Welcome to the

PUBLIC INFORMATION CENTRE

for the

Highway 401 Widening

From Highway 403/410 Interchange to the Credit River

Detail Design Project

G.W.P. 2150-01-00 and G.W.P. 2152-01-00

Wednesday November 13, 2013

4:00 p.m. to 8:00 p.m.

PLEASE SIGN IN

Purpose of the Public Information Centre

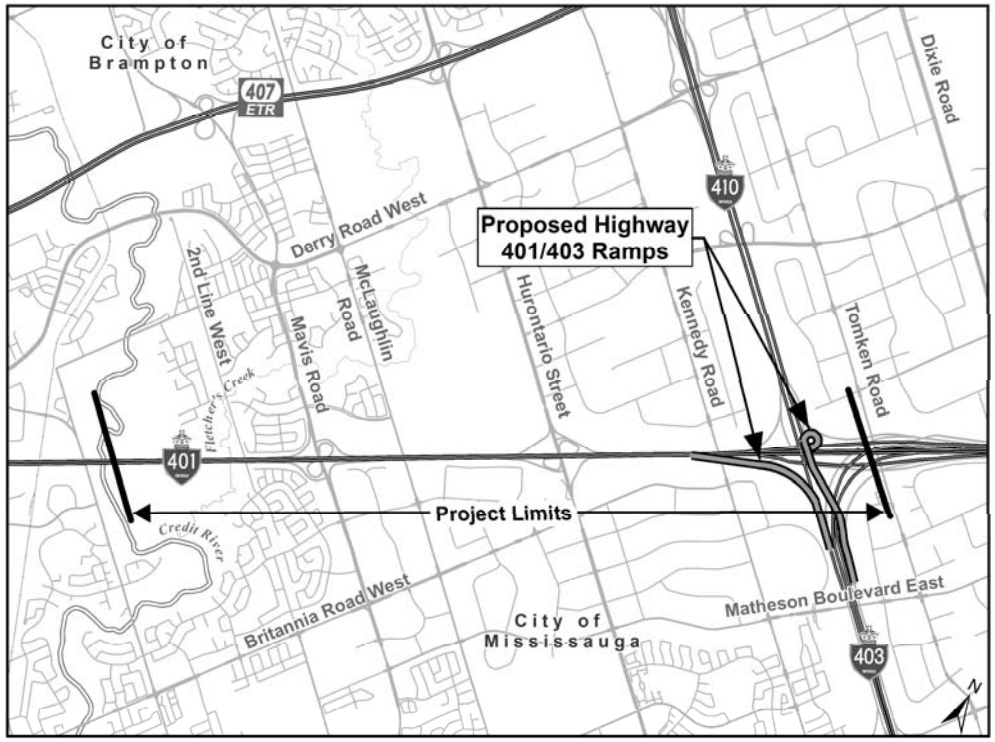
The purpose of this Public Information Centre (PIC) is to seek input on the Detail Design for the recommended plan and answer questions about the project.

Purpose of the Project

- The purpose of the project is to carry out a Detail Design and Class Environmental Assessment (EA) for the ultimate widening of Highway 401 from the Highway 403/410 interchange to the Credit River, a distance of 7 km.

- The project will complete the expansion of Highway 401 within the project limits from its current 6- lanes to a 12-lane core/collector system, as documented in the Transportation Environmental Study Report (TESR) for the *Preliminary Design of Highway 401 From Highway 410/403 Interchange to East of the Credit River*, August 2005.

- Upon completion, the project will be documented in Design and Construction Reports (DCRs) and will include mitigation measures and future commitments to address the identified environmental impacts.



Project Background

- In 1982, the Ministry of Transportation completed a Preliminary Design study for Highway 401 from Renforth Drive to 2nd Line West (G.W.P. 127-66-64). This study identified the need for significant capacity improvements to accommodate growing travel demands, including the need for an express/collector system west of the Highway 410/403.

- In August 2005, the Ministry of Transportation completed a Preliminary Design study for improvements to Highway 401 from the Highway 410/403 interchange westerly to east of the Credit River (G.W.P. 2149-01-00 and 2150-01-00). This study was undertaken to review and update previous work and look for opportunities to integrate High Occupancy Vehicle (HOV) facilities within the corridor.
  - The study included two (2) PICs held in June 2003 and June 2004.
  - The Transportation Environmental Study Report (TESR) was approved with Conditions by the Minister of the Environment in 2007 following receipt of two (2) bump-up requests (Part II Orders).

- In June 2011, the Ministry of Transportation initiated the current Detail Design project (G.W.P. 2150-01-00).

Design Features

This project involves:

Under G.W.P. 2150-01-00

- Expansion of Highway 401 from its current 6-lanes to a 12-lane core/collector system including:
  - Collector lanes consisting of three (3) general purpose lanes in each direction;
  - Core lanes consisting of two (2) general purpose lanes and one (1) High Occupancy Vehicle (HOV) lane in each direction;
  - HOV lanes from west of Mavis Road to east of Highway 410 to be opened following construction completion;
  - Removal of the 2nd Line West structure over Highway 401 to accommodate the highway widening;
  - New ramps from Highway 401 eastbound to Highway 403 southbound and from Highway 403 northbound to Highway 401 westbound at the 401/410/403 interchange;
  - New structures carrying the proposed collector lanes over Fletcher's Creek;
  - Stormwater management strategy;
  - High mast illumination on Highway 401 throughout the project limits; and
  - Reconstruction of the existing highway pavement.

Under G.W.P. 2152-01-00

- Extension of the Mavis Road bridge as an advanced construction contract to accommodate the proposed additional collector lanes.

EA Process

- This project is following the approved environmental planning process for **Group 'B' projects**, under the Ministry's Class Environmental Assessment (EA) for Provincial Transportation Facilities (2000), with the opportunity for public input throughout.

- **Group 'B' Projects** generally include major improvements to existing provincial transportation facilities. They do not require formal EA Act review and approval, provided the Class EA process is followed.

- There is an opportunity at any time during the Class EA Process for interested persons to provide comments and review outstanding issues.

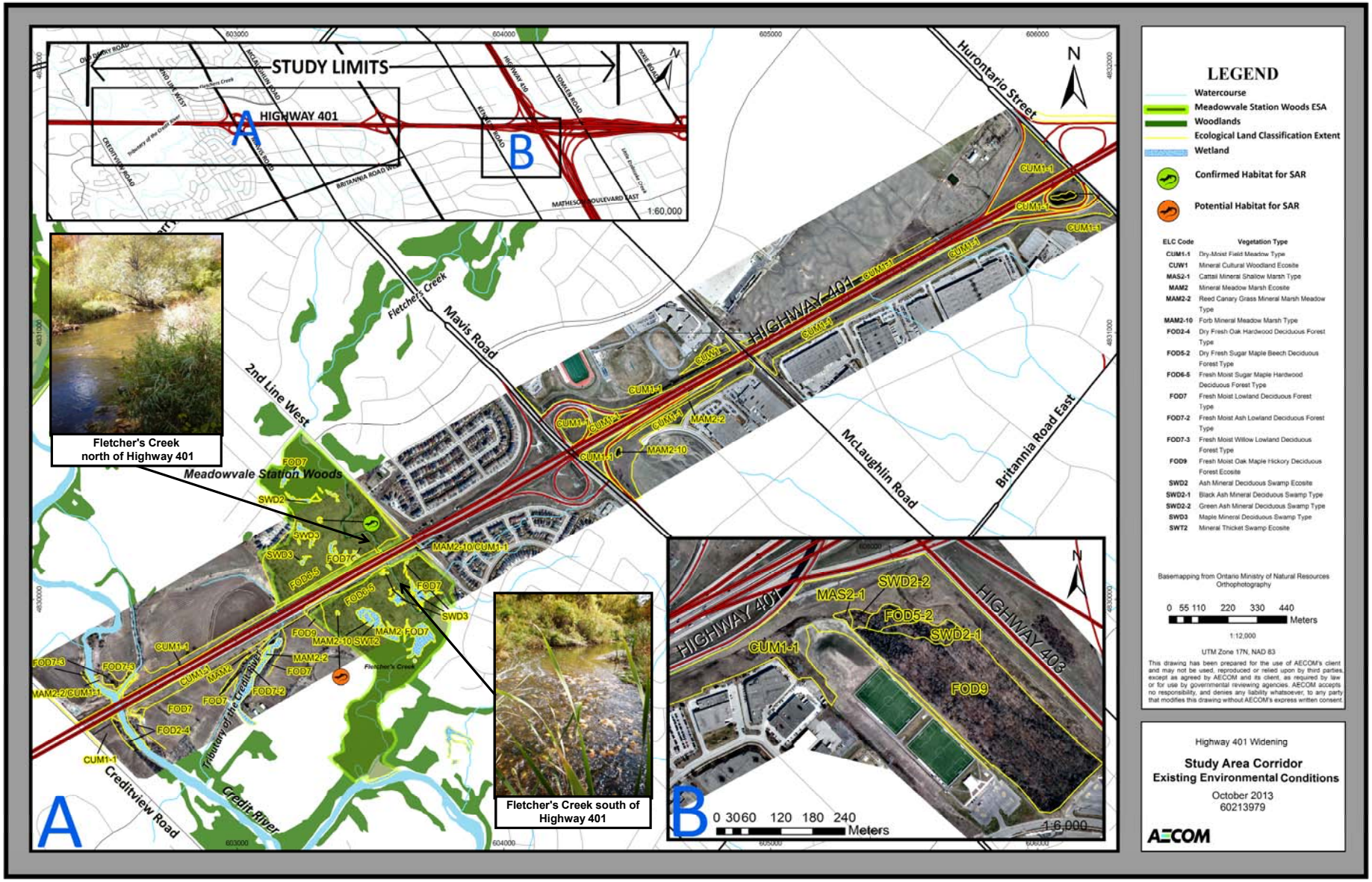
- The project will proceed with documentation as follows:
  - Extension of the Mavis Road bridge will be documented in a **Design and Construction Report (DCR)** for construction start in 2014;
  - The remainder of the highway expansion work will be documented in a separate **DCR**; and
  - An **Addendum to the August 2005 TESR** will be prepared to document the proposed extension of Belgrave Road to connect to Mavis Road. Only the changes documented in the Addendum are eligible for a bump-up (request for a Part II Order by the Minister of the Environment).
- There is no bump up opportunity (request for Part II Order by the Minister of the Environment) for a DCR.
- Details regarding the release of these documents will be provided in future notices.

Existing Environmental Conditions

Natural Environment:

- The project area contains two watercourses, including:
  - ***Tributary of the Credit River*** – crosses Highway 401 approximately 0.7 km east of the Credit River. It originates on the north side of the Highway to the west of Meadowvale Station Woods and discharges approximately 700 m downstream of the highway. This tributary is an intermittent stream with a coolwater thermal classification and is located within the Credit River Watershed.
  - ***Fletcher's Creek*** – large meandering watercourse that flows through Meadowvale Station Woods and discharges to the Credit River approximately 1.5 km downstream of the highway. Fletcher's Creek is a permanent stream with coolwater thermal classification and is located within the Credit River Watershed.
- There is evidence of wildlife crossings through existing culverts at the Tributary of the Credit River and Fletcher's Creek.
- Species at Risk and/or habitat are present within the project area including the Jefferson Salamander (*Ambystoma jeffersonianum*) and Redside Dace (*Clinostomus elongatus*), as designated under the *Endangered Species Act* (2007).
- The Environmentally Sensitive Area (ESA) and Life Science Area of Natural and Scientific Interest (ANSI) named *Meadowvale Station Woods*, bisects Highway 401.
- There are no Provincially Significant Wetlands within the project limits, however there is an unevaluated wetland near the Highway 403/410 interchange.
- MOE Well Water Records indicate that there are fourteen (14) wells located in the project area, the majority are inactive, decommissioned, or demolished.

Existing Environmental Conditions



Existing Environmental Conditions

Socio-Economic Conditions:

- There are three (3) planning districts: Meadowvale Village (Residential); East Credit (Residential); and Gateway (Employment) within the project area.
- The Highway 403/410 and Highway 401 interchange is located within the Parkway West Belt Plan Area (2008) under the Public Use Areas land use category.
- Land uses in the project area include commercial/industrial developments to the east of Hurontario Street and residential lands from Mavis Road to 2nd Line West. Land uses west of 2nd Line West primarily consist of forested and agricultural land.
- The existing Highway 401 is intersected by the following north-south urban roads that provide access to local residents and businesses:
  - 2nd Line West
  - Mavis Road
  - McLaughlin Road
  - Hurontario Street (Highway 10)

Cultural Landscapes and Archaeology:

- There are eleven (11) cultural heritage landscapes (CHL) and built heritage resources (BHR) within or adjacent to the project area, including roadscapes, bridges, waterscapes and farm complexes.
- The project area has been cleared from archaeological potential following a Stage 2 archaeological assessment.

Noise Assessment

- A Noise Sensitive Area (NSA) is defined as a noise sensitive land use with an outdoor living area, including: single family houses (typically backyard); townhouses (typically backyard); multiple unit buildings, such as apartments with outdoor living areas for use by all occupants; hospitals and nursing homes, where there are outdoor living areas for patients.

- Highway noise levels take into consideration the vehicle type, road grade, distance from an NSA, type of ground between the road and the NSA and travel speeds.

- A noise analysis was carried out to assess the potential impacts of the proposed highway conditions. The analysis determined that no additional noise mitigation measures are warranted.

New Highway 401 West to Highway 403 South Ramp and Highway 403 South to Highway 401 West Ramp

See Roll Plan for Greater Detail

Key Changes from the 2005 TESR

Key changes include:

- An eastbound transfer from collector to core has been added;
- To address concerns with respect to wildlife crossings, the Fletcher's Creek crossing was enlarged and wildlife fencing will direct animals to safe crossings at the Credit River and Fletcher's Creek;
- A Stormwater (SWM) management pond identified for the north side of Highway 401 at 2nd Line West has been removed from the design. The SWM strategy for the area draining to Fletcher's Creek will include a series of small wetlands within the Mavis Road interchange. This will allow for additional vegetation restoration once 2nd Line West is closed;
- MTO's Green Pavement Design Rating System 'GreenPave' was considered in the development and evaluation of pavement recommendations; and
- 'Green Road' design concepts were incorporated to mitigate environmental impacts (A copy of the Report is on the Reference Table).

Fletcher's Creek Crossing

- The August 2005 TESR recommended retaining the existing twin cell culvert and constructing a third cell under the future core lanes to address hydraulic deficiencies. In addition, two (2) rigid frame structures were proposed to carry the future Highway 401 collector lanes over Fletcher's Creek.
- The project team has re-evaluated the crossing and determined that full replacement with two bridges is preferred:
  - Provides enhancement to the SAR designated watercourse;
  - Provides ultimate infrastructure upgrade within the Highway 401 core/collector expansion;
  - Culvert inspection revealed that the existing structural culverts are weak and would require rehabilitation;
  - Allows for additional room for construction access;
  - Will significantly reduce upstream flooding conditions;
  - Allows opportunity for increased light, air penetration and a larger opening to make it more attractive to wildlife crossing the highway; and
  - Reduces future maintenance and disruption of Highway 401 traffic.
- MTO has obtained MNR's agreement in principle on the design concept including the span of the new bridges.

Existing twin cell culvert at Fletcher's Creek

Proposed replacement with two full span bridges

Conceptual Fletcher's Creek Crossing

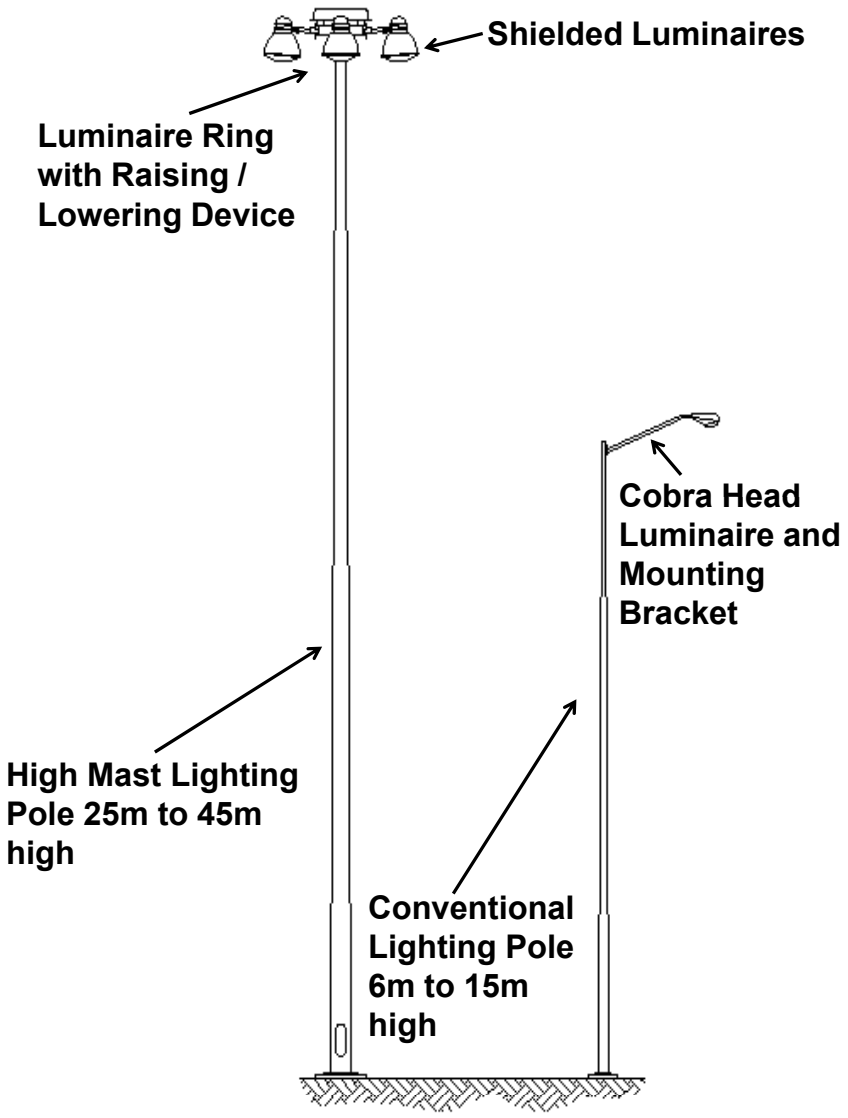
Conceptual bird's eye view of 2 clear span bridges

Conceptual view from south side of Highway 401

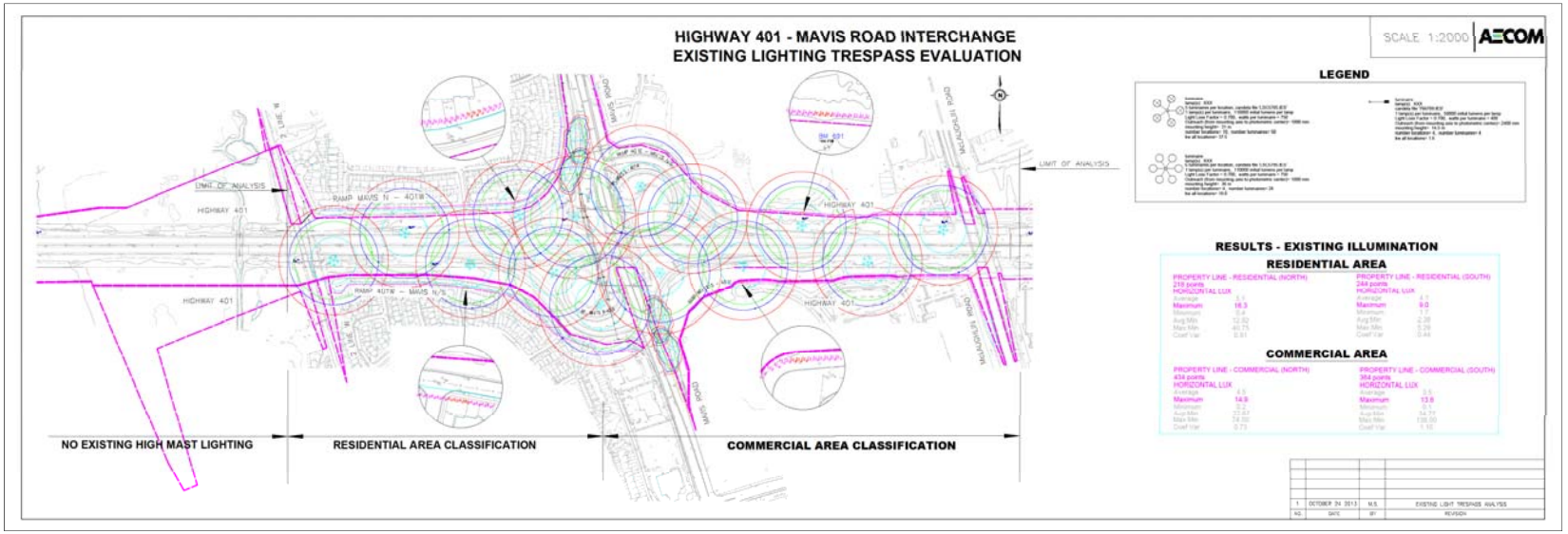
Conceptual view from north side of Highway 401

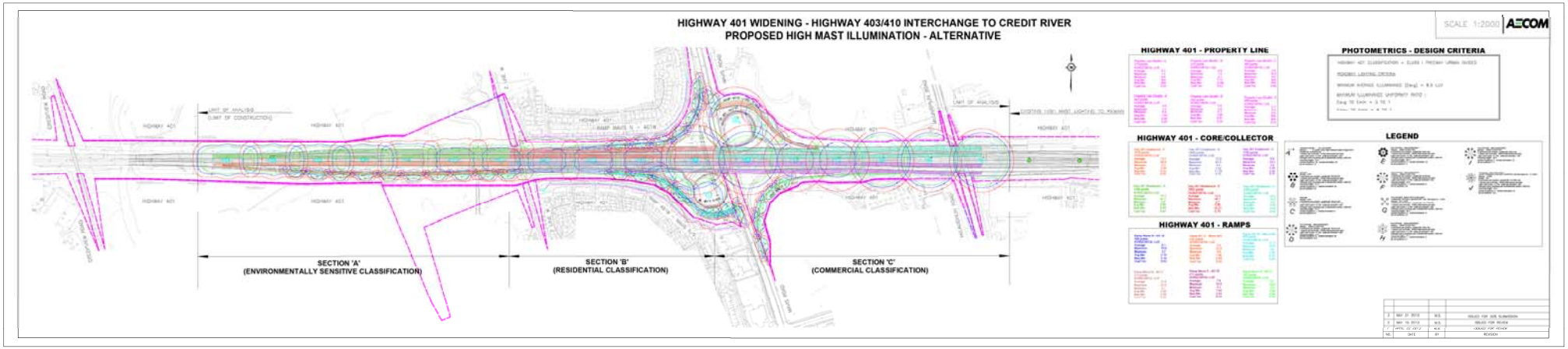
Lighting System Improvements

- High mast system will be implemented within the entire project corridor and will extend along Highway 401 from Mavis Road to the Credit River.
- High mast lighting at the Mavis Road interchange will be upgraded to meet current standards and to reduce the amount of light trepass onto private properties.
- Special measures will applied to control light and minimize light spillage into environmentally sensitive and residential areas:
  - Environmentally Sensitive Area extends from 2nd Line West to the Credit River; and
  - Residential zone covers the section of Highway 401 between Mavis Road and 2nd Line West.
- In some sections, high mast lighting will be supplemented by lower conventional lighting poles to minimize light spillage.
- High mast lighting poles will be located in the median for the main sections of the Highway 401 core/collector system and located strategically within the Mavis Road interchange to provide uniform coverage of Highway 401 and access ramps.
- Shielded high mast lighting fixtures have been selected to significantly reduce glare and create a well defined lighting corridor while controlling lighting levels beyond the MTO Right-of-Way.



Existing and Proposed Illumination Plan

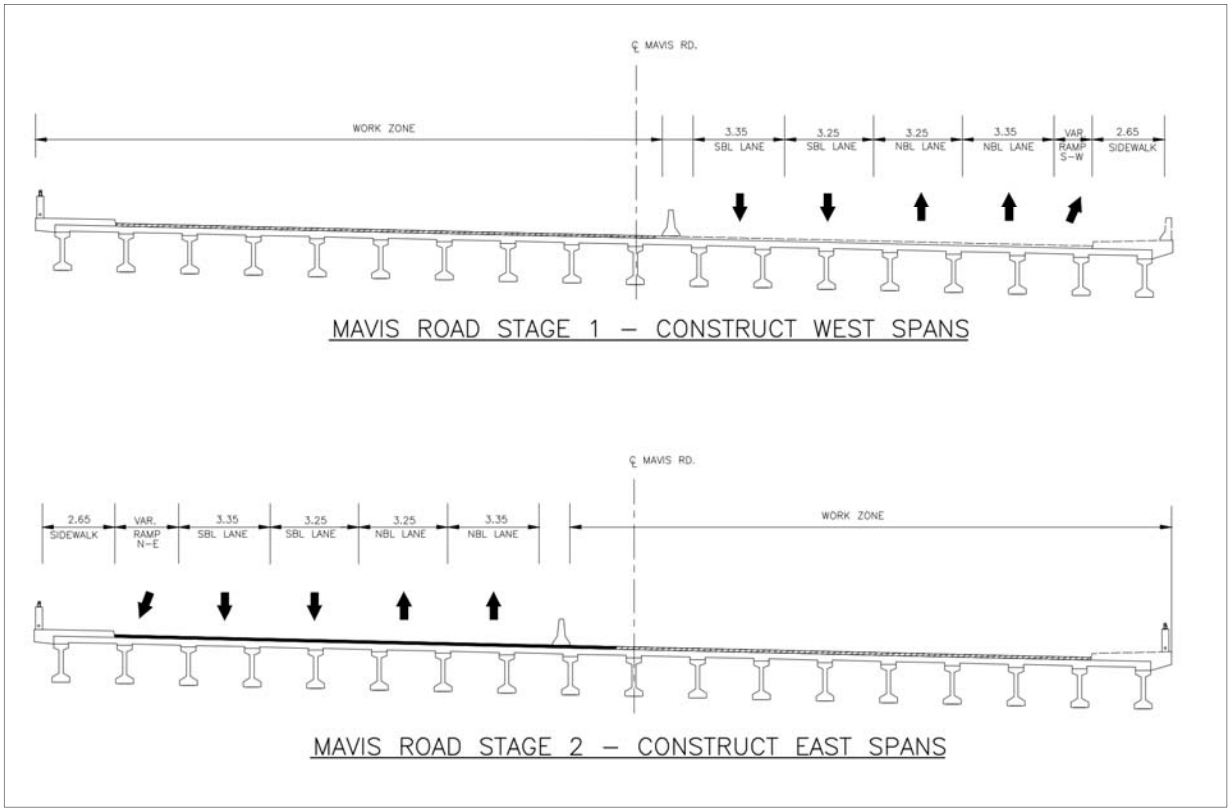




See Roll Plan for Greater Detail

Construction Staging – Mavis Road

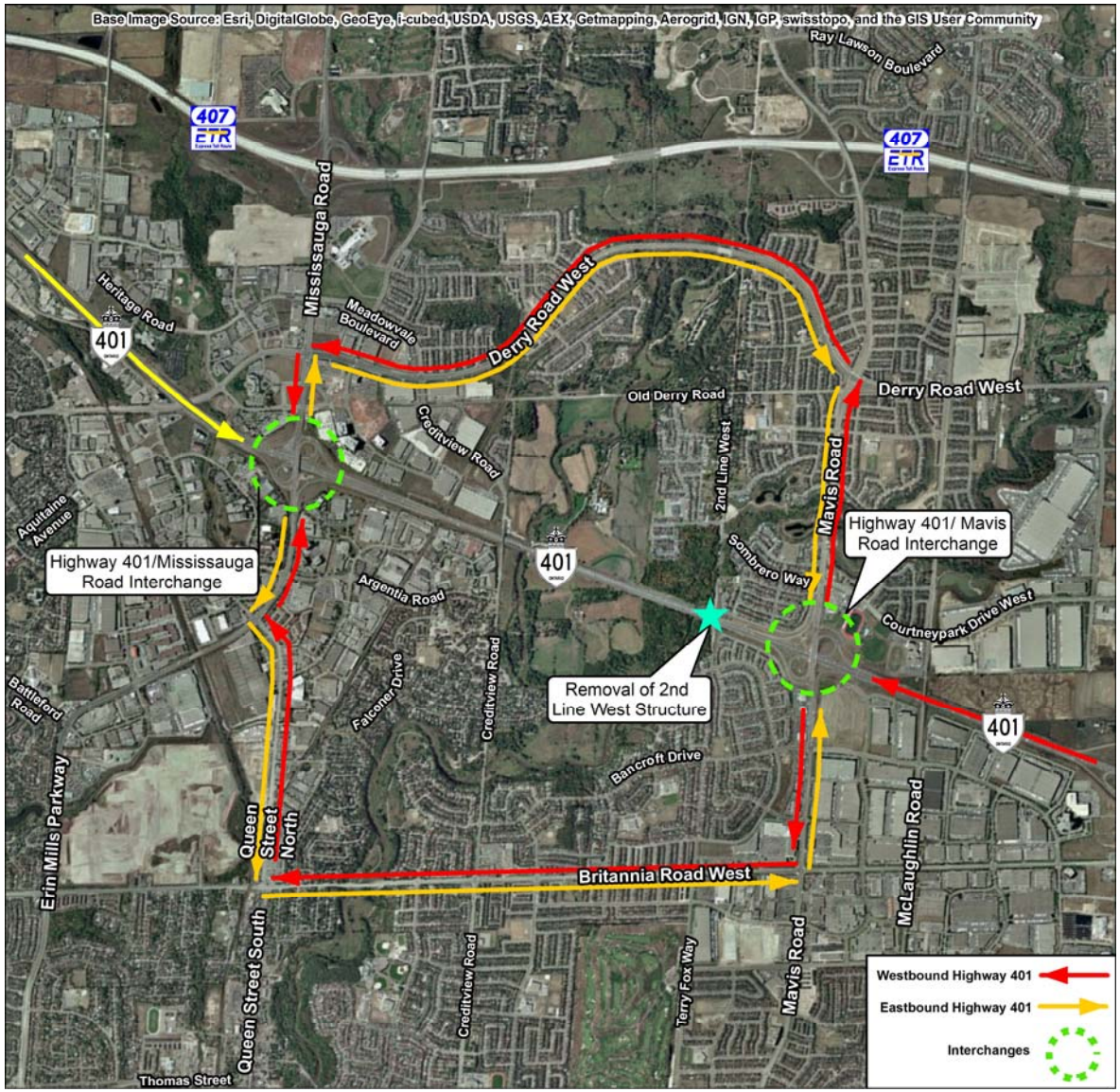
- Extension of the Mavis Road bridge will be required in order to accommodate widening of the highway.
- It is expected that construction will take place over a 2-year period.
- During construction of the interchange, two lanes of traffic will be maintained in both directions at all times.



See Traffic Staging Drawings for More Detail

Proposed Construction Staging – Removal of 2nd Line West

- Removal of the 2nd Line West structure will require the temporary full closure of Highway 401 in the eastbound and westbound direction from Mavis Road to Mississauga Road.
- Closure will take place over the weekend for approximately a 12-18 hour period; typically starting 11pm on Saturday to 5pm on Sunday.
- A Communication Plan will be developed to include:
  - PVMS signs advising motorists in advance of and during construction;
  - Notification to transit and emergency services;
  - Media notification; and
  - Signage along all detour routes.
- Detours will ensure that thru traffic avoids travel through residential neighbourhoods.
- Details are subject to approval by the City of Mississauga and the Regional Municipality of Peel.
- Detour routes include Mavis Road, Derry Road West, Britannia Road West, Queen Street North and Mississauga Road.



Potential Environmental Impacts and Mitigation

Potential Issues/Effects	Mitigation
Natural Environment	

Soil Erosion and Sediment Control
• Excavation and grading activities associated with construction may result in erosion and generation of sediment carried into the watercourses within the project limits
	• Sedimentation control measures consisting of the installation of silt fencing, as per Ontario Standard Drawings, will be installed prior to construction and any surface grading. Plans will be developed and reviewed by the CVC and MNR.
	• Erosion and sediment control practices will focus on two separate targets: minimizing site erosion; and, keeping any eroded material on site. Best management practices for erosion and sediment control include:
	  • Silt fence barriers, erosion control blanket, and rock flow checks will be implemented during construction to prevent migration of sediment to the watercourses within the project area and all other natural features;
	  • Rip rap or other stabilizing systems will be installed at outlets or spillways; and
	  • Stabilization and re-vegetation of all disturbed surfaces will be established as soon as possible with the most appropriate treatments available.

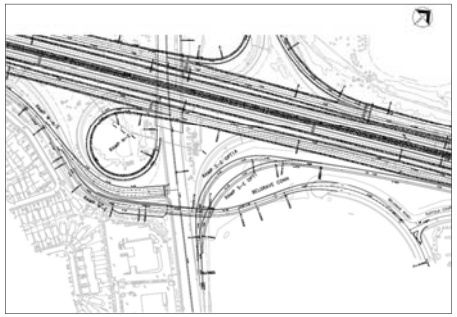
Watercourses and Fisheries • Potential for impacts to fish habitat in Tributary to the Credit River and Fletcher's Creek	• Maintain fish habitat through structures with fisheries resources by providing natural substrate and channel form. • Apply timing constraints for construction. • Contract package to include appropriate timing restrictions and mitigation design (i.e. open bottom culvert, clear span bridge, where possible). • Manage fisheries impacts and mitigation in accordance with the Federal *Fisheries A*ct and the MTO/DFO/MNR Fisheries Protocol. • Reinstate and expand culvert inlet and outlet at Fletcher's Creek and enhance pools at inlet and outlet of culvert at tributary of the Credit River.
Wildlife • Potential for wildlife passage through existing culverts at Tributary to the Credit River and Fletcher's Creek	• A wildlife crossing will be established at Fletcher's Creek that allows for increased light, air penetration and a larger opening to make it more attractive to wildlife crossing the highway and provides enhancement to the SAR designated watercourse. • Fencing will be provided along Highway 401 within the Meadowvale Station Woods to encourage/direct wildlife to use the crossing.
Vegetation • Loss of vegetation due to construction	• Develop an overall-benefit plan and contract documents to include operational constraints and special provisions with respect to vegetation removal.
Species At Risk • Loss of habitat for species at risk due to construction	• A permit will be obtained under the *Endangered Species Act* for the area of the Meadowvale Station Woods and crossing of Fletcher's Creek prior to construction for two species at risk. • Tree and site clearing will take place between September and March 31st and avoid the months of April until August, in accordance with the *Migratory Birds Convention Act*.
Groundwater/Surface Water • Potential for increased pollutants to enter receiving watercourses and groundwater recharge areas	• Drainage will be designed to manage stormwater quality and quantity, and will include a series of small wetlands within the Mavis Road interchange for the area draining to Fletcher's Creek. • Obtain Permit to Take Water for dewatering activities exceeding 50,000L/day. • Re-fuelling during construction will occur in designated areas.
Management of Excess Material and Property Contamination	• Management of excess materials will be dealt with in accordance with normal MTO practices (regulated by OPSS 180). • Lead paint on guard rails will be managed in accordance with the *Ontario Occupational Health and Safety Act* (Reg. 843) and *Ontario Environmental Protection Act* (Reg. 347).

Potential Environmental Impacts and Mitigation

Potential Issues/Effects	Mitigation
Socio-Economic Environment	
Noise • Highway operational noise • Potential noise increase during construction activities	• A noise analysis was carried out to assess the potential impacts of the proposed highway conditions. The analysis determined that no additional noise mitigation measures are warranted. • The Contractor will be required to maintain equipment in good operating condition to prevent unnecessary noise and restrict idling of equipment to the minimum necessary to perform the work. • Complaints about noise will be investigated in accordance with the MTO/MOE Noise Protocol. • Adherence to the municipal noise by-law.
Archaeology • Potential impact to archaeological resources	• A Stage 2 Archaeological Assessment recommended that no further archaeological concern is warranted for lands with the project area. • If any archaeological and/or historical resources be discovered during construction, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act.* Construction must cease immediately and a licensed consultant archaeologist must be engaged to carry out archaeological fieldwork in compliance with Section 48(1) of the *Ontario Heritage Act.* Work in the area would not resume until cleared by the Ministry of Tourism, Culture and Sport.
Property Impacts • Limited property requirements for widening	• MTO will negotiate with individual owners for property purchase in accordance with standard MTO procedures.
Emergency Access • Temporary or permanent change to access	• Notify OPP and emergency medical services of construction staging, start of construction, temporary closure of Highway 401 for the removal of the 2nd Line West structure, etc. to minimize delay in emergency response times during and after construction.
Air Quality (Dust)	• Dust suppressants will be used during construction. • Construction equipment will be required to conform to emissions standards and the idling of equipment will be restricted to ensure that air quality is not unduly impacted.
Utilities • Potential impacts to existing utilities	• Utility relocations will be coordinated.
Traffic • Motorists may experience delays and disruption during construction	• Collector lanes will be generally constructed first thereby minimizing traffic disruptions on Highway 401. • Closure of lanes only once additional capacity of the network has been provided. • Short-term closures will be limited to off-peak and/or nighttime hours.

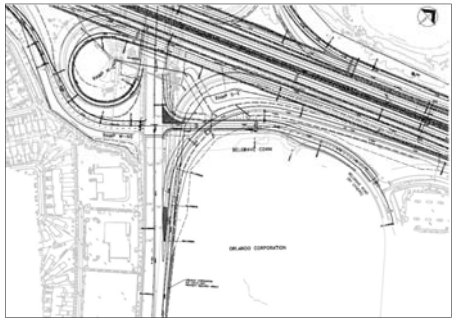
Proposed Belgrave Road Extension

- At the request of the City of Mississauga, the Ministry of Transportation has investigated the need for a future extension of Belgrave Road from the Highway 401 EB off ramp at Mavis Road easterly to the existing cul-de-sac west of Suffolk Court – a distance of approximately 200m.
- Three (3) alternatives were considered. They include:



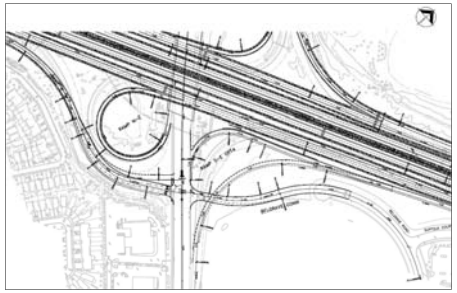
Alternative A – Mavis Road Underpass to Belgrave Road

- The full grade separated option would provide unimpeded unidirectional traffic flow onto Belgrave Road from the W-N/S ramp via a tunnel under the existing Mavis Road, similar to that currently under construction at Hurontario Street.
- Access from Highway 401 east would be split into two ramps when approaching Mavis Road. Ramp W-N/S would approach Mavis Road at-grade while a second Ramp W-E would tunnel under Mavis Road [and S-E Ramp] to connect to Belgrave Road.



Alternative B – At-Grade Intersection with Mavis Road Structure Over Realigned Ramp S-E

- An at-grade connection would provide 2-way access to Belgrave Road from Mavis Road. Some turning movements would be restricted at the intersection (i.e. Belgrave WB Left) to optimize traffic operations.
- A south to east at-grade ramp would be constructed under the Belgrave Road extension.
- MTO would construct the S-E ramp on a lower profile and the City would build a bridge over the ramp to connect Belgrave Road at a later date.



Alternative C – At Grade Full Intersection at Mavis Road Ramp S-E Relocated North of the Existing Intersection

- MTO Central Region has utilized this type of connection within Parclo-A type interchanges in some recent highway projects to maintain connections to existing connected roadways.
- Construction of a tighter Ramp S-E avoids the construction of a bridge structure.

Proposed Belgrave Road Extension

- **Alternative B** is selected to be carried forward as the Recommended Plan. This alternative provides operational benefits including providing free flow of traffic and provision of a 'right out' access to northbound Mavis Road; allows for the protection of a future Belgrave extension within the current MTO contract; and, has minimal impact to existing environmental features.
- For this proposed design enhancement, MTO will prepare an Addendum to the August 2005 TESR, on behalf of the City of Mississauga. The TESR Addendum will document the proposed change to the 2005 TESR and consultation which has taken place. It will be available for a 30-day public review period. Only the changes identified in this presentation and documented in the Addendum will be eligible for a 'bump up' (request for a Part II Order by the Minister of the Environment).
- A Notice of TESR Addendum Filing will be posted in the **Mississauga News**, **L'Express de Toronto**, as well as the project website at **www.401expansion-mississauga.ca**.
- Timing for the construction of the Belgrave Road extension will be determined at a later date.

Copy of the Geometric Feasibility Design Report (August 2012) on the Reference Table

Next Steps


Transportation AECOM

Ministry of Transportation
Highway 401 Widening
From Highway 403/410 Interchange to the Credit River
Design and Construction Report
GWP 2150-01-00

Prepared by:
AECOM

Project Number:

Date:
Winter 2014

Following tonight's information session we will:

- Review and consider your comments and input;
- Respond to your written questions;
- Produce the following EA documentation:
  - DCR to document the reconstruction of the Mavis Road interchange;
  - DCR to document the remainder of the highway expansion work, with the exception of the proposed Belgrave Road extension; and
  - TESR Addendum to the 2005 TESR to document the proposed extension of Belgrave Road.

Details regarding the release of these documents and will be provided in future notices, as well as the project website at www.401expansion-mississauga.ca.

Once the Detail Design and contract package for the Mavis Road interchange and the remainder of the highway expansion is finalized, the project will proceed to construction.

The City of Mississauga is considering a separate study for pedestrian/cycling options across Highway 401 at the location of the removed 2nd Line West structure. This study will be undertaken in accordance with the *Municipal Class EA* process.

Remain Involved in the Project

Thank you for attending this PIC and participating in the Detail Design process. We encourage you to fill out the comment sheet provided and drop it off in the comment box. Alternatively, you can mail, fax, or email your comments by December 13, 2013 to either of the individuals listed below:

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All comments received will be reviewed and considered in the Detail Design process to implement the proposed improvements within the Highway 401 Project Limits. Public comments will be 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.