wildlife and Species at Risk
- Due to urban development in the area, wildlife potential is limited to species typical of residential areas.
- Species at Risk (SAR) that may occur in the general area include barn swallow, bobolink, eastern meadowlark, butternut and snapping turtle. These are very unlikely to be found in the study area due to urban development.
- No SAR were observed in the study area.

Aquatic Environment
- A seasonal watercourse is located approximately 200 m west of the overpasses and a permanent watercourse is located approximately 850 m east of the overpasses.
- Both watercourses are warm water fish habitat.
- No aquatic SAR were observed in either watercourse during field investigations.

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<tr>
<th>Natural Environmental Conditions</th>
<th>Vegetation</th>
<th>Watercourses</th>
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<tr>
<td>CUM1-1 Dry-Moist Old Field Meadow Type</td>
<td>Sumac Cultural Thicket Type</td>
<td>Ecological Land Classification (ELC) Boundary</td>
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<tr>
<td>PERMANENT WATERCOURSE</td>
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Archaeology

A Stage 1 archaeological assessment was completed for the study area. The archaeological potential was determined to be low, and no further archaeological assessment is required.

Cultural Heritage

The Highway 401 overpasses at Pitt Street were screened as part of the *Heritage Bridges: Identification and Assessment Guide Ontario, 1945-1965* and were found to not have any heritage value or interest. No further heritage assessments are required at the overpasses.

Land Use

The study area for the overpasses is located within the City of Cornwall, along Highway 401. The City of Cornwall Official Plan, Schedule 3 designates the land in the study area as Urban Residential. The City of Cornwall Zoning and Land Use Map (2012) designates the land surrounding the overpasses as Residential.

At present, there are clusters of several detached homes approximately 800 meters north and 900 meters south of the study area. The land in the immediate vicinity of the overpasses is currently vacant.
## EVALUATION OF ALTERNATIVES

The study began with the collection of information through field work and background research to determine the project need and assess existing conditions. The first step in the design process was to determine whether rehabilitation or replacement of the overpasses is preferred. Once replacement was identified as the preferred solution, alternatives for construction methods (including staging alternatives consisting of single lane closures with median crossover or on the existing alignment) were developed. Alternatives were assessed considering environment, transportation and cost.

Alternatives examined as part of this project include:

1. **Rehabilitation vs. Replacement**
2. **Temporary Median Crossover vs. Existing Alignment**

### CRITERIA | REHABILITATION | REPLACEMENT
--- | --- | ---
**Environment** | Can be completed within the existing footprint of the overpasses with minimal environmental impacts. | May result in environmental impacts outside of the footprint of the existing overpasses but within existing MTO right-of-way. |
| Rehabilitated structures will require future rehabilitations at regular intervals, which will impact traffic at the site. | | |
**Technical Considerations** | Cannot address all existing deficiencies in terms of design standards (e.g., seismic standards, bridge width). | Allows design deficiencies to be corrected in order to meet current design standards. |
| Has a shorter service life than new structures. | Has a longer service life than rehabilitated structures. |
| Minimizes adjustments needed to existing noise wall barriers. | Can accommodate future widening and desired cross-section of Pitt Street. |
| Similar construction duration to replacement. | Similar construction duration to rehabilitation. |
**Cost** | Comparable cost to replacement. | Comparable cost to rehabilitation with reduced future maintenance costs. |
| Increased maintenance costs compared to replacement. | |

**REPLACEMENT** is recommended as the overpasses are approaching the end of their service life, and new overpasses can be designed to meet current standards, have a longer service life and accommodate future growth of Pitt Street.
EVALUATION OF ALTERNATIVES

Alternatives examined as part of this project include:
1. Rehabilitation vs. Replacement
2. Temporary Median Crossover vs. Existing Alignment

During construction, one (1) lane of traffic in each direction will remain open on Highway 401. Two alternative ways of achieving this were considered:

Temporary Median Crossover involves closing one overpass and shifting one lane of Highway 401 traffic to the opposite overpass while the closed overpass is replaced. This process will be repeated the following construction season for the remaining overpass.

Existing Alignment involves maintaining a single lane of Highway 401 traffic on each overpass in each stage of construction, while the other half of each overpass is demolished and replaced.

<table>
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<th>CRITERIA</th>
<th>TEMPORARY MEDIAN CROSSOVER</th>
<th>EXISTING ALIGNMENT</th>
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<td>Natural Environment</td>
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| Social / Cultural Environment | • Minimizes the use of detour routes.  
• Traffic queuing expected on summer weekends.  
• Reduction to one lane west of Brookdale and east of McConnell avenues. | • Minimizes the use of detour routes.  
• Traffic queuing expected on summer weekends. |
| Technical Considerations  | • New structure can be constructed in one stage which will reduce complexity of construction and result in lower future maintenance costs.  
• Construction lasts 2 construction seasons.  
• Avoids lane restrictions and reduced lane width over winter.  
• Structures will be replaced on same alignment with wider cross-section to satisfy design standards. | • Staged construction required for both structures.  
• Construction lasts 2 or more construction seasons.  
• Requires lane restrictions and reduced lane width over winter.  
• Additional structure widening required to accommodate minimum lane widths in each stage of construction. |
| Cost                      | • Slightly higher cost due to construction of temporary median crossover. | • Slightly lower cost. |

TEMPORARY MEDIAN CROSSOVER is recommended for the overpasses because it can be completed with a shorter construction process of reduced complexity, and allows Highway 401 traffic to be restored to two lanes over winter.
To permit a longer service life, reduce maintenance costs, and meet current design standards, it is recommended that the Pitt Street overpasses be replaced with two single-span rigid frame structures. The existing noise barriers on the overpasses will be replaced, and the shape of the overpasses as seen from Pitt Street will change from the current three span configuration to a single span structure with a wider opening over Pitt Street. The overpasses will be wider than the existing to match the existing Highway 401 cross-sections at the approaches.
The replacement of the Highway 401 overpasses at Pitt Street is anticipated to begin in 2018 and last two (2) construction seasons. A temporary median crossover from the eastbound lanes will be installed transitioning traffic to a single lane in each direction on the westbound overpass in spring 2018. The stages of this crossover are illustrated on the following page.

The two lanes of traffic on the overpass will be separated by a temporary concrete barrier. The existing eastbound overpass will be demolished and the new rigid frame overpass will be constructed within the first construction season. After completion of the eastbound overpass, two lanes of traffic will be open on each overpass during winter shutdown. The same process will be used to replace the westbound overpass the following construction season.

Due to lane reductions during construction, there is potential for queuing during peak summer weekends. Temporary speed reductions and appropriate signage to alert motorists will be in place through the construction zone.
HIGHWAY 401 OVERPASS REPLACEMENTS AT PITT STREET

RECOMMENDED PLAN - HIGHWAY 401 TRAFFIC STAGING

STAGE 1 - EASTBOUND MEDIAN CROSSOVER

- From 1 lane to 2 lanes
- Construction ingress
- Construction egress
- Work zone

STAGE 2 - WESTBOUND MEDIAN CROSSOVER

- From 1 lane to 2 lanes
- Construction ingress
- Construction egress
- Work zone
Temporary short-term closures of Pitt Street, as well as truck detours, will be required throughout construction. Signage will be used to indicate a detour route via McConnell Avenue. Brookdale Avenue may also be used as an alternate detour route, although construction is scheduled to take place at the same time at the CN overpass along this route. Each detour route is approximately 5 km long. Timing and duration of closures will be established to minimize traffic impacts and delays.
## ENVIRONMENTAL IMPACTS AND MITIGATION

### WILDLIFE & VEGETATION

Wildlife and vegetation may be disturbed during construction.

- Vegetation damage and removal will be minimized.
- No vegetation clearing will take place from April 1st to August 31st to protect nesting migratory birds. Any wildlife encountered during construction will not be knowingly harmed.
- Should any Species at Risk (SAR) be encountered at any time in the construction area, the Ministry of Natural Resources and Forestry will be consulted to identify appropriate mitigation measures.
- Exposed soils will be re-vegetated with native species.

### FISHERIES & AQUATIC ECOSYSTEMS

Construction of the Highway 401 median crossover may take place near watercourses; no in-water work is anticipated.

- If in-water work is required, it will not be permitted between March 15th and June 30th.
- An erosion and sediment control (ESC) plan will be developed and implemented to minimize the risk of sediment entering the watercourse.
- Construction machinery will be operated in a way that minimizes disturbance to waterbody banks.

### TRAFFIC OPERATIONS & ACCESS

Single-lane operations will be in place on Pitt Street throughout construction. Short-term full closures of Pitt Street and longer-term truck detours are also required. A median crossover is required on Highway 401.

- Detour routes will be established as required during the short-term closures of Pitt Street, and for truck traffic.
- Pedestrian facilities will be maintained on Pitt Street during construction, except when Pitt Street is fully closed.
- Pitt Street full closures will be scheduled during off-peak times to minimize impacts to traffic.
- Lane reductions on Highway 401 are required throughout construction.

### WASTE MANAGEMENT & CONTAMINATION

Waste, excess materials (including salt impacted soil) and emissions have the potential to contaminate the surrounding environment if not managed properly.

- Excess materials will be managed in accordance with provincial standards.
- Stockpiled materials will be kept at least 30 m from watercourses and the top of steep slopes.
- The Contractor will be responsible for controlling the emission of dust and other pollutants and preventing them from leaving the work site.

### ARCHAEOLOGICAL & CULTURAL HERITAGE

There is potential to uncover archaeological resources during construction.

- No significant archaeological resources are known to exist within the study area, which has been significantly disturbed.
- In the event that deeply buried archaeological deposits are discovered in the course of construction, the Ministry of Tourism, Culture and Sport shall be notified immediately.
- In the event that human remains are encountered during construction, the Cemeteries Regulation Unit of the Ministry of Consumer Services shall be notified.

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- Construction machinery will be operated in a way that minimizes disturbance to waterbody banks.

### UTILITIES

Utilities are present in the area of the underpass and relocation is required.

- Utilities will be relocated as required.
- Existing water mains will be protected during construction.

### NOISE

There will be elevated noise levels during construction at the overpasses, including night work for the demolition of the structures. Existing noise barriers on each overpass will be temporarily removed during construction.

- The Contractor will be required to maintain equipment in good operating condition to prevent unnecessary noise, and to minimize idling of equipment.
- The Contractor will abide by the City’s noise control by-law for day-to-day operations.
- An exemption to the City of Cornwall Noise by-law (079-1996) will be obtained prior to construction to permit night work.
- The duration of noise barrier removal will be minimized.
NEXT STEPS

Following this Online Public Information Centre, next steps will include:

• Reviewing and responding to comments received;
• Refining the Detail Design and Mitigation Plan;
• Preparing separate Transportation Environmental Study Report (TESR) for public review;
• Finalizing the Detail Design and preparing the contract package; and
• Submitting the project for tender.

Thank you for participating in the Online Public Information Centre. We welcome your comments. Information is being collected in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record. If you have accessibility requirements in order to participate in this project, please contact the undersigned.

Stakeholders and the public will be notified when the TESR for this project is available for review.

If you would like more information, please contact:

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Please submit any questions or comments to the contacts listed above or here by September 19, 2017.

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