

Steeles Avenue (Regional Road 8) Transportation Corridor Improvements Municipal Class Environmental Assessment Study

Tremaine Road (Regional Road 22)
to Industrial Drive
Town of Milton

Welcome

Public Information Centre #1
November 21, 2019

Members of the Project Team are available to discuss
and answer any questions you may have.

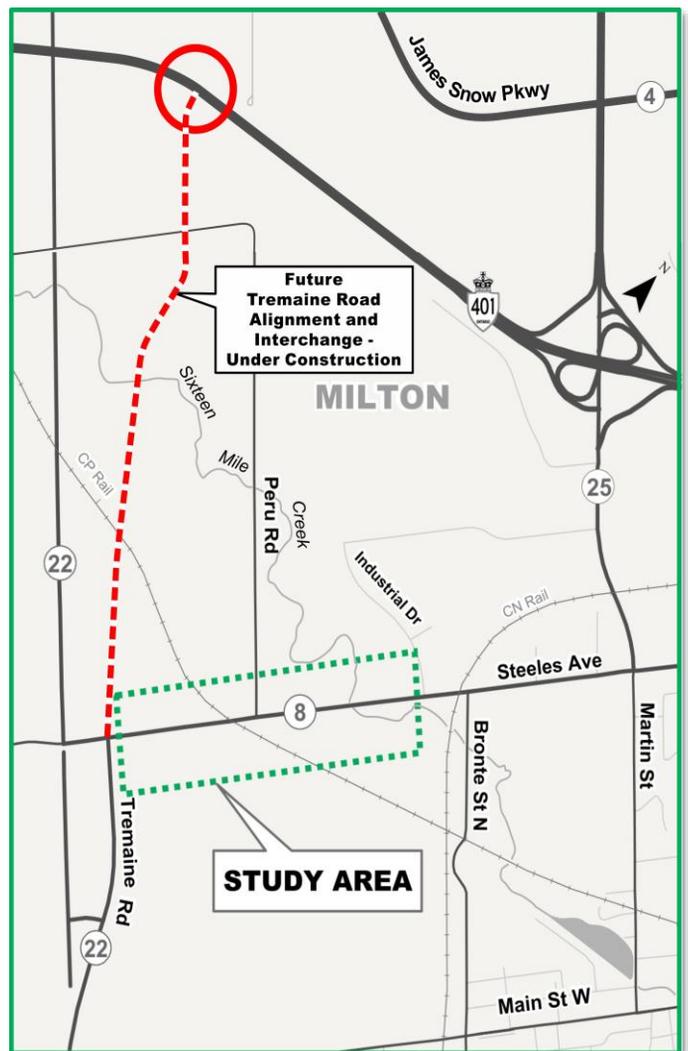
Please Sign In



Study Area Overview

Halton Region is carrying out a Municipal Class Environmental Assessment (Class EA) Study for improvements to Steeles Avenue (Regional Road 8) Transportation Corridor from Tremaine Road (Regional Road 22) to Industrial Drive in the Town of Milton to address future growth and travel demand to 2031.

- ❖ Steeles Avenue is a Regional **Major Arterial Road** serving both local and inter-Regional trips
- ❖ It is a **key east-west road connection with future access to Highway 401 via the future Tremaine Road extension and interchange**
- ❖ Study area extends from Tremaine Road to Industrial Drive
- ❖ Existing road character is generally rural
- ❖ Largely within the **Sherwood Survey Secondary Plan area** (future development)
- ❖ Includes **existing at-grade CP railway crossing** located west of Peru Road
- ❖ Includes Sixteen Mile Creek and Tributary Crossing



Purpose of Public Information Centre #1

The purpose of this Public Information Centre (PIC) is to present and discuss the work completed to date and collect public input on:

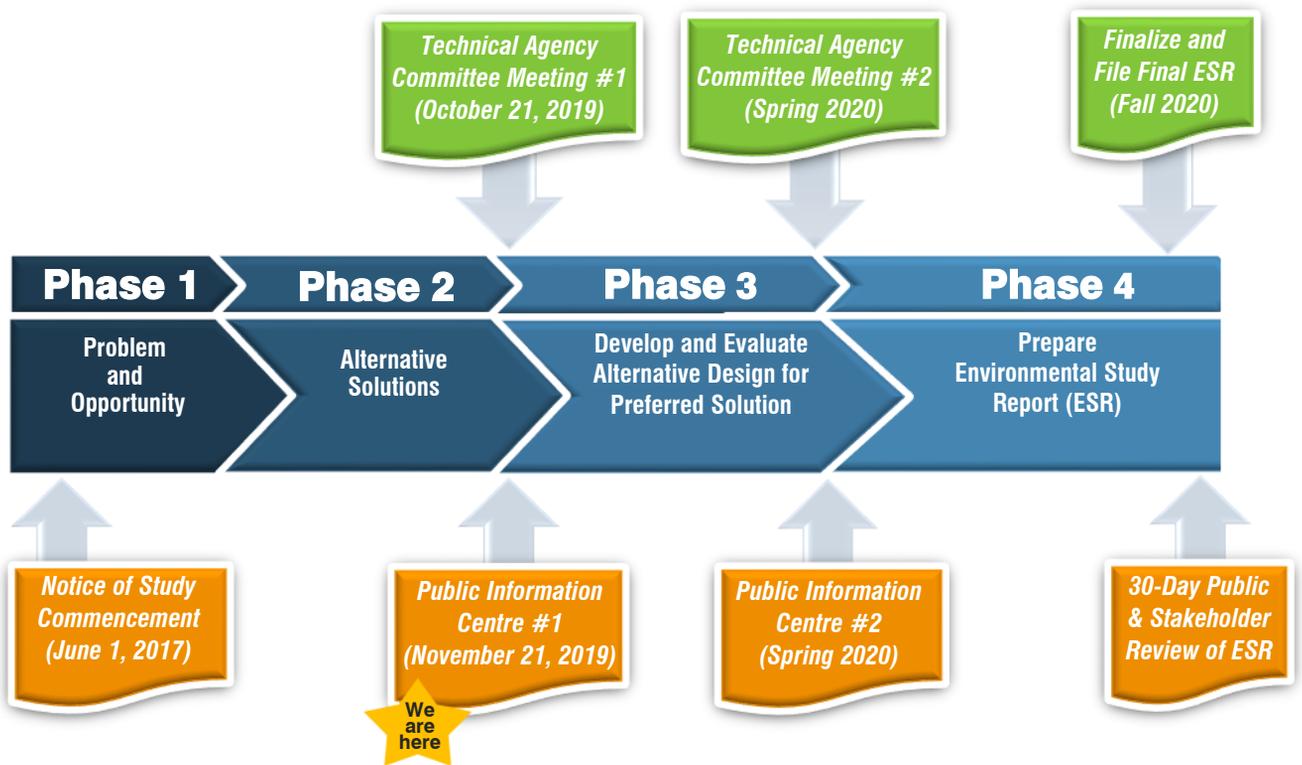
- ❖ Study Process and Schedule
- ❖ Background Information and Existing Conditions
- ❖ Problem and Opportunities
- ❖ Alternative Solutions
- ❖ Corridor Concepts and Evaluation
- ❖ Next Steps

Comment sheets are available and we encourage you to fill one out at the PIC or submit to the Project Team by

Friday, December 6, 2019.



Study Schedule

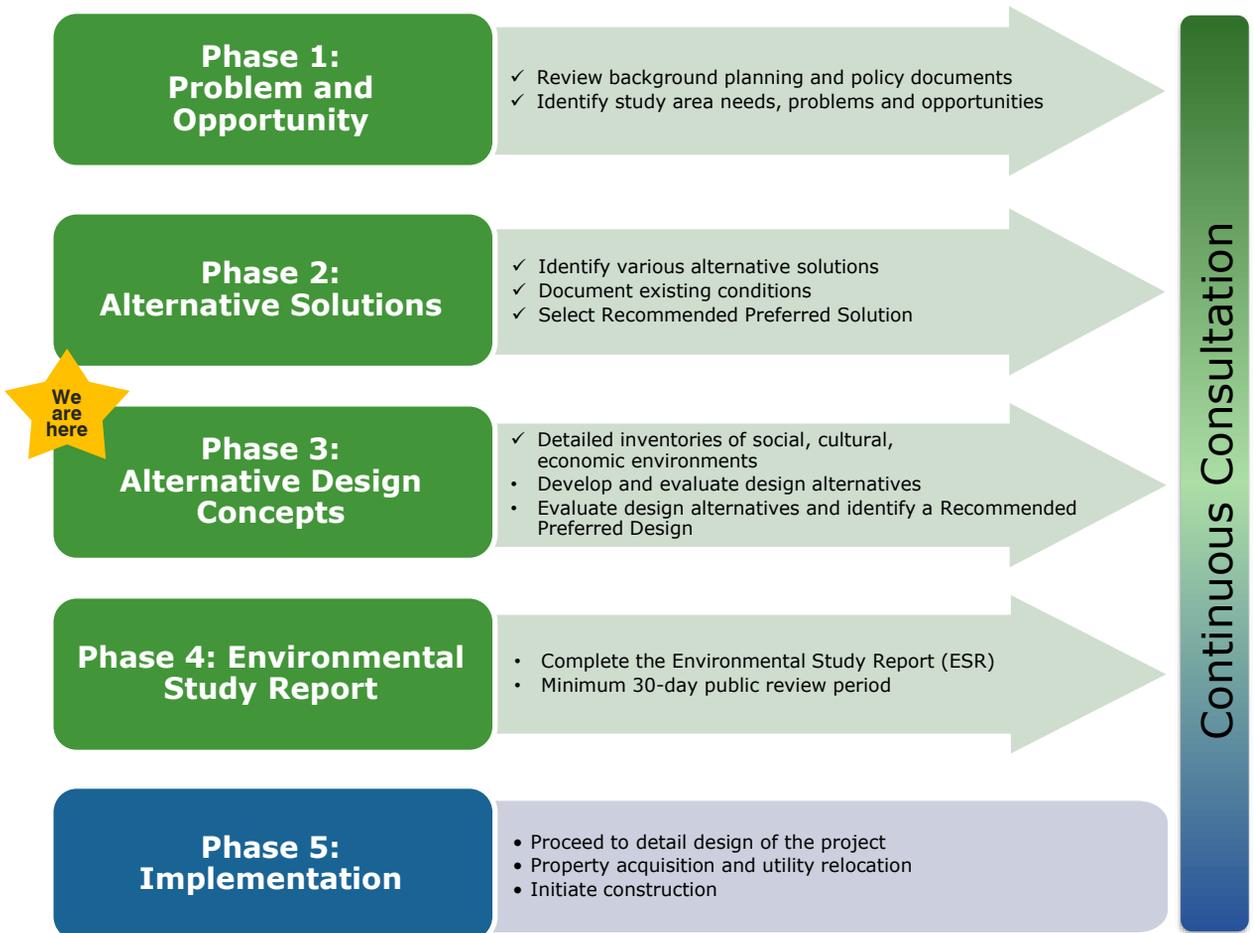


Study Organization



Study Process

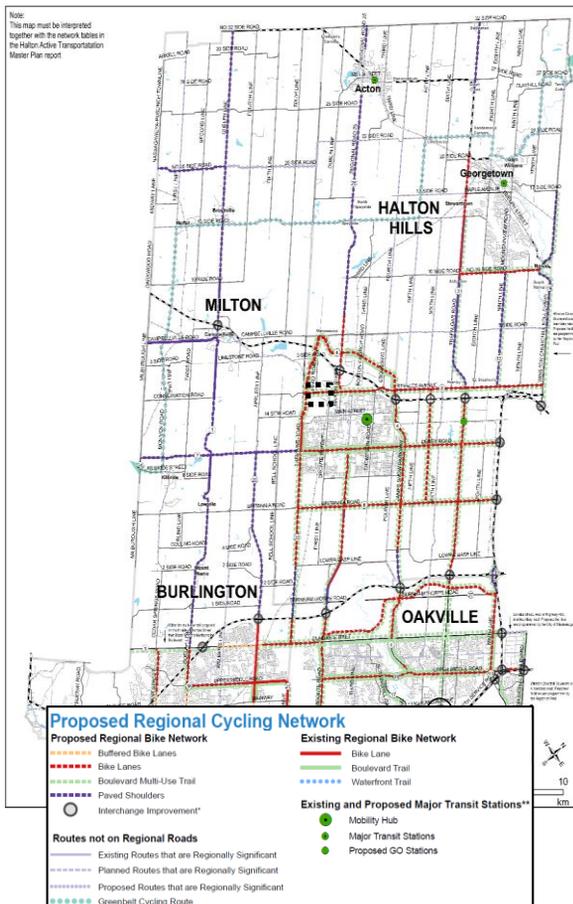
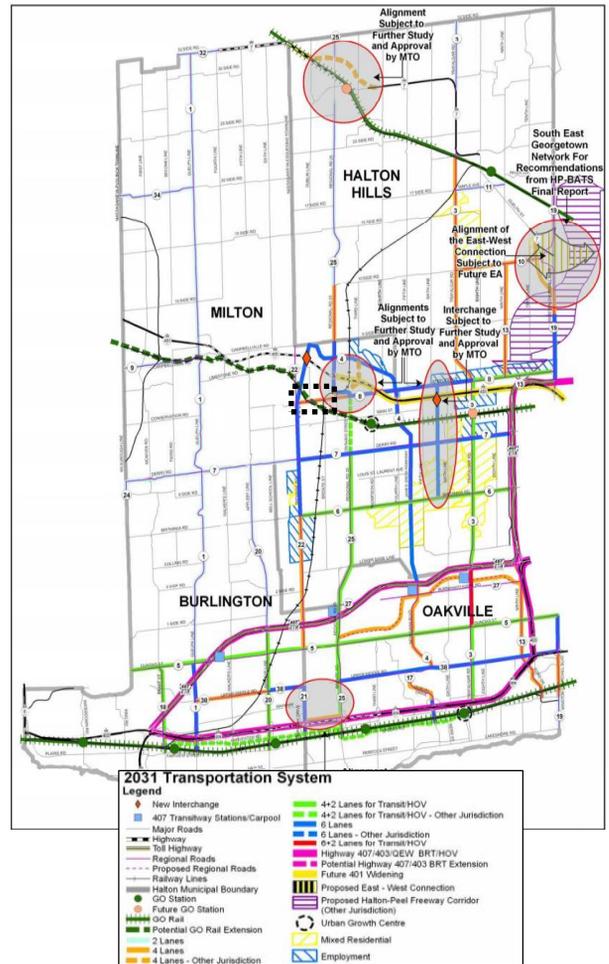
- ❖ The Municipal Class EA process frames the planning and implementation of municipal infrastructure.
- ❖ Social, cultural and natural environments are considered as well as community interests, agency requirements and unique project issues.
- ❖ This study is identified as a ‘Schedule C’ and will follow Phases 1 to 4 of the Municipal Class EA process.



Study Background - Transportation Planning

Halton Regional Transportation Master Plan (TMP) – The Road to Change (2011)

- ❖ TMP identified widening Steeles Avenue to 4 lanes (Tremaine Road to Industrial Drive)
- ❖ Key east-west Regional road extending from Tremaine Road and traversing Milton to the Mississauga/Peel boundary



Halton Region Active Transportation Master Plan (ATMP) (2015)

- ❖ Identified 1.8 m on-road bike lanes (each way) and 3.0 m multi-use paths on both sides of Steeles Avenue

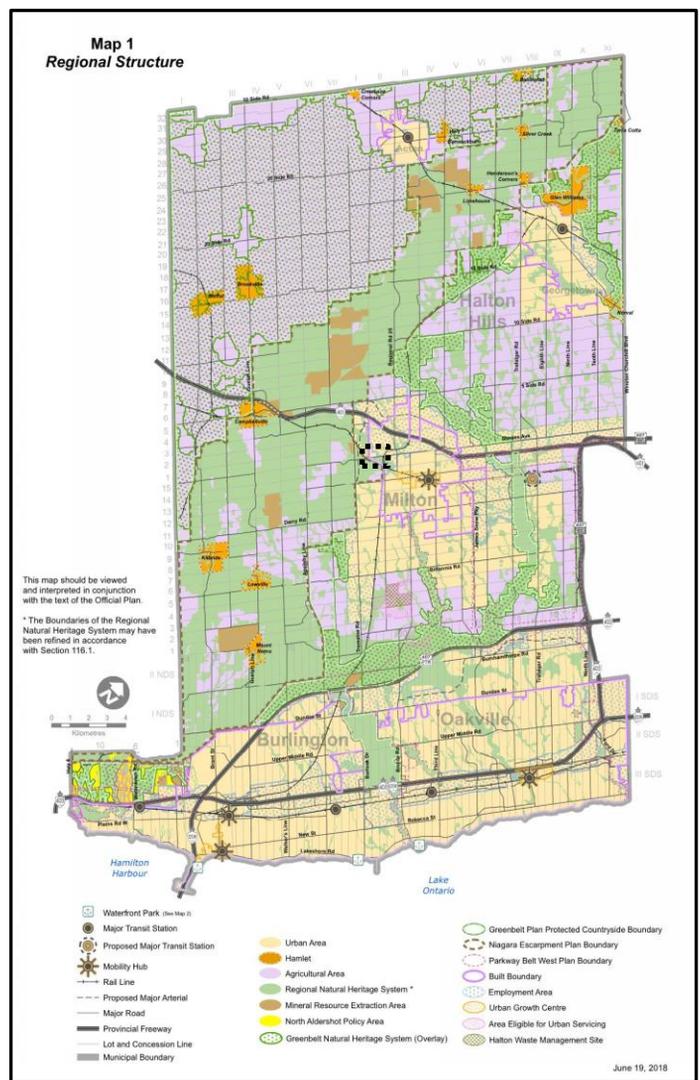
Existing Conditions Overview



Existing Conditions - Land Use

Halton Regional Official Plan (Office Consolidation June 2018)

- ❖ Steeles Avenue crosses the Niagara Escarpment Plan (NEP) area boundary, which generally follows the rail line across the study area. NEP designations are: Escarpment Protection Area and Rural Area.
- ❖ **Regional Natural Heritage System** designation encompasses natural areas associated with watercourse valleys, riparian areas and wetlands.
- ❖ **Urban Area and Employment Lands** are designated within existing and planned growth areas, mainly north of Steeles Avenue.
- ❖ **Existing agricultural areas** south of Steeles Avenue, within the NEP area, are designated Prime Agricultural Areas.

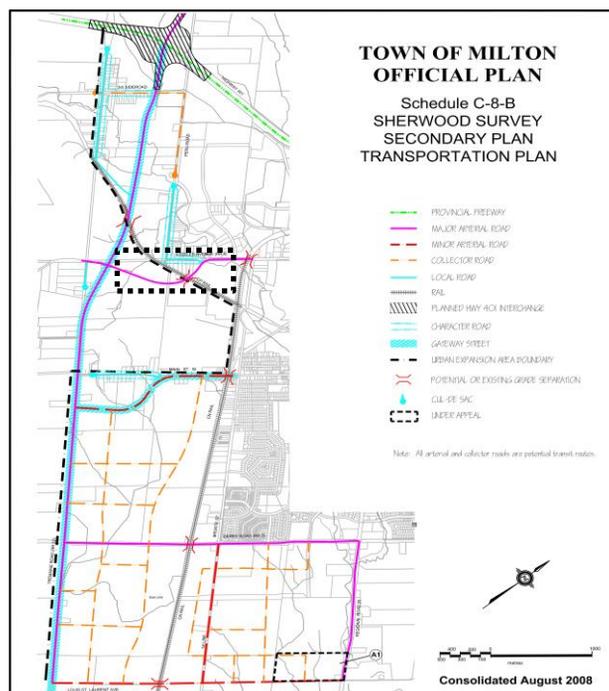
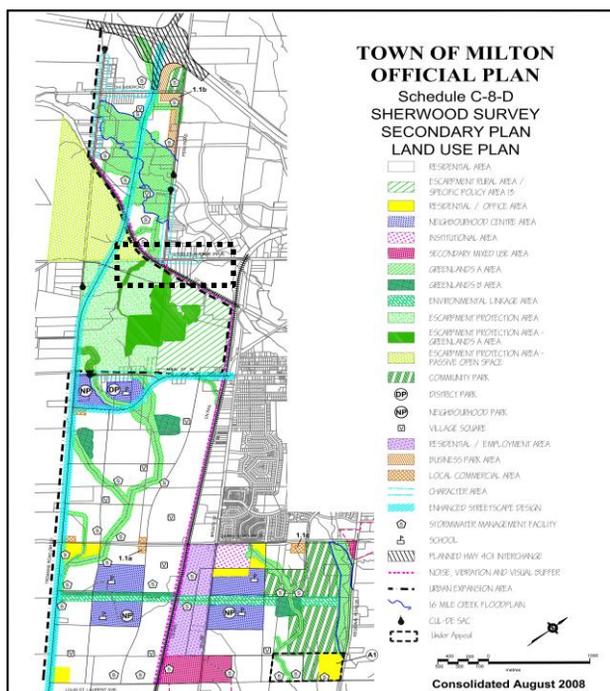


Existing Conditions – Land Use

Town of Milton Official Plan - Sherwood Survey Secondary Plan (2008)

The Secondary Plan provides more detailed planning for land use in east Milton. With respect to the Steeles Avenue study area:

- ❖ Steeles Avenue crosses the Niagara Escarpment Plan area and Town of Milton Urban Expansion boundary.
- ❖ **Residential and Business Park** areas are planned north of Steeles Avenue; Greenlands are also identified.
- ❖ **Escarpment Protection and Escarpment Rural Areas** are identified south of Steeles Avenue.
- ❖ The Plan envisioned a future southerly alignment of Steeles Avenue.
- ❖ Refers to Peru Road **Character Area**.



Existing Conditions - Cultural Heritage

Built Cultural Heritage and Cultural Heritage Landscapes

- ❖ A Cultural Heritage Assessment Report is being prepared for the Municipal Class EA Study.
- ❖ There are no Ontario Heritage Act designated properties present within the study area.
- ❖ 12 properties within the historic hamlet of Peru (Peru Road Character Area) that are registered on the Town of Milton Heritage List.
- ❖ Cultural Heritage Landscapes are associated with Peru Road and Steeles Avenue within the historic hamlet of Peru.

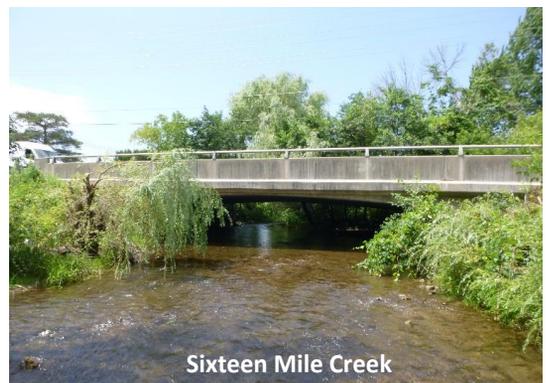


Archaeological Resources

- ❖ A Stage 1 Archaeological Assessment has been completed.
- ❖ Given the presence of watercourses, portions of the study area have high potential for archaeological resources.
- ❖ Previously disturbed areas along Steeles Avenue and at the former brickworks have limited archaeological potential.

Existing Conditions - Natural Environment

- ❖ Natural areas have been identified as part of the Regional Natural Heritage System and designated as Greenlands in the Secondary Plan.
- ❖ Key natural features are associated with Sixteen Mile Creek and the Sixteen Mile Creek Tributary.
- ❖ These areas contain a variety of habitats including meadow, wetland (swamp and marsh), thicket and deciduous forest.
- ❖ A large wetland associated with the Sixteen Mile Creek Tributary occupies the area bound by the CP Rail line, Steeles Avenue and Peru Road.
- ❖ Sensitivity and Significance of natural features in this area has been examined as part of this Municipal Class EA Study and has been previously studied during the Sherwood Survey Secondary Plan and Subwatershed Study.
- ❖ Species at Risk or their habitat have been identified in some areas.



Existing Conditions - Natural Environment

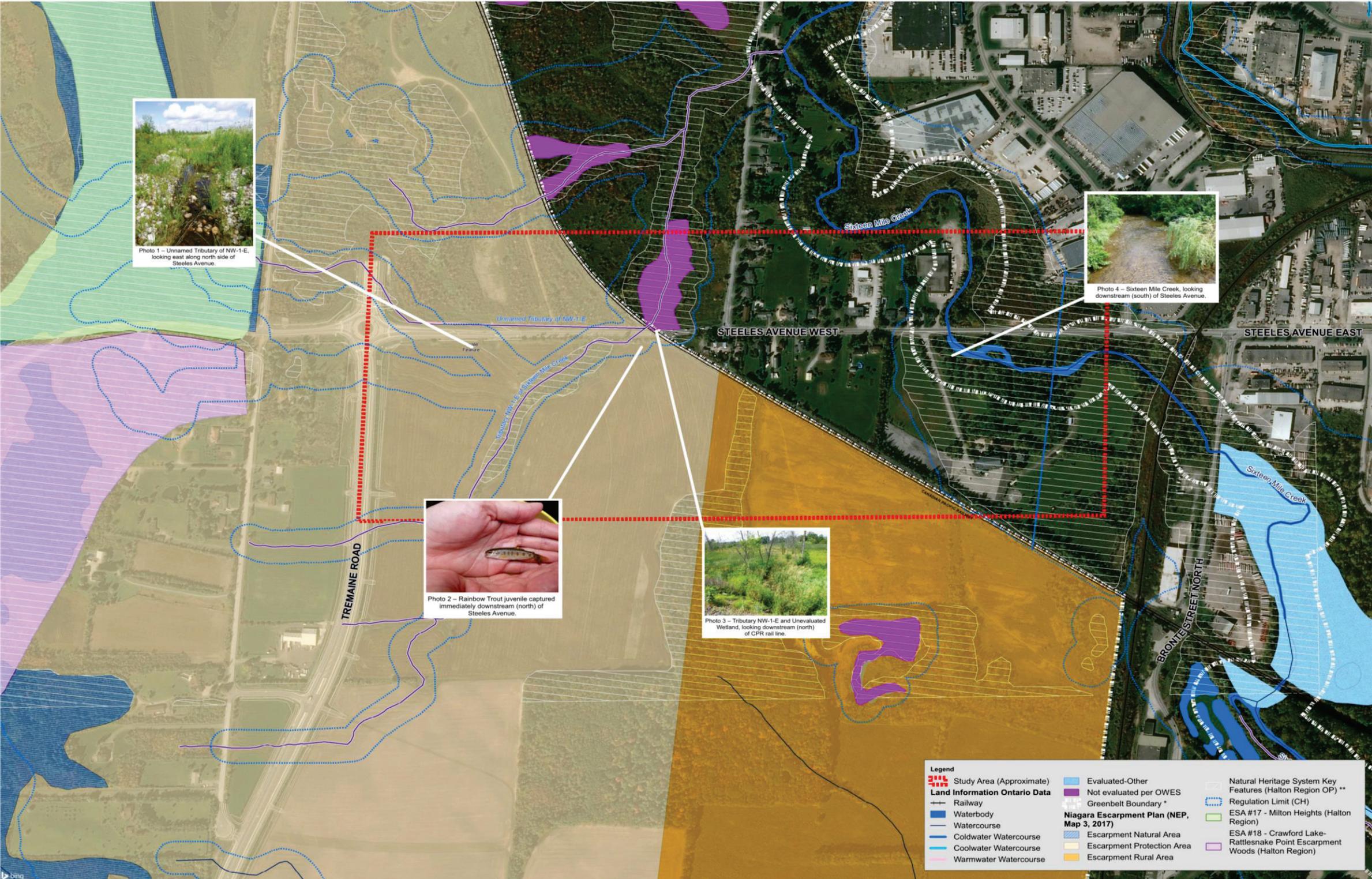


Photo 1 – Unnamed Tributary of NW-1-E, looking east along north side of Steeles Avenue.

Photo 4 – Sixteen Mile Creek, looking downstream (south) of Steeles Avenue.

Photo 2 – Rainbow Trout juvenile captured immediately downstream (north) of Steeles Avenue.

Photo 3 – Tributary NW-1-E and Unevaluated Wetland, looking downstream (north) of CPR rail line.

Legend

- Study Area (Approximate)
- Land Information Ontario Data
 - Railway
 - Waterbody
 - Watercourse
 - Coldwater Watercourse
 - Coolwater Watercourse
 - Warmwater Watercourse
- Evaluated-Other
- Not evaluated per OWES
- Greenbelt Boundary *
- Niagara Escarpment Plan (NEP, Map 3, 2017)
 - Escarpment Natural Area
 - Escarpment Protection Area
 - Escarpment Rural Area
- Natural Heritage System Key Features (Halton Region OP) **
 - Regulation Limit (CH)
 - ESA #17 - Milton Heights (Halton Region)
 - ESA #18 - Crawford Lake-Rattlesnake Point Escarpment Woods (Halton Region)

Existing Conditions - Ecological Land Classification



Existing Conditions - Drainage

- ❖ The study area is located within Sub-catchment 2 of Sixteen Mile Creek Subwatershed. The portion north of Steeles Avenue between CPR and Peru Road falls in Phase 2 SIS Area 4.
- ❖ Within the study area, there are three culverts (C1, C3 and C4) and a bridge over Sixteen Mile Creek. Culvert C2 is located at CPR immediately downstream of Culvert C1.



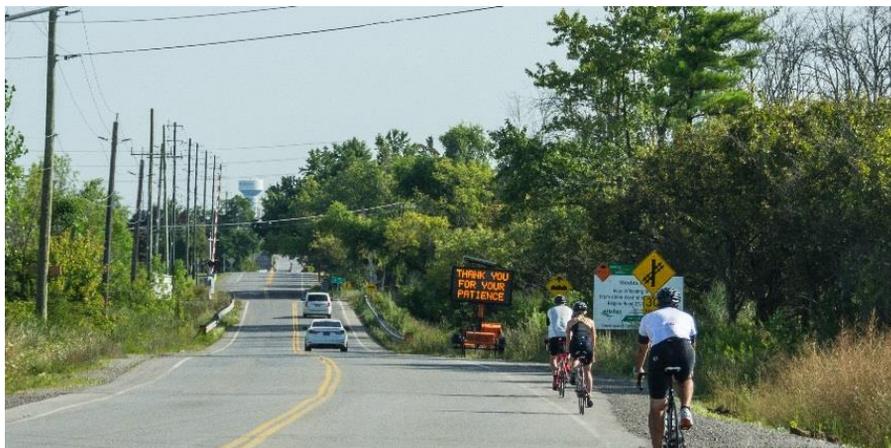
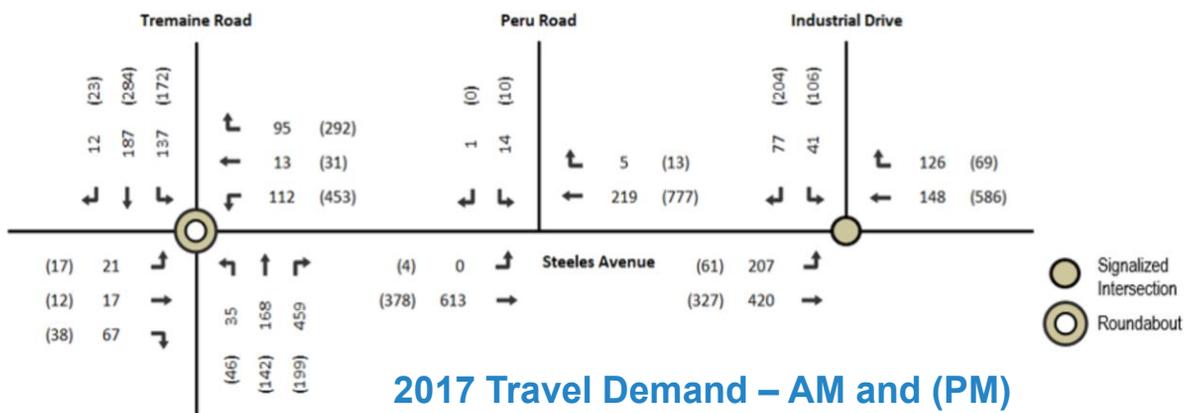
❖ Existing Conditions:

- Sixteen Mile Creek overtops Steeles Avenue under Regional storm event.
- Further hydraulic analysis and investigation will be undertaken



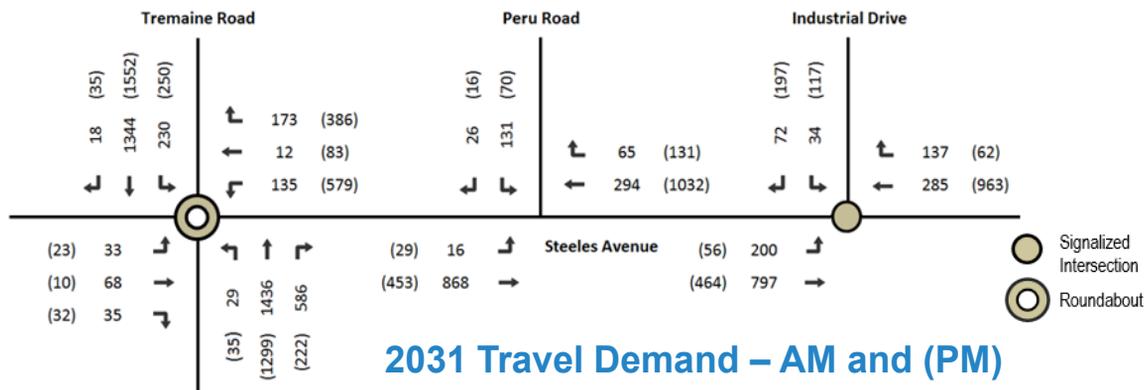
Existing Conditions - Transportation

- ❖ Within the study area, Steeles Avenue is a 2-lane rural road with a posted speed of 60 km/h.
- ❖ At the west study limit, Tremaine Road has been realigned and intersects Steeles Avenue at a roundabout.
- ❖ Steeles Avenue was recently widened from 2 to 4 lanes, east of Industrial Drive.
- ❖ Daily, approximately 17 to 22 freight trains cross the at-grade CP Rail crossing, west of Peru Road, resulting in traffic delays.
- ❖ Limited provision for cyclists and pedestrians – partially paved shoulders only.
- ❖ Daily travel demand ranges between 400 and 800 vehicles, in the peak hours.



Future Needs - Transportation

- ❖ A traffic assessment was carried out to examine forecasted future travel demand for Steeles Avenue.
- ❖ Travel demand on Steeles Avenue is expected to exceed existing capacity by 2031, therefore additional road capacity will be required on Steeles Avenue.



- ❖ Active transportation facilities such as on-road bike lanes (each way) and multi-use paths (both sides of road) will be provided, consistent with the Active Transportation Master Plan.
- ❖ Steeles Avenue is a Major Arterial Road which provides safe connections between communities. A road/rail grade separation is proposed to provide safe and convenient travel on Steeles Avenue.



Problem and Opportunities

- ❖ Without improvements, Steeles Avenue is expected to experience delays during peak periods as travel demand continues to grow by 2031.
- ❖ To support future growth and travel demand, improvements to the Steeles Avenue corridor are required.
- ❖ A grade separation at CP Railway between Tremaine Road and Peru Road is recommended.
- ❖ The improved corridor should support all modes of transportation (i.e. active transportation) and provide safety for all road users.

Therefore, Halton Region is carrying out this study to address these requirements in accordance with the Municipal Class EA Study process.

Alternative Solutions Evaluation Summary

Improvements to Steeles Avenue are required to support existing and future transportation needs while respecting the social, cultural and natural environment.

The following Planning Alternatives have been considered:

Alternatives	Description	Evaluation Summary	Recommendation
Do Nothing	<ul style="list-style-type: none"> Status quo; only planned improvements to 2031 will be in place, including the widening of Regional Road 25 and the Tremaine Road realignment (with interchange) 	<ul style="list-style-type: none"> Does not address the needs within the study area. 	Do not carry Forward (for comparison purposes only)
Limit Development	<ul style="list-style-type: none"> Limit development within the Town of Milton 	<ul style="list-style-type: none"> Future projections have been based on currently approved Official Plans in Halton Region and Town of Milton. 	Do not carry forward
Improvements to Other Roadways	<ul style="list-style-type: none"> Widen Regional roadways in the immediate study area to planned 2031 improvements (e.g. Regional Road 25 and Tremaine Road) 	<ul style="list-style-type: none"> Part of the Region's overall transportation strategy (Transportation Master Plan). 	Carry forward as part of overall Region and Town transportation strategies
Transportation Demand Management (TDM)	<ul style="list-style-type: none"> Measures to manage travel demand by encouraging carpooling; shifting travel demand to off-peak hours through flexible work hours, telecommute, etc. 	<ul style="list-style-type: none"> On their own, TDM measures do not fully address the transportation needs and are part of Region's overall transportation strategy. 	Carry forward as part of overall Region and Town transportation strategy
Improve Transit Infrastructure/ Other Modes of Transportation	<ul style="list-style-type: none"> Continue to support transit infrastructure improvement and provide facilities for active transportation use to accommodate pedestrians and cyclists. 	<ul style="list-style-type: none"> On their own, these measures do not fully address the problem, while part of the Region's overall transportation strategy. 	Carry forward as part of overall Region and Town transportation strategy
Operational Improvements	<ul style="list-style-type: none"> Enhance traffic operations of roadway through minor improvements including intersection improvements (traffic signals, provision of turning lanes), access management and other measures. 	<ul style="list-style-type: none"> On their own, do not fully address the problem while part of the Region's overall transportation strategy. 	Carry forward within overall Project strategy
Improvements to Steeles Avenue	<ul style="list-style-type: none"> Improve Steeles Avenue, by widening to 4 lanes, providing active transportation (on-road bike lanes and multi-use paths) and planning for a new grade separation at the CP Rail line. 	<ul style="list-style-type: none"> Needs identified in Halton Region Transportation Master Plan and Active Transportation Master Plan to support future growth. 	Carry forward within overall Project strategy

Steeles Avenue Design Considerations

In developing the design alternatives for Steeles Avenue, a number of key constraints and design elements need to be considered:

Steeles Avenue

❖ Natural Environment:

- Niagara Escarpment and policy areas
- Watercourse crossings of Sixteen Mile Creek and its tributaries
- Stormwater conveyance, management and outlets

❖ Socio-Economic Environment:

- Impacts to businesses and residential properties
- Existing and future communities

❖ Cultural Environment:

- Built heritage features and archaeology resources

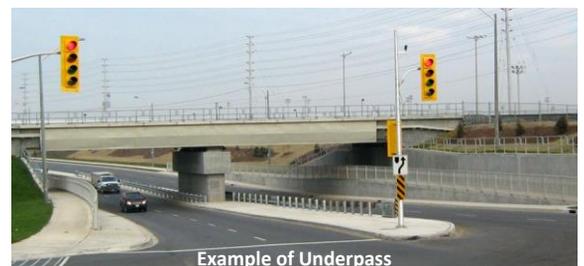
❖ Geometric Design:

- Planned overall road right-of-way width of 35m, consistent with Region's Transportation Master Plan
- Provision of a high-quality pedestrian and cycling environments to encourage active transportation, consistent with the Regional Active Transportation Master Plan



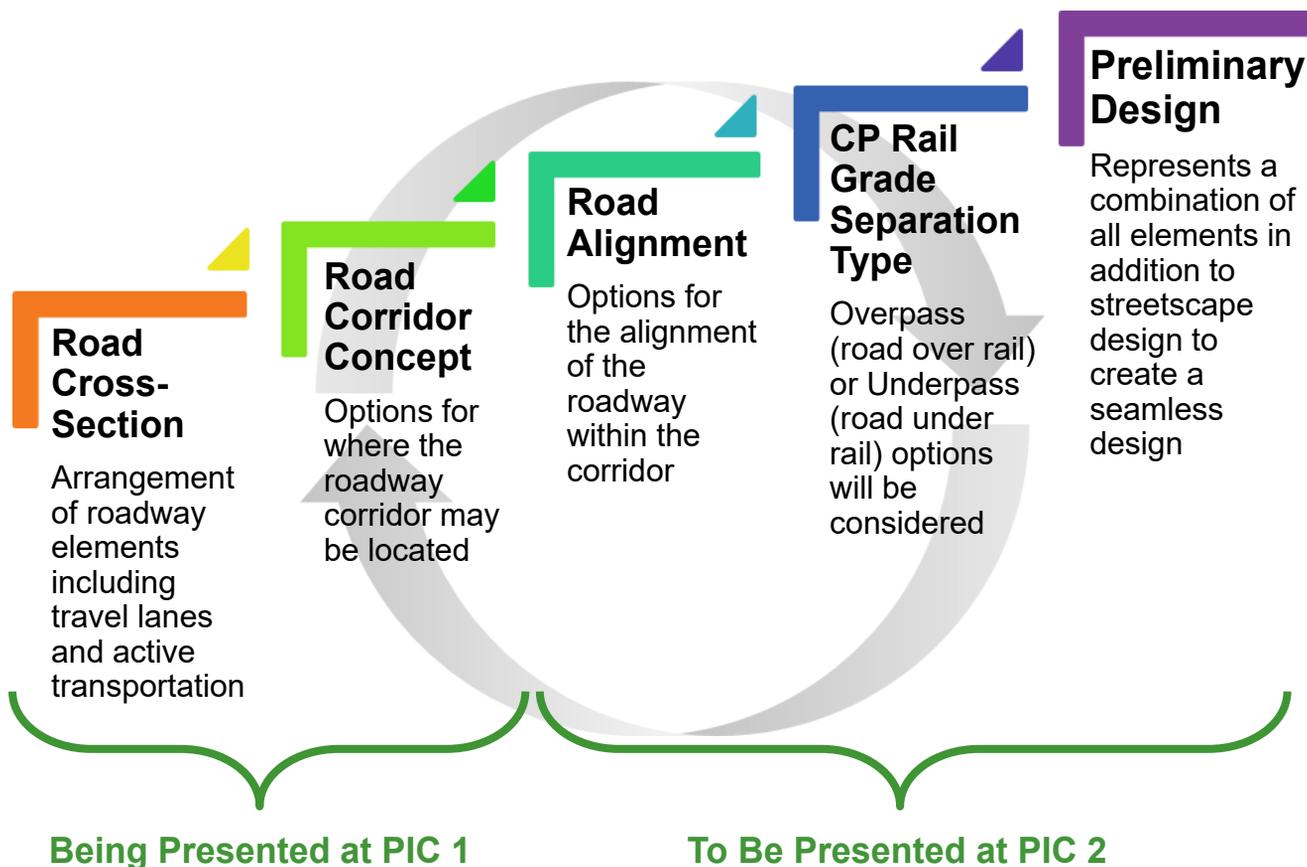
CP Rail Grade Separation

- ❖ Structure Type (Overpass or Underpass)
- ❖ Design requirements (clearance, drainage, access, accommodation for active transportation)
- ❖ Construction staging and rail detour requirements
- ❖ Visual aesthetics relative to the Niagara Escarpment Plan area and surrounding community



Steeles Avenue Design Components

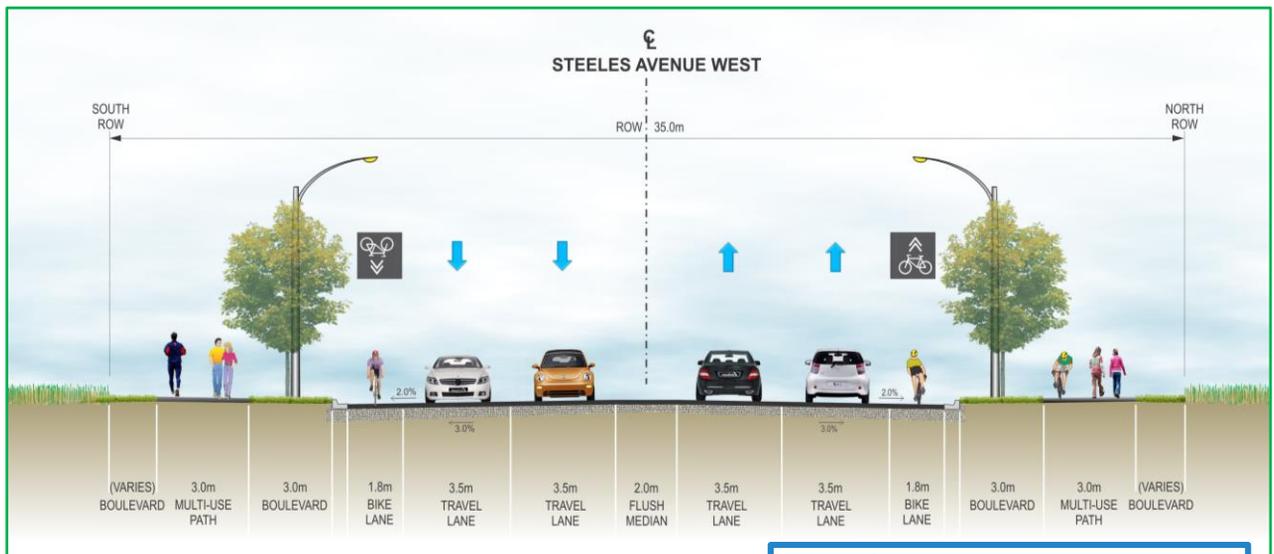
As the design progresses and our knowledge of conditions and constraints evolve, there may be design iterations.



Proposed Typical Section

The typical cross-section for the proposed 4-lane Steeles Avenue have been developed based on:

- ❖ Planned overall road right-of-way width of 35 m, consistent with Halton Region Transportation Master Plan and Official Plan
- ❖ Provision of two 3.5 m travel lanes in each direction
- ❖ Provision of a 1.8 m on-road bike lane (each way) and 3.0 m multi-use path (both directions) to accommodate cyclists and pedestrians



Note: Some adjustments to the road cross-section may be made as part of future design iterations in order to reduce localized impacts, where feasible.

Factors for Analysis and Evaluation

Design Alternatives will be developed within the preferred road corridor concept and evaluated using the factors below, and based on comments received from agencies, stakeholders and members of the public.

Socio-Economic Environment



- Consistency with Land Use Plans and Policies
- Supports future planned growth
- Potential property requirements
- Impacts to residents and business operations (direct impacts and access)
- Local community character and mobility
- Provision for pedestrians and cyclists
- Noise and Air Quality

Cultural Environment



- Archeological Resources
- Cultural Heritage Resources
- Peru Road Character Area

Natural Environment



- Niagara Escarpment Plan area and associated policies
- Designated natural features and environmentally sensitive areas
- Potential impacts to terrestrial and aquatic species and habitats (including opportunity for mitigation)
- Potential impacts to Species at Risk and their habitat

Surface Water and Groundwater



- Management of road runoff
- Protection of surface water features and watercourse crossings
- Floodplain storage
- Protection of groundwater resources

Transportation & Technical



- Addresses future capacity requirements
- Consistency with transportation planning and policy documents
- Improves multi-modal network connectivity
- Improves traffic operations
- Road design requirements and construction constraints/complexity
- CP Rail grade separation design requirements

Preliminary Cost Estimate



- High level cost estimate for comparative purposes only

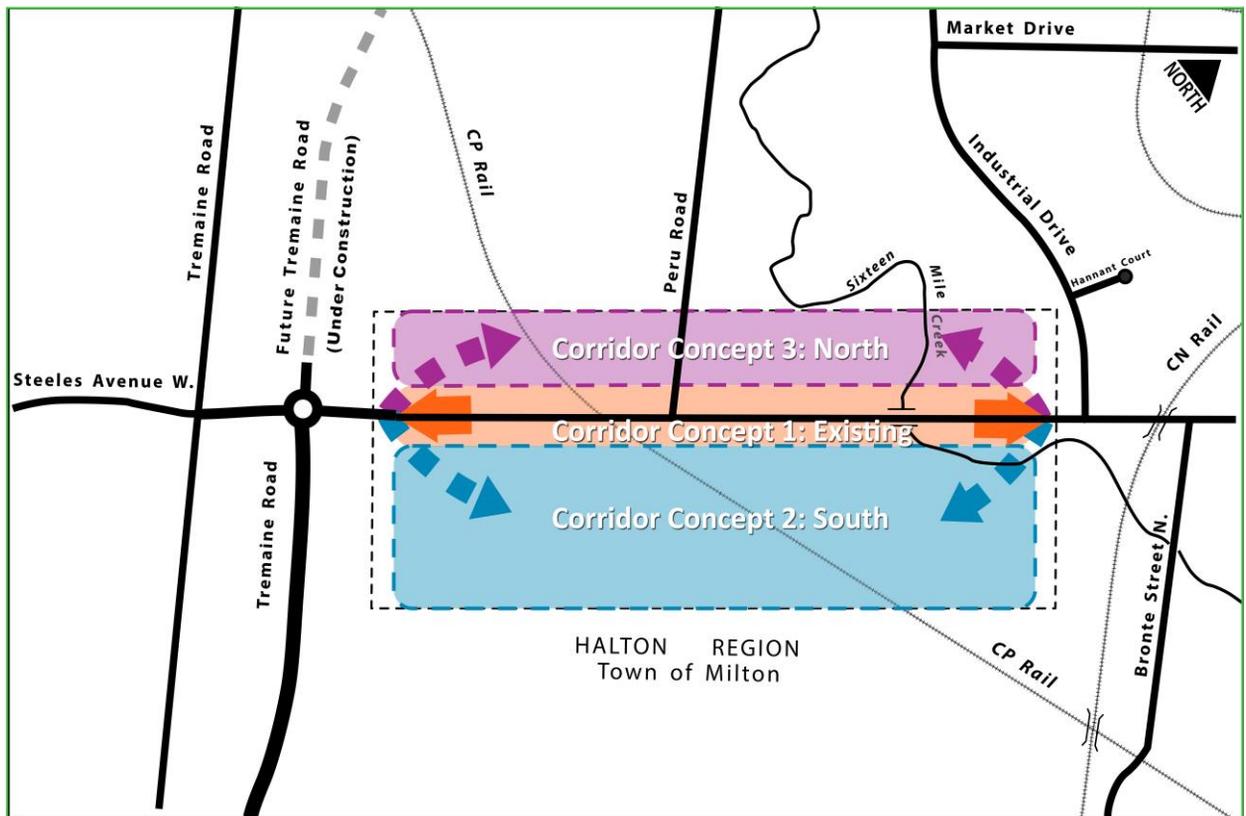
Road Corridor Concept Alternatives

Based on the typical road cross-section, three road corridor alternatives are being considered:

Corridor Concept 1: Improvements along the **existing** right-of-way

Corridor Concept 2: New corridor to the **south** of existing right-of-way

Corridor Concept 3: New corridor to the **north** of existing right-of-way



Road Corridors - Preliminary Analysis Summary

CATEGORY	CONCEPT 1 Widening Existing Steeles Avenue	CONCEPT 2 New Corridor to the South	CONCEPT 3 New Corridor to the North
Socio-Economic Environment 	<ul style="list-style-type: none"> - Not consistent with Town's Official Plan. - Impacts to frontage of existing properties along Steeles Avenue. - Substantial visual intrusion if grade separation is an overpass. 	<ul style="list-style-type: none"> - Consistent with Town's Official Plan. - Possible impacts to properties on south side of Steeles Avenue. - Visual intrusion if grade separation is an overpass. 	<ul style="list-style-type: none"> - Not consistent with Town's Official Plan. - Significant impacts to existing properties on north side of Steeles Avenue. - Substantial visual intrusion if grade separation is an overpass.
Cultural Environment 	<ul style="list-style-type: none"> - Edge impacts to numerous registered properties on Steeles Avenue and Peru Road, within the Peru Road Character Area. - Stage 2 Archaeological Assessment required beyond disturbed areas. 	<ul style="list-style-type: none"> - Preserves the historic hamlet of Peru and Character Area. - Some potential for impacts to built heritage resources. - Potential for archaeological finds in undisturbed areas, particularly near water crossings. Stage 2 Archaeological Assessment required beyond disturbed areas. 	<ul style="list-style-type: none"> - Significant impacts to the historic hamlet of Peru and Character Area. - Several registered heritage properties would be directly impacted. - Potential for archaeological finds in undisturbed areas, particularly near water crossings. Stage 2 Archaeological Assessment required beyond disturbed areas.
Natural Environment 	<ul style="list-style-type: none"> - May limit opportunities to mitigate impacts to Niagara Escarpment Protection (NEP) areas. - Generally has less impact to natural features than a new corridor. - Utilizes existing Sixteen Mile Creek crossing location. - Relatively lower impacts to potential bat habitat, but will impact barn swallows at CP Rail culvert. 	<ul style="list-style-type: none"> - New corridor within NEP areas. - Potentially greater impact on natural environment and wildlife habitat. - Creates new crossings, including Sixteen Mile Creek, lowland deciduous riparian forest and cultural thicket communities. - However, crossings of natural features are discreet with opportunity for mitigation to maintain ecological functions. 	<ul style="list-style-type: none"> - Least impact to NEP areas. - Results in substantial removal of riparian wetland. - Creates a new crossing of Sixteen Mile Creek. - Opportunities for mitigation may be limited by other constraints (technical, socio-economic).
Surface Water and Groundwater 	<ul style="list-style-type: none"> - A potential CP Rail overpass would result in substantial fill within regulated area. - A potential CP Rail underpass would require a major creek realignment. - Limited potential at Sixteen Mile Creek bridge to improve overtopping of Steeles Avenue under Regional storm event. 	<ul style="list-style-type: none"> - New watercourse crossings including Sixteen Mile Creek and tributary – opportunities to mitigate flooding concerns through design. - Opportunity for perpendicular crossing of Sixteen Mile Creek. 	<ul style="list-style-type: none"> - A potential CP Rail overpass would result in substantial fill within regulated area. - A potential CP Rail underpass would require a major creek realignment and may require a permanent pumping station. - Deficiencies at Sixteen Mile Creek bridge downstream could impact design of a new upstream crossing.
Transportation & Technical 	<ul style="list-style-type: none"> - Addresses future growth and travel demand to 2031; opportunities for active transportation limited. - Substantial disruption and lengthy closures during construction. Highly complex traffic staging, utility relocation, etc. - CP Rail grade separation challenging with potentially significant impacts. - Existing Peru Road / Steeles Avenue intersection would likely be realigned. 	<ul style="list-style-type: none"> - Addresses future growth and travel demand to 2031, including active transportation. - Significantly simpler to construct and stage within greenfield. - Greater separation between CP Rail line and watercourses simplifies design. - Existing Steeles Avenue would serve local access only. 	<ul style="list-style-type: none"> - Addresses future growth and travel demand to 2031, including active transportation. - Construction is complicated by impacts to properties, utilities, drainage, etc. - CP Rail grade separation challenging with potentially significant impacts. - Existing Steeles Avenue would serve local access only.
Preliminary Cost Estimate 	<ul style="list-style-type: none"> - Greater capital cost to construct 	<ul style="list-style-type: none"> - Lower overall capital cost to construct 	<ul style="list-style-type: none"> - Greater overall capital cost to construct

Corridor Concept 2 (South) is Preferred

Next Steps

After this Public Information Centre, the following tasks will be carried out:

- ❖ Review and respond to feedback and comments received from Agencies and members of the public
- ❖ Confirm preferred solution and corridor concept
- ❖ Develop and evaluate design alternatives
- ❖ Identify preliminary preferred design alternative
- ❖ Consult with technical agencies and stakeholder group
- ❖ Public Information Centre #2 (anticipated in Spring 2020)

Visit the study website at:

halton.ca

Please complete a comment sheet. Completed comment sheets can either be dropped in the comment boxes or submitted by mail or email to either of the following Project Team members:

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Please submit your comments by

Friday, December 6, 2019

Thank you for attending!

